



Artistic
Suite

User's Guide



Creative DRAWings® Artistic edition

Creative DRAWings® Advanced (Suite and/or Premium) edition version 7.1

Creative DRAWings® Simple Cut edition version 7.1

Software Manual

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Table of Contents

Chapter I	Welcome to Creative DRAWings	13
	Online resources	13
	Creative DRAWings help	14
	Creative DRAWings and Wing's modular	14
	Creative DRAWings Samples	15
Chapter II	Quick start	17
	Start up wizard	17
	Create and stitch design modes	20
	Creating your first embroidery	20
	Scan a design and embroider it	27
	Get image from camera	37
	Import a stitch file and embroider it	46
	Create monogram design	54
	Create your first Cut design	60
	Create your first stencil design	65
	Create design using Crystals	76
	Create your first Paint design	86
	Create a design from scratch	94
Chapter III	Working with files	101
	Vector and Bitmap designs	101
	Creating designs	102
	Artwork sources	105
	From file (Vector or Bitmap)	105
	From embroidery	108
	From scanner	109
	From camera	111
	New monogram	112
	New graphic	115
	Loading designs	115
	Open dialog box	117
	Saving designs	119
	Save As dialog box	120
	Janome file manager	121
	Export design	123
	Export to editor	123
	Export to Dropbox (Ctrl + D)	123
	Export embroidery image	129
	Export Vector file	131
	Export to Quilt	132

Export to Happy Lan machine	133
Export to Janome MC12000 / MC15000	134
Export to Cutters	136
Export to file	138
Direct connection to cutter	139
Artistic Edge wireless configuration	146
Print templates	150
Scanning images	154
Capturing from camera	158
Importing bitmaps	161
Open as Backdrop	161
Trace (convert to outlines)	164
Open as Cross-stitch	166
Open as Photo stitch	167
Open as Photo Paint	169
Import embroidery files	171
Convert to Vector design	172
Import ngs embroidery file	174
Printing	174
Print design	174
Print Artwork	179
Send design	180
Recent files	180
Auto-backup mechanism	180
Chapter IV Workspace tour	182
Workspace components	183
Toolbars	186
Customizing DRAWings workspace	189
Techniques	193
Chapter V Selections	196
Select with mouse (click)	196
Rectangle selection	196
Lasso selection	197
Invert selection	198
Select all	198
Select none	199
Select by stitch type	199
Select / View overlapping order of vector design	200
Selections by color	201
Selections in sequence manager	201
Selection by Crystal	202
Chapter VI View your designs	209

Zoom in	209
Zoom out	210
Zoom previous	210
Zoom all	210
Actual size zoom 100%	210
Hand tool (pan)	211
Measure	211
3D preview	211
View Outline design	212
View Stitches	212
View Stitch points	213
Thickness view	213
Overlapping Crystals	214
Set light source	215
View Ruler	216
View Grid	216
View Hoop	216
View Cutting mat	217
View active designs (Windows)	218
Slow redraw (Shift+F11)	219
Add Guidelines	221
Horizontal Guidelines	221
Vertical Guidelines	222
Diagonal Guidelines	222
Guideline options	222
Guideline editor	223
Working with guidelines	224

Chapter VII Designing tools

227

Tools toolbar	227
Drawing tools	228
Create Freehand shapes	229
Create Bezier shapes	231
Create Outline shapes	233
Magic Wand shapes	235
Insert Crystals	236
Insert shapes	237
Create Ellipses	237
Create Pies	239
Create Trapezoids and Parallelograms	241
Create Stars	244
Create Polygons	248
Create Rectangles	251

Designing tools' options	254
Array tool (Circular-Rectangular)	255
Using Array	257
Rectangular array	258
Basic customizations	260
Advanced Customizations	263
Edit clones	265
Circular array	266
Using Circular array	269
Basic customizations	271
Rotate - mirror copies	275
Edit Clones	276
Autoborder	277

Chapter VIII Transformations

281

Positioning objects	281
Move an object(s)	281
Move a shape while drawing it	282
Move objects with arrow keys	282
Move an object with X and Y coordinates	283
Aligning, distributing and auto-sizing objects	283
Aligning objects	284
Auto-sizing objects	286
Distributing objects	287
Re-order objects	288
Sequence manager	290
Re-sequence items	295
Duplicating and deleting objects	296
Cutting, copying and pasting	297
Paste special	297
Duplicating a design	298
Delete objects	298
Sizing and skewing objects	298
Size objects	298
Skewing objects	301
Rotating and mirroring objects	301
Rotating objects	302
Mirroring objects	303
Repeat transformation	305
Clear transform	305
Grouping objects	306
Group objects	306
Add object to a Group	306
Delete an object form a Group	307
Edit an object form a Group	307

Ungroup objects	307
Combining and breaking apart objects	307
Intersection and Weld	308
Remove overlaps	310
Trimming objects	311
Convert outline to Object	312
Undo	313
Redo	313
Add new objects as clones	313
Chapter IX Color management	317
Thread palette toolbar	319
Setting colors	320
Editing default color palette (RGB)	322
Selections by color	324
Cross-stitch designs	324
Edit Palette	324
Color reduction area	329
Chapter X Node editor	332
What is a node	332
Cusp nodes	333
Smooth nodes	333
Curve objects	333
Edit shape nodes	334
Select Node(s)	334
Move node(s)	334
Using control handles of a node	335
Add a node	336
Delete a node	336
To line	336
To curve	337
Select all and Select Polyline	337
Close outline	338
Join nodes	338
Split outline	339
Stencil bridge	339
Auto remove overlaps	341
Transform in Node editor (Multiple node selection)_2	341
Move selection	342
Rotate selection	343
Resize selection	344
Slant selection	345
Chapter XI Working with text	346

To add text	346
Selecting Text	347
Change Font and Size	347
Text abbreviations	348
Using Abbreviations	348
Creating - Editing Abbreviations	349
Edit Text shape	351
Text on path	351
Remove text from path	355
Monogramming	355
Edit Caption	356
Edit monogram template	358
Transform monogram area	361
Overlapping areas	363
Insert symbol	365
Chapter XII Clipart Library	367
Insert item from library	367
Filter visible clipart items	368
Change view	370
Clipart names and Tags	370
Adding items to clipart library	371
Chapter XIII Array	373
Array on Object Fill	373
Edit Array fill	377
Array - Fill patterns	379
Rectangle	380
Circular	384
Contour	387
Single Line	389
Shape Fit	390
Line Fit	391
Edit outline	392
Array on Object Outline	393
Outline array options	396
Array and Cloned objects	398
Edit Clones (Fill)	398
Edit clones (Outline)	399
Nested array	401
Chapter XIV Crystals - Creating designs with Crystals	404
Insert Crystal shapes	404
Crystal Fill	406
Create a design with crystals	409

Edit Crystal fill object's outline	414
Overlapping Crystals	415
Crystal fill - Common parameters	416
Palette	416
Color-Shape	417
Size	418
Offset	419
Item rotation	419
Separate to crystals	420
Crystal Fill patterns	420
Rectangle	421
Circular	426
Contour	431
Single Line	434
Shape fit	435
Line fit	439
Edit Crystal fill outline	440
Crystal outline/pen Fill	442
Chapter XV Cut - Creating designs with Cuts	445
Create your first Cut design	445
Import from scanner and Cut	450
Import from camera and Cut	459
Create a Cut design from scratch	468
Cut properties	476
Print & Cut	479
Chapter XVI Stencil - Creating stencil designs	485
Stencil how it works	485
Create your first stencil design	486
Stencil parameters	497
Chapter XVI Paint - Painting designs	502
Create your first Paint design	502
Color management	511
Brush palette toolbar	512
Setting colors	514
Editing default color palette (RGB)	516
Selections by color	517
Change brush width	518
Paint transformations	519
Paint Fill	520
Paint Outline	525
Directions and Divides	529
Realistic Paint	531
Open as Photopaint	531

Convert outline to Object	536
Chapter XVI Embroidery - Creating embroidery designs	538
Stitch types - Embroidery types	538
Fabric selection	543
Object Properties	546
Fill Properties	546
Artwork	546
Satin	547
Step	550
Row fill	554
Applique	557
Cross-stitch	564
Photo-stitch	566
Net Fill	567
Array fill	569
Rectangle	571
Circular	574
Contour	576
Single Line	577
Shape Fit	578
Line Fit	580
Outline properties	580
Artwork	581
Running	581
Satin Serial	583
Array	586
Divide and Directions tools	588
Design Properties	589
General	590
Optimizer	591
Change hoop	599
Select hoop	600
Add New Hoop	601
Edit hoop	603
Preview	605
Embroidery sequence	605
Automatic Embroidery sequence	605
Enable Auto-sequence	605
Sequence tool	607
Sequence manager - Auto	607
Manual Embroidery sequence	608
Disable Auto-sequence	608
Sequence manager - Manual	609
Chapter XIX Settings	611

Options	611
General	611
Tools	612
Monitor	614
View	615
3D properties	616
Printing	617
Palette order	618
Colors-Sizes	618
Selecting Colors	621
Creative DRAWings 3D setup	623
Security keys	624
Chapter XX Appendix	626
A: Creative DRAWings Tips	626
Quality hints	626
Printing and embroidering	627
Color changes	628
B: Standard - Tools toolbar	629
C: Quick reference card	631
D: Troubleshooting	635
Installation problems	635
CBU Failure When Launching DRAWings®	635
Creative DRAWings Quits and Generates a Visual C++ Runtime Error	635
Unhandled Exception	635
Creative DRAWings fails to launch	636
Verifying Video Card Memory	638
Updating the Video Driver	639
Installing DirectX	639
Chapter XXI Show help on	640
Index	641

Chapter I

Welcome to Creative DRAWings

Creative DRAWings® is an embroidery software which will excite your creativity because it's **easy to learn** and **easy to use!** With only a few minutes of hands-on instruction, it's possible for anyone -- **regardless of skill level** -- to produce a high-quality design. It'll be clean of wild stitches and ready to be sewn out on your embroidery machine.

Creative DRAWings® is an embroidery software that contains a wide variety of amazing features and functionality. Besides from embroidery functionality, it includes cutting of various materials, stencil lines creation, crystals template creation and paint functionality.

Rhinestones in a variety of sizes can now be added to sewing and crafting projects like never before. Any shape, including logos, clip art, or imported graphics, can be easily designed for rhinestones. The software then sends the design to a digital cutter for template creation. You'll also find a powerful monogram feature - insert 3 characters for monogramming, freely edit monogram shapes with a Node Editor, and create a monogram from any True Type font.

Almost any clipart or photo can be imported and be instantly converted into a flawless embroidery file. That's because Creative DRAWings® is not static software which just converts images to stitches. The revolutionary and professional DRAWstitch® technology has been incorporated into Creative DRAWings® to work the miracles that you'll see it perform – almost as fast as the blink of an eye.

Creative DRAWings® is much more than a digitizing software. It's an interactive product which almost "thinks" for you and helps release your creativity. A big plus for Creative DRAWings® is that it doesn't require you to keep buying expensive add-on digitizing packages as you advance in skill.

Instead of having to learn complicated production techniques, Creative DRAWings® does most of the work for you – almost instantly! That's because Creative DRAWings® is a wonderful new embroidery software created for home use at a very reasonable price, yet powerful enough for the professional shop. Creative DRAWings® will allow you to file your digitized images in most of the world's most popular embroidery formats.

We want you to enjoy embroidering and not agonize over perplexing software programs that plague the sewing market today. We want you to really USE Creative DRAWings®. Many embroidery programs are so frustrating because of their "*steep-learning curve.*" The learning is almost endless, and you almost drown in the need for more software!

Online resources

More information about Creative DRAWings including tutorials, demos and frequently asked questions are at the official site of Creative DRAWings:

DRAWstitch - Artistic Creative Products

Creative DRAWings help

Need more instructions? **Help** is at hand! Comprehensive information about the features in the software is displayed in the **Help** viewer provided by your operating system: Microsoft HTML **Help**. You can access information in any of the following four ways from the **Help** menu or by pressing **F1** shortcut key:

1. **The table of contents** enables you to see all of the information organized by subject. Click top-level entries to view subtopics.
2. **The index** allows you to look up specific terms or concepts in alphabetical order. Type is a word or phrase.
3. **Search** allows you to find any character string or word anywhere in the text of the **Help** system.
4. **Show help on** is another way to access help for a specific tool, area, or function in Creative DRAWings®.

Show help on can be activated from the **Help** menu, or by clicking on the  icon in the standard toolbar or by pressing the **Shift+F1** shortcut key. When you activate **Show help on**, the mouse pointer turns to a pointer with a question mark. Click on any function you want in **Show help on** and the subject will be displayed.

Creative DRAWings and Wing's modular

Here's why Creative DRAWings® is so powerful: It includes a portion of Wings modular, one of the world's leading professional digitizing embroidery software programs. The two programs communicate to give you professional results – even on the first try. You can export Creative DRAWings® designs for further editing into Wings' modular or open existing embroidery designs such as **.dst**. Wings' modular is a fully working Professional embroidery software split into modules. The full package of Wings' modular is consisted of 14 modules which are purchased separately.

When you have created an embroidery design in Creative DRAWings®, you can instantly call up Wings' modular from the menu File>Export>To Editor ** or by pressing the shortcut key **Ctrl+E** and make any modifications you like. The original design in Creative DRAWings® will remain unchanged for future use. (** *The > means "then click on" as in click mouse on File, then click on Export, then click on To Editor. This shortened version using > will be used in giving directions in this manual.*)

For more information about what exciting things you can do with the Wings software, refer: www.wingsmodular.com

In the purchased package some of the modules are included.

- If you have purchased **Artistic Suite V7**, the included modules are **Basic, Editing** and **Venere**.
- if you have purchased **Artistic Suite Premium V7**, the included modules are **Basic, Editing, Venere, Text, Digitizing, Artistic Digitizing** and **Node editing**.

Information about the modules

- **Basic** module is the first and most important module because it contains the basic parts of the software. **Basic** module includes the standard interface, design scaling capabilities, simple design editing, fully functional stitch editor, image database management and all supported floppy formats. It also includes

many connection abilities that allow you to connect the software with your embroidery machine. You can read more about **Wings' modular Basic module** inside the **Basic module manual** that is also included or from the **Help > Contents** menu in the **Basic** module Contents tab book.

- **Editing module** adds editing abilities to Wings' modular®. You can edit selected objects by using the mouse, change the order of the objects and create an array of a selected object or design. Also you can adjust the density of the objects and change the Satin width. In addition you can convert Step objects to Satin objects, edit Step pattern, smooth and split stitch data objects and many more features. **Editing module** completes the editing functionality of modular giving you the power to transform any embroidery design easily, while keeping the embroidery quality high with the AI (Artificial Intelligence) that the software has. These editing capabilities can reduce the embroidery design production and help you create high quality embroidery designs with fewer stitches.
- With **Venere module** you can make Venere cuts in the fabric. You can design the area you want to be cut with "Venere cutting" like creating an outline with Running stitch. Your embroidery machine will process the information and will cut the area you have designed accordingly. The Venere tool increases embroidery quality by creating accurate cuts in the fabric with the best possible way. Using this tool you can create unique designs combining embroidery with fabric cuts.
- The **Text module** contains all the required functionality for creating high quality text embroidery designs including 255 pre-digitized fonts for Satin, Piping, Zig Zag! You can create Text embroidery designs with any True Type font installed in your computer! Also, a new feature named "Name Drop" is added, which is an easy way of creating multiple designs with different names!
- **Digitizing module**, gives you the ability to make embroidery designs from scratch. Contains seven possible stitch types which are: Running, Satin, Satin Serial, Piping, Step Zig-Zag and Manual. It includes basic node editing, automatic underlay, Reference copy, Drag and drop sewing Re-sequence and node editing. This module also adds extra options in the stitch types that can be accessed from the "Object properties" Toolbar. In addition includes Join and Break apart functionality between the objects, erase outline tool, step pattern editing, automatic border insertion, object copy from one design to another and multiple section digitizing (Auto-Branches).
- **Artistic Digitizing module**, with this module you get extra artistic digitizing abilities that can increase your embroidery designs quality and production. It adds extra options in the stitch types, advanced "Envelope" effects and useful artistic functionalities such as "Vector fill", "Block fill" and "Form fill" that you can use to create unique embroidery designs by adding different shape fills. Using your imagination, your creativity and the combination of these tools you can create embroidery designs that you never thought that was possible to produce.
- **Node Editing module**, With this module you get more node editing abilities that can help you make more accurate adjustments on the design and decrease the production time. This module helps you to modify the objects of the embroidery designs more accurately and create the exact shapes you want to design. It includes multi node editing selection, connection with straight lines of two or more nodes, join ability of nodes, splitting ability of a node in two sections and transformation of objects in "Node editing" mode.

Creative DRAWings Samples

Creative DRAWings® includes sample designs for you to work with and produce embroidery designs while you are learning the software. After installing the software, the designs will be copied into your hard disk so you have direct access to them. To find the designs, click on Start button, then position the mouse over

Programs menu to open it, expand Creative DRAWings subfolder and select Creative DRAWings samples to open the samples folder. You will find 200 vector file designs with .cmx extensions that can be imported into Creative DRAWings and converted to stitches. Also, you will find 204 embroidery file designs with .ngs extensions that can be imported into Creative DRAWings® and create new ones based on them. The stitch folders in .ngs files can be opened with the Wings' modular 5 software included in Creative DRAWings®. The designs in .ngs files contain readymade embroidery designs. After saving them to the file format which your machine supports, you can embroider them directly with your embroidery machine. You can save them to the file format you want through Creative DRAWings® or Wings' modular 5 software.

There are more designs in .ngs file format but they are located in the installations CD of Wings' modular software inside the **Designs** folder. There you will find nearly 3000 embroidery designs ready to sew out.

Chapter II

Quick start

In this chapter we will present the basic principles of **Creative DRAWings** functionality. All the design tools and options are described thoroughly in the following chapters. In this chapter we will only provide some step by step examples to have a jump start to the basic functionality of the program.

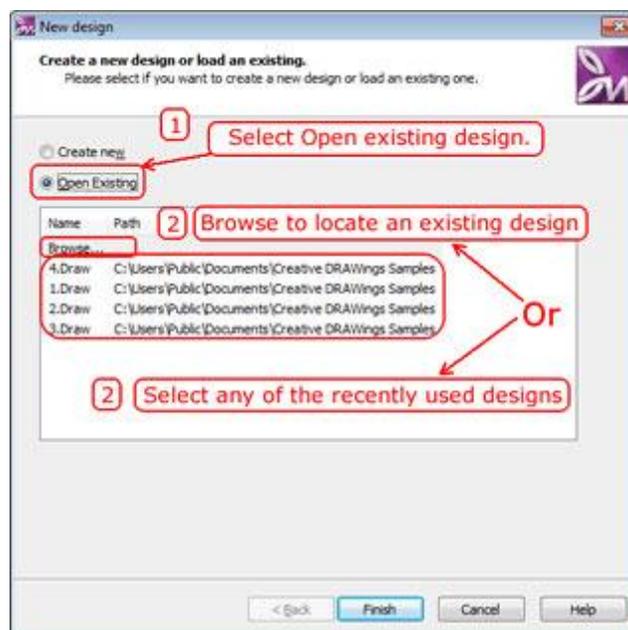
By the end of this chapter you will be able to create a sample design, use an old stitch file to create a new embroidery design, convert a bitmap image (picture) to an outline design and create a new design from scratch by using the available tools. In addition, you will become familiar with the working space of *Creative DRAWings*.

Start up wizard

By default when starting the **Creative DRAWings** the application window loads and the **new design** startup wizard will appear. Using the wizard you can create a **new design** or **load an existing**. This dialog appears only in program startup, when using **New design** or **Open design** options of **File** menu a different portion of the wizard is started.

Open a design

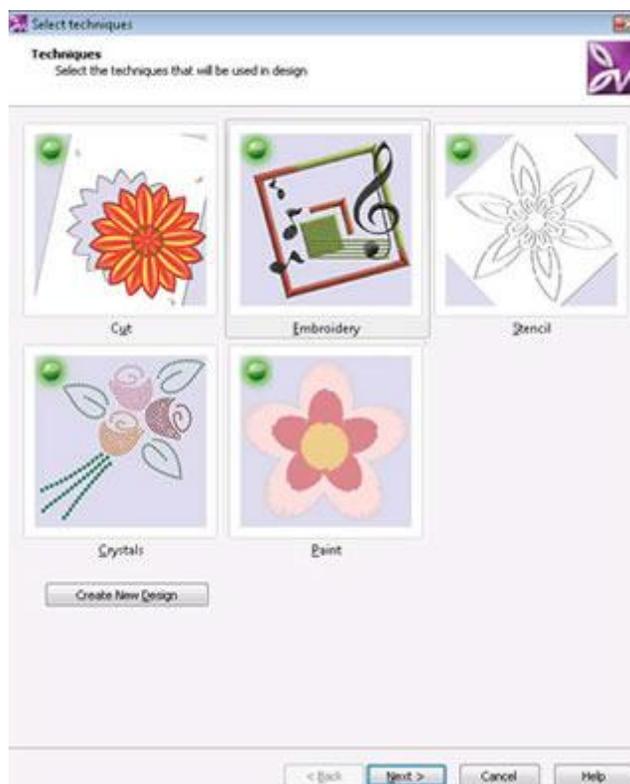
In order to open a design select **Open existing** and then press **Browse** to locate your design. You can also open with a single click one from the list with recently used designs.



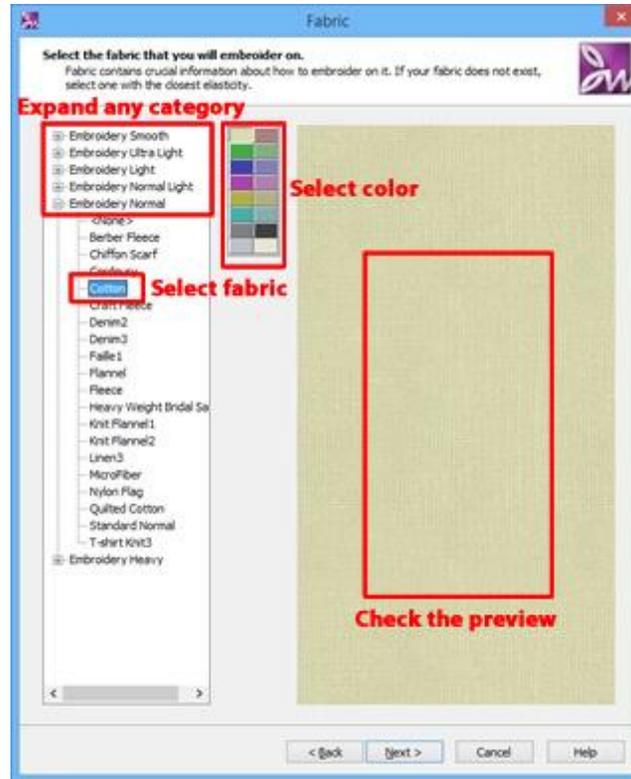
Start-up wizard load existing design

Create new design

The first step of the wizard prompts you to select which of the available **Techniques** will be enabled for this new design. Creative DRAWings workspace available components are dynamically altered according to the enabled techniques. For example if we Enable only embroidery technique in case that we want to create an embroidery design only the design tools and stitch types will be available in the workspace. If we want to create a paint design with stitches together we will enable both techniques (**Embroidery** and **Paint**). In this case the tools for **embroidery** and **Paint** will be available in our workspace. More information available in a separate topic. Techniques

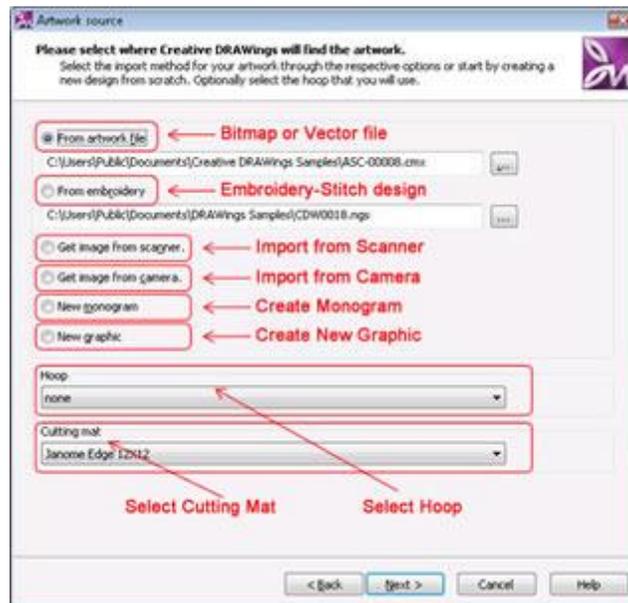


When you have enabled any of the **Embroidery**, **Crystals** or **Paint** techniques then the **Fabric** dialog will appear. Using this dialog you must select a fabric type and a color that is as close as possible to the one you are going to produce the design on. Expand any of the fabric categories, by clicking on the + icon next to it, to select a fabric and-or a color for the fabric. After selecting the **Fabric**, choose the color from the list at the middle of the dialog. The Fabric selection is not just an issue of previewing the design on the fabric. The software automatically adjusts, according to the selected fabric, various embroidery parameters. Embroidery quality depends on some of these parameters. The software suggests the appropriate backing materials for every fabric, in the printout of each design. In case that you don't want to preview the design on any fabric you can select the **none** option that exists in any of the fabric categories. In this case only the color that is select in fabric dialog will appear in the background of the created design. More information about Fabric selection is provided into a separate topic. After selecting a Fabric and a color for the fabric click on Next to proceed.



Select fabric dialog

When creating a **new design** using the start-up wizard we can use many types of artwork source to base the new design on. In Artwork source wizard step select any of the available sources of artwork to base the created design on.



Artwork source dialog

More detailed information on the usage of and options of any artwork source will be provided in the following chapter.

Create and stitch design modes

This new version of **DRAWings** implements design modes instead of design tabs.

- ✓ **Create mode**, is a build-in designer workspace. Using **Create** mode you can create and edit embroidery or vector designs with the complete set of design and editing tools. **Create** mode contains everything you need to create new designs from scratch or edit your old “.DRAW” files. Create mode is the default design mode..
- ✓ **Stitch mode**, we activate this mode when we want to see the stitches and like a preview of how the embroidery will look like.

Creating your first embroidery

This is a **step-by-step** tutorial to guide you in creating your first design with Creative DRAWings®.

1. Start **Creative DRAWings** application by double clicking on shortcut icon  that you will find on your Desktop.
2. Creative DRAWings application will open and the starting dialog named New Design will appear.



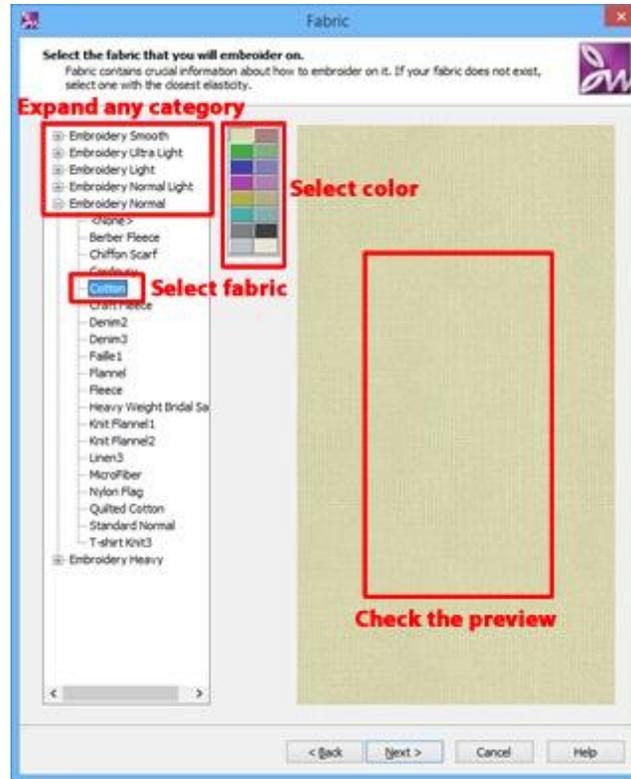
Starting dialog

3. Use **Create new** option and click **Next>** button.
4. From the next dialog select which techniques you want to be enabled. Make sure that **Embroidery** technique is enabled.



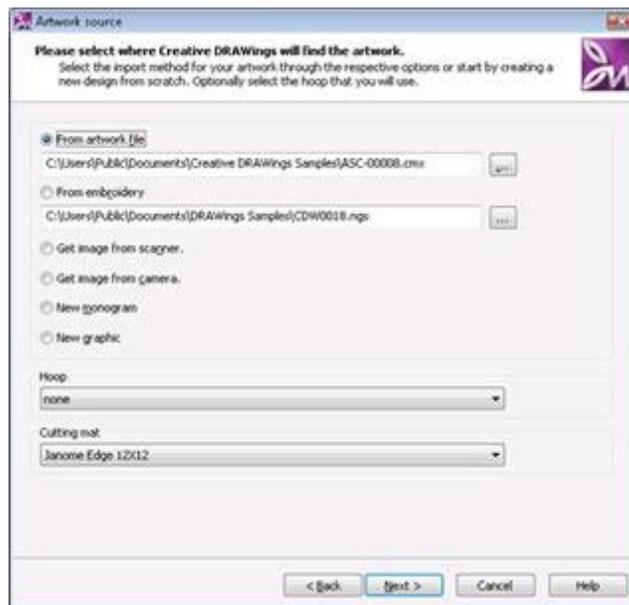
Select the Techniques that you want to be enabled

5. When you have enabled any of the **Embroidery**, **Crystals** or **Paint** techniques then the **Fabric** dialog will appear. Using this dialog you must select a fabric type and a color that is as close as possible to the one you are going to produce the design on. Expand any of the fabric categories, by clicking on the + icon next to it, to select a fabric and-or a color for the fabric. After selecting the **Fabric**, choose the color from the list at the middle of the dialog. The Fabric selection is not just an issue of previewing the design on the fabric. The software automatically adjusts, according to the selected fabric, various embroidery parameters. Embroidery quality depends on some of these parameters. The software suggests the appropriate backing materials for every fabric, in the printout of each design. In case that you don't want to preview the design on any fabric you can select the **none** option that exists in any of the fabric categories. In this case only the color that is select in fabric dialog will appear in the background of the created design. More information about Fabric selection is provided into a separate topic. After selecting a Fabric and a color for the fabric click on Next to proceed.



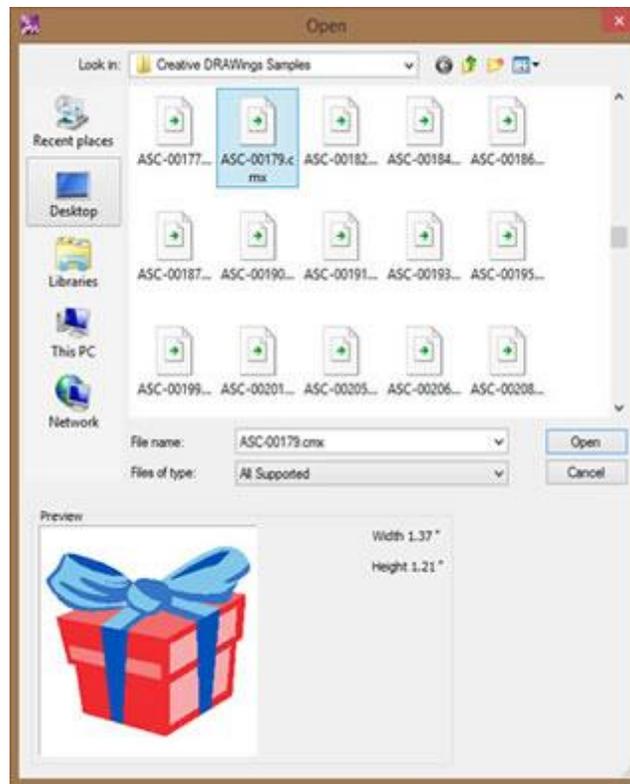
Select fabric dialog

6. The **Artwork source** dialog will appear. Select the **From File** option. Click on the browse button  at the right to import the design you want to embroider.



Artwork source dialog

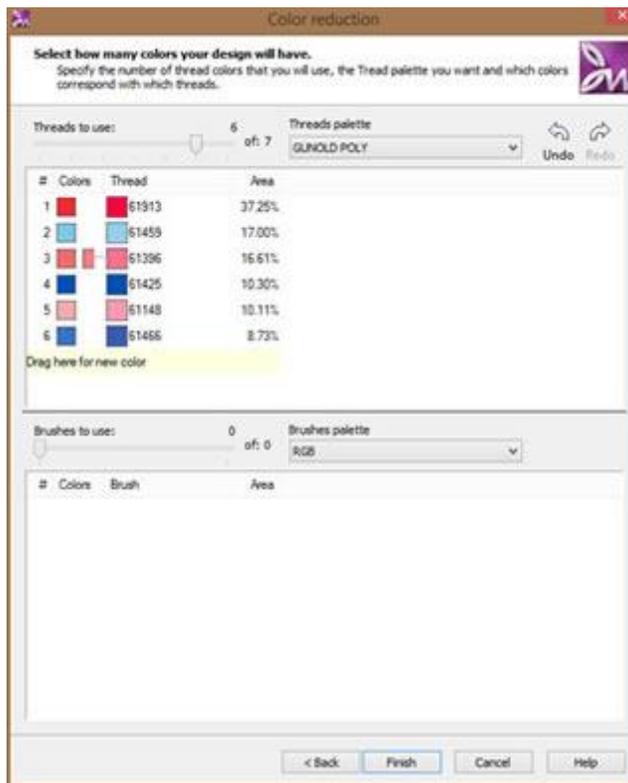
7. The **Open** dialog box will appear from where you can find the design you want to embroider.



Open design dialog

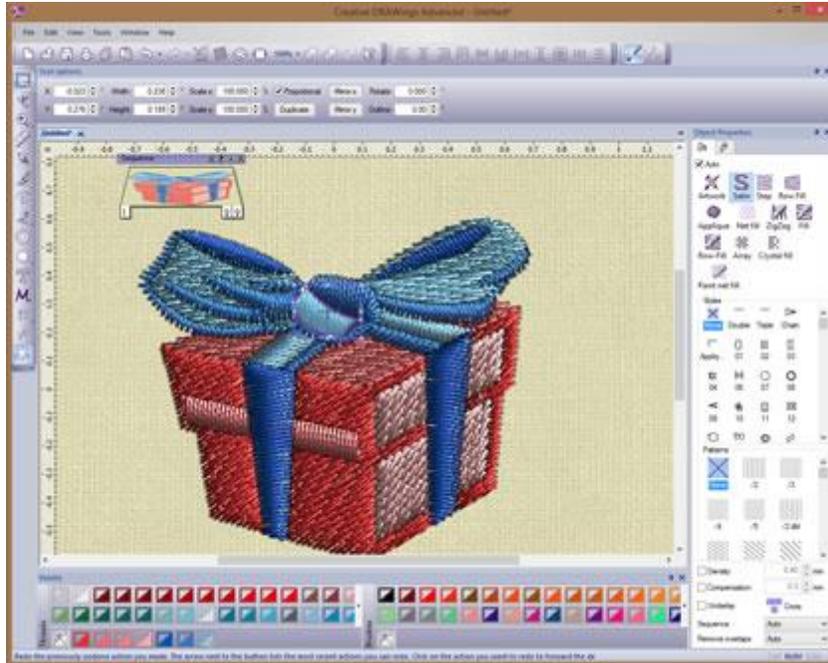
8. Click on **My documents** folder at left side of the dialog.
9. Then find and double click on the **Embroidery designs** folder
10. Inside **Embroidery designs** folder you will find another folder called **Creative DRAWings samples**. Double click on it.
11. Inside the **Creative DRAWings samples** folder you will find ready-made **Vector** (clipart) designs that you can import into Creative DRAWings® and convert them to stitches. You can select to embroider any of them but for our example we will use the **ASC_00179.cmx** file as it is shown in figure above.
12. Select it and click the **Open** button.
13. The **Artwork source** dialog will appear once more with the design you have selected under **From file** field.
14. At the **Hoop** section of the same dialog, you can select the hoop which you will embroider your design on. If the hoop your machine supports does not exist in the list select one with similar dimensions. You can create your custom hoops easily inside Creative DRAWings®. (Information on adding specific hoops will be covered later in the manual.)
15. After selecting the hoop, click **Next>** to continue.
16. The **Color reduction** (number of threads) dialog will appear where you can select the **Thread palette**.

17. Click on the arrow of **Palette** and the drop-down menu will show the threads available.
18. Select the brand-name threads you want to use by clicking on the list. For example, select **Gunold Poly** thread.
19. The colors of the design you are importing will automatically be assigned to the closest thread color of the **Gunold Poly** thread palette.



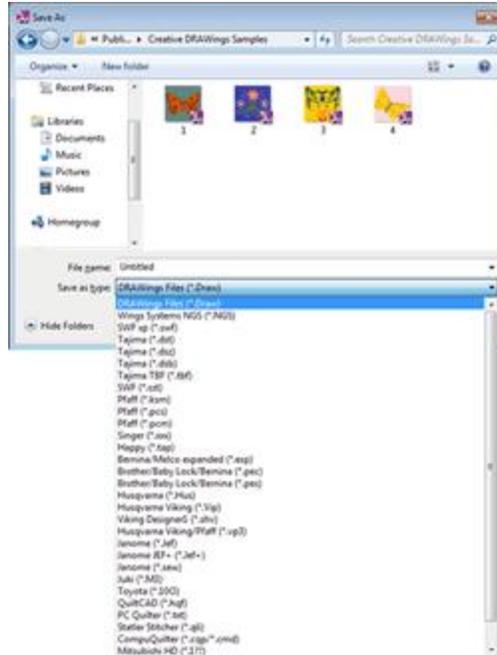
Color reduction dialog

20. In **Color reduction** dialog you can see that the design has 7 colors in **Threads to use**. You can reduce the number of colors in the design by moving the arrow to the left. Click **Finish** to end the process and convert the imported design to stitches.
21. The design will appear in the working area filled with stitches.



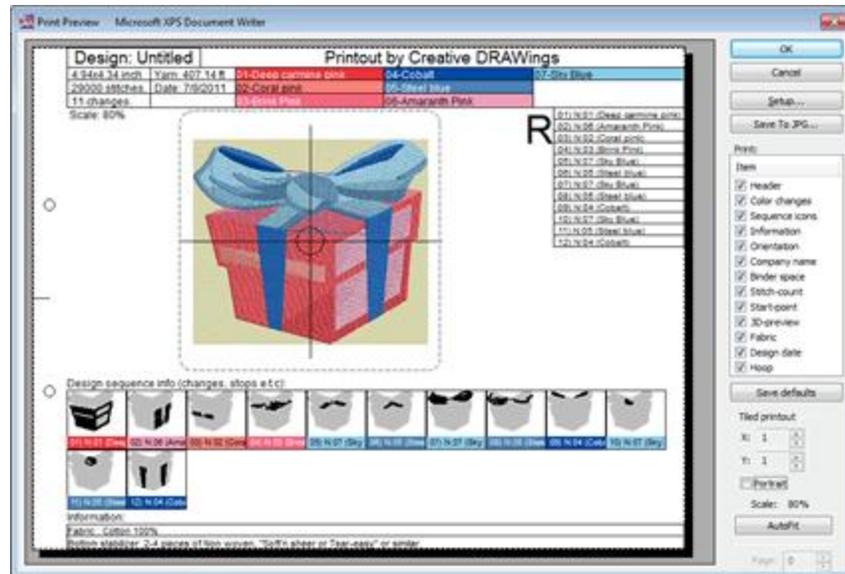
The imported design converted to stitches

22. The **3D** design will be positioned at the center of the hoop which you selected from the starting dialog.
23. There are many available changes to do on the artwork or on the stitches of the design inside Creative DRAWings® but we will not explain them now in this section. The design which was produced here can be embroidered as is without any problem. The important thing right now is that you can see what this fantastic software can do by sewing out your first embroidery design.
24. Before embroidering, save your design to the embroidery file format which your machine supports. Select **File** menu, **Save as** option.
25. The **Save As** dialog will appear. Select a location to save all your embroidery files. For example, file to **My documents> Embroidery designs**. You can also save designs directly to a floppy disk or to your memory card.



Save As dialog box

26. In the **File name** field, give your design a name. For example, type **My first Embroidery**.
27. Then click on the arrow of **Save as type** drop-down menu to view the available file-type options. Select any that your embroidery machine reads. For example, if you have “**Brother**” embroidery machine you have to select the **.pes** or **.pec** embroidery file format. Always remember to save your design in **.draw** file format before saving it to any embroidery machine’s file format. This file format holds all design information that is necessary to re-use this design without any loss.
28. Once you are ready, click **Save**. The design will be saved in the location you chose with the name you gave to it. If you have saved the design directly to a floppy disk, a thumb drive, or to your hard drive, you are ready to download it to your embroidery machine’s memory card and sew it out. Otherwise you have to:
 - A. Open Windows Explorer,
 - B. Browse to the location you saved it,
 - C. Right click on the file and from the right click menu expand the **Send to** submenu
 - D. Save to a 3.5 Floppy disk (A:) or to a thumb drive
 - E. Then the design can be downloaded to your embroidery machine’s memory card to be sewn out. (Note: in big commercial machines, the file can be downloaded directly to the machine’s memory.
29. After saving the design, make a printout so you can set the functions of the embroidery machine correctly and sew it out without any problem.
30. To do that, from **File** menu select **Print** option.



Printout of the design

31. The **Print preview** dialog of the design will appear where all the information you need is listed to embroider the design correctly. If you have a printer you can press **OK** button and make a **Printout** of the design. If you do not have a printer or don't want to print it, you can save it as an image file and view it with the standard image viewer of Windows.
32. To save the **Printout** as image file, you have to click on the **Save to JPG** button.
33. The **Save printout as** dialog will appear where you have to:
 - A. Specify the location you want the image to be saved.
 - B. Type the **File name** you want the image to have
 - C. Click on **Save** button.
 - D. You can view the saved image by double clicking on it.
34. All the information you need in order to embroider a design is listed in the **Printout**, including the embroidery design's sequence (1-2-3 order of sewing out), the color changes, the number of stitches, and much more useful information.
35. You are ready -- Download the file to your embroidery machine, use the **Printout** as your guide to set up your machine, and embroider the design you have just created.

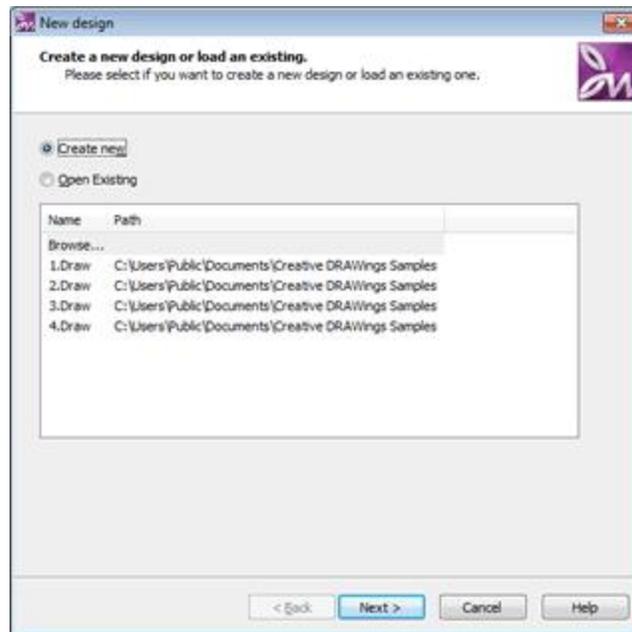
Scan a design and embroider it

Sometimes we may find a design in a magazine or a flyer which you would like to embroider but don't realize how easy it is to acquire the image. If your computer has a scanner installed, you can scan and import almost any design you want to embroider.

Important: The design which you want to convert to stitches must be compatible for embroidery and must be able to be filled with stitches. Photos from your camera cannot be easily filled with stitches. Later, you'll learn to Trace your photos and then fill with stitches.

Follow these steps to convert a **Bitmap** (picture) images to an embroidery design with your scanner:

1. Turn on the scanner and place the image in it.
2. Open **Creative DRAWings** by double clicking on the desktop icon 
3. Creative DRAWings® application will open and the starting dialog New Design will appear.



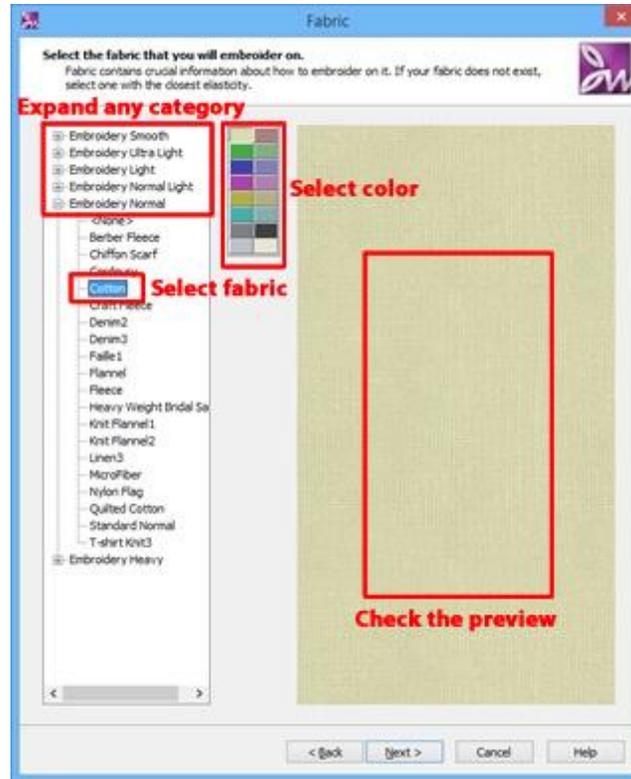
Starting dialog

4. Select the **Create new** option and click **Next>** button.
5. From the next dialog select which techniques you want to be enabled. Make sure that **Embroidery** technique is enabled.



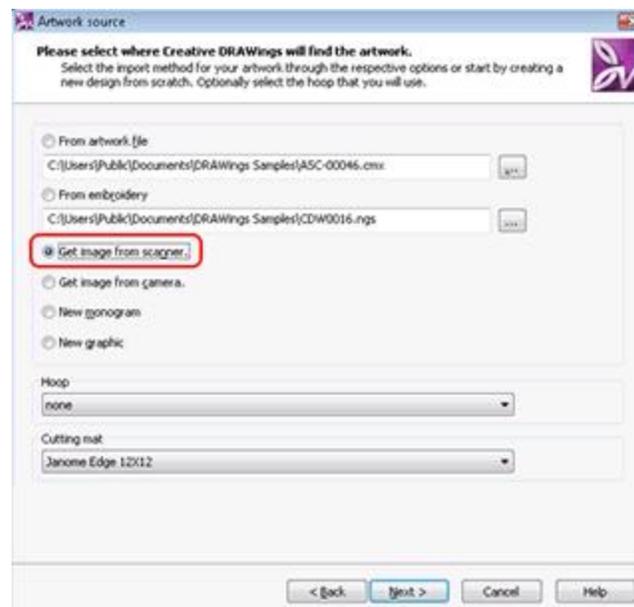
Select the Techniques that you want to be enabled

- When you have enabled any of the **Embroidery**, **Crystals** or **Paint** techniques then the **Fabric** dialog will appear. Using this dialog you must select a fabric type and a color that is as close as possible to the one you are going to produce the design on. Expand any of the fabric categories, by clicking on the + icon next to it, to select a fabric and-or a color for the fabric. After selecting the **Fabric**, choose the color from the list at the middle of the dialog. The Fabric selection is not just an issue of previewing the design on the fabric. The software automatically adjusts, according to the selected fabric, various embroidery parameters. Embroidery quality depends on some of these parameters. The software suggests the appropriate backing materials for every fabric, in the printout of each design. In case that you don't want to preview the design on any fabric you can select the **none** option that exists in any of the fabric categories. In this case only the color that is select in fabric dialog will appear in the background of the created design. More information about Fabric selection is provided into a separate topic. After selecting a Fabric and a color for the fabric click on Next to proceed.



Select fabric dialog

7. The **Artwork source** dialog will appear.



Starting dialog - 2nd page

8. Select the **Get image from scanner**.

9. At the **Hoop** section of the same dialog, you can select the hoop that you will embroider your design on. If the hoop your machine supports don't exist in the list, select one with similar dimensions. You can create your custom hoops easily inside Creative DRAWings® later.
10. Click **Next>** button to continue.
11. The **Image Scan** dialog appears.

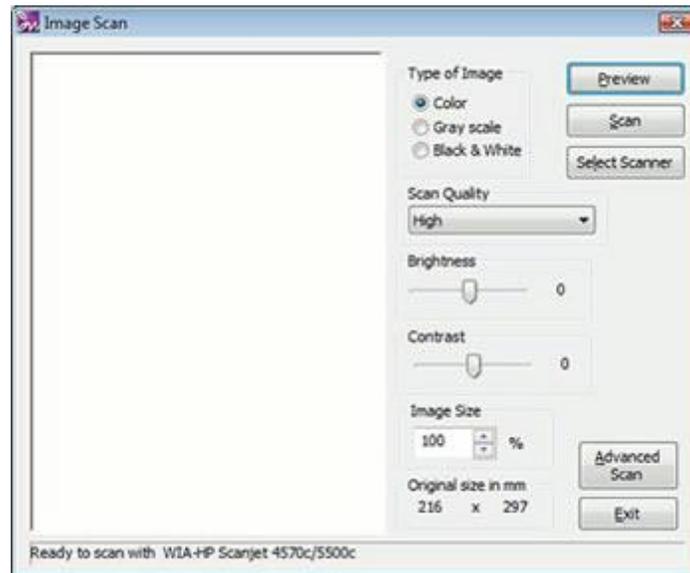
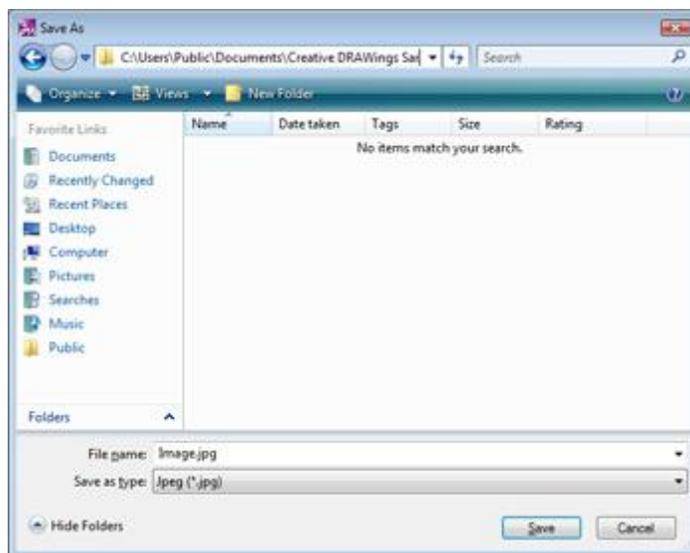


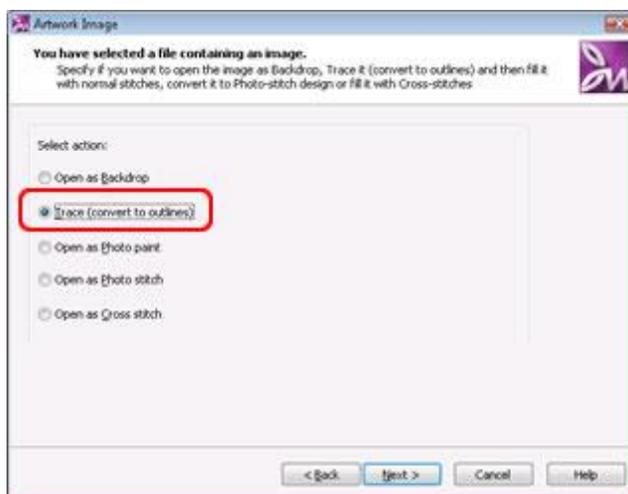
Image scan dialog

12. The **Image Scan** dialog helps you scan the image you want to embroider and import it into Creative DRAWings®. If your scanner is correctly installed, all you have to do is press the **Preview** button.
13. The design will be scanned and the image will appear in **Preview**. You can specify the exact image to want to embroider in **Preview** by drawing a rectangle with your cursor. Only the area inside the rectangle will be embroidered.
14. If the design in the **Preview** is what you want to embroider, press the **Scan** button to continue.
15. Then you will be asked to save the design on your hard disk. The **Save As** dialog will appear.



Save as dialog

16. Select **My documents** icon from the left side and then double click on the **Embroidery designs** folder.
17. In the **File name** field, type a name for your image.
18. Select **Save** button to save the scanned image. The scanned image is saved as bitmap image (like photo) with **.jpg** file extension.



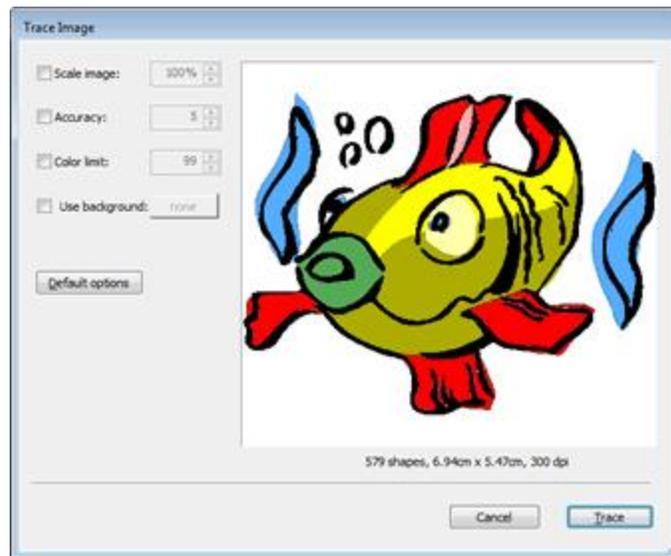
Artwork image dialog

19. The **Artwork Image** dialog will appear providing four conversion options.
 - a. **Open as Backdrop:** This option can import the image into Creative DRAWings® without any changes. The image is used as a reference to create an embroidery design from scratch. You select and draw freehand what objects you want in your design.
 - b. **Trace (convert to outlines):** This option will guide you to convert the **Bitmap** (picture) image that you are importing to a **Vector** (clipart) based image which will be filled with standard embroidery (Satin, Step, Satin serial or Running stitches). Tracing a **Bitmap** image is not an easy procedure;

therefore you must be careful with the images which you are tracing. They must be clear so that they can be actually embroidered. (Such image is the one that it is shown in the following figure)

- c. The **Open as Photo paint** option can convert the bitmap file directly into **photo paint** design.
- d. **Open as Cross stitch:** This option imports the image as it is and fills it with cross-stitches (X's). This is the easiest way to fill a **Bitmap** (picture) image with stitches and it is the best choice for images which cannot be embroidered with standard embroidery stitches.
- e. **Open as Photo stitch:** This option will convert the imported image from scanner into a **Photo stitch** design.

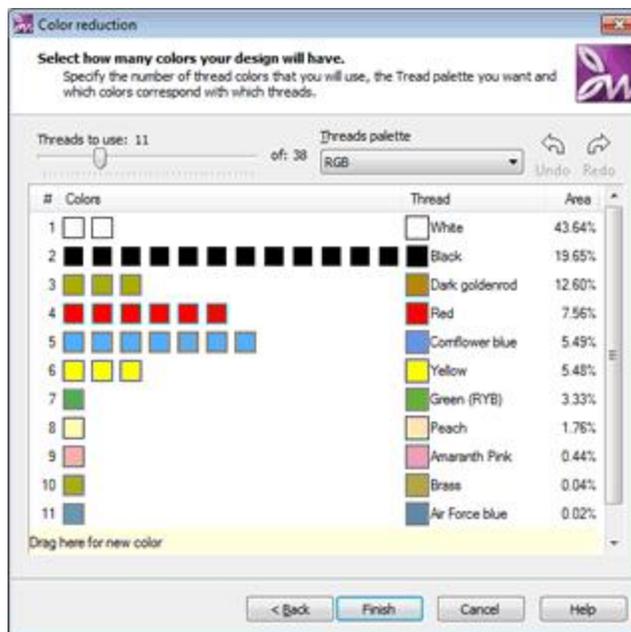
20. In our example we will select **Trace** option and press the **Next>** button.



Trace image dialog

21. **Trace Image** dialog will appear with the scanned image. In the **Preview** area you can see how the result of the traced picture will look like. The **Vector** (clipart) design from tracing the scanned image is the same image you see in the **Preview** of the **Trace Image** dialog. What you see is what you get. And with Creative DRAWings® it's what will be . . . when sewn out.
22. You can also adjust the traced result by changing the available options which are listed at the left side of the dialog.
 - a. You can change the size of the **Trace** result by adjusting the **Scale image** option.
 - b. You can set how exact the traced image will be to the scanned image by adjusting the **Accuracy** value.
 - c. You can select the number of colors for your traced image by adjusting the **Color limit** value.
 - d. And you can remove the background color that the scanned **Bitmap** images usually have by using the **Use background** option.
 - e. Any changes you make to these options are automatically adjusted by Creative DRAWings® and shown in **Preview**. We will learn of these options more in the next chapter.
23. Use the default options for this example and press the **Trace** button.

24. The **Color reduction** dialog will appear where you can select the **Thread palette** you will use.
25. Click on the arrow of the **Palette** drop-down menu and the available thread manufacturers will appear.
26. Select the brand-name thread you want by choosing it from the list. For example, select **Gunold poly**.
27. The colors of the design you are importing will automatically be assigned to the closest thread color of the **Gunold poly** in the **Thread palette**



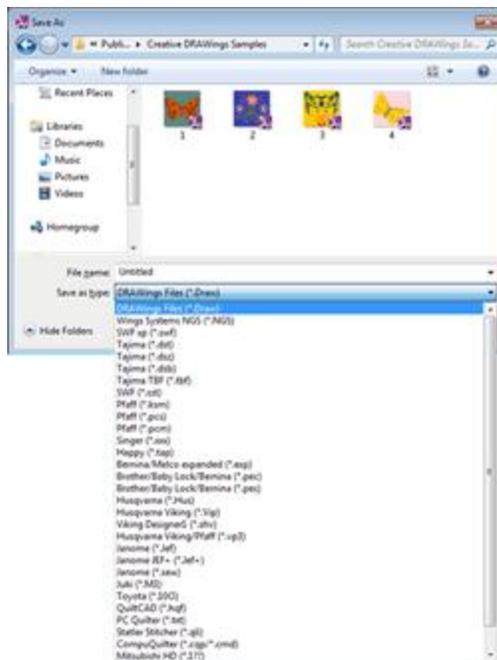
Color reduction dialog

28. In the same dialog you can see that your design has 38 different colors of thread. The number of colors can be reduced now by sliding the **Threads to Use** arrow to the left. Color reduction can also be applied later inside the software. The reduction of colors from 38 to let's say 11 won't affect the design much, but the embroidery time will be reduced. Take some time and use the slider of **Threads to use**. Finally click **Finish** to end the process and convert the imported design to stitches.
29. The design will appear in the working area filled with stitches.



The traced image converted to stitches

30. The design will be positioned at the center of the hoop you selected in the starting dialog.
31. Many changes can be made in the design which was produced by scanning the Fish image. We will not take the time here to explain them, but we must say that the **Traced** design must be edited to increase its quality and to prepare it for embroidery. By increasing the quality of the **Vector** artwork you automatically increase the quality of the embroidery design.
32. When finished editing your design, you can proceed to the embroidering process. Save the design to any embroidery file format that your machine can read. Select from **File** menu the option **Save As**.
33. The **Save As** dialog will appear. Select a location to save all your embroidery files. For example, file to **My documents> Embroidery designs**. You can also save designs directly to a floppy disk or to your memory card.



Save As dialog box

34. In the **File name** field, name your design file. For example, type **My second Embroidery**.
35. In the **Save as type** box, click on the drop-down arrow to select an embroidery format for the saved design. You must always use the ones that are suitable for your embroidery machine. For example, if you have “Brother” embroidery machine you have to select the **.pes** or **.pec** embroidery file format.

Tip: Always remember to save the design in **.draw** file format before saving it to any embroidery machine's format. This format holds all design information and can be used easily again and again to reproduce for any embroidery machine file.

36. When finished with the design, click **Save**. The design will be saved in the location you chose with the name you gave to it. If you have saved the design directly to a floppy disk, a thumb drive, or to your hard drive, you are ready to download it to your embroidery machine's memory card and sew it out. Otherwise you have to:
 - A. Open Windows Explorer,
 - B. **Browse** to the location you saved it,
 - C. Right click on the file and from the right click menu expand the **Send to** submenu
 - D. Save to a 3.5 Floppy disk (A:) or to a thumb drive.
 - E. The design can be downloaded to your embroidery machine's memory card to be sewn out. (Note: in big commercial machines, the file can be downloaded directly to the machine's memory).
37. After saving the design, make a printout so you can set the functions on the embroidery machine correctly and then sew it out without any problem.
38. To do that, from **File** menu select **Print** option.

39. The **Print preview** dialog of the design will appear with all the listed information you need to embroidery the design correctly. If you have a printer you can press **OK** button and make a **Printout** of the design. If you do not have a printer or you do not want to print it, you can save it as an image file and view it with an image viewer.
40. To save the **Printout** to as image file, you have to click on the **Save to JPG** button.
41. The **Save printout as** dialog will appear where you have to
 - a) Specify the location you want the image to be saved,
 - b) Type the **File name** you want the image to have
 - c) Click **Save** button. You can view the saved image simply by double clicking on it.
42. All the information you need is listed in the **Printout**, including the embroidery design's sequence (1-2-3 order of sewing out), the color changes, the number of stitches, and much more useful information.
43. You are ready -- Download the file to your embroidery machine, use the printout as your guide to set up your machine, and embroider the design you have just created.

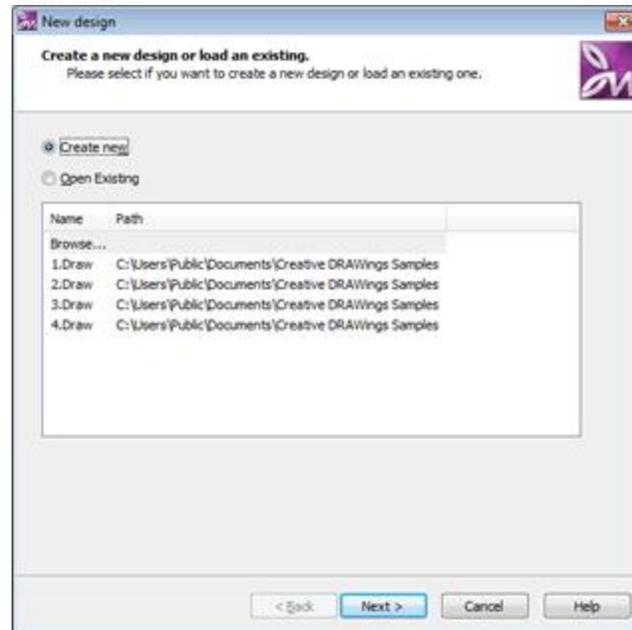
Get image from camera

Another way to acquire an image from a magazine or a flyer or from a drawing you have created on a page is by using any camera that is attached on your pc. If your computer has a camera installed (most modern laptops have a camera already installed), you can capture a snapshot image and import almost any design you want to embroider.

Important: The design which you desire to convert to stitches must be suitable for embroidery in order to be filled correctly with stitches.

Follow these steps to convert a **Bitmap** (picture) images to an embroidery design with your **camera**:

1. Start *Creative DRAWings* application by double clicking on shortcut icon  that you will find on your **Desktop**.
2. *Creative DRAWings* application will open and the starting dialog named New Design will appear.



Starting dialog

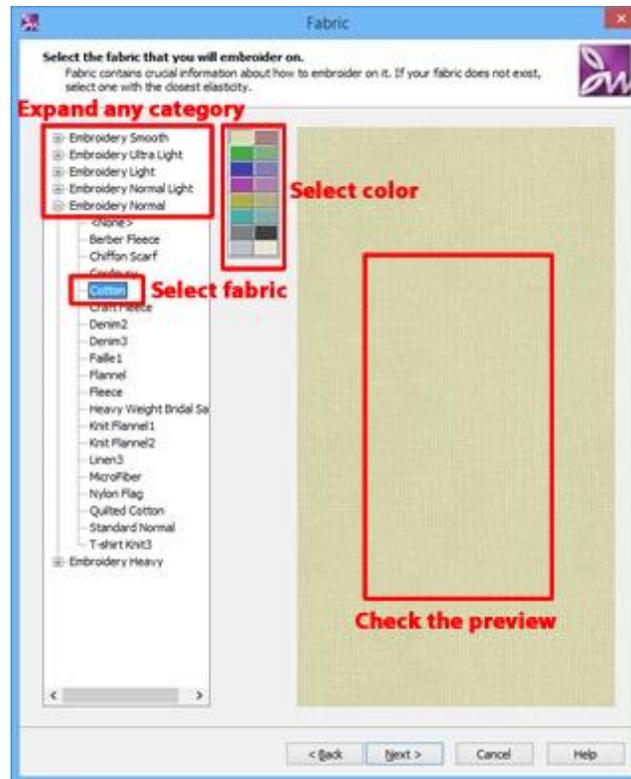
3. Select the **Create new** option and click **Next>** button.
4. From the next dialog select which techniques you want to be enabled. Make sure that **Embroidery** technique is enabled.



Select the Techniques that you want to be enabled

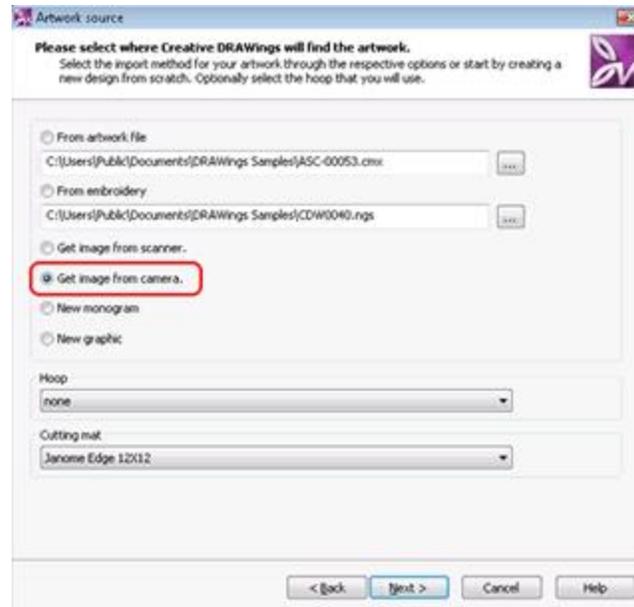
5. When you have enabled any of the **Embroidery**, **Crystals** or **Paint** techniques then the **Fabric** dialog will appear. Using this dialog you must select a fabric type and a color that is as close as possible to

the one you are going to produce the design on. Expand any of the fabric categories, by clicking on the + icon next to it, to select a fabric and-or a color for the fabric. After selecting the **Fabric**, choose the color from the list at the middle of the dialog. The Fabric selection is not just an issue of previewing the design on the fabric. The software automatically adjusts, according to the selected fabric, various embroidery parameters. Embroidery quality depends on some of these parameters. The software suggests the appropriate backing materials for every fabric, in the printout of each design. In case that you don't want to preview the design on any fabric you can select the **none** option that exists in any of the fabric categories. In this case only the color that is select in fabric dialog will appear in the background of the created design. More information about Fabric selection is provided into a separate topic. After selecting a Fabric and a color for the fabric click on Next to proceed.



Select fabric dialog

6. The Artwork source dialog will appear.
7. Select the **Get image from camera** option.
8. At the bottom of the dialog you can select a Hoop to be used for the design. If you can find any Hoop that is compatible to your machine select one with similar dimensions. You can also create custom hoops easily.



Starting dialog - 2nd page

9. Click **Next>** button to continue.
10. The camera **Preview** dialog appears.

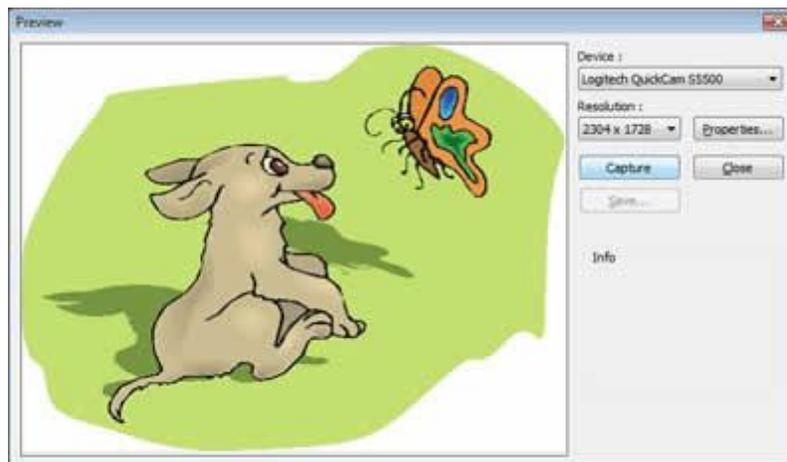


Image scan dialog

11. The camera **Preview** dialog helps you capture the image you want to embroider and import it into *Creative DRAWings*. If your camera is correctly installed, all you have to do is press the **Capture** button and take a snapshot of the design you want.
12. The design will be captured and the image will appear in **Preview** area. You can specify the exact image to want to embroider (crop image) in **Preview** by drawing a rectangle with your cursor. Only the area inside the rectangle will be embroidered. We will leave it as it is.

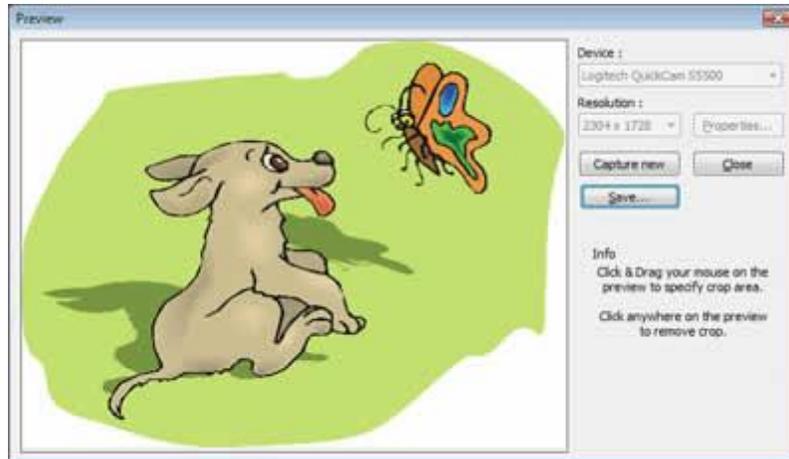
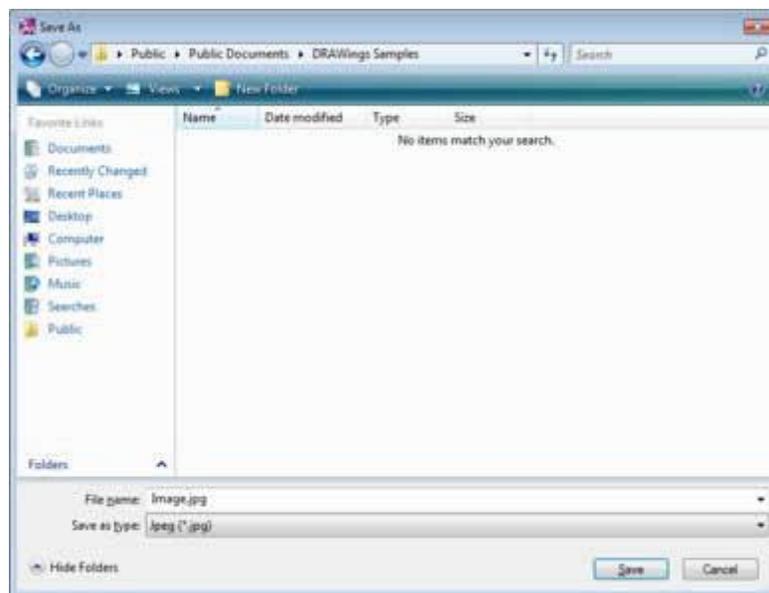


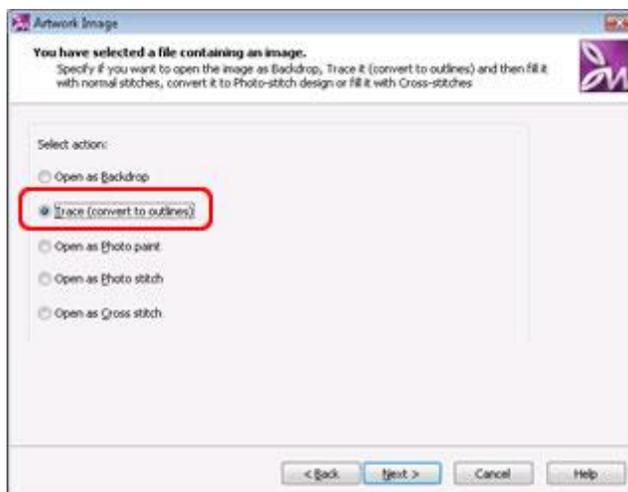
Image scan dialog

13. If you are not satisfied with the image you captured you can click on the **Capture new** button and take a new snapshot.
14. If the design in the **Preview** is what you want to convert, press the **Save** button to continue.
15. Then you will be asked to save the design on your hard disk. The **Save As** dialog will appear.



Save as dialog

16. Select **Documents** icon from the left side and then double click on the **Embroidery designs** folder.
17. In the **File name** field type a name for your image.
18. Select **Save** button to save the scanned image. The captured image is saved as bitmap image (like photo) with **.jpg** file extension.



Artwork image dialog

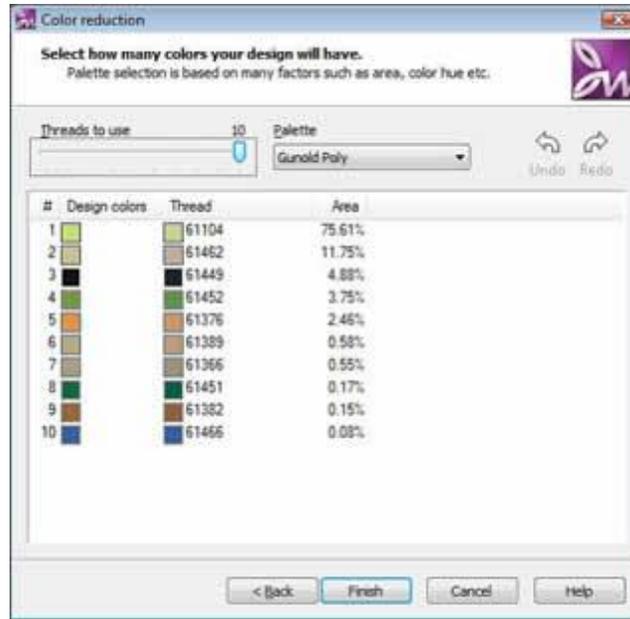
19. The **Artwork Image** dialog will appear providing four options.
- Open as Backdrop:** This option imports the image into *Creative DRAWings* without any changes. The image is used as a reference to create an embroidery design from scratch. You select and draw freehand what objects you want in your design.
 - Trace:** This option will guide you to convert the **Bitmap** image that you are importing into a **Vector** design that will be filled with stitches. Tracing a **Bitmap** image is not an easy procedure; therefore you must be careful with the images which you are tracing. They must be clear and ones that can be actually embroidered.
 - The **Open as Photo paint** option can convert the bitmap file directly into **photo paint** design.
 - Open as Cross-stitch**, this option will convert the camera snapshot into a cross stitch design.
 - Open as Photo stitch**, using this option you can convert the design into **Photo stitch** design.
20. In our example we will select the **Trace** option and press the **Next>** button.



Trace image dialog

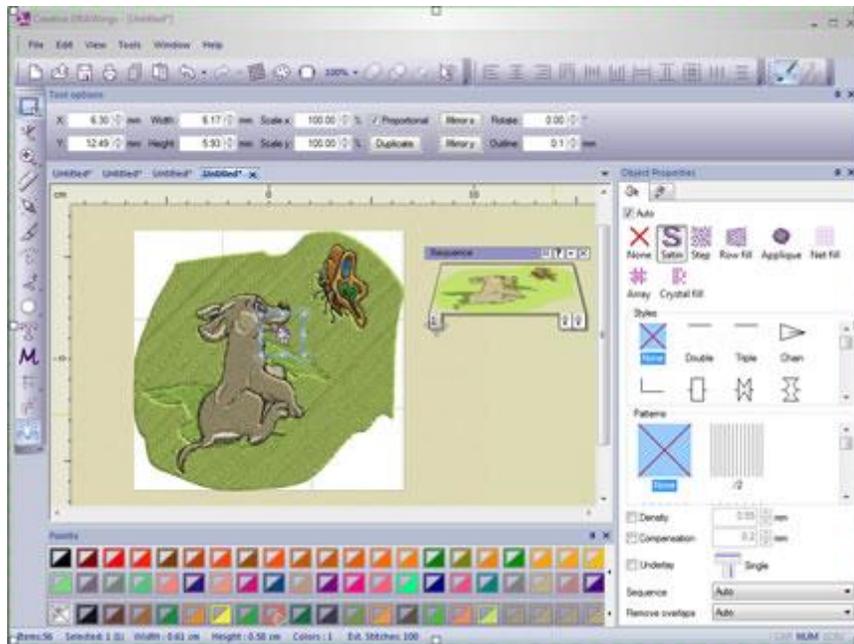
21. The **Trace Image** dialog will appear with the captured image imported. In the **Preview** on the right you can see what the traced result of the **Bitmap** (picture) image will look like. The **Vector** (clipart) design from tracing the scanned image is the same image you see in the **Preview** of the **Trace Image** dialog. What you see is what you get. And with *Creative DRAWings* it's what will be embroidered.
22. You can also adjust the traced result by changing the available options which are listed at the left side of the dialog.
 - a. You can change the size of the **Trace** result by adjusting the **Scale image** option.
 - b. You can set how exact the traced image will be to the scanned image by adjusting the **Accuracy** value.
 - c. You can select the number of colors for your traced image by adjusting the **Color limit** value.
 - d. And you can remove the background color that the scanned **Bitmap** images usually have by using the **Use background** option.

Any changes you make to these options are automatically applied and shown in the **Preview** area. We will refer to these option in more detail in the next chapter.
23. Change the **Color limit** to 15, and press the **Trace** button.
24. The **Color reduction** dialog will appear to select a **Thread palette** to be used for the design.
25. Use **Palette** drop-down menu to review the available thread manufacturers and select one that you prefer. For example, select **Gunold Poly**.
26. The colors of the converted design will be automatically assigned to the closest thread color of the **Gunold Poly** in the **Thread palette**.



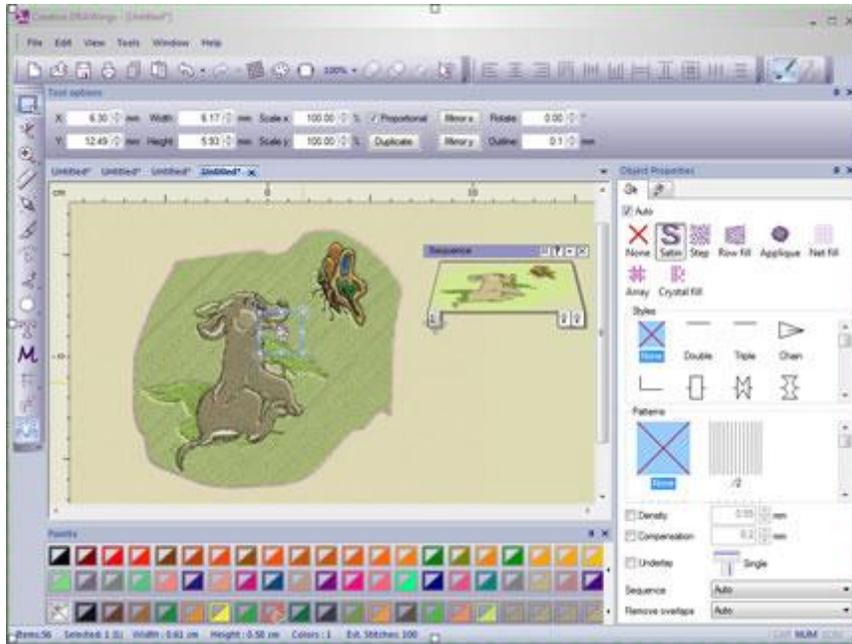
Color reduction dialog

27. In the same dialog you can see that your design has 10 colors of thread. You can reduce the available colors, using the **Threads to use** slider. Click **Finish** to end the process and convert the imported design into stitches.
28. The design will appear in the working area filled with stitches.



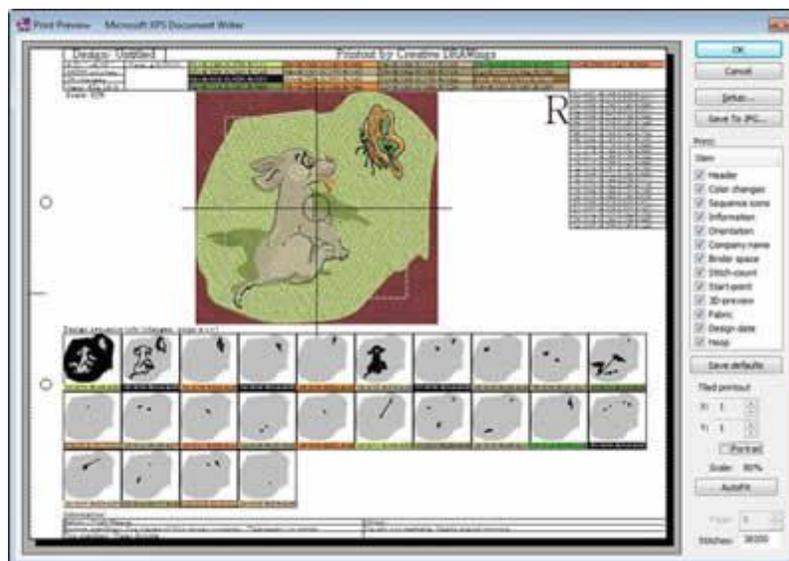
The traced image filled with stitches

29. The design will be positioned at the center of the selected hoop.
30. We can use the option **Backdrop -> Hide** from **View** menu to hide the backdrop that has been also imported, in order to work easier with the actual design.



Remove unneeded objects and hide backdrop image

31. Now we are ready to edit and save the design.
32. You can make a printout so that you can set the functions on the embroidery machine correctly and then sew it out without any problem.
33. To do that, from **File** menu select **Print** option.
34. The **Print preview** dialog of the design will appear with all the listed information you need to embroider the design correctly. If you have a printer you can press **OK** button and make a **Printout** of the design. If you do not have a printer or you do not want to print it, you can save it as an image file and view it with an image viewer.



Printout dialog box

35. To save the **Printout** to as image file, you have to click on the **Save to JPG** button.

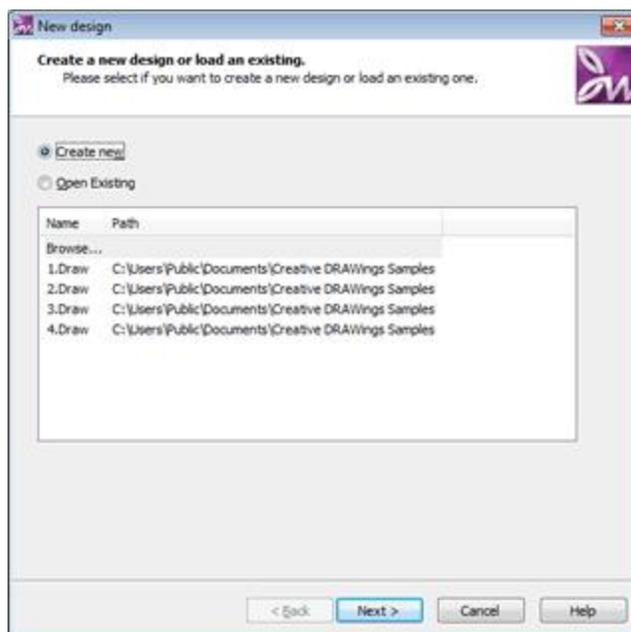
36. The **Save printout as** dialog will appear where you have to
 - A. Specify the location you want the image to be saved,
 - B. Type a **File name** you want the image to have
 - C. Click on **Save** button.
 - D. You can view the image you have saved by double clicking on it.
37. All the information you need is listed in the **Printout**, including the embroidery sequence the color changes, the number of stitches, and much more useful information.
38. You are ready – Load the file to your embroidery machine, use the printout as your guide to set up your machine, and embroider the design you have just created.

Import a stitch file and embroider it

Creative DRAWings® gives you the ability to import stitch files (.dst, .pes, .hus, .M3, .ngs, etc.) and work with them. You can change colors, move and slant stitch objects, add new embroidery objects by designing them from scratch, or copying and pasting them from a different source. You can also convert the **Stitch** objects into **Vector** (clipart) objects which will allow you to change their stitch types and shapes.

This is a step-by-step tutorial to guide you on importing a **Stitch** file inside Creative DRAWings®, change colors, add text and produce a new embroidery design based on an old design.

1. Start **Creative DRAWings** application by double clicking on this shortcut icon  on your Desktop.
2. Creative DRAWings® will open with the starting dialog of **New Design**.



Starting dialog

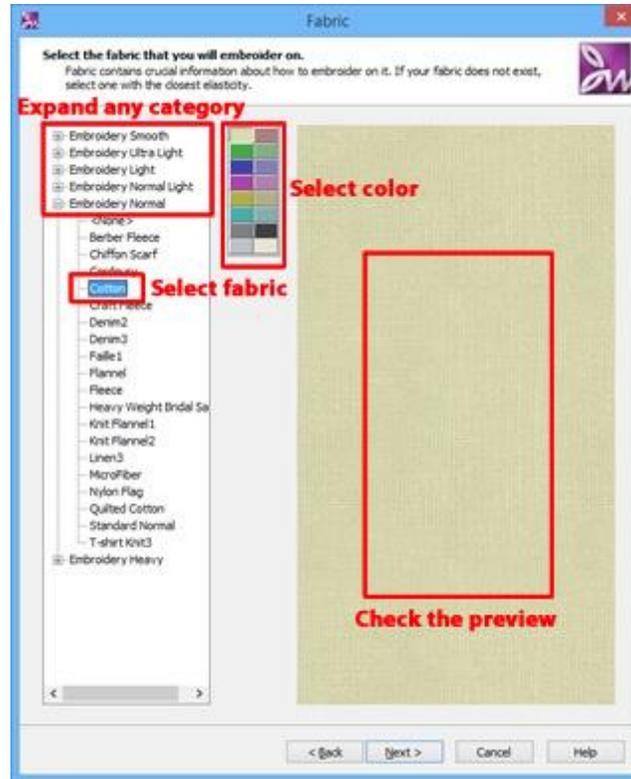
3. Select the **Create new** option and click **Next>** button.

- From the next dialog select which techniques you want to be enabled. Make sure that **Embroidery** technique is enabled.



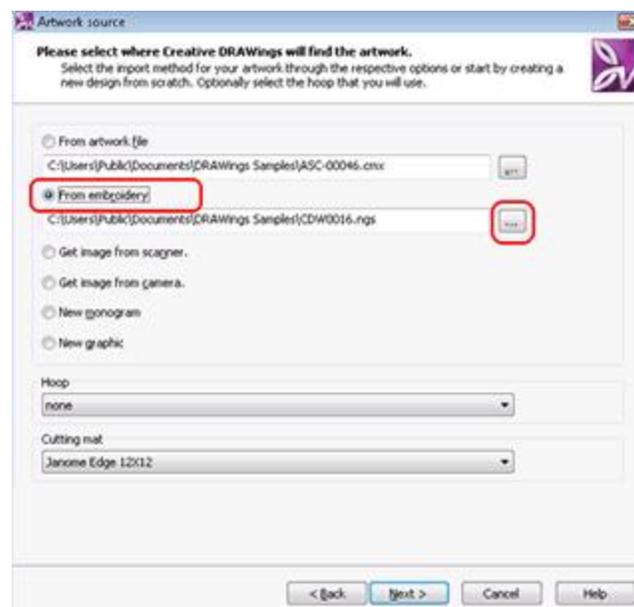
Select the Techniques that you want to be enabled

- When you have enabled any of the **Embroidery**, **Crystals** or **Paint** techniques then the **Fabric** dialog will appear. Using this dialog you must select a fabric type and a color that is as close as possible to the one you are going to produce the design on. Expand any of the fabric categories, by clicking on the + icon next to it, to select a fabric and-or a color for the fabric. After selecting the **Fabric**, choose the color from the list at the middle of the dialog. The Fabric selection is not just an issue of previewing the design on the fabric. The software automatically adjusts, according to the selected fabric, various embroidery parameters. Embroidery quality depends on some of these parameters. The software suggests the appropriate backing materials for every fabric, in the printout of each design. In case that you don't want to preview the design on any fabric you can select the **none** option that exists in any of the fabric categories. In this case only the color that is select in fabric dialog will appear in the background of the created design. More information about Fabric selection is provided into a separate topic. After selecting a Fabric and a color for the fabric click on Next to proceed.



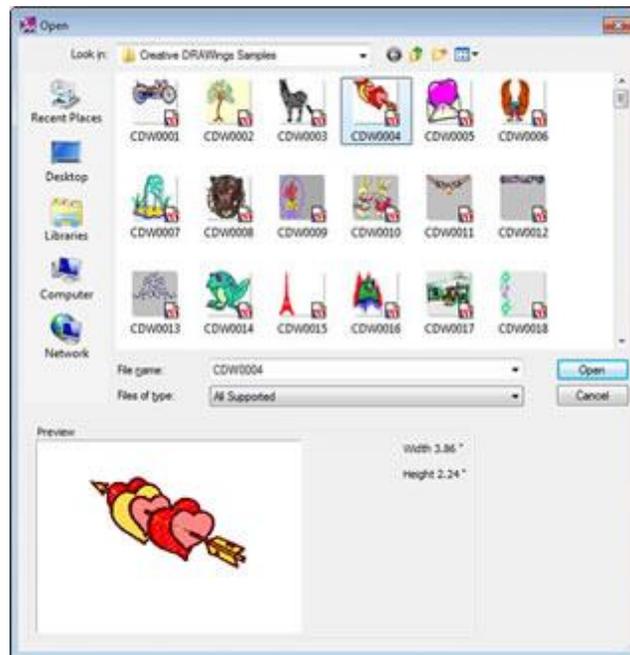
Select fabric dialog

6. The **Artwork source** dialog will appear.
7. Select the From Embroidery option at the top of the dialog.
8. Click on the browse button  at the right to import the **Stitch** file design you want to embroider.



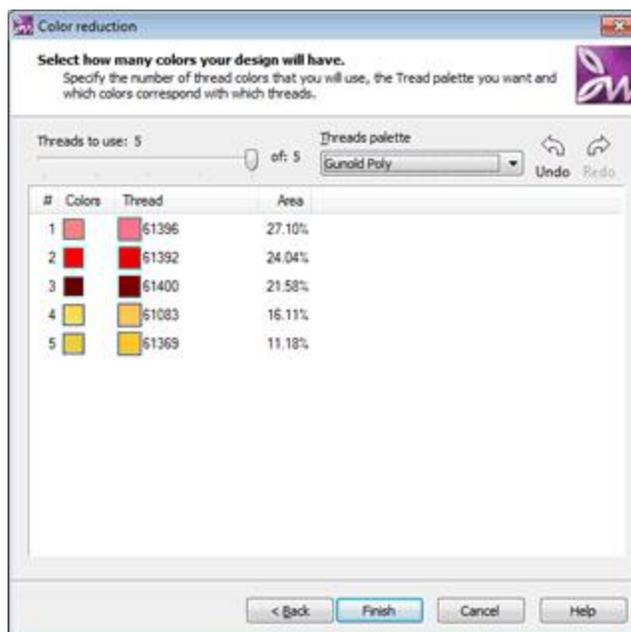
Starting dialog - 2nd page

9. The **Open** dialog box will appear and you can find the design you want to embroider.

*Open design dialog*

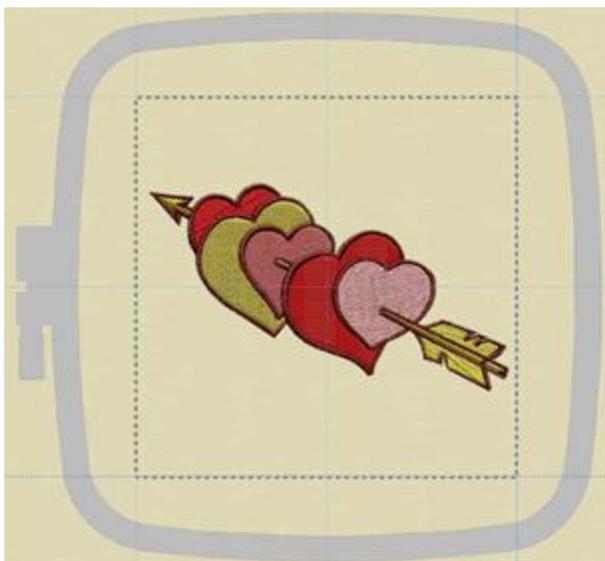
10. Click on **My documents** folder at left side of the dialog.
11. Find and double click on the **Embroidery designs** folder.
12. Inside **Embroidery designs** folder, you will find another folder called **Creative DRAWings samples**. Double click to open it.
13. Inside the **Creative DRAWings samples** folder you will find **.ngs** stitch files which you can import into Creative DRAWings®. You can import any of them, but for our example we will use the **CDW0004.ngs** file.
14. Select it and click the **Open** button.
15. The Artwork source dialog will appear once more with the design you selected under **From Embroidery** field.
16. At the **Hoop** section of the same dialog, you can select the hoop that you will embroider your design on. If no hoop that your machine supports exists in the list, select one with similar dimensions. You can create your custom hoops easily (Information on adding specific hoops will be covered later in this manual.)
17. After selecting the **Hoop**, click **Next>** to continue.

18. The **Color reduction** (number of threads) dialog will appear where you can select your **Thread palette**. Use Palette drop-down menu to select any of the available thread manufactures palette. For example, select **Gunold Poly** thread.
19. The colors of the design you are importing will automatically be assigned to the closest thread color of the **Gunold Poly** in the **Thread palette**.



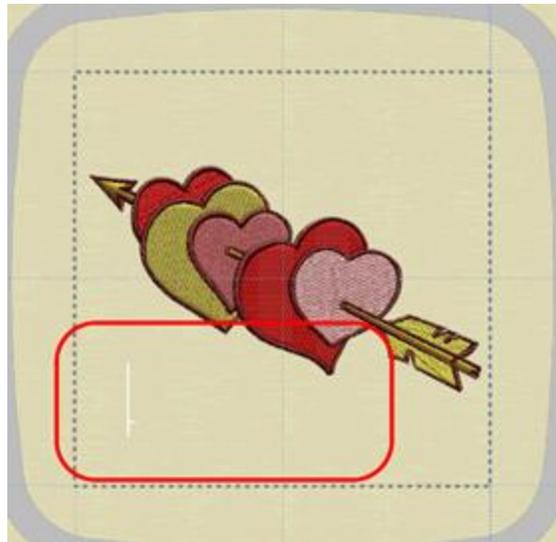
Color reduction dialog

20. In the same dialog you can also reduce the number of the design colors. Our design has 5 different colors of thread. The number of colors can be reduced now, or later inside the software. Click **Finish** to end the process and convert the imported design into stitches.
21. The design will appear in the working area filled with stitches.



The imported design converted to stitches

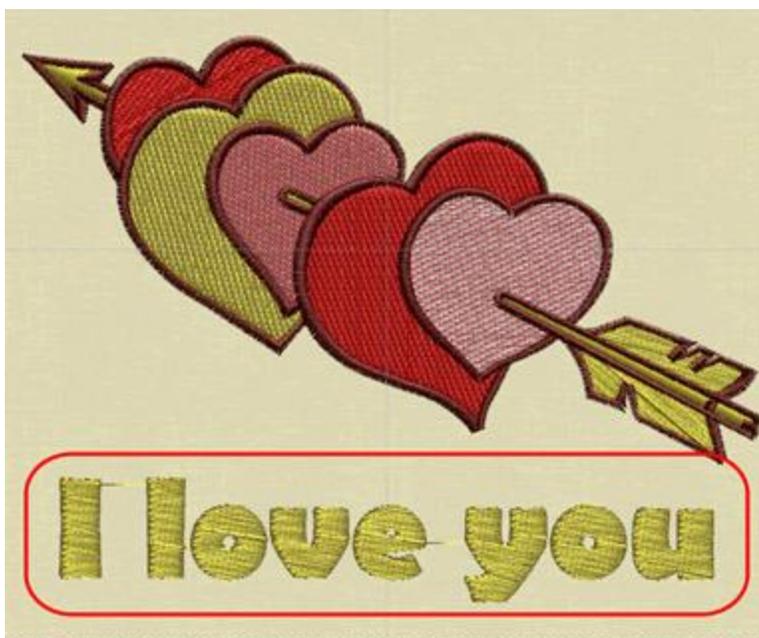
22. We can change the colors of the hearts and add some text to the imported design. You can make many changes to the embroidery design, but we will not cover that in this tutorial. The available tools that Creative DRAWings® includes are presented thoroughly in following chapters.
23. To change the color of each heart, select a heart by clicking on it and then clicking on the bottom right corner of the color you want from the **Thread palette** bar at the bottom of the screen. The **Thread palette** is split to two parts; the part on top where all the available colors of the **Gunold Poly** thread colors are listed and the bottom part where the 5 currently used colors on the design are listed.
24. Change the objects colors by following the steps above, and then produce the design.
25. Now we will add some text to the design.
26. Activate the **Text tool** by left clicking on the  icon located on the **Tools** toolbar at the left side of the screen.
27. Left click on the position you want the text to be placed and a blinking line will appear which allows you to insert your text.

*We changed the colors of the imported stitch file*

28. Type "I love you." You can change the Font by selecting a different one from the **Font name** drop-down menu on top of the screen. You can also change the **Font size** by typing its dimensions. If you want the text to be **Bold** or **Italic**, click on one.

*Tool options bar – Text options*

29. For this tutorial, the options were made as shown in previous figure. If you've been following this tutorial on your screen, left click on the **Rectangle selection** tool  from Tools toolbar to confirm our changes.
30. Select the **Text** object by clicking on it.
31. Change its **Fill** color by clicking on the bottom right corner of the yellow color and set its **Pen** (outline) color to **None** by left clicking on the top left corner of None color  icon. The **None** color icon will change to this  and the Pen color will be removed from the Text object.
32. The design should look like in the following figure.



The design with some text added.

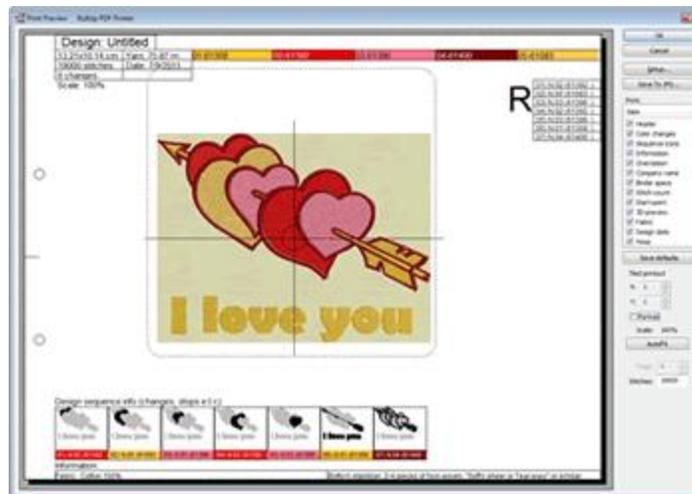
33. Now we are ready to embroider the design.
34. To proceed to the embroidery process you have to save the file to the embroidery file format your machine can read. To do that you have to select the **File** menu and then the **Save as** option.



Save As dialog box

35. Use **Save as type** drop down menu to select one of the available embroidery type files to export the design. For example, if you have Brother Embroidery machine you have to select the **.pes** or **.pec** embroidery file format.
36. In the **File name** field that is located at the bottom of the dialog type the name you want the design to have. For example, type **MyEmbroiderydesign**.
37. Remember to save your design in **.draw** file format before saving it to any embroidery machine's format, because this is the file format which Creative DRAWings® uses to store all design information.
38. When finished with the design, click **Save**. The design will be saved in the location you chose with the name you gave to it. If you have saved the design directly to a floppy disk, a thumb drive, or to your hard drive, you are ready to download it to your embroidery machine's memory card and sew it out. Otherwise you have to:
 - a) Open a windows explorer,
 - b) Browse to the location you have save it,
 - c) Right click on it and from the right click menu expand the **Send to** submenu
 - d) Save to a 3.5 Floppy disk (A:) or to a thumb drive
 - e) Then your design can be downloaded to your embroidery machine's memory card to be sewn out. (Note: in big commercial machines, the file can be downloaded directly to the machine's memory).

39. After saving the design, make a printout so you can set the functions on the embroidery machine correctly and then sew it out without any problem.
40. To do that, from **File** menu select **Print** option.
41. The **Print preview** dialog offer all the information that is needed in order to embroider the design correctly. Press **OK** button to create the **Printout** of the design. If you do not have a printer or you do not want to print it, you can save it as an image file and view it with an image viewer.



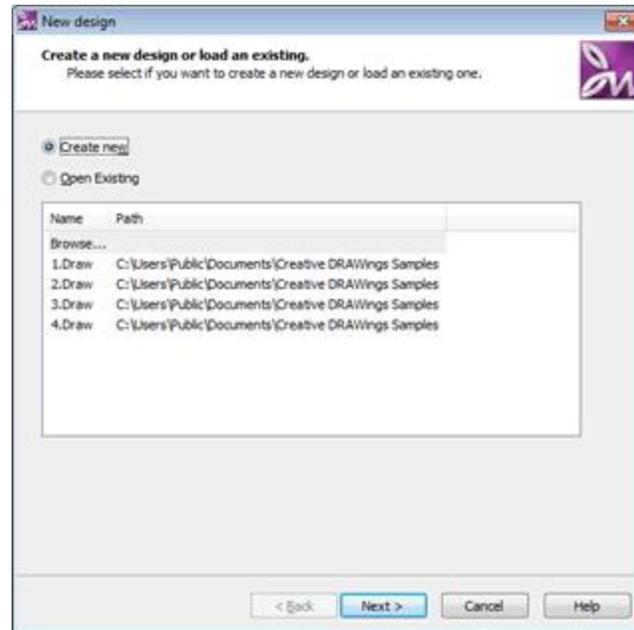
Printout of the design

42. To save the **Printout** to as image file, you have to click on the **Save to .jpg** button.
43. The **Save printout as** dialog will appear where you have to specify the location you want the image to be saved,
 - A. Specify the location you want the image to be saved
 - B. Type the File name you want the image to have
 - C. Click on **Save** button
 - D. You can view the image you have saved by double clicking on it.
44. All the information you need is listed in the **Printout**, including the embroidery sequence of the design (1-2-3 order of sewing out), the color changes, the number of stitches, and much more useful information.
45. You are ready. Download the file to your embroidery machine, use the printout as your guide to set up your machine, and then sew out the design you have just created.

Create monogram design

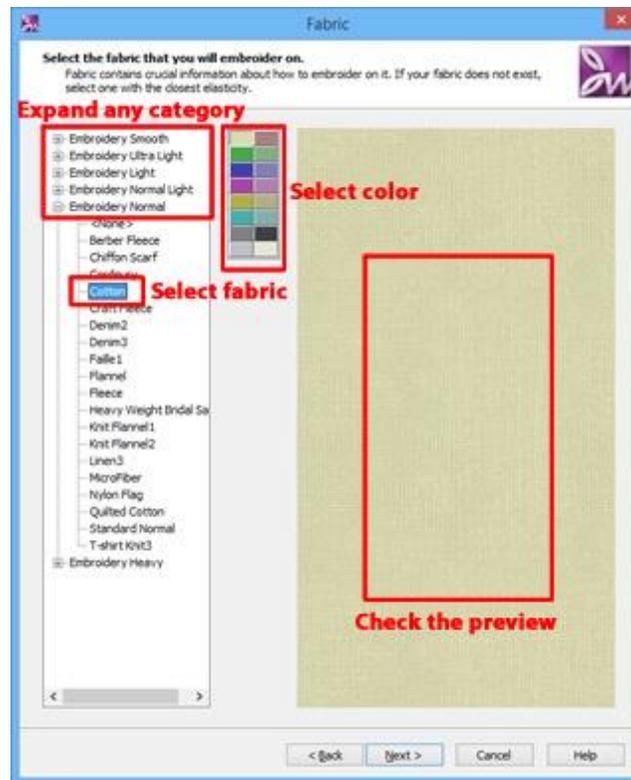
This is a **step-by-step** tutorial to guide you in creating a **Monogram** design.

1. Start **Creative DRAWings** application by double clicking on shortcut icon  that you will find on your Desktop.
2. Creative DRAWings® application will open and the starting dialog named New Design will appear.



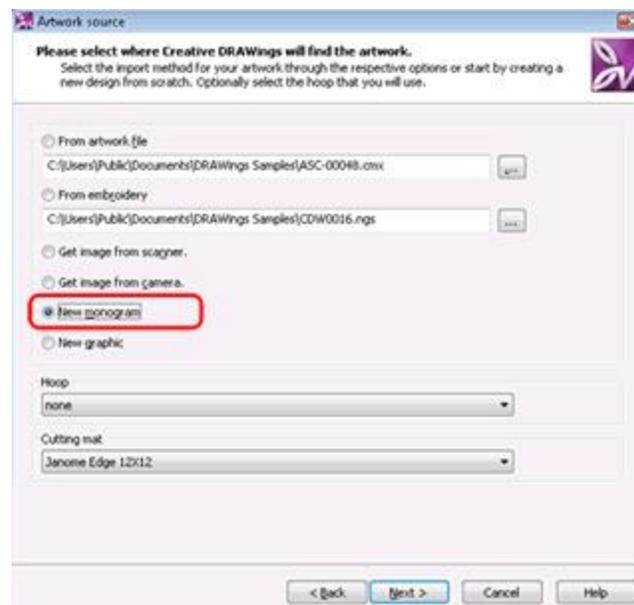
Starting dialog

3. Use **Create new** option and click **Next >** button.
4. When you have enabled any of the **Embroidery, Crystals** or **Paint** techniques then the **Fabric** dialog will appear. Using this dialog you must select a fabric type and a color that is as close as possible to the one you are going to produce the design on. Expand any of the fabric categories, by clicking on the + icon next to it, to select a fabric and-or a color for the fabric. After selecting the **Fabric**, choose the color from the list at the middle of the dialog. The Fabric selection is not just an issue of previewing the design on the fabric. The software automatically adjusts, according to the selected fabric, various embroidery parameters. Embroidery quality depends on some of these parameters. The software suggests the appropriate backing materials for every fabric, in the printout of each design. In case that you don't want to preview the design on any fabric you can select the **none** option that exists in any of the fabric categories. In this case only the color that is select in fabric dialog will appear in the background of the created design. More information about Fabric selection is provided into a separate topic. After selecting a Fabric and a color for the fabric click on Next to proceed.



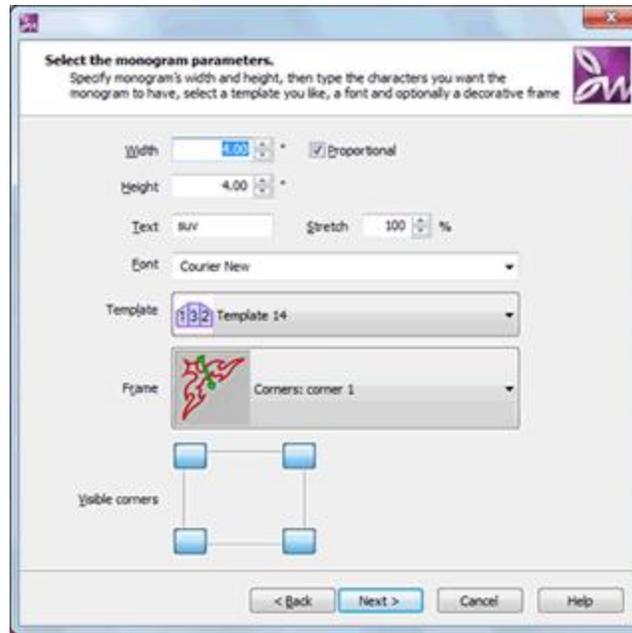
Select fabric dialog

5. The **Artwork source** dialog will appear
6. Select the **New monogram** option and Click on **Next** button



Starting dialog - 2nd page

7. In the next wizard step we must define the parameters of the **monogram**.



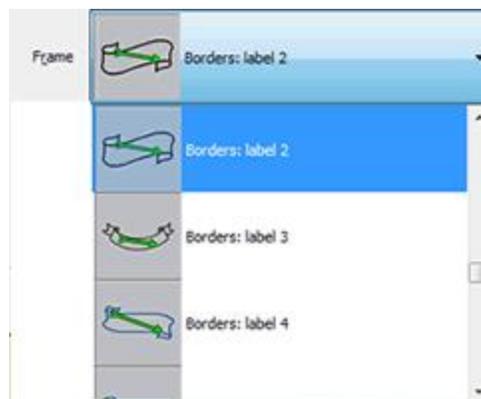
Open design dialog

8. First we must define the size of the monogram. Define the **width** and the **height** of the area that the monogram will be placed and if the monogram dimensions will be sized proportionally or not.



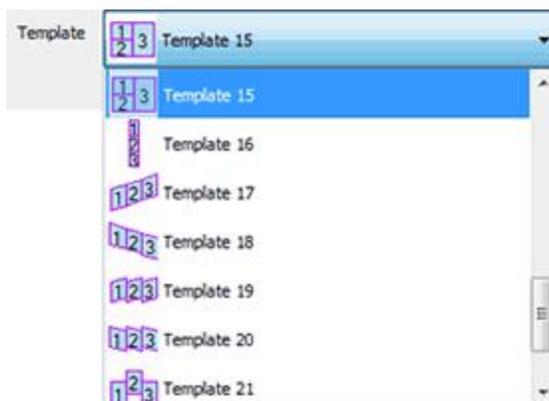
9. Select the **monogram frame**, there are various types of frames (**Borders, Sides, Corners**).

The monogram frame is fitted into the specified dimensions. There are various types of monogram frames, some of them are rectangular and some of them parallelogram. If proportional is enabled the program tries to make the best fit of one dimension of the frame and changes the other dimension accordingly. If it is not enabled, the frame is stretched in order to fit into the specified dimensions.

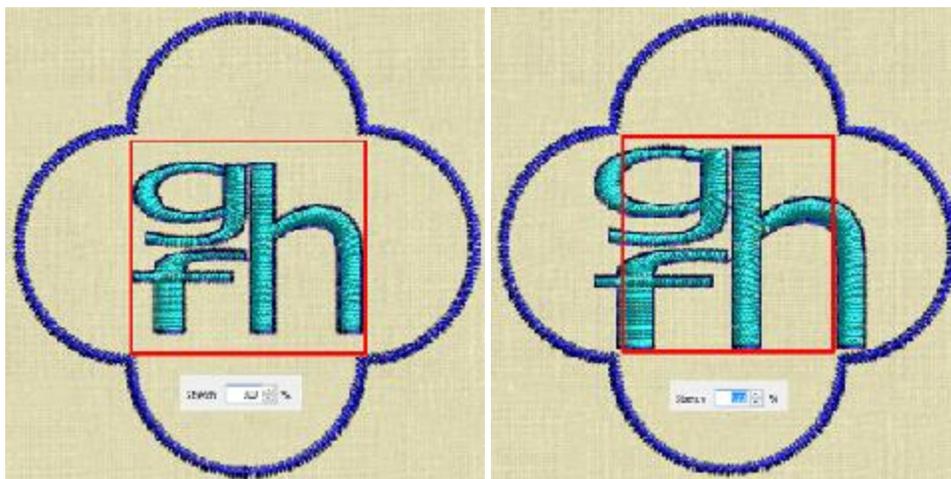


After the frame is selected a rectangular area inside the frame is kept for the monogram characters.

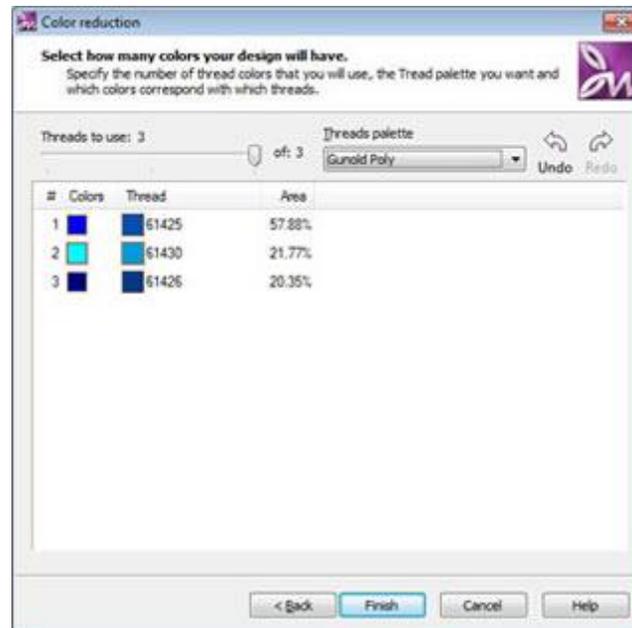
10. Add the 3 characters of the monogram and select a font.
11. Select one of the available monogram templates.



12. Finally, you can specify **stretch** value. if stretch value is 100% the monogram will take the whole place that remains inside the borders in order to add the monogram chars. Using 120 % the monogram characters will be stretched and take more space inside the frame.



13. Click **Next>** to continue.
14. The **Color reduction** dialog will appear where you can select your **Thread palette**. Use **Thread Palette** drop-down menu to select any of the available thread manufactures palette. For example, select **Gunold Poly** thread.
15. The colors of the design you are importing will automatically be assigned to the closest thread color of the **Gunold Poly** in the **Thread palette**.



16. In the same dialog you can also reduce the number of the design colors. Our design has 3 different colors of thread. The number of colors can be reduced now, or later inside the software. Click **Finish** to end the process and convert the imported design into stitches.

17. At this point the monogram is almost ready. You can click **Finish** to terminate the wizard and place the monogram design inside the design area.

If you move the **wizard** dialog you can see the created monogram in the design area previewed.

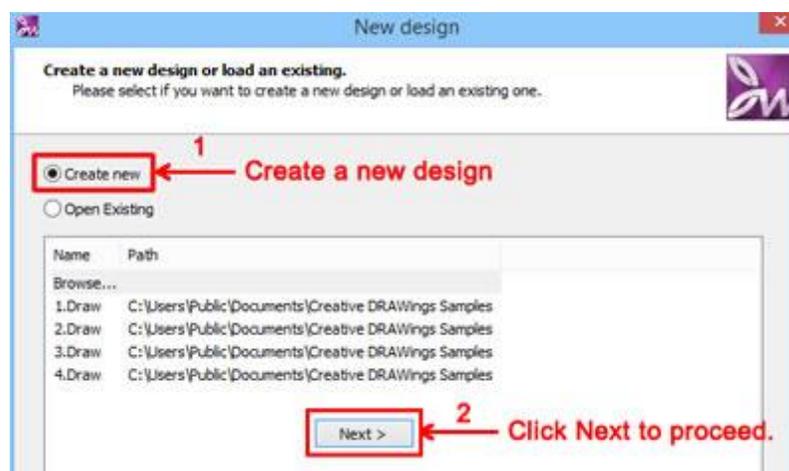


18. Now we can edit - change the **monogram template**, the **placement** of the characters and much more. All these editing options are described in detail in Monogramming section of Designing tools chapter.

Create your first Cut design

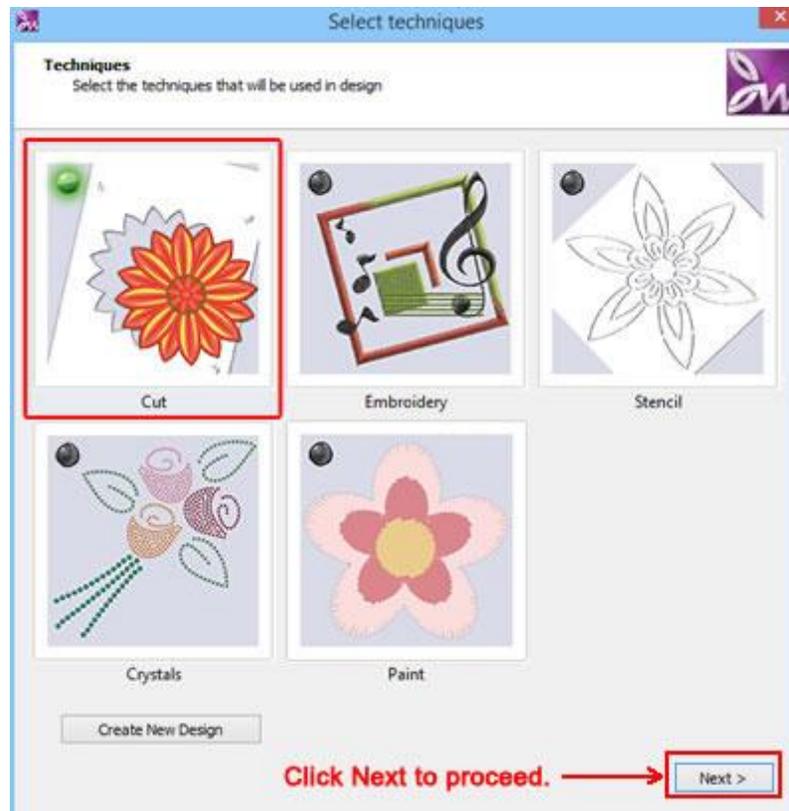
This is a step-by-step tutorial to guide you in importing an artwork file and convert automatically into **Cut** lines.

1. Start **Creative DRAWings** by double clicking on shortcut icon  that you will find on your **Desktop**.
2. The application will load and the **startup wizard** will prompt you to **create a new design** or **load an existing**.



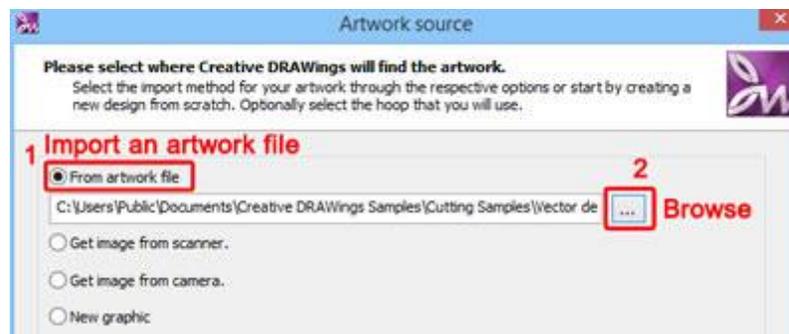
Starting dialog

3. Select the **Create new** option and click **Next>** button to proceed.
4. In the appearing dialog you must select which Techniques you want to be enabled for the created design. For the purposes of this sample we will enable only **Cut** technique. Then click on **Next** button to proceed.



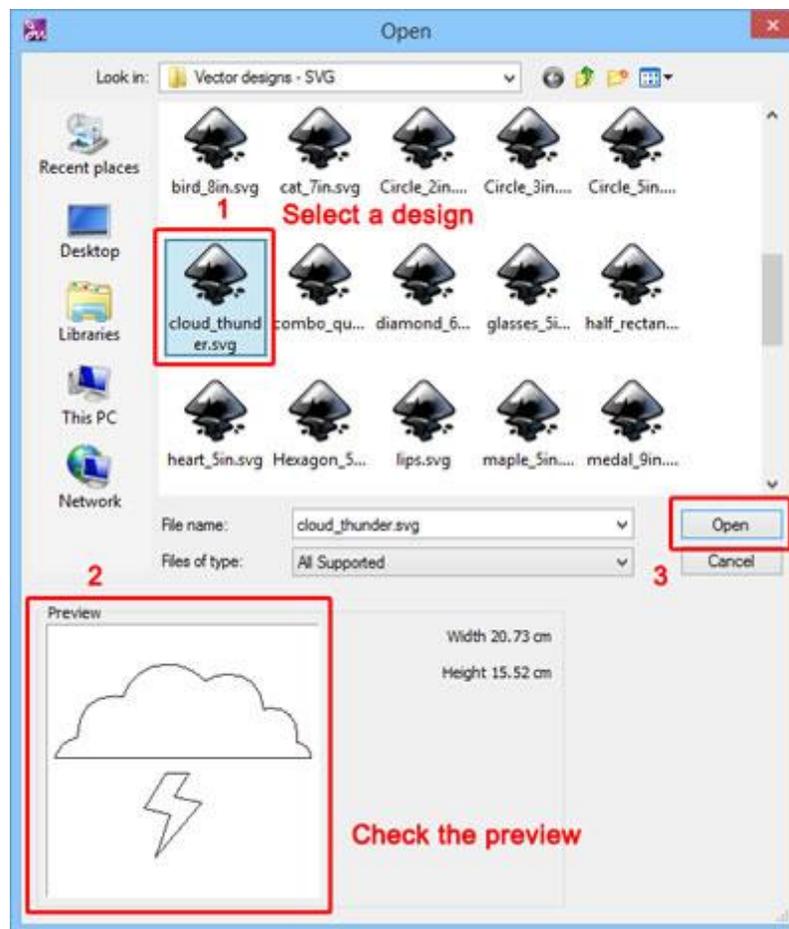
Select Techniques

5. The **Artwork source** dialog will appear.
6. Select the **From artwork file** option and click on the **Browse** button , to import the design you want to convert to **Cut**. Since we have enabled only **Cut** technique all the parts of the design will be converted into **Cut** lines.



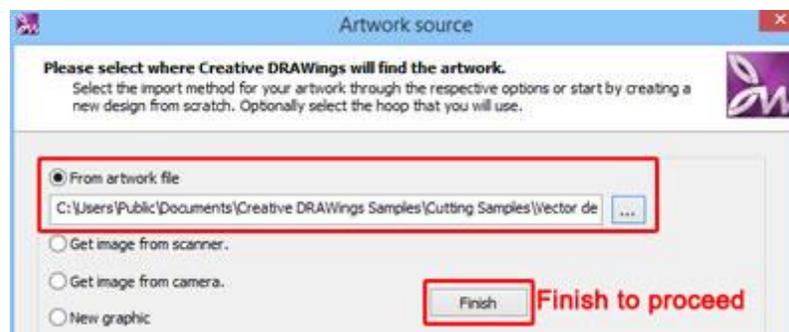
Artwork source

7. The **Open** dialog box will appear to locate the design that you want to embroider.



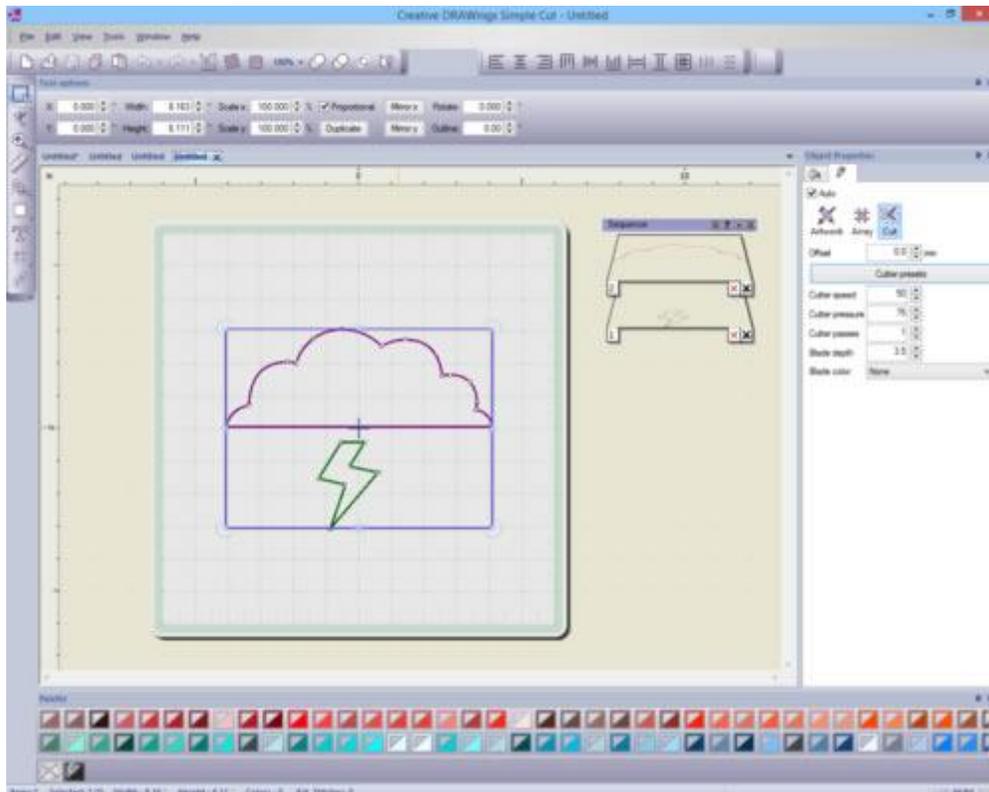
Open design dialog

8. On **My documents** folder there is an **Embroidery designs** folder.
9. Inside **Embroidery designs** folder you will find another folder called **Creative DRAWings samples**.
10. For the purposes of this example we will select one of the files that are located **Cutting samples** folder.
11. Select any sample, in our example we will use the **cloud_thunder.svg** file.
12. Left click to select any sample, take a look on the preview to confirm that it is as you like and then click the **Open** button to confirm the selection.
13. The **Artwork source** dialog will appear once more with the design you selected under **From file** field.



Artwork source

14. You can also select the cutting mat to preview the design on.
15. Click **Finish** to end the process and convert the imported design to Cut lines.
16. The design will appear in the working area previewed on a matte surface.

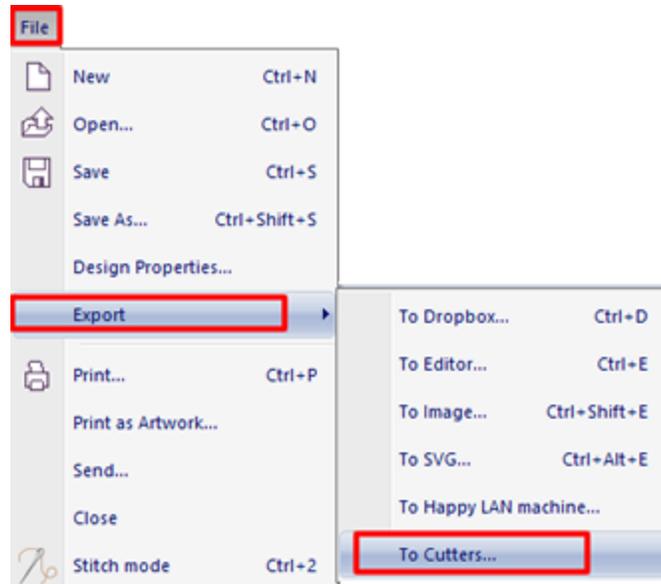


The imported artwork converted into cut lines

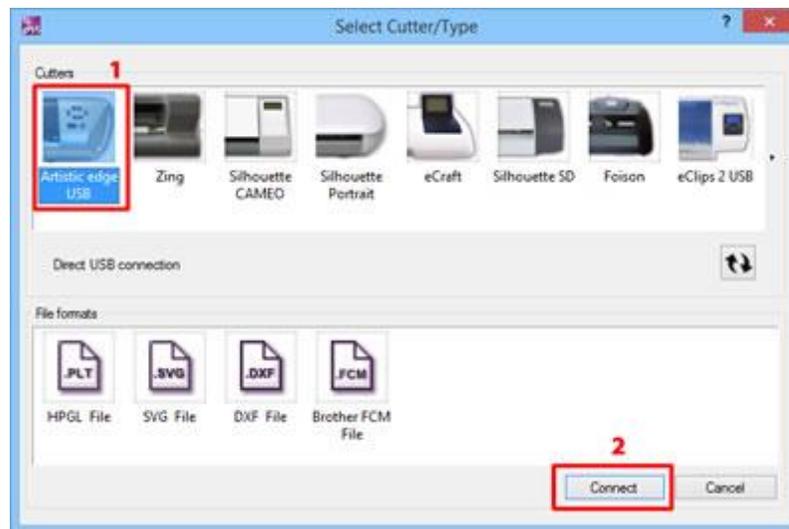
17. There are many changes that you can do on the artwork or create new parts, but we will not present them now in this **Quick Start** topic. We will only present the procedure of producing this **Cut** design with a digital cutter.

At this point we must mention that any design part - artwork can be converted into a cut line simply by selecting the desired part and click on the **Cut** outline type . You can use the design tools to add new parts on this design and by selecting cut outline type  you can easily changes created parts into **Cut** lines

18. Let's suppose that we are done with the design and we are ready to Cut the parts using our digital cutter.
19. From **File** menu, **Export** sub-menu activate **Export to Cutters** option.



20. From the appearing dialog we must select one of the **Cutters** to connect or a **File format** if we want to export to a file and import to our cutter in a manual way. In our sample we will use **Artistic Edge** cutter, click on the **Artistic Edge** Cutter icon and then click on **Connect** to proceed.



Select a Cutter or Export to a file

21. The **Export to Cutter** dialog will appear, using this dialog you can **Cut** any design part with your cutter. If the Digital Cutter is properly connected and powered ON, then at this point you should be able to directly communicate with the Cutter through this dialog.

Before proceeding you must have loaded the **cutting mat** with the **cutting material** into the Cutter.

22. First select the design parts that you want to cut from the **Templates** area.
23. Then you should select an **origin**. This is the point that you want the cutter to begin from.
24. If you have never used this material on your Cutter you should first perform a **Test** cut to verify that the material is **Cut** properly with the current settings. Using the arrow buttons move the Blade to a

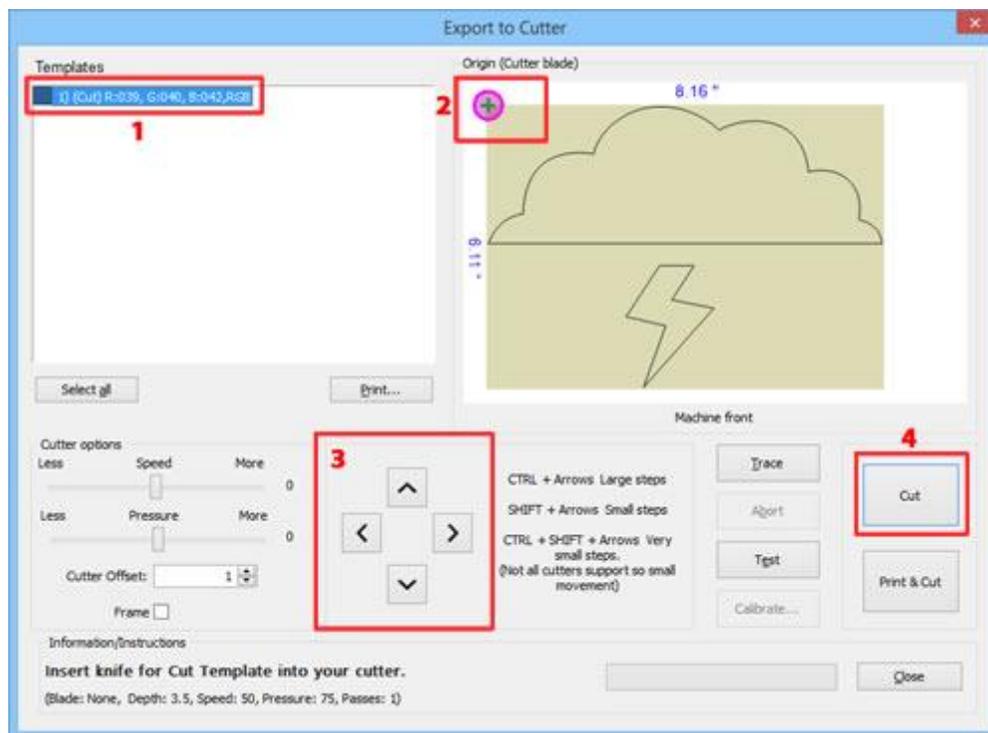
position that will not be used for the actual Cut and press **Test** button. The cutter will perform a test Cut of the material, peel the cut part in order to verify if it was correctly Cut. if it was not adequate adjust the cutter options until you are satisfied by the result.

25. Now you must position the **Blade** for the actual **Cutting** of the material. In our case we must move the **Blade** close to the edge of the upper left part of the material according to the origin we have selected. Use the arrow buttons to move the Blade to a desired position. If you need to fine tune the position of the Blade you can use **Ctrl** , **Shift** keys on your keyboard to adjust the step of the movement.

- § Hold **Shift** key  in order to make the movement small.
- § Hold **Ctrl** key  in order to have a large movement step.
- § Use **Ctrl and Shift** keys together ( + ) to make a very small movement step.

26. You can **Trace** the area that the design will need to make sure that it fits into the material you have placed.

27. Finally press **Cut** in order to start the actual cutting process.

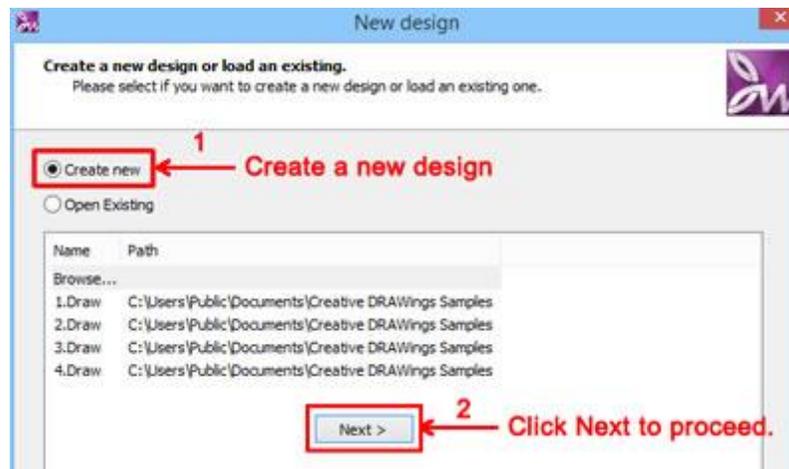


28. After the cutting process remove the cutting mat with the material and peel the cut Cloud and Thunder parts. That's all for now, if you have followed the guide you should now have on hands the Cut thunder and the Cloud parts.

Create your first stencil design

This is a step-by-step tutorial to guide you in importing an artwork file and convert automatically into **Stencil** lines.

1. Start **Creative DRAWings** by double clicking on shortcut icon  that you will find on your **Desktop**.
2. The application will load and the **startup wizard** will prompt you to **create a new design** or **load an existing**.



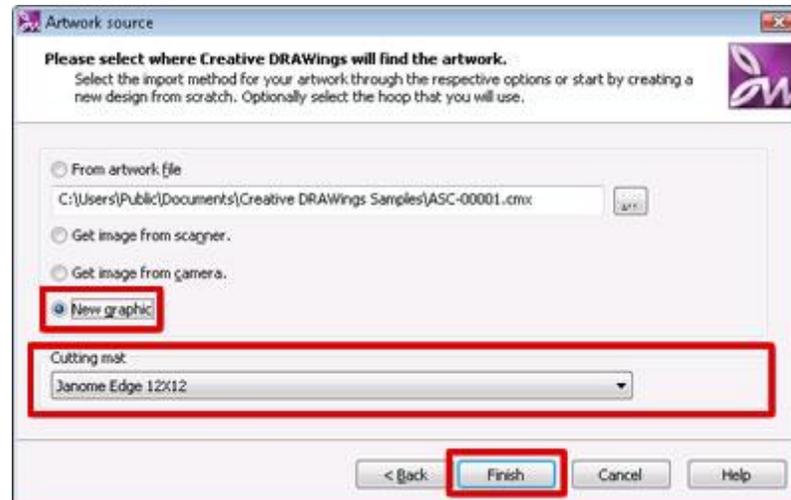
Starting dialog

3. Select the **Create new** option and click **Next>** button to proceed.
4. In the appearing dialog you must select which Techniques you want to be enabled for the created design. For the purposes of this sample we will enable only **Stencil** technique. Then click on **Next** button to proceed.



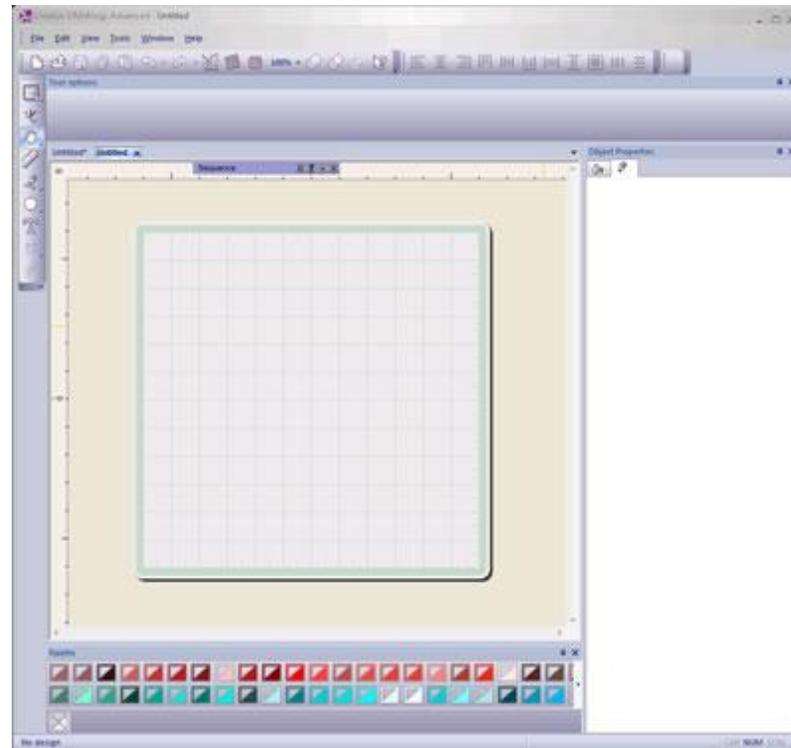
Select Techniques

5. The **Artwork source** dialog will appear.
6. Select the **New graphic** option, select the Cutting mat that you will use from the drop down menu and click **Finish**.



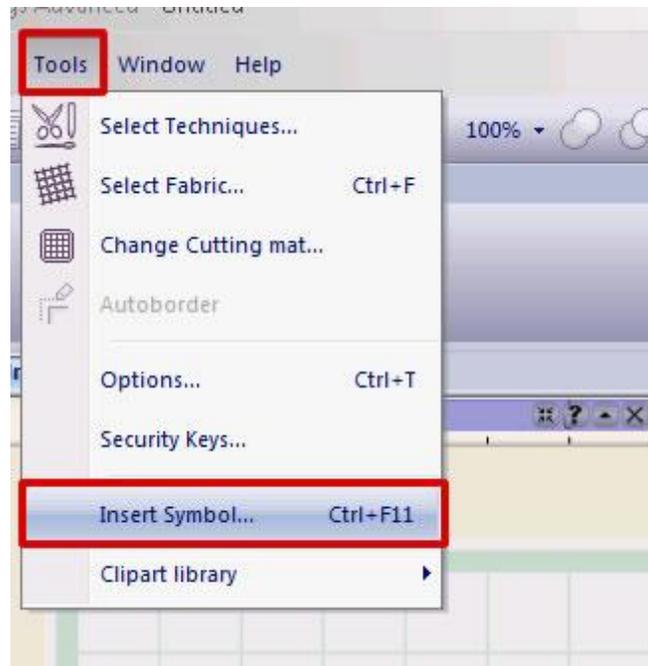
New graphic - Select Cutting mat

7. The dialog will finish and the working area will appear empty, showing only the cutting mat that you have selected to use. If the cutting mat is not visible, from **View** menu select **Cutting mat** and it will become visible.



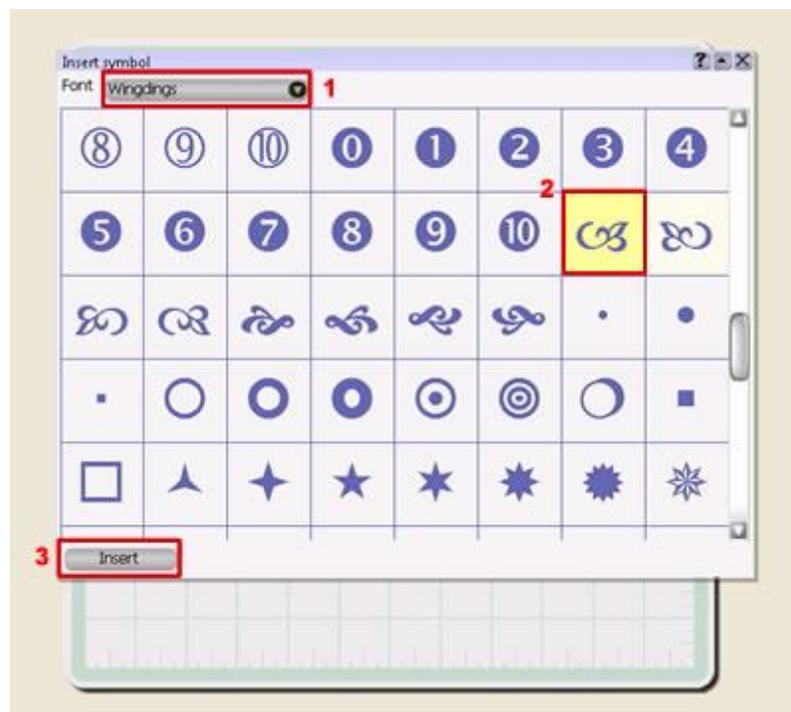
New empty design with cutting mat

8. From **Tools** menu select **Insert Symbol** option.



Tools - Insert Symbol

9. Select the **Wdings** font from the font list and select the symbol shown below. Click **Insert** to insert it on the cutting mat.



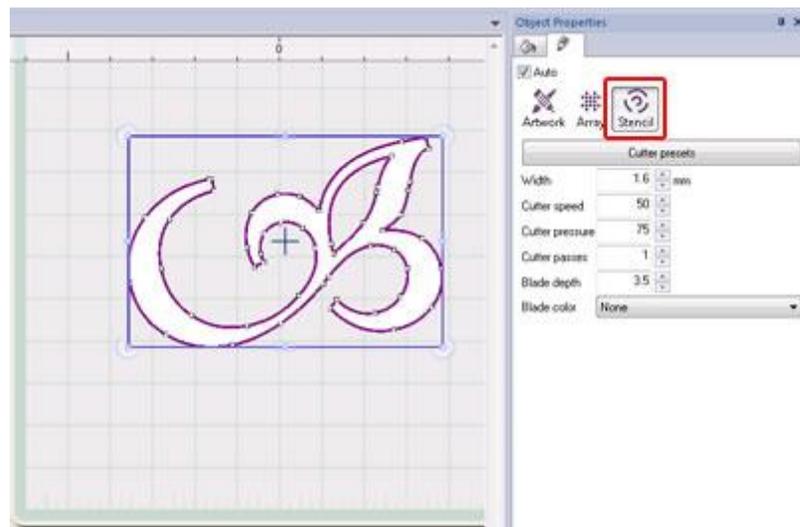
Select the Symbol you want

10. Click and drag on the cutting mat to draw the symbol on the cutting mat. Release the mouse to insert it.



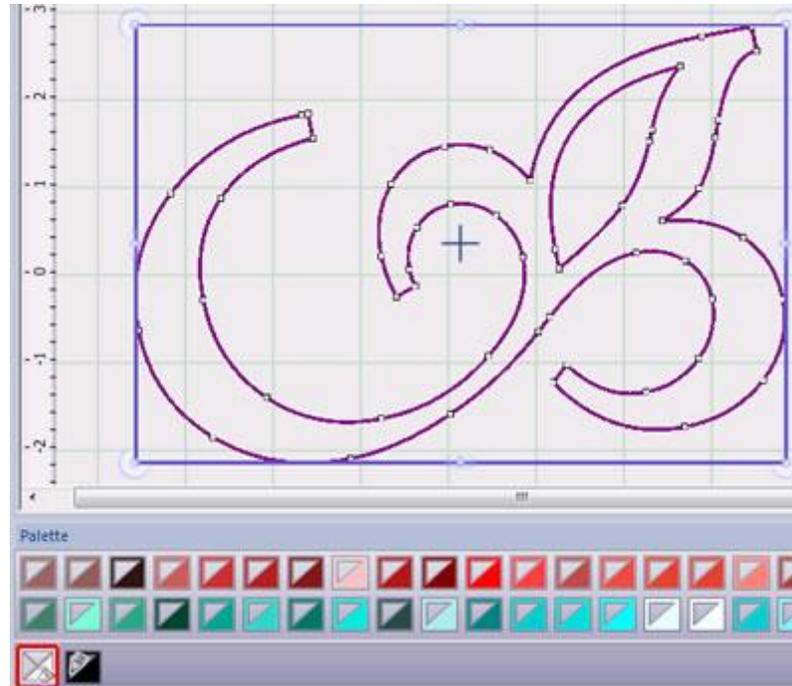
Insert Symbol on the working area

11. The symbol will inserted without fill type (**Artwork fill**)  and with **Stencil**  outline/pen type.



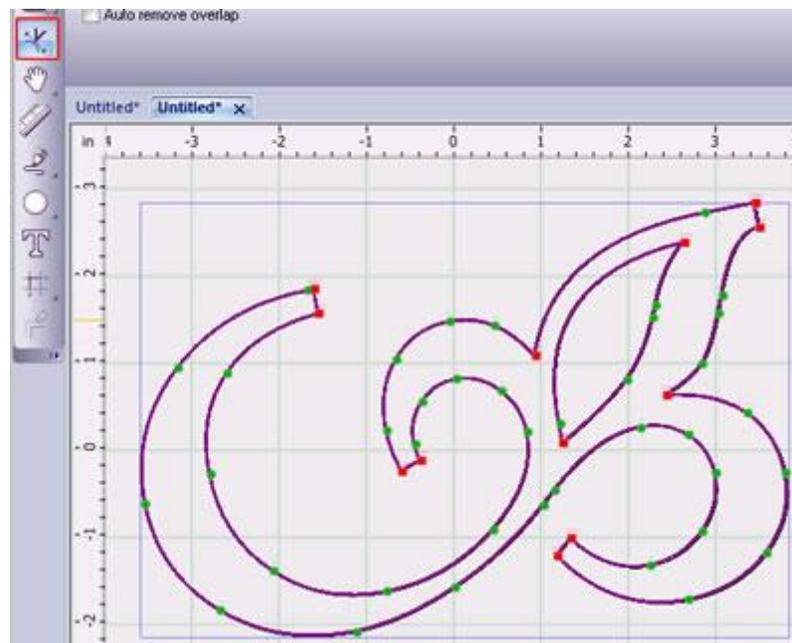
Stencil outline/pen type

12. Set **fill color** to **none** by clicking on the **none fill**  icon.



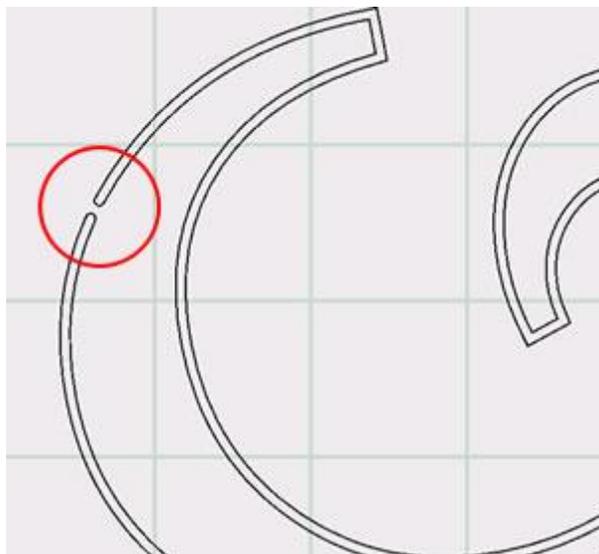
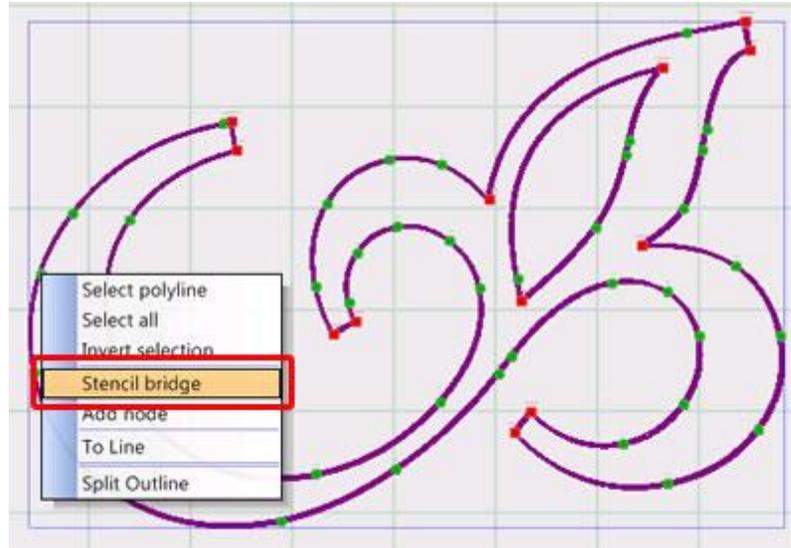
Set fill type to none

13. The design is a closed shape and the Stencil cutting area is not visible. To convert it to a proper stencil design you have to convert it to an open shape by adding stencil bridges. To do that you have to click on the **edit shape nodes**  from the options toolbar.



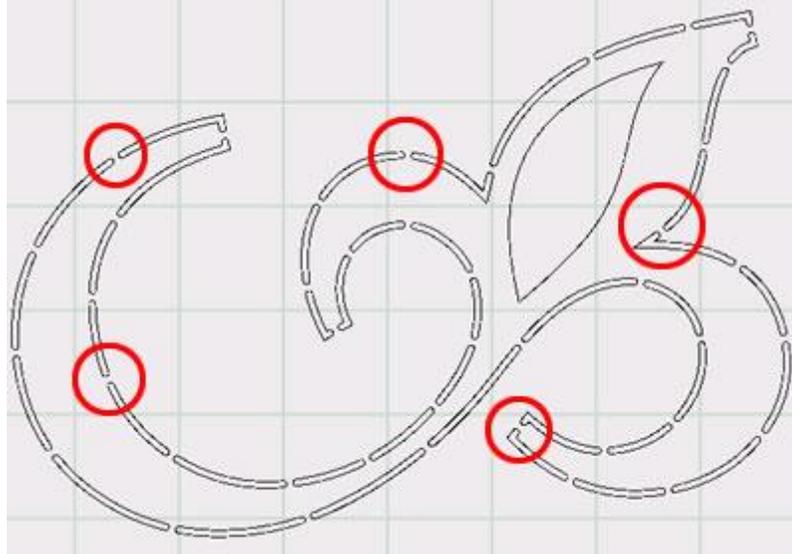
Edit Shape nodes of the symbol

14. To add **stencil bridges** you have to right click on the location where the bridges will be added and select the respective option from the pop-up menu.



Add stencil bridge on the symbol

15. Continue adding Stencil bridges in generally close distances to make the stencil more stable.



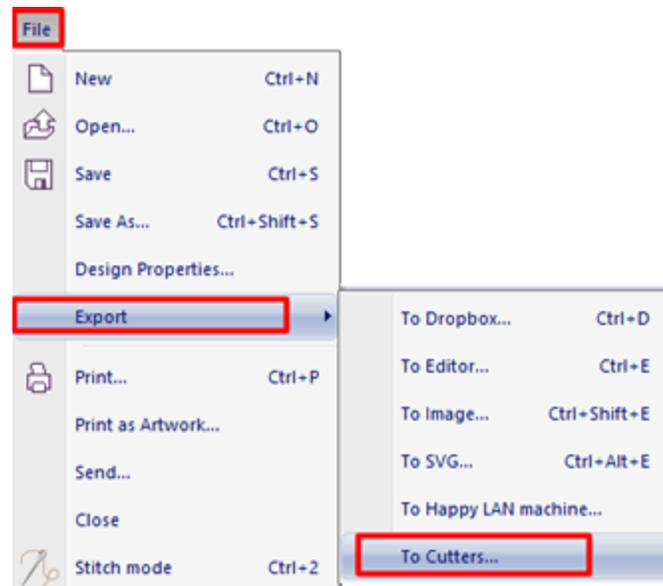
Add more stencil bridges on the symbol

16. The outline of the symbol is correctly converted to stencil and can be send to the cutter. If you want also convert the inner part of the symbol to stencil you can add stencil bridges to this object tool



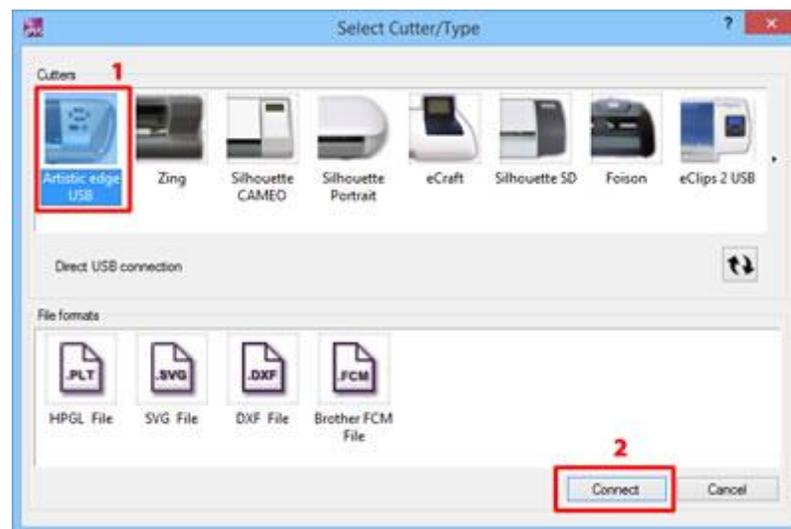
Add stencil bridges at the shape inside

17. The stencil design is ready and you can send it to your cutter.
 18. From **File** menu, **Export** sub-menu activate **Export to Cutters** option.



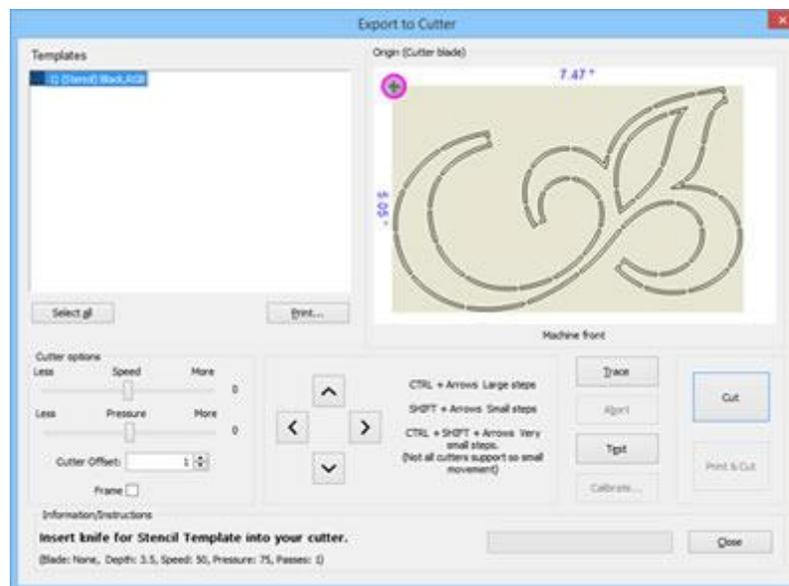
File > Export > To Cutters

19. From the appearing dialog we must select one of the **Cutters** to connect or a **File format** if we want to export to a file and import to our cutter in a manual way. In our sample we will use **Artistic Edge** cutter, click on the **Artistic Edge** Cutter icon and then click on **Connect** to proceed.



Select a Cutter or Export to a file

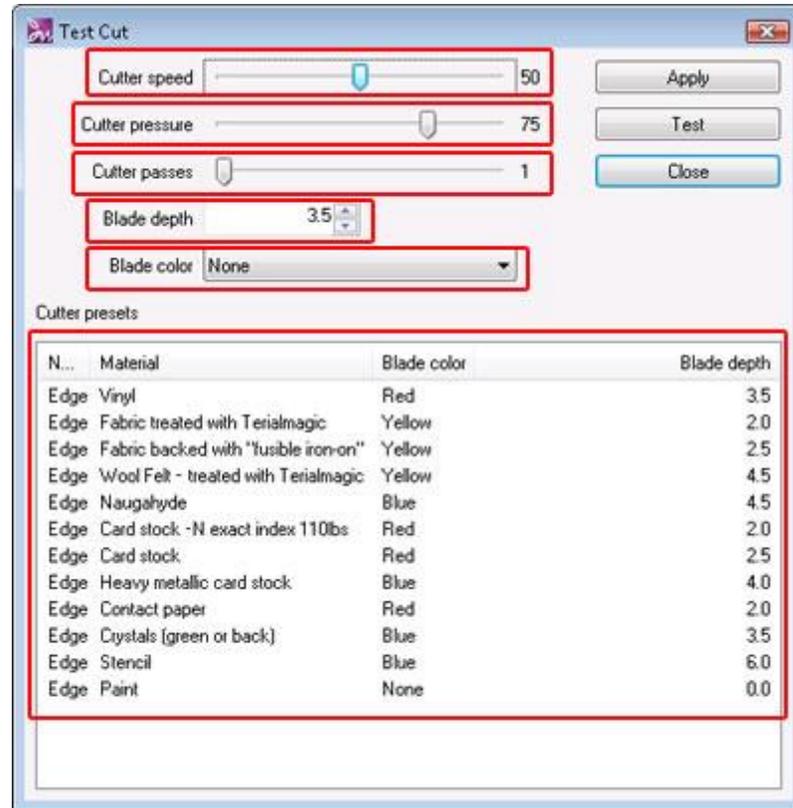
20. The **Export to Cutter** dialog will appear, using this dialog you can cut the **Stencil** design with your cutter. If the **Digital Cutter** is properly connected and powered **ON**, then at this point you should be able to directly communicate with the Cutter through this dialog.



Ready to send the design to the cutter

Before proceeding you must have loaded the **Cutting mat** with the **cutting material** into the **Cutter**.

21. First select the design parts that you want to cut from the **Templates** area.
22. Then you should select an **origin**. This is the point that you want the cutter to begin from.
23. If you have never used this material on your Cutter you should first perform a **Test** cut to verify that the material is cut properly with the current settings. Using the arrow buttons move the Blade to a position that will not be used for the actual Cut and press **Test** button.
24. The **Test Cut** dialog will appear listing all the cutter settings that you can adjust. Make the adjustments you prefer or select any **cutter preset** from the available ones. Click **Test** to cut the test design, which will be made based on the specific settings. Peel the cut part in order to verify if it was correctly Cut. If you are satisfied with the specific settings you can click **Apply**. The settings will be updated on the Object properties toolbar.



send the design to the cutter

25. Now you must position the **Blade** for the actual **Cutting** of the material. In our case we must move the **Blade** close to the edge of the upper left part of the material according to the origin we have selected. Use the arrow buttons to move the Blade to a desired position. If you need to fine tune the position of the Blade you can use **Ctrl** , **Shift** keys on your keyboard to adjust the step of the movement.

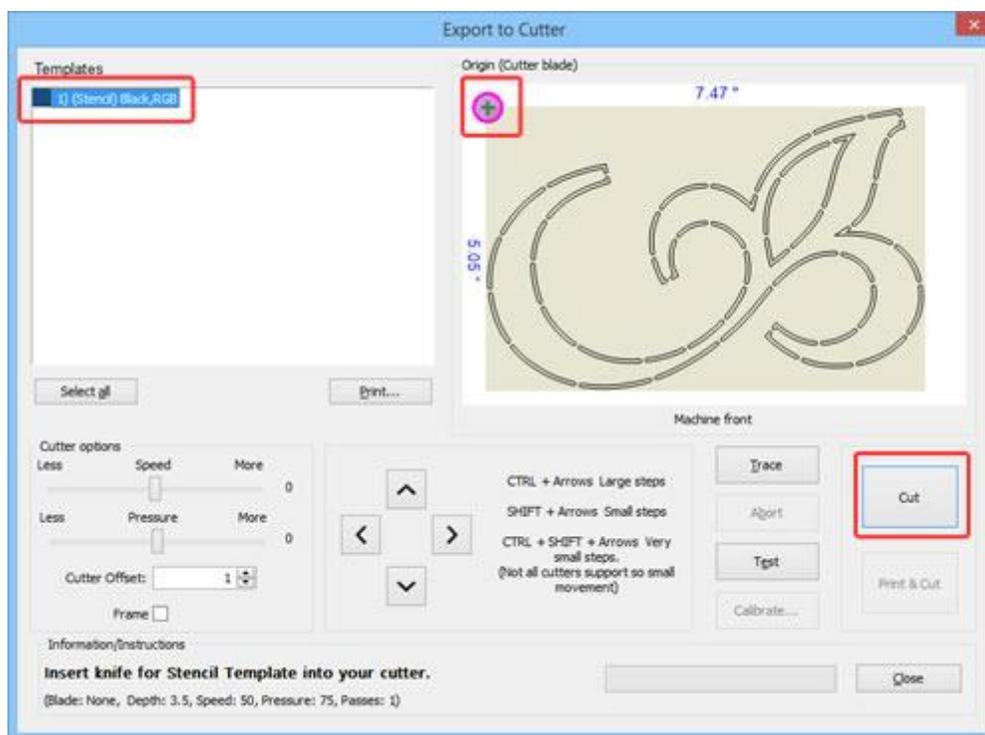
§ Hold **Shift** key  in order to make the movement small.

§ Hold **Ctrl** key  in order to have a large movement step.

§ Use **Ctrl and Shift** keys together ( + ) to make a very small movement step.

26. You can **Trace** the area that the design will need to make sure that it fits into the material you have placed.

27. Finally press **Cut** in order to start the actual cutting process.



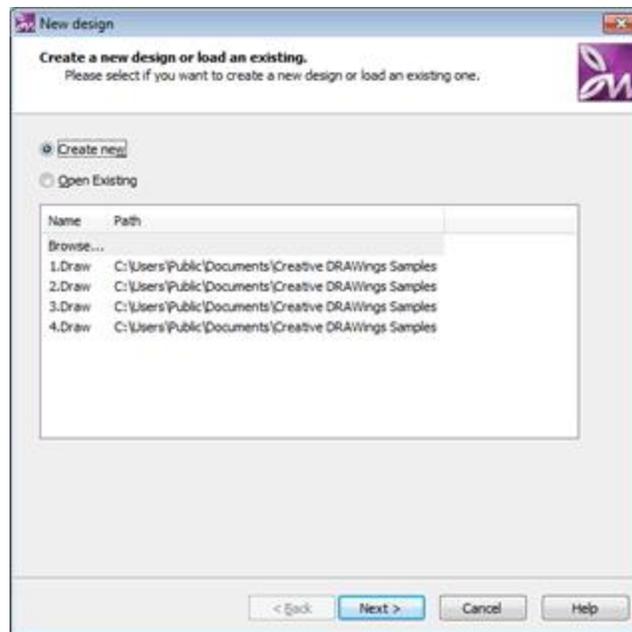
Export to Cutter

28. After the cutting process remove the Cutting mat with the material and peel the cut shapes to produce the final stencil design. That's all for now if you have followed the guide you should now have your first stencil design created.

Create design using Crystals

This is a **step-by-step** tutorial to guide you in creating a design using **Crystals** in order to fill objects.

1. Start **Creative DRAWings** application by double clicking on shortcut icon  that you will find on your Desktop.
2. Creative DRAWings application will open and the **starting dialog** will appear.



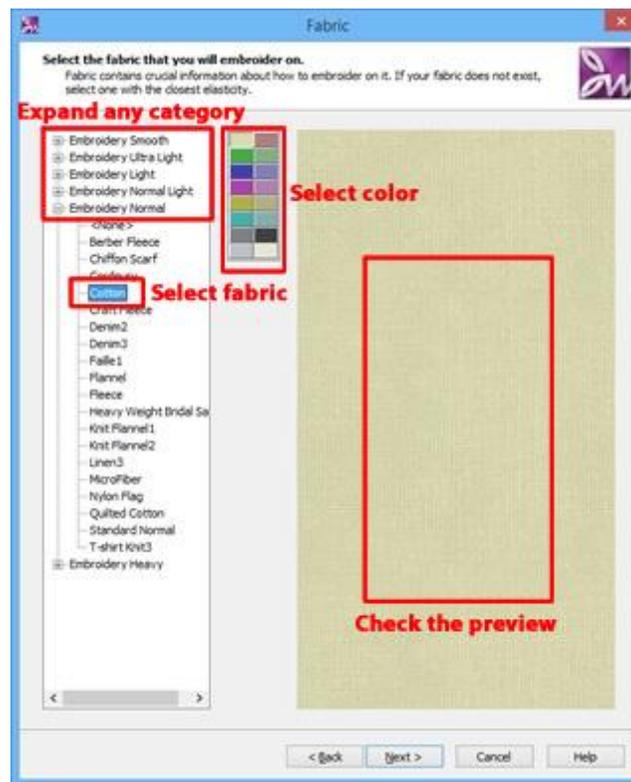
Starting dialog

3. Select **Create new** option and click **Next** button.
4. From the next dialog select which techniques you want to be enabled. Make sure that **Crystals** technique is enabled.



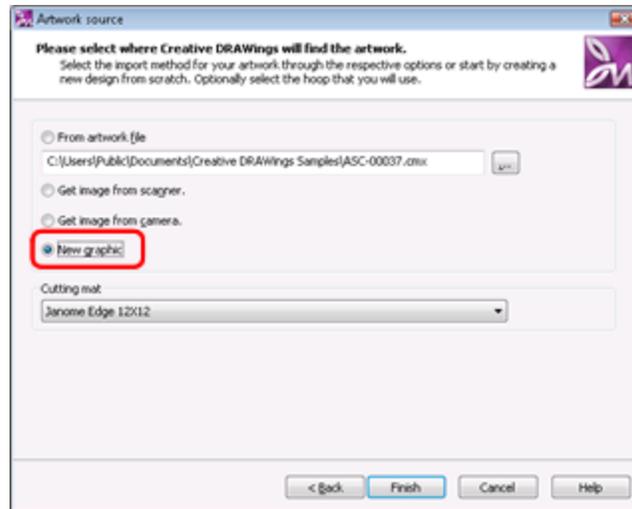
Select the Crystal Technique that you want to be enabled

5. When you have enabled any of the **Embroidery**, **Crystals** or **Paint** techniques then the **Fabric** dialog will appear. Using this dialog you must select a fabric type and a color that is as close as possible to the one you are going to produce the design on. Expand any of the fabric categories, by clicking on the + icon next to it, to select a fabric and-or a color for the fabric. After selecting the **Fabric**, choose the color from the list at the middle of the dialog. The Fabric selection is not just an issue of previewing the design on the fabric. The software automatically adjusts, according to the selected fabric, various embroidery parameters. Embroidery quality depends on some of these parameters. The software suggests the appropriate backing materials for every fabric, in the printout of each design. In case that you don't want to preview the design on any fabric you can select the **none** option that exists in any of the fabric categories. In this case only the color that is select in fabric dialog will appear in the background of the created design. More information about Fabric selection is provided into a separate topic. After selecting a Fabric and a color for the fabric click on Next to proceed.



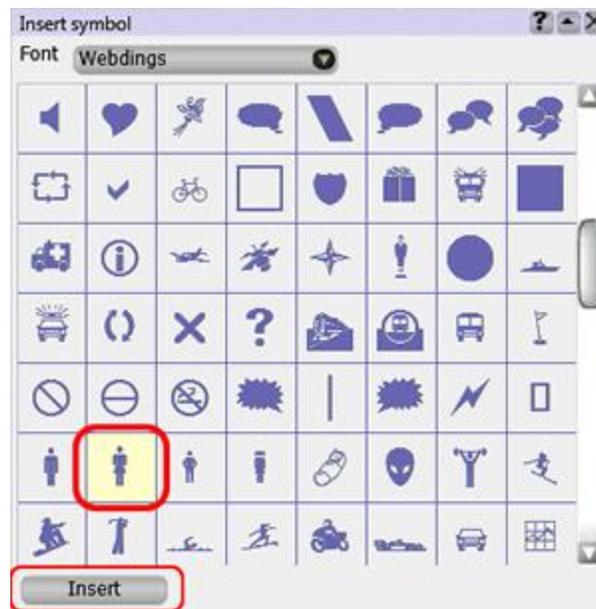
Select fabric dialog

6. The **New design** dialog will appear.
7. Select the **New graphic** option that is located at the bottom of the dialog.

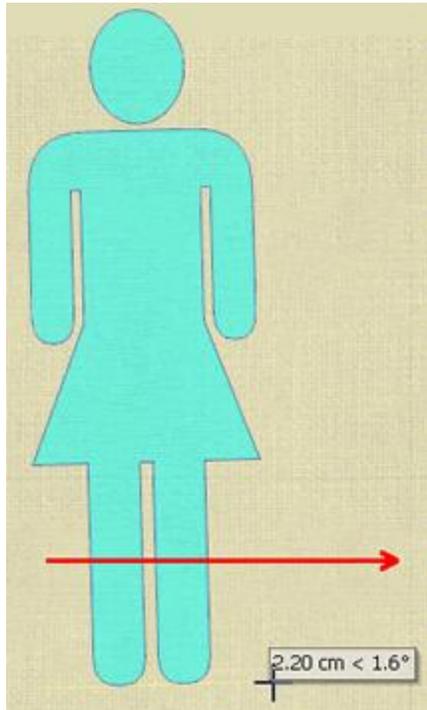


Starting dialog - 2nd page

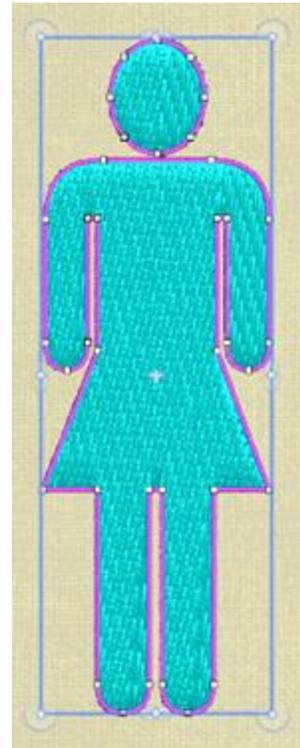
8. At the **Cutting mat** section of the same dialog, you can select the Cutting mat that you will use to cut the design on. If the cutting mat your machine supports does not exist in the list, select one with similar dimensions and you can customize the dimensions later. You can create your custom cutting mat easily inside Creative DRAWings.
9. After selecting the **Cutting mat** Click **Next>** button to continue.
10. The workspace will appear with the selected hoop at the center but without any design in it.
11. We will add a Girl **symbol** we will fill it using **Crystal fill** and then we will present a way to edit and change this Crystal fill.
12. From **Tools** menu use **Insert symbol** option. The following dialog will appear.



13. Click on the highlighted **girl symbol** and then press **insert** button. The cursor will turn into a cross waiting to specify a reference line.
14. **Click and drag** to specify the reference line that the symbol will be placed on. Click and drag towards the direction that is shown by the red arrow into the following image.



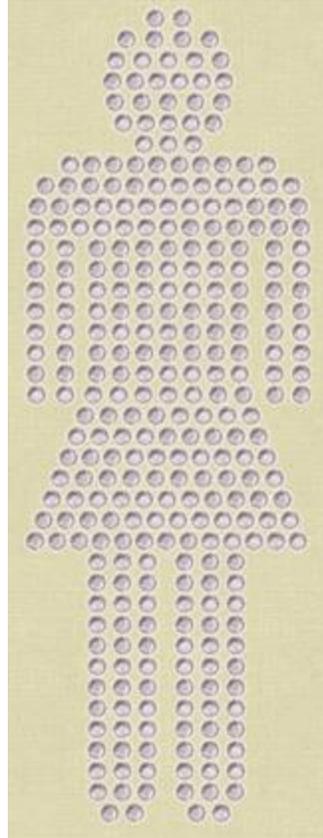
Click and Drag to define the size and rotation of the symbol



The symbol is added and filled with step

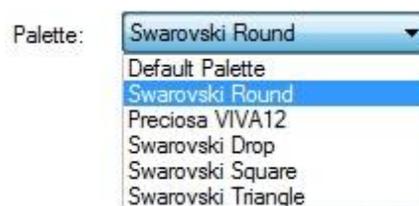
15. The symbol has been added to the design and it is by default filled with step stitches .
16. Remove the outline from the design by setting the pen color to empty  .

17. Select the entire design and click on the **Crystal fill**  icon from the **Object properties** toolbar.



Girl symbol filled with crystals

18. The symbol is filled with crystals automatically. At first look the result is not attractive, but Creative DRAWings gives you all the tools to change it in any way you like.
19. From the **Object properties** toolbar select the **Palette** of crystals you are using. Currently there are three palettes available. The **Default Palette**, the **Swarovski Round** and the **Preciosa VIVA12**.



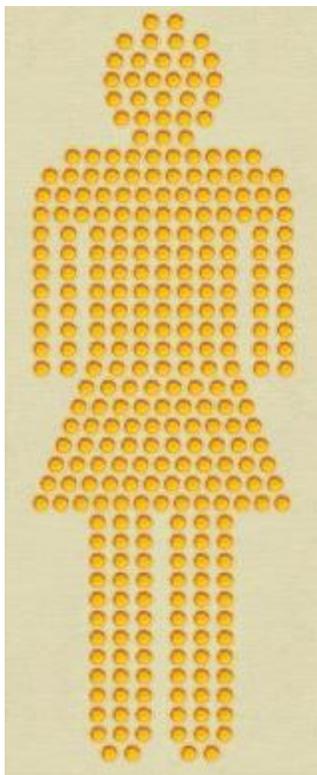
Select palette

20. Each crystals' creator palette contains only the crystals that are included in the specific collection. After selecting, for example **Swarovski Round** palette the crystals that includes appear on the **Color/Shape** list from where you can select any crystal by simply clicking on it.



Color/Shape

21. If you do not have any of the available palettes your only alternative is to use the **Default palette**. The **Default palette** contains only one crystal. You can use this crystal to fill all your crystal designs and change its color by simply changing the color of the shape where crystal was placed. Therefore with only one crystal you can apply any color you like by changing the color of the shape.
22. In our example with will select the Swarovski Round palette and apply the **Topaz** crystal.



Apply Topaz color/shape

23. At the bottom of **Object properties** toolbar you will find the **Cutter** options for the selected crystal object. Select a Cutter Preset from the available ones ore set the cutter options according your preferences.

Cutter presets	
Cutter speed	50
Cutter pressure	62
Cutter passes	2
Blade depth	3.5
Blade color	Blue

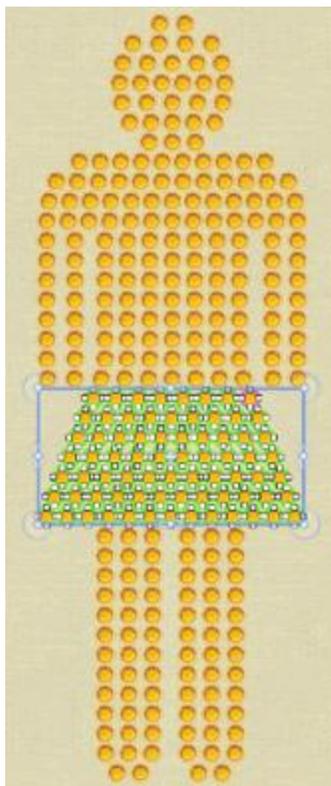
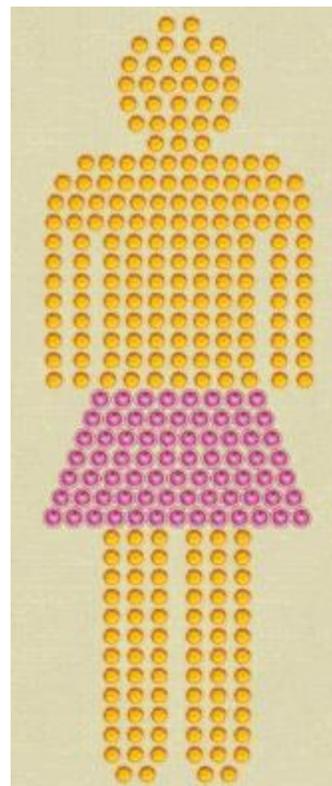
Cutter Presets

24. Use **Separate to Crystals** button to convert the selected object into individual **Crystals**. Then you are able to delete, move or manually add Crystals.

Separate to crystals

Separate to crystals

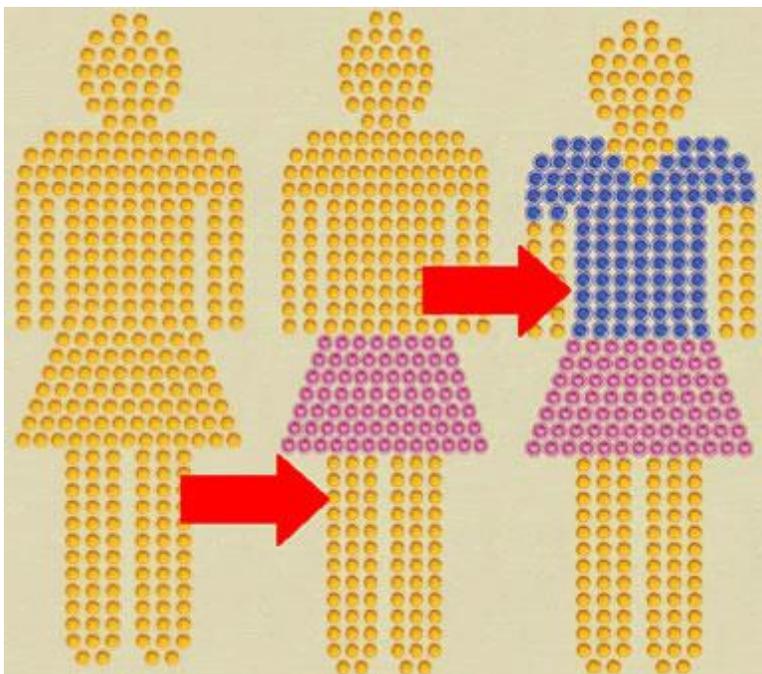
25. It is very useful when you want to create a shape filled with crystals and then assign different crystal **Color/Shape** to parts of the design. For example select all the crystals of the girl's skirt and press on any of the available crystal colors. In this example we have selected **Fuchsia**.

*Selected Skirt crystals**Applies fuchsia Crystal color*

Keep in mind though that you cannot group the separated crystals back to an crystal fill object. Therefore keep the Separate to crystals option as your last choice or keep a

duplicate object of the one that you will Separate to crystals in order to be able to go back and edit it again

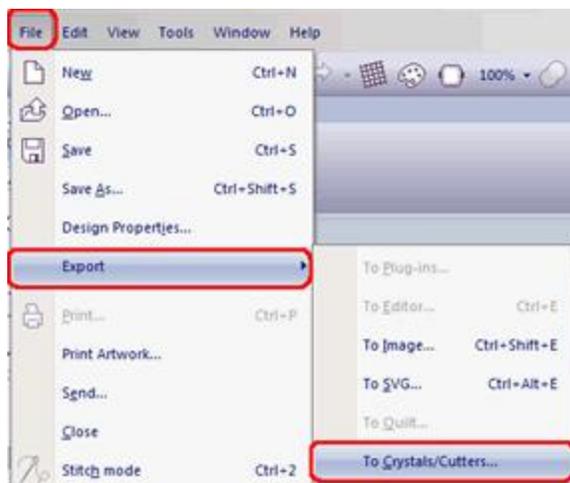
26. In the same way we can create a shirt for the girl symbol.



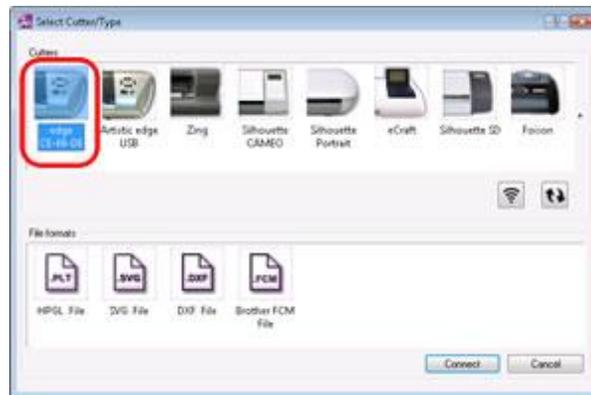
Draw an oblong shape

27. For the purposes of this example, now we will only present how to export the Crystal design.

28. From **File** menu use **Export** submenu and **To Crystals / Cutters** option. This option will appear only if there is a design on the working area. Otherwise will be disabled.

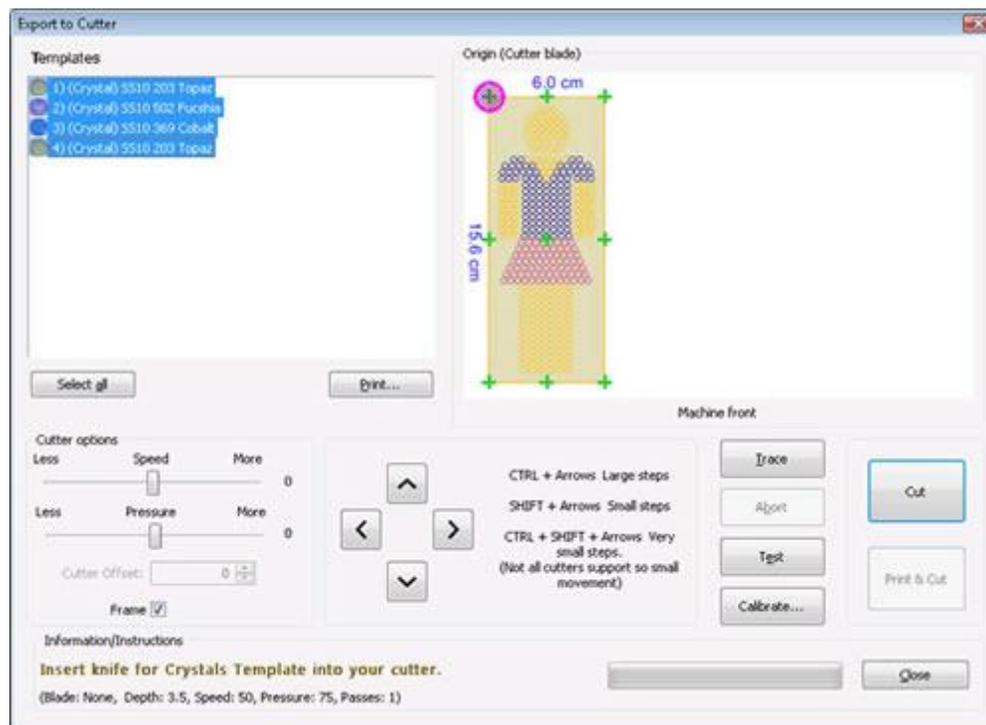


29. From the appearing dialog you have the ability to export the design in various ways. We can export as **HPGL file - SVG file - DXF file - FMC file** or directly sent the created design to a specific cutting machine. The machine will create the crystal holes, cut the outline of the shape you have created.



Sent design to Artistic Edge cutting machine

30. Select your machine from the list and click **Connect**.
31. The **Export To Cutter** dialog will appear. Based on the Cutting machine you can adjust the **Speed**, the **Pressure**, the **Cutter Offset** to all cut templates or adjust more cutter parameters for each template through the **Test** dialog. If the fields are enabled then you can edit this options, otherwise you will have to do it manual from the machine's panel. The values that you will see in the fields are the default values that we recommend you to use with the specific machine.



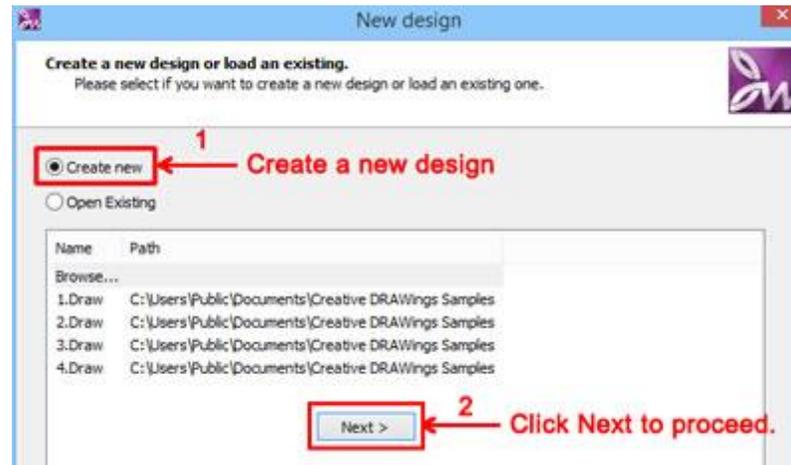
32. In the dialog you can also adjust the design's **Origin**. At the **Origin** area you can specify the position from where you want the machine to start creating the design. This option helps you to position the material that will be cut at the correct position. You can change the **Origin** by simply clicking on the respective green cross.

33. Before clicking the **Cut**, make sure that you have inserted the cutting Mat with the cutting material in the Cutter and you have positioned the cutter header (use the arrows from the dialog) at the location where you want the design to be cut.
34. Select a template you want to cut from the Templates list (If you want to cut one one set of holes) or select all/more than one and then click **Cut** button to begin cutting the design.

Create your first Paint design

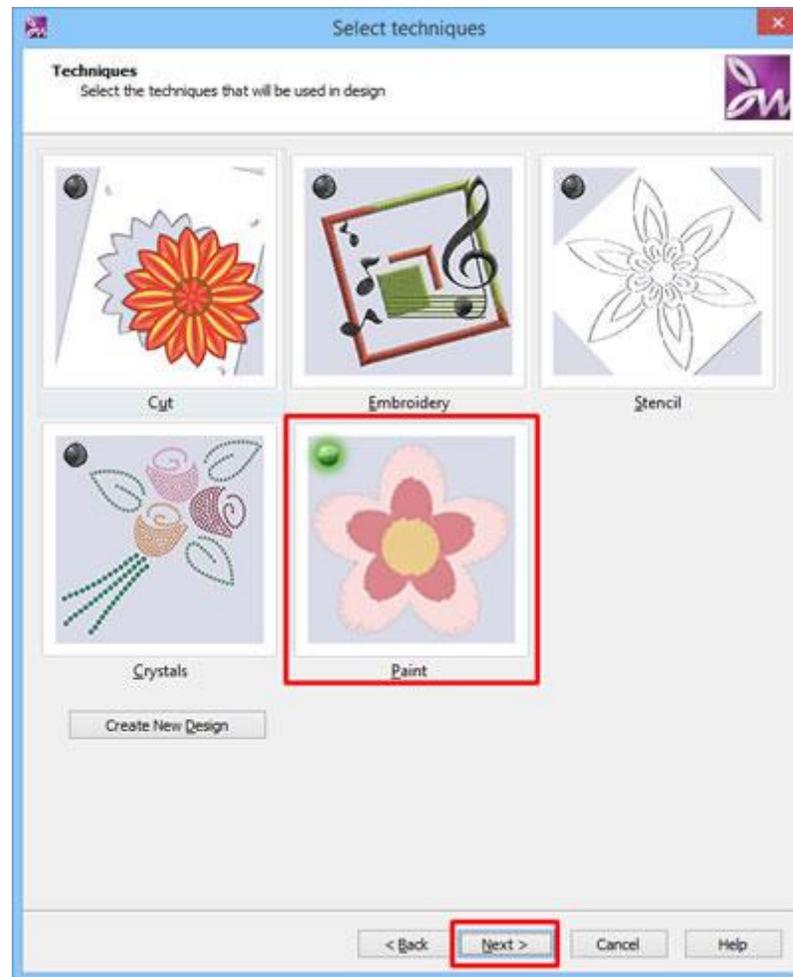
This is a step-by-step tutorial to guide you in creating your first **Paint** design.

1. Start **Creative DRAWings** by double clicking on shortcut icon  that you will find on your **Desktop**.
2. The application will load and the **startup wizard** will prompt you to **create a new design** or **load an existing**.



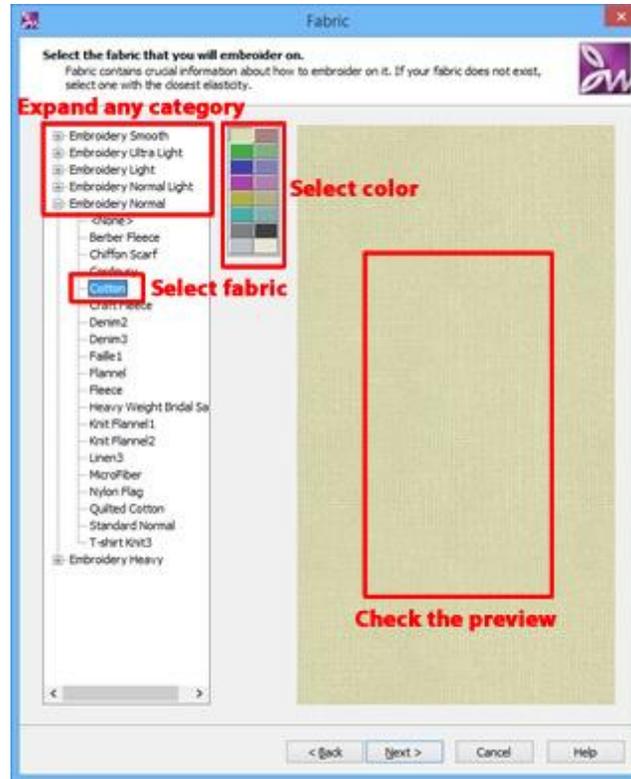
Starting dialog

3. Select the **Create new** option and click **Next>** button to proceed.
4. In the next step you must select which Techniques you want to be enabled for the created design. For the purposes of this sample we will enable only **Paint** technique. Then click on **Next** button to proceed.



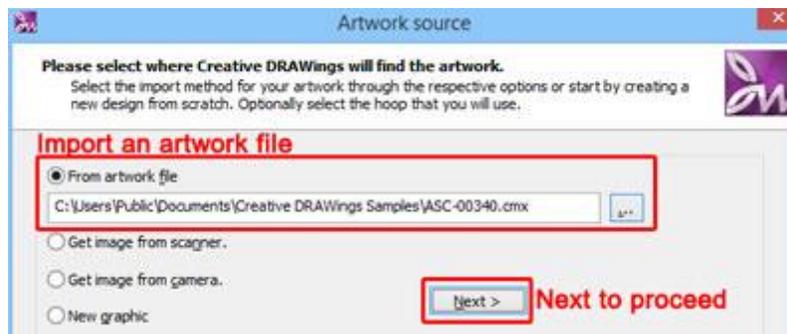
Select Techniques

5. When you have enabled any of the **Embroidery**, **Crystals** or **Paint** techniques then the **Fabric** dialog will appear. Using this dialog you must select a fabric type and a color that is as close as possible to the one you are going to produce the design on. Expand any of the fabric categories, by clicking on the + icon next to it, to select a fabric and-or a color for the fabric. After selecting the **Fabric**, choose the color from the list at the middle of the dialog. The Fabric selection is not just an issue of previewing the design on the fabric. The software automatically adjusts, according to the selected fabric, various embroidery parameters. Embroidery quality depends on some of these parameters. The software suggests the appropriate backing materials for every fabric, in the printout of each design. In case that you don't want to preview the design on any fabric you can select the **none** option that exists in any of the fabric categories. In this case only the color that is select in fabric dialog will appear in the background of the created design. More information about Fabric selection is provided into a separate topic. After selecting a Fabric and a color for the fabric click on Next to proceed.



Select fabric dialog

6. The **Artwork source** dialog will appear.
7. Select the **From artwork file** option and Click on the browse button  at the right to select a design.



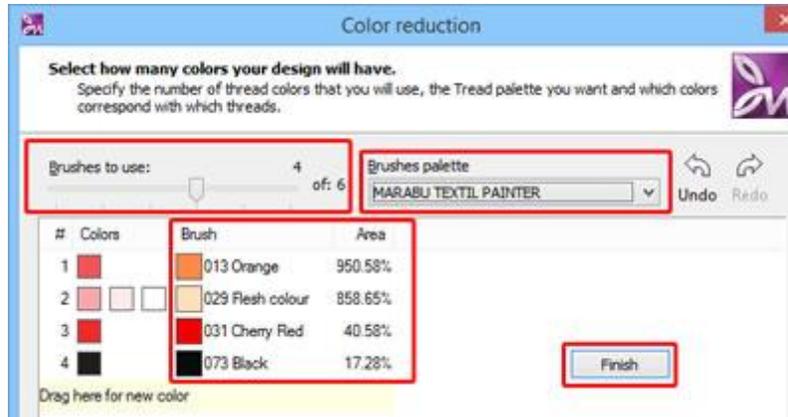
Starting dialog - 2nd page

8. The **Open** dialog box will appear from where you can browse to find any bitmap or Vector image to be used as artwork for the new design.



Open design dialog

9. Click on **My documents** folder at left side of the dialog.
10. Then find and double click on the **Embroidery designs** folder
11. Inside **Embroidery designs** folder you will find another folder called **Creative DRAWings samples**. Double click on it.
12. Inside the **samples** folder you will find ready-made **Vector** (clipart) designs that you can import and convert to a Paint design. Select any of them, in our example we will use the **ASC-00340.cmx** file. Select it and click the **Open** button.
13. The **Artwork source** dialog will appear once more with the design you selected under **From file** field. Click on **Next** to proceed.
14. The **Color reduction** (number of Brushes) dialog will appear where you can select the **Brushes palette**. Since only the Paint technique is enabled, the software will convert the imported design using paint types and paint colors.



Color reduction dialog

15. Click on the arrow under the **Brushes Palette** and the drop-down menu will show the available ones.
16. Select the brand-name brush palette you want to use by clicking on the list. For example, select the **MARABU TEXTIL PAINTER** brush palette.
17. The colors of the design you are importing will automatically be assigned to the closest brush color of the **MARABU TEXTIL PAINTER** palette.
18. In the **Color reduction** dialog you can see that the design has **6** different colors but the design is automatically reduced to 4 colors since the palette has only 4 brushes.
19. You can reduce the number of colors in the design by moving the arrow to the left. Click **Finish** to end the process and convert the imported design to a Paint design.
20. The design will appear in the working area filled with the available Paint types. You can have a better preview of the paint effect by activating Realistic paint



The imported design converted to Paint

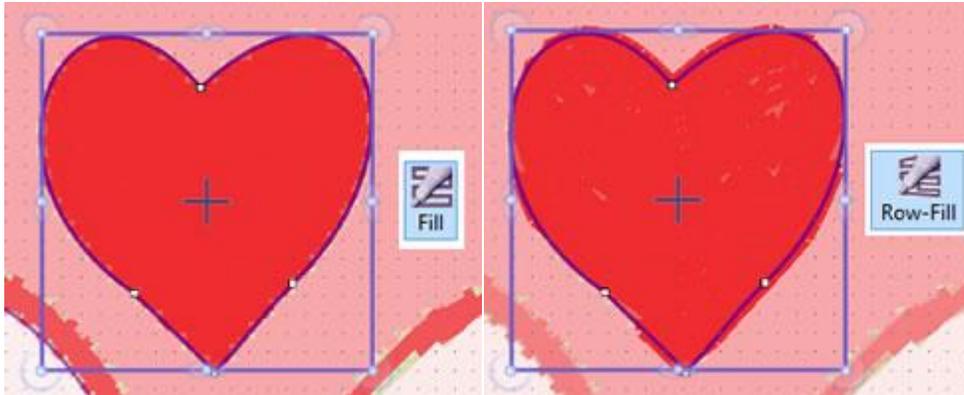


Realistic paint view

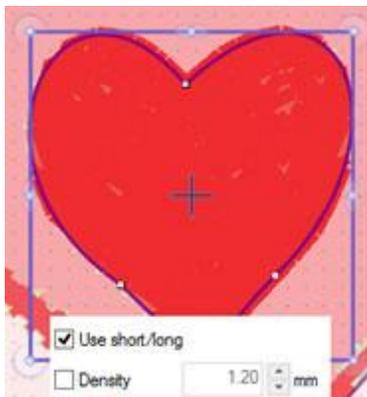
21. Select any of the design parts and see on **Object properties**, **Paint** fill or outline types have been automatically applied. Every time you select a Paint object its properties appear on the **Object**

properties Toolbar. You can select multiple object by holding the **Shift** key pressed and clicking on the objects you want to add it to the selection.

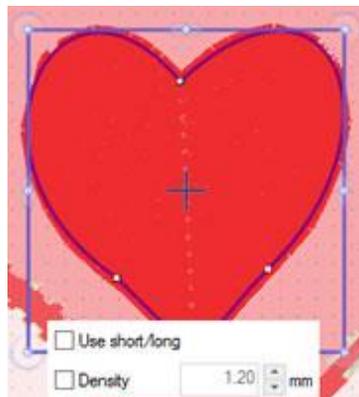
22. For example select the heart, as you can see **Paint fill** is the automatically select **Paint** type. You can easily change the fill type by clicking on any other fill type for example **Row-fill**.



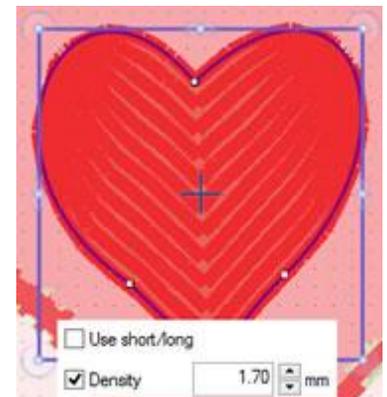
23. We can use all editing tools and perform various transformation on the artwork. At this point we will only mention something about object properties. There are various properties for any of the paint types. For example for the Paint Row fill of the previous figure we can adjust the **Density** and or use **Short/long** movements.



Initial object

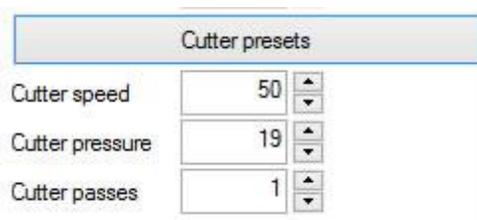


Disable short/long



Increased density

24. At this point we should mention about **Cutter settings**, let's suppose that we own **Artistic Edge** digital cutter and our design has only paint objects. We will select all objects and from **Cutter presets** we will select the preset **Edge - Paint**. The selected set of cutting options (Cutter speed, pressure, passes) will be applied to all selected objects. This cutter settings are suitable for Paint objects.

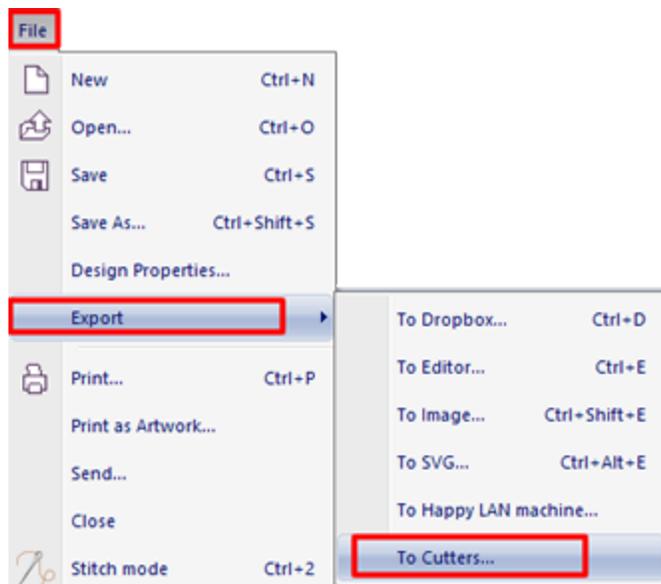


Paint preset - Cutter settings

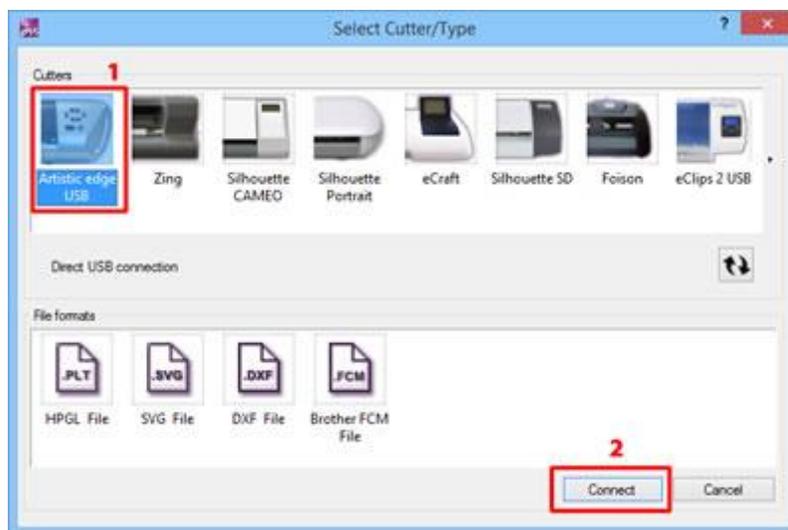
25. Let's suppose that we are done with the design and we are ready to **Paint** the parts using our Digital cutter (the cutter must support placing of a **Brush** instead of the Blade).

You should always save the design to **.draw** file format, in order to have it for later reference.

26. From **File** menu, **Export** sub-menu activate **Export to Cutters** option.

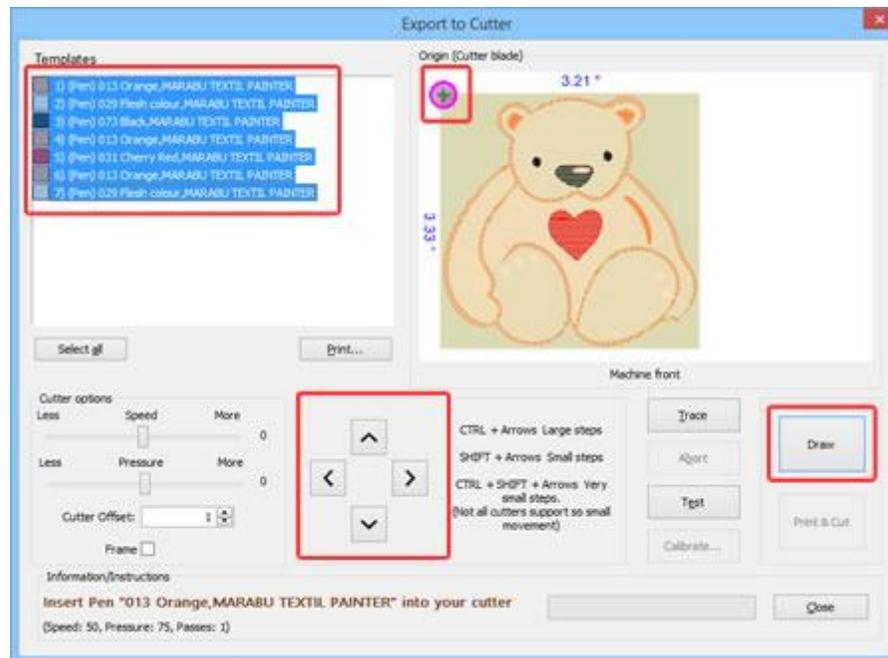


27. From the appearing dialog we must select one of the **Cutters** to connect or a **File format** if we want to export to a file and import to our cutter in a manual way. In our sample we will use **Artistic Edge** cutter, click on the **Artistic Edge** Cutter icon and then click on **Connect** to proceed.



Select a Cutter or Export to a file

28. The **Export to Cutter dialog** will appear, using this dialog you can DRAW any design part with your cutter. If the Digital Cutter is properly connected and powered ON, then at this point you should be able to directly communicate with the Cutter through this dialog. At this point that we must mention that on the preview you can see the actual colors of the Brush palette that you have selected for the design. Some colors have been substituted by their closest one from the Brush palette. For example the Pink color was substituted by this number 029 color called Flesh Color.



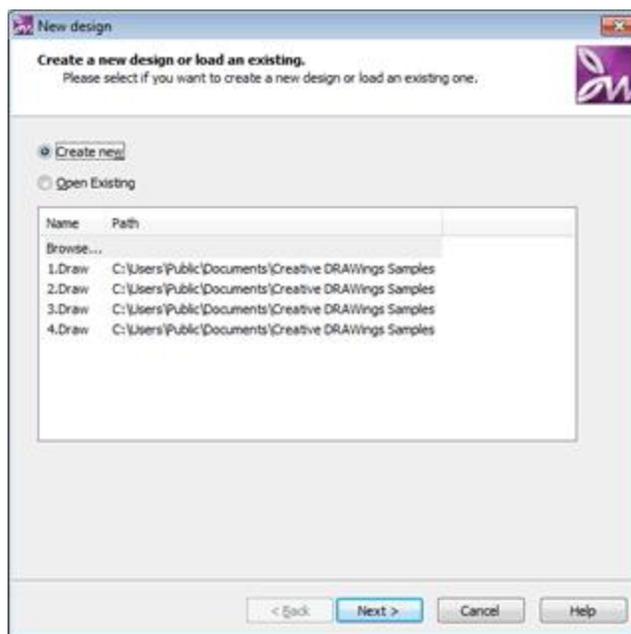
Before proceeding you must have loaded the **cutting mat** with the **material** to Draw into the Cutter.

29. We will now proceed and **Draw** the design parts onto any paper like material or onto a Fabric. Select all items from the **Templates** area.
30. Then you should select an **origin**. This is the point that you want the cutter to begin Drawing from.
31. If you have never used this material or the Pen on your Cutter you should first perform a **Test** to verify that the Pen/Brush Draws as you wish on the current material. More information about **Test** functionality setting is provided into separate topic.
32. Place the respective Pen on the pen holder and now you must position the head of Cutter with the first **Pen / Brush** at the position on top of the area the you want to Draw. More specifically we need to place the head close to the edge of the upper left part of the material according to the origin we have selected. Use the arrow buttons to move the Head to a desired position. If you need to fine tune the position of the Head you can use **Ctrl** , **Shift** keys on your keyboard to adjust the step of the movement.
 - § Hold **Shift** key  in order to make the movement small.
 - § Hold **Ctrl** key  in order to have a large movement step.
 - § Use **Ctrl and Shift** keys together ( + ) to make a very small movement step.
33. You can **Trace** the area that the design will need to make sure that it fits into the material you have placed.
34. Finally press **Draw** in order to start the actual cutting process. When the part of the first **Pen** is complete the Cutter will stop and you will be prompted to place the next **Pen/Brush** onto the pen holder.

Create a design from scratch

Creative DRAWings provides the ability to create an embroidery design from scratch by using all available designing tools and your creativity. With the designing tools that the software includes you can create any embroidery design you want easily and quickly. In this section we will show you how to create a design step by step.

1. Start **Creative DRAWings** application by double clicking on shortcut icon  that you will find on your Desktop.
2. Creative DRAWings application will open and the **starting dialog** will appear.



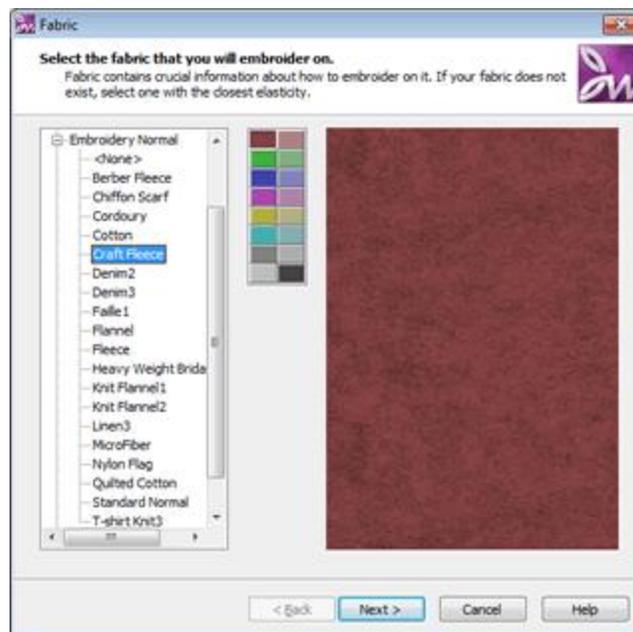
Starting dialog

3. Select **Create new** option and click **Next** button.
4. From the next dialog select which techniques you want to be enabled. Make sure that **Embroidery** technique is enabled



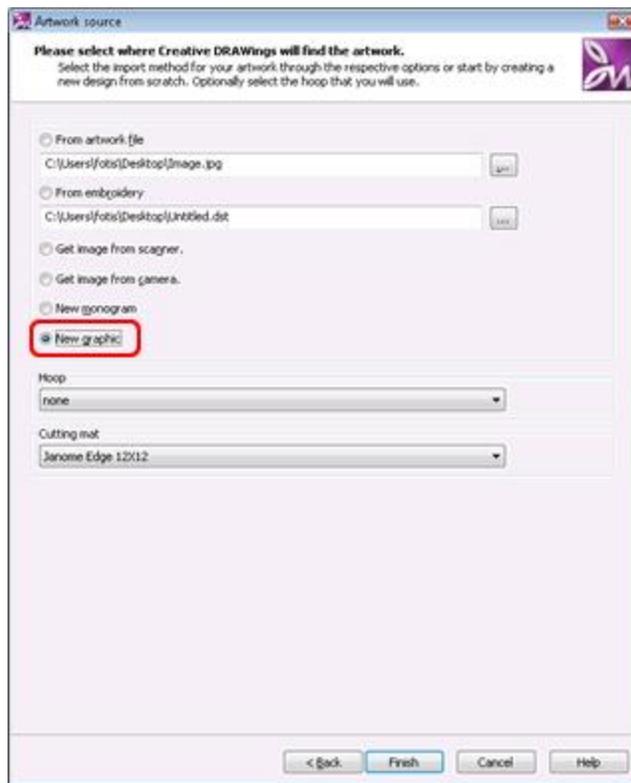
Select the Techniques that you want to be enabled

5. The **Select Fabric** dialog will appear. Expand the **Embroidery normal** category from the list at the left by clicking on the + icon next to it.
6. Select the fabric that is similar with the one you will actually use to embroider the design. For example select **Craft Fleece** fabric.



Select fabric dialog

7. Select a color for the fabric that your fabric has from the color list at the middle of the dialog. For example select **gray** color.
8. Click **Next>** button to continue.
9. The **New design** dialog will appear.
10. Select the **New graphic** option that is located at the bottom of the dialog.

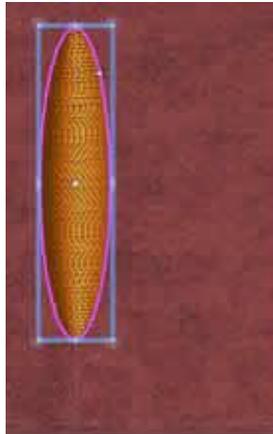


Starting dialog - 2nd page

11. At the **Hoop** section of the same dialog, you can select the hoop that you will embroider your design on. If the hoop your machine supports does not exist in the list select one with similar dimensions. You can create your custom hoops easily inside Creative DRAWings.
12. After selecting the hoop you want Click **Next>** button to continue.
13. The workspace will appear with the selected hoop at the center but without any design in it.
14. We will create a flower by using the available designing tools of Creative DRAWings. From the **Tools** toolbar that is located at the left side of the working space, and holds all the designing tools select the **ellipse** tool . The ellipse tool is above the **Text** tool . If a different shape is visible at that position, click on the small arrow at the bottom right of the icon to expand it and then select the ellipse tool that will appear.

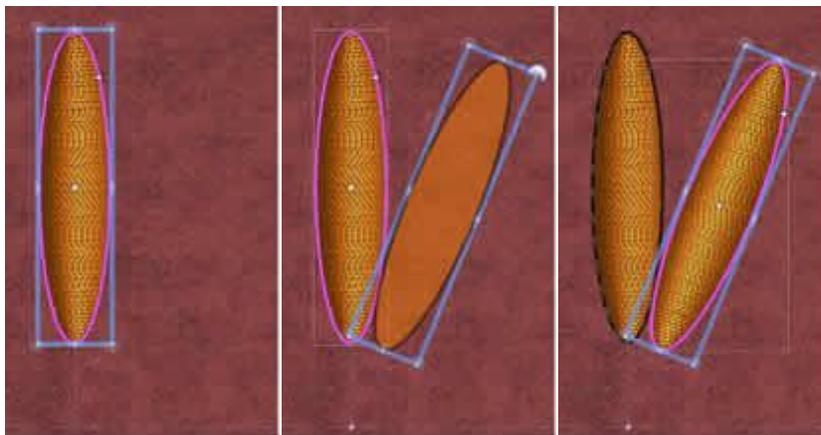


15. With the **ellipse** tool selected, draw an oblong shape like a petal, by click and dragging with the mouse on the working area. The oblong shape that you create will automatically be filled with **Satin** stitches and have a running outline. If the shape you created is big, it will be filled with **Step** stitches.
16. The shape will be filled with the default **Fill** color and the default **Outline/Pen** color. To change the **Fill** color you have to select the shape/object and **Left click** on the color you want from the **Thread palette** toolbar at the bottom of the screen. To change the **outline/Pen** color you have to hold the **Shift** key pressed from the keyboard and then **left click** on the color you want.



Draw an oblong shape

17. In our case we do not want the shape to have any outline/pen color. We will hold **Shift** key pressed and then click on the **None** color icon . The outline will be removed from the shape and the **None** color icon will change to  icon, which means that our shape does not have any outline color.
18. Select the shape by clicking on it.
19. At the middle of the selected shape you will see a small cross. This is the rotation center of the design. Click and drag it to the bottom of the shape and position it outside of the shape. This will allow us to rotate the shape based on a different rotation center.



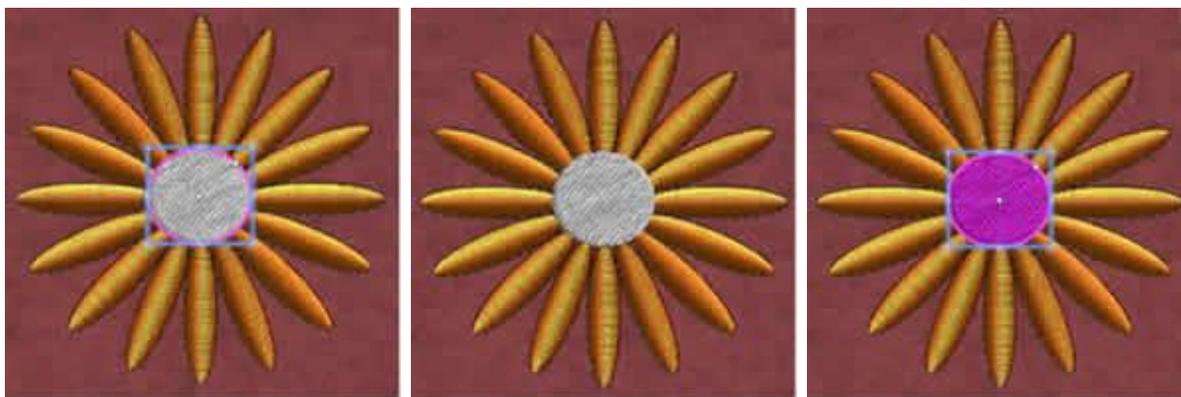
Select shape – Move Rotation center – Rotate from top-right corner and duplicate

20. Position the mouse on the top right corner until you see the rotation icon, which is a curved arrow.
21. Click and drag the clockwise and the object will start rotating. At the point that the original shape ends, **Right click** once while keeping the **Left click** pressed, to activate the **Duplicate** function. The cursor will change to this icon . When you are ready release the left click to **Duplicate** the object. The duplicated object will appear at the position you rotated.
22. To avoid doing that again and again until you draw all petals of the flower, you can simply select the **Repeat last transform** option from the **Edit** menu. This option will redo your last transformation, based on the last inserted petal, as many time you want.



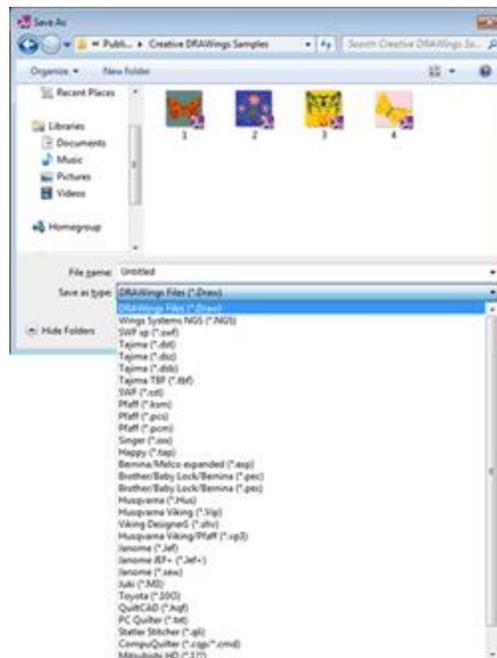
Apply Repeat last transform option

23. Now we will design the center of the flower.
24. Select the **Ellipse** tool , once more, from the **Tools** toolbar.
25. By click and dragging on the center of the petals, draw a circle. If you hold the **Ctrl** key pressed while dragging with the mouse diagonally, guidelines will appear that help you draw the shape based on them. By dragging based on the diagonal guideline you can draw a perfect circle.



Draw a circle – remove outline - change color

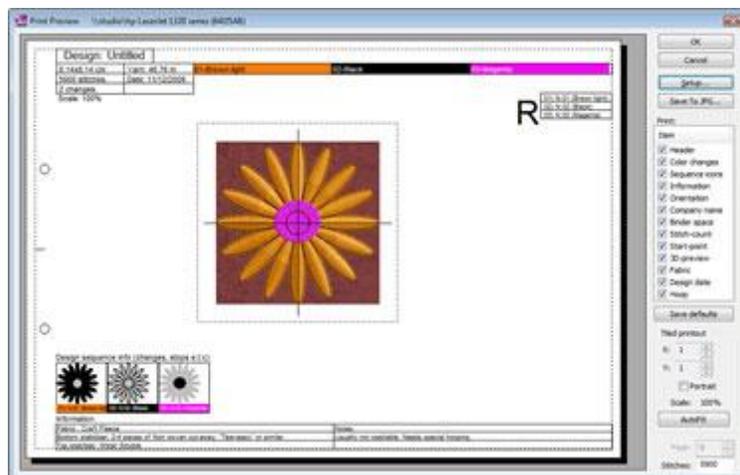
26. If the circle you created is not exactly at the center of the petals you can move it by click and dragging it to the position you want.
27. Select the circle you created, change its color to **Yellow** and **remove its outline** by following the same procedure we described on 15 and 16 steps.
28. Your flower is ready to be embroidered.
29. To avoid losing your work you have to save the design in .draw file format that makes it fully editable inside Creative DRAWings. To do that you have to select the **File** menu and then the **Save as** option.



Save As dialog box

30. The Save As dialog will appear. Find the location you want the file to be saved. For example, inside the **Embroidery designs** folder that is located inside **My documents** folder. If you want you can save the design directly to your floppy disk or your memory card that your machine reads.
31. In the **File name** field that is located at the bottom of the dialog type the name you want the design to have. For example, type **Mydesign**.
32. Then click on the **Save as type** drop down menu to view the available file type options. Select the **.DRAW** type which is the first on the list. The **.DRAW** file format is the file format that Creative DRAWings supports and holds your artwork together with your stitches. Click **Save** button to continue.
33. If you want to embroider the design you have to save it also to the file format your embroidery machine reads. For example, if you have Husqvarna embroidery machine you have to select the **.Hus** or **.Vip** embroidery file format.

34. After saving the design, make a printout so you can set the functions on the embroidery machine correctly and then sew it out without any problem.
35. To do that, from **File** menu select **Print** option.
36. In appearing **Print preview** dialog we can find all necessary information in order to embroider the created design correctly. If you have a printer you can press **OK** button and make a **Printout** of the design. If you do not have a printer or you do not want to print it, you can save it as an image file and view it with an image viewer program.



Printout of the design

37. To save the **Printout as image** file you have to click on the **Save to JPG...** button.
38. The **Save printout as** dialog will appear where you have to :
- Specify the location to save the file.
 - Type a filename for the file.
 - Click on Save button
 - In order to view the saved image you have to simply double click on the created file.
39. All the information you need is provided in the Printout including the **Embroidery sequence** of the design, the color changes the number of stitches and many more useful information.

You are ready. Load the file to your embroidery machine, use the printout as your guide to setup your machine and embroider the design you have just created.

Chapter III

Working with files

In this chapter you will learn how to **import** and **convert** almost any type of artwork that you wish to import. The secret of the powerful *Creative DRAWings* is that it can import any clipart or photo and quickly convert it into a design.

You can easily import vector and bitmap pictures and directly convert the artwork into a design. Images can be imported in 3 ways. You can import from a file, get image from scanner or take a snapshot from camera. Imported bitmap images can be traced and converted into vector artwork.

You can also import an embroidery design created in another embroidery program. This is a fantastic feature, we can import any stitch design and add **new design objects** to this old design and reproduce a newer and improved version.

After learning the available ways to create a design, you will learn all the available tools to review the design and get it ready for production by the embroidery machine. (Print preview, Save and Export).

Vector and Bitmap designs

Creative DRAWings can import **Vector** designs and directly convert them into a design. Additionally **Bitmap** graphics can be imported and handled in 2 ways. The graphic can be opened **As backdrop** to be used for creating the design you want based on the image or to be Traced (Convert into vector outline).

Vector graphics: Vector designs are created as collections of lines. Vector designs are images/drawings generated from mathematical descriptions that determine the position length and direction in which lines are drawn.

The vector files types that can be recognized and used by *Creative DRAWings* are:

- Corel Graphics (*.CMX)
- Encapsulated Postscript (*.EPS)
- Enhanced windows metafile (*.EMF)
- Scalable vector graphics (*.SVG)
- Adobe Illustrator (*.AI)
- AutoCAD (*.DXF)
- Windows metafile (*.WMF)
- HP GL file (.PLT)

All these types of files can be directly imported into *Creative DRAWings*, which recognizes and visualizes all mathematical descriptions that determine the position, length and direction in which lines-shapes are drawn. The imported artwork is converted directly into outline design.

Bitmap graphics, which are mainly photographs, are saved in .bmp, .jpeg, .gif, or .jpg) files formats. Bitmap graphics (Images) are made of patterns of individual dots or pixels. The shapes that they contain cannot be easily resized.

The bitmap file formats that Creative DRAWings supports are as follows:

- Bitmap files (*.BMP, *.DIB, *.RLE)
- Jpeg file (*.JPG, *.JPEG, *.JPE, *.JFIF)
- Gif file (*.GIF)
- Tiff file (*.TIF, *.TIFF)
- Png file (*.PNG)
- Icon file (*.ICO)

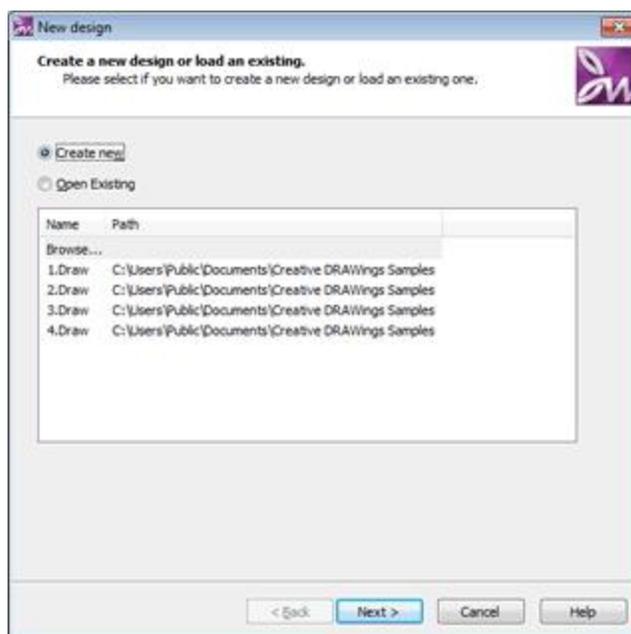
Bitmap graphics can be **traced** or used as **Backdrop**. Trace process turns the bitmap into a **Vector** design so it can be embroidered. We can also use it as a backdrop and design on top of it.

Now that you've learned that **Vector** means clipart and that **Bitmap** means a photograph or picture, we'll use the graphics terms of **Vector** and **Bitmap** as you familiarize yourselves with them.

There are various file formats which can include Vector and Bitmap graphics but you can only import by copying and pasting them or by importing them from the application you are using. This process of acquiring files from different graphics software will be described later on.

Creating designs

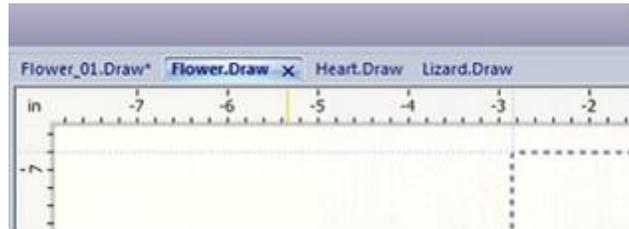
As we have already mentioned in **workspace tour** Creative DRAWings starts with a wizard to help you create new designs, using various sources of artwork.



Startup wizard

We can create and handle many files at the same time. Every created or opened design opens in a new tab. When opening a new design, a new tab appears next to the previous and you can switch between them by

clicking on their filename. You can also use **Ctrl+Tab** keyboard combination in order to move to the next tab or **Ctrl+Shift+Tab** to move to previous tab.



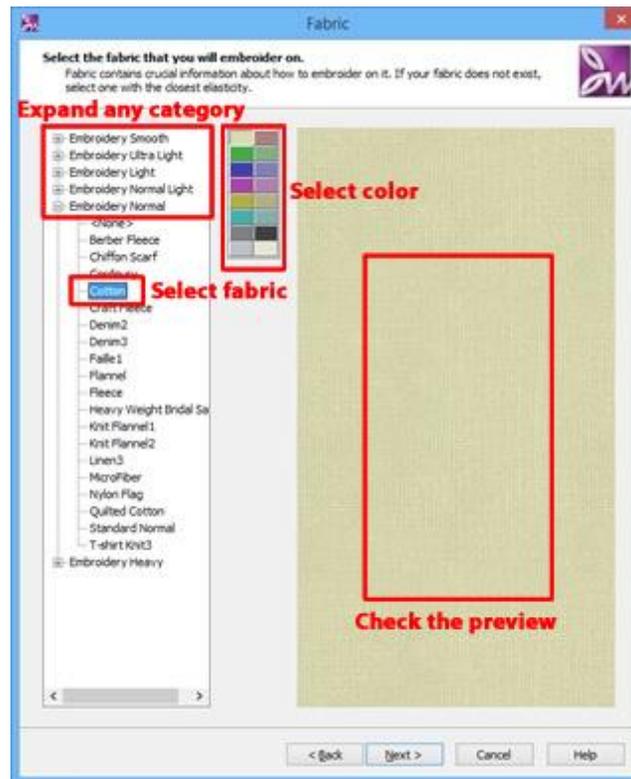
Design tabs

When you have already created a design and you are inside the application window, you can create a new design in 3 ways. First you can use **New design** option of **File** menu. In addition you can press **Ctrl+N** keyboard shortcut or the **new design** icon  of standard toolbar. A wizard will start-up to select which techniques to be available for the new design. Select the techniques that you want to be available and click on next to proceed.



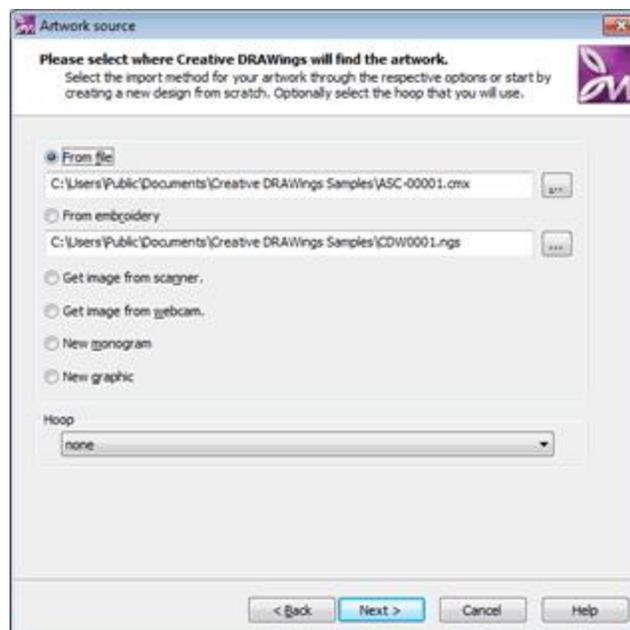
When you have enabled any of the **Embroidery**, **Crystals** or **Paint** techniques then the **Fabric** dialog will appear. Using this dialog you must select a fabric type and a color that is as close as possible to the one you are going to produce the design on. Expand any of the fabric categories, by clicking on the + icon next to it, to select a fabric and-or a color for the fabric. After selecting the **Fabric**, choose the color from the list at the middle of the dialog. The Fabric selection is not just an issue of previewing the design on the fabric. The software automatically adjusts, according to the selected fabric, various embroidery parameters. Embroidery quality depends on some of these parameters. The software suggests the appropriate backing materials for every fabric, in the printout of each design. In case that you don't want to preview the design on any fabric you can select the **none** option that exists in any of the fabric categories. In this case only the color that is select

in fabric dialog will appear in the background of the created design. More information about Fabric selection is provided into a separate topic. After selecting a Fabric and a color for the fabric click on Next to proceed.



Select fabric dialog

Click **Next >** and the **Artwork source** dialog appears. In this dialog you have six possible options to acquire artwork.



Artwork source dialog

First select an artwork source and at the end of the dialog you can select a **Hoop** to preview you design on. You can leave it as it is, or if you decide later you need another size of hoop, click on **Tool >Change hoop** to select the correct size. If you do not want a hoop, click **None** hoop. After you select a source of artwork, a hoop and the desired design mode you are ready to proceed.

Artwork sources

There are several sources that can be used to import artwork.

- **From File**, use any Vector or Bitmap file as artwork for a new or an existing design.
- **From Embroidery**, import an embroidery file.
- **From scanner**, get image from scanner.
- **From camera**, get snapshot from camera.
- **New monogram**, create a new monogram design
- **From scratch**, use your inspiration to create a design from scratch.

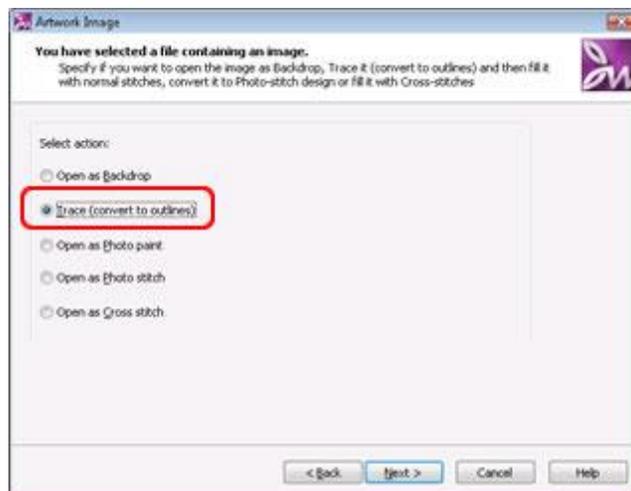
From file (Vector or Bitmap)

Use this option to **Browse** inside your computer and locate a **bitmap** or a **Vector** file to convert into embroidery design. Click on the **Browse**  icon to select the file. The **Open** dialog box will appear, only the supported **Bitmap** or **Vector** files can be selected. A complete list of supported file formats exists Vector and Bitmap designs section. Locate a file and and click **Next >**. According to the selected file type (Bitmap - Vector) there are various conversion options.

Bitmap file

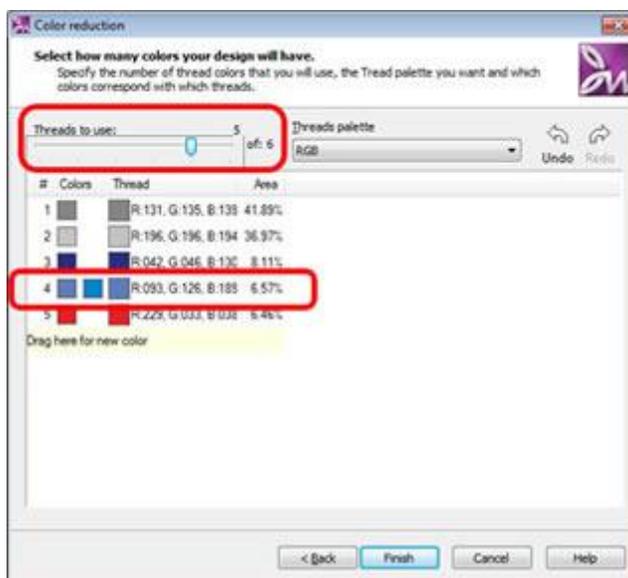
If the selected file is a **Bitmap**, a dialog will appear providing various conversion options. There are four options as shown in the figure below: **Open as Backdrop**, **Trace** (*convert to outlines*), **Open as Cross stitch** and **Open as photo stitch**. We will just refer to these options and we will describe them in detail later in this chapter.

- The **Open as backdrop** option will import the **Bitmap** image as a backdrop on which you can manually draw the embroidery design on top of it.
- The **Trace** option will convert the **Bitmap** to a **Vector** outline design that can be filled with normal outline stitches (Running, Satin Serial).
- The **Open as Photo paint** option can convert the bitmap file directly into **photo paint** design.
- The **Open as Cross stitch** option will convert the **Bitmap** design to a perfect **Cross stitch** embroidery design.
- The **Open as Photo stitch** option can convert the bitmap file directly into **photo stitch** design.



Artwork image dialog

Select one of the conversion options and click **Next**. If you select the **Open as Backdrop** option the software will place the image as backdrop directly without the **Color reduction** dialog. If you selected **Open as Cross stitch** or **Open as Photo stitch** the **Color reduction** dialog will appear immediately.

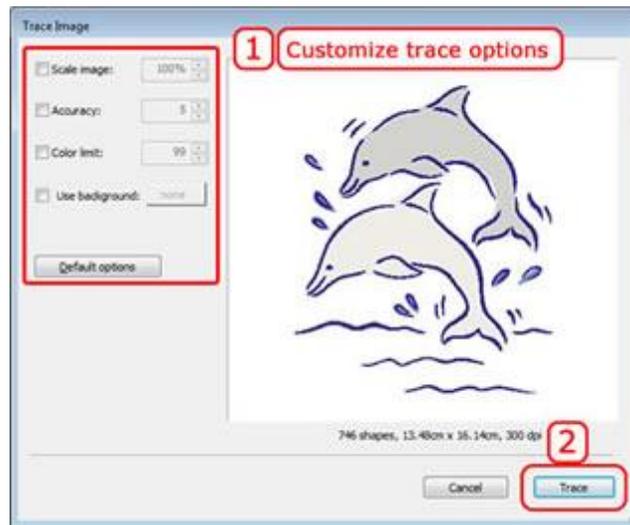


Color reduction dialog

You can reduce the number of threads from 6 to 5, for example, without changing the hue of the design drastically. Experiment by clicking on the arrow and moving it to different numbers of color threads. This dialog allows a complicated design of many threads to be reduced for easier sew-outs on a single-needle machine. Click on **Palette** and the dropdown menu offers a variety of thread manufacturers. Select Madeira Classic, for example, and you'll see the Gunold Poly thread number listed. Your supplier stocks the Madeira thread by this number. Click **Finish** to continue. The design are will appear blank having only the selected image as a background in order to work as guideline for creating the new design.

If you select the **Trace (convert to outlines)** option, then you must customize the Trace of the selected image and then the Color reduction dialog will appear after tracing the bitmap image. After customizing the

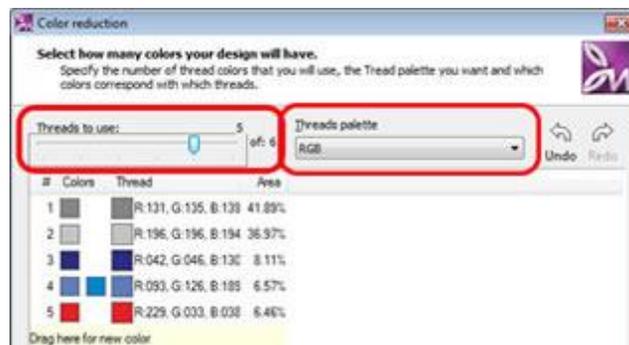
design colors click **Finish** to continue. The Traced bitmap will appear in the design area. Now you can modify any part of the created embroidery design using all available design tools.



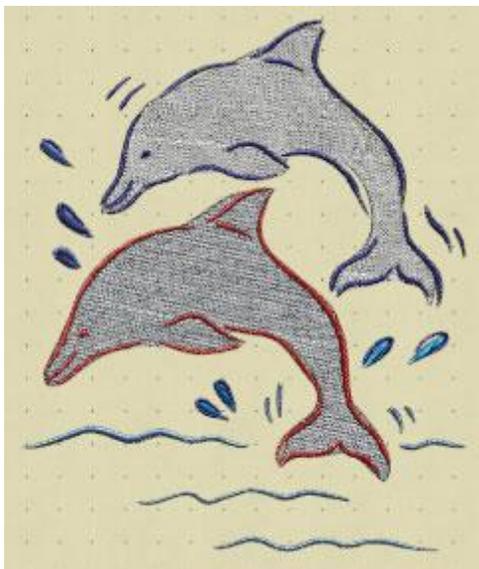
Trace image dialog

Vector file

In case that you select a **Vector** file when using **From file** option, the selected Vector artwork will be converted automatically into an outline design. The only thing you have to do is to select a **Thread manufacturer** palette and the **number of used colors**.

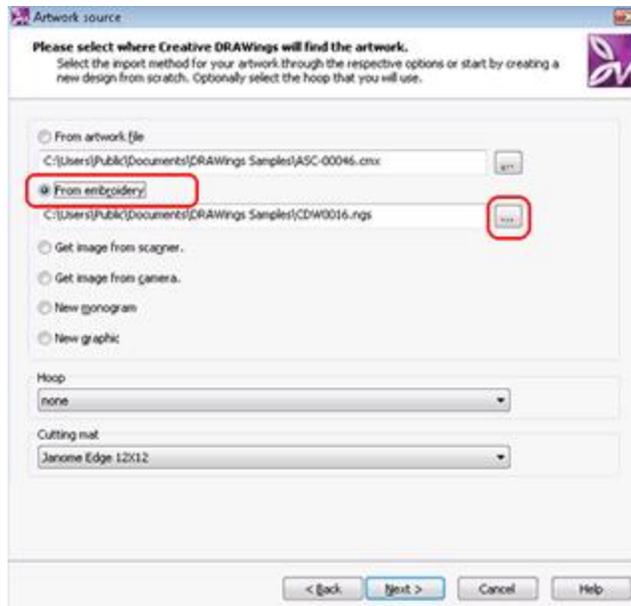


Click on **Finish** and the design will appear in the design area ready to be edited. Select any object and use any of the available design tools to edit the design part.



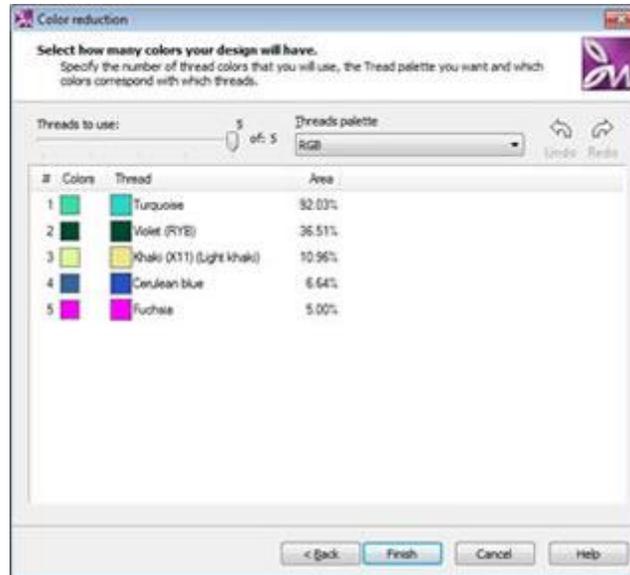
From embroidery

Using Import embroidery files option you can import a stitch file format (like “.exp”, “.ngs”, “.dsz”, “.pes”...) inside *Creative DRAWings* unchanged. The procedure is very simple, from **Artwork source** dialog select **From embroidery** option and browse  to locate any embroidery file you like. You'll see the selected file listed under **From embroidery** field. Click **Next** to proceed.



Import from embroidery file

Color reduction dialog is the next step, select a **Thread manufacturer palette** and the **number of threads** to use. Now you're ready to import, click on the **Next** to proceed.



Click **Finish** to view the imported embroidery file. The select embroidery file is imported as is in the design area.



The embroidery design is imported as is. You **can not** edit the artwork or the stitch types of the imported design. You can create new parts and reproduce the updated design. There is also an option to convert any design part into **Outline** design, using **Convert to curves** option. The stitches of this object are removed and it is converted into vector outline in order to be edited as any object that is created by Creative DRAWings.

Stitch files can only be imported from the startup wizard and not from any internal menu - option.

You can read more about how to Import embroidery files and if you want Convert it to vector artwork later in this chapter.

From scanner

Using **Get image from scanner** option, you can scan an image and import it to *Creative DRAWings* as a bitmap image. From **Artwork source** dialog, select **Get image from scanner** option, place your image in the scanner and click next to proceed. The image scan dialog will appear with several options. Through the

Image scan dialog you can scan the design you want and make some adjustments. In the following figure you can take a first look at the available scan options. You can read more about what **Image Scan** option does later in this chapter.

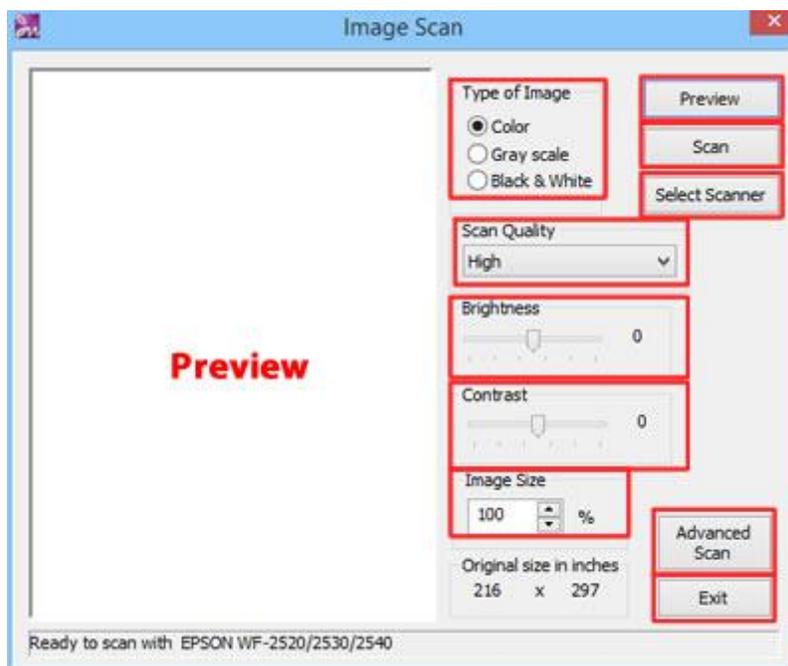
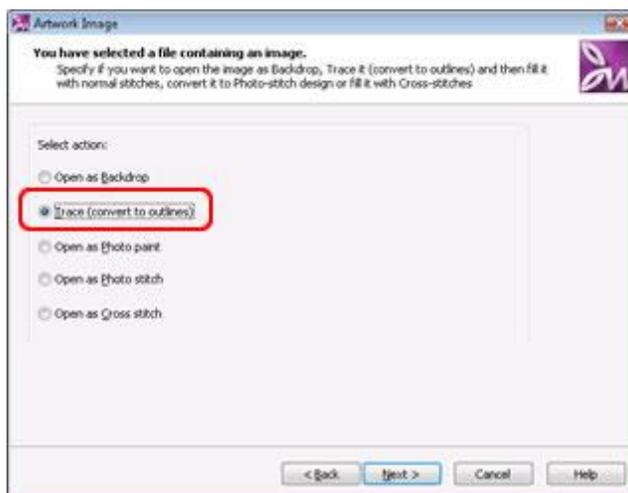


Image scan dialog

You can press **Preview** to review the image on the scanner before scan operation. Each time you change an option from the **Image scan** dialog, you can preview it by clicking the **Preview** button. When you're satisfied with the image, click the **Scan** button. Your image will appear with a **Save as** dialog, asking where you want to save it -- in your files or on a disk. When the scanned image is saved, the wizard will proceed prompting you to select how to handle the bitmap image. Select to open as **Backdrop** or Trace to convert into **Vector** design. From this point you are handling the scanned image as any imported bitmap file. The imported bitmap image can be used as a **Backdrop**, opened in **Trace** and filled with normal outline stitches and opened as **Cross stitch** or as **Photo stitch**.



Artwork image dialog

In case that you need more information about the following wizard steps, about handling the imported bitmap, review following section about Importing bitmap files.

Note: You can find more information about scanning Scanning images into a separate section.

From camera

With the **Get image from camera** option, you can take a snapshot with your camera and import it to *Creative DRAWings* as a bitmap image. The imported bitmap image can be used as a **Backdrop** or opened in **Trace** and filled with normal outline stitches (Running, Satin Serial) , opened as cross stitch or photo stitch design.

The basic steps in order to take a camera snapshot and import the captured image are as follows:

1. Make sure that your **camera** is plugged in to your Computer.
2. From **Artwork source** dialog select the option **Get image from camera**.
3. The camera **Preview** dialog will appear with several options.
4. Through the camera **Preview** dialog you can take snapshots of anything you want and make some adjustments to the image.

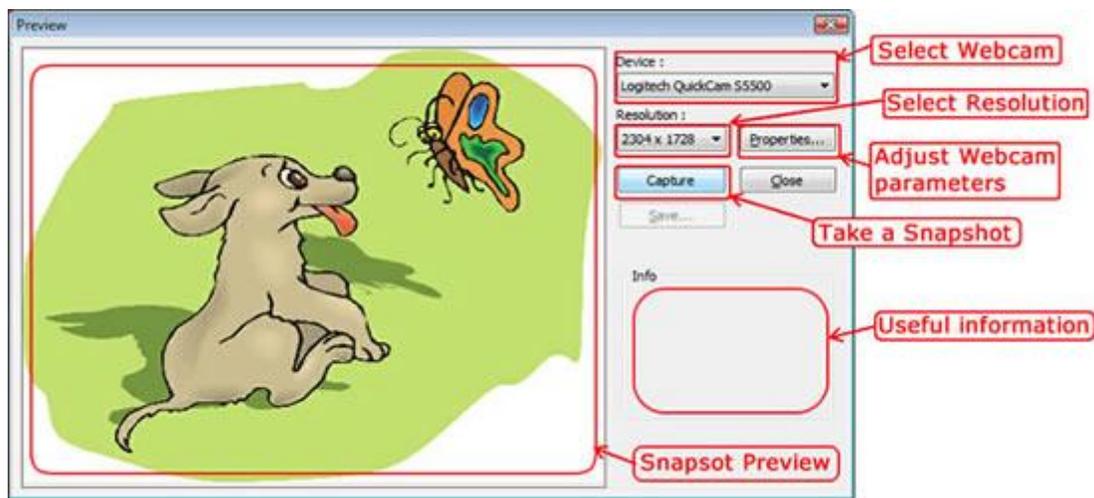
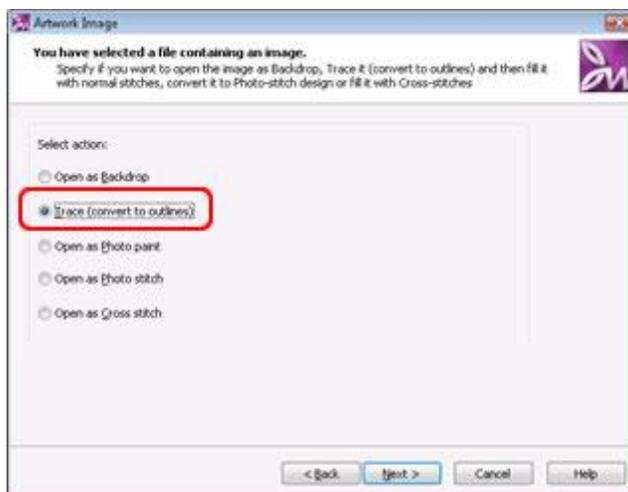


Image scan dialog

5. In the **Preview** area you will view live the picture of your camera.
6. You can make the adjustments on the camera until you capture the snapshot image you want. Each time you change image **Resolution** or **Properties** the live image changes accordingly. When you're satisfied with the image, click the **Capture** button. The image you captured will appear in the preview area showing you the result of your capture. If you do not like the snapshot you can take a new one by clicking once more on the **Capture New** button. The previous taken image will be lost and the camera will become live again, ready for a new snapshot. Once you are ready click again on **Capture** to take the picture.
7. If you are satisfied click on the **Save...** button to save the image on your hard disk. When the design is saved, the image is automatically loaded inside *Creative DRAWings* prompting you to the import dialog. You'll be asked how you want the image to be opened: as a **Backdrop**, converted to a **Vector** design in **Trace**, open as Photostitch or open as Cross stitch.
8. From this point you are handling the scanned image as any imported bitmap file.



Artwork image

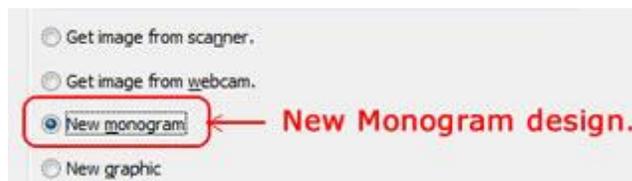
In case that you need more information about the following wizard steps, about handling the imported bitmap, review the following section about Importing bitmap files.

Note: You can find more information about Capturing from camera into a separate section.

New monogram

Using **New monogram** option of **Artwork source** dialog we can create a monogram design. In the following **wizard steps** we can customize the monogram design. More information about monogram designs will be provided in monogram section of **Design Tools** chapter. At this point we will only demonstrate the usage of **New monogram** option in order to create a monogram design from scratch.

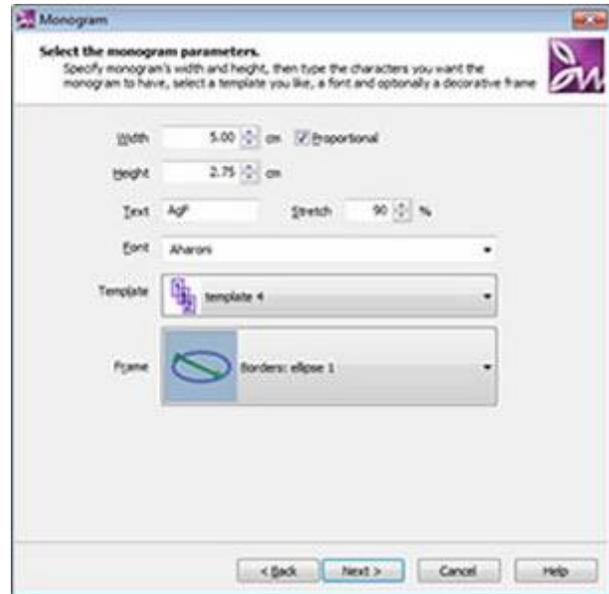
Select "**New monogram**" option of Artwork source dialog and click **Next** to continue.



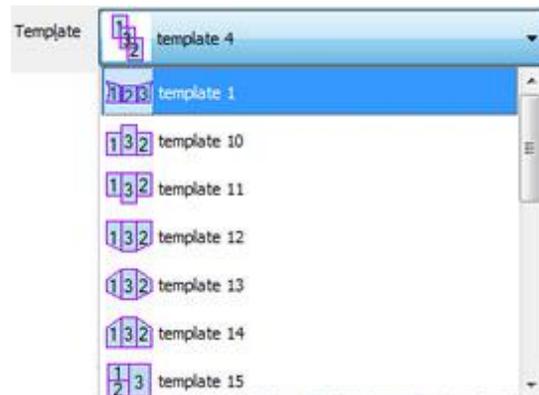
Customize the newly created monogram design.

Adjust the dimensions. The dimensions that we provide define a rectangle that the monogram will be placed inside.

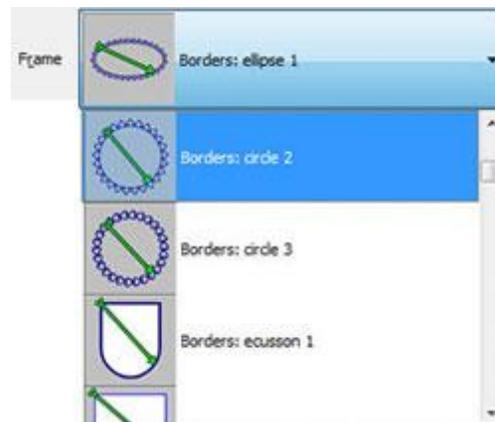
Stretch option can be used to define the percentage of the dimension rectangle that will be used for the monogram. For example if we define 90% as stretch the wizard will apply the monogram on the 90% of the dimension rectangle. If we define 130% the monogram then the monogram will be applied into a rectangle 30% larger than the defined dimensions. Type the characters that will be used for the monogram and select a Font.



Select a monogram template.



Select a frame motif for the monogram.



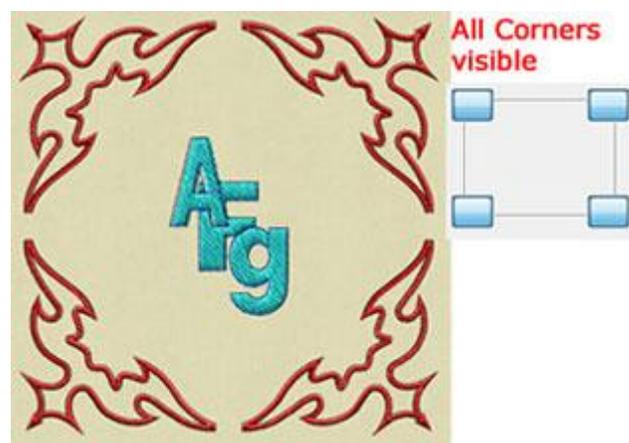
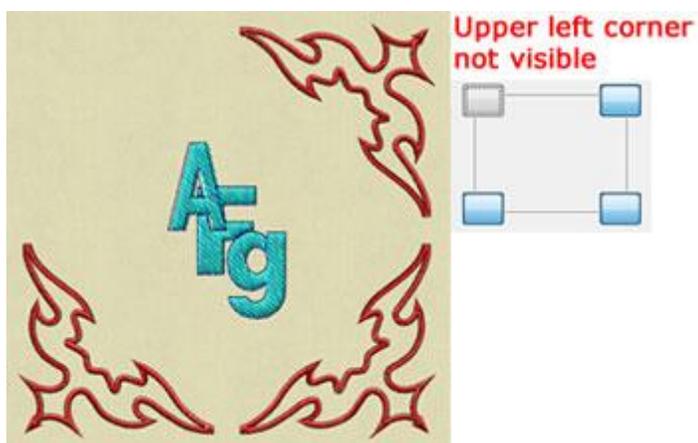
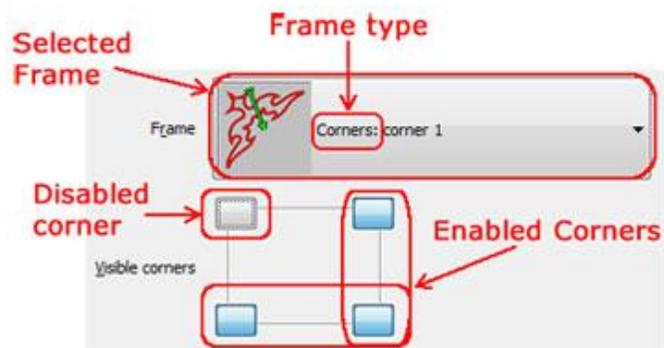
There are three types of motifs. **Borders**, **Corners** and **Sides** motifs. On the drop down list that we select **Frame** next to the icon of the frame and before the name of the Frame there is a label that defines the type of the frame. The 3 available labels are **Borders**, **Corners**, **Sides**. For the **Corner** motifs we can select the corners that the frame will be visible. For the **Side** motifs we can select the Sides that the border will be visible.

Corner frames

When we select a Corner frame, this rectangle appears with these handles on the corners.

By default all corners are Visible. Click on any corner handle to make not visible. Click once more to alter the status.

In the next figure you can see that upper left corner is not visible.

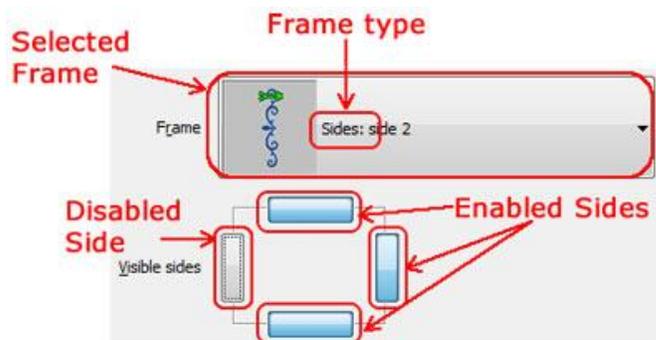


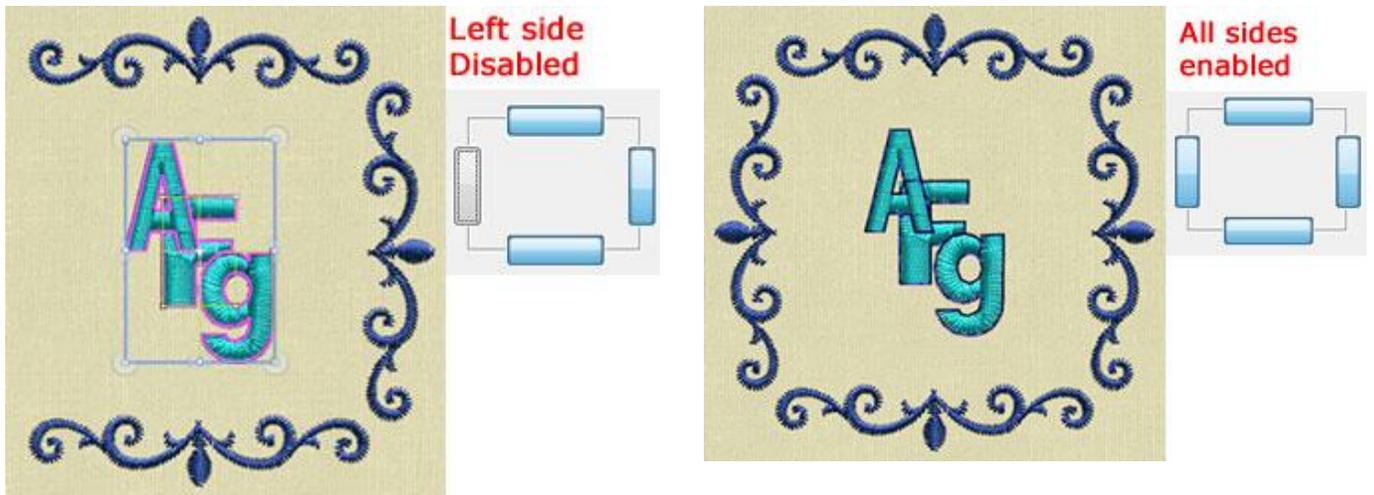
Side Frames

When we select a side Frame, this rectangle appears with these handles on the sides.

By default all sides are Visible. Click on any Side to make not visible. Click once more to alter the status once more.

In the next figure you can see the left side is not visible.





1. We can always see a preview of the created monogram on the design area behind the wizard. Customize the monogram and press **Next** to proceed.
2. In Color reduction dialog, Select **Thread manufacturer** palette, adjust number of colors and press **finish**. The monogram design has been created. Now we can edit the created monogram as any normal design.



New graphic

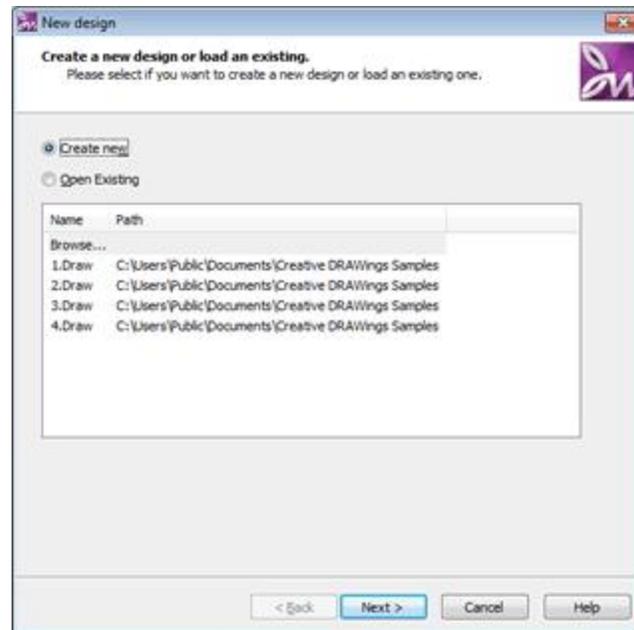
New graphic allows you to manually draw a design and edit it using **Create** mode. Click on **Finish**, Creative DRAWings window will open in **Create** mode where you can manually create the design you want. Use the existing designing tools to create the embroidery design you want.

Loading designs

The program allows you to open only **.draw** file designs. All the other vector / bitmap files have to be imported from the **From file** option that you will find in the starting dialog of the software or by copy and pasting it inside the **Create** mode of the software.

You can load an existing design in many ways. First by using **Open existing** option of **Create new design** dialog of the start-up wizard. We can also press **Ctrl+O** keyboard shortcut once the main application window is loaded, and finally by pressing **Open** icon  in main toolbar. We have already discussed **Create New**

dialog, using this dialog we can select whether we will load a design or if we will open an existing. In **Open Existing**, you also get two options: **Browse** your files and disks for a design or you can click on a **List** of recently opened files. When you click on an existing Creative DRAWings® file (.draw) it will open in a new design tab inside Creative DRAWings window.



New design dialog

When you choose **Open Existing**, here's the step-by-step procedure to follow: You can either **Browse** your files and disks by clicking on **Next >** or open a **List** of recently opened designs by clicking on **Finish**. When you **Browse** a file, you will see it in **Preview** at the bottom of the dialog. You can open one or more files by selecting multiple designs. You can select multiple designs by using the **Ctrl** or **Shift** keys from the keyboard or by making a rectangle selection with the mouse. Once you are ready click on **Open** button and the design(s) will appear in a new design tab (separate tabs for multiple designs).

In the starting dialog's **List**, you can view the last several Creative DRAWings® files you have saved or recently opened. To open one of these files, double click on it or click the **Finish** tab. If the file name you want is not listed, select **Browse > Finish** and an **Open** dialog box will appear. After locating your file, click the **Open** tab and a new window will appear where you can modify your design, and then save it.

Notice: If a **Data Loss Warning** appears, this means that you are trying to open a .draw file that was created from a previous version of Creative DRAWings.



Data Loss Warning

If you attempt to open the design Creative DRAWings will try to open it inside **Create** mode but you might lose some information of the **.draw** artwork (that existed inside the old **DRAW** mode). Therefore, every time you want to open a **.draw** file from a previous version of Creative DRAWings, you should save it with a new file name so the original file to remain unchanged. By following this procedure, you will be able to work with different versions of Creative DRAWings and avoid losing your artwork.

Open dialog box

Using **Open** dialog, you can load an embroidery design from your **.draw** file or import from a disk or the internet. This **Open** dialog -- a normal Microsoft Windows Explorer function -- appears in any way we try to load a **.draw** design. The same dialog appears when selecting other sources of artwork. The same dialog appears but different files are supported in every operation.

When **Open** dialog appears on the top line you can see **Look in:** which has a drop-down menu of files to open any **.draw** file or a **Vector** design supported in your computer (in artwork source dialog). Click on the downward arrow to expand your selection. Every time you return to the **Open** dialog, the program will show the folder you last opened. To find a design, you have to select its location in **Look In**. If you have your files on a CD, click on the drive and you can bring in your **.draw** designs or even supported **Vector** designs.

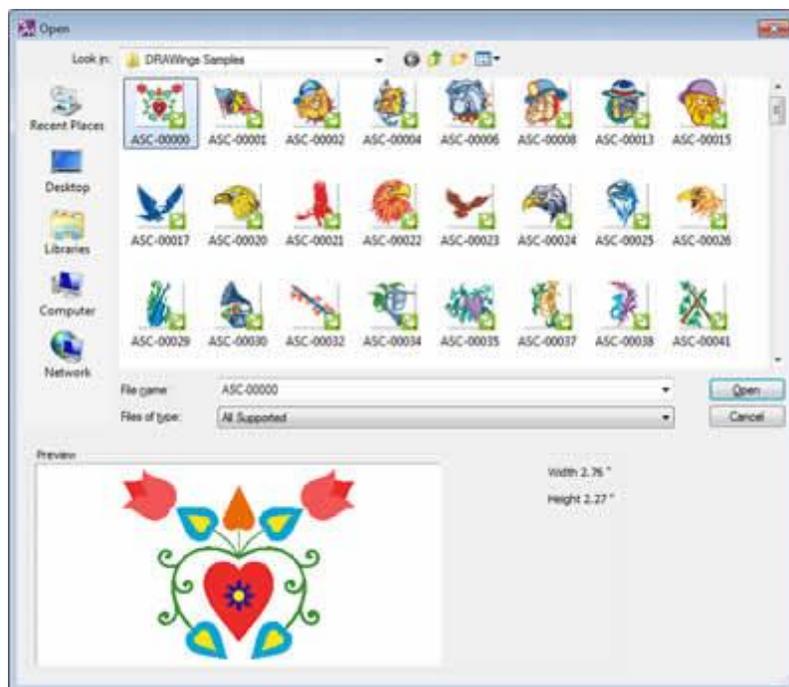
Important: All new imported designs are brought into Creative DRAWings® through the **Look in** field.

Example:

Say you want to load a design in **C:\Designs\Women** directory.

1. Click on the **Look in** field and click on the **C:** hard-disk drive.
2. The **Look in** field shows **C: <Name of the disk>** and the **File list** will show the contents of the hard disk **C:**.
3. In the file list, double click on the folder **Designs**. The **Look in** field shows **Designs** and the file list will show the contents of the **C:\Designs** folder.
4. In the file list double click on the folder **Women**. The **Look in** field shows **Women** and the file list will show the contents of the **C:\Designs\Women** folder.
5. Double click on the design you want to load. On the right side of the **Look in** field are two more buttons that help you change which folder you are searching through.

When you click on any file design, an image of the file will be displayed as a **Preview** at the bottom of the dialog box. This image helps you select the design you want without having to recall the file name or number.



Open dialog

Go to last folder visited

When you want to see previous files that you have opened, click on the back arrow, which is the left-facing icon on the right of **Look in**. Keep clicking until you return to the design you want. In the given example, when you are in the **C:\Designs\Women** and you press the back button, in the **File** list you will view the contents of the **C:\Designs** folder. The second time you will press the back button you will view the contents of the hard disk **C:** and the third time you will see the contents of your designs directory.

Up one level

Clicking on this **Up One Level** icon will take you back to the folder preceding the sub-folder that your saved design opened in.

Example: Say your file open dialog shows the **C:\Creative DRAWings\designs** directory and you want to find a design which is in **C:\Creative DRAWings\men**.

Press the **Up one level** button and the **Look in** field will show the **C:\Creative DRAWings** directory.

In the **File list**, double click on **C:\Creative DRAWings\men**. The list shows the designs or the sub-folders that the current folder contains. Where you select your designs depends upon where you have saved them.

Create new folder

With this button you can create a new sub-folder in the current folder. When this button is pressed, a folder named **New Folder** appears in the **File list** area. The name of the folder remains highlighted allowing you to rename it by writing in a new title.

View options

With this button you can specify the way that the sub-folders and the designs will be viewed in the **File list**. The possible options are:

Thumbnails, Tiles, Icons, List, and Details.

On every design you select from the **File list**, the name or number is written in the **File name** field. In the **Preview** box, you'll see your image. If you can't find the design you specifically wanted but know the name, just type it in and press the **Open** button.

In the **Files of type's** field you can select specific embroidery files names like **.jpeg** for example, and only those files will be visible in the **File List** area. If you want to see all the files, no matter the file type, you can select the **All Files** option. Click on the down arrow and you'll see the big list of files that Creative DRAWings® will accept besides the default **.draw** files.

Saving designs

When you create a design in Creative DRAWings® you can save it in many different file formats. The standard saving format is **.draw** and it is the only format that Creative DRAWings can read and load and all design information is kept all other formats aren't lossless. The other file formats which Creative DRAWings® can open and convert to **.draw** are:

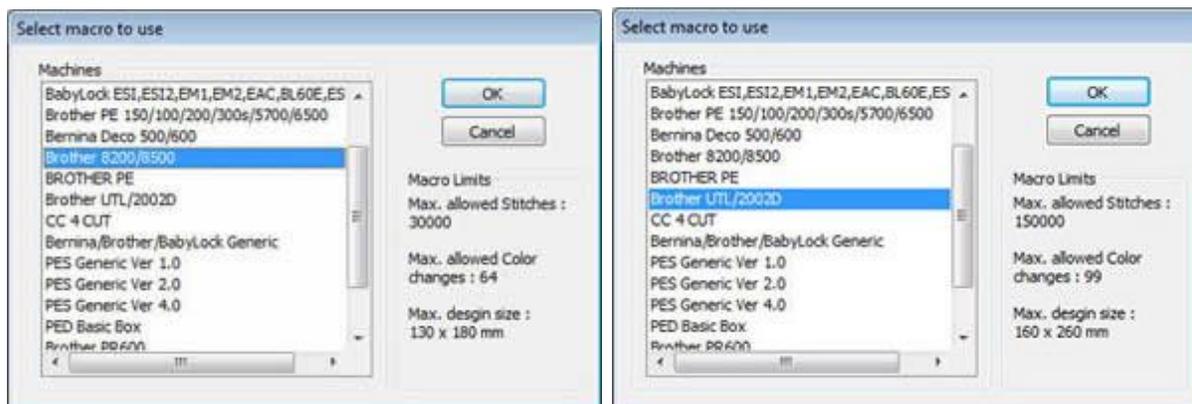
- Wings Systems (".ngs")
- Tajima (".dst", ".dsz", ".dsb")
- Tajima TBF (".tbf")
- SEF xp (".sef")
- SWF (".sst")
- Pfaff (".ksm", ".pcs", ".pcm")
- Singer (".xxx")
- Happy (".tap")
- Melco expanded (".exp")
- Brother/Baby Lock/Bernina (".pec", ".pes")
- Husqvarna (".hus")
- Husqvarna Viking (".vip")
- Husqvarna Viking/Pfaff (".vp3")
- Viking Designer 1 (".shv")
- Janome (".jef", ".sew", ".jpx")
- Janome JEF+ (".jef+")
- Juki (".M3")
- Toyota (".100")
- Laesser (".mst")
- QuiltCAD (".hqf")
- PC Quilter (".txt")
- Statler Stitcher (".qli")
- CompuQuilter (".cqp/", ".cmd")

- Mitsubishi HD (".1??")
- Barudan FDR (".U??")
- ZSK TC (".Z??")

Except from **.ngs**, these are mainly embroidery machine file formats. You can load them from any digitizing software that supports them or from the embroidery machine which will embroider your design. The **.ngs** is a powerful file format that can be processed from some of the leading digitizing software packets in the market (**eXPerience®**, **Wings' modular®**). Also all the formats can be opened with the powerful **Wings' modular**, which is included in this copy of Creative DRAWings®.

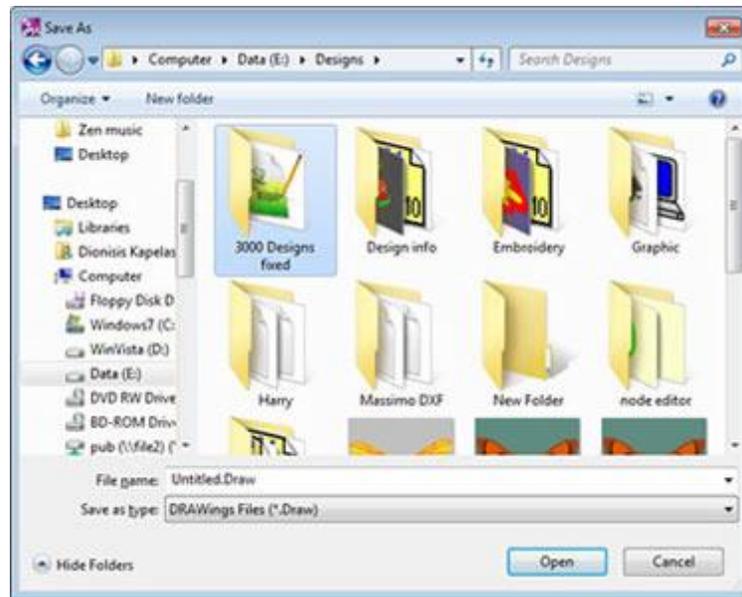
With the ability to save designs in several formats, you can easily put them on a floppy disk or CD and then download them to your embroidery machine.

When selecting to save a design in any of the supported embroidery machine formats then **Macro selection** dialog appears. In this dialog we can select any of the available macros. Some of the macros are specifically for some embroidery machines, select if any is suitable, otherwise use a generic macro that fits most embroidery machines. Inside the Macro dialog you can now view the limits of the selected Macro. This is very helpful for making the correct selection.



Save As dialog box

The **Save As** dialog box is similar with the **Open** dialog box that we described previously. If you need more information about how to find your files through the **Save As** dialog box, refer to **Open** dialog box description.



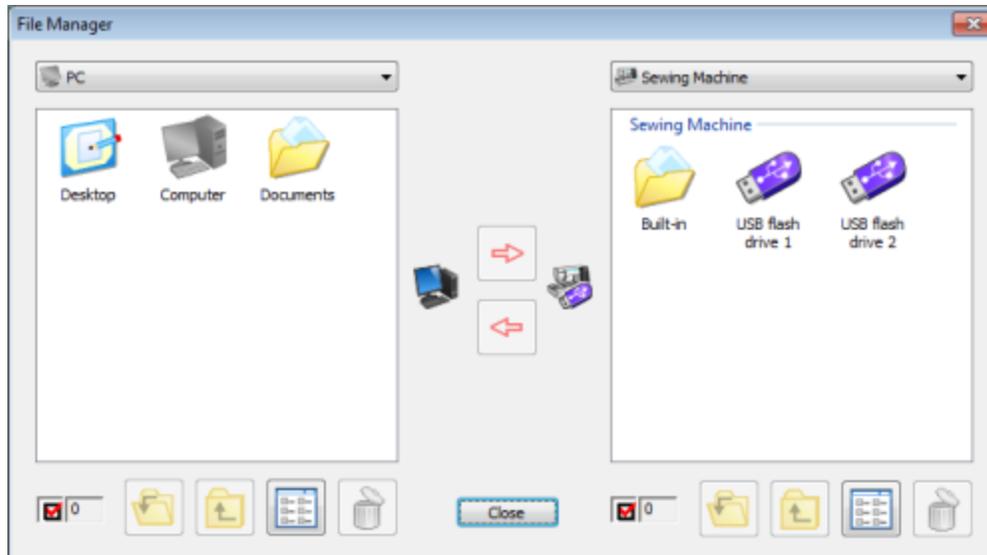
To save a new Creative DRAWings® design you must follow these steps:

1. Choose **File > Save As** or click on the **Save**  icon or click on the shortcut key **Ctrl+S**. The **Save As** dialog box appears. Click on the arrow in **Save in** to choose a location on your hard drive, or to a disk.
2. Give your design a **File name** and then choose **Type of File**, such as **.draw**. (Note: If you want to have access and edit your designs with Creative DRAWings®, always save them in **.draw** format.)
3. Then click on **Save**. Any additional modifications you make to the design can be saved by simply clicking on **Save** or **Ctrl+S**. Your design will be added to the **File** list in the folder you selected to save it in, plus you can see the names of previous designs.

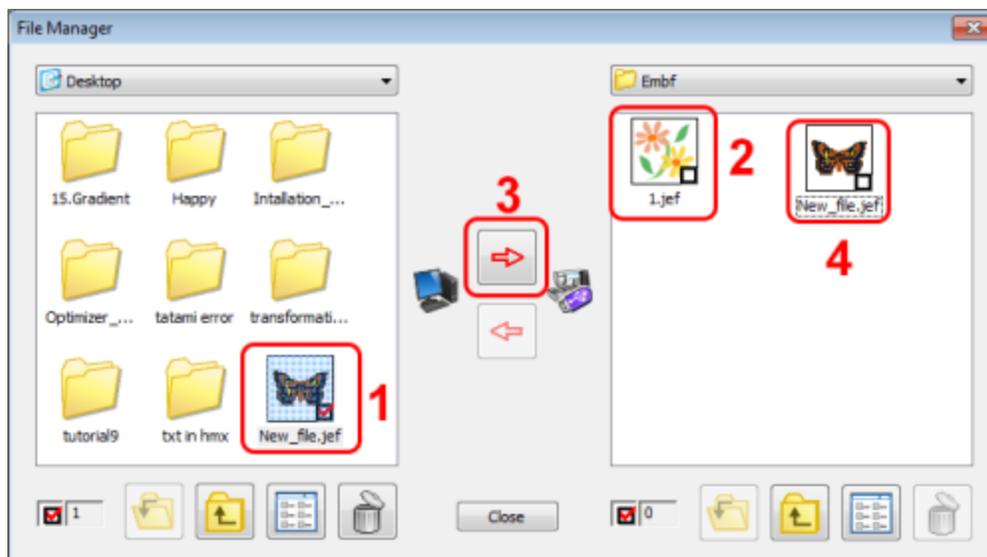
The **File** list area shows the designs that the current folder contains. If you click on a design, its name will appear in the **File name** field and information about that design can be viewed at the bottom of the **Save as** dialog.

Janome file manager

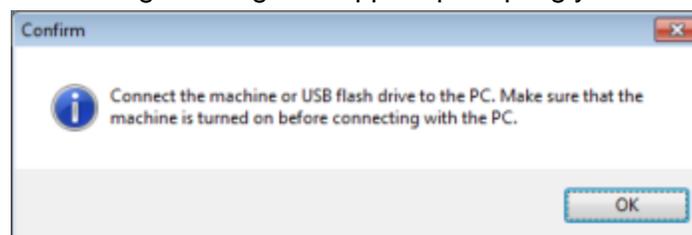
Using the respective options of **File** menu you can access **Janome file manager** for Janome MC12000 - MC15000. For example if i have Janome MC1500 connected into any USB port of my computer and i use **MC15000 File manager** option of **File** menu, the following dialog will appear to help us transfer files between our computer and the connected **Janome MC15000** machine.



Now using this dialog we can transfer any file from our **PC** to the **Sewing Machine**. Use the left part of the dialog to navigate to any folder / file on your computer and then select a destination place from the right area. Now by pressing the arrow that is pointed to Sewing machine area the design is transferred to the connected **Janome MC12000** or **MC15000**.



Please keep in mind that you must select the respective option according to the machine that is connected to your computer, otherwise the following message will appear prompting you to connect you machine.



Export design

You can export any design you create in many **embroidery** formats, in **embroidery image**, to **quilt**, to a **vector** file to be used by another program. Another very powerful capability is that we can export the design to the provided editor.

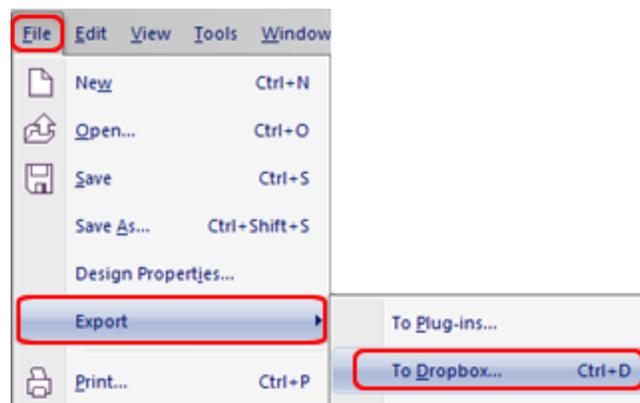
Export to editor

A portion Wings' modular is included together with Creative DRAWings to provide more editing and exporting capabilities. You can export your embroidery designs from Creative DRAWings® to **Wings' modular** to make some simple modifications on the designs. Click on **File> Export> To editor** or use the **Ctrl+E** shortcut keys. **Wings' modular** will open automatically with the exported design inside. There you can do more editing on the design and see how it will look embroidered. The options and capabilities of **Wings' modular** are presented thoroughly in the manual that accompanies the software.

Export to Dropbox (Ctrl + D)

Creative DRAWings, includes a mechanism that can be used to export designs to Dropbox. This is not just an export procedure, the exported designs can be synchronized with AcuDesign iOS application for iPad / iPhone. The uploaded designs are organized into packages.

You can access this mechanism from **File** menu – **Export** option – **To Dropbox**. You can also use **Ctrl+D** keyboard shortcut.



In order to **Export to Dropbox** you must first authorize Creative DRAWings to create an **Embroidery** folder into **Apps** folder of your Dropbox account. The appearing dialog is informing you about the authorization process.



1. Your default internet browser will load the Dropbox authorization page.

Sign in to Dropbox to link with AcuDesign

[Forgot your password?](#)

[New to Dropbox? Create an account](#)

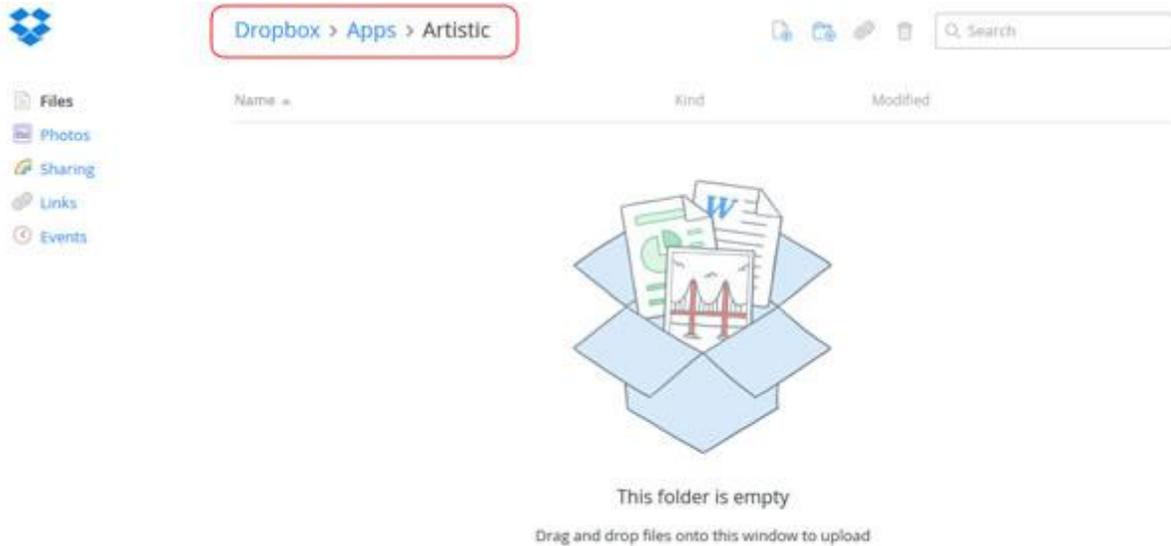
2. Sign-in by using your Dropbox account credentials and/or authorize the application by pressing **Allow**.



3. A message confirming the success of the authorization. Now the application is connected to your Dropbox account.

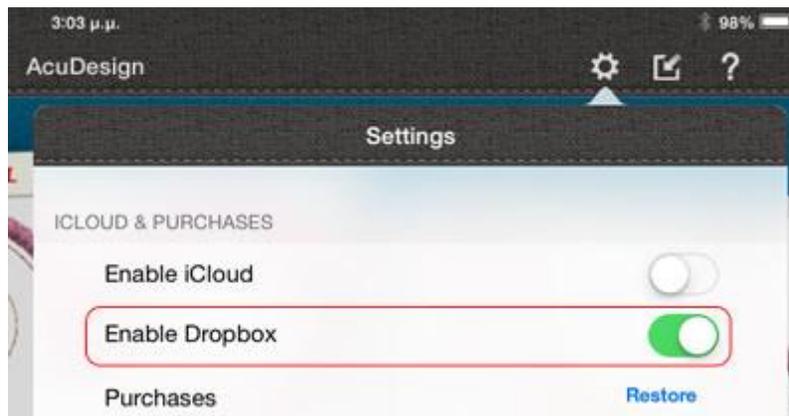


4. A folder called **Embroidery** has been created into **Apps** folder of your Dropbox account. The exported designs are placed into that folder.

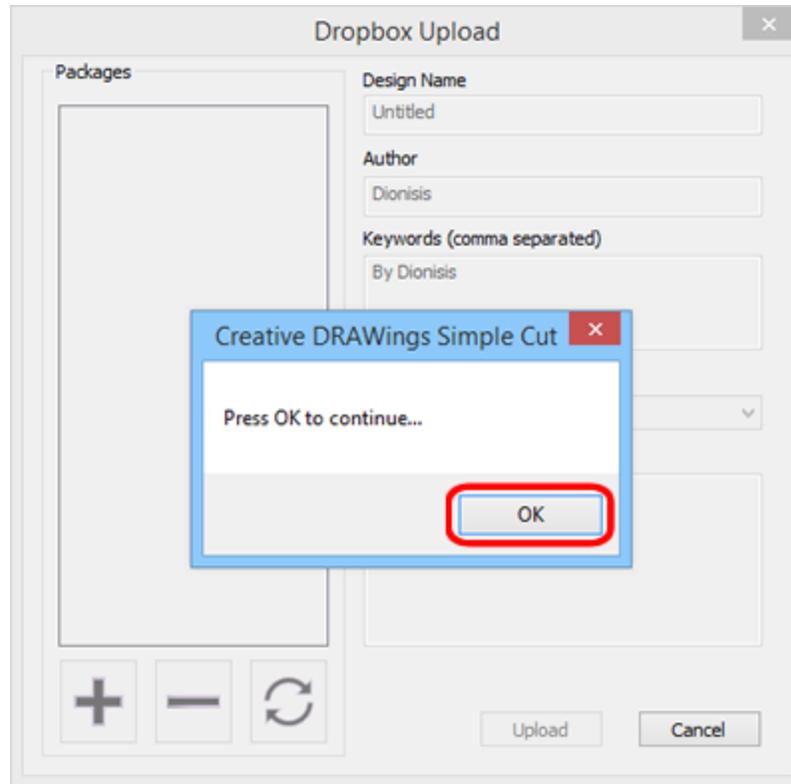


Creative DRAWings, has read and write access to this folder only. Any designs that are exported can be added / synchronized with the designs on Artistic Snap IOS application.

Notice: In order to have your files synchronized please make sure that **Enable Dropbox** option of Artistic Snap options in **ON** state.



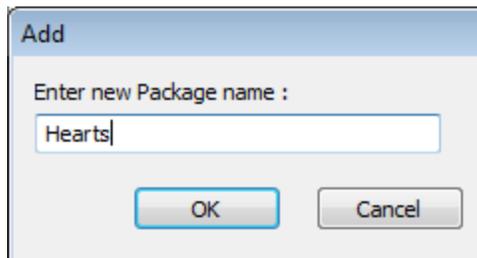
5. Let's see how it works. We will switch back to Creative DRAWings. If the Authorization was successful we must press **OK** and we are ready to start using the **Dropbox Upload** dialog.



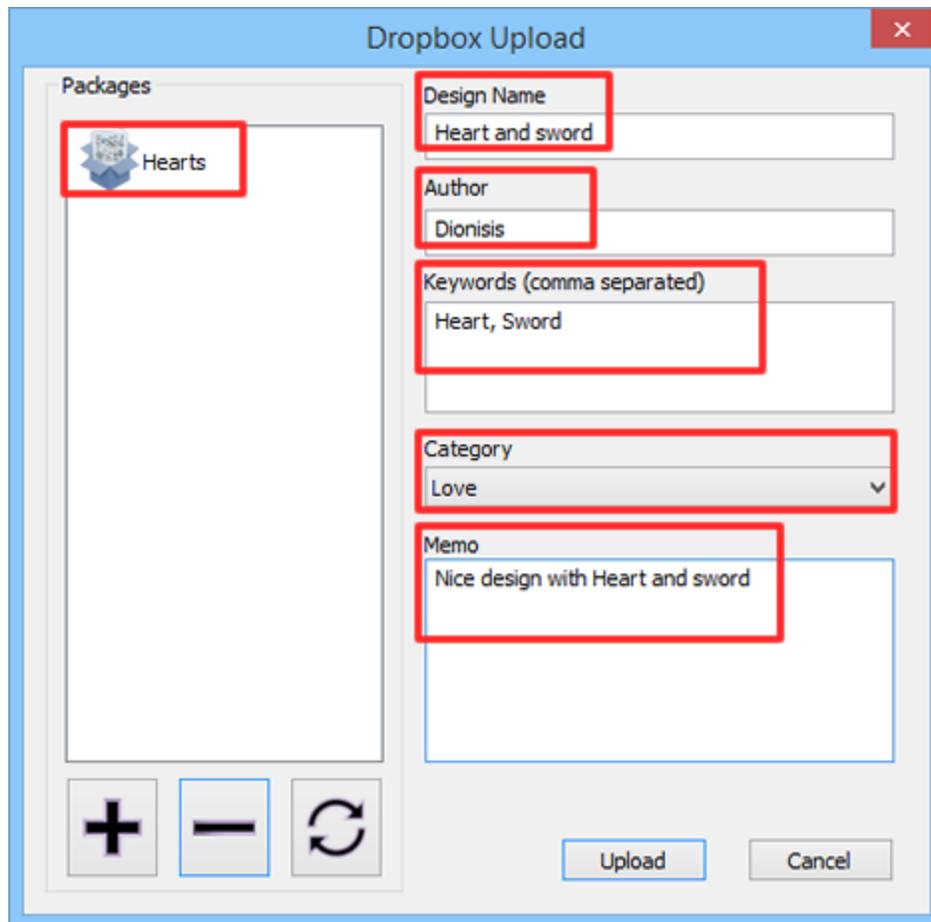
If the authorization is not successful the message of the following figure will appear. If something went wrong and the authorization failed you must start over again, using the Export to Dropbox option of File menu.



6. After the successful authorization the **Dropbox Upload** dialog is grayed out. The only option that is available is the **plus sign** in packages section. In order to upload a design we must first select a package for the design. As we have already mentioned the uploaded designs are organized into packages. A package is a collection of designs. Using the plus sign you can create as many packages you like, the only thing that you must define is the package name.



7. We have created a package called **Summer collection**.

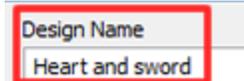


8. The Uploaded design will be a part of Summer collection.

First we must select a package for the design. In our case we only have one package.



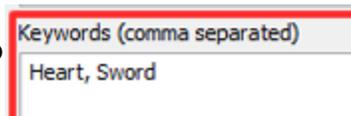
Type a name for the design.



Author name the dialog automatically detects the user name of the computer but we can change it in anything you like.



Type Keywords, comma separated, that may help you in case that we search for a design.



Select a category that the design will belong to.



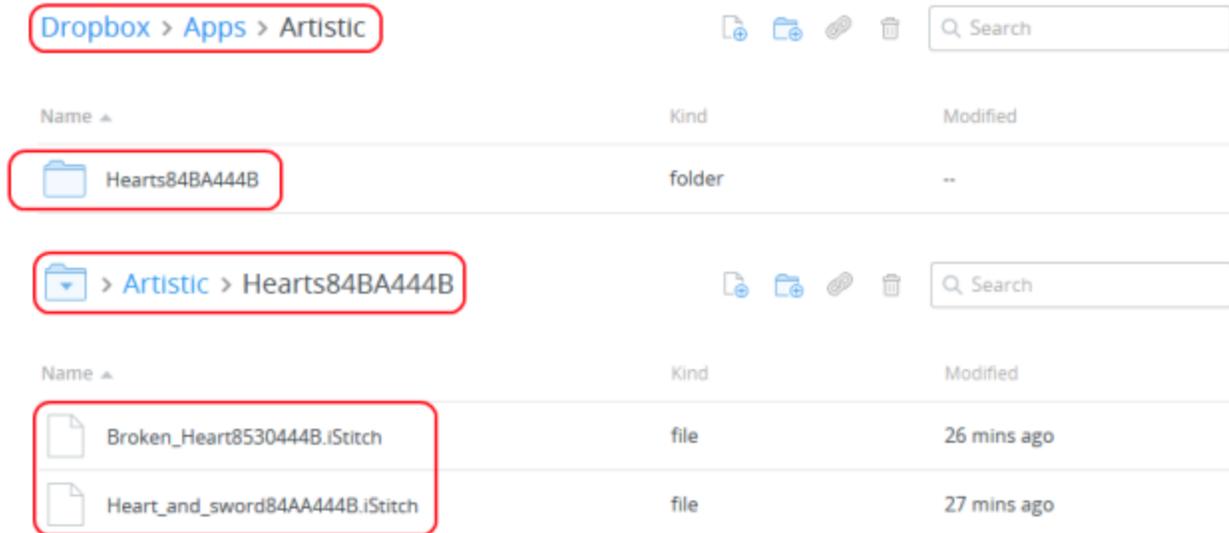
We can add a short description about the design and if there are things that we must remember about it's production or anything else.



Finally, we must press Upload to send the design to Dropbox.

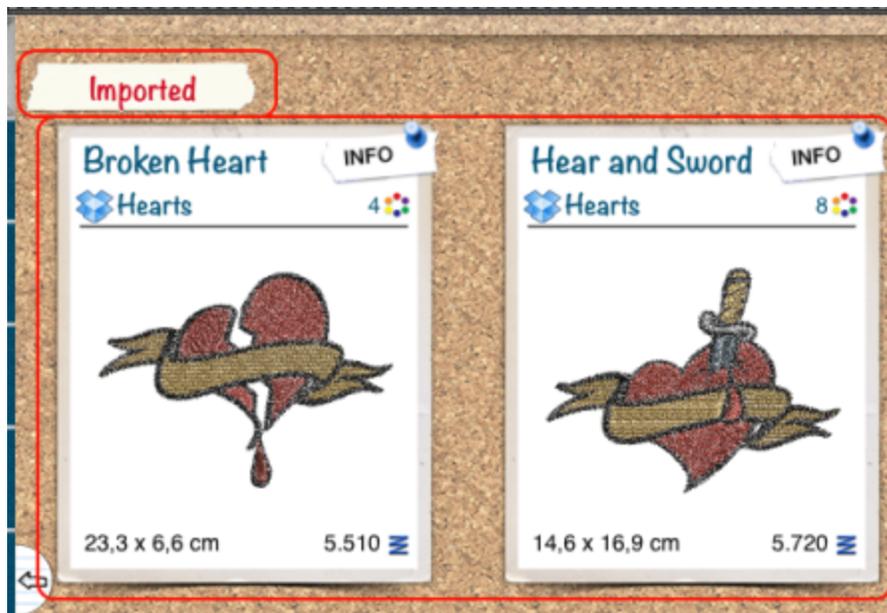
Upload

9. A confirmation message about the upload success appears. Using Export to Dropbox option of Creative DRAWings we have uploaded a design into Dropbox. In the same way we can upload as many designs we like. As we can see on the following figures in our Dropbox account in **Apps - Embroidery**, a folder called **Summer collection** (package name) was created (Upper part of the following figure) and the uploaded designs were placed into that folder (as we can see on the lower part of the following figure).

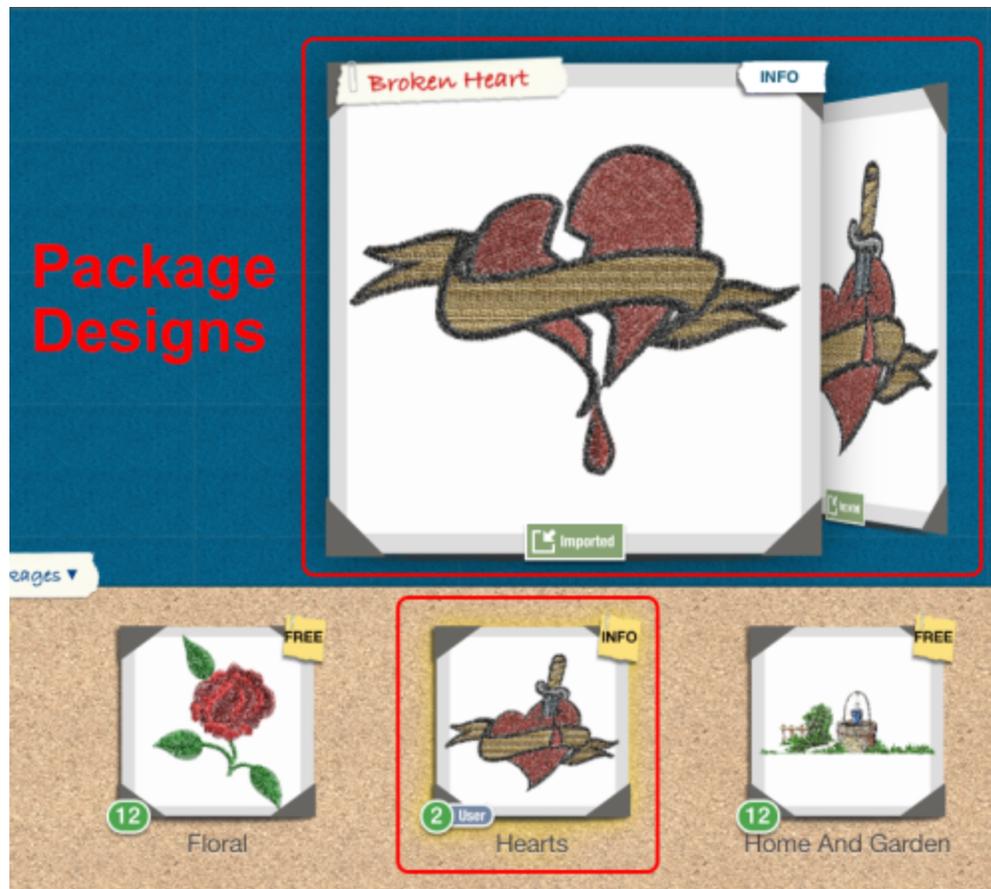


10. From now on we can create packages and upload designs to Dropbox with just a few clicks. Let's switch to Artistic Snap to see how these designs are synchronized to the design collection of Artistic Snap. Make sure that **Enable Dropbox** option of settings area is set to **ON** state.

In Artistic Snap category view, the uploaded designs are placed into a special section called **Imported**. You can tell which designs are imported from Dropbox by the respective icon that is on the design preview.



In package browser we can see the created package and the designs that belong to it.



Export embroidery image

In this chapter we will analyze the way that you can export the embroidery image of the design you have created. You can export the design you are viewing as viewed in **3D preview** of **Stitch** mode to four different image file formats. The embroidery images that will be produced can be used for graphics designing, envelop decoration, creation of birthday cards, brochure creation and generally advertising material that are based on embroidery or not.

In order to export the embroidery design to bitmap file you have to follow the steps below:

1. From **File > Export** select **To image...** option or press **Ctrl, Shift** and **E** shortcut keys (Ctrl+Shift+E) together from the keyboard.
2. The dialog that will appear is a standard Save as windows dialog from which you can browse and find the location you want to save the design,
3. Find the location you want the file with the embroidery effect to be saved,
4. Type the name you want the exported file to have in the **File name** field
5. Select the file you want to save the design from **Save as type** drop down menu. The options you have are Tiff (*.tif), PNG (*.Png), Jpeg (*.jpg, *.jpeg) and Bitmap (*.Bmp).
6. Click **Save** button and you are ready.

There are some more adjustments that you can do on the dialog window before exporting the design that will be described below. After making the adjustments you want (**DPI**, **Fabric** and **Backdrop** options), you can click the save button that will export the file in the location you have specified with the name you wanted.

Change image resolution

You can adjust the resolution of the produced image by changing the **DPI** (Dot Per Inch) value.



Set DPI value

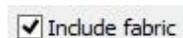
Dots per inch: measurement of the scanning resolution of an image or the quality of an output device. DPI expresses the number of dots a printer can print per inch, or that a monitor can display, both horizontally and vertically.

The resolution of an image is measured by the number of dots per Inch that it consists of when it is printed. The DPI value that you will choose affects the image quality. The DPI value that you can enter in the **DPI** field can vary from 60 to 600. Generally images that are created only to be displayed on computer monitors are 72 or 96 dpi and images that are created for the internet are 72 dpi. In addition images created for printing on desktop printers are between 150 to 300 dpi, while images for professional printers are usually 300 dpi or higher.

You can produce images with embroidery effect with the dpi resolution you prefer by simply adding the DPI value in the field. We propose for better embroidery effect results to set the dpi value more than 150 dpi. With resolution near to 160 dpi you will be close to the real dimensions of the design and you will get a proper representation of the embroidery effect by avoiding re-sampling the original image. For textile printing it is better to use the highest possible resolution of 600 dpi for more realistic results.

Include fabric option

With the **Include fabric** option you can decide whether you want the exported image from Creative DRAWings to have fabric background or not. With a fabric background you could have a realistic preview of the design with the selected fabric. The preview will look very much alike to how the design will be embroidered on the actual fabric.



Include fabric option

If **Include fabric** option is selected, the fabric that was selected in the creation of the embroidery design will be added as a background in the exported image. The color and type of the fabric is the same with the one that was set in the embroidery design. According your fabric selection from the **Select Fabric** option of the standard toolbar you will get the respective fabric as background in your image. If **none** fabric is selected then only the color of the fabric will appear, without any actual fabric.

If they **Include fabric** option is not selected, the embroidery effect image will not have a fabric background. For **Bitmap**, **Jpeg** and **Tiff** files the background will be a solid black color and for **PNG** files will be transparent.

Include backdrop option

In some cases that we are digitizing based on a backdrop it would be very useful to export the design with the used backdrop. This way we can review the design in comparison to the design source in order to improve any aspect of the design we like.

Include backdrop

Include backdrop option

If this option is selected the Backdrop that is included in the design will be exported to the image as seen on screen. In order to be able to export the backdrop, the desired backdrop must be visible in 3D preview. In any design we may have one or backdrops if we want to export the design to image we any of them we must first enable "Use in 3D preview" option of Backdrop properties dialog.

Exported images

The images that will be exported from Creative DRAWings can be used as artwork in various graphics designing projects. The embroidery image artwork can be used from embroiderers to present their work or promote it. They can print it on any fabric to visualize the actual size of their work or create brochures with their designs. It can be also used to make combinations of printed embroidery effect on a T-shirt together with actual embroidery. This is a new trend in the market that combines both embroidery and printing on garments.

In addition, embroidery images can be used also for decoration of envelopes, birthday cards, business cards or any other graphics creation that could have embroidery look images on (view figures below).



Envelop decoration



Birthday card decoration

Use your imagination and create the artwork you want with embroidery images that Creative DRAWings exports. Embroidery images of Creative DRAWings will enhance your work.

Export Vector file

When you create a **Vector** design in the **Create** mode of Creative DRAWings® you have the option to export it to a special folder and keep it as a **Vector** file. You can also save it as an embroidery file and to sew it out. The exported **Vector** file can be used for printing purposes or for creating combinations of embroidery and textile printing on garments.

To save your design as a **Vector**, you will save it in **Scalable Vector Graphics -- SVG --** file by following these steps:

1. Select **File** menu,

2. Expand **Export** submenu,
3. Select the **To SVG** option. Another way to activate **To SVG** option directly is by pressing **Alt** and **E** shortcut keys (Alt+E) together from the keyboard.
4. The **Save As** dialog will appear
5. Type the name of the file in the **File name** field
6. Find the location you want the design to be saved
7. Click the **Save** button to save the design in **SVG** file format.

Once the **SVG** file is saved, you can edit it in any **Vector** design editor. The design can also be imported back into Creative DRAWings® and edited in the **Create** mode a second time. By keeping the artwork separately, it's ready to use again if you need to create a similar embroidery design.

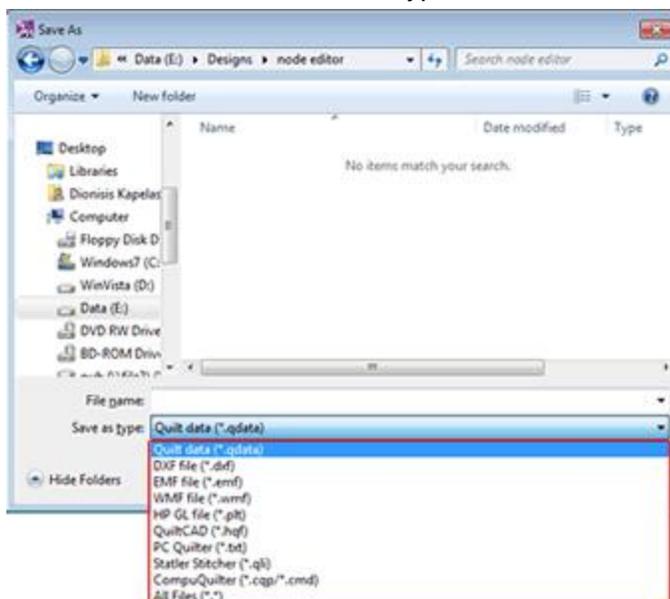
Note: Inside SVG files, only vector designs can be stored and not bitmap design. If you use a Bitmap backdrop to create the Vector design and try to export the bitmap to SVG, the Bitmap will be lost. Only Vector artwork will be saved.

Export to Quilt

Creative DRAWings software has the ability to save files for **Quilt Frame** machines. You can create a design for quilting and once you are ready you can export it to **Quilt data** file that you can load and use to your Quilt Frame machine.

To **Save** the file do the following:

1. Select **File** menu
2. Expand **Export** submenu
3. Select the **To Quilt...** option. The Quilt **Save as** dialog will appear.
4. From **Save as type** area select the most suitable file type .



Select location for Quilt data

5. Type the name of the file in the **File name** field

6. Find the location you want the design to be saved
7. Click the **Save** button to save the design in the selected file format.

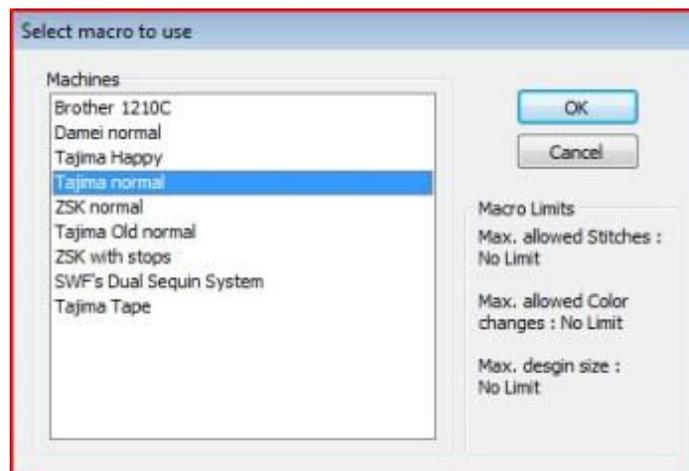
Now you can load the file to your **Quilt Frame** machine and start Quilting.

Using this export tool you can export your design to various formats. The DXF (AutoCAD) format is a vector format that can be used for presentations or used in Laser cutters or Quilt machines. To export a design to (DXF) file format you have to follow the steps listed above but in Save as type section you must select **Dxf file**.

In the same way you can export into any of the available file formats.

Export to Happy Lan machine

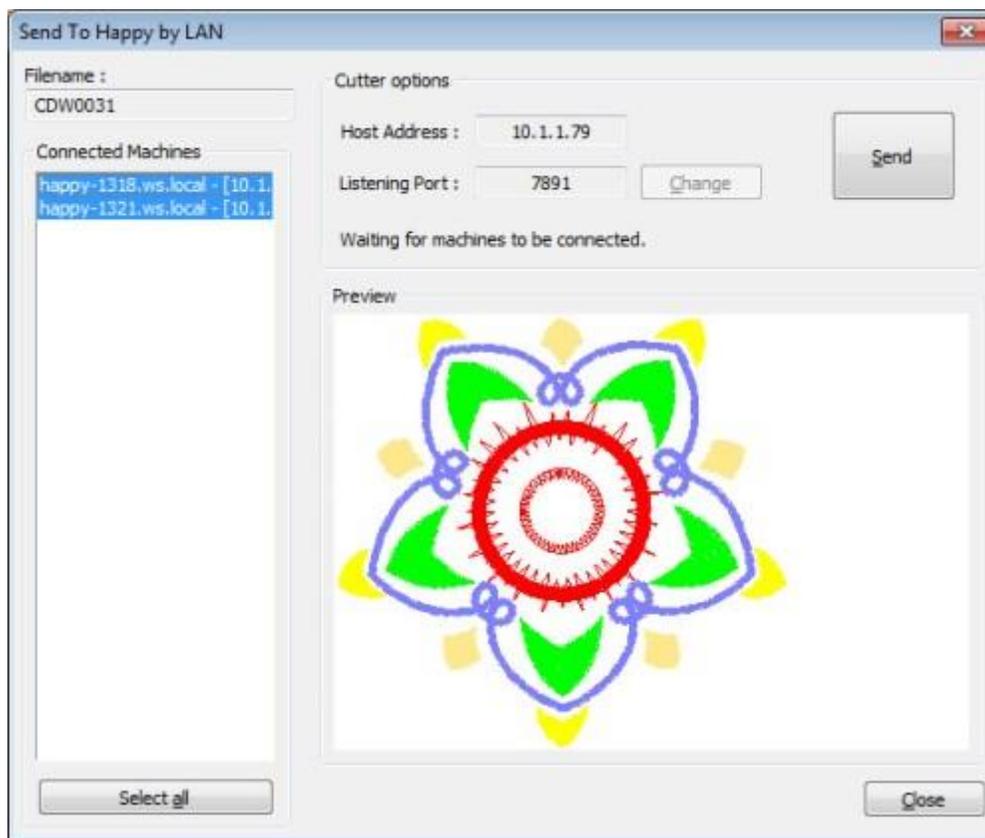
Using this option we can export a design to one or more **Happy Lan** embroidery machines that are connected to the same Local area network (LAN). If you have configured correctly your Happy Lan machine(s) and the computer that is running Creative DRAWings to belong to the same logical network, then you can directly produce the same design to one or more Happy Lan machines. When using this option you must first select a macro that is suitable for your embroidery machine.



Select a macro and click on OK to proceed. At this point we must notice that the program tries to make a network connection to the **Happy Lan** machine and you may see a firewall warning as in the following figure. In order for the connection to work correctly you must allow access, so that the program can connect to the embroidery machine.

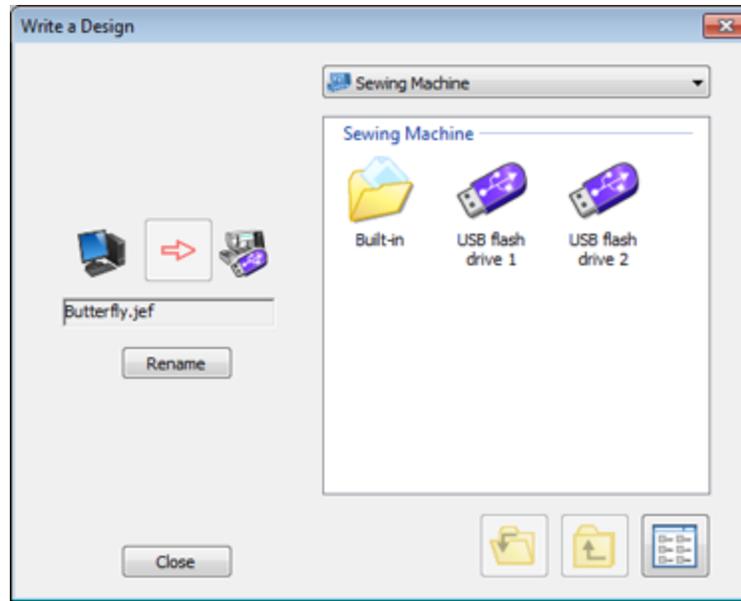


In the appearing dialog you must select one or more of the available discovered **Happy Lan** machines and by pressing **Send** the design is send to the selected machines.

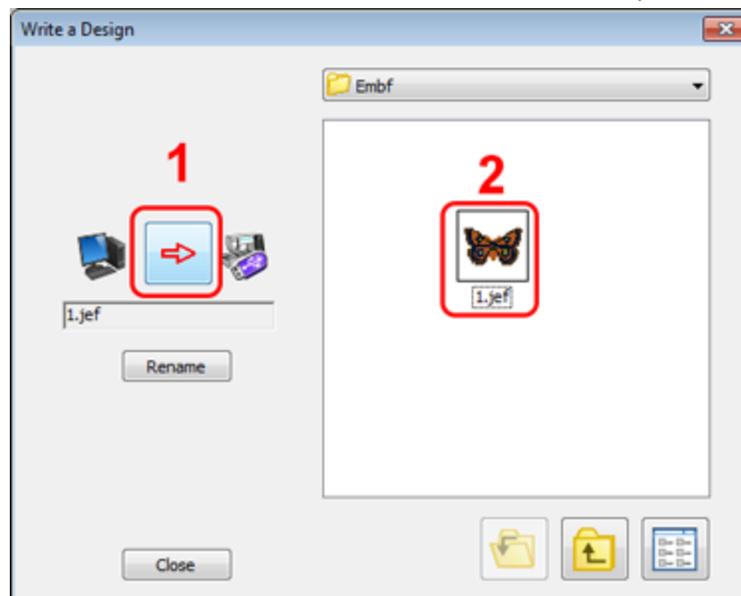


Export to Janome MC12000 / MC15000

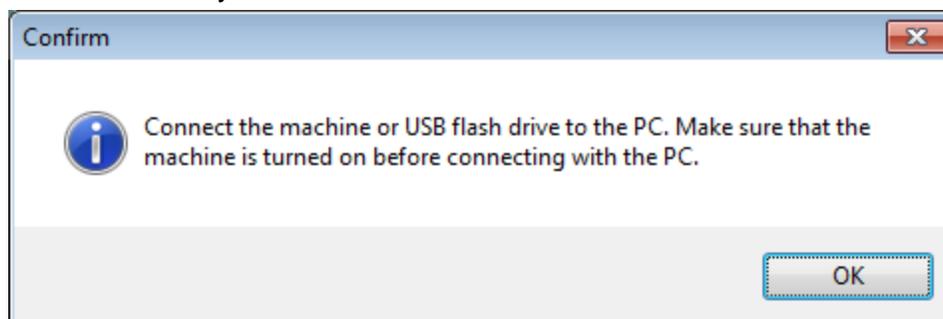
Using these options of **File - Export** menu we can send the current design directly to **Janome MC12000** or **MC 15000** sewing machine. Use File -Export - Export to MC1500 (This is the machine i have connected to my computer USB port) and the following dialog will appear to help you send the currently loaded design to Janome MC15000.



Select a destination from **Sewing machine** area and press on the arrow pointing the Sewing machine area and the file is send to the selected destination on the connected embroidery machine.



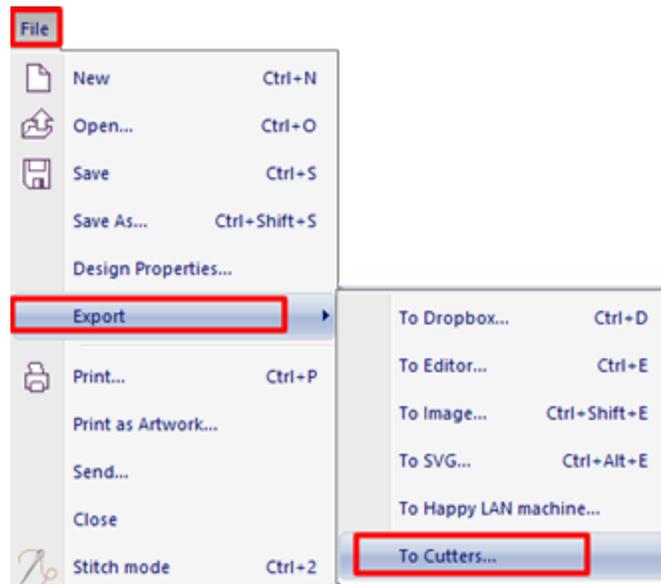
Please make sure that you are using the correct option of **File - Export** menu according to the connected Janome sewing machine otherwise the following message will appear prompting you to connect the embroidery machine and then retry.



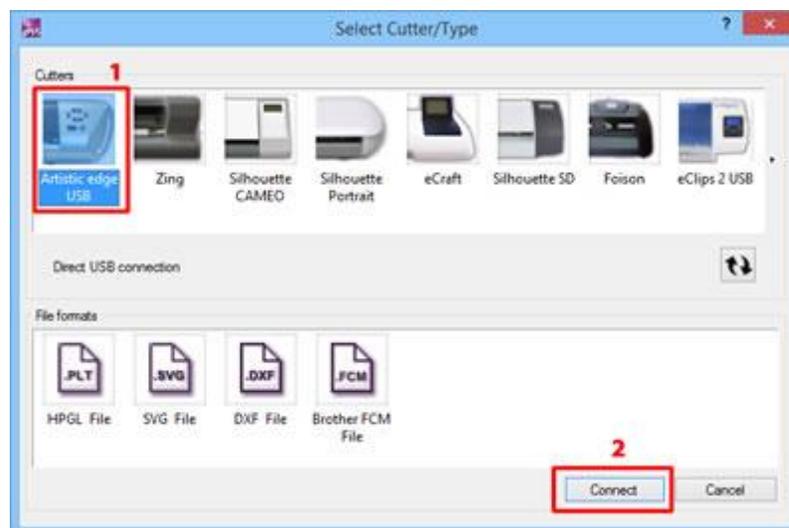
Export to Cutters

All the designs that contain **Crystals, Cuts, Stencil, Applique** or **Paint** objects need special care in order to send them to the digital cutter for production. Creative DRAWings includes the ability to export designs directly on specific cutting machines or as files that can be used for the same purpose. In order to export such a design you need to:

1. From **File** menu, **Export** sub-menu activate **To Cutters** option.



2. From the appearing dialog we must select one of the **Cutters** to connect directly to, or a **File format** (HPGL file ,SVG file, DXF , FCM file) if we want to export to a file and import to our cutter in a manual way. If you select a cutter to connect directly then after selecting the cutter press **connect** button.



Select a Cutter or Export to a file

The **Windows Security Alert** may appear the first time you will open the dialog. Click **Allow access** to allow the communication of the software with the **Artistic Edge cutter (Wireless)**.



Cutter connection configuration

Under the list of the Cutters you can adjust the connection settings with the cutting machine. There are various types of connections, **Serial** connection(Com), **Printer** connection(**USB**), **Direct USB** connection or **Wireless** connection. After selecting any of the available cutters, you can see in the area below a **Printer**, a

Com selection drop-down menu or a **Wireless** configuration icon .



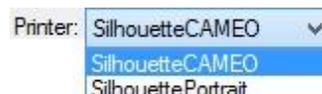
- **Serial connection**

For **Zing**, **eCraft**, **Foison**, **REDSail**, you can change the selected **Com** port (serial port that the machine is connected) using the drop-down list. The software always tries to auto detect the correct port, but in some cases it may not succeed. If you send a design to the machine and it does not start then try to change the COM port from the menu item and try again. If none of the available ports work, then you have to check if the machine is correctly installed on the PC.



- **Printer connection**

For **Silhouette SD**, **Silhouette CAMEO**, **Silhouette Portrait**, **GCC**, you can select from the **Printer** drop down menu, to specify the printer driver for the respective machine. The software tries to auto detect the correct printer, but in some cases it may not always succeed. If there is not a printer available in the list, you have to check if the machine is properly installed on your PC.



- **Direct USB connection**

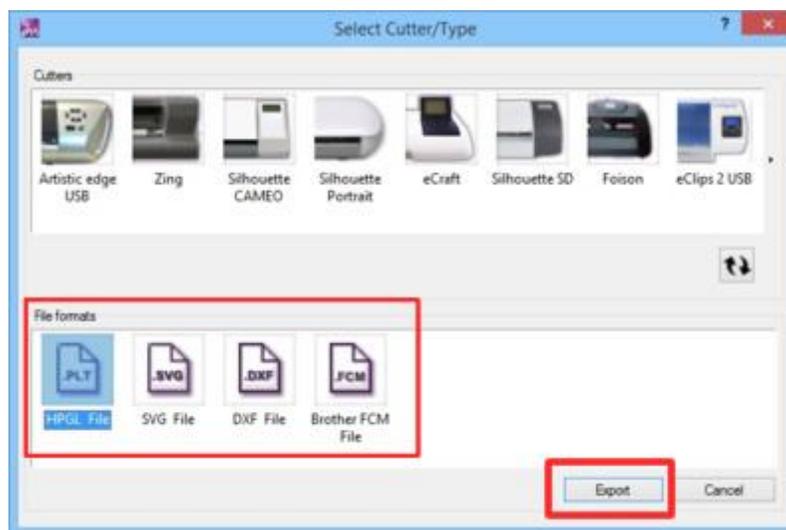
Artistic Edge USB and **eClips 2 USB** create a direct USB connection. If they are connected to the computer correctly and powered on, the connection to them is automatic. In case that you can not communicate correctly to any of these cutters, close the dialog, power off and then ON the cutter and then use Export to cutter once more.

- **Wireless connection**

For Artistic Edge Wireless cutter the software tries to make a direct wireless connection to the cutter. If the connection is successful then the Cutter name will appear. Next to the cutter name there is a button that is used in order to configure the wireless connection. For more information please refer to chapter Artistic Edge wireless configuration. If the cutter name is not available make sure that you are connected to the Edge-xx-xx-xx access point or to the access point of your home-business (In case that you switched the Cutter to Client mode). More information in chapter Artistic Edge wireless configuration.

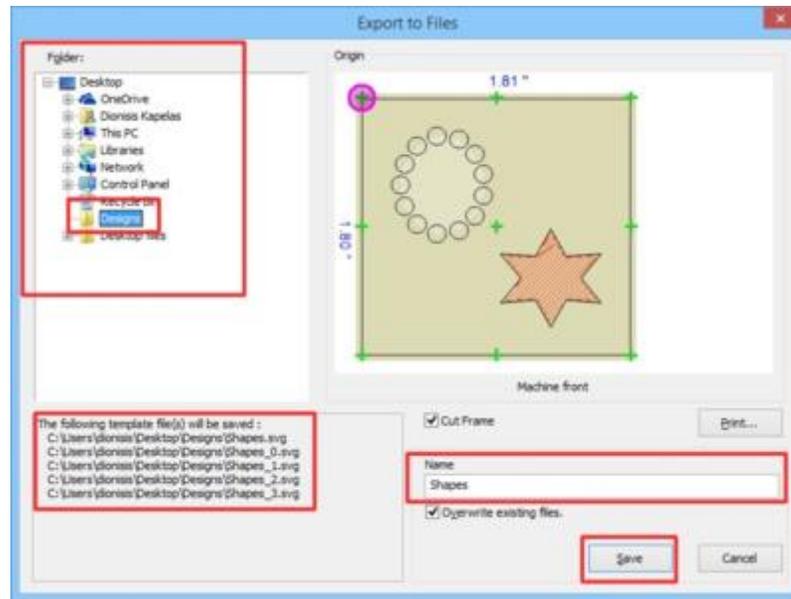
Export to file

1. Select the **HPGL file (.plt)** or **SVG file (.svg)** or **DXF file (.dxf)** or **FCM file (.fcm)** option and press **Export** button to proceed.



File section of export dialog

2. At the **Origin** area you can specify the position from where you want the machine to start creating the design. This option helps you to position the material that will be cut at the correct position. You can change the **Origin** by simply clicking on the respective green cross . The .plt or .svg or .dxf file that will be produced will have the design positioned near the button you have selected.
3. Navigate to the location that you want to save the templates and type a name
4. If you want existing designs to be overwritten you can check the **Overwrite existing files** option underneath. After typing the file name you can see on lower left part the names of the template files will be created. Finally press **Save** button to write the template files to the disk.



Settings area

There are also some other useful options on the export dialog:

§ **Cut Frame:** This option adds a rectangle around the design that will be cut after cutting the main object. In order to apply it on the design you have to simply check the **Cut Frame** checkbox. At the **Origin** area you will see a rectangle to be added around the design you have created. This is the **Cut Frame** that will force the cutter to cut the material and produce a portable version of the Cut design you have created.

Cut Frame

Cut Frame

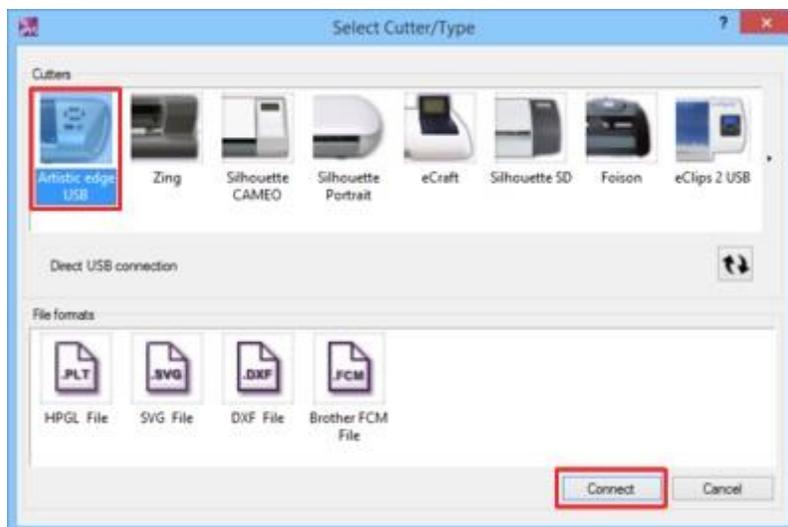
§ **Print...:** This option allows you to make a printout of the design and be able to view the cutting sequence of the objects. More details about the Print dialog you can find here.

Print...

Print

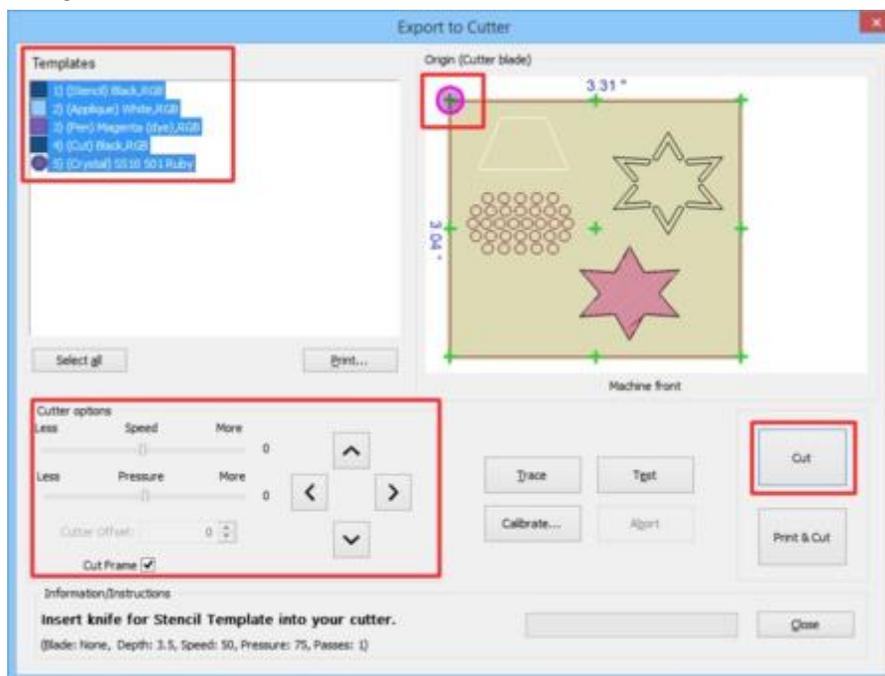
Direct connection to cutter

When using **Export to Cutters** option from **File** menu you must select one of the available cutters and press **connect** in order to connect directly to the cutter.



Select cutter/type

The **Export to Cutter** dialog will appear, using this dialog you can send any design part (**Paint, Cut, Stencil, Applique, Crystals**), to the Cutter that you are already connected, for production. If the **Digital Cutter** is properly connected and powered **ON**, then at this point you should be able to directly communicate with the Cutter through this dialog.



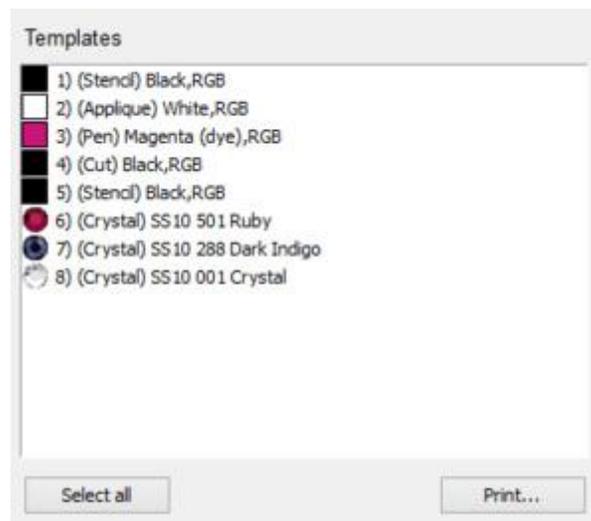
Select a Cutter or Export to a file

The **Export to Cutter** dialog is generally the same for all cutters, the only difference is that some options may not be available for any cutter that does not support their usage. In this topic we will present the various parts of this dialog and the usage.

Templates area

When you export a design to a cutter, then the program automatically converts all the design parts, that should be send to the cutter, into separate templates. A separate template is created for each object type

(**Cut, Paint, Stencil, Crystal, Applique**) and for each color if multiple objects of the same type exist. For example, for the design of our sample there is **Stencil, Applique, Pen, Cut** and **Crystal** template. In this area you can select one or more templates to send to the cutter. You can hold the **Ctrl** key from the keyboard pressed and select the templates you want to send to the cutter, by clicking on them. Those that were clicked will be highlighted showing you that are selected. To deselect any of the selected you can again hold the **Ctrl** key pressed and click on them. Another way to select multiple templates that are sequential, is by holding the **Shift** key pressed by clicking on the first template you want to select and then the last one. All the templates that are in between the selected template will be selected. If you select multiple templates and press **Cut**(For knife parts) or **Draw**(For pen parts) they will be send to the cutter in the sequence that you can see. When a template is completed the cutter stops and instructions about the next template are provided in the lower part of the dialog. For example, in the figure bellow the first template is a **Stencil** template so you must place the cutting mat with the material to cut into your cutter and on the information area you are instructed to place a **knife/blade** into your cutter head. After you press **Cut** and produce the stencil template the cutter will stop and provide you instructions for the next template. The procedure goes on for all selected templates you are instructed to place the cutting mat with the material for each template and the **Pen** or **Knife** on the cutter head.

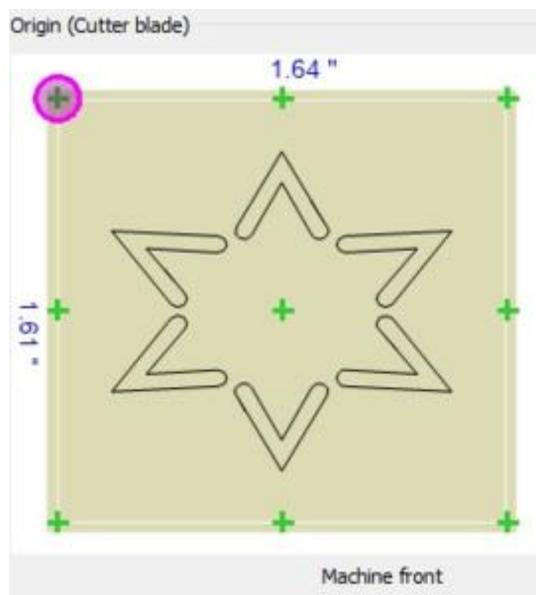


If you want to **Select all** templates that are listed you can simply click on the respective button underneath the templates area and all of them will become selected. By default, whenever you **Export to Cutters** dialog all templates are selected. Any page selection you make in the Templates list is previewed in the **Origin** area. You can also Print the templates all together with useful information about the production.

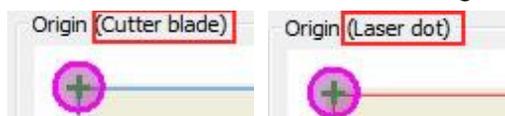
Origin - Preview

In this area you can see a preview of the selected template(s) and there are also various cross signs. You can select any of these points to be the origin of your design. Not all cutters support all origin points that you can see on the following figure, in some cutters there may be only one or few origin points available. The cutter will start producing the design according to the selected origin point. For example, in the following figure, the upper left origin is selected and this is the point that the cutter will begin from. This option helps you to start the cutter operation according to the material that you have placed and the position of the cutter head. You can change the **Origin**, simply clicking on any cross icon.

The **Silhouette SD, Silhouette CAMEO** do not support this option and therefore you cannot change the designs origin.

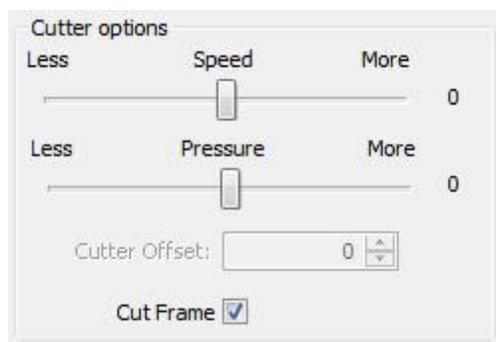


Next to the **origin** name you will see the origin definition tool that each machine uses to specify from where it will start to cut the design. For example the **Zing** machine uses a **Laser dot** to define the origin and the other machines are using the actual cutter head (Blade - Pen). Therefore keep in mind to check the way that your machine uses to set the starting position from where it will start cutting the material.



Cutter options

In this area you can adjust various parameters of the cutter's operation (**Speed, Pressure**), add additional **offset** and **Cut frame**.



Speed - Pressure

For any created object **Paint, Cut, Stencil, Applique, Crystals**, we can set the **speed** and the **pressure**, using the respective options of object properties. Any of the objects-templates may have varying speed or pressure. Using the **Speed** and the **Pressure** track bar you can increase or decrease the speed and the pressure that will be applied to **all templates** that are available on the dialog. Generally, we are using these track-bars when we have created a complex design and during production we see that we may need more speed or pressure, then we increase the speed or pressure for all design templates without going to all design objects and change their cutting options. In case that these values

are grayed-out (disabled) this means that the cutter does not support their usage. You must have in mind that these track bars keep the previous settings that you have selected, so if you start a new design and send to the cutter, you will see that previously selected speed and pressure are kept, so if you need to use initial selected speed then you should return the track bar to zero.

Cutter offset

Using this value, if it is enabled, you can specify the offset that the cutter will add to each shape in order to be produced properly and keep its shape. This value varies from cutting machine to cutting machine and some machines do not allow you to change this value at all through our software. You can make adjustments through the machine's panel. Feel free to change the Cutter Offset setting based on the offset you want to be added to each Cut that the machine will make. To make it more clear, consider that the machine in order to cut the material uses a knife that has a specific size. When the machine cuts the material creates a shape that might be smaller that the one you have specified inside the software, because of the knives dimensions. To overcome that we add some offset that will force the machine to create the design slightly larger and match the size we want it to be.

Cut Frame:

This option adds a rectangle around the design that will be cut after cutting the main object. In order to apply it on the design you have to simply check the Cut Frame checkbox. At the Origin area you will see a rectangle to be added around the design you have created. This is the Cut Frame that will force the cutter to cut the material and produce a portable version of the Cut design you have created.



Cutter operations

Using the controls that are visible on the following figure we communicate directly to the cutter and perform various **Cut - Paint** operations.



Arrow buttons

Using the **Arrow** buttons you can move the head of the cutter to a position that you want the head to be. This may be necessary in 2 cases, first in order to position the cutter head above the area of the cutting mat that we want to **cut-paint** (position the head according to the selected origin) and second in order to move the cutter head to a position that we want to perform a **Test operation** of the cutter settings.

For example if you have selected an origin on the upper left corner of the template, you must move the head to the upper left corner of the area, that you want to perform the **Cut-Paint** operation.

If you need to fine tune the position of the cutters head you can use **Ctrl** , **Shift** keys on your keyboard to adjust the step of the movement.

- Hold **Shift** key  in order to make the movement small.
- Hold **Ctrl** key  in order to have a large movement step.
- Use **Ctrl** and **Shift** keys together ( + ) to make a very small movement step.

Trace:

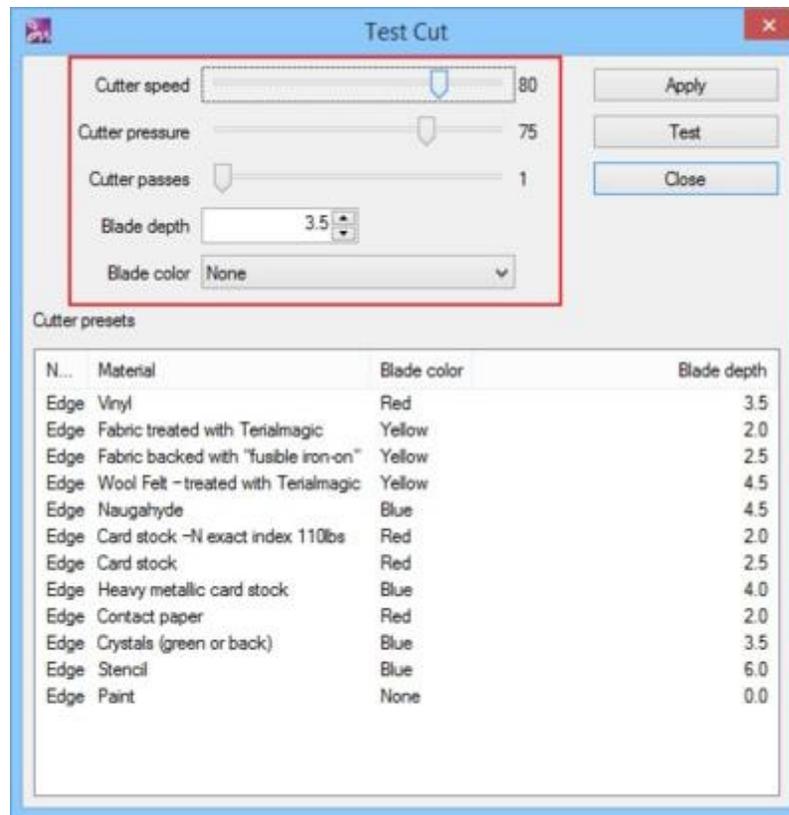
When we have placed the cutter head above the part that we want to cut-paint we may want to check out if the design fits in the area we have specified. If we press **Trace** button then the cutter head will start moving around the area that is necessary according to the design size. This way we can see if the design fits according to the position of the head.

Abort:

Using the **abort** button we can stop the **send to the cutter** operation, if the data have not been transmitted yet. In case that we find out that something is wrong, we may abort, in order to correct our design or settings and re-send to cutter.

Test

There are many cases, such as if we have never used a material, or a **Pen/Brush** to a Cutter, that we may need to perform a **Test** in order to verify the results of the operation with the current template settings. We can use **Test** button in order to perform such a test. The test must be performed for each template separately, select a Template and press **Test** button. The **Test** dialog will appear, if you have multiple templates selected then the test will be performed with the settings of the first template. In the appearing dialog you can see the cutter settings that were selected for the objects of the template (Using Object properties). By pressing **Test** the cutter will perform a test job with the current settings on the material that you have placed. It will just produce a simple shape in order to verify that it is produced correctly.



There are 3 types of tests as you can see on the following figure, one for **Cut, Applique, Stencil** objects, one for **Paint** objects and one for **Crystal** objects. A different pattern is used that is better suitable for each type of object.



Crystals test pattern



Cut, Applique, Stencil test pattern



Paint test pattern

After the test is complete, if the result is not as desired, you can edit **Cutting** options (**Speed, Pressure, Passes**), move the head of the cutter to another point and test once more. If the results are as desired then you can press **Apply** and the current settings will be applied to the object of the template. In order to adjust the current settings there is also a list of preset settings that you may use in order to give you set of pre-configured settings according to the production material.

Calibrate

This option is only enabled for **Zing, eClips 2 USB** and **Artistic Edge** cutters that have a laser pointer. Using the **calibrate** button you can define the distance between the laser pointer and the cutter head.

Cut

Once you are ready, click the **Cut - Draw** button to send the design to the machine. Once you have started the process the software locks the connection with the machine and you are not able to select a different template until the process is done.

If the design has multiple groups of crystals or multiple outline objects or multiple applique objects, the software will send each design separately informing you which one is sending every time. Therefore, for crystal designs, first one group of crystals will be send and cut, then a second group will be send and cut on a different cutting material, then the third and so on. Each time the software will ask for confirmation (Press "OK" to Send next page or "Cancel" to abort.). The crystal design will be made with layers of different hole groups based on the design. Designs with Outlines or Applique will be handled accordingly.

Print & Cut

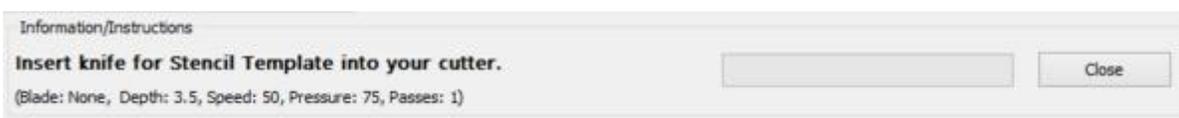
This option is enabled only for cutters that can support this function. **Zing, eClips 2 USB** and **Artistic Edge** cutter that have a laser pointer, support **Print & Cut** and there is also a Calibrate option available. Using the calibrate button you can define the distance between the laser pointer and the cutting blade. For Silhouette CAMEO and Silhouette SD that have a special optical recognition mechanism Print & Cut option is also enabled. Print & Cut option is a special mechanism that can be used to print the outlines of a design to a printer and then place the print on the cutting mat and cut the printed artwork using the cutter. The printed paper has some special marks:

for **Zing, eClips 2 USB** and **Artistic Edge** that have a laser pointer we must point with the laser pointer these special marks during the procedure so the print and the cut are properly aligned.

For Silhouette CAMEO that has a special optical recognition mechanism we must place the printed paper to the cutter and the Cutter will recognize the special marks using optical recognition.

Instructions

In this area you can see information about the currently produced template. You can see the cutting properties that were selected for this template and you are instructed to place the correct production head. For **Cut, Stencil, Applique** objects you are prompted to place the proper **knife/blade** to the cutter head and for **Paint** objects you are prompted to place the proper



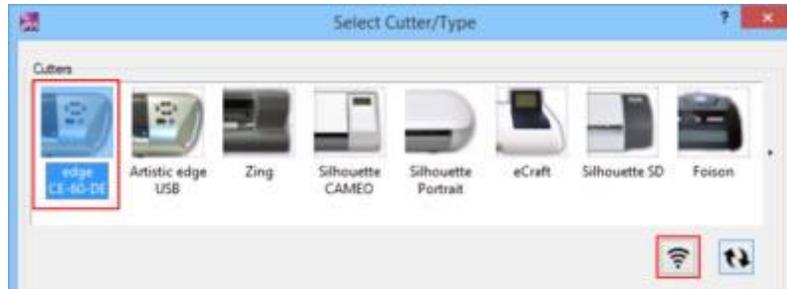
Artistic Edge wireless configuration

Artistic Edge cutter comes with an optional **Wireless** module. The following information-instructions apply only for those who have purchased the version with the **Wireless** module.

The cutter has 2 Wireless operating modes.

- **Access point mode:** The cutter is **not** connected to a router but it implements a **Wireless access point** and the computer connects directly to this access point. The access point is called **Edge-xx-xx-xx**.
- **Client mode:** The cutter is connected to a router and the computer communicates with the Cutter through the network connection.

By default when starting the cutter for the first time the **Access point mode** is enabled. This means that in order to connect to the cutter you must first connect to the **Edge-xx-xx-xx** access point. If you are connected to the **Edge-xx-xx-xx** access point then the cutter name will appear as on the following figure in **Export to Crystal/Cutters** dialog. If you can not see the Cutter name then you should first check if **Wireless** functionality is enabled on the Cutter, the **Wireless/Light** button should be highlighted. If it is not highlighted please read the following instruction in order to Turn on the Wireless functionality.



Turn on and off Wireless module

Artistic edge Cutter with **Wireless** dongle included has a wireless button next to **power** button (On-Off). When the **Wireless** is enabled this button is **ON** with a white light otherwise it looks turned off. If **Wireless** is **Off** then in order to turn it on, press and keep pressed the **Wireless** button for about 5 seconds until it is highlighted with a white light. At this point if we search through the available wireless networks we should be able to locate the **Edge-xx-xx-xx** wireless access point and we should be able to connect to it. In the same way by holding the **Wireless** button pressed we can disable **Wireless** functionality.

Notice: In order to be able to send a design via **Wireless** to the cutter the **Wireless** should be enabled and highlighted and we should be connected to its access point, if it is in **Access point** mode or connected to the network that the cutter is connected when switched to **Client mode**.

Connect to Artistic Edge access point

First of all we must mention that the you should ensure if the wireless function is activated. if it is not please **Push and hold down Light/wireless** button for three seconds. The button will light up once the wireless function is activated. Wireless access point to become ready and then search again for the Edge access point.

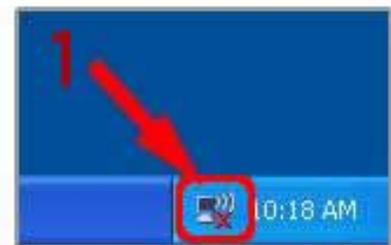
1. In order to connect to the Edge cutter you must press on the network icon on your system in order to view available networks.



Windows 8

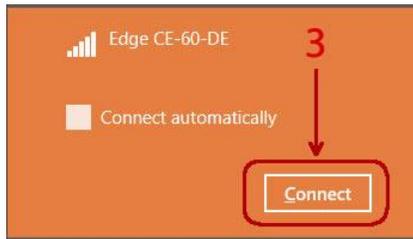


Windows 7/Vista



Windows XP

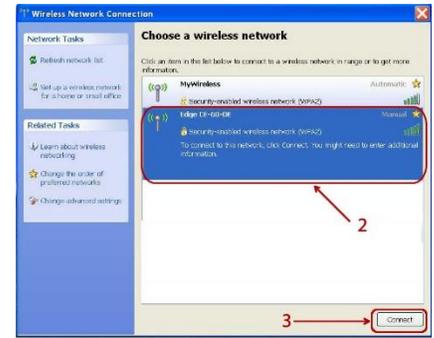
2. From the available networks select the one called **Edge-xx-xx-xx** and press **Connect** to join the network.



Windows 8



Windows 7/Vista



Windows XP

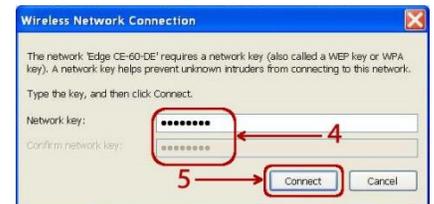
3. You will be prompted for a security key, please enter **12345678** click **Next** and wait for a while for the connection to be initialized. It is very important to ensure that you're entering the password correctly, because sometimes, if the password is incorrect, it may look like you're connected to a network, but no actual file transfer will happen.



Windows 8



Windows 7/Vista



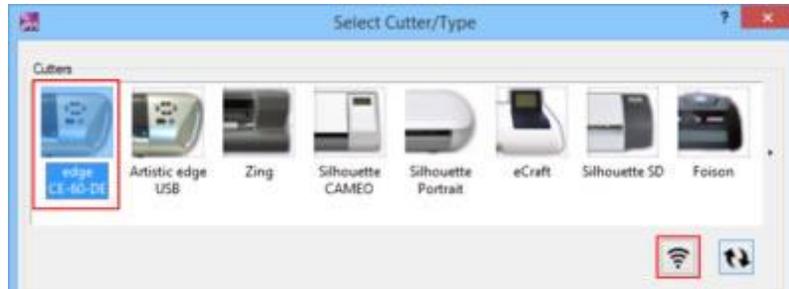
Windows XP

4. Now you are connected with the Edge cutter directly. To send a Cut design to it, do the following:

Note: While you are directly connected with the Edge cutter, the Internet will not be available. To connect your PC back to the internet you have to close your cutter or repeat steps 2-3 but this time connect to **Your Wireless** network.

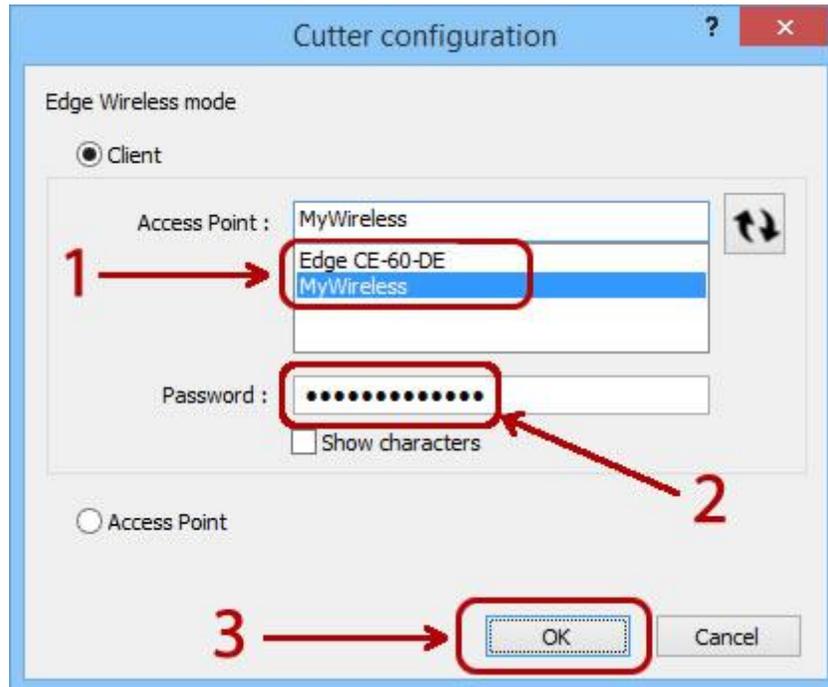
Select Wireless operation mode

If you are connected to **Edge-xx-xx-xx** access point and you can see the Cutter name on **Export to Cutters** dialog then you are successfully connected to the Cutter. On the area below the available cutters and when Edge wireless is selected you can see a wireless icon that can be used in order to manage Wireless operation mode, see on the following figure.



Click on the **Wireless** button and the **Cutter configuration** dialog will appear. As you can see on the following dialog the **Access point mode** is grayed out, this means that this mode is already active and we can not change into that mode.

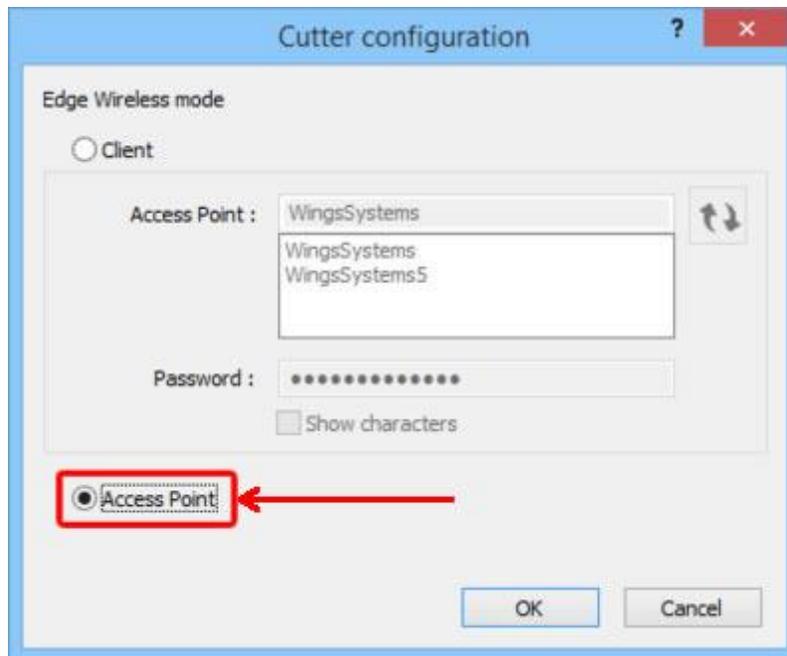
You can now add Artistic Edge cutter to your Wireless network permanently and have it available every time you need it. In order to do that we must switch the Cutter into **Client mode**. From the **Cutter configuration** dialog select any of the available **Wireless** networks and then type the security key for the selected network. You can check the field **show characters** in order to make sure that we have typed the correct security key. Finally press **OK** to apply.



A warning dialog will appear informing you that at this point both the **Power** button and the **Wireless** button will start blinking for about **30 seconds** until the Cutter is connected successfully to the wireless network. Please wait for a minute while the auto-configuration of the cutter with the network takes place. Have in mind that you may have to re-connect to the network that you connected the cutter in order to be able to communicate with the cutter wireless.

Switch into access point mode

At any point and for any reason if you like to connect directly to the cutter you must use Export to Crystal/Cutter dialog in order to manage Wireless operation mode as described in previous part. Now when entering the dialog (following figure) the option to switch to **Access point** mode is now enabled and you can select it. Check **Access point** mode and press **OK** to proceed, wait for the cutter to re-initialize until the buttons become steady **ON** and finally connect to the **Edge-xx-xx-xx** access point again.



Emergency reset to Access point mode

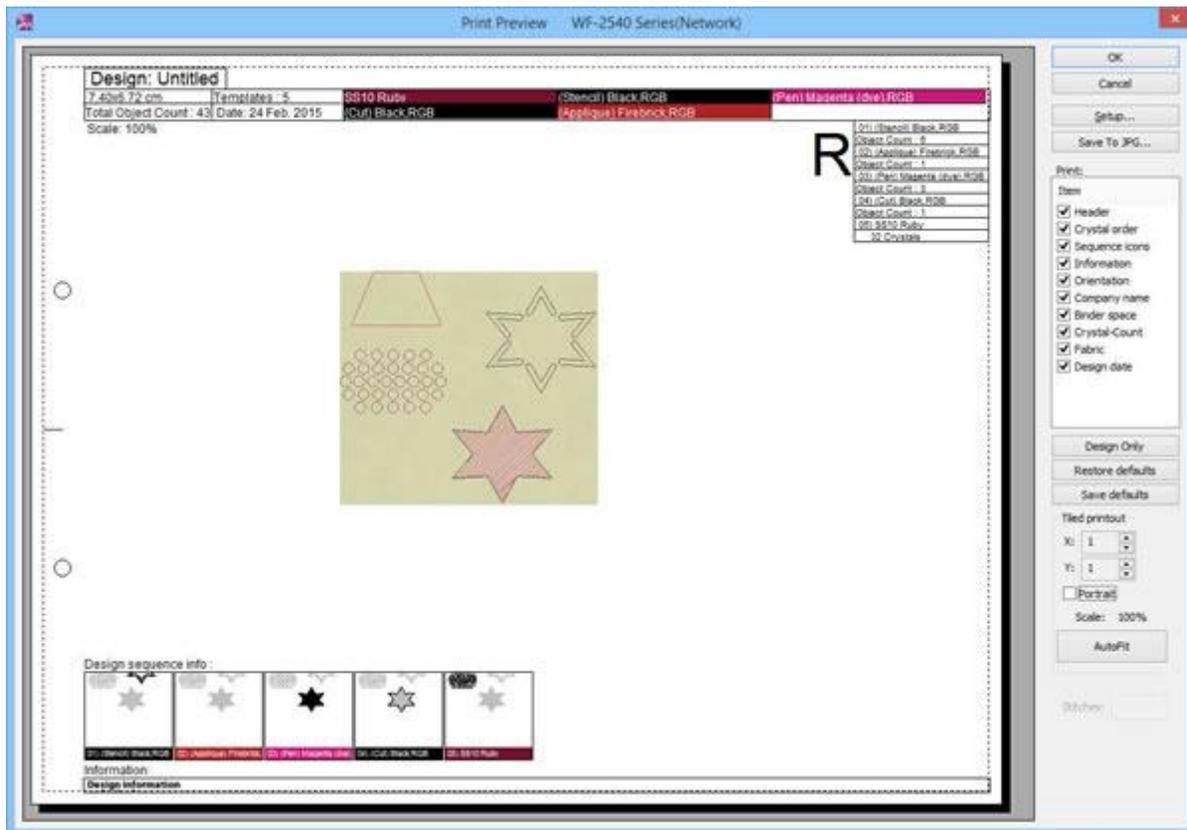
In case that you can not connect to the cutter or any miss-configuration has happened and you can not access the cutter you must reset the cutter to the default **Access point** mode and then re-connect to any wireless network in **Client mode** again. In order to reset the cutter you must keep pressed the **Wireless button** and **Right limit button** together, for 3 seconds. When the **power** button and the **Wireless** button turn off then release the button. At this point the **Wireless** button will start blinking until the network initialization is completed, when blinking stops you are ready to connect to **Edge-xx-xx-xx** access point in order to use the cutter.



Print templates

Creative DRAWings® provides extensive options for printing your designs with **Cut**, **Stencil**, **Applique**, **Crystals** and **Paint** before sending them to the cutter. You can print the design parts-templates together with much information that are useful for the production process. The printout of the design provides information needed to evaluate before sending a design to the cutter. This is a special print that you can only use from

Export to cutter dialog, under the templates are there is a print button. The following dialog will appear, you can see a preview of the printout of a design.



Cutter Printout

In **print preview** window, we can see a preview of the Cut design together with provided information. On the right part we can see various customization of the printout. These customizations are:

- We can use **Setup** button in order to select and customize the properties of the printer that we are going to use.
- We can also use **Save to JPG** option in case that we don't want to print it, but we want to save it for later reference or to review on our computer monitor.
- In section **Print** we can select which parts we want to be visible. Click on any of the checkboxes in order to **enable/disable** visible items.
- If you want this selection of visible items to be the default for any Cut design, you can use **save defaults** button. Use the **Restore defaults** button to use the default values that you have already saved.
- Also, there is a **Design only** button. Press this button in case that you want to print only the actual design (stitches).
- Finally in **Tiled printout** section we can customize some aspects of the print, **number of pages, orientation, and scale**. We can also set number of stitches that we want to be visible on the print preview.

Print: In this section of the printing dialog you can specify which information you want your printout to include. Every item of the printout can be enabled or disabled by clicking on the square on the left of its description. If the item is enabled the changes can be viewed on the preview area.

- **Header**

The header is at the top of the page, showing the size, color/crystal changes, number of crystals, Crystal types that are used, the crystal colors and their names.

7.40x6.72 cm	Templates : 5	SS10 Ruby	(Stencil) Black,RGB	(Pen) Magenta (dye),RGB
Total Object Count : 43	Date: 24 Feb. 2015	(Cut) Black,RGB	(Applique) Firebrick,RGB	
Scale: 100%				

Annotations: Size (points to 7.40x6.72 cm), Number of templates (points to 5), Crystals used (points to SS10 Ruby), Pen/Brush used (points to (Pen) Magenta (dye),RGB), Size on paper (points to 7.40x6.72 cm), Object count (points to 43), Design date (points to 24 Feb. 2015), Knife/Blade used (points to (Cut) Black,RGB).

Header

- **Object order**

The box shows the sequence of the crystal/color changes. These information is really useful in order to know the order the objects will be send to the cutter.

01) (Stencil) Black,RGB
Object Count : 6
02) (Applique) Firebrick,RGB
Object Count : 1
03) (Pen) Magenta (dye),RGB
Object Count : 3
04) (Cut) Black,RGB
Object Count : 1
05) SS10 Ruby
32 Crystals

Crystal/Color changes

- **Sequence icons**

The sequence icons are at the bottom of the page. They show parts of the design split by color/crystal change. Also, in the bottom of the icon you can view the name of the color/crystal that should be used, plus comments.



Sequence icons

- **Information**

Information is at the bottom of the page. The information area lists any extra information you want to view on the printout. These information can be added at **File > Design Properties > General** tab.

- **Orientation**

The orientation is the icon shown with the "R" character at the top right corner of the printout. This is important because it shows how the printed page should be put on the cutter to identify the starting point of the design.

R

Orientation

- **Company name**

The company name, which is at the top of the printout, can be changed from the **Printing** tab of the **Tools > Options** dialog.



Company name

- **Binder space**

This option makes the necessary margin (on the left side of the page) in case you want to put the printout in a folder.

- **Object count**

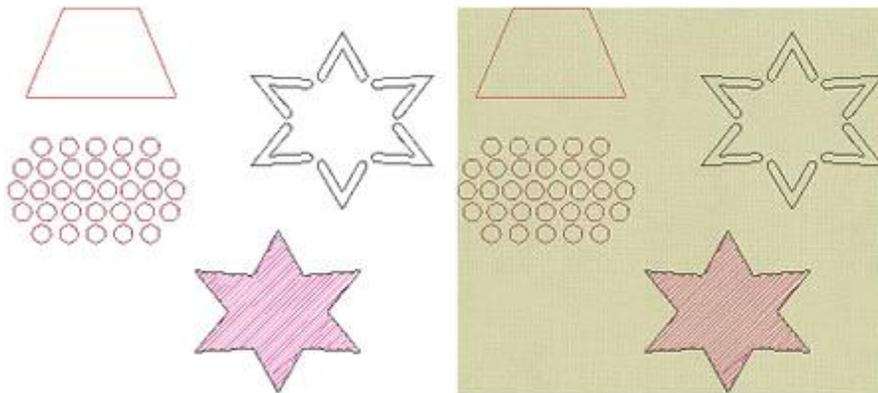
The number of objects in your design can be viewed at the header of the printout.

7.40x6.72 cm
Total Object Count : 43
Templates : 5

Crystal count location

- **Fabric**

Hides or Shows the fabric behind the design.



Without fabric – With fabric

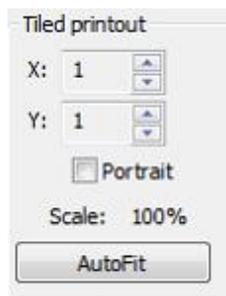
- **Design date**

The date that the design was created can be viewed at the top left of the printout.

7.40x6.72 cm	Date: 24 Feb. 2015
Total Object Count : 43	
Templates : 5	

*Design date location***Tiled printout**

This section manages the way that your design will be printed. When the printout dialog is called up, the first two fields indicate the number of pages needed for printing: 'X' for horizontal and 'Y' for vertical; the number of designs printed on each page can be changed by using the arrows on the right hand side or with the mouse wheel. The changes you make can be viewed on the print preview as you make them.

*Tiled printout*

The **Portrait** option specifies how the design is positioned on the page. If it is enabled, then the design is printed vertically as a portrait. If disabled, then the design is printed horizontally as a landscape.

The **Scale** field shows if the design will be depicted smaller than its actual size and the percentage of the reduction. The first time that the printing dialog is used, the software finds the best way to show the design in actual size with the least number of pages.

To automatically restore the parameters indicated at the beginning of this process you could click on the **AutoFit** tab. If your design is previewed in more than one page, you can print them, cut the border of the page, which is already marked, and tape them to have your design complete.

Scanning images

Previously in the chapter we presented that we can import artwork through a connected scanner using **Get image from scanner** option of artwork source dialog. In this section we will analyze the options and capabilities of **Image scan** dialog. Select the **Get image from scanner** option and click **Next>** button. The **Image scan** dialog will appear that allows you to scan an image.

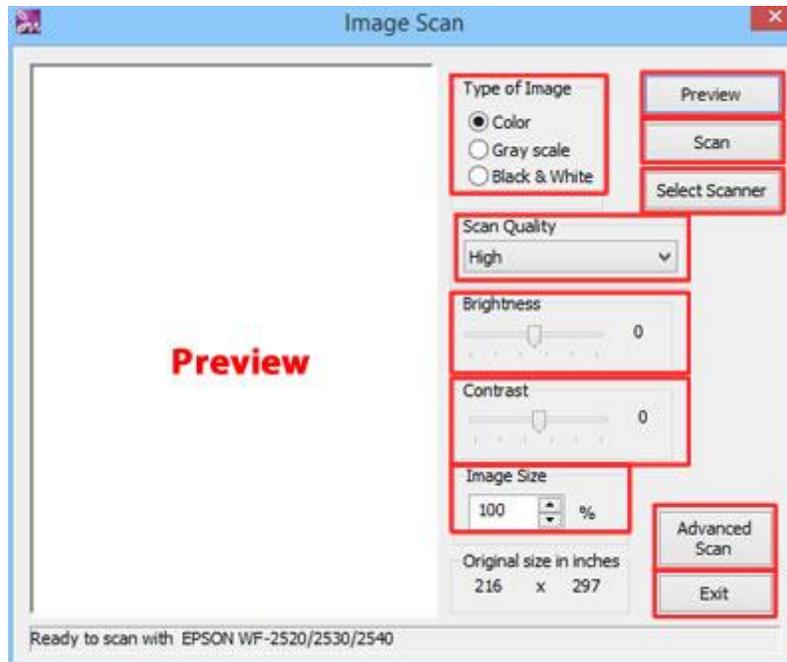


Image scan dialog

In the **Image Scan** dialog you can scan the design you want and make some adjustments from the options in the dialog or by checking preferences in the scanning software. The options that are available in the **Image scan** dialog are the following:

Select scanner button

Select Scanner

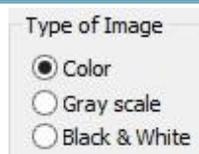
With the **Select scanner** button, you can select the scanner you want to use. By clicking the **Select scanner** tab the **Select source** dialog appears where all the available scanners are listed. Select one and then click **Select** to continue or **Cancel** if you do not want to make any change. If there is no scanner installed or currently active, you will not see any scanner listed in the **Select source** window.

Preview button

Preview

By clicking **Preview**, you can see the image you want to scan. Place your design in the scanner and press **Preview**. When the scan is finished, your design will appear in **Preview**. If you like what you see, press **Scan** tab to import your design. If you want to correct the design, then you can adjust the image in the options available. Press **Preview** again before you **Scan**.

Type of image

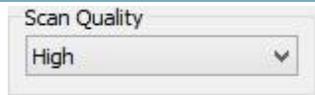


Type of image

With the **Type of Image** option, you can scan and import images in your choice of hues and shades: **Color**, **Gray scale**, or **Black & White**. By scanning in the **Color** option, the final image will look like the original design.

Your scanner will easily convert a color design into a **Gray Scale** or a **Black & White** design that can be imported by clicking on your choice. The **Gray Scale** will be filled with different tones of grays. By selecting the **Black & White** option the image will be scanned with more contrast. When you select any of the three scanning options, you can see what the scanned image will look like by clicking **Preview**.

Scan quality



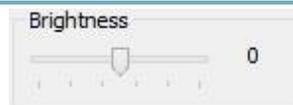
Scan quality

With the **Scan quality** option you can select the characteristics that you want your image to have. The **Scan** option is a drop-down menu with three different image options: **High**, **Medium** and **Low**. The three options mean exactly what they signify:

- **High** quality has the highest quality and the file size of the image will be the largest.
- **Low** quality has the lowest quality (but still very useable) and the file size is the smallest.
- **Medium** will produce an image quality between the other two.

Every time you select a different option you can see how it affects the scanned image by clicking the **Preview** button.

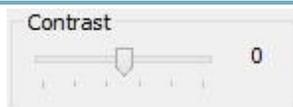
Brightness



Brightness

With the **Brightness** option you can brighten the image, you can click and drag the track-bar to the right you can increase the brightness of the scan. Dragging the mark to the left decreases the brightness. You can also make fine adjustments in **Brightness** by using the arrow keys on your keyboard.

Contrast



Contrast

With the **Contrast** option you can change the contrast of the image by clicking on and dragging the track-bar. Dragging the mark to the right increases the contrast and dragging it to the left decreases the contrast in the scan. You can also make fine contrast adjustments by using the arrow keys on your keyboard.

Image size

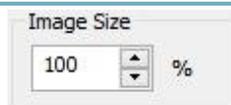
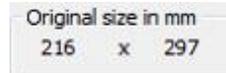


Image size

With the **Image size** option you can enlarge or reduce the image you are scanning. The initial value of the image size is 100%, which is its original size. You can enlarge the scanned image by typing a larger value (more than 100) to the **Image size** field or shrink it by typing a smaller value (less than 100) to the **Image size** field. You can also use the up and down arrows in the box to change the image value by 1% each time an arrow is clicked. Hold down on the arrow to change values faster. The enlargement or shrinkage of the image will be made in the final output of the scanned image.

Original size in mm*Original size in mm*

With the **Original size in mm** you can view the actual size of the image measured in millimeters. This option is not editable and its value changes automatically. The dimensions of the image are shown as **Width X Height** (e.g. 150 x 180). This value changes if you select to scan a specific area of the image you are previewing. The selected area on the **Preview** area will be the new size of the image.

Advanced Scan button

A screenshot of a button labeled "Advanced Scan".

With the **Advanced Scan** tab you can use the default software of your scanner to import the image instead of using the scanner in Creative DRAWings. If you are accustomed to scanning with your printer's software, you can normally use it. To activate the default scanning software of your scanner, click on the **Advanced Scan** tab. Every time you scan from now on, your own scanner dialog will appear. Make your adjustments and press the **Scan** tab. Then you will be asked to save the image to a file on your hard disk, which will allow the software to import it and automatically create a design inside Creative DRAWings. If you decide not to use the default scanning software, you can press the **Cancel** tab to exit and return to **Image scan dialog**.

Preview area

By pressing the **Preview** you can decide if the image needs any adjustments prior to scanning it. Another useful feature of **Preview** is its ability to zero in on a specific portion of the image that you want to scan. This way you only scan the portion of the image you want to embroider. Select the portion you want to scan by making a rectangle selection on the **Preview** area. Click and drag the rectangle and this portion will automatically be prepared for scanning. If you want to deselect the rectangle you have selected, simply click once in **Preview**. Once you're satisfied with the image, press **Scan**.

Scan button

A screenshot of a button labeled "Scan".

Pressing the **Scan** tab starts the scanning process, which will import the selected image into Creative DRAWings®. The scanning will include the adjustments you have made on the **Image Scan** dialog. When completed, you will be asked to save the image to Creative DRAWings®.

Exit button

A screenshot of a button labeled "Exit".

With the **Exit** tab you can close the **Image Scan** dialog and return to the **Artwork source** dialog and choose a different way to create an embroidery design.

Some of the above options might not be available to your scanner. If you see an option disabled, this means that this option is not supported from the driver of the scanner.

After scanning the image you will be prompted to save it as bitmap file on your hard disk. The image will be imported automatically inside Creative DRAWings prompting you for more actions.

Capturing from camera

Creative DRAWings software gives you the ability to capture snapshots from your camera and convert them into embroidery. This is a unique and flexible feature that allows you to capture any image you want from the camera of your PC and convert it in embroidery design. We have previously presented the whole procedure, at this point we will analyze in detail the options of the dialog that is used to get images from camera.

Plug your camera on the PC (if it is external), select the **Get image from camera** option and click **Next>**. The camera **Preview** dialog will appear with several options. Through the camera **Preview** dialog you can take snapshots of anything you want and make some adjustments to the image.

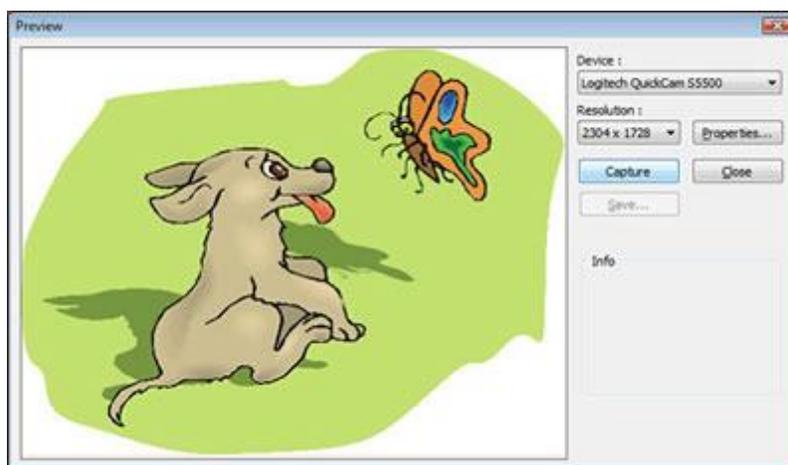


Image scan dialog

In the **Preview** area you will view live the picture of your camera. You can make the adjustments on the camera until you capture the snapshot image you want.

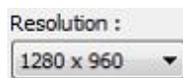
The options you can adjust are the following:

Device



From the **Device** drop down menu you can select the camera of your PC. You might have more than one cameras attached on your PC and you want to switch between them. To do that you have to click on the drop down menu and select the **camera Device** you want to use.

Resolution



From the **Resolution** drop down menu you can select the image size that your camera will capture. You can switch between the available resolutions by clicking on the drop down menu and selecting the one that meet your preferences. Higher resolution images include more details; therefore it is better to select the highest resolution from the dropdown menu to capture your images.

Properties

A rectangular button with a light gray background and a thin border, containing the text "Properties..." in a standard sans-serif font.

By clicking on the **Properties...** button you can adjust the properties of your camera. The properties of every camera are not the same, therefore the option that you will see after clicking on the Properties... button, are based on your camera's features. Please refer to the manual of your camera for more information about adjusting these options. Usually the options that you can adjust are Brightness, Contrast, Saturation, Sharpness, White Balance and many more.

Capture

A rectangular button with a light gray background and a thin border, containing the text "Capture" in a standard sans-serif font.

By clicking the **Capture** button you can take a snapshot of the image that you are viewing in the preview of the camera. The image will freeze allowing you to decide if you want to save it or not. If you do not like the captured image and you want to capture a new one you have to click on the **Capture New** button that will discard the previous snapshot and will allow you to take a new one. Once you are ready to make a new capture click once more on the **Capture** button and a new snapshot will be made.

Save...

A rectangular button with a light gray background and a thin border, containing the text "Save..." in a standard sans-serif font.

If you are satisfied with the image you have captured, you can save it by clicking on the **Save...** button. You will be prompted to a **Save as** dialog (this is a standard **Save as** dialog of windows), where you can find a preferred location to save the captured image. The saved image will be automatically imported to the software ready to be converted.

Close

A rectangular button with a light gray background and a thin border, containing the text "Close" in a standard sans-serif font.

By clicking on the **Close** button you can close the camera **Preview** dialog and select a different way to import a design into the software. The **Close** button closes the dialog and returns to the **Artwork source** dialog.

Info



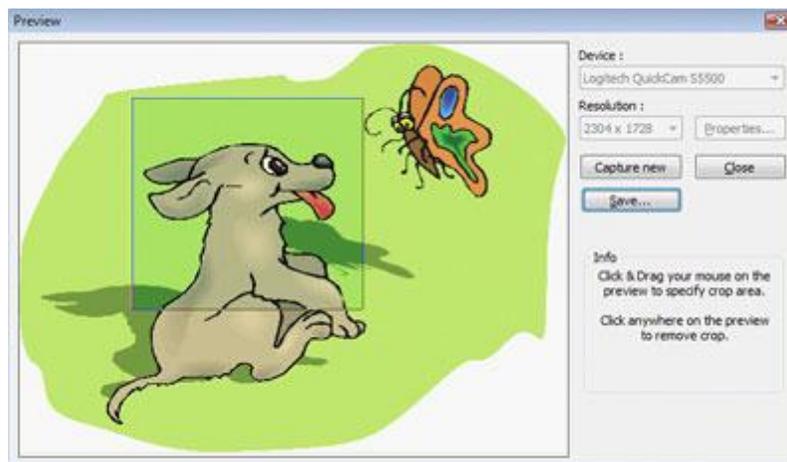
Every time you are making an action in the camera **Preview** dialog the **Info** box shows useful information about the action that is taking place. It also shows information about extra actions that you can make in the dialog such as cropping the image you have captured.

The camera **Preview** dialog gives you the ability to make the needed adjustments on the captured image and produce the result you prefer. If you are satisfied with the captured image click on the **Save...** button to save the image on your hard disk. When the design is saved, the image is automatically loaded inside *Creative DRAWings* prompting you to the import dialog. You'll be asked how you want the image to be opened: as a **Backdrop** or converted to a **Vector** design in **Trace**.

Cropping the captured image

In the camera **Preview** dialog you have also the ability to crop the captured image and use only a part of it. This is very easy to do it by following the steps below:

1. From the camera **preview** dialog make the appropriate adjustments and prepare the scene you will capture.
2. Once you are ready click on the **Capture** button to take a snapshot.
3. To **Crop** the captured image you can simply draw a rectangle area on the captured image by covering the area you want to keep. To draw the rectangle area you have to click and drag with the mouse on the captured image diagonally. While dragging you will view a rectangle to be drawn on the image with a light blue color.



Crop area of captured image

This will be the area of the image that will be kept if you save the design. The rest of the image will be discarded. If you want to define a different crop area you can draw a new rectangle that will be the new **Crop area** (The previous defined crop area will be automatically canceled).

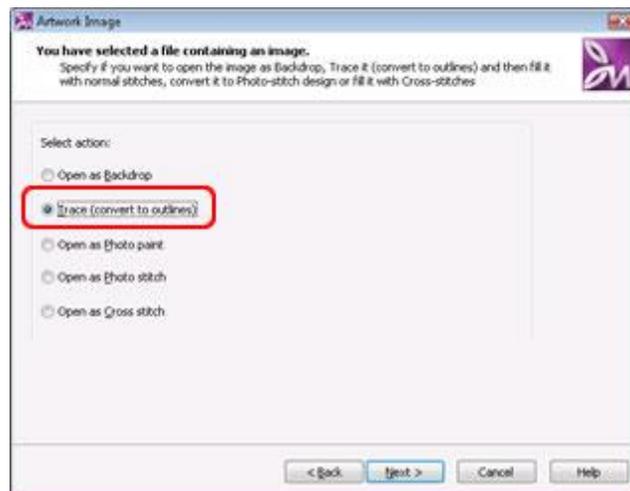
4. If you are satisfied with crop area you can click on the **Save...** button to save the cropped image
5. After saving the cropped image it will be automatically imported in *Creative DRAWings* to be converted to stitches.

With the cropping option you do not need to straggle capturing exactly the area you want to convert to stitches but you have the ability to capture a general image and then keep only the area you need by simply cropping it.

Importing bitmaps

Bitmap files can be imported into Creative DRAWings® four different ways: They can be imported as backdrop, can be traced and imported as a Vector design, can be converted to Cross stitch or Photo stitch design. All four ways are accessible from the starting dialog of Creative DRAWings® software.

1. Select **Create new** design option from the starting dialog and click **Next** button,
2. Select a **Fabric** and proceed to Artwork source dialog.
3. Use **From file** option and click on the  icon to locate the bitmap design you want to import.
4. Press **Next** and the dialog of the following figure will appear providing four image handling options.



Artwork Image dialog

In this section we will describe the conversion options of bitmap files.

Open as Backdrop

Using **Open as backdrop** option, you can import a **bitmap** image and use it as guideline to draw a design on top of it. It is very useful for complex **bitmap** images that cannot be easily **traced** or you want to embroider only a part of them. Using this technique to create the design on top of an image you can create the design exactly in the way you want to be embroidered. Professional digitizers find this functionality very useful. Once you press **Finish** on the startup wizard the selected bitmap file will appear in the design area as a backdrop (You can not edit it). You can only import one bitmap backdrop, in case that you want to import multiple

backdrops you will have to use an image editor and make the multiple images a single image by combining them and then import the combined image as a backdrop.

Once an image has been added as backdrop, there are some options that can be used to handle the imported backdrop. These options can be located under the **Backdrop** submenu of **View** menu and they are the following:

Hide (Alt + 1)

By clicking on **Hide** – or press **Alt + 1** shortcut key – you can hide the imported backdrop. The **Hide** option can help you view the embroidery design you have created without confusing it with the backdrop image at the back.

Below embroidery (Alt +2)

With this option checked you can make the backdrop visible and position it below the design you are creating. Whenever you import a **Bitmap** image as backdrop, Creative DRAWings® automatically positions the image under the embroidery design. Also, another way to enable this option is by pressing the **Alt + 2** shortcut keys from the keyboard.

Washed-out (Alt +3)

With this option checked you can make the backdrop colors appear **Washed-out**. This means that the colors of the backdrop will have lighter tones. This is very helpful when you are trying to draw a shape that will have the same color with the backdrop image. Also, another way to enable this option is by pressing the **Alt +3** shortcut keys from the keyboard.

Above embroidery (Alt + 4)

With this option checked you can position the backdrop image to appear above the design you have created. This is very helpful. You'll be able to view the backdrop image and be able to design the objects that will be on top of larger objects you have already designed. Also, another way to enable this option is by pressing the **Alt + 4** shortcut keys from the keyboard.

Properties

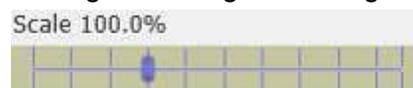
The **Properties** option is available only if you have inserted a backdrop **Bitmap** in the working area. By selecting the **Properties** option from the **View** menu a 3D pop-up dialog appears on the working area with various options related with the already inserted backdrop.



Backdrop properties

The **Backdrop Properties** dialog includes the following options:

- **Straighten**, using this useful option you can straighten a scanned bitmap. Select the **Straighten** option and view the cursor changing shape. To straighten your **Bitmap**, click the mouse twice to make two points which will become a virtual straight line that your design will adjust to. For example, if you make a diagonal straight line on the **Bitmap**, Creative DRAWings® will rotate the **Bitmap** and turn the diagonal straight line into a horizontal straight line. You can apply the **Straighten bitmap** option as many times as needed to bring the backdrop bitmap to the straight position.
- **Scale bitmap**, using **Scale** track-bar you can change your **Backdrop Bitmap** proportionally. Drag the track-bar to the left to reduce the image and drag it to the right to enlarge the **Backdrop**.



Scale backdrop

You can reduce the image to a minimum 50% from its initial size and enlarge the image with a maximum 300%. The scale tool is very useful in helping you change the size of the **Backdrop** image without the interference of any other software. Therefore, you do not need editing software for **Bitmaps** to adjust the size of your **Backdrops**.

- **Rotate bitmap**, using this tool you can rotate your image freely by clicking and dragging the indicator either way. This tool helps to straighten your backdrop image before starting to draw the embroidery design. The rotation circle always opens up at the zero position.



Rotate backdrop

This tool can help you straighten your backdrop image before starting drawing the embroidery design based on it.

- **Below embroidery:** By pressing this button you can make the backdrop visible and position it **Below the embroidery** you are creating. This option is enabled by default whenever you import a Bitmap image as backdrop and positions the image under the embroidery design. Also, another way to apply this option is by pressing the **Alt + 2** shortcut keys from the keyboard.
- **Washed-out:** By pressing this button you can make the backdrop colors appear **Washed-out**. This means that the colors of the backdrop will have lighter tones. This is very helpful when you are trying to draw a shape (with any of the available drawing tools) that will have the same color with the backdrop image. Also, another way to apply this option is by pressing the **Alt +3** shortcut keys from the keyboard.
- **Above embroidery:** By pressing this button you can position the backdrop image to appear above the embroidery design you have created. This is very helpful in order to view the backdrop image and be able to design the objects that will be on top of larger objects you have already designed. Also, another way to apply this option is by pressing the **Alt + 4** shortcut keys from the keyboard.
- **Remove backdrop:** Press this button to remove the imported bitmap backdrop.

After adjusting your backdrop and you do not need the **Backdrop Properties** window to appear you can close the dialog by clicking on the close icon  or minimize it by clicking on the minimize icon . The minimize icon will make Backdrop properties to disappear and leave the title bar to float on the working area.



If you need the **Backdrop properties** window again, click once on the minimized title bar and you're ready to make more adjustments.

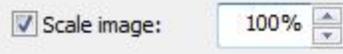
Trace (convert to outlines)

Creative DRAWings® includes a powerful tool called **Trace** which allows you to convert **Bitmap** artwork into a **Vector** design. The **Vector** can then be converted into a normal embroidery design. Very important: Before converting the **Bitmap** into a Vector, save and rename the original for future use. By selecting the **Trace** option and clicking **Next>** the **Trace Image** dialog will appear.

*Trace Image*

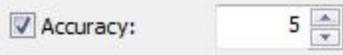
The **Trace Image** dialog box can be enlarged so the adjustments will be easier to observe. Click on box, hold down on the bottom right corner of it and pull diagonally to fill up the screen, or make as large as you want it. The **Trace** tab has some options that can help you produce the results you want. Those are:

Scale image:

*Scale image*

The **Vector** design in **Trace Image** will always open at the default 100% -- the original size of the **Bitmap**. To enlarge or reduce the **Vector** size, click first on **Scale Image**, then type in a new value above or below the 100% option. You can also change the **Vector** image size by clicking on up-or-down arrows (hold down for a speedy change). No matter how you do it, the scaling will always be proportional to all dimensions of the design: A 35mm x 60mm design will become a 70mm x 120mm design while you're adjusting it in **Trace Image**. Any change in values is automatically changed in **Preview**.

Accuracy:

*Accuracy*

The **Accuracy** option lets you choose how much detail of the original artwork will be in your final embroidery design. Click on the box to edit this option, which will open with a default Value 5. If you want your embroidered design to appear as the artwork, click up to Value 8 – the highest degree of accuracy. A Note of Caution: Depending upon your design, a Value 8 may not produce results best for embroidering because of excessive details. On the other end of the **Accuracy** scale, a Value 1 option may not have enough details to please you. You will find that the Accuracy value varies greatly among bitmap images, so you must try different **Accuracy** values to get the preferred result. Each time you change a value, you can see it in **Preview**.

Color limit:



Color limit

The **Color limit** box gives you a choice of how many thread colors you want in your **Traced** image. Click on the box. It always opens with a value of the maximum number of colors, but there are several factors to be considered. If you have a 6-needle embroidery machine, you may want to change the Value 6 with six threads. The number of threads affects the way the **Bitmap** image will be converted to **Vector** design. In the **Preview**, you can view any value changes. Another Option: You can go ahead and create your vector design with 20 colors and then reduce the number inside Creative DRAWings®. Having a file of all 20 colors gives you the option of later sewing your design commercially. Or . . . when you step up to your own big-time machine, you will have the files ready!

Use background:



Use background

With **Use background** option you can make the color/object that you will choose from the **Preview** area transparent. This is an easy way to remove a specific color/object from the **Bitmap** image. To edit this option, click the checkbox next to it. Move the mouse cursor over the **Preview** and it will automatically change to an eyedropper tool. The color that you will select from the preview area with the eyedropper tool will automatically become transparent and will fill the color tab next to the **Use background** option. Only one color object will become transparent from the design. You can make a different color transparent by selecting a different color with eyedropper tool from the design.

Open as Cross-stitch

By selecting the **Open as Cross stitch** option, you can convert the bitmap image to a perfect **Cross stitch** design. The conversion is made automatically by clicking the **Next>** button in the dialog. The **Cross-stitch** will be created inside the design area, where you can make the adjustments.

In the **Create** mode of Creative DRAWings you cannot edit the actual bitmap image but you can resize and change the position of the Cross-stitch design. If you want to edit the actual bitmap image you have to use a Bitmap editing software and then import the edited bitmap back to Creative DRAWings to view the results. By editing the bitmap you can increase the quality of the embroidery result.

In the Create mode you can increase the detail of the cross-stitch design by increasing the size of the bitmap or decreasing the size of crosses. This will result in a high detailed cross-stitch design that will be closer to the actual image view. To increase the size of the bitmap inside Creative DRAWings you have to select the Cross-stitch design, and then resize it by click and dragging the corner handles of the bitmap or the handles at the middles of each side. The bitmap will be resized and the cross-stitches will be recalculated. By increasing the size of the bitmap you automatically increase the number of cross-stitches that will be placed on it; therefore the quality of the embroidery design.

You can also move the cross-stitch design and position it exactly in the location you want it to be. To do that you have to select the cross-stitch design and by click and dragging on it move it to the position you want it to be.



Photos to Cross-stitch

In the **stitch** mode of Creative DRAWings you can edit the cross-stitches by setting the **Cell size** of each cross-stitch, changing the number of times each cross-stitch will be embroidered and selecting which parts of the design you want to embroider and which not. All this options are located on the **Object properties** toolbar that appears at the right side of the application window. The same options are available in the Create mode, if **Stitches**, **3D preview** and **Object properties** options from **View** menu are enabled.

More about how to edit Cross-stitch designs you will find in the Embroidery transformations chapter.

Important: Creative DRAWings can import only Bitmap images that have been created with RGB (Red, Green, and Blue) colors. Any Bitmap that was created with CMYK (Cyan, Magenta, Yellow, and Black) will not convert properly.

Open as Photo stitch

By selecting the **Open as Photo stitch** option, you can convert the bitmap image to a perfect **Photo stitch** design. The conversion is made automatically by clicking the **Next>** button in the dialog. The **Photo-stitch** will open inside Creative DRAWings® where you can make the adjustments.

Photo-stitch is another alternative you have when it comes to filling bitmap images with stitches. It consists of 4 stitch layers that have different colors. Each thread color layer is one of the CMYK(Cyan, Magenta, Yellow and Black) color model. First the Magenta color is embroidered, then the Cyan color, the Yellow color follows and finally comes the Black color. These colors cannot be changed and you must use them exactly as they are embroidered, if you want to produce accurate Photo-stitch results.

In the **Create** mode of Creative DRAWings you cannot edit the actual bitmap image but you can resize and change the position of the Photo-stitch design. If you want to edit the actual bitmap image you have to use a Bitmap editing software and then import the edited bitmap back to Creative DRAWings to view the results. By editing the bitmap you can increase the quality of the embroidery result.

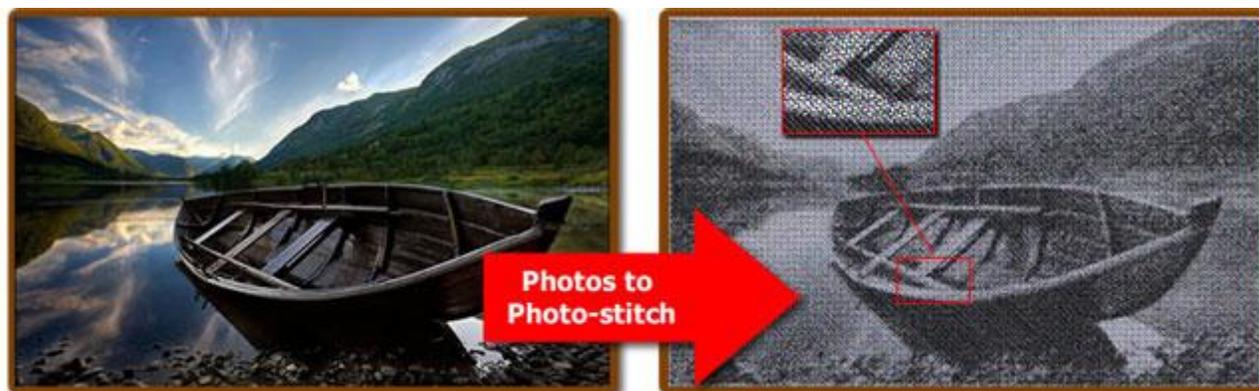


Image to Photo-stitch

You can increase the embroidery result of the Photo-stitch design by adjusting the image contrast. By increasing the contrast of the image you will get thicker satin bars in the darker areas of the photos and add detail to the final embroidery. Also, some adjustments to the image size might be needed to get more detail to your photo-stitch. To increase the size of the bitmap inside Creative DRAWings you have to select the Photo-stitch design, and then resize it by clicking and dragging the corner handles of the bitmap or the handles at the middle of each side. The bitmap will be resized and the Photo-stitch will be recalculated. By increasing the size of the bitmap you automatically increase the area that will be covered from the satin bars that will lead to detail increase.

The photo-stitch object gives you the ability to adjust the satin bars' **Width** and the **Density** of each satin bar for more accurate results. With the **Width** value you can set the distance that two satin bars will have between them and with the **Density** value you can set the density that each satin bar will have when it passes over dark areas. By adjusting those two values you can get more detailed photo-stitch results.

Also, you have the ability to create **Monochrome** Photo-stitch by checking the respective option from the **Object properties** toolbar. The Photo-stitch will become monochrome created from only one color (black). This is a great effect that can give an artistic feeling to your photo-stitch.



Monochrome Photo-stitch

Important: Creative DRAWings can import only **Bitmap** images that have been created with RGB (Red, Green, and Blue) colors. Any **Bitmap** that was created with CMYK (Cyan, Magenta, Yellow, and Black) will not convert properly.

Open as Photo Paint

By selecting the **Open as Photo Paint** option, you can convert the bitmap image to a perfect **Photo paint** design. The conversion is made automatically by clicking the **Next>** button in the dialog. The **Photo-paint** will open inside Creative DRAWings® where you can make the adjustments.

Photo-paint is another alternative you have when it comes to filling bitmap images with CMYK(Cyan, Magenta, Yellow and Black) paint colors. It consists of 4 paint layers that have different colors. Each thread color layer is one of the CMYK(Cyan, Magenta, Yellow and Black) color model. First the Magenta color is embroidered, then the Cyan color, the Yellow color follows and finally comes the Black color. These colors cannot be changed and you must use them exactly as they are applied, if you want to produce accurate Photo-paint results.

In Creative DRAWings you cannot edit the actual bitmap image but you can re-size and change the position of the Photo paint design. If you want to edit the actual bitmap image you have to use a Bitmap editing software and then import the edited bitmap back to Creative DRAWings to view the results. By editing the bitmap you can increase the quality of the paint result.

*image to Photo-paint*

You can improve the painted result of the Photo-paint design by adjusting the image contrast. By increasing the contrast of the image you will get thicker satin bars in the darker areas of the photos and add detail to the final painting. Also, some adjustments to the image size might be needed to get more detail to your photo-paint. To increase the size of the bitmap inside Creative DRAWings you have to select the Photo paint design, and then re-size it by clicking and dragging the corner handles of the bitmap or the handles at the middle of each side. The bitmap will be re-sized and the Photo paint will be recalculated. By increasing the size of the bitmap you automatically increase the area that will be covered from the satin bars that will lead to detail increase.

The photo paint object gives you the ability to adjust the satin bars' **Width** and the density (**St. density**) of each satin bar for more accurate results. With the **Width** value you can set the distance that two satin bars will have between them and with the **St. density** value you can set the density that each satin bar will have when it passes over dark areas. By adjusting those two values you can get more detailed photo-paint results.

Also, you have the ability to create **Monochrome** Photo paint by checking the respective option from the **Object properties** toolbar. The Photo paint will become monochrome created from only one color (black). This is a great effect that can give an artistic feeling to your photo-paint.

In addition you have the ability to adjust the cutter parameters that will allow you to get a better painted result. The parameters that you can adjust are the following:

Cutter presets

All the **paint** objects are produced by placing a **Brush/Pen** to your digital cutter and then exporting the design to the cutter. When exporting **Paint** designs, the cutter must be instructed to use lower speed and less pressure in order to achieve best results. These are some settings that you must adjust either for each object, here in object properties, using the following properties (**Cutter pressure, Speed, Passes**) or at the **Export to Cutter** dialog. In order to assist you in selecting the proper settings according to the material and the type of the operation we have prepared various operation presets. Click on the **Cutter presets** button and from the drop down menu, select any of the available presets for your **Cutter** and the **material** that you are going to use. This preset selection affects only the selected objects. For example for painting tasks for users that own **Artistic Edge** cutter you can select the preset **Edge , Paint**. After selecting the preset you will see the values of the following properties change (**Cutter pressure, Speed, Passes**).

Cutter speed

With this value, you can specify the speed that the digital cutter will produce the design. This value takes values from 0 - 100, 100 is the max speed that each digital cutter can support. Some digital cutters may not allow you to adjust this value at all through our software, you can make adjustments though through the machine's panel. So the selection of speed though this property may not be applied during production.

Cutter pressure

With this value, you can specify the pressure (force) that the digital cutter will use on its head. In our case, we will use a Brush/Pen to our digital cutter in order to paint a design the pressure must be less than when we actually use a Blade. This value takes values from 0 - 100, 100 is the max pressure that each digital cutter can support. Some digital cutters may not allow you to adjust this value at all through our software, you can make adjustments though through the machine's panel. So the value that you have selected may be ignored. The value of Pressure varies from material to material, thicker material need more pressure and thinner less.

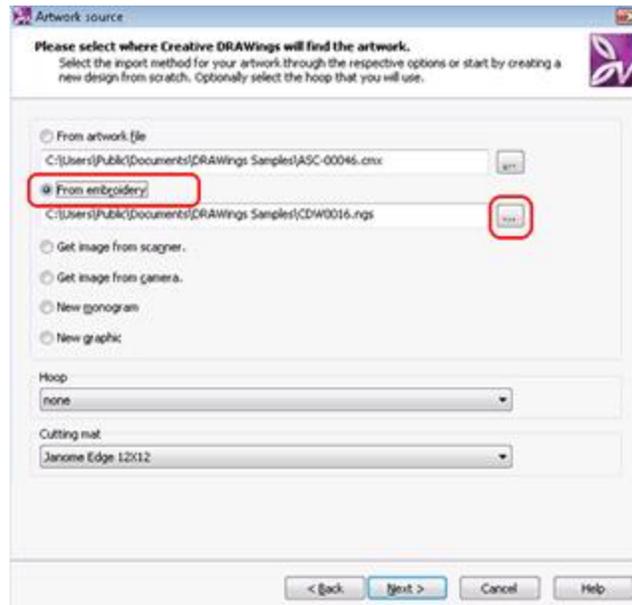
Cuter Passes

You can specify the number of **Passes** you want the design to be made with. It actually defines how many times each shape will be made by the machine.

Important: Creative DRAWings can import only **Bitmap** images that have been created with RGB (Red, Green, and Blue) colors. Any **Bitmap** that was created with CMYK (Cyan, Magenta, Yellow, and Black) will not convert properly.

Import embroidery files

One of the importing abilities, as we have already mentioned, is that we can import any embroidery design we like. Creative DRAWings® will convert **Stitch** file formats like **.ngs** or **.dsz** or **.pes** into **Vector** designs. Using this ability you can import your ready-made embroidery designs, convert them to **Vector** designs, make any changes you desire, and embroider them again.



Import from embroidery dialog

In order to use this ability we must select **From embroidery** option, from the **artwork source** dialog of startup wizard. Select this option use **browse**  icon to select an embroidery file to import.

you can import any supported embroidery file into Creative DRAWings®. You can save it without changes, or you can create a new **.draw** file. You will be able to make some limited adjustments on the imported embroidery files, like adding new objects or text, and then save it as a new embroidery design.

You can only import an embroidery design from the opening dialog of **Create new** in Creative DRAWings®. Make sure **Browse** is highlighted, then click **Next>**. In the next dialog **Artwork source**, select **From embroidery** option, and then click on the **browse**  icon to reach the embroidery file you want to import.

From the standard **Open** dialog that appears, you can find the **Stitch** file you want to import and click the **Open** tab. You can import one of the following files:

- Wings Systems (".ngs")
- Milestone (".mls")
- Tajima (".dst", ".dsz", ".dsb")
- Tajima TBF (*.tbf)
- SEF xp (".sef")
- SWF (".sst")
- Saurer (*.SAS)
- Pfaff (".ksm", ".pcs", ".pcm")

- Singer (*.xxx)
- Happy (".tap")
- bernina / Melco expanded (".exp")
- Brother/Baby Lock/Bernina (".pec", ".pes")
- Husqvarna (".hus")
- Husqvarna Viking (".vip")
- Husqvarna Viking/Pfaff (".vp3")
- Viking Designer 1 (".shv")
- Janome (".jef", ".sew", ".Jpx")
- Janome JEF+ (".jef+")
- Juki (".M3")
- Toyota (".100")
- Artista (*.art)
- QuiltCAD (*.hqf)
- PC Quilter (*.txt)
- Statler Stitcher (*.qli)
- CompuQuilter (".cqp/", ".cmd")
- Mitshubishi HD (".1??")
- Barudan FDR (".U??")
- ZSK TC (*.Z??)

The **Stitch** file you have selected will appear in the **From embroidery** import field. Click **Next>** to import your file in the **Create** mode. Creative DRAWings® will prompt you to the next dialog to select the Fabric and **Color** for your design. Click **Finish** and view the imported embroidery design. If you want another file, click on the browse icon and select another **Stitch** file.

To the imported embroidery design you can change the colors of the objects, and make some simple transformations such as rotation, skew, move and delete objects.

Auto density adjust

Auto density adjust

To apply **Auto density adjust** option you have to select the stitch object you want to resize (**Auto density adjust** will appear at the bottom of **Object Properties** toolbar), make sure that the checkbox of the option is checked and then resize the stitch object by dragging any corner handle. While dragging with the mouse, on the **Status bar** (is located at the bottom of the application) you can view the percentage of resize that you are making.

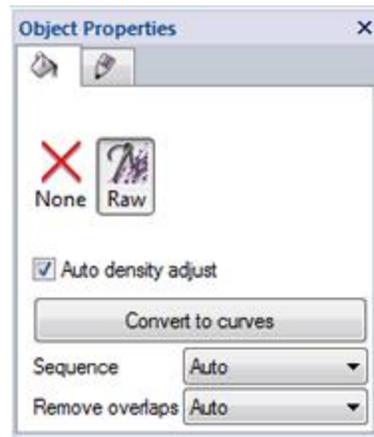
To be able to have full editing abilities you have to convert the stitch objects to vector objects that will give you the ability to make any changes you want on the design.

Convert to Vector design

As we have already mentioned you can import your old embroidery files and convert them to vector designs. You can convert the entire embroidery designs or a part of them. In this case after their conversion you can use them as a normal design and edit in **Create** mode of Creative DRAWings.

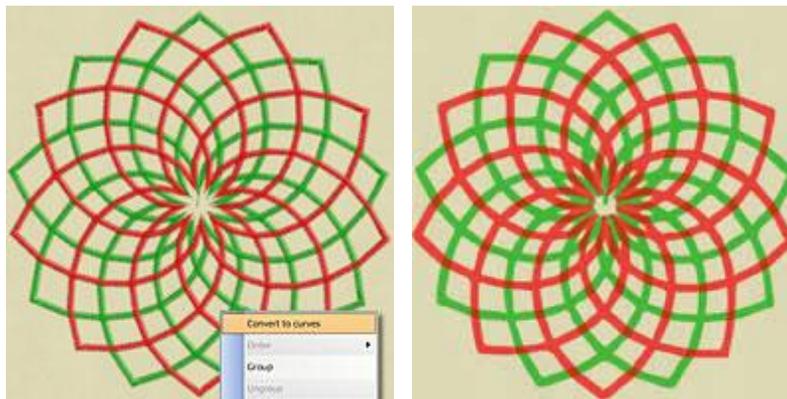
To convert the imported embroidery artwork to **Vector** design, select the entire design with **Ctrl+A** keys. Right click on the design and from the pop-up menu select the **Convert to Curves** option or press **Ctrl+Q** at

the same time. Another way that you can convert it, is by clicking on the **Convert to curves** button that will appear on the **Object properties** toolbar.



Convert to curves

The embroidery design will be automatically converted to fully editable **Vector** artwork which can be edited. You can also convert only an object or two. Creative DRAWings® takes you one giant step beyond the normal **Convert to Curves** of software programs. Its new approach to imported embroidery allows you to have **Stitch** objects together with **Vector** objects in the same file. You can convert specific parts of the embroidery design to **Vector** artwork, make the changes in those objects, and then embroider them and keep the rest of the embroidery design unchanged. Choose **Stitch** objects in a design and convert them to **Vector** artwork. Select the artwork and from the right click menu, select the **Convert to Curves** option. This combination allows you to have **Stitch** and **Vector** objects in the same file.



Embroidery file to Vector file

In such cases you may don't want to view both stitch and vector objects. You can disable **Stitches** option of **View** menu to temporary hide all stitch objects. You can also hide all vector artwork by disabling Outline design option of View menu. In this case if stitches option is enabled you can only see the available stitch objects. Using these View options you will be able to edit your **Stitch** and **Vector** objects easier.

The new produced **Vector** design is fully editable, which means you can make as many changes as you want on the design. You can add or remove objects or designs and give them stitches by clicking on the **Stitch** mode. The former **Vector** design will be filled with stitches ready to be embroidered again. By editing your imported embroidery files you can give life to your old designs.

Import ngs embroidery file

The reason Creative DRAWings® is so powerful: the default ngs embroidery files of **Wings' modular** software is at your fingertips. The designer included much of the professional **Wings' program** into Creative DRAWings®.

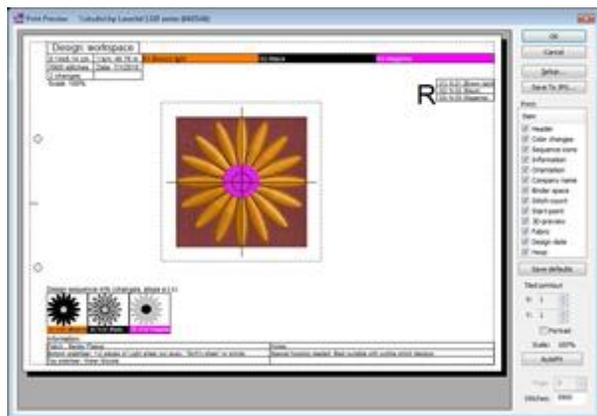
Besides stitch data, **ngs** files contain the outline data of the design. The most powerful embroidery file formats such as **.dst**, **.sst**, **.exp**, etc. can hold only stitch data and not outline data. This is important because outline data allow you to change the artwork and recalculate the embroidery result.

If you import an embroidery file inside Creative DRAWings, it will not have any outline data imported unless the file has an **.ngs** extension. The outline data of the imported ngs file will be automatically recognized from the software and will be imported as **Vector** data. Therefore, the **Vector** artwork of the embroidery design will be directly editable in the **Create** mode of Creative DRAWings. Some **ngs** files may only contain stitch data.

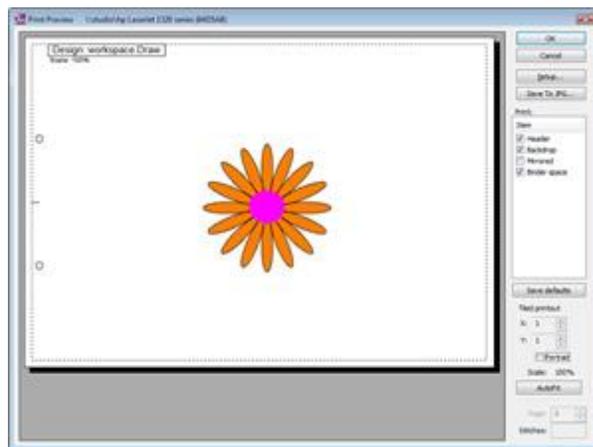
This can happen if you open a **.dst** file for, example, which holds only stitch data and then save it as **.ngs** file format. For the ngs file to hold the outline data, it must be either saved directly from Creative DRAWings or **Wings' modular** as a ngs file or it must be created inside **Wings' modular** from scratch.

Printing

Creative DRAWings® provides extensive options for printing your designs. You can print the design together with much information that are useful for the embroidery process or **Print the artwork** of the design in order see clearly the artwork without any other information.



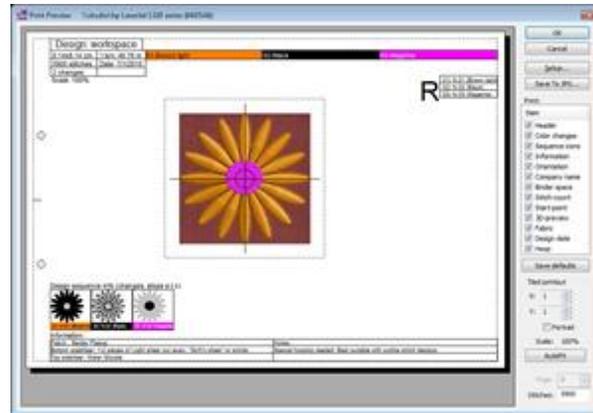
Print design



Print artwork

Print design

The printout of the design provides information needed to evaluate before sending a design for production or to a customer to see if this is what he likes. To print a design from your screen, press the **print**  icon on the standard toolbar or from the menu File > Print option or press the **Ctrl + P** shortcut keys from the keyboard. The following dialog will appear, you can see a preview of the printout of a design.



Creative DRAWings Printout

In **print preview** window, we can see a preview of the design together with provided information. On the right part we can see various customization of the printout. These customizations are:

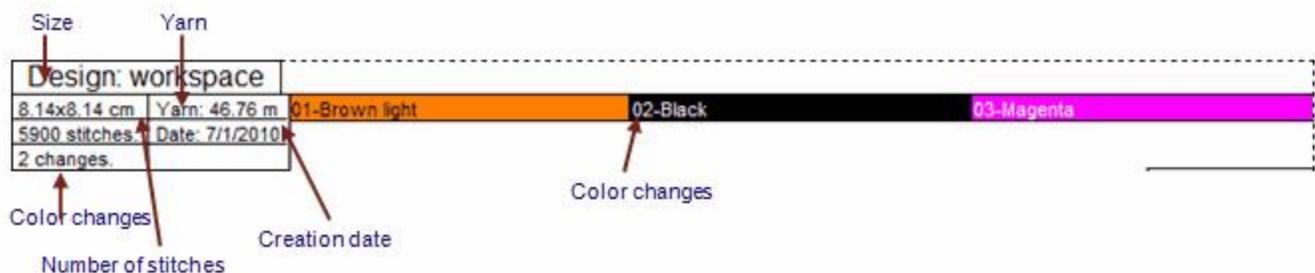
- We can use **Setup** button in order to select and customize the properties of the printer that we are going to use.
- We can also use **Save to JPG** option in case that we don't want to print it, but we want to save it for later reference or to review on our computer monitor.
- In section **Print** we can select which parts we want to be visible. Click on any of the checkboxes in order to **enable/disable** visible items.
- If you want this selection of visible items to be the default for any design, you can use **save defaults** button.
- Finally in tiled printout section we can customize some aspects of the print, **number of pages, orientation, and scale**. We can also set number of stitches that we want to be visible on the print preview.

Print items

In this section of the printing dialog you can specify which information you want your printout to include. Every item of the printout can be enabled or disabled by clicking on the square on the left of its description. If the item is enabled the changes can be viewed on the preview area.

- **Header**

The header is at the top of the page, showing the size, color changes, number of stitches, quantity of thread needed, the colors of the design, and their position.



Header

- **Color changes**

The box shows the sequence of the color changes. This information is really useful in case the design will be saved in a file format which uses “stop” instead of color-change command.

01) N:01 (Brown light)
02) N:02 (Black)
03) N:03 (Magenta)

Color changes

- **Sequence icons**

The sequence icons are at the bottom of the page. They show parts of the design split with a special function like color change, appliqué, or stop. Also in the bottom of the icon you can view the name of the color that should be used, plus comments.



Sequence icons

- **Information**

Information is at the bottom of the page. The information area lists and describes the components of your embroidery design. The information is sent from the program to the component presets you have selected.

Information:	
Fabric : Berber Fleece	Notes:
Bottom stabilizer: 1-2 pieces of Light sheer cut away, "Soft'n sheer" or similar	Special hooping needed. Best suitable with outline stitch designs.
Top stabilizer: Water Soluble	

Information

- **Company name**

The company name, which is at the top of the printout, can be changed by using the Printing tab of the Tools > Options dialog.

Design: DRAWings		DRAWstitch				
6.39x5.60 cm	Yam: 35.60 m	01-R-242,0:116,0:110	04-R-207,0:167,0:099	07-R-140,0:151,0:092	10-R-172,0:177,0:091	13-R-116,0:101,0:104
11040 stitches	Date: 6/2/2005	02-R-229,0:177,0:092	05-R-111,0:100,0:117	08-R-244,0:243,0:113	11-R-205,0:156,0:095	14-R-031,0:026,0:023
13 changes.		03-R-171,0:116,0:088	06-R-175,0:177,0:125	09-R-134,0:056,0:081	12-R-090,0:043,0:044	

Company name

- **Orientation**

The orientation is the icon shown with the "R" character at the top right corner of the printout. This is important because it shows how the printed page should be put on the embroidery machine to identify the starting point of the design.

R

Orientation

- **Binder space**

This option makes the necessary margin (on the left side of the page) in case you want to put the printout in a folder.

- **Stitch count**

The number of stitches in your design can be viewed at the header of the printout. This **Stitch count** is important for commercial use when the number of stitches is used to calculate the embroidery price.

Design: workspace	
8.14x8.14 cm	Yarn: 46.76 m
5900 stitches.	Date: 7/1/2010
2 changes.	
Scale: 100%	

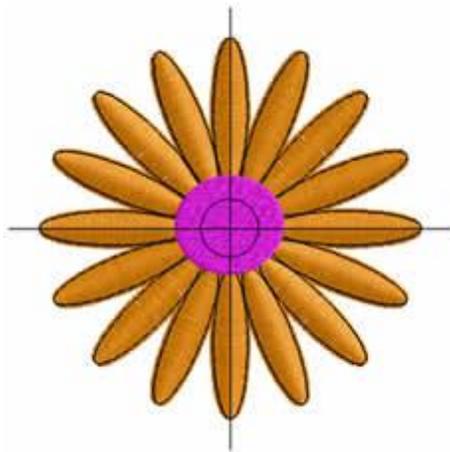
Stitch count location

- **Start point**

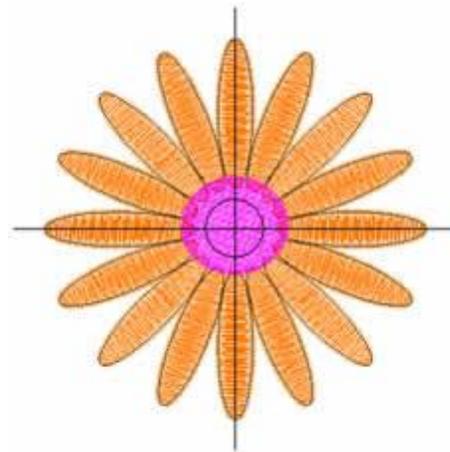
This option shows or hides the starting point of the design, marked with the  icon.

- **3D-preview**

Displays the stitch design in 3D-preview mode.



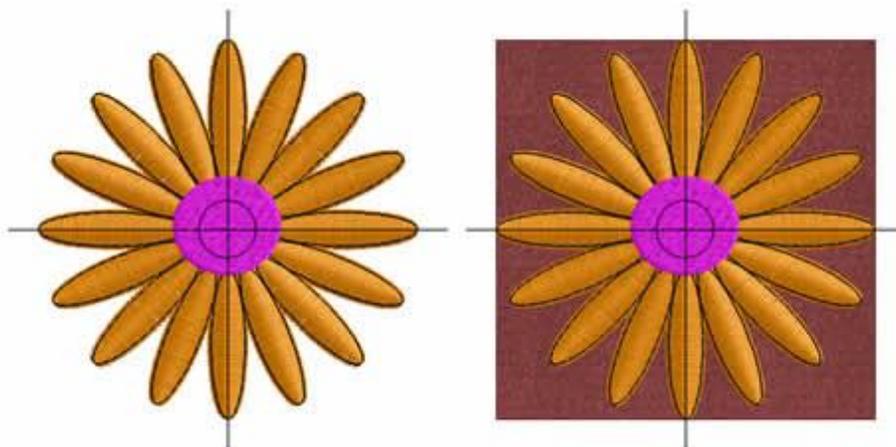
3D-preview Enabled



3D-preview disabled

- **Fabric**

Hides or Shows the fabric behind the design.



Without fabric – With fabric

- **Design date**

The date that the design was created can be viewed at the top left of the printout.

Design: workspace	
8.14x8.14 cm	Yarn: 46.76 m
5900 stitches.	Date: 7/1/2010
2 changes.	
Scale: 100%	

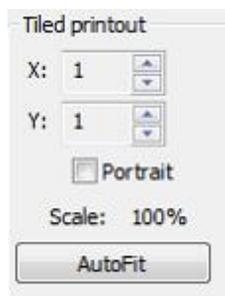
Design date location

- **Hoop**

Hides or Shows the embroidering area (dotted line) of the selected hoop with a dashed line around the design. If your design is position outside this line you will have problems embroidering the design on a hoop that has the same dimensions (You might damage your machine).

Tiled printout

This section manages the way that your design will be printed. When the printout dialog is called up, the first two fields indicate the number of pages needed for printing: 'X' for horizontal and 'Y' for vertical; the number of designs printed on each page can be changed by using the arrows on the right hand side or with the mouse wheel. The changes you make can be viewed on the print preview as you make them.



Tiled printout

The **Portrait** option specifies how the design is positioned on the page. If it is enabled, then the design is printed vertically as a portrait. If disabled, then the design is printed horizontally as a landscape.

The **Scale** field shows if the design will be depicted smaller than its actual size and the percentage of the reduction. The first time that the printing dialog is used, Creative DRAWings® finds the best way to show the design in actual size with the least number of pages.

To automatically restore the parameters indicated at the beginning of this process you could click on the **AutoFit** tab. If your design is previewed in more than one page, you can print them, cut the border of the page, which is already marked, and tape them to have your design complete.

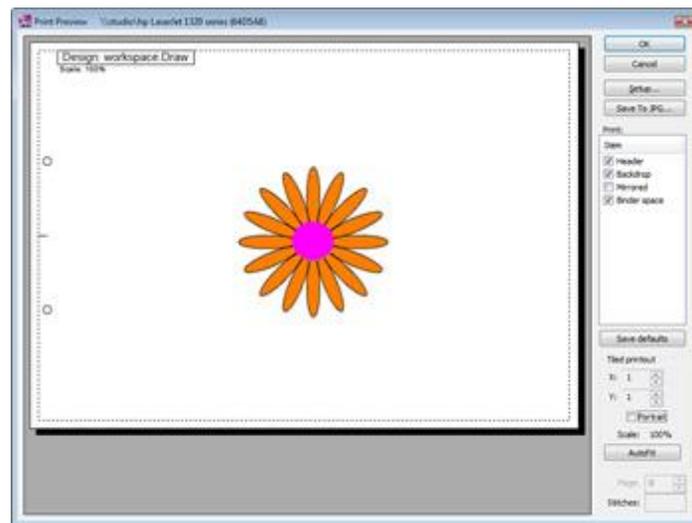
Finally at the bottom of the right area of Print preview dialog there is a control that you can use in order to set the number of stitches that you want to be viewable in the respective area of the printout. Click on the editable area and type the value you want to appear in Printout.

Stitches: 5900

Print Artwork

With *Creative DRAWings* you have the ability to print any artwork you want on a special paper for textile printing. Then you can iron the paper on the fabric and apply the design on the fabric. You can also combine textile printing with redwork embroidery and create unique and stylish designs on garments.

To print the artwork of the design you have created or imported inside *Creative DRAWings* you have to select the **Print Artwork** option from **File** menu. The **Print Preview** dialog will appear that includes all the options that you can adjust to prior printing the artwork.



Print artwork preview

As we have described in previous section the printout and the visible items can be customized.

- Select a printer
- Save into JPG file
- Select printed items
- Customize orientation and number of pages.

The only addition is that you can create **Mirrored printouts easily**. **Mirrored** option allows you to make a Mirror of the artwork you want to print in order to make it proper for textile printing or any demonstration purpose.

*Normal Printout**Mirrored Printout.*

Send design

With this option you can send a **.draw** file of Creative DRAWings by e-mail. Click on **File > Send**. When the **Send** option is selected, Creative DRAWings finds the default program that you use for e-mails and opens a new window. It saves the current design in the **.draw** format in your temporary directory, and inserts this **.draw** file as attached. Type in the e-mail address, add any text, and send it.

Recent files

Click on **File** to find the list of designs that you recently opened. The lower half of the dropdown menu contains links to your last-accessed files. If you click on a link, the design will open in a new Creative DRAWings® window and the opened file will be placed on the top of the recently used **File** list.

Auto-backup mechanism

Creative DRAWings® software has two security features to help you avoid losing your work from a possible systems crash. The first is the **Failure Recovery** feature and the second is the **Auto-backup** feature of the embroidery designs.

- **Failure Recovery:** This feature is activated automatically when an illegal operation is made in the software. Immediately the **Failure Recovery** tool is activated to baffle the termination of the program.

*Failure Recovery dialog*

When this **Failure Recovery** dialog box appears, click **Yes** and the software will continue functioning. If you click **No**, the Creative DRAWings® software will be terminated immediately without asking you to save your design. If the **Failure Recovery** box appears while designing, it is better to save your design by clicking **Yes**, then restart Creative DRAWings®. This mechanism secures your work.

- **Auto-backup:** Another feature that Creative DRAWings® has to protect your valuable work is the **Auto-backup** feature. Creative DRAWings® automatically saves your designs after every change. The **Auto-backup** works even if you have not saved your design at all. If the software locks up for whatever reason, your work will not be lost in most cases. When you open the software again, the designs before the lock-up will be recovered. This mechanism will protect you from losing your work.

Note: As another safety feature, always keep in mind the importance of saving your designs frequently.

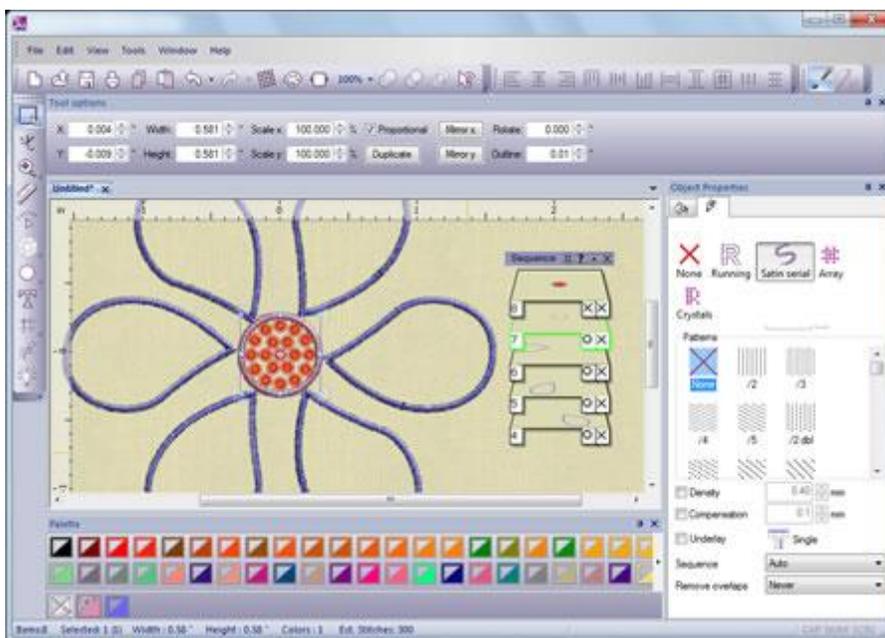
Chapter IV

Workspace tour

The main application window consists of a variety of **menus**, **toolbars**, **wizards** and **dialog windows**. All these together with the design tabs are called a **workspace**. A workspace is any combination of the above components. The way that the workspace components and windows are placed is fully customizable. When opening the application for the first time all these tools are placed by default in a way to help you focus on your task (creating, editing and viewing designs). Make any arrangement on workspace components in order to have a workspace that matches your personal preferences. More information about customizing workspace will be provided later on this chapter. Some of the workspace components are available only in **Create** mode and some of them change inside **stitch** mode because they have dynamic contents.

Take some time using all the available workspace components. As you are getting more familiar with the tools and their usage you will improve your productivity. Let's take a look at the tools and their default placement. This is the main application window of *Creative DRAWings*.

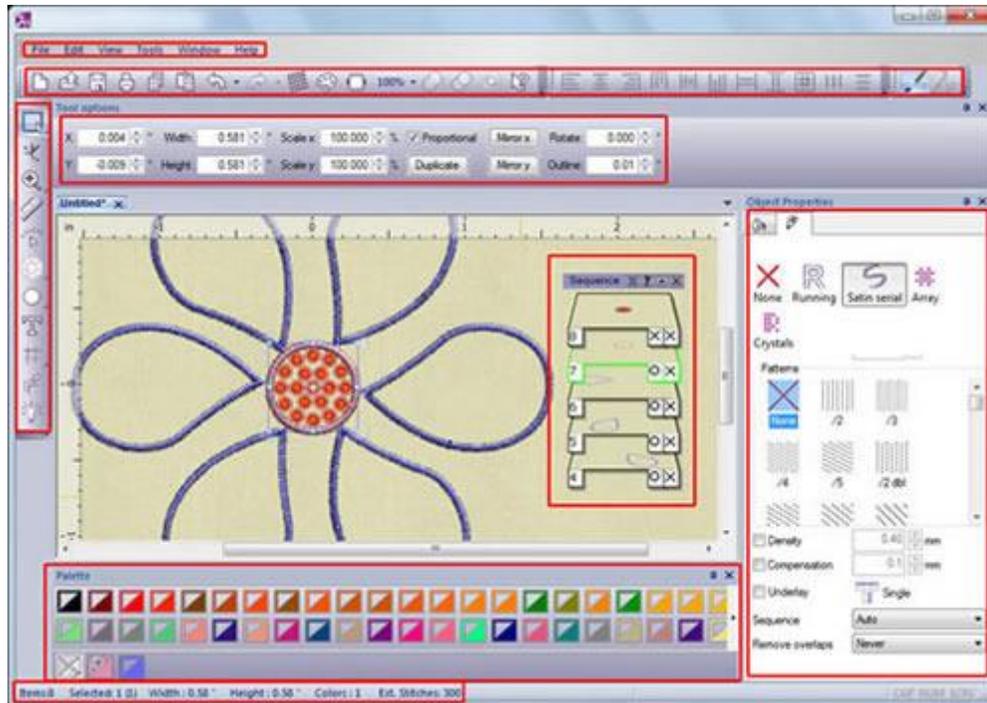
While creating a design you are prompted to select which Techniques you should enable, according to the enabled techniques the available workspace components are altered, so always have in mind that a tool or an option may not be available with some of the enabled techniques while it may be in other techniques.



Creative DRAWings application window

Workspace components

We will now describe the available workspace components and the ways to customize them. On the top area of the application window you can see the **Title bar**, the **Main Menu bar**, the **Standard toolbar**, **Draw-Stitch toolbar** and **Tool options** pane. On the left side of the application window you can see **Tools toolbar**. You can also see the **Thread palette** and the **Status bar** at the bottom area of the window. On the right side of the design area you can see **Object properties** pane. **Object properties** toolbar is a context sensitive bar because it provides properties for the object you have selected. Each object might have different properties depending on its size and shape. While using the application there are also some transparent dialogs that appear on top of the design area. Let's take a closer look at all these components.



Workspace components

Title bar

This bar is located on the top of the application window. Most windows applications provide file information and window handling controls via this bar. The default location is on the top of any application window. By double clicking on the title bar the application changes from maximized state to custom window state.



Title bar

Main menu bar

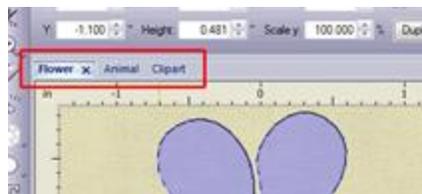
Under the title bar is located the **Main menu bar**. This *bar* provides access to most of the commands that control the main functionality *Creative DRAWings*. It consists of several menus, click on any of them (for example, File, Edit, View, Tools) to see the included menu commands.



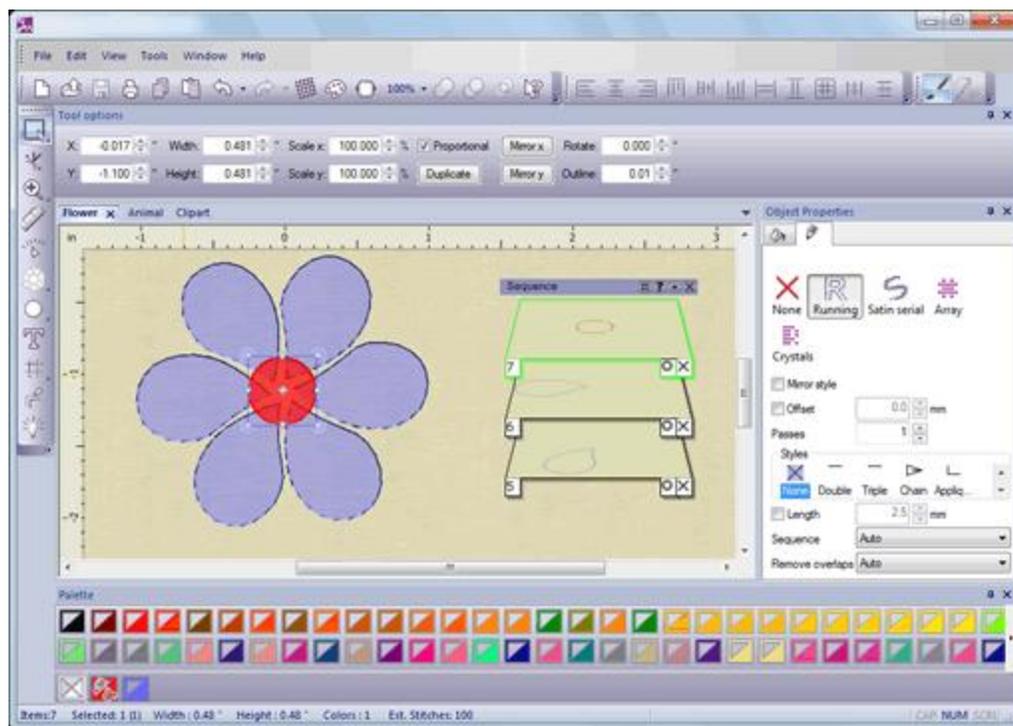
Main menu bar

Design area

The heart of Creative DRAWings software is the **design area**. All the tools, menus and functions exist to provide functionality useful during designing process. The design area is the rectangular area inside Creative DRAWings application window. This area is used for creating and editing designs. Any tool you are using from any toolbar affects the creation inside the design area. You can have many loaded designs in the same window. Every design has its own design area. Multiple designs are can be loaded in different tabs. By pressing on any of these tabs you can select which design you want to be visible. At the top and left side of the working area you will find the Ruler that can help you make precise changes to your design.



Design tabs



Design area and Design tabs

Window handling

By pressing on the top of any tab you can select the active tab. Another way to select the design that you want to be active is by selecting from the dropdown list that exist on the right side of the design area. From

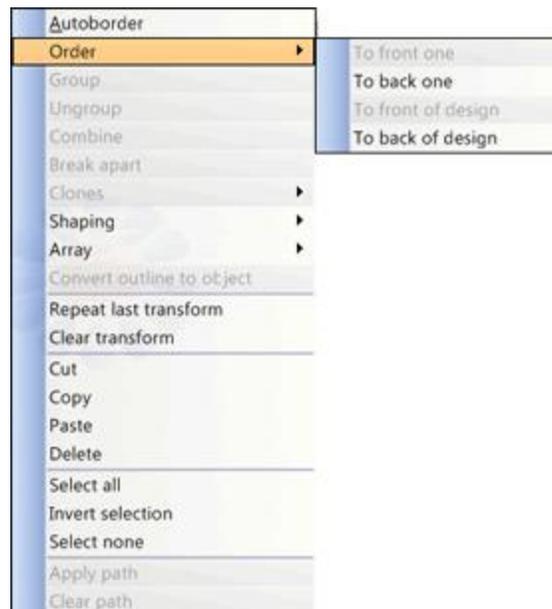
the appearing list, select using your mouse one of the designs. Click on the design you like, the selected design will appear inside the design area.



Select active design from list

Context menus

The term **context menu** (shortcut menu or *pop-up menu*) is commonly used for menus which pop up when right clicking on an item inside the design area, offering a list of options. The available options vary depending on the context of the action and the item selected. For example different options appear when right clicking on a design object than when clicking on the same object in **Edit shape nodes** mode. The available context menus of *Creative DRAWings* are hierarchically organized, allowing navigation through different levels of the menu structure.



Context menus

The context menu of the previous figure is available only when right clicking on an object in object editing mode. Some of the applications functionality can only be revealed by specific context menus that are available inside the *Creative DRAWings* design area. This kind of logic separates the available actions for each type of object. Select any object, right click on it and select a function from the appearing menu, just like that you can perform a number of designing tasks.

Thread palette

At the bottom of the screen we have the onscreen **Thread palette** bar from where you can select and set colors on the designs. You can either have RGB colors or colors from thread manufacturers' color palettes. The **Thread palette** is divided to two parts: available colors on the top area and the colors that are currently used in the bottom area. Thread palette is available only when using **Create** mode.

*Thread palette*

Status bar

The status bar displays information about selected objects (such as Width, Height, and Number of stitches). It also displays information while transforming objects about angle etc, information that assist in more accurate transformations.

*Status bar*

Floating dialogs

There are various dialogs that contain tools or visual assistance to be used while designing.

1. Object properties

The object properties pane contains all the properties that can be customized in the embroidery aspect of the design. It is consisted of two tabs **Fill**  and **Outline** . You can view the **Object properties** pane both in **Create**  and in **stitch**  mode of *Creative DRAWings*. Using the provided options you can change the stitch type of the design easily by just clicking on it. The **Object properties** pane contains all available parameters for each stitch type. You can see and change the parameters of selected objects. Just click on a parameter to change its value. When selecting an object the object properties pane, shows the properties of the selected object. Every stitch type has a different set of parameters. The available parameters and the proper way of affecting them will be described later on this manual, in a different section. If object properties window isn't visible you can activate it by selecting from **View** menu -> **Toolbars** item and then sub item **Object properties**. You can also use the shortcut key Alt + Enter to show-hide the pane.

2. Sequence manager

This tool provides a graphical representation of the embroidery sequence. There are signs to separate the different types of objects (Embroidery, appliqué). It is often needed to change this sequence, in order to improve embroidery quality. Any item you select on sequence manager gets selected on the working area. **Sequence** floating dialog can be opened in case that it is closed using **Sequence manager** option from the **View** menu. The extra ability of this tool is that you can re-arrange the sewing order for the current design, and select an object. Therefore you can organize the sequence of embroidery production in the way you prefer.

There are also some floating dialogs that appear only to help us during design process. These dialogs are **Apply array**, **Set light source**, **Slow redraw**. More information about the usage of **Object properties**, **Sequence manager** and all other floating dialogs will be provided into separate sections.

Toolbars

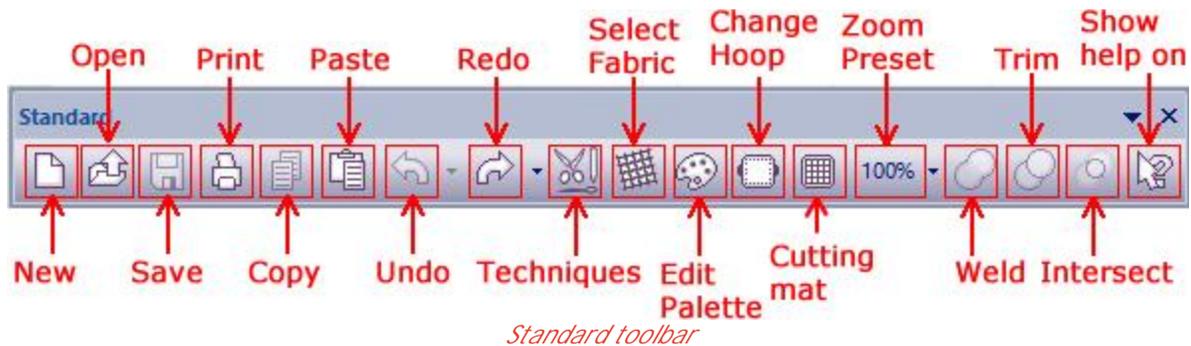
In any windows application there are usually a number of icon toolbars. They have shortcuts to dialog boxes or actions. Click on any icon of the program's toolbars to see the performed action. You can also pause your mouse over any of the icons and a popup containing information about the action will appear.



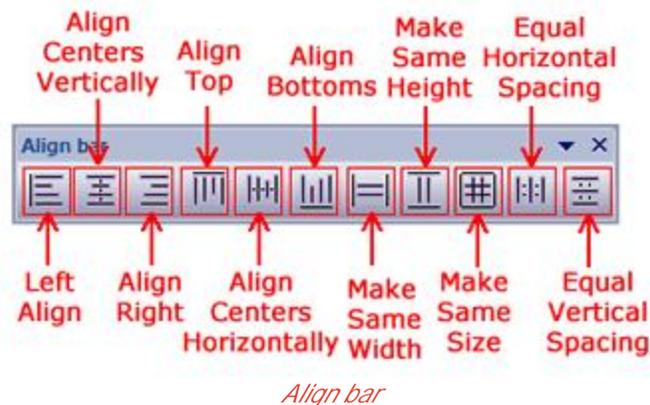
Icon toolbars (Standard, Align and DRAW-Stitch bar)

These 3 bars that are highlighted on the above figure are the **Standard**, the **Align** and the **Draw-Stitch** bar. In case that any of these bars is not visible you bring it up using the respective options of menu View -> Toolbars section. This way you can select which toolbars will appear on workspace and which will not. On above figure you can see all the icons toolbars enabled and appearing on the workspace.

1. **Standard toolbar**, this toolbar is a collection of buttons that serve as shortcuts for the basic functionality of the application. Most of these icons implement the same functionality in the majority of windows applications. If you are familiar to any windows application, you have used many times, tools such as **new design**, **open design**, **Save**, **Cut** or **Paste**. Besides these basic file operations, in Standard toolbar, you can select **zoom preset**, use **shaping tools** (Weld, Trim, and Intersect), Select **Fabric** and **Thread** manufacturer palette.

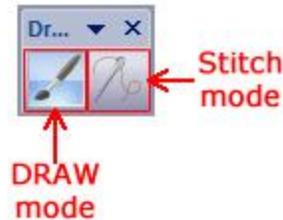


2. **Align bar**, this icon toolbar is located at the top area of the applications workspace and contains aligning, distributing and auto-sizing tools.

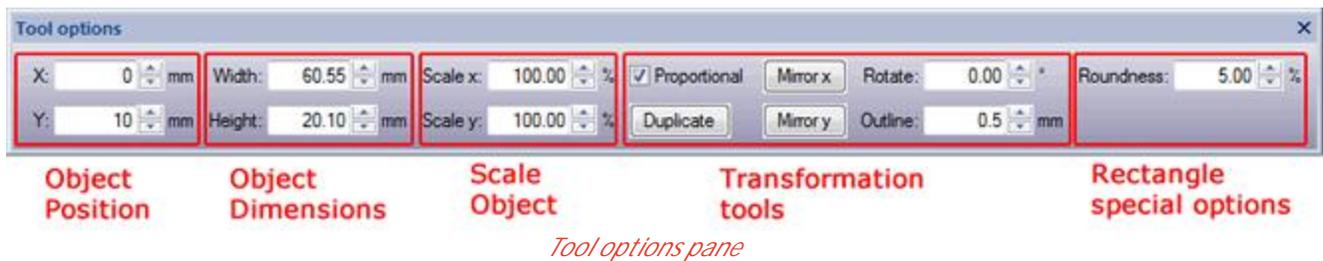


3. **DrawStitch** bar, using this toolbar you can toggle between the available design modes. Creative DRAWings software has two important working modes, the **Create** and the **Stitch** mode. We can design anything we like in **Create** mode and Convert the design into stitches in **Stitch** mode. The **Create** mode is mainly for creating and editing the artwork. In **Stitch** mode you can convert the artwork to stitches and make the final adjustments. Different controls and options are available in any

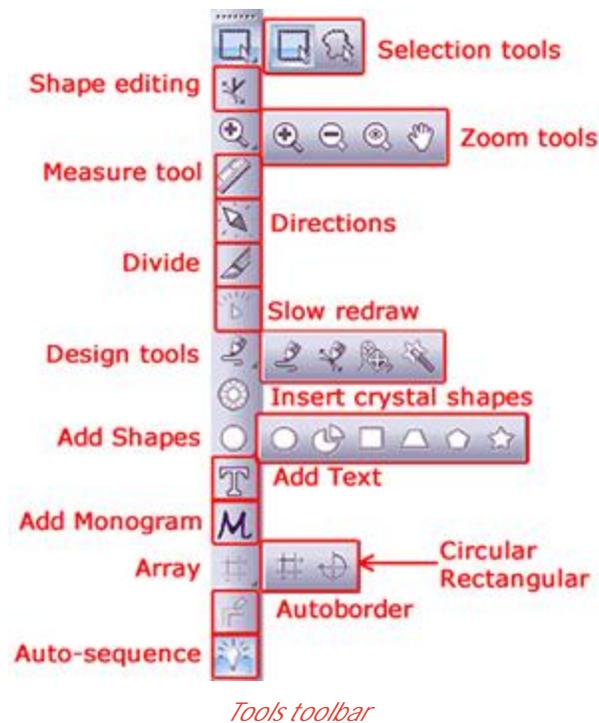
of the two modes. By pressing DRAW icon  or by using **Ctrl+1** keyboard shortcut you enable Create mode. In order to switch to Stitch mode you must press **Stitch** icon  or **Ctrl+2** keyboard combination.



4. **Tool options** pane is a context sensitive toolbar. Depending on the tool you have selected from the **toolbox** the property bar changes accordingly. It also contains controls that you can use to change the properties of the selected object. Some of the available tools have extra parameters that appear on the **Tool options** toolbar, every time you select them.



5. **Tools toolbar**, this toolbar contains shortcuts for most of the viewing and designing tools. Selection modes (Rectangle and Lasso), **Edit shape nodes** mode, View port presets (Zoom in, Zoom back, Zoom all, Pan), Slow redraw, create **Freehand shapes** or **insert Shapes**, use **Text**, **Array** tool (Circular, Rectangular), **auto border** tool and Auto-sequence. The tools and their usage will be described later on a separate section each.



Customizing DRAWings workspace

We have described the workspace components and the purposes that they serve. Spend some time using them in order to understand how they work. At first you must be trying to sort out which tools are important to you, in order to have them in first sight. You can rearrange workspace components in order to serve your personal preferences and make a version of the perfect working environment for you.

Tip: Creative DRAWings will remember the position that you last placed any workspace component.

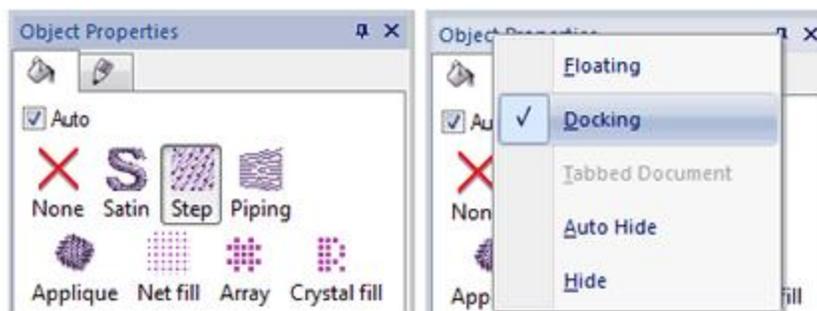
Take in consideration that the screen space depends on the screen resolution. If you have a large resolution it means more available space. So first of all set the best resolution that fits to your screen. Start *Creative DRAWings* software, make a few shapes, use some properties, add more shapes, and view the design objects in sequence manager. If the design space is not enough and the tools are crowded you must organize available tools.

To give you complete control over the size and position of the elements in the workspace, *Creative DRAWings* lets you **move**, **resize**, **dock** and **auto hide** most of the workspace components and make visible only the elements that you want to view. You can **attach** or **dock** tool windows to make more space visible. You can also partially conceal tools as *tabbed documents* along the edge of the workspace and then switch back. The exact size and shape of the tools and windows depend on how you have configured your designing environment to look like.

Using Tool windows

Once a tool window is floating it has a title bar like the one in the following figure. By double clicking on its title bar, it gets docked in the last position that it was docked. You can also close this tool window by pressing the close  button in the upper right corner of the window. Double click on the title bar to undock the pane. You

can also close it by pressing the **Close**  button in the upper-right corner of the window. You can set the window in **auto hide** mode by pressing this pushpin . Finally by right clicking on the title bar you can select a state for the dialog (Floating, Docking, Auto hide, Hide). You can always open any closed window again later by selecting the appropriate command on the View menu.



Object properties window handling

Moving tool windows

To move one of the tool windows, simply click the title bar and drag it to a new location.

Move **Object Properties** tool window:

1. If the Object properties pane isn't visible, select from **View** menu, **Toolbars** item, **Object Properties** sub-menu item. Object properties pane will appear.
2. Double-click the title bar of **Object Properties** pane to display the pane as a floating (undocked) window.
3. Using **Object Properties** title bar, drag the pane to a new location inside the application window, but don't dock it. See how easily you can affect the position of the available tools.

Resize tool windows

If you want to see more of a tool window, simply drag one of its borders to view more content.

Resize **Object Properties** pane:

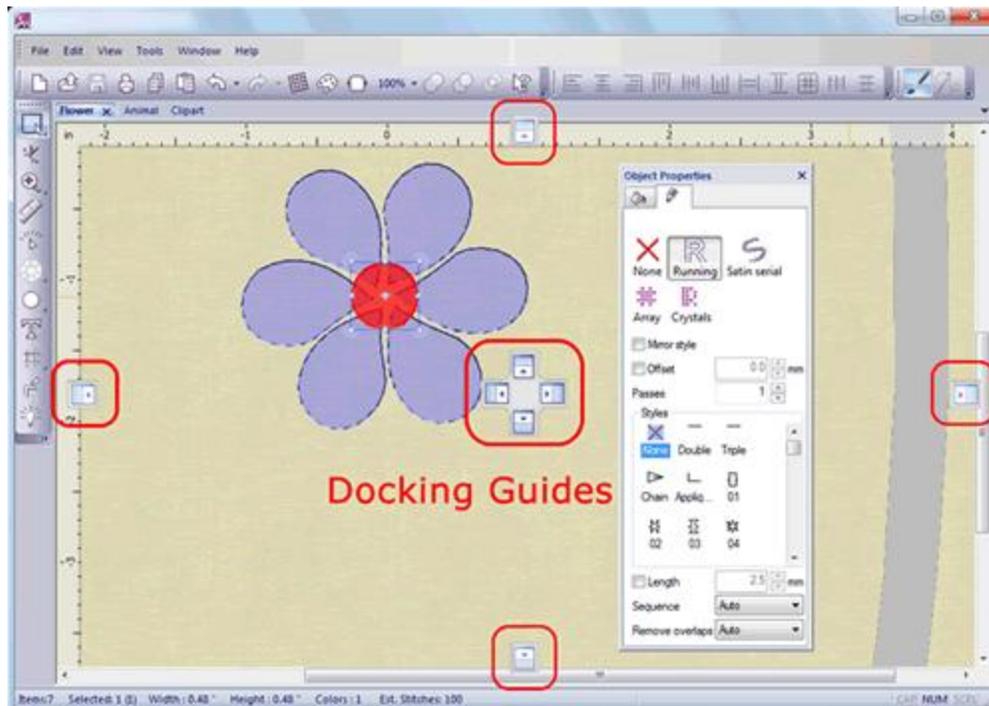
Resize the **Object Properties** pane to have a better view of the available parameters. **Point your mouse** to the lower-right corner of the Object Properties window until the pointer changes to a **double-headed arrow** (the resizing pointer). **Drag** the lower-right border of the window down and to the right to enlarge the window. The same way, you can resize any tool window from any of its edges. You can work more quickly and with more clarity of purpose in a bigger window. Feel free to move or resize any tool window when you need to see more of its contents.

Docking Tool Windows

Dockable windows are advantageous because they always remain visible. (They don't become hidden behind other windows.) If a tool window is floating over the design area, you can return it to its original docked position by double-clicking the window's title bar. (Notice that you can use the same technique to undock a docked window. Double-clicking a title bar works like a *toggle*, a state that switches back and forth between two standard positions). You can also attach or dock a floating tool in a different place.

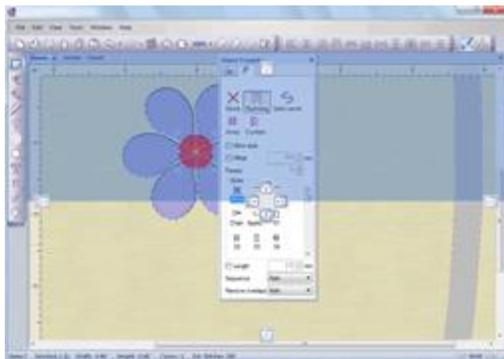
You can dock windows by using **docking guides**, as shown in the figure below. Docking guides are icons that appear on the surface of the application window when you move a window or tool from a docked position

to a new location. Because the docking guides are associated with shaded, rectangular areas of the application window, you can preview the results of your docking maneuver before you actually make it.

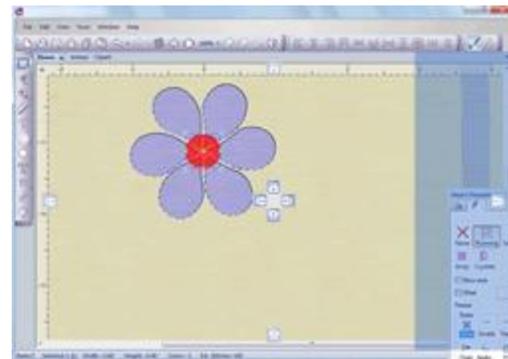


Docking handles

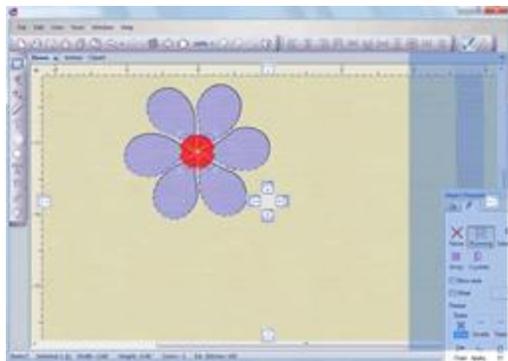
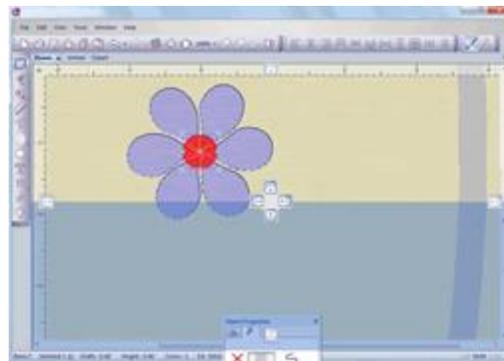
In case that you want to dock into a place where there other tools docked while you point over this control you can see how the control will be docked. Only then extra docking guides appear to help you decide how to place the window relative to the other docked window.



Dock to the upper part



Dock to the right side

*Dock on the left side**Dock on the bottom area*

Dock the **Object Properties** window

1. Verify that the Object Properties window (or another tool that you want to dock) is floating over the design area in an undocked position.
2. Drag the title bar of the Object Properties tool window to the top, bottom, right, or left edge of the design area. While dragging, take care to drag the mouse pointer over one of the docking guides (small arrows) on the edges of the Creative DRAWings window or the collection of four docking guides (called a *diamond guide*) in the center. As you move the mouse over a docking guide, the Properties window snaps into place, and a blue shaded rectangle indicates how your window will appear when you release the mouse button. There are several valid docking locations for tool windows, so you might want to try two or three different spots until you find the one that looks right to you.
3. Release the mouse button to dock the Object Properties window. The window snaps into place in its new home.
4. Try docking the object Properties window several more times in different places to get the feel of how docking works.

You can always adjust the size of docked windows by simply dragging one of its borders to view more content.

Hiding Tool Windows (Auto hide)

If you want an option somewhere between docking and closing a window, you might try auto hiding a tool window at a side of the application window by clicking the tiny **Auto Hide** pushpin button on the right side of the tool's title bar. When you auto hide a window, you'll notice that the tool window remains visible as long as you keep the mouse pointer in the area of the window. When you move the mouse to another part of application window, the rollup slides out of view. To restore a window that you have auto hidden, click the tool tab at the edge of the application window or hold your mouse over the tab (You can recognize a window that is auto hidden because the pushpin in its title bar is pointing sideways.)

The benefit of enabling auto hide, of course, is that the process frees up additional design area while the hidden window is also quickly accessible.



Press the pushpin to go into Auto hide mode

Object properties pane is hidden on the side of the window and becomes visible only when you place the mouse over it.

Object properties rollup is viewable, you can press the pushpin once more to turn into docked mode again

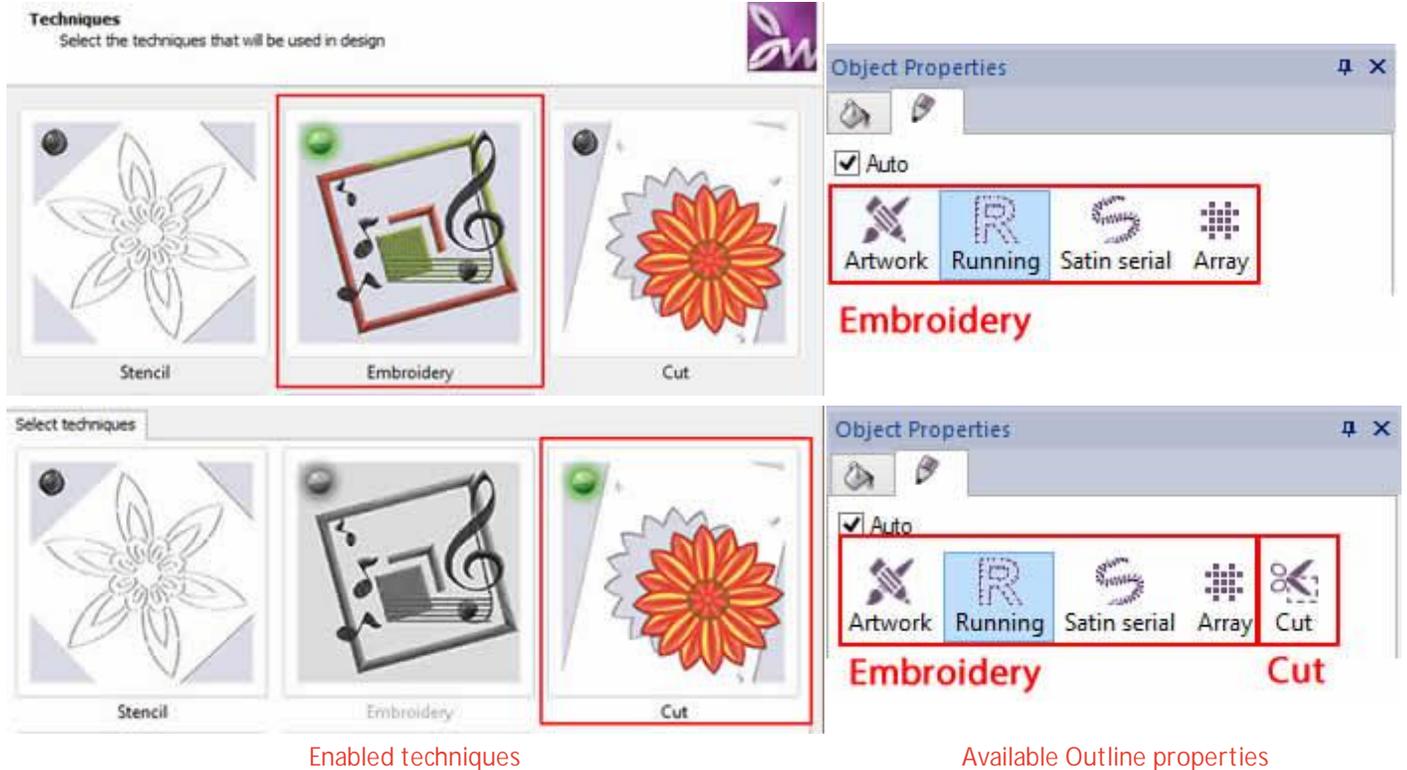
Use the Auto Hide feature (Hide Object Properties tool window)

1. Locate the **Auto Hide** pushpin button  on the title bar of the **Object Properties** pane. The pushpin is currently in the **down**, or **pushed in**, position, meaning that the window is **pinned** open (Auto hide is disabled).
2. Click the **Auto Hide** button, Object Properties tool window slides off the screen and is replaced by a small tab named Object Properties at the edge of the application window. You can also use a right-click on the title bar and select **Auto Hide** in order to auto hide a tool window.
3. Hold the mouse pointer over this **Object Properties** tab (You can also click the tab if you like) and the Object Properties tool window immediately slides back into view.
4. Click elsewhere inside the application window and it will disappear again.
5. Finally, bring out the **object Properties** window again and then click the **pushpin** button  on the title bar. Object Properties returns to its familiar docked position and you can use it without worrying about it sliding away.

Tool windows that have **Auto Hide** enabled temporarily slide into view when the window has focus. To hide the window again, select an item outside of the current window. Once the window loses focus, it slides back out of view.

Techniques

The available components dynamically change according to the **Techniques** that we enable for this design. For example in the following figure, in the upper part we have only selected **Embroidery** technique and as you can see on the right part only **Embroidery** types are available. In the lower part we have also enabled **Cut** technique and the **Cut** type has been added to the available outline types.

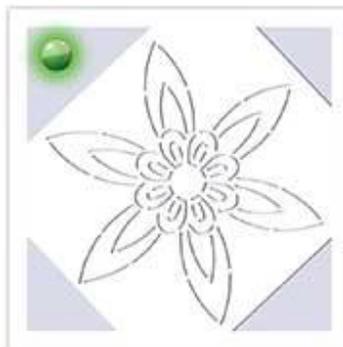


Enabled techniques

Available Outline properties

There are 5 techniques available **Stencil, Embroidery, Cut, Crystals, Paint.**

Stencil:



When enabling **Stencil technique**, **Stencil**  outline type is enabled. Using this outline type you can convert any open outline automatically into a **Stencil** design.

Embroidery



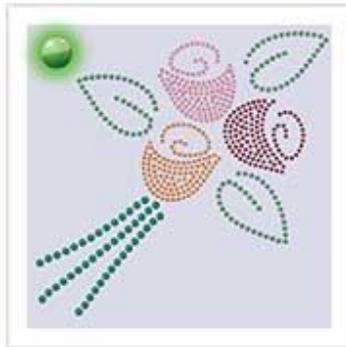
When enabling **Embroidery technique** we can apply various **embroidery fill types** (Satin , Step , Row fill , Applique , Net fill ) and various **outline embroidery types** (Running , Satin serial )

Cut



When enabling **Cut technique**, the **Cut**  outline type is enabled and visible in available outline types. Using this outline type we can Cut any design part using your cutter. Create a design you want to cut and you can easily send it to your cutting machine.

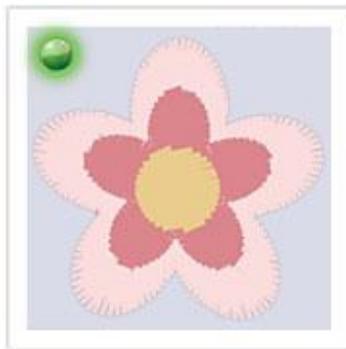
Crystals



Crystals technique enables the **Crystal fill**  type and

Crystals outline  type. Using **Crystal fill** or **Crystals** you can automatically add crystals to any portion of your design using various crystal/rhinestone shapes and sizes.

Paint



Paint technique enables various **Paint fill types** (**Zig zag**

 , **Fill**  , **Row fill**  , **Paint net fill** ) and

various **Outline paint types** (**Line**  , **Zig zag paint**

). Using any of the previously mentioned paint types any portions of your designs can be painted precisely.

Using the Start up wizard to create a new design you are prompted to select which techniques you want to be enabled for the created design so that only the tools that you need are available on the workspace. In case that you change your mind and you want to use additional tools that are not included in the enabled techniques you enable additional techniques using the **Techniques**  icon of Standard toolbar. Select any technique that you would like to enable by clicking on its icon. At this point we must mention, techniques that

are already and actively used on the design have this red bulb  on their upper left corner and we can not disable them until there is no usage of their tools on the design.

The enabled techniques that are not already actively used on the design have this green bulb  and the

techniques that are not enabled have this black bulb  . Click on any technique that you may want to enable, its lamp will get Green. The workspace will be updated and the tools of the newly enabled designs will appear for this design.

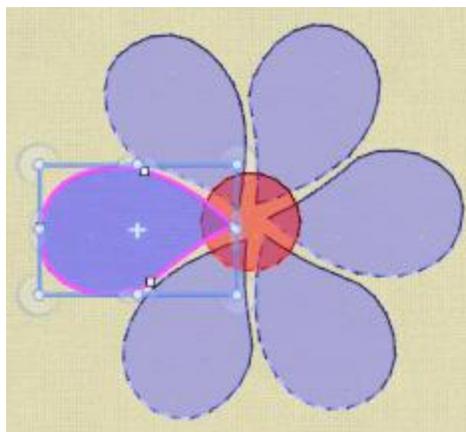
Chapter V

Selections

In this chapter we will learn how to select objects in a design and how to modify them. To make changes in your embroidery design, select an object by clicking on it, and then applying the stitch type you prefer. The standard selection tools in are **rectangle selection** and the **lasso selection**. You can use the selection tools from **Tools** toolbar, using the mouse (click) and the functions in the edit menu.

Select with mouse (click)

Complex designs may consist of many objects, that may have different stitch types and colors. In order to make changes in one or more objects you must first select them. The easiest way to select any object is by **simply clicking on** it using your mouse. A highlight rectangle appears around the object to reveal the currently selected object, as you can see on the following figure. This is helpful for not losing your current selection when you have to work on a complex design. Also, whenever you pass the cursor over the selected object, the dimensions of the selection rectangle appear on each side.



Selection information rectangle

You can also make **multiple selections** using the mouse click combined with holding **Shift** or **Ctrl** keys. **Hold** the **Shift** key and **click** on more than one object in order to make a multiple object selection. In the same way you can **Hold Ctrl** key and click on the object that you want to select. The difference of selections using **Ctrl** key is that using **Ctrl** in reality you invert the selection status of any object. If it is selected it gets unselected and the opposite. Just like that using **Ctrl** you can easily add/remove objects to a selection simply by holding **Ctrl** and clicking on any object.

Rectangle selection

The **Rectangle selection** is a working mode that you can form a rectangle on the design area and all the object(s) that are in this rectangle become selected. Click on the **Rectangle selection** icon  in order to

enter this working mode, now **click and drag** over the design area in order to create a rectangle around the objects that you want to select. The objects that are entirely inside the rectangle are automatically selected.

We can hold **Alt** key while forming the rectangle area and in this case the objects that are partially inside the selection are also selected. This is an easier way to select objects which are large and have irregular shape.

The **Rectangle selection** icon is the top icon of **Tools toolbar** that is by default located on the left side of the application window. In this icon place we can also find **Lasso selection** icon. Click and hold on the icon that exist in this top icon place of **Tools toolbar** and a fly-out toolbar will appear showing both (Rectangle and Lasso) selection icons, place the mouse on top of the one that you want to use, until it becomes highlighted. Release the mouse and the selected icon becomes visible on the toolbar and it is automatically activated. The last used selection tool is visible on the toolbar. In case that **Rectangle selection** is not visible you can follow the above instructions to make it visible. If the **Rectangle selection** tool is your default selection tool, you can activate it by pressing the **Space** bar.



Just like that you can make multi-object selections by specifying a rectangular area. You can draw a rectangle around your entire design and all the objects that are completely within this rectangle will be selected.

Note: You can change the default selection tool from the Tools tab of the Options dialog box that is located under the Tools menu. You can set the Lasso tool as the default selection tool. By default the Rectangle selection tool is the default selection tool.

Lasso selection

The **Lasso selection** is a working mode that you can form an irregular shape on the design area and all the object(s) that are in this shape will become selected. Click on the **Lasso selection** icon  in order to enter this working mode, now **click and drag** over the design area in order to draw a freehand selection line around the objects that you want to select. **Right click** to confirm the selection. The objects that are entirely inside the shape are automatically selected.

We can hold **Alt** key while forming the lasso selection and in this case the objects that are partially inside the selection are also selected. This is an easier way to select objects which are large and have irregular shape.

There is an option **Allow polygon selection with lasso** in **Options** dialog, Tools tab. When this option is enabled you can click while forming the **Lasso selection** and by specifying the nodes of a shape you can create a **polygon** shape selection with lasso.

The **Lasso selection** icon is the top icon of **Tools toolbar** that is by default located on the left side of the application window. In this icon place we can also find **Rectangle selection** icon, that is the default selection tool. **Click and hold** on the icon that exists in this top icon place of **Tools toolbar** and a fly-out toolbar will appear showing both (Rectangle and Lasso) selection icons, place the mouse on top of the one that you want to use, until it becomes highlighted. Release the mouse and the selected icon becomes visible on the toolbar and it is automatically activated. The last used selection tool is visible on the toolbar. In case that

Lasso selection is not visible you can follow the above instructions to make it visible. If the **Lasso selection** tool is your default selection tool, you can activate it by pressing the **Space** bar.

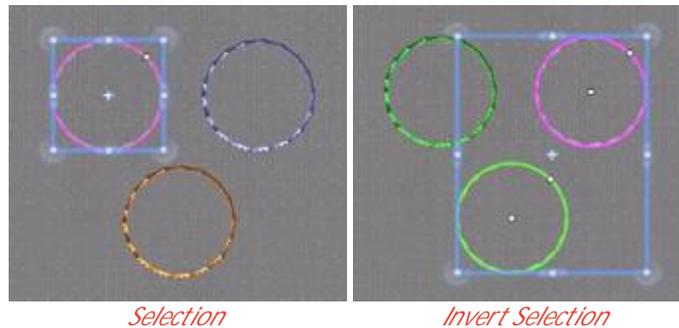


Just like that you can make multi-object selections by specifying an irregular selection shape.

Note: You can change the default selection tool from the Tools tab of the Options dialog box that is located under the Tools menu. You can set the Lasso tool as the default selection tool. By default the Rectangle selection tool is the default selection tool.

Invert selection

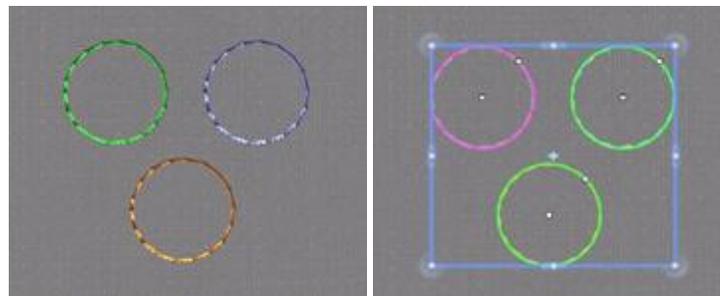
Using this option from the **Edit** menu (Ctrl+Shift+i), you can invert the object selection, select all **unselected objects**, and vice versa.



This option is useful when you want to select a larger portion of a design. Select a small object or group of what you don't want, then choose **Invert selection** to capture the larger portion. You've selected the portion you want in this reverse process.

Select all

Using this option from the **Edit** menu, or by clicking the shortcut key **Ctrl+A**, you can select all the objects in the design.



*None selected**Select all*

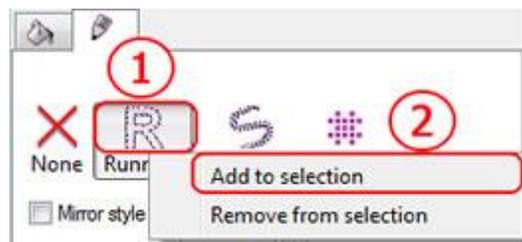
This option is useful when you want to modify all the objects of your design at the same time. Any change will be applied on all selected objects at the same time.

Select none

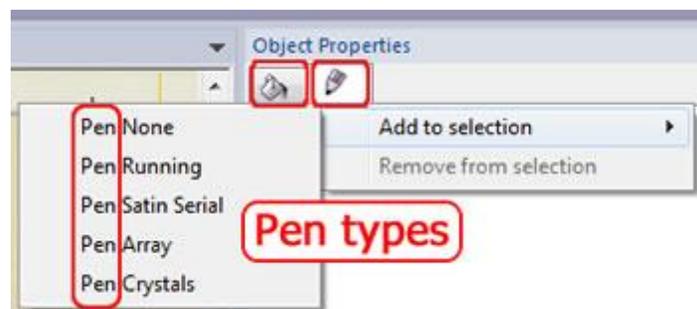
There are various ways to de-select everything. First you can click with your mouse on the fabric, at any point outside of the created design and everything will become unselected. We can also use **Select none** option of Edit menu and nothing is selected. This function is the opposite of **Select all** function where you are selecting all the designs in the working area. It is useful when you want to clear your current design selections to make a new selection

Select by stitch type

Sometimes it is very useful to select all the objects, of the same stitch type and apply a color change or any other transformation. **Right click** on any icon of the available stitch or embroidery types on object properties toolbar and from appearing menu use **Add to selection** option. In case that there are some objects that are already selected, the objects of the selected stitch type are added to the current selection. In the same way we can remove the object of a selected stitch type from a selection. Right click on the stitch type that you want to be removed and use **Remove from selection** option.

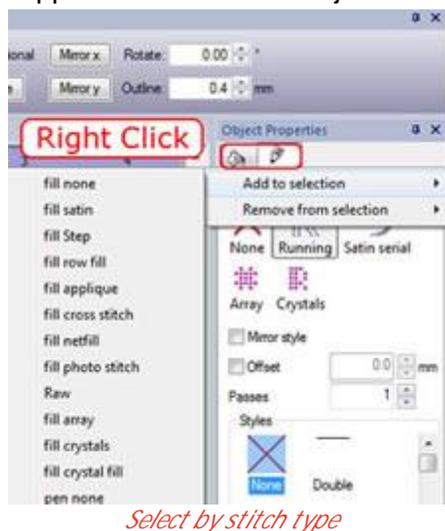


When no object is selected (Object properties does not show anything), you can access **select by stitch type** options by **right clicking** on **Fill** or **Border/Pen** tab icons of **Object properties** toolbar. From appearing menu use **Add to selection** option and click on any stitch type you want to select. When right clicking on the **Pen tab icon** only the available **pen types** appear and when clicking on the **Fill tab icon** only the **fill types** appear. After making the selection you want, you can make any embroidery adjustments to your entire selection. All changes that you will make will be applied in all selected objects.



With this option you can make selections according to stitch types. Click on **Fill** or **Border/Pen** icon of **Object properties** toolbar and **Add to your selection** all embroidery objects of a specific stitch type.

After making the selection you want, you can make any embroidery adjustments to your entire selection. All the changes that you will make will be applied in all selected objects.



In the same way, it is also possible to **Remove from the selection** all the objects of a specific stitch type, by right clicking on **Fill**  or **Border/Pen**  tab icons and then select the stitch type you want to be removed. All the objects of the selected stitch type will be automatically removed from your selection.

This selection tool will help you to make selections easier, especially to a big complicated object, and apply your embroidery changes to your entire selection.

Select / View overlapping order of vector design

Creative DRAWings provides an easy way to **navigate** through the design objects. Using keyboard combinations you can view the design order of the **Vector** design. The sequence that the objects are embroidered is the same as they were designed. If you have imported a ready-made **Vector** design, the order will be the same with the order the designer created the design. If you have created the design from scratch, the order will be the same as the order of creation.

Using **Ctrl+Home**, **Ctrl+End**, **Tab** and **Shift + Tab** shortcut keys, you can navigate between the objects of the design. The shortcut key has the following functionality:

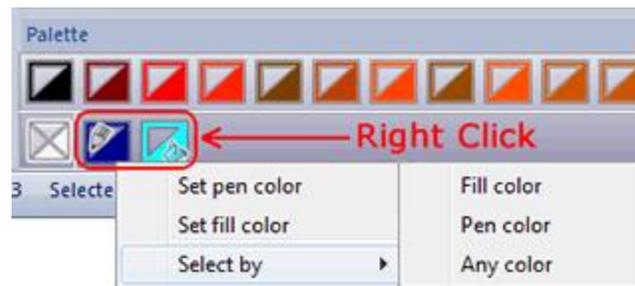
- **Ctrl+Home:** By pressing the **Ctrl+Home** key on the keyboard, the first object of the design will be selected. This object is the first of the vector design.
- **Ctrl+End:** By pressing the **Ctrl+End** key on the keyboard, the last object of the design will be selected. This object is the last of the vector design.
- **Tab:** By pressing the **Tab** key on the keyboard the next object of the design will be selected. If we have not made any selection, the first object of the design will be selected. Each time we press the **Tab** key a different object will be selected, which is the next in the designing order of the vector design. If we continue pressing the **Tab** key, we will continue changing objects, until we reach the last object of the design.
- **Shift + Tab:** By pressing the **Shift + Tab** keys on the keyboard the previous object of the design will be selected. If we have not made any selection, the last object of the design will be selected. Each time we press the **Shift + Tab** key a different object will be selected, which is the previous in the designing order of the vector design. If we continue pressing the **Shift + Tab** key, we will continue changing objects, until we reach the last object of the design.

This selection/viewing ability is very useful when you want to know how the vector design was created and make the needed adjustments to produce the embroidery sequence you prefer.

Selections by color

Thread palette toolbar includes the ability to select objects by color. This option is very useful when you want to make a change to all objects that have the same color. You can select them and then make the change you want. You can change colors or stitch types to all objects, apply a different style or apply any other option you want. You can select object by Fill color, by Pen (outline) color or simply by color.

To select the objects by color you have to **right click** on the **color** you want from those that are listed on the **currently used area** and from the right click menu, expand the **Select by** submenu, select one of the three available selection options: **Fill color**, **Pen color** and **Any color**.



Select by color right click menu

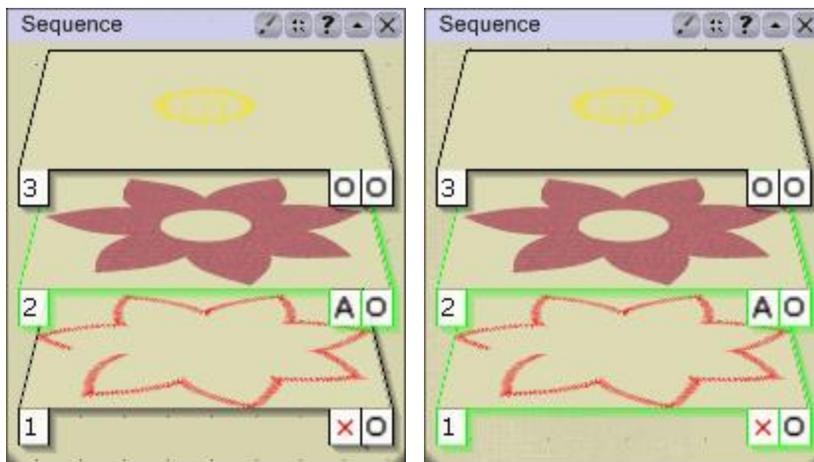
- If you select **Fill color** option, all objects that have the fill color you right clicked on will be selected.
- If you select **Pen color** option, all objects that have the Pen (outline) color you right clicked on will be selected.
- If you select **Any color** option all objects that have Fill or Pen (outline) color you right clicked on will be selected.

Any change you make on the selected objects, affects all objects.

Selections in sequence manager

Sequence manager is a visual assistance tool that provides a graphical representation of the design's vertical order. The functionality and capabilities of sequence manager are described later in this manual. At this point we will mention only the selection capabilities that it implements.

Place the mouse anywhere over any item of the **Sequence manager**, you can see an highlighted outline appearing around this item. The highlighted item looks like on top of the other items, revealing that it is currently selected. Click on any item and it gets selected. You can see the specific item selected in the design area with a highlight rectangle around it. We can also select multiple sequence items by holding **Ctrl** and clicking on the items to be selected.



1 sequence item selected

Multiple sequence items selected

Selection by Crystal

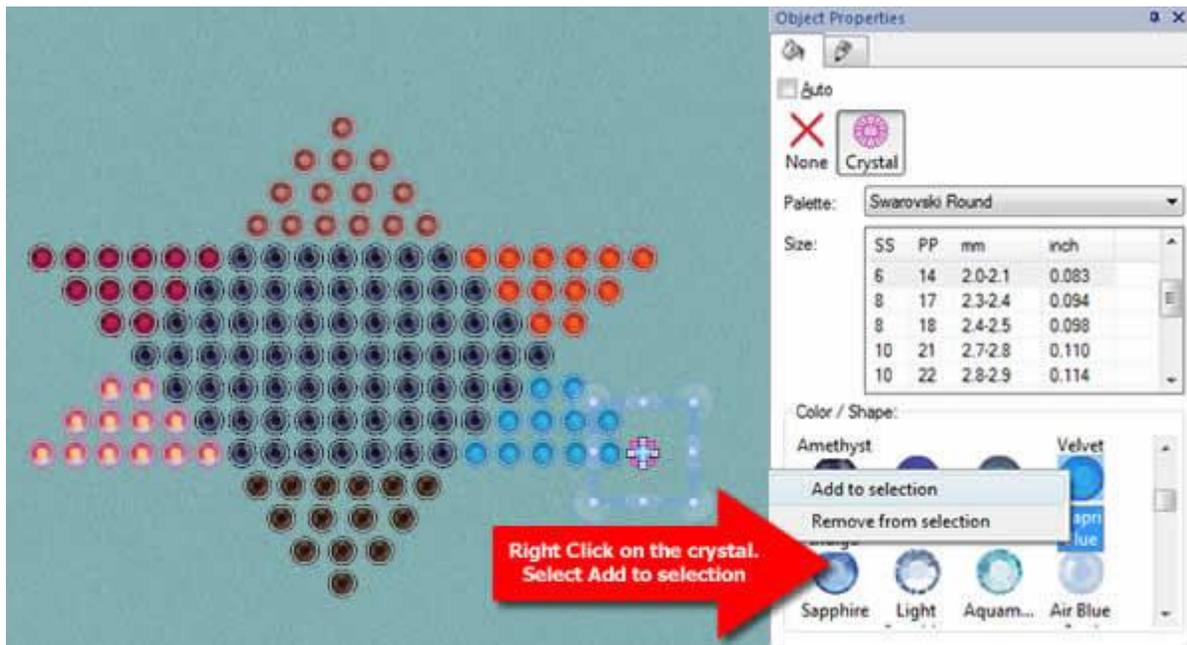
With this option you can make selections based on specific crystal types or add groups of crystals to your selection. The Crystals Technique needs to be enabled ( at the Techniques selection dialog) in order the Crystal tool to be available.

Select separate crystals of the same type

If you have many different separate crystals in your design you have the ability to select all crystals of the same type and apply changes to all of them.

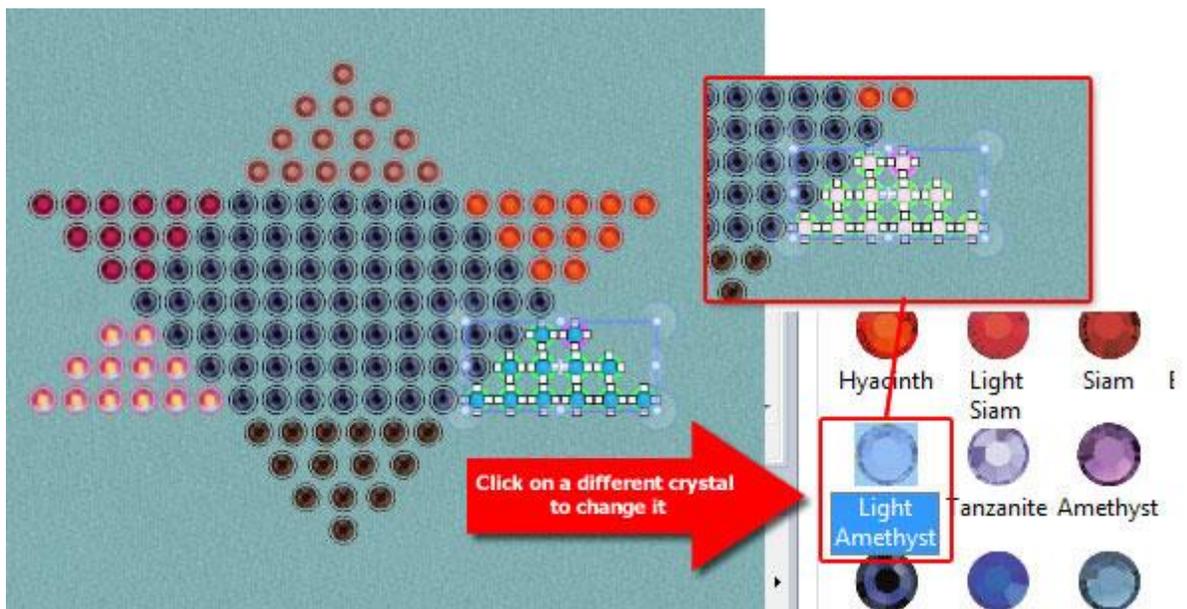
Select a single crystal from the design. On the **Object properties** toolbar the Crystal options will appear.

From the **Color/Shape** section you will find the selected crystal highlighted with light blue color  . To select all crystals of this specific **Color/Shape**, **right click** on it and select **Add to selection** option.



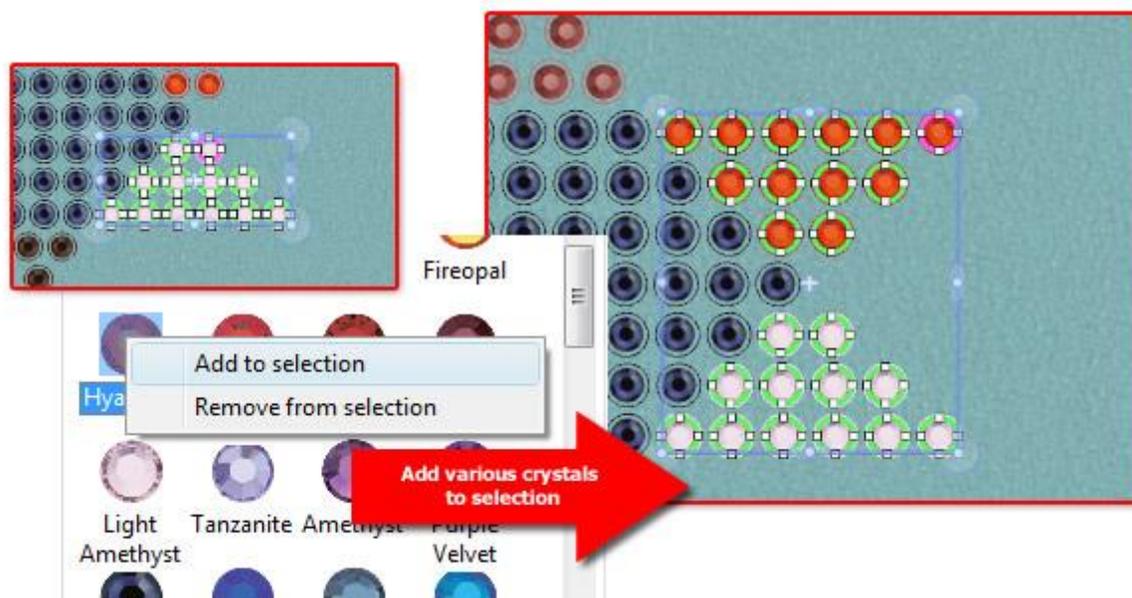
All crystals of the same Shape/Color will be added to the selection.
 (Notice: Crystals of the same type that are inside an **Array fill-Outline** or inside a **Crystal fill-Outline** object would not be added to the selection because they are considered to be in a different fill/outline type and they have different options in the object properties toolbar.)

You can apply a different **Shape/Color** on the selected Crystals by simply clicking on a different one from the list or if you want you can add more crystals in your current selection.

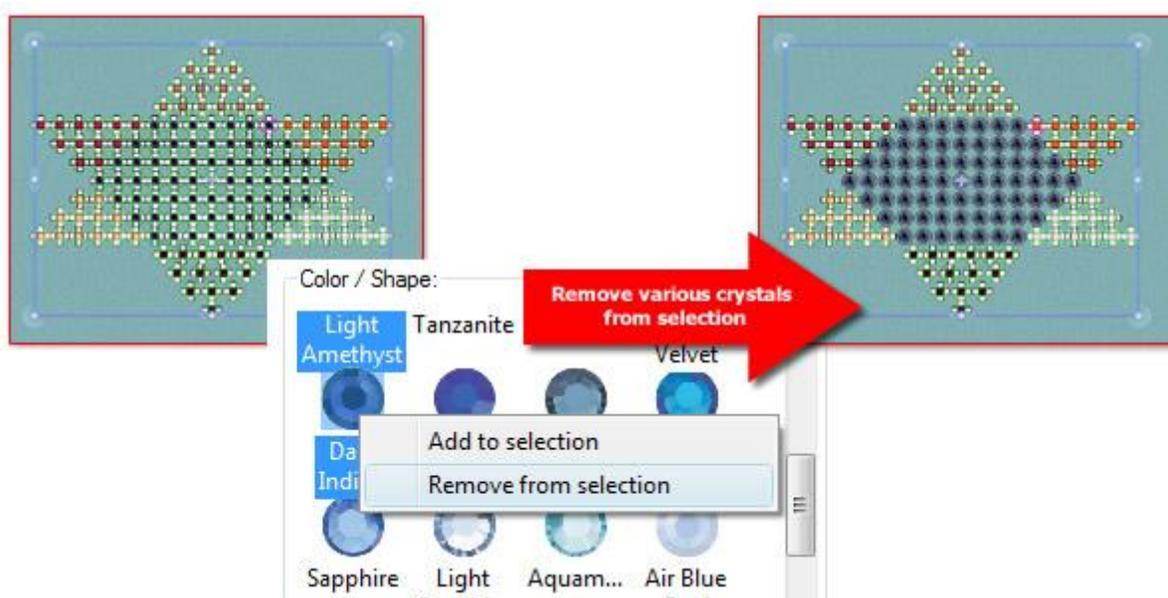


To add more crystals to your selection you have to **right click** on another crystal that you know that exists in the design and select **Add to selection** option. All **separate** crystals with this **Color/Shape** that exist in the

design will be added to the current selection. Now, if you want you can change the properties of all selected crystals. For example change the crystal **Size** or the crystal **Color/Shape**.



Also, you can remove crystals from your selection. Right click on the the crystal you want to remove from the **Color/Shape** list and select the **Remove from selection** option. All crystals that had the same Color/Shape will be removed from the selection. By following the same steps you can remove separate crystals from your selection.



Select crystal fills of the same type

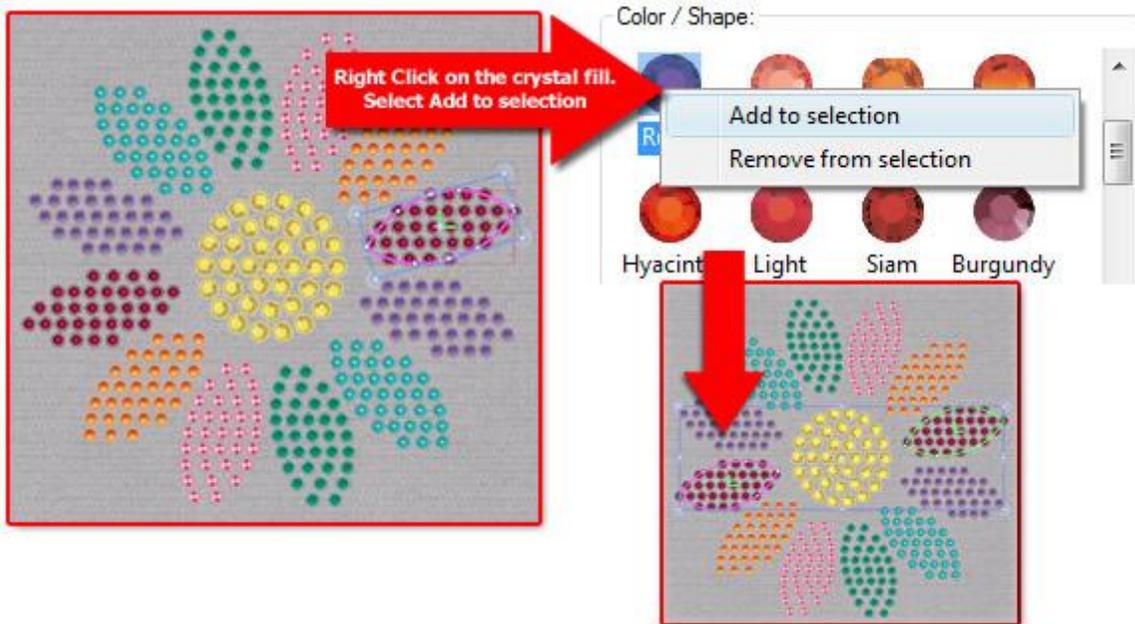
If you have many different crystal fill shapes in your design you have the ability to select all crystals of the same type and apply changes to all of them.

Select a crystal fill object from the design. On the **Object properties** toolbar the **Crystal fill** options will appear.

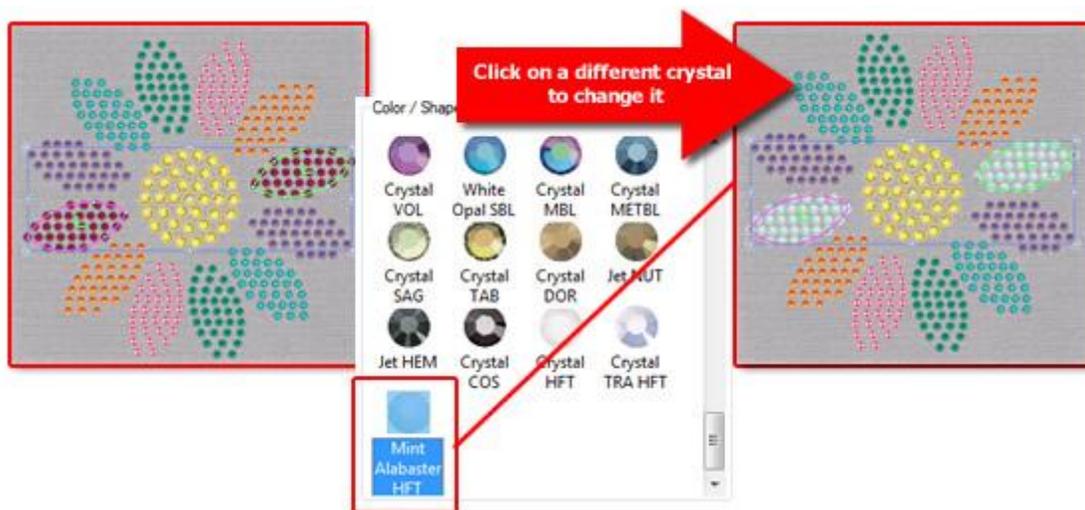
From the **Color/Shape** section you will find the selected crystal highlighted with light blue color. To select all crystals of this specific **Color/Shape**, **right click** on it and select **Add to selection** option.

All crystals of the same Shape/Color will be added to the selection.

(**Notice:** Crystals of the same type that are inside a **Crystal fill-Outline** object or separate crystals would not be added to the selection because they are considered to be in a different fill/outline type and they have different options in the object properties toolbar.)



You can apply a different **Shape/Color** on the selected **Crystal fill** objects by simply clicking on a different crystal from the list or if you want you can add more crystals in your current selection.

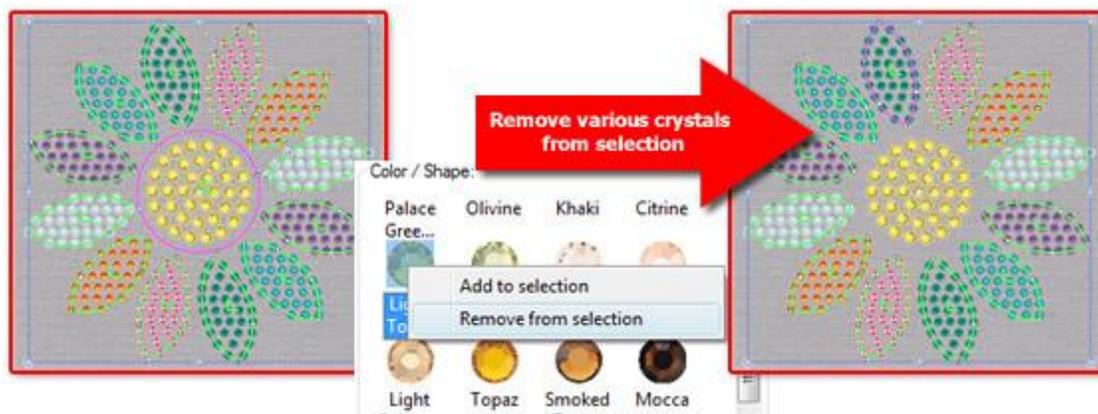


To add more crystals fills to your selection you have to **right click** on another crystal that you know that exists in the design and select **Add to selection** option. All crystal fill objects with this **Color/Shape** that exist

in the design will be added to the current selection. Now, if you want you can change the properties of all selected crystals. For example change the crystal **Size** or the crystal **Color/Shape**.



Also, you can remove crystals fill objects from your selection. Right click on the the crystal you want to remove from the **Color/Shape** list and select the **Remove from selection** option. All crystals fill objects that had the same Color/Shape will be removed from the selection. By following the same steps you can remove more crystal fill objects from your selection.



Select crystals placed on the outline

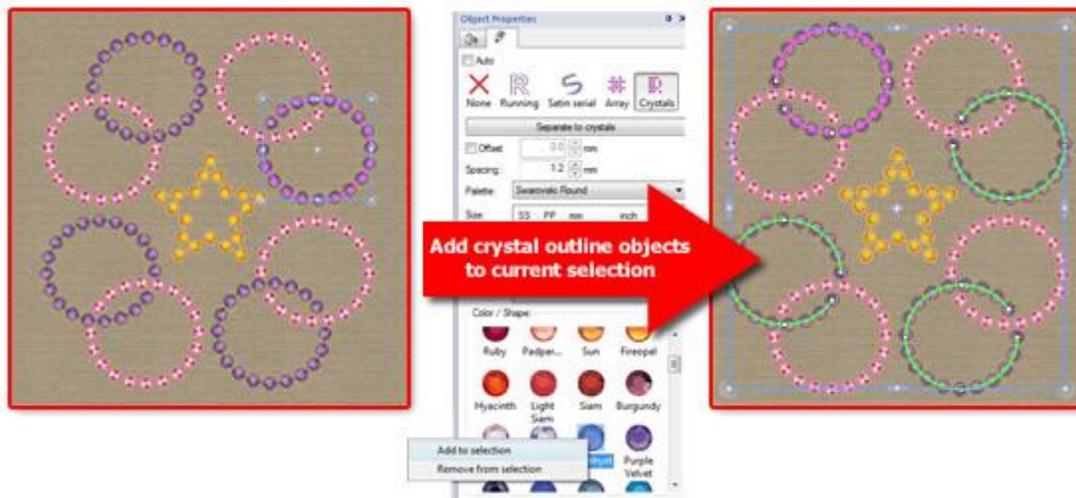
If you have many different crystal outline shapes in your design you have the ability to select all crystals of the same type and apply changes to all of them.

Select a crystal outline object from the design. On the **Object properties** toolbar the **Crystals** options in the Pen tab will appear.

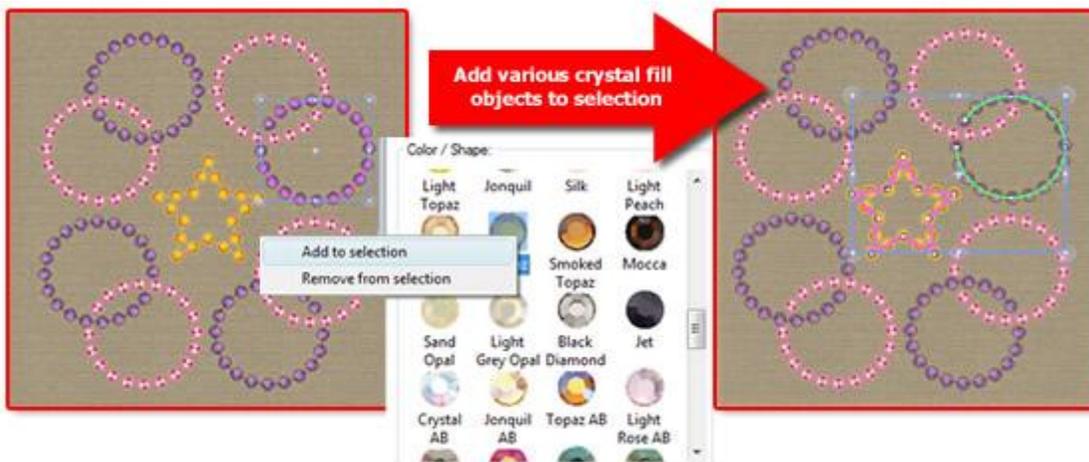
From the **Color/Shape** section you will find the selected crystal highlighted with light blue color. To select all crystals of this specific **Color/Shape**, **right click** on it and select **Add to selection** option.

All crystals of the same Shape/Color will be added to the selection.

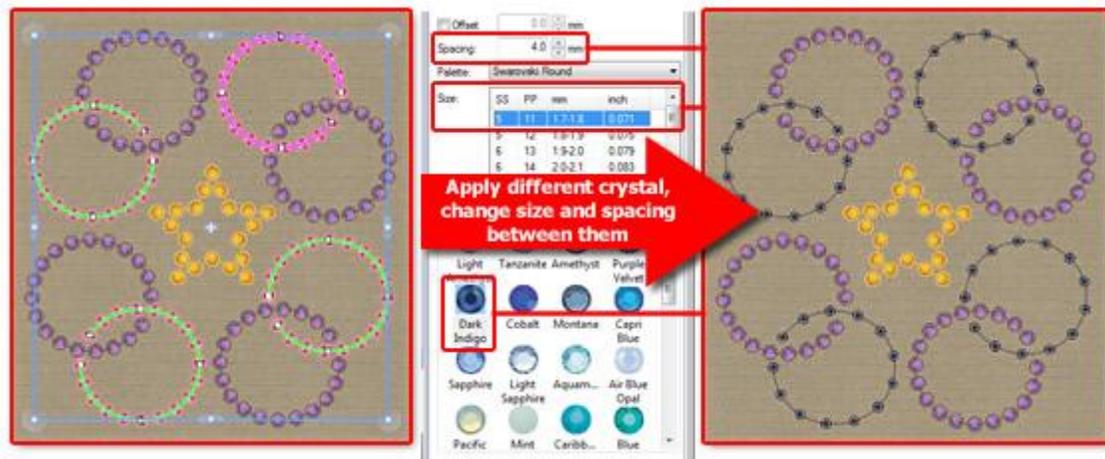
(**Notice:** Crystals of the same type that are inside a **Crystal fill** objects or **separate** crystals would not be added to the selection because they are considered to be in a different fill/outline type and they have different options in the object properties toolbar.)



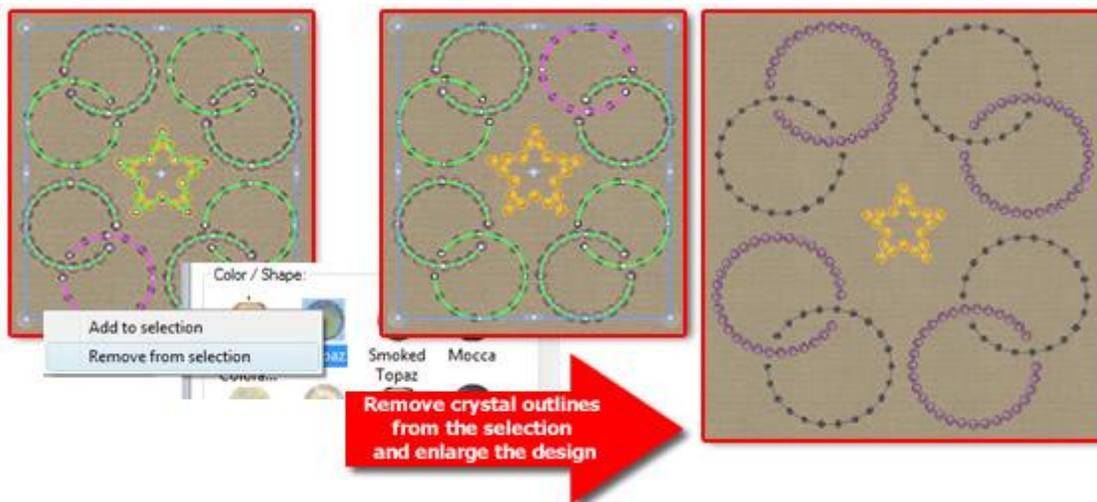
To add more crystals outline objects to your selection you have to **right click** on another crystal that you know that exists in the design and select **Add to selection** option. All crystal outline objects with this **Color/Shape** that exist in the design will be added to the current selection. Now, if you want you can change the properties of all selected crystals. For example change the crystal **Size** or the crystal **Color/Shape**.



You can apply a different **Shape/Color** on the selected **Crystal outline** objects by simply clicking on a different crystal from the list. Also, you can specify different crystal **sizes** and add more **spacing** between them from the respective options.



Also, you can remove crystals outline objects from your selection. Right click on the the crystal you want to remove from the **Color/Shape** list and select the **Remove from selection** option. All crystals outline objects that had the same Color/Shape will be removed from the selection. By following the same steps you can remove more crystal outline objects from your selection.



This selection tool will help you to make selections easier, especially to a big complicated crystal objects, and apply your changes to the entire selection.

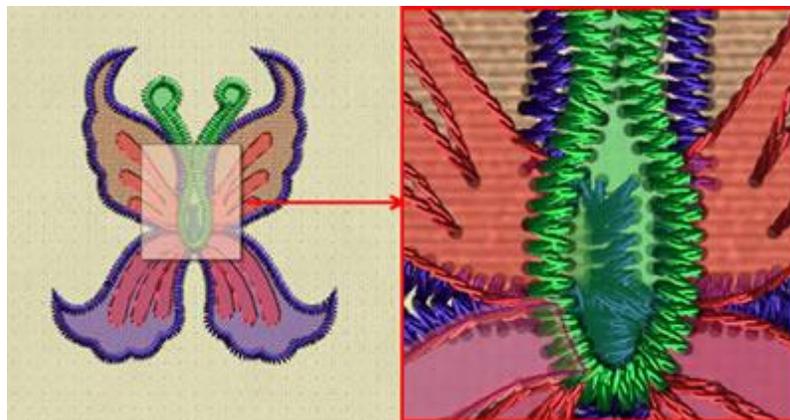
Chapter VI

View your designs

In this chapter you will learn the different ways to view your designs. You will learn how to **Zoom** your designs, **Measure** them or **Move** them around the design area. Also, you will learn how to change **View** modes in your designs. The default view mode is **3D preview**, but you can unclick 3D and you'll see only the stitches of the embroidery design or the outline of the **Vector** objects. In addition, you will learn how to add hoop and guidelines in the design together with how to enable and disable the **Grid** and the **Ruler** of the working area.

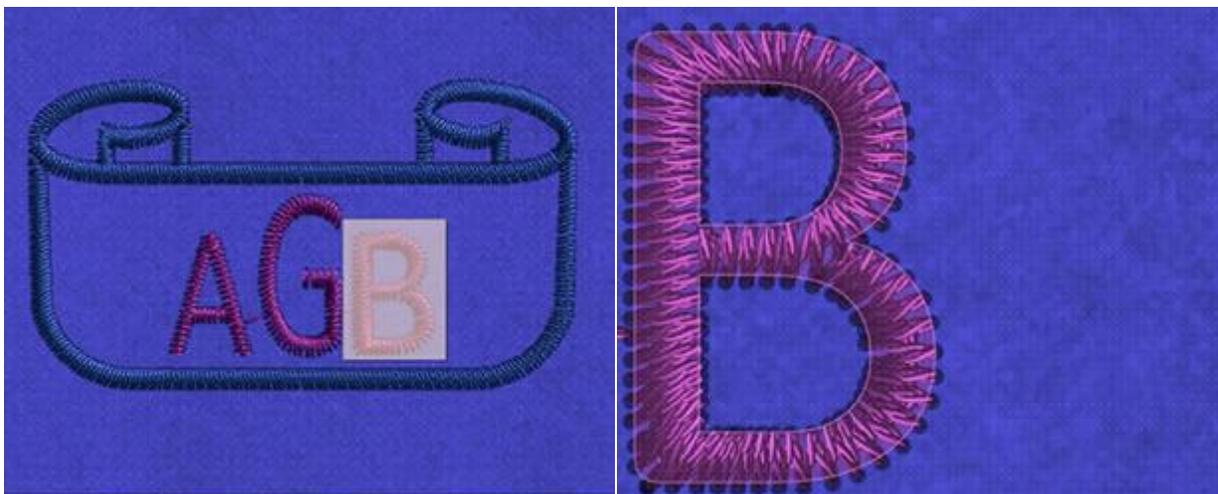
Zoom in

By using this tool you can enlarge the portion of your design to check on details. Select the **Zoom** tool from the **Tools** toolbar and the cursor will become a magnifying glass. Then, click at the point from where you want the new view port to start and drag the mouse holding the left button. The area you marked will be the new view port. Also, you can activate the **Zoom** from the menu **View > Zoom > In** or by clicking the shortcut **Z**. Either way, the cursor will turn into a magnifying glass.



Rectangle Zoom area

New view port

*Rectangle Zoom area**New view port*

Zoom out

To **Zoom out** your design, use your mouse wheel . If you click anywhere on the screen and rotate the mouse wheel backwards , you will see your design zooming out (getting smaller). While zooming out with the mouse wheel the **inertia / kinetic scrolling** is activated automatically. This is an Interactive smooth scrolling (Zoom in – Zoom out) to the design that gives a more flowing feeling to the working space..

Zoom previous

Using this option you can get the previous **Zoom** view of your design. The new view port will be the same as it was before the last zoom-in. You can activate **Zoom previous** from the **Tools** toolbar by click and drag on

the **Zoom In** tool  and selecting the **Zoom Previous**  option. By doing that the Zoom Previous tool will become the current on Tools Toolbar and you can change it by following the same procedure. Another way that you can activate the Zoom Previous option is by selecting the View > Zoom > Previous option from the menu or by clicking the shortcut key F3. Another way to **Zoom previous** your design is to **Zoom out**.

Zoom all

Using this option you can view the whole design fitted into the visible screen. You can activate the zoom-all

function from the Tools toolbar , from the menu **View > Zoom > All** or by using key **F4**. If you have a multi-functional keyboard, make sure that **F** keys are not locked.

Actual size zoom 100%

Clicking on this button in the standard toolbar, you can view the current design in actual size. Also by clicking on the arrow at the right of this icon, you can select one of the zoom presets. The zoom presets that you can choose from are 25%, 50%, 75%, 100%, 125%, 150%, 200%, 250%, 300%, 400%, 500% and 600%.

If you set the exact size of your monitor, from the **Monitor** tab of the **Options** dialog box under the **Tools** menu, every time that you will select the 100% of the zoom presets you will view the design in its actual size. You can also activate the **100%** zoom by pressing the **Shift + 1** shortcut keys.

Hand tool (pan)

This tool lets you move a design around your screen like you would move a paper around on a desk with your hand. You can activate the **Hand tool (pan)** function in **Create** or **stitch mode** from the **Tools** toolbar or by pressing the **H** shortcut key. The cursor will change to a hand like the one on the icon and you can use it by clicking and dragging on the screen. While dragging with the working area the **inertia / kinetic scrolling** is activated automatically. This is an Interactive smooth panning of the design that gives a more flowing feeling to the working space.



Pan tool

Another way to **Pan** the working area is by pressing the middle click of the mouse (or the mouse wheel). The

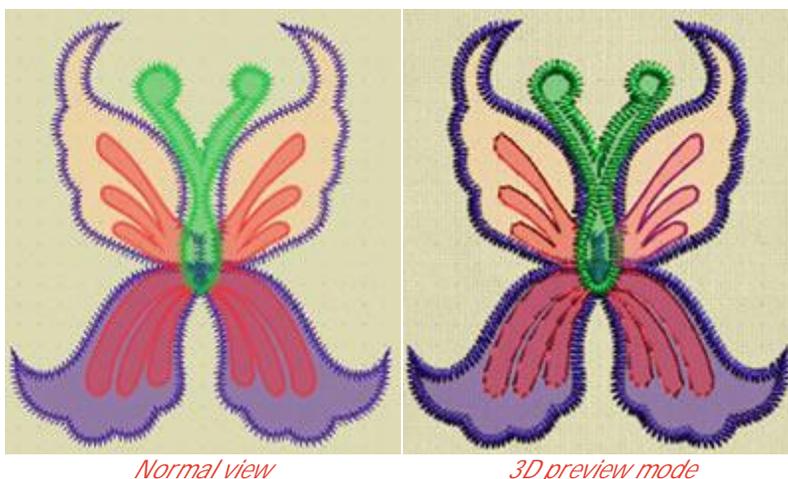
mouse cursor will change to a four directional arrow  that shows that you can move the working area to all directions. To move the working area you have to move the mouse slowly to the direction you want. The view port will move, showing you the design to the direction that you are moving the mouse. To close the mouse pan tool, press once more on the middle mouse wheel.

Measure

The measure tool calculates the distance between any two points in the work area. You can activate the measure tool function from the **Tools** toolbar icon  or by pressing the **F9** shortcut key. With this tool you will be able to measure any time you need to know the size of your embroidery design, or any portion of it.

3D preview

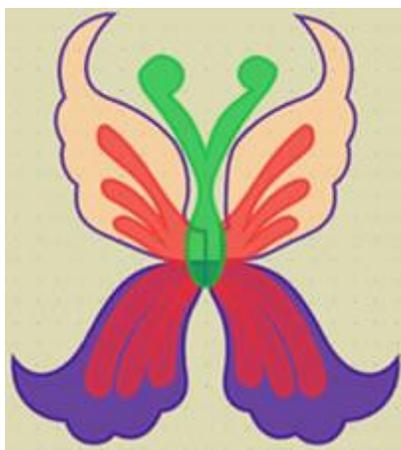
You can enable **3D preview** option from View menu or by pressing **P** key on your keyboard. If the 3D preview selection is checked, the design will be visible in **3D**. By enabling 3D preview, you can have a realistic 3D preview of how the design will look like when it will be embroidered on the selected Fabric. The stitching style, the color of stitches and the way which the design will be sewed give you the perception of a real embroidered result. In the **3D preview** the threads are much thicker than in the stitches view. The **3D preview** of the design can be enabled-disabled both in **DRAW** or **Stitch** modes.

*Normal view**3D preview mode*

If you are working in a close-up zoom, the stitches and the gaps between them may be displayed larger on the screen, but in reality the gaps are too fine to view them. In the **Preview** area, the **Fabric** and its **Color** can be changed from the Select fabric  button on the standard **Toolbar** or from the menu Tools > Select fabric option. The only option that is not available in **3D** mode is stitch points view.

View Outline design

You can access **Outline Design** from View menu. With this option enabled, you can view the outline in the **Preview** when you deactivate **3D preview**.

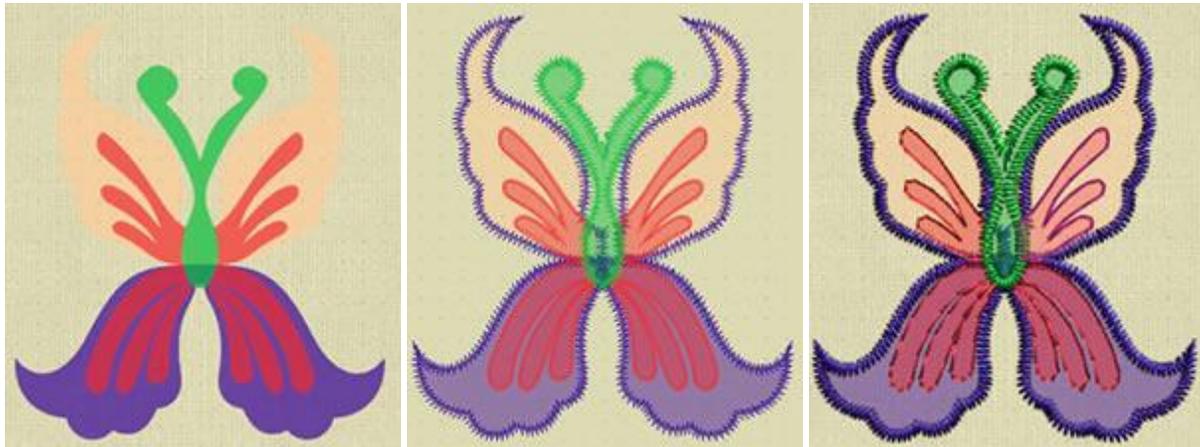
*Outline preview*

With the 3D preview option enabled, the outline will not be clearly visible because it will be located behind the embroidery design. The **Outline View** is useful when you want to change the **Vector** artwork of the design. This view also makes it easier to see all of the parts in the design and to make adjustments.

View Stitches

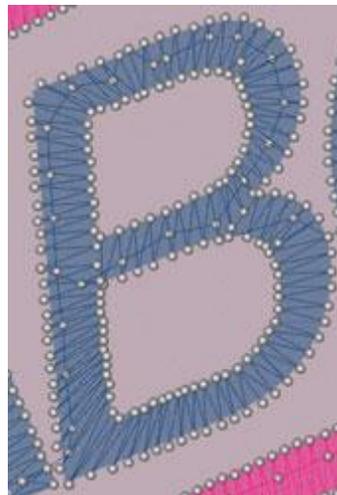
When **Stitches** option of **View** menu is enabled we can see the actual stitches. If **3D preview** is disabled we can see the stitches in normal view and if **3D preview** is enabled we can see stitches in realistic 3D preview. You can access **stitches** option from **View** menu or by pressing **G** key from the keyboard. When the option is enabled we can see the stitches of the whole design. Any change on the design has an impact on the way

that the stitches will be placed. All the recalculations are automated, which means that no further action is required on your part. You can view the stitches of the design and edit the shape of the object at the same time.

*Stitches disabled**Normal view stitches**3D preview stitches*

View Stitch points

You can enable Stitch points from View menu. While Stitch points is active, **3D preview** will be disabled. To activate this option you have to disable **3D preview** option first.

*Thread penetration point view*

Stitch points are the points where the machine's needle bores the fabric. With this view, you can distinguish the stitch length, density, and bore points.

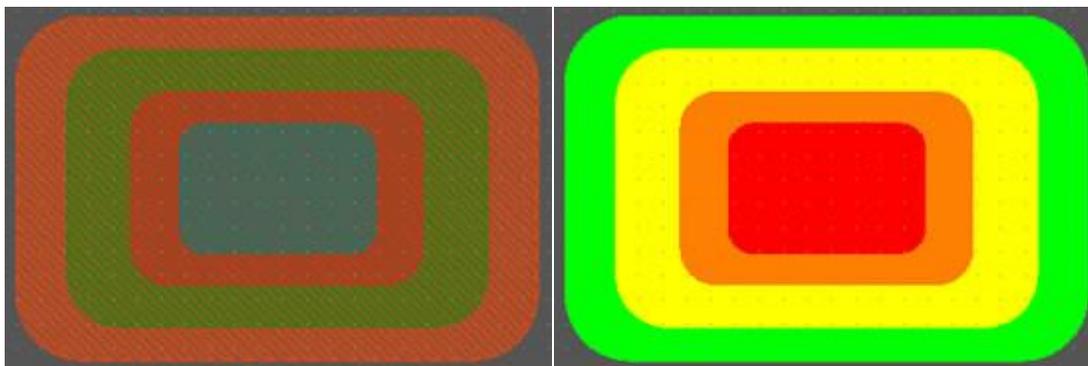
Thickness view

This option is very useful in order to create professional looking designs. Stitches that fall on top of other stitches don't create nice embroidery. We may intentionally want to let this happen in order to create a

special effect. But in the majority of cases we want to know if more than one layer of stitches fall, one on top of the other, in order to prevent this.

You can enable this option by using the respective option of **View** menu. When this option is enabled **3D preview** is disabled. In order to return to the previous view of the design you must disable this option.

In Thickness view we can see the design items painted in various colors according to the embroidery that is placed on top of it. When only a layer of embroidery falls on a part, we can see this part with green color, 2 layers of embroidery-yellow color, 3 layers of embroidery-orange color and too many layers of embroidery-red color. This way we can easily find and correct all the areas that have too much overlapping stitches.



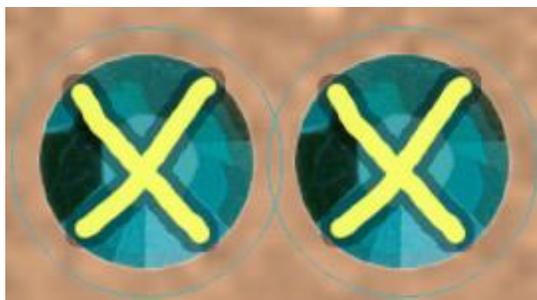
Overlapping objects

Thickness View

Overlapping Crystals

This option is very useful when you are creating designs with crystals. You can enable this option from **View** menu by selecting **Overlapping crystals** or by pressing the **O** shortcut key. By enabling this view all crystals that overlapping will be marked with an 'X' in order to be easily recognizable.

If the overlapping between the crystals is limited on the outline of the crystals the 'X' will be yellow.



Crystals outline overlapping

If the overlapping between the crystals is on the actual crystals the 'X' will be red.



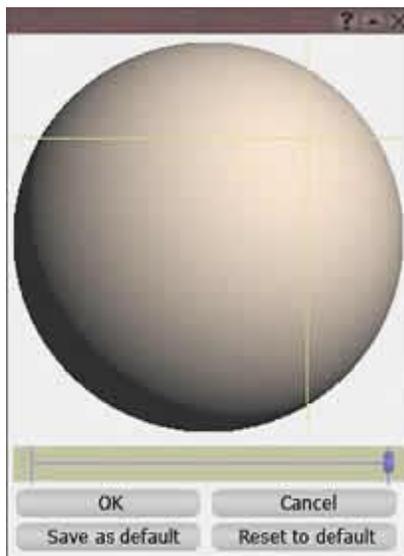
Actual crystals overlapping

Every time you finish a design with crystals it is a good practice to enable the **Overlapping crystals** option in order to check if there is any overlapping in your crystals that you have not noticed and needs to be fixed.

Notice: It is advisable not to leave the Overlapping Crystals always on because it might slow down your PC.

Set light source

You can activate Set light source from View menu. The **Adjust light** dialog will appear from where you can change the light source of the embroidery's 3D preview. The option of Set light source becomes available only if you are working in 3D preview mode (View->Preview 3D). It is a 3D tool that gives you the ability to illuminate your design from different angles.



Light source globe

If you activate the Set light source, the Adjust light dialog will appear with a 3D ball in it. The light source changes by moving the crossed lines to the position you want the light to come from or by click and dragging on the ball to the position you want the light to be. The yellow crossed lines show where the new light source will be and the blue their initial position.

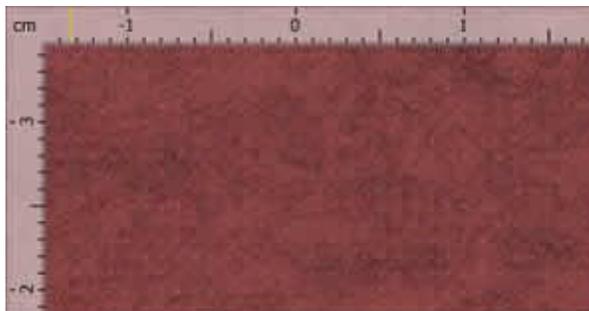
Another option that you can adjust in the dialog is the **Intensity** of the light that illuminates the threads. By click and dragging the **Intensity** bar to the left the light decreases and to the right the light increases. Select the amount of light you want to illuminate your embroidery designs and click **OK** button to apply the changes you have made to the dialog.

The best way to make the adjustment accurately is by having an embroidery design loaded prior activating the **Set light source** option. Any change you are making inside the **Adjust light** dialog it is immediately previewed on the design allowing you to make accurate adjustments.

We can also use **Save as default** option in order to save current light source as the default for every design. Once a default value is selected and saved as default it will be used for every new design. You can also use **Reset to default** in order to reset the light source to the default value.

View Ruler

You can enable/disable Ruler from View menu. Check the **Ruler** selection in order for the Ruler to become visible around the working area.



Ruler

The **Ruler** appears at the left and top sides of the working area. It is transparent and becomes solid only if you place the mouse on it. The ruler shows the values of virtual X and Y axes based on centimeter or on inch values. The 0 on X axis and the 0 on Y axis in the starting point of the axes. The values on the ruler are changing based on the zoom you are using to view the design.

The ruler can help you draw, size and align the objects precisely and create the design you want. In case you select "US" measurement system, from Tool, Options, General tab the ruler will show information in **US**(inches) and not **Metric**.

View Grid

You can enable-disable Grid from **View** menu. Check the **Grid** selection and it'll appear in the working area. The **Grid** appears as small symmetrical dots across the working area in vertical and horizontal lines. If you have the **Ruler** option enabled from the **View** menu, the horizontal lines will be aligned on the ruler values allowing you to draw, size, and align the objects precisely.



Grid

The values of the **Grid** changes with the values of the **Ruler** and both change with **Zoom in** or **Zoom out**. Therefore, it is better to have the **Ruler** option enabled while working with the **Grid**. Also, it is good practice to use **Zoom presets** (100%, 200%, etc.) while designing based on a **Grid** to create precise adjustments.

View Hoop

In many cases it is very useful to preview a created design on a machine hoop. You can enable - disable the view of the hoop using **Hoop** option of **View** menu. When enabled you can view the design on the specified hoop. If **Hoop** option is disabled on **View** menu, then this means that no hoop has been selected for the

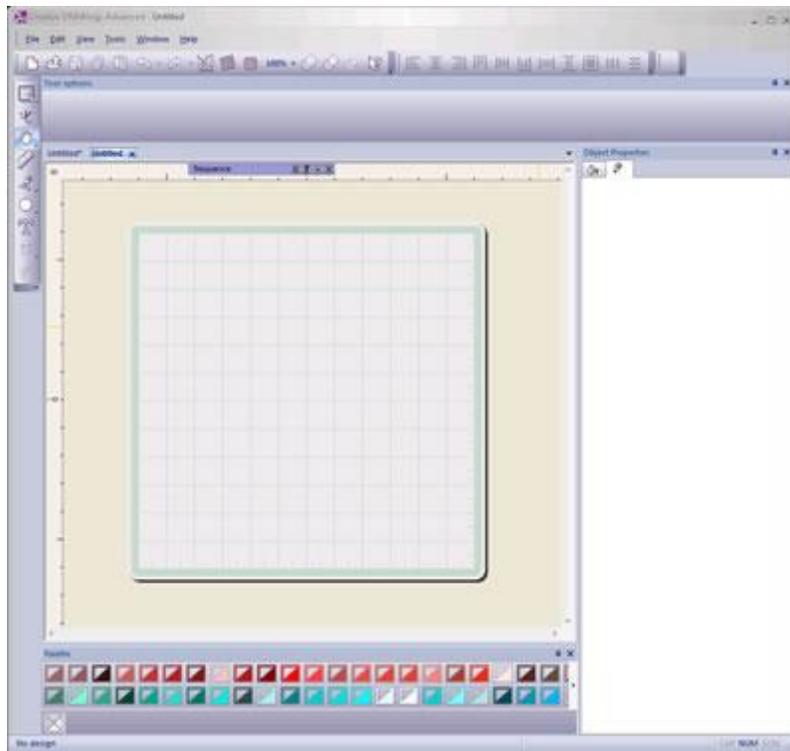
design. You can easily select a **Hoop** for the design using **Change Hoop** dialog. This dialog can be accessed in 3 ways, by pressing **Change Hoop**  icon on Standard toolbar, using **Change hoop** option of **Tools** menu and by using **Ctrl+H** keyboard combination.

The **Hoop** in *Creative DRAWings* is very useful because it will make sure that the design which you are creating will fit on your embroidery machine hoop. There is a variety of hoops from which you can select and you can even add your own. More information about how to work with hoops in **Change hoop** section.

View Cutting mat

This option is available in all techniques except the Embroidery technique.

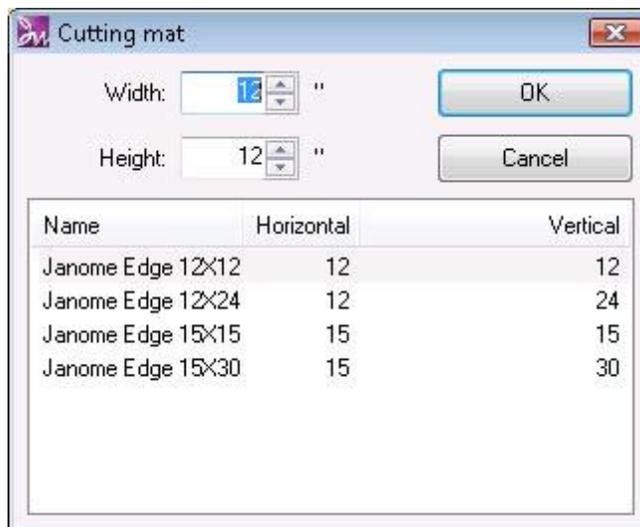
You can enable-disable the **Cutting mat** option from **View** menu. The **Cutting mat** appears as one inch grid behind the design you have created.



cutting mat

It simulates the cutting mat that you will use in your cutter and allows you to accurately position the design you want to send to the cutter on the cutting mat.

You can change the size of the cutting mat by clicking on the **Cutting mat**  icon from the standard toolbar. The following dialog will appear:

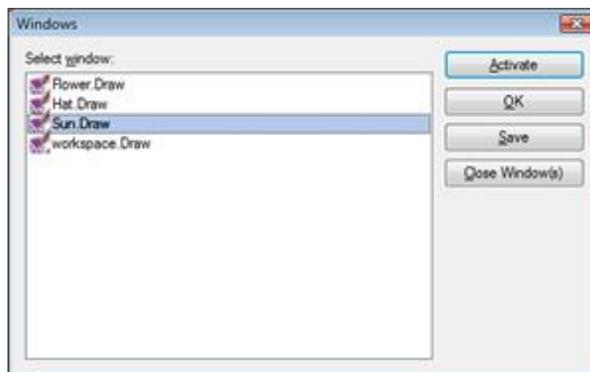


Select cutting mat dialog

From the Cutting mat dialog you can select any preset cutting mat from the available ones, or set the dimensions of your cutting mat at the respective fields. You can set the **Width** and **Height** of your cutting mat in inches. Each square of the cutting mat, has 1 inch height and 1 inch width. Therefore it is very easy to measure your cutting mat and set its dimensions in the dialog. Click **OK** to apply the changes or **Cancel** to cancel them.

View active designs (Windows)

Windows tool, is a supportive tool, located under Window menu, where you can view all the designs that are currently loaded. Some extra window handling and file saving functionality is also provided. By selecting Windows option of Window menu you activate the dialog that is shown in the following figure.



Windows dialog

In section **Select window** you can select any window that you like to be active. Highlight **workspace.draw** and then you have a number of choices provided. Make this design active by pressing **activate**. The dialog closes and the selected design is the active design in the design area.

You can also save loaded designs. Select any design from select window list, then press **Save** button. If the selected design has been previously saved, it will be saved into the same location, otherwise it will prompt you for a location to save.

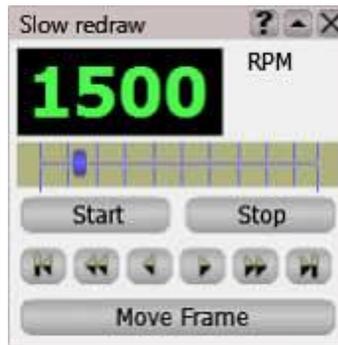
Finally you can select to close designs. Select a design and by pressing Close you close the selected design. If the design hasn't been saved previously you will be prompted to Save or Discard the design.

In any of the above operation you can select more than one designs by pressing **Ctrl** and then by clicking one by one the designs that you want to select.

Slow redraw (Shift+F11)

This tool is available only if Embroidery technique  is enabled.

A very valuable step before turning on your embroidery machine in order to embroider for first time, any of your designs is a simulation like process. **Slow redraw** provides an automated way to simulate the embroidery process. Move through objects stitches and preview the placement of every stitch. It's a good chance to correct any detail on your design. You can enter slow redraw mode by using **Shift+F11** keyboard shortcut or by pressing slow redraw icon  on tools toolbar. While using **Stitch mode**, you can also use the arrow keys on your keyboard in order to navigate through objects-stitches. The **Right** and **Left** arrow keys are simulating the design **stitch by stitch** and the **Up** and **Down** keys object by object.



Slow redraw dialog

In order to start **Slow redraw**, press its icon  on **Tools** toolbar. The following dialog appears on top of the design area.

Slow redraw dialog consists of 5 parts

- **Title bar**, provides window handles
- **Simulation speed** track bar, adjust simulation speed
- **Start-Stop** simulation
- **Move through objects or stitches - paint lines**
- **Simulation view options**

We will describe each part and its description on the following sections.

Title bar

On the top of the dialog you can see its title bar.  The **title bar** contains some controls to help manage the position and the size of the dialog. **Click and drag** on the title bar in order to move the dialog in any place you like.

Help , click on this icon the cursor turns into a question mark. Click on any of the components of the dialog and the available help about the control will appear.

Minimize , Press this icon to minimize the dialog. It stays at the same place but in minimized state. Press it again in order to view the dialog in full mode.

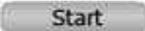
Close , Press on this icon to close the current dialog.

Simulation speed

On this part you can see and adjust the simulation speed. Click and drag this track bar to select the speed of the simulation.

	The machine speed that you select on the track bar shown in numeric format.
	Simulation speed track bar, Select the speed of the simulation. It looks like you are selecting your embroidery machines speed. Simulation speed can between 100 and 9900 RPM

Start-Stop simulation

	Start the simulation, if simulation has been stopped you can resume from where you have stopped.
	Stop the simulation.

Move through objects-stitches

In this part you can move through object-stitches using the navigation buttons . These buttons help you to select the object or the stitch that you want.

	Design start, go to the first stitch of the design.
	Previous object, go to the first stitch of the design.
	Previous stitch, move to previous stitch.
	Next stitch, go to next stitch
	Next object, move to the first stitch of the next object
	Design end, go to last stitch of design

Simulation view options

At the bottom part of the dialog you can select the view mode of slow redraw

	Preview simulation with the frame moving, as it is in real embroidery process.
-------------------------------------------------------------------------------------	--------------------------------------------------------------------------------



Using Slow redraw

Press **Start** button to begin the visual simulation. In case that no object-stitch is selected, the simulation will start from the start of the design. You can stop the simulation by pressing **Stop** button or press **Esc** key on your keyboard. After stopping the simulation, you can always start over and continue from the stitch you left the simulation.

Use the track-bar on the upper part of the dialog to adjust simulation speed. While using the track-bar you can see the selected speed above the track bar.

You can always use **move through object-stitches** buttons together with slow redraw tool in order to navigate through object/stitches.

Finally with the button at the bottom the dialog you can switch between **Move head** or **Move frame** mode. By default the dialog starts in **Move head** mode. When move head is pressed you can see the head of the embroidery machine moving along the design simulating the embroidery process. In case you select **Move frame**, the head stays at the same place and the design (Frame/hoop) moves in such a way in order to pass under the head to be embroidered.

Add Guidelines

When you are creating a design sometimes it is very useful to add a guideline to help in aligning the objects. The three types of guidelines are Vertical, Horizontal, or Diagonal. In case that guidelines are not visible make sure that **Guidelines** option of **View** menu is enabled. Most of guideline options can be accessed through **guidelines** menu, **right click** on any point of the **ruler** and the menu of the following figure will appear. Using this menu you can easily add any type of guideline. We can also access Guideline editor dialog that helps manage the guidelines of the design. Finally through Guideline options you customize some options of guidelines appearance and state.



Guidelines menu

Horizontal Guidelines

To add a **Horizontal Guideline**, left click on the **Horizontal ruler** and drag a dotted line down to the position you want in your working area. You can also get a **Horizontal** line with a right click on the **Vertical Ruler** > **Add new guide** > **Horizontal Guideline**. If you right click on the Vertical part of the ruler then **Horizontal Guideline** will be inserted exactly in the position you right clicked on the **Ruler**. You can reposition your inserted **Horizontal Guideline** by clicking and dragging it to where you want it, or you can delete it by dragging back behind the **Ruler**.



Add Horizontal Guideline

Vertical Guidelines

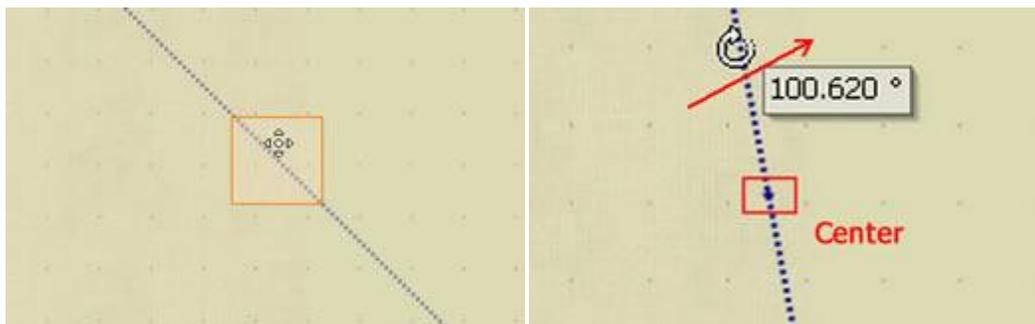
You can add a **Vertical Guideline**, simply by left clicking on the **Vertical Ruler** and drag a dotted line over to the position you want. You can also get **Vertical Guideline** by right clicking on **Ruler> Add new guide> Vertical**. If you have click on the horizontal part of the ruler the guideline will be inserted exactly in the position where you right clicked on the **Ruler**. If you click on the vertical part it is placed under the vertical ruler. You can reposition the inserted **Vertical Guideline** by clicking and dragging it to the position you want, or you can delete it by dragging it on top of the **Vertical Ruler** until you see a delete icon.



Add Vertical Guideline

Diagonal Guidelines

To add a **Diagonal Guideline**, right click on the **Ruler** and when the pop-up **Add new Guide** appears, select **Diagonal** option. The **Diagonal Guideline** will be inserted exactly in the position where you right clicked on the **Ruler**. You can reposition the inserter **Diagonal guideline** by clicking and dragging it from the middle to the position you want. If you position the mouse over the diagonal guideline far from its center, the cursor will change to rotation icon allowing you to rotate the diagonal guideline by clicking and dragging it. The guideline will rotate by displaying the current angle next to the cursor.



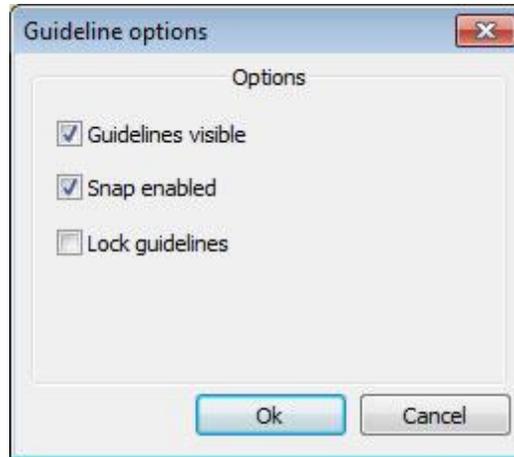
Move diagonal guideline

Rotate diagonal guideline

If you hold the **Ctrl** key pressed while rotating the guideline, it will snap on every **22.5o** to make precise rotation of the guideline.

Guideline options

Guidelines have some options which are useful in creating and editing embroidery designs. You can adjust the **Guideline options** before or after adding lines on the working area. Right click on the **Ruler** and from **Guideline options** dialog enable - disable the available options (**Guidelines visible**, **Snap enabled**, **Lock guidelines**).



Guideline options dialog

From the **Guideline options** dialog, you can set the following options:

Guidelines visible: With this option, you can choose to have the guidelines visible or not. To make the guidelines visible, click **View> Guidelines visible**. To confirm the changes, press the **OK** button and the changes will be applied immediately.

Snap enabled: With this option, the objects of a design will align automatically to a guideline. To make your objects snap to the guidelines, check the **Snap enabled** option. By default the **Snap enabled** option is disabled. To confirm the changes you made press the **OK** button and the changes will be applied immediately.

Lock guidelines: With the **Lock guidelines** option, you can lock the guidelines. The accidental movements of guidelines will be avoided. If you keep the **Lock guidelines** option unchecked, you will be able to move or add guidelines on the working area. To confirm the changes you made press the **OK** button and the changes will be applied immediately.

Hoop guidelines are permanently locked and cannot be unlocked.

We can change the color of the guidelines using Colors-Sizes tab of **Tools -> Options** dialog.

Guideline editor

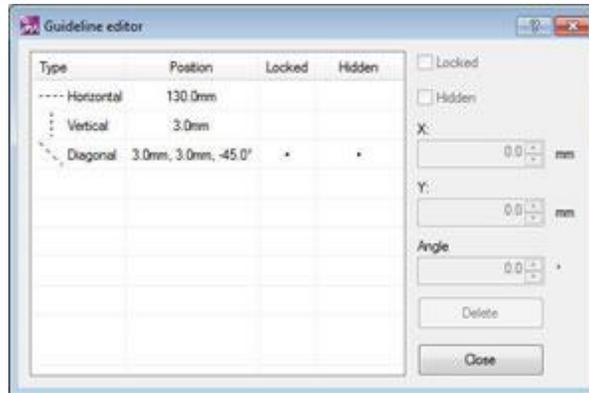
Using guideline editor we can edit used guidelines of any design.

Inside guidelines editor you will find advanced options for making precise changes to the guidelines you have already added in the design you are working on. If you have no guidelines inserted the dialog will be empty. If you have inserted guidelines in your design the editor gives you the ability to edit the following:

- Edit the position of the guideline's using numeric values
- Specify the Y and X axis distance for Horizontal and Vertical guidelines.
- Specify the Angle for diagonal guidelines.
- Lock and-or hide guidelines

In this dialog we can edit the guidelines that have been added to the design.

Select any of the guideline and only then the available parameters of the specific guideline are enabled.



We can edit the parameters of the selected guideline.



- **Locked:** If this option is checked then you will not be able to change the position of the guideline in the working area. This is very helpful when you want to avoid accidental movements of guidelines while you are creating your design.
- **Hidden:** If this option is checked, then this guideline will not be visible in the working area. This is very useful when you have finished your design and you want to hide the guidelines and view the design without the distraction of guidelines.
- **X:** This option is available only on Vertical and Diagonal guidelines. With this option you can specify the distance of the guideline from the X axis. The values that you can insert in the respective field can be negative or positive.
- **Y:** This option is available only on horizontal and Diagonal guidelines. With this option you can specify the distance of the guideline from the Y axis. The values that you can insert in the respective field can be negative or positive.
- **Angle:** This option is available only on Diagonal guidelines. With this option you can specify the angle of the guideline from the X axis. The values that you can insert in the respective field can be negative or positive.
- **Delete:** With the delete option you can delete the selected guideline.

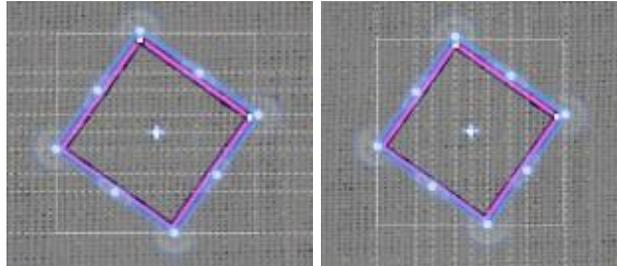
Working with guidelines

All inserted guidelines inside the software have snapping and aligning abilities that can be found very useful when you are designing inside *Creative DRAWings*. All objects can snap on **Horizontal** and **Vertical** guidelines that you have placed on the working area while moving the objects towards them. This is very useful when you want to align the objects of the design to specific position and makes your life easier while

designing. Also, it is possible to do the opposite and move the **Horizontal** and **Vertical** guidelines towards the objects and be able to snap on its edges/sides. Finally, the guidelines have snapping abilities based on the Grid of the working area that allows you to position them exactly where you want them.

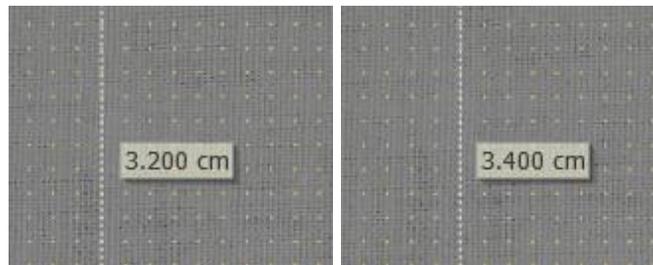
The snapping and aligning abilities of the Guidelines are the following:

If you click and drag any **Horizontal/ Vertical** and **Diagonal** guidelines towards a selected object, they will snap on every control handle that the object has on its selection rectangle.



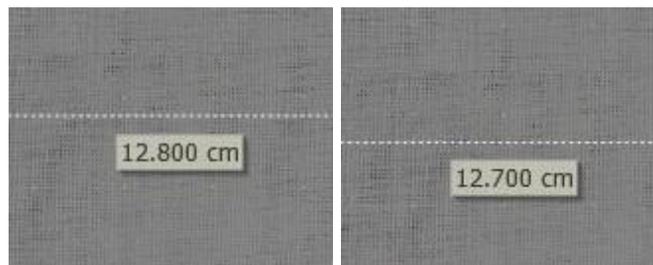
Guidelines Snap on Handles

If you hold the **Alt** key from the keyboard pressed while dragging **Horizontal** and **Vertical** guidelines, they will snap on every step of the **Grid**(if the Grid is enabled from **View>Grid** menu option).



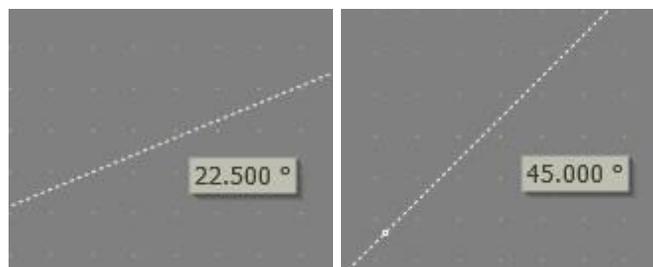
Guidelines will snap on every step of the Grid

If you hold the **Ctrl** key from the keyboard pressed while dragging **Horizontal** and **Vertical** guidelines, they will snap on every one millimeter movement.



Guidelines snap on every one millimeter movement

Also, if you hold the **Ctrl** key from the keyboard pressed while rotating **Diagonal** guidelines, they will snap on every 22.50 degrees.



Diagonal Guidelines snap on every 22.50

Finally If you hold the **Shift** key from the keyboard pressed while dragging **Horizontal** and **Vertical** guidelines, all snapping abilities will be canceled. The guidelines will not snap at all and you will be able to move them freely.

All this snapping and aligning abilities can help you create perfect designs.

Chapter VII

Designing tools

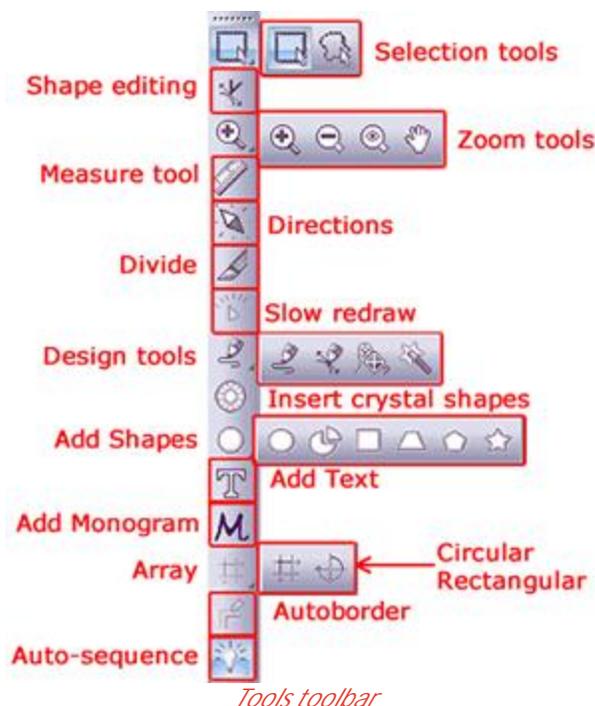
In this chapter we will learn about the **Designing tools** of Creative DRAWings® and how to use them to create **Vector** designs which can be converted into stitches. The designing tools can be found only inside **Create** mode of Creative DRAWings®. The available **Designing tools** are the **Freehand** tool, the **Bezier** tool, the **Outline shape** tool (digitizing tool), the **Create shapes** tool, the **Text** tool and the **Insert symbol - Insert Clipart** tools. By combining these powerful designing tools you can create outstanding designs.

-  **Tools toolbar**
-  **Drawing tools**
-  **Insert shapes**
-  **Designing tools' options**
-  **Add new objects as clones**
-  **Array**
-  **Autoborder**
-  **Working with text**
-  **Monograming**
-  **Insert symbol**
-  **Clipart Library**

Tools toolbar

The most important designing elements in Creative DRAWings® are in the **Tools toolbar** at the left side of your screen. You can change the toolbar's location by clicking and dragging it to a location you prefer.

All the designing tools of Creative DRAWings® are found in these **Tool** icons. Several tools have fly-outs which are activated by **click and Hold** on the little black arrows on lower right corner of the icons. The tool which you click on will become active and will replace the previous option in the **Tools toolbar**. Five of the tools have extra icons on the fly-outs of the **Tools toolbar**.



The **Tools** toolbar changes according which design mode you are currently viewing. The **Tools** toolbar in the **Create** mode include all tools that are available in the **Stitch** mode and some designing tools (only inside **Create** to **stitch** mode combination). Some tools appear only if the **Stitches** (option **Stitches** form **View** menu is enabled) are visible on the design.

The available tool categories that exist on Tools toolbar are the following:

- ∨ **Selection tools**
- ∨ **Shape editing tool**
- ∨ **Zoom tools**
- ∨ **Stitch editing tools**
- ∨ **Measure tool**
- ∨ **Designing tools**
- ∨ **Shape insertion**
- ∨ **Text insertion**
- ∨ **Array tool**
- ∨ **Auto border**

In this section we will analyze only the designing tools that are available in the Tools toolbar such as **Designing** and **Shape insertion** tools.

Drawing tools

On Tools toolbar there are three available designing tools. These are Create **Freehand** shapes, Create **Bezier** shapes and Create **Outline** shapes. Only one of the 3 tools can be active on the toolbar each time.

Click and hold on the current tool icon  in order to view all items. While holding left

key pressed, you can move the cursor on top of the tool that you want to select. Release the mouse and it is selected. The tool is now active; use it to design any shape you like. The selected tool has become the current one and you can use it to create the shape you want.

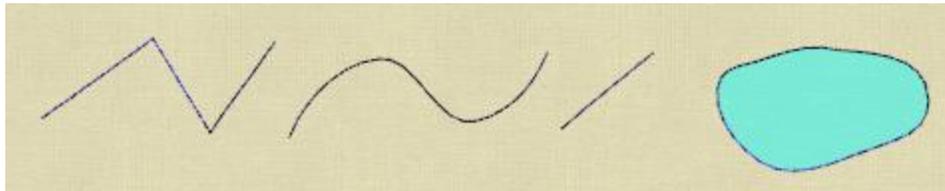
- **Create Freehand shapes**
- **Create Bezier shapes**
- **Create Outline shapes**
- **Magic Wand shapes**

By using the available designing tools you can draw the embroidery designs you want, based on a backdrop bitmap or on your designing abilities.

Create Freehand shapes

With the Freehand tool  you can design **simple lines** or **complete shapes**. In order to create simple lines, select the freehand tool  or press the **F5** key. Now that the tool is active, click once on the working area. This is the starting point of the line. Click once more to define the end of the line. By following the same steps you can add more lines and create the design you want.

If you want you can continue the straight line you have created by inserting another straight line that will start from the start/end of the existing line. To do that you have to position the cursor over the ending/starting point of the existing line and see the cursor image changing. This change of the cursor informs you that you can continue designing a line from that point. Click to set the starting point of the line to be the same with the starting/ending point of the current line and then click on the position you want the line to end. By following the same steps you can continue entering straight lines at the end of the same shape and if you want make it a closed shape by connecting the last node with the first node.



Connected lines - Freehand curve - Straight line - Closed shape

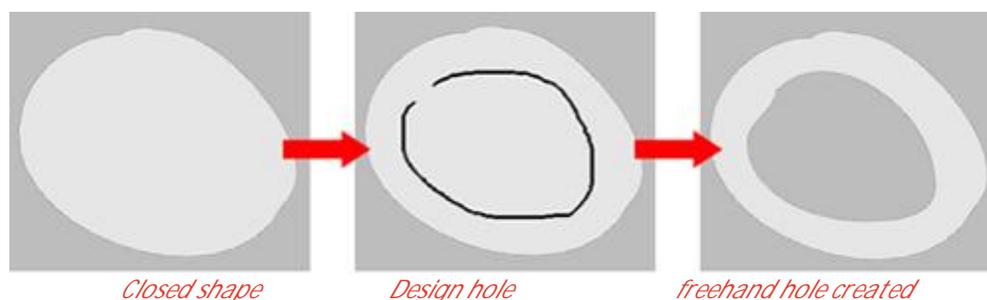
Using the **Freehand** tool you can also make freehand designs like those you are drawing on a piece of paper. To do that you have to click and drag with the mouse on the working area until you have created the shape you want. You can create a closed shape by click and dragging with the freehand tool and end at the same point you have started. A closed shape will be created with fill and outline color. If the design you have created does not have a fill color this means that it is an open shape (line art design) or its fill color property in **Thread palette** toolbar is set to none.

When you have finished one object you can continue creating the second one and so forth, but all of them will be part of the same object (all object will be joined/combined). This means that every shape you are creating without ending the designing process (by right clicking once) of the object will be member of the same object even if those objects are totally different. If you do not want them to be joined/combined you can select the

objects with any selection tool and from the right click menu select **Break apart** option that will separate the designed objects.

If you want to create objects as different entities you have to create the first object with the Freehand tool and then right click once to end the creation of the first object. The created object will be highlighted and you will be able to continue by designing the second object. Important to remember is that whenever you want to end the creation of an object you have to right click once. To completely end the designing process with the **Freehand** tool you have to select any selection tool from the Tools toolbar. In same way as with lines you can continue with another part on previous item by placing the mouse over the start-end point of the previous one. The cursor changes somehow to reveal that you can continue the shape.

The way that the Freehand tool works it is helpful to create holes inside the shapes you are creating. For example if you want to create a wheel shape you have to draw the outer circle and then draw the inner smaller circle.



When the designing of the inner circle is finished, a hole will be created inside the bigger circle. This functionality is very helpful when you are drawing shapes over a bitmap backdrop.

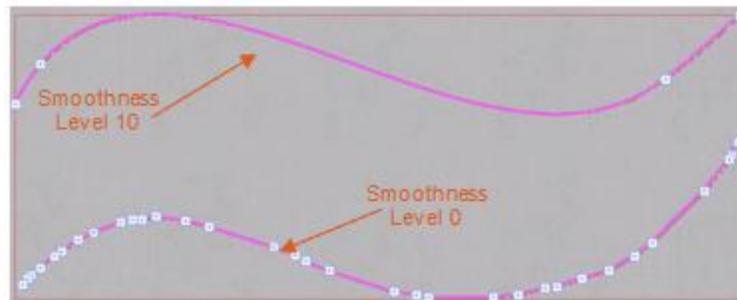
While using **Freehand** tool to create a freehand shape you can hold the **Shift** key down to make the curves you are drawing smoother. This ability helps to make the design easier.

If you hold the **Ctrl** key pressed while drawing with **Freehand** tool, guidelines will appear on every 22.5 degrees of the X and Y axes. When you press the **Ctrl** key the object automatically moves/snaps on the closest guideline. While drawing, the object it will snap on the guidelines, allowing you to draw the curve object along the guidelines. The guidelines that appear have as center the point from where the freehand curve you are drawing starts.

If you hold the **Alt** key pressed while drawing with Freehand tool, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. While drawing the curve object it will snap on the guidelines, allowing you to draw straight lines along the guidelines. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw a line to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

Also, when you select the **Freehand** tool, the **smoothness level** option appears on **Tools options** bar. With this tool you can set the smoothness level of the freehand artwork that you will create. The scale of smoothness level option is from 0 to 10 and can be adjusted by entering the value you want on the respective

field or by using the increase/decrease arrows next to the field. If you set the smoothness level value to 0 the freehand curves that you will draw will have a lot of nodes and its curvature will not be so smooth.



Freehand - Smoothness Level

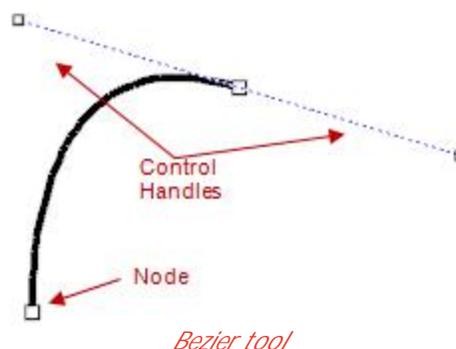
On the other hand if you set the smoothness level value to 10 the freehand curves that you will draw will have the minimum nodes needed and its curvature will be smooth. Middle range values have average smoothing effect on the drawn curves. The **Smoothness level** options must be set before the creation of the curve you want to use.

Finally, while drawing a shape and you make a mistake, you can press the **Backspace** button from the keyboard and delete the last inserted section until the previous node. If you want you can delete more of the design by pressing the Backspace button again. You can continue drawing the shape from that point and finish the shape you want to create.

Create Bezier shapes

With the **Bezier** designing tool  you can create shapes where you can handle better the curvature of each segment easier by adjusting the control handles of each inserted node.

To draw a curve you have to select the **Bezier** tool from tools toolbar or by pressing the **Shift + F5** shortcut keys from the keyboard, define the first node by clicking on the working area once, move the mouse to the position you want the second node to be placed and by click and dragging at that position you can define the second node and adjust the curvature of the segment by moving the control handles of the node. Release the mouse button to confirm the segment you have added and continue with the next one by following the same procedure.



Bezier tool

If you want to add a straight line you have to define the first node or continue from an existing one and then the second node by clicking once more to the position you want. A straight line will be inserted connecting the two nodes. You can continue the shape by either inserting straight lines or curves.

You can create a closed shape by connecting the last node with the first node you have inserted.

While creating a shape you can **end** the design by **right clicking** once and continue with the next shape that will belong to the same object. This means that the first shape you have created together with the second shape that you will create will belong to the same object. This ability is very useful when you want to create embroidery designs, because it is really easy to create holes in any shape that will not be filled with stitches. For example if you want to create a wheel shape you have to draw the outer circle and then draw the inner smaller circle. When the designing of the inner circle is finished, a hole will be created inside the bigger circle. This effect is very useful also when you want to create a design based on bitmap backdrop.

If you have created such an object and you want to separate it to its sub-shapes you have to select it with any selection tool and from the right click menu select **Break apart** option. The complex object will be separated to its sub-objects and you will be able to edit them separately.

In addition, if you want each closed shape or line art shape you are creating to be a separate object you have to right click once to end the designing process of the closed shapes and twice for the line art shapes. After ending the first shape you can continue with inserting the second that will be a separate object. You can continue the same process and add more objects that will shape your design.

While inserting nodes with **Bezier** tool and you think you made a mistake you can delete as many nodes as you think you need to by pressing the **Backspace** form the Keyboard. Each time the Backspace is pressed the last node that was inserted is deleted. You can continue designing the object from the node you want.

Another useful ability that Bezier tool has is that you can move the position of the last inserted node during designing. To do that you have to hold the **Shift** key down after inserting the last node and while you are moving the control handles of the node, you can move the node to the position you prefer. By releasing the shift key you will be able to adjust the control handles of the node once more from its new position. All the adjustments must be made by keeping the left mouse click continually pressed.

If you hold the **Ctrl** key pressed while drawing with **Bezier** tool, guidelines will appear on every 22.5 degrees of the X and Y axes. When you press the **Ctrl** key the object automatically moves/snaps on the closest guideline. While drawing, the object it will snap on the guidelines, allowing you to draw the curve object along the guidelines. The guidelines that appear have as center the point from where the Bezier curve you are drawing starts.

If you hold the **Alt** key pressed while drawing with **Bezier** tool, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. While drawing the curve object it will snap on the guidelines, allowing you to draw straight lines along the guidelines. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw a line to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

Finally, with the Bezier tool you can continue the line art you are creating from the first or last node. You can do that when you have created a line art/curve shape and you have right clicked once to end the creation of the shape (If you right click twice you end the designing process of the object, and you cannot continue the line art shape). To do that you have to position the cursor over the ending/starting point of the existing curve and see the cursor image changing.

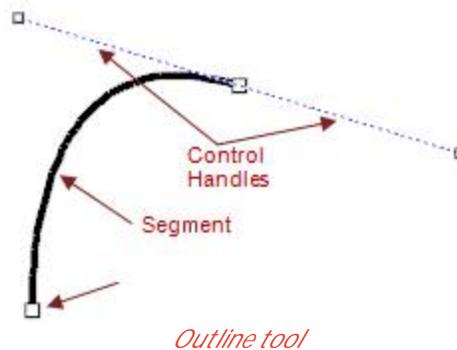


First part - Second Part - Closing shape - Filled with color - Fill stitches

This change of the cursor informs you that you can continue designing a curve from that point. Click to set the starting point of the curve to be the same with the starting/ending point of the current line/curve and then click on the position you want the line/curve to end. By following the same steps you can continue entering lines/curves at the end of the same line art shape and if you want make it a closed shape by connecting the last node with the first node.

Create Outline shapes

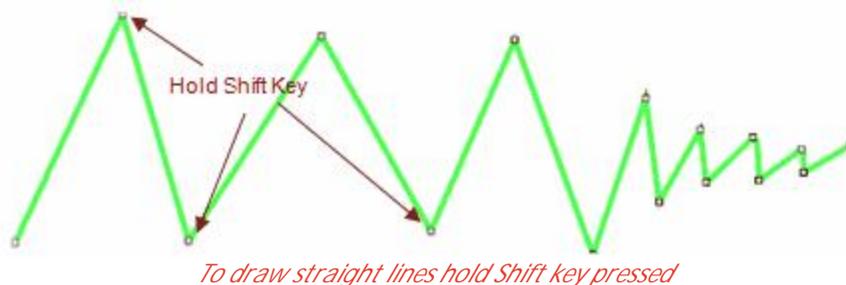
The create **Outline** tool  (Digitizing tool) is based on the **Bezier** tool with the difference that the lines that you are creating are by default curve based. With the outline tool you can draw lines and curves by specifying their nodes and altering the curvature of their segments by adjusting their control handles.



Outline tool

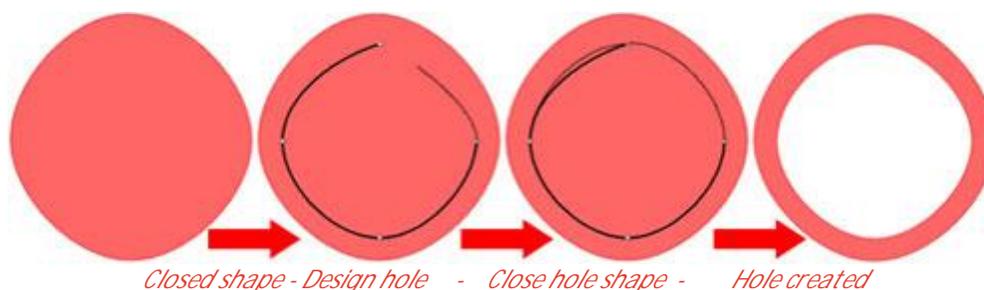
To **draw a curve** you have to select the **Outline** tool  from the Tools toolbar or by pressing the **Ctrl + F5** shortcut keys, define the first node by clicking on the working area once, move the mouse to the position you want the second node to be placed and by click and dragging at that position you can define the second node and adjust the curvature of the segment by moving the control handles of the node. Release the mouse button to confirm the segment you have added and continue with the next one by following the same procedure.

If you want to add a **straight line** you have to define the first node or continue from an existing one and then by holding the **Shift** key down, the second node by clicking once more to the position you want. A straight line will be inserted connecting the two nodes. You can continue the shape by either inserting straight lines or curves.



You can create a closed shape by connecting the last node with the first node you have inserted.

While creating a shape you can end the design by right clicking once and continue with the next shape that will belong to the same object. This means that the first shape you have created together with the second shape that you will create will belong to the same object. This ability is very useful when you want to create embroidery designs, because it is really easy to create holes in any shape that will not be filled with stitches.



For example if you want to create a wheel shape you have to draw the outer circle and then draw the inner smaller circle. When the designing of the inner circle is finished, a hole will be created inside the bigger circle. This effect is very useful also when you want to create a design based on bitmap backdrop.

If you have created such an object and you want to separate it to its sub-shapes you have to select it with any selection tool and from the right click menu select **Break apart** option. The complex object will be separated to its sub-objects and you will be able to edit them separately.

In addition, if you want each closed shape or line art shape you are creating to be a separate object you have to right click once to end the designing process of the closed shapes and twice for the line art shapes. After ending the first shape you can continue with inserting the second that will be a separate object. You can continue the same process and add more objects that will shape your design.

While inserting nodes with Outline tool and you think you made a mistake you can delete as many nodes as you think you need to by pressing the **Backspace** form the Keyboard. Each time the Backspace is pressed the last node that was inserted is deleted. You can continue designing the object from the node you want.

Another useful ability that **Outline** tool has is that you can move the position of the last inserted node during designing. To do that you have to hold the **Shift** key down after inserting the last node (If you press the Shift key before inserting the last node it will insert a Cusp node and draw a straight line) and while you are moving the control handles of the node, you can move the node to the position you prefer. By releasing the shift key you will be able to adjust the control handles of the node once more from its new position. All the adjustments must be made by keeping the left mouse click continually pressed.

If you hold the **Ctrl** key pressed while drawing with **Outline** tool, guidelines will appear on every 22.5 degrees of the X and Y axes. When you press the **Ctrl** key the object automatically moves/snaps on the closest guideline. While drawing, the object will snap on the guidelines, allowing you to draw the curve object along the guidelines. The guidelines that appear have as center the point from where the Outline curve you are drawing starts.

If you hold the **Alt** key pressed while drawing with **Outline** tool, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. While drawing the curve object it will snap on the guidelines, allowing you to draw straight lines along the guidelines. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw a line to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

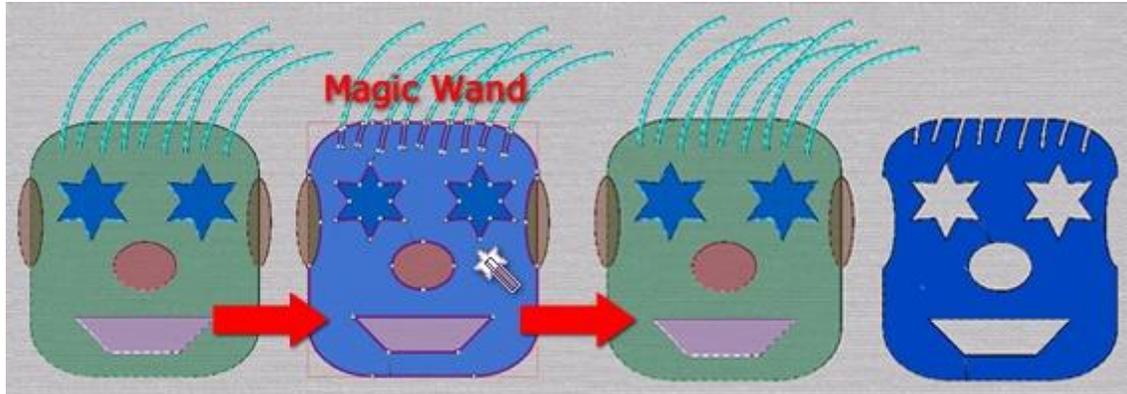
Finally, with the Outline tool you can continue the line art you are creating from the first or last node. You can do that when you have created a line art shape and you have right clicked once to end the creation of the shape (If you right click twice you can end the designing process of the object, and you cannot continue the line art shape). To do that you have to position the cursor over the ending/starting point of the existing curve and see the cursor image changing. This change of the cursor informs you that you can continue designing a line from that point. Click to set the starting point of the line to be the same with the starting/ending point of the current line/curve and then click on the position you want the line/curve to end. By following the same steps you can continue entering lines/curves at the end of the same line art shape and if you want make it a closed shape by connecting the last node with the first node.

By using the available designing tools you can draw the embroidery designs you want, based on a backdrop bitmap or on your designing abilities.

Magic Wand shapes

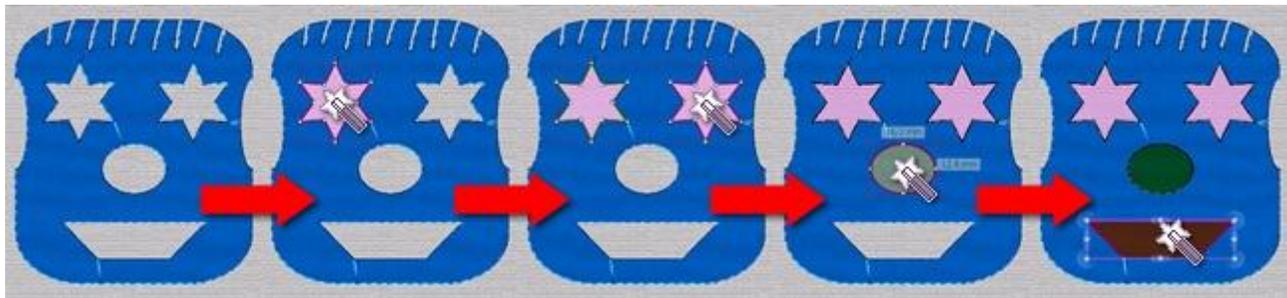
The **Magic Wand** tool creates any shape that consists of the intersection of two or more other shapes. It is a very useful tool that can help you create strange shapes easily.

In order to use this tool you have to have already created some designs that are overlapping. Then you activate the **Magic Wand** tool by selecting it from the **Tools** toolbar, position it over the area where the objects are intersecting/overlapping and click on it to create it. The tool will create an object identical with the intersection area of the overlapping objects that you can move elsewhere by click and dragging it. If you want you can continue creating shapes by clicking on the area you want to be converted to an object. All the object that you are creating remain selected in order to be easier from you to move them, change their stitch type or make any other modification. To stop using the **Magic Wand** tool you have to simply right click with the mouse and the software will switch to the Selection rectangle mode.



Select the Magic wand tool -> Click on the area you want to produce -> Drag the created object out

Another functionality of this tool is that you can fill holes of a design with the shapes that these holes are forming. The only thing you have to do is to select the Magic Wand tool and click in the hole. The software will automatically create a new object that fills the hole.

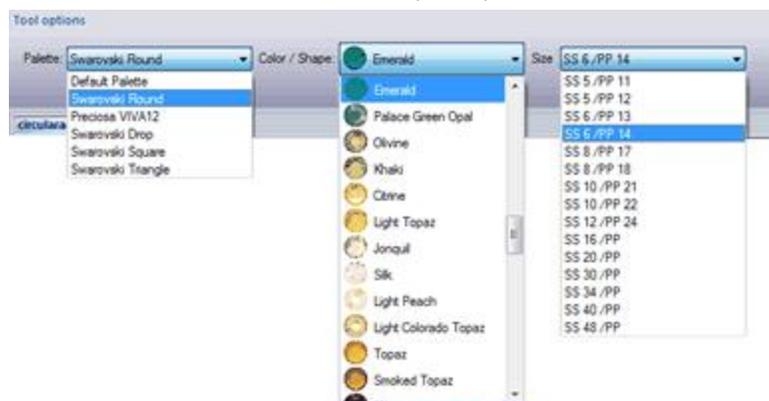


Select the Magic wand tool -> Click in the holes -> Create new objects that will fill the holes

Insert Crystals

With the **Insert crystal shapes**  designing tool you can insert crystals anywhere in the design by simply selecting the tool and left clicking once in the position you want each crystal to be added. If you want to end the insertion of crystals you have to right click once or to select a different tool from the **Tools toolbar** like the **Rectangle selection** tool.

When you select the **Insert crystal shapes** designing tool, relevant options appear on the **Tools options** toolbar. These options allow you to select the **Palette** of the crystals you want to add crystals from, specify the **Color/Shape** you want to use and the **Size** of the crystal you want to add.



Crystal options

Make the adjustment you want on the **Tool options** toolbar and you can start inserting single crystals on the design by simply clicking on the position you want to add them. You can change the **Palette**, the **Color/Shape** and the **Size** after the crystal insertion from the **Object Properties** toolbar. Select the crystal you want and you will be able change its properties from the **Object Properties** toolbar. Also, you can make multiple selection of crystals and make changes to all of them at the same time.

Insert shapes

From the tools toolbar you can select and insert shapes that will help you create embroidery designs easier. The available shape tools are **Create Ellipses**, **Create rectangles**, **Create Pies**, **Create Stars**, **Create Polygons** and **Create Trapezoids/Parallelograms**.



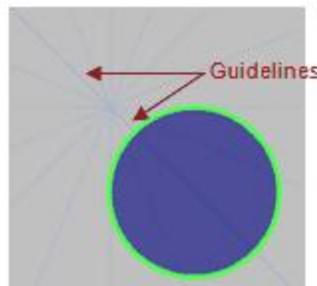
Shapes fly out

From the available tools only one can be active on the **Tools** toolbar each time. To view all the available shape tools click on the current shape tool and hold while moving the mouse over all available shape tools. The selected designing tool will become the current one and you can use it to insert the specific shape on the working area.

Create Ellipses

The **Create Ellipse** tool  allows you to design ellipses that will be filled with stitches. You can create any ellipse shape but also circles and complex shapes by combining elliptic shapes. To create an ellipse shape you have to select the **Ellipse tool**  from the **Tools** toolbar or by pressing the **F7** shortcut key from the keyboard and by click and dragging diagonally on the working space, draw the ellipse shape you want. By releasing the mouse click the shape will be placed on the position you have designed it.

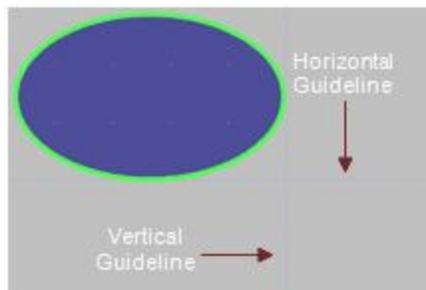
By holding the **Ctrl** key pressed while drawing a shape, guidelines will appear on every 22.5 degrees of the X and Y axes, with center the point you click and dragged to draw the circle. By click and dragging diagonally you can draw a **Circle**. Also, by click and dragging with the mouse based on the guidelines you can draw perfect oblong ellipses. While drawing the object, it will snap on the guidelines, allowing you to draw the shape along the guidelines.



Hold Ctrl key and guidelines will appear on every 22.5 degrees

By holding the **Alt** key pressed while drawing an ellipse, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point

you can draw the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

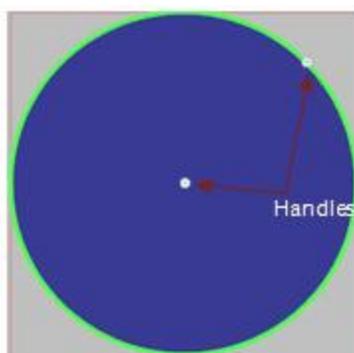


Hold Alt key - Horizontal and Vertical guidelines appear

By holding the **Shift** key pressed while drawing an ellipse the center of the ellipse will change and become the point from where you started drawing the ellipse.

You can also use combination of keys that will have combined effect. For example, by holding both **Ctrl** and **Shift** key pressed while drawing an ellipse, the center of the shape will be the point from where you started drawing the shape (as well as the center of the guidelines) and the shape will be a Circle. This is helpful when you know the center of the design and you want to add a Circle that will have as center specific point.

There are some more editing abilities that ellipse tool has and they are available in **Node editing mode** . You can change an ellipse shape you have created by selecting it and then selecting the **Edit shape nodes** option  from the **Tools** toolbar, to change to node editing mode. On the outline of the selected ellipse will appear two handles, one positioned on the middle of the ellipse and the second one on the top right border of the shape.



Hold Alt key - Horizontal and Vertical guidelines appear

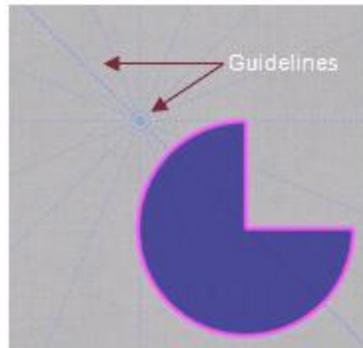
By click and dragging the handle of the top right part of the ellipse you can change the size of the ellipse shape freely to all dimensions or based on guidelines by using the **Ctrl**, **Alt** or **Shift** keys (**Ctrl**, **Alt** or **Shift** keys has the same functionality that we described previously in this section). Also, by click and dragging the handle from the center of the shape you can change the position of the ellipse freely or based on guideline by using the **Ctrl** and **Alt** keys.

Notice: If you have converted the ellipse shape to curves by selecting the respective option of the right click menu, the Vertical and Horizontal handles will not be available in Node editing mode.

Create Pies

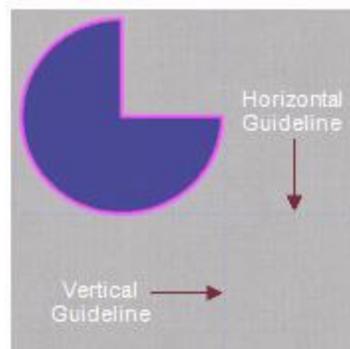
The **Create Pie** tool  allows you to design ellipses and pie shapes that will be filled with stitches. You can create any ellipse/circle shapes, pie shapes and complex shapes by combining them. To create an ellipse you have to select the **Pie** tool  from the **Tools** toolbar or by pressing the **Shift+F7** shortcut keys from the keyboard and by click and dragging diagonally on the working space, draw the **Pie** shape you want. By releasing the mouse click the shape will be placed on the position you have designed it.

By holding the **Ctrl** key pressed while drawing a shape, guidelines will appear on every 22.5 degrees of the X and Y axes, with center the point you click and dragged to draw the Pie. By click and dragging diagonally you can draw a **Circle** based Pie. Also, by click and dragging with the mouse based on the guidelines you can draw perfect oblong pie shapes. While drawing the object, it will snap on the guidelines, allowing you to draw the shape along the guidelines.



Hold Ctrl key and guidelines will appear on every 22.5 degrees

By holding the **Alt** key pressed while drawing a pie, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

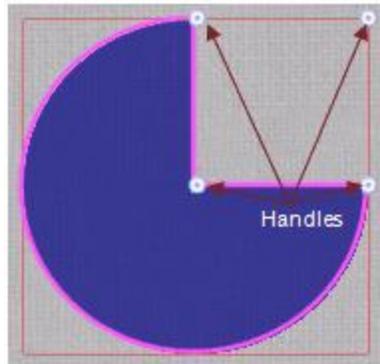


Hold Alt key - Horizontal and Vertical guidelines appear

You can also use combination of keys that will have combined effect. For example, by holding the **Shift** key pressed while drawing a pie the center of the ellipse will change and become the point from where you started drawing the ellipse.

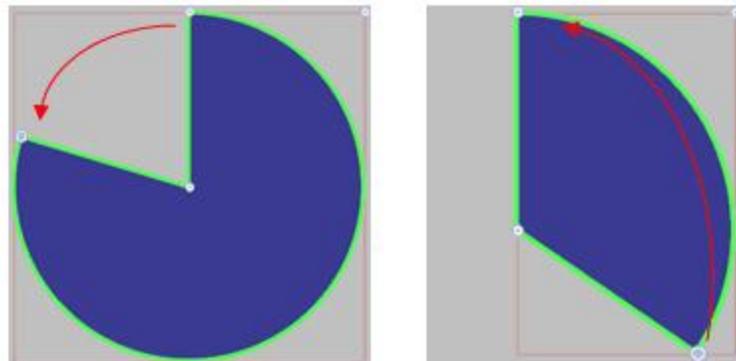
By holding both **Ctrl** and **Shift** key pressed while drawing a pie, the center of the shape will be the point from where you started drawing the shape and the shape will be a Circle based pie. This is helpful when you know the center of the design and you want to add a Pie shape that will have as center a specific point.

You can change the shape of a pie object you have created by selecting it and then selecting the **Edit shape nodes** option  from the **Tools** toolbar, to change to node editing mode. On the outline of the selected pie, four handles will appear, one positioned at the **center** of the design, one on the **Vertical** axis, one on the **Horizontal** axis and the other on the **top right corner** of the object.



Three Pie Handles

By click and dragging the handle of the **Vertical** or **Horizontal** axes you can change the shape of the Pie. By dragging the handles to the right or to the left you can increase or decrease the opening of the Pie. You can use any of the two handles to do that. If you hold the **Ctrl** key while dragging a handle, the mouse will snap on every 22.5o degrees allowing you to make precise changes on the Pie shape.



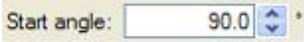
Drag to left to close Pie shape - Drag to right to open shape

By click and dragging the handle of the corner you can change the size of the Pie shape freely or based on guidelines by using the **Ctrl** or **Alt** keys (**Ctrl**, **Alt** keys has the same functionality that we described previously in this section). If you hold the **Shift** Key pressed during the resizing process the Pie will be resized proportionally and become a Circle or Pie based on a circle.

By changing the position of those three handles you can make precise changes on the size and shape of the pie you have created.

By click and dragging the handle that is located at the center of the design you can move the object to the position you want.

You can also define the starting and ending position of the Pie's angle by specifying them on the **Tool options** toolbar. If you select the Ellipse/Pie object in Node editing mode or in object editing mode, two options will appear on the Tool options toolbar related with the Pie object. Those options are the **Start angle** and the **Stop angle**.

With the **Start angle**  you can define the starting position of the angle that the Pie is making based on virtual X and Y axes. The value of the Start angle is in degrees; therefore, if the Start angle value is 90 the starting position of the angle will be the top point of the pie, which is also the initial position of the Vertical handle (the same with 90o degrees on X and Y axes). You can change the value of the filed by selecting the current value and typing a new one. Then press the **Enter** key from the keyboard to confirm the new value. The change will be applied immediately on the shape. Also, you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

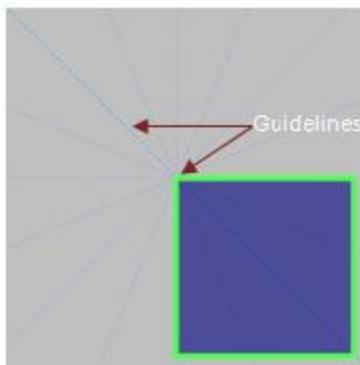
With the **Stop angle**  you can define the ending position of the angle that the Pie is making based on virtual X and Y axes. The value of the Stop angle is in degrees; therefore, if the End angle value is 360 the starting position of the angle will be the top point of the ellipse, which is also the initial position of the handle (the same with 360o degrees on X and Y axes). The Stop Angle value changes, while changing the position of the **Horizontal** handle. You can change the value of the filed by selecting the current value and typing a new one. Then press the **Enter** key from the keyboard to confirm the new value. The change will be applied immediately on the shape. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

Notice: If you have converted the pie shape to curves by selecting the respective option of the right click menu, the handles will not be available in Node editing mode.

Create Trapezoids and Parallelograms

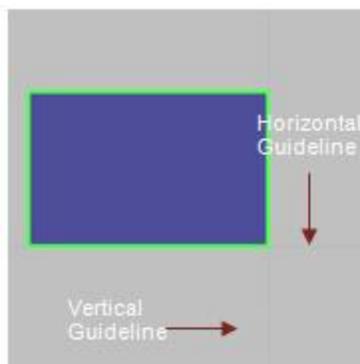
The **Create Trapezoids/Parallelograms** tool  allows you to design rectangles and **Trapezoid/Parallelogram** shapes that will be filled with stitches. You can create rectangle/square shapes, **Trapezoid/Parallelogram** shapes and complex shapes by combining them. To create a **Trapezoid/Parallelogram shape** you have to create a rectangle shape first, on which the **Trapezoid/Parallelogram** will be based. To create a rectangle you have to select the **Trapezoids/Parallelograms** tool  from the **Tools** toolbar or by pressing the **Shift + F6** shortcut keys from the keyboard and by click and dragging diagonally on the working space, draw the rectangle shape you want. By releasing the mouse click the shape will be placed on the position you have designed it.

By holding the **Ctrl** key pressed while drawing a shape, guidelines will appear on every 22.5 degrees of the X and Y axes, with center the point you click and dragged to draw the rectangle. By click and dragging diagonally you can draw a **Square**. Also, by click and dragging with the mouse based on the guidelines you can draw perfect parallelepiped that you can convert to **Trapezoid/Parallelogram** shapes later. While drawing the object, it will snap on the guidelines, allowing you to draw the shape along the guidelines.



Hold Ctrl key and guidelines will appear on every 22.5 degrees

By holding the **Alt** key pressed while drawing a rectangle, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled. The **Alt** key will work even if the ruler is disabled.



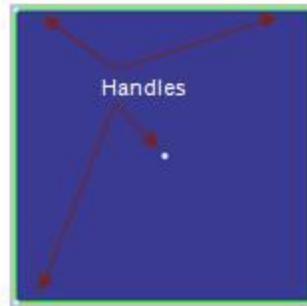
Hold Alt key - Horizontal and Vertical guidelines appear

By holding the **Shift** key pressed while drawing a rectangle the center of the rectangle will change and become the point from where you started drawing the rectangle.

By holding both **Ctrl** and **Shift** key pressed while drawing a rectangle, the center of the shape will be the point from where you started drawing the shape and the shape will be a square. This is helpful when you know the center of the design and you want to add a Trapezoid/Parallelogram shape that will have as center a specific point.

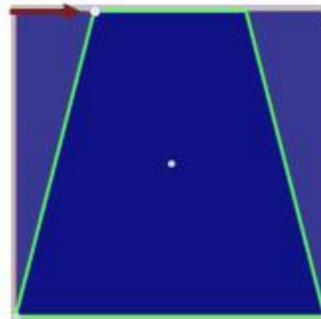
Node editing

There are some more editing abilities that Trapezoid/Parallelogram tool has and they are available in **Node editing** mode . You can change a rectangle shape you have created to Trapezoid/Parallelogram by selecting it and then selecting the **Edit shape nodes** option  from the **Tools** toolbar, to change to node editing mode. On the outline of the selected rectangle will appear four handles, one positioned at the **center** of the design, one on the **top left corner** of the object, one on the **top right corner** of the object and one on the **bottom left corner** of the object.



Four handles of Trapezoids/Parallelograms

By click and dragging the handle of the **top left corner** to the right, you can transform the rectangle to a **Trapezoid** shape. While dragging both top corners are moving towards to the center of the top side, creating a perfect Trapezoid. If you drag the top left handle until the middle of the top side you will create a triangle. Therefore with this tool you can create also triangle shapes.

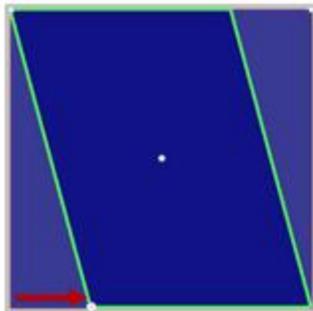


Drag top left corner handle to the right to create Trapezoid

You can also change the rectangle to Trapezoid by adjusting the **Slant** value from the **Tool options** toolbar.

If you select the rectangle object in Node editing mode the **Slant** options will appear on the **Tool options** toolbar. Also, the same option will appear if you select the rectangle object in Object editing mode (when you make a rectangle\lasso selection) together with some other useful sizing and positioning options. By changing the slant value you can specify the percentage of distance that the top left corner will have from its starting position. The **Slant** is a percentage value that can take values from 0 to 100. The 0 value will have as result the rectangle to remain unchanged. The 100 value will have as result a triangle because the two corner handle will be positioned at the middle of the top side. Therefore, to create a Trapezoid you have to insert values from 0 to 100. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

By click and dragging the handle of the **bottom left corner** to the right, you can transform the rectangle to a **Parallelogram**. While dragging the handle both bottom left and top right corners are moving towards the opposite corners creating a perfect Parallelogram.



Drag bottom left corner handle to the right to create Trapezoid

You can switch between **Trapezoid** and **Parallelogram** by checking **Trapezoid** checkbox Trapezoid from the **Tool options** toolbar and the opposite to switch back to **Parallelogram**. If you select the Trapezoid object in **Node editing** mode the **Trapezoid** option Trapezoid will appear on the **Tool options** toolbar. Also, the same option will appear if you select the rectangle object in **Object editing** mode (when you make a rectangle/lasso selection) together with some other useful sizing and positioning options.

By click and dragging the handle of the **top right corner** you can change the size of the Rectangle/Trapezoid/Parallelogram shape freely or based on guidelines by using the **Ctrl**, **Alt** or **Shift** keys (**Ctrl**, **Alt** or **Shift** keys has the same functionality that we described previously in this section). If you hold the **Shift** key pressed during the resizing process and shape is a rectangle, will be resized proportionally and become a square. If you hold the **Shift** key pressed during the resizing process the Trapezoid/Parallelogram will be resized proportionally based on the initial shape.

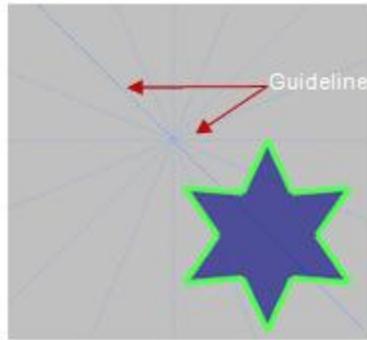
By click and dragging the handle that is located at the middle of the design you can move the object to the position you want.

Notice: If you have converted the Rectangle/Trapezoid/Parallelogram shape to curves by selecting the respective option of the right click menu, the handles will not be available in Node editing mode but you will be able to edit the nodes of the shape directly.

Create Stars

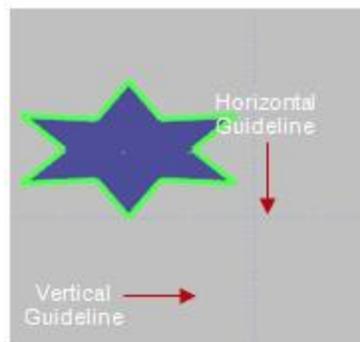
The **Create Star** tool  allows you to design Star shapes that will be filled with stitches. You can create any star shapes, complex shapes by combining them. To create a star you have to select the **Create Star** tool  from the **Tools** toolbar or by pressing the '**S**' shortcut key from the keyboard and by click and dragging diagonally on the working space, draw the star shape you want. By releasing the mouse click the shape will be placed on the position you have designed it.

By holding the **Ctrl** key pressed while drawing a star, guidelines will appear on every 22.5 degrees of the X and Y axes, with center the point you click and dragged to draw the star. By click and dragging diagonally you can draw a **Star** with equal dimensions to all its rays. Also, by click and dragging with the mouse based on the guidelines you can draw stars with various shapes. While drawing the object, it will snap on the guidelines, allowing you to draw the shape along the guidelines.



Hold Ctrl key and guidelines will appear on every 22.5 degrees

By holding the **Alt** key pressed while drawing a star, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

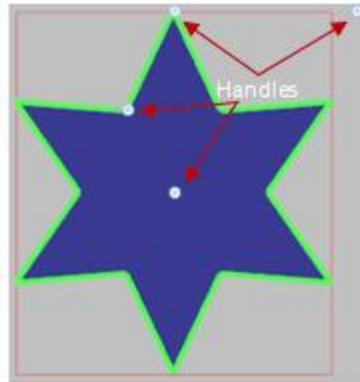


Hold Alt key - Horizontal and Vertical guidelines appear

By holding the **Shift** key pressed while drawing a Star the center of the star will change and become the point from where you started drawing the star.

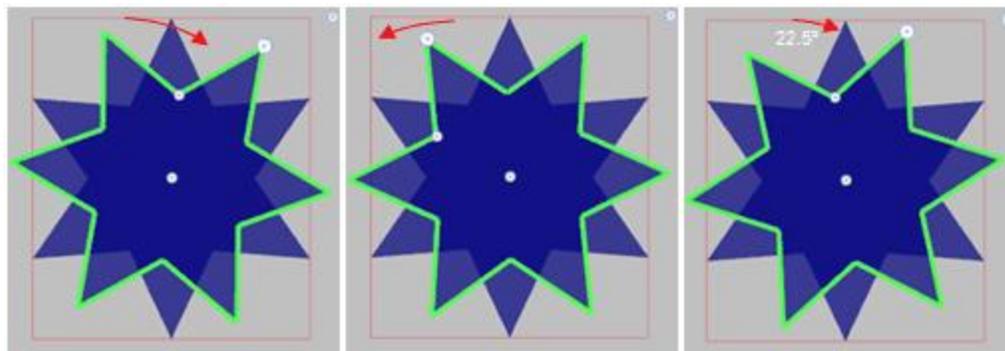
By holding both **Ctrl** and **Shift** key pressed while drawing a star, the center of the shape will be the point from where you started drawing the shape and the shape will be a perfect star. This is helpful when you know the center of the design and you want to add a Star shape that will have as center a specific point.

There are some more editing abilities that Star tool has and they are available in **Node editing** mode . You can change a star shape you have created by selecting it and then selecting the **Edit shape nodes** option  from the **Tools** toolbar, to change to node editing mode. On the outline of the selected star will appear four handles, one positioned at the **center** of the design, one on the **Vertical** axis, one on the **top right corner** of the object and one between two rays at the top left quarter of the shape.



Four handles of Star objects

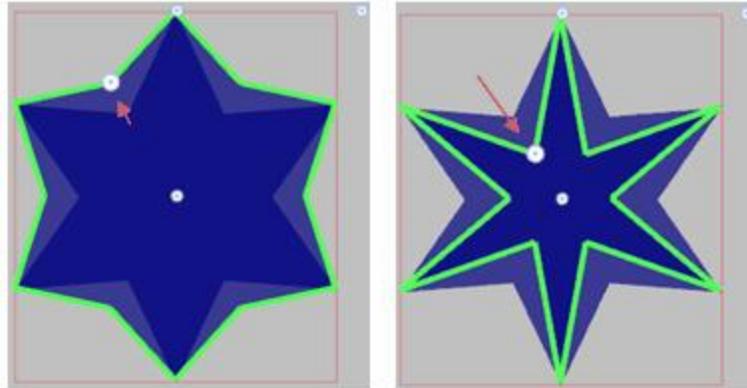
By click and dragging the handle of the **Vertical** axis you can change the angle of the star by rotating it clockwise (CC) or anti-clockwise (ACC). By dragging the handle to the right you can rotate the Star shape clockwise. On the other hand by dragging the handle to the left you can rotate the shape anti-clockwise. If you hold the **Shift** key while dragging, the mouse will snap on every 22.5o degrees allowing you to make precise rotations.



CC Rotation - ACC Rotation - Shift 22.5o snap Rotation

By click and dragging the handle of the corner you can change the size of the star shape freely. If you hold the **Shift** Key pressed during the resizing process the star will be resized proportionally and become a perfect star.

By click and dragging diagonally the handle between the two rays at the top left quarter of the shape you can change the size of all rays at the same time. Mainly you can change the distance of the ray (the base) from the center of the design.

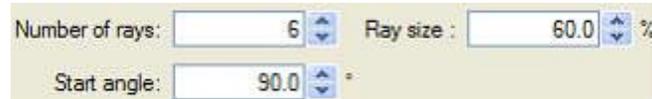


Change size of rays Increase depth – Decrease depth

By changing the position of those three handles you can make precise changes on the size and shape of the star you have created.

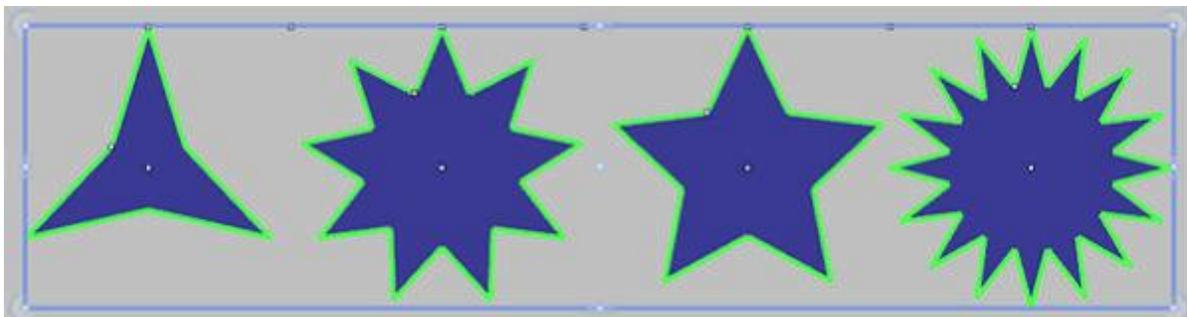
By click and dragging the handle that is located at the middle of the design you can move the object to the position you want.

You can also define the size of ray, the number of rays and the starting angle of the Star from the **Tool options** toolbar. If you select the star object in Node editing mode three options will appear on the **Tool options** toolbar related with the Star object. Also, the same option will appear if you select the star object in Object editing mode (when you make a rectangle\lasso selection) together with some other useful sizing and positioning options. Those options are the **Number of rays**, the **Ray size** and the **Start angle**.



Tool options - Number of rays, Ray size, Start angle

With the **Number of ray's** value you can set the number of rays you want the selected star object to have. The default value of rays is 6; therefore when you insert a star shape on the working area, it always comes with 6 rays.



3 Rays – 9 Rays – 5 Rays – 16 Rays

The minimum value of Number of ray's option is 3, because with less than 3 rays we cannot create a star object, and the maximum value is 16. You can change the value of the filed by selecting the current value and typing a new one. Then press the **Enter** key from the keyboard to confirm the new value. The change will be

applied immediately on the shape. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

With the **Ray size**  you can define the percentage distance between the center of the Star shape and the line that connects two sequential ray vertexes of the star. Therefore the 0 value is the center of the Star and the 100 value will be on the line that connects two sequential ray vertexes. If you set the Ray value to 100 the star will become a polygon. You can change the value of the field by selecting the current value and typing a new one. Then press the **Enter** key from the keyboard to confirm the new value. The change will be applied immediately on the shape. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively. By adjusting this value you can set the exact dimensions you want the star object to have.

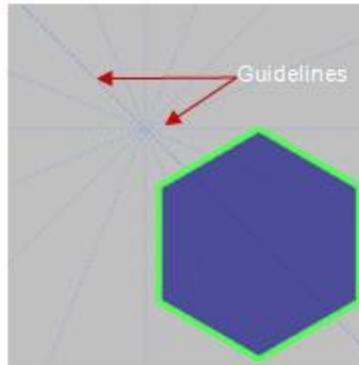
With the **Start angle**  you can define the starting position of the angle that the star is making based on virtual X and Y axes. The value of the Start angle is in degrees; therefore, if the Start angle value is 90 the starting position of the angle will be the top point of the ellipse, which is also the initial position of the handle (the same with 90 or 0 degrees on X and Y axes). You can change the value of the field by selecting the current value and typing a new one. Then press the **Enter** key from the keyboard to confirm the new value. The change will be applied immediately on the shape. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

Notice: If you have converted the star shape to curves by selecting the respective option of the right click menu, the handles will not be available in Node editing mode.

Create Polygons

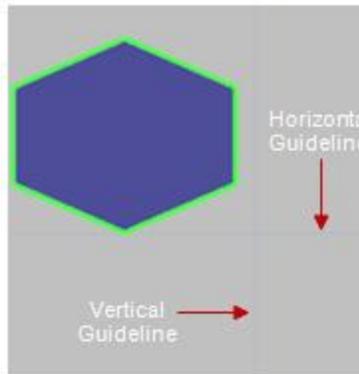
The **Create Polygon** tool  allows you to design **Polygon** shapes that will be filled with stitches. You can create any polygon shape and complex shapes by combining many polygon shapes. To create a polygon you have to select the **Create Polygon** tool from the **Tools** toolbar or by pressing the 'Y' shortcut key from the keyboard and by click and dragging diagonally on the working space, draw the polygon shape you want. By releasing the mouse click the shape will be placed on the position you have designed it.

By holding the **Ctrl** key pressed while drawing a polygon, guidelines will appear on every 22.5 degrees of the X and Y axes, with center the point you clicked and dragged to draw the **Polygon**. By click and dragging diagonally you can draw a **Polygon** with equal dimensions to all its sides. Therefore depending on its sides you can create a perfect hexagon a perfect pentagon and so forth. Also, by click and dragging with the mouse based on the guidelines you can draw different variations of polygons. While drawing the object, it will snap on the guidelines, allowing you to draw the shape along the guidelines.



Hold Ctrl key and guidelines will appear on every 22.5 degrees

By holding the **Alt** key pressed while drawing a polygon, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

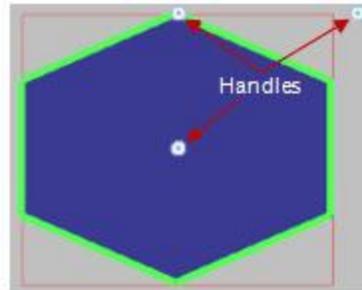


Hold Alt key - Horizontal and Vertical guidelines appear

By holding the **Shift** key pressed while drawing a **Polygon** the center of it will change and become the point from where you started drawing the polygon.

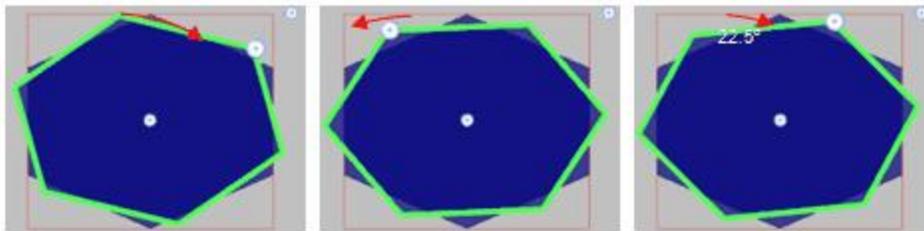
By holding both **Ctrl** and **Shift** key pressed while drawing a Polygon, the center of the shape will be the point from where you started drawing the shape and the shape will be a perfect Polygon. This is helpful when you know the center of the design and you want to add a polygon shape that will have as center a specific point.

There are some more editing abilities that Polygon tool has and they are available in **Node editing** mode . You can change a polygon shape you have created by selecting it and then selecting the **Edit shape nodes** option  from the **Tools** toolbar, to change to node editing mode. On the outline of the selected polygon will appear three handles, one positioned at the **center** of the design, one on the **Vertical** axis and one on the **top right corner** of the object.



Three handles of Polygon objects

By click and dragging the handle of the **Vertical** axis you can change the angle of the polygon by rotating it clockwise or anti-clockwise. By dragging the handle to the right you can rotate the Polygon shape clockwise. On the other hand by dragging the handle to the left you can rotate the shape anti-clockwise. If you hold the **Shift** key while dragging, the mouse will snap on every 22.5 degrees allowing you to make precise rotations.



CC Rotation - ACC Rotation - Shift 22.5o snap Rotation

By click and dragging the handle of the corner you can change the size of the polygon shape freely. If you hold the **Ctrl** Key pressed during the resizing process the polygon will be resized proportionally and become a perfect polygon.

By changing the position of those two handles you can make precise changes on the size, shape of the polygon and rotate it also.

By click and dragging the handle that is located at the middle of the design you can move the object to the position you want.

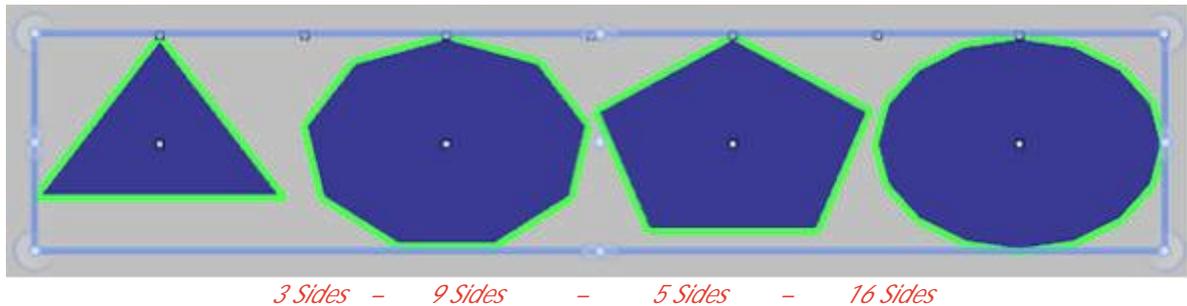
You can also define the number of sides and the starting angle of the Polygon from the **Tool options** toolbar. If you select the polygon object in Node editing mode two options will appear on the **Tool options** toolbar related with the Polygon object. Also, the same option will appear if you select the polygon object in Object editing mode (when you make a rectangle\lasso selection) together with some other useful sizing and positioning options. Those options are the **Number of sides** and the **Start angle**.



Tool options - Number of sides, Start angle

With the **Number of side's** value you can set the number of sides you want the selected polygon object to have. The default value of sides is 6; therefore when you insert a polygon shape on

the working area, it always comes with 6 rays. The minimum value of Number of side's option is 3, because with less than 3 sides we cannot create a polygon object, and the maximum value is 16. You can change the value of the field by selecting the current value and typing a new one. Then press the Enter key from the keyboard to confirm the new value. The change will be applied immediately on the shape. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.



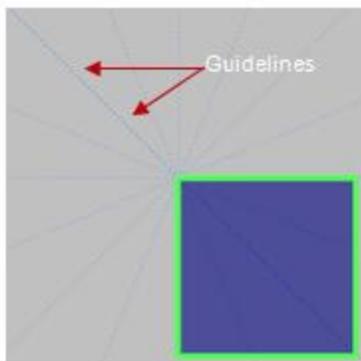
With the **Start angle** you can define the starting position of the angle that the Polygon is making based on virtual X and Y axes. The value of the Start angle is in degrees; therefore, if the Start angle value is 90 the starting position of the angle will be the top point of the polygon, which is also the initial position of the handle (the same with 90o degrees on X and Y axes). You can change the value of the field by selecting the current value and typing a new one. Then press the Enter key from the keyboard to confirm the new value. The change will be applied immediately on the shape. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

Notice: If you have converted the polygon shape to curves by selecting the respective option of the right click menu, the handles will not be available in Node editing mode.

Create Rectangles

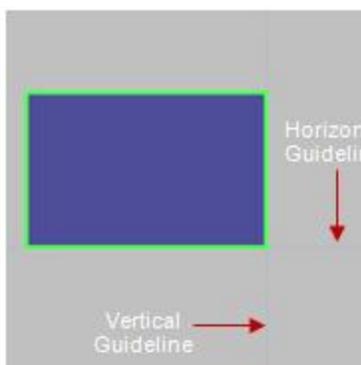
The **Create rectangle** tool  allows you to draw rectangle shapes that will be filled with stitches. You can create any rectangle shape but also squares and complex shapes by combining rectangle shapes. To create an ellipse shape you have to select the **Rectangle tool**  from the **Tools** toolbar or by pressing the **F6** shortcut key from the keyboard and by click and dragging diagonally on the working space, draw the rectangle shape you want. By releasing the mouse click the shape will be placed on the position you have designed it.

By holding the **Ctrl** key pressed while drawing a shape, guidelines will appear on every 22.5 degrees of the X and Y axes, with center the point you click and dragged to draw the rectangle. By click and dragging diagonally you can draw a **Square**. Also, by click and dragging with the mouse based on the guidelines you can draw perfect parallelepiped shapes. While drawing the object, it will snap on the guidelines, allowing you to draw the shape along the guidelines.



Hold Ctrl key and guidelines will appear on every 22.5 degrees

By holding the **Alt** key pressed while drawing a rectangle, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.



Hold Alt key - Horizontal and Vertical guidelines appear

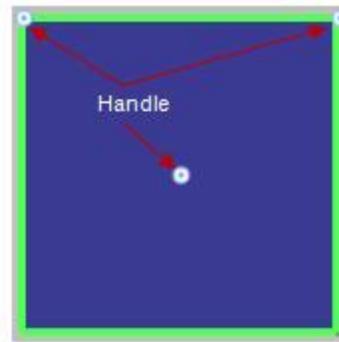
By holding the **Shift** key pressed you can draw a rectangle from its center outward while drawing a rectangle. When you press the Shift key the center of the design changes and become the point from where you started drawing the rectangle.

By holding both **Ctrl** and **Shift** key pressed while drawing a rectangle, the center of the shape will be the point from where you started drawing the shape and the shape will be a Square. This is helpful when you know the center of the design and you want to add a Circle that will have as center specific point.

Node editing

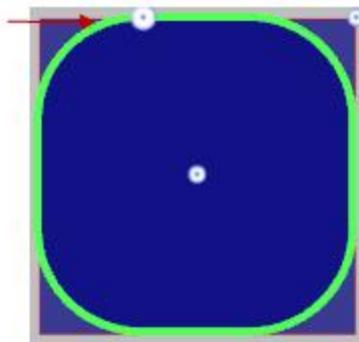
There are some more editing abilities that rectangle tool has and they are available in **Node editing** mode

. You can round the corners of a rectangle or square you have created by selecting it and then selecting the **Edit shape nodes** option  from the **Tools** toolbar, to change to node editing mode. On the top side of the selected rectangle will appear three handles, one positioned on the left corner, one on the middle and one on the Right corner. By click and dragging the handle of the left corner you can round the corners of the rectangle.



Four handles of Rectangles

By click and dragging the handle of the left corner you can round the corners of the rectangle. The roundness applies to all four corners of the rectangle.



Drag left handle to add roundness

You can also define the **roundness** of the rectangle from the **Tool options** toolbar. If you select the rectangle object in Node editing mode the **Roundness** options will appear on the **Tool options** toolbar. Also, the same option will appear if you select the rectangle object in Object editing mode (when you make a rectangle\lasso selection) together with some other useful sizing and positioning options. By changing the roundness value you can increase the roundness of the rectangle's corners. The **Roundness** is a percentage value that can take values from 0 to 100. The 0 value will have as result normal corners and no roundness. The 100 value will have round corners to their full extend. Therefore, by giving a specific value you can produce the result you want. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

By click and dragging the handle of the **top right corner** you can change the size of the Rectangle shape freely or based on guidelines by using the **Ctrl**, **Alt** or **Shift** keys (**Ctrl**, **Alt** or **Shift** keys has the same functionality that we described previously in this section). If you hold the **Shift** key pressed during the resizing process the shape will be resized proportionally and become a square.

By click and dragging the handle that is located at the middle of the design you can move the object to the position you want.

Notice: If you have converted the rectangle shape to curves by selecting the respective option of the right click menu, the handles of the top left and right corner of the rectangle will not be available in Node editing mode.

Designing tools' options

Tool options pane, provides immediate access to the properties of every object. Using the available controls we can customize the properties of every object. The pane is content sensitive; it shows the properties of the selected object. The same usability exists also while designing. Select a design tool and before you start designing, you can see a set of options appearing on tool options pane. These options can be customized either before using the tool or afterwards. Not all design tools have customizable options.

In case that the pane is not visible you can re-enable it by pressing **Tool options** option of menu **View - >Toolbars**. Whenever you select an object or a tool that has options such as Text tool the **Tools options** toolbar is updated to show the additional options that are available for the selected object or tool. There is a basic set of options that appears for all objects. The standard options that will appear when you select an object are:

- ✓ The **X** and **Y** position of the object in the design area based on the **Ruler**
- ✓ The dimensions of the selected object (**Width** and **Height**)
- ✓ The **Horizontal - Vertical** scale of the object
- ✓ If Scaling operations will be proportional or not.
- ✓ Duplicate object.
- ✓ Mirror the object, based on the X or Y axis.
- ✓ Rotate the object.
- ✓ The **thickness** of the border.

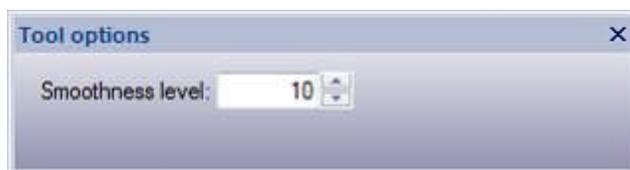


Tool Options pane

There are also some options that appear only for specific types of objects. If you create a free hand design or insert a star shape for example, you will view some extra options appearing on the **Tool options** toolbar. Each of these options contains numerical values that can be changed according to your needs. In this section we will discuss the standard options that appear for all objects. The special options that each design tool provides are analyzed separately in the section that describes any of the design tools.



Extra options for Star shape



Extra options for freehand design

By changing the **X and Y values** you can reposition the object inside the design area. The X and Y axes are based on the X and Y rulers that exists on the Left and Top sides of the design area. The position of the selected object is calculated based on its center. Therefore any inserted value in the X and Y fields will define the position you want the center of the object to be located in the design area. In order to change these values, type the value you like in the respective fields and then press enter or click outside of the field. The

change is automatically previewed in the design area. You can also use the arrows next to the fields to change the values.

By changing the **Width** and **Height** values you can change the dimensions of the selected object. The values represent the exact dimensions of the object and not the approximate dimensions that you are viewing on the selection rectangle whenever you select an object. To change the Width and Height values, you have to click inside the relative field and then type the value you like. Press **Enter** from the keyboard or click outside the field to confirm the value you have entered. Also you can increase or decrease the value by pressing the arrow buttons next to the field. In case that the option **proportional** is checked and you select to scale one dimension the program automatically adjusts the other dimension in order to keep the same analogy between the horizontal and the vertical size.

The next 2 fields (**Scale X-Y (%)**) provide the capability to scale the object by providing a percentage of scale according to the initial size. You can scale the object according to the X dimension or according to Y dimension. In case that the option **proportional** is checked and you select to scale one dimension the program automatically adjusts the other dimension in order to keep the same analogy between the horizontal and the vertical size.

Duplicate object, press this button and an exact duplicate of the object will be created slightly moved from the initial object.

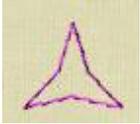
Mirror object, the next 2 buttons can be used to Mirror the original object based on the Horizontal or Vertical axis. It is like flipping the object around a horizontal or vertical axis that is located on the horizontal or vertical center of the object.

Rotate object, using this field you can set a number in degrees to rotate the selected object. Type a numeric value or use the arrows next to the field to specify one, press enter or click out of the control. The object is automatically rotated clockwise for the degrees that you have specified.

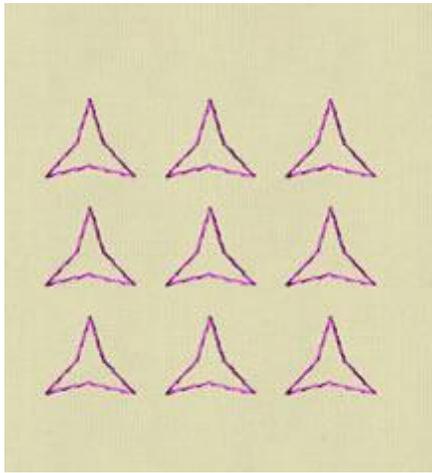
The last option you can adjust is the **Outline thickness**. By changing this value you can add an outline on the selected object or change the width of an existing outline. If the value of the Outline width field is 0 means that the selected object does not have a border. By changing the value to any value greater than 0, an outline will be added to the object with the specified width. You can change the value of the **Outline** thickness by highlighting the current value and then typing the new one. The old value will disappear and the new one will take its place once you press **Enter** key from the keyboard or click outside the field. The value change affects the outline of the selected object. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively. If you want you can remove the border of the selected object by changing the Outline thickness value to 0.

Array tool (Circular-Rectangular)

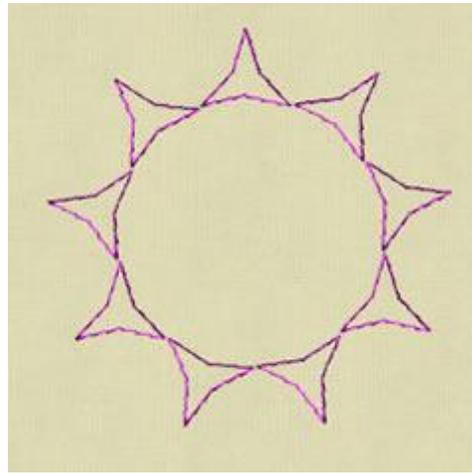
Using **Array tool** you can create **Rectangular**  or **Circular**  arrays. The array creates copies of one or more objects and places them in a patterned way (Circular - Rectangular). Select one or more objects and with array tool you can multiply them along the design area and create unique formations.



Starting from a simple shape you can create a **Rectangular** or **Circular** arrays like these on the following figures.

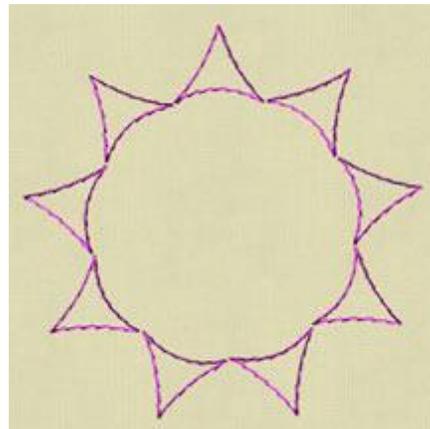
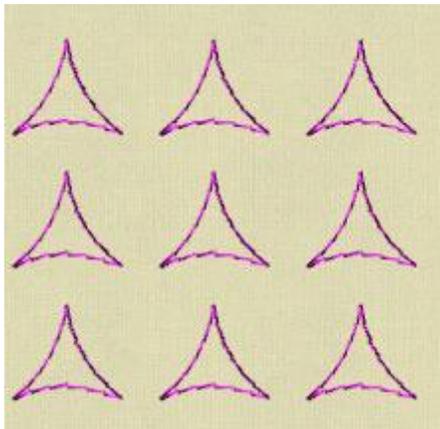


Rectangular array



Circular array

Array tool can be used in combination to **Cloned** objects. While applying the array you have the ability to mark the created copies of the original object as **Clones**. In this case if you reshape any of the copies, all other clones will be affected as well. The arrays of the above figures have been reshaped, simply by reshaping any of the copies and now they look like in the figure below.



The shape of all clones has changed.

Using Array tool.

You can find both **Rectangular** and **Circular** array shortcut icons on **Tools** toolbar that is located on the left side of the application window.



The one that is visible on the toolbar can be used by a single click. In order to see both tools, **click and hold** on the icon. **Holding left key pressed, move your mouse** over the one that you want to use. Once it is highlighted, release the mouse and it is activated. The tool that has been selected is also the currently visible on tools toolbar, in order to be able to access it the next time by a single click.

Array icons aren't enabled when nothing is selected. You must first select one or more objects. After clicking on any of the array icons a preview of how the array will look like will appear. Now you are in **preview array** mode. You can customize the array and then apply it.

In some cases while in **preview array** mode you can get carried away and think that you can use other tools or change design mode. The array hasn't been applied until you press **Apply array** button. Anyway if you by mistake try to select any other **design tool** or change **design mode** before you have applied the array, a warning about applying array will appear. At this point if you don't want to apply the array yet, select **No** and you are brought back to the state before the array. If you select **Yes** the array will be applied with its current configuration.

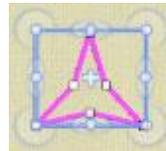


Apply array

Using Array

At this point we will present the basic steps to apply an array. In the following sections you more detailed information on how to customize an array before applied and how Array tool can be combined will Cloned objects in order to change the pattern of any created array.

1. Select one or more objects



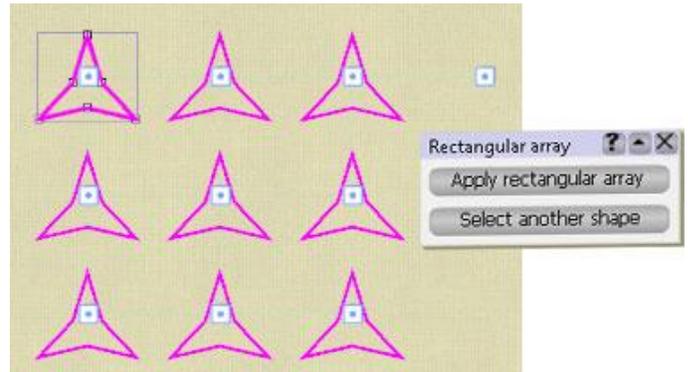
2. Click on any of the **array** icons.



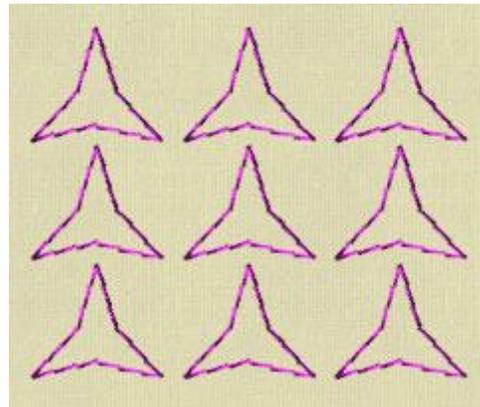
3. A virtual preview of how the array will be appears.
4. A floating window has appeared on top of the design area. While using array tool this dialog is always visible.
5. You can always alter the selection using "Select another shape" button and then make a new selection.
6. At this point you can customize the array (adjust number of horizontal - vertical copies, distance between them and rotate - mirror any of the

copies. These customizations will be described in detail in following sections.

- Finally when you are satisfied by the appearance of the array, press **Apply rectangular array** button in order to apply the array.



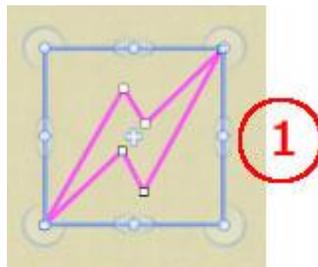
- The Array has been applied.



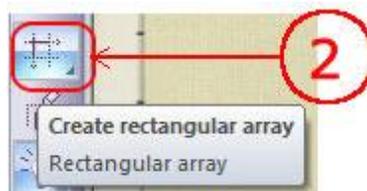
Rectangular array

Rectangular array tool creates copies that are placed in a Rectangular way. The following example will provide you the basic knowledge in order to use array tool.

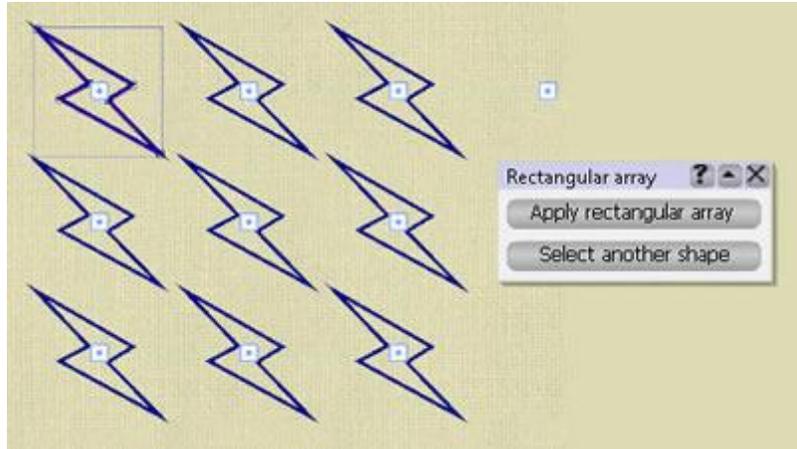
- Select one or more objects.



- Click on Rectangular array icon.

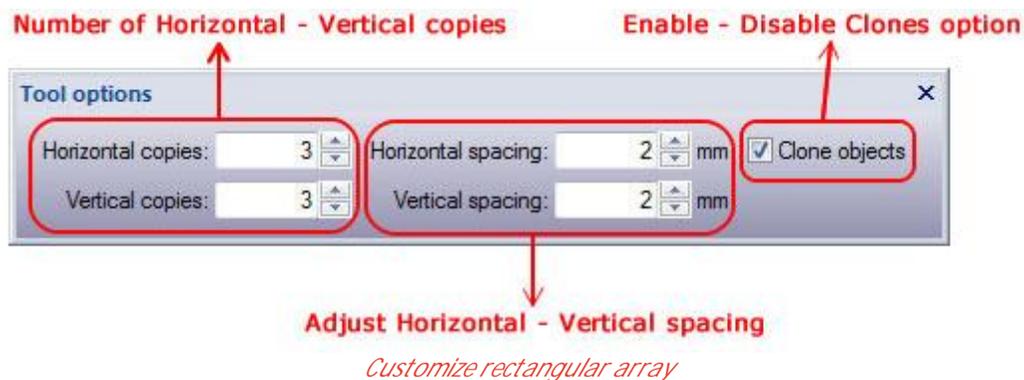


- A virtual preview of how the array will be will appear.



Before we apply the array we can customize it in various ways.

First way: Using the options that appear on **tool options** toolbar as shown in the following figure.



Number of Horizontal and Vertical Copies

In these two fields you can specify the number of copies that you want to be created in the horizontal axis and in the vertical axis.

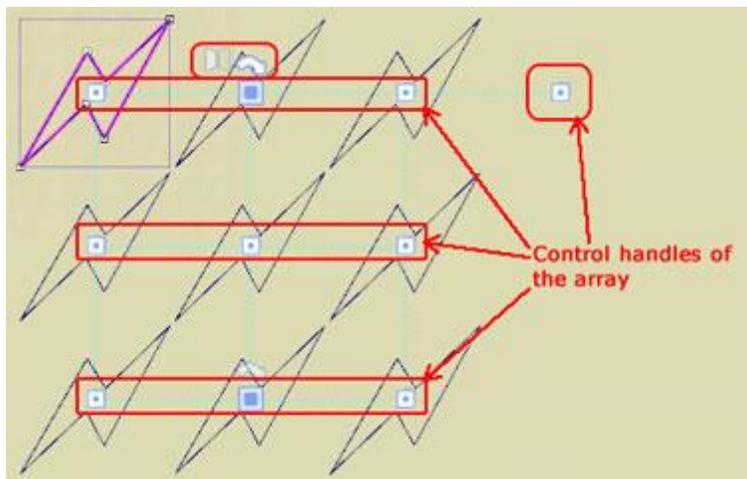
Horizontal and Vertical spacing

In this field you can specify the distance between the horizontal and the vertical copies of the array that will be created.

Clone objects

If this option is enabled, the copies of the original object will be clones. This means that we can reshape them all together by simply reshaping one of them. This option can save us a lot of time and it is also a tool that can produce unique embroidery designs. Any shape transformation you make, on any of the cloned copies, is applied to all of them immediately.

Take your time and adjust the properties of the created array. We can also adjust the properties of the array using the various visual handles that appear when we are in preview array mode.



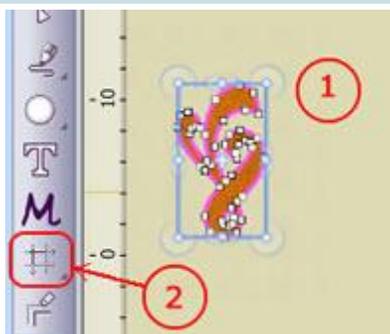
Using these control handles we can:

- Change the orientation of the copies.
- Adjust number of copies.
- Mirror copies.
- Change the distance between copies.
- Move the array.
- Rotate the array.

In the following sections we will present the usage of these control handles.

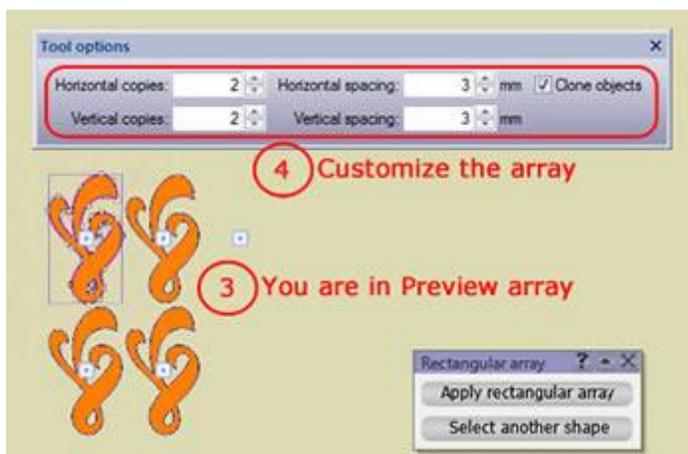
Basic customizations

Create a design to multiply and then press **Rectangular array**.

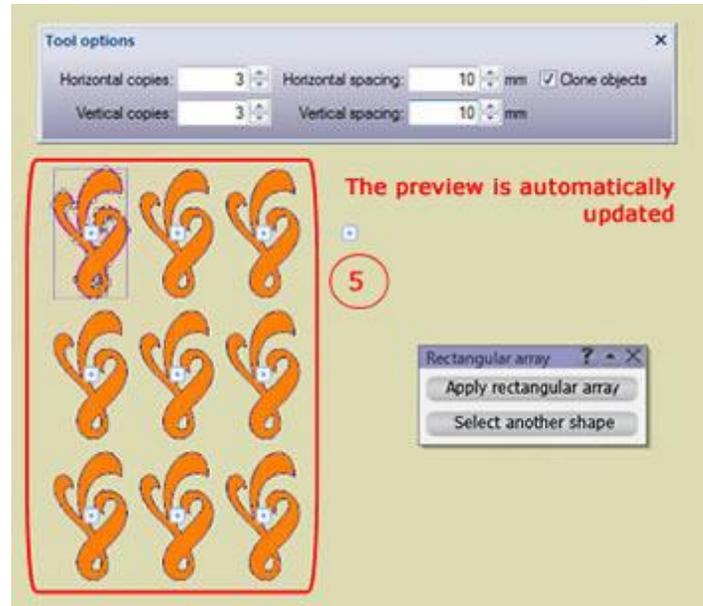


You are in **preview array** mode. The selection has been multiplied, the array is not applied, it is just a preview.

Select number of copies and Horizontal - Vertical distance.



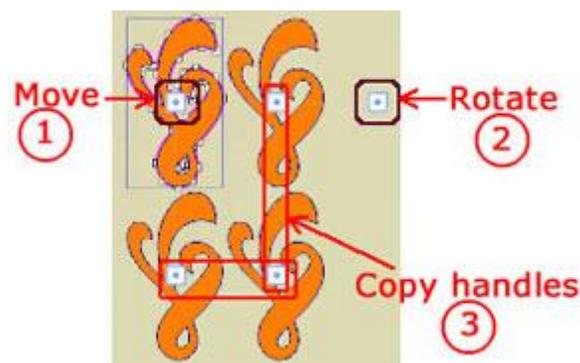
The preview is automatically updated.



At this point we will present all the ways to customize the array using mouse and keyboard combinations. When in **preview array** mode several control handles appear on top of the array. Some of them provide different functionality than the others. For example, as you can see on the following figure you can use:

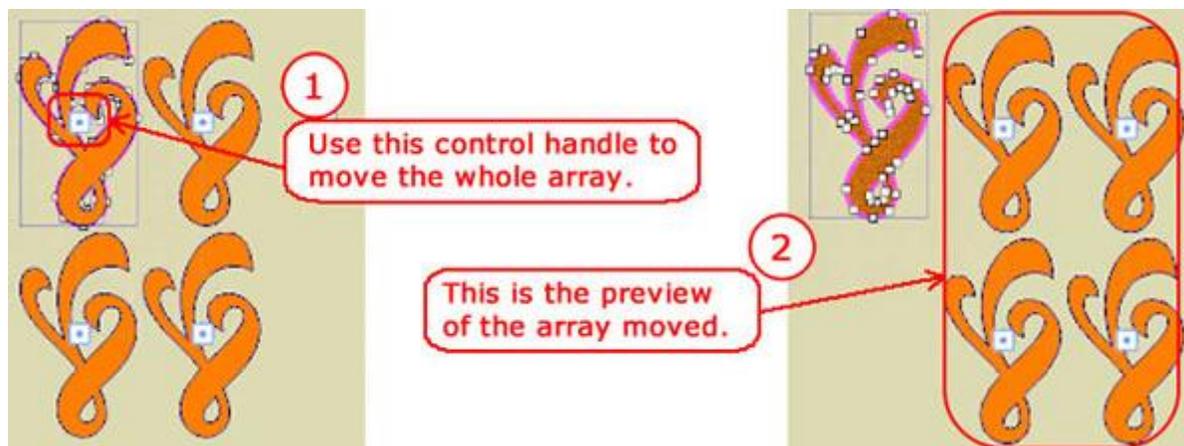
- **Handle 1** in order to move the whole array to another position.
- **Handle 2** All the handles that are no top of array items except the original can be used in order to change the horizontal - vertical distance.
- **Handle 3** to rotate the whole array.

Besides these handles there are also some keyboard shortcut that we can use in order to perform array customizing tasks. We can hold Shift key and any Control handle and the by dragging the mouse we can manage number of Horizontal - Vertical lines. Some handles appear on top of any copy and you can use them to rotate - mirror copies. These option will be described in the following section "Advanced Customizations"



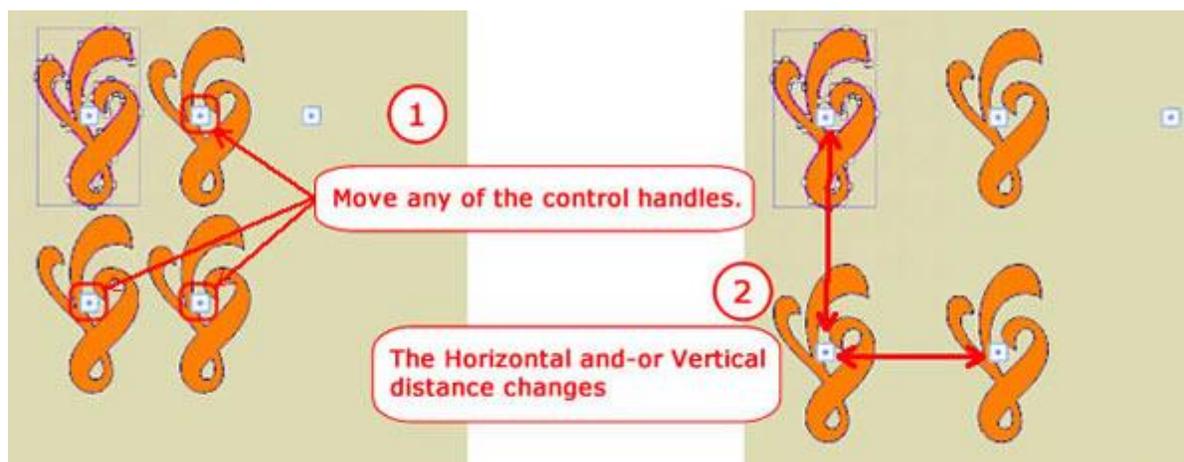
Move array

The first upper **left copy** is actually the initial object. The control handle that is on top of it can be used to move the whole array to another place. Only the part that is visible on the preview will remain after we apply the operation. As you can see on the moved part the initial part that has no control on top of it is not part of the array anymore.



Change horizontal and vertical distance

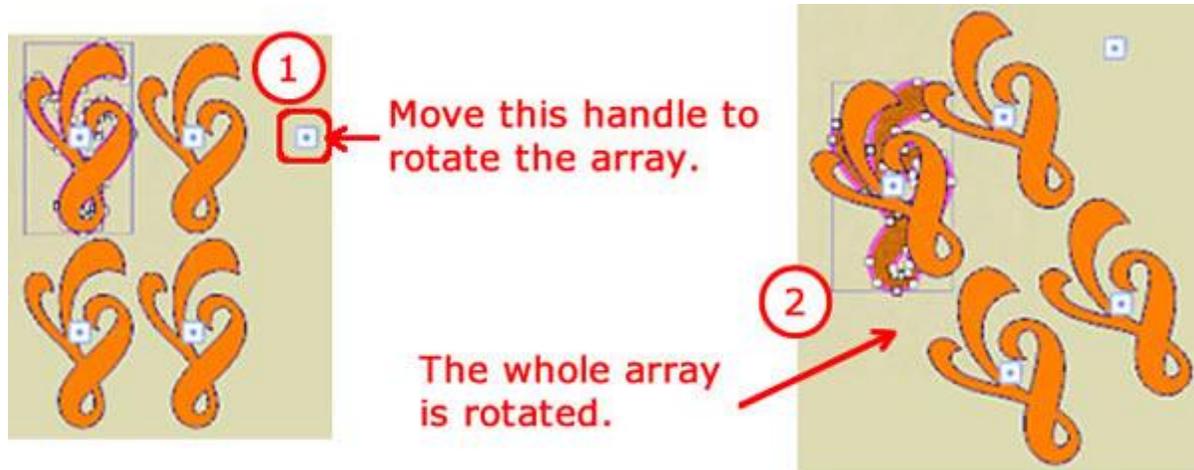
Move any of the control handles besides the top left one and you change the horizontal and vertical distance. See figure below.



If you hold **Ctrl key** while changing horizontal and vertical distance, the horizontal and vertical distance is kept the same.

Rotate array

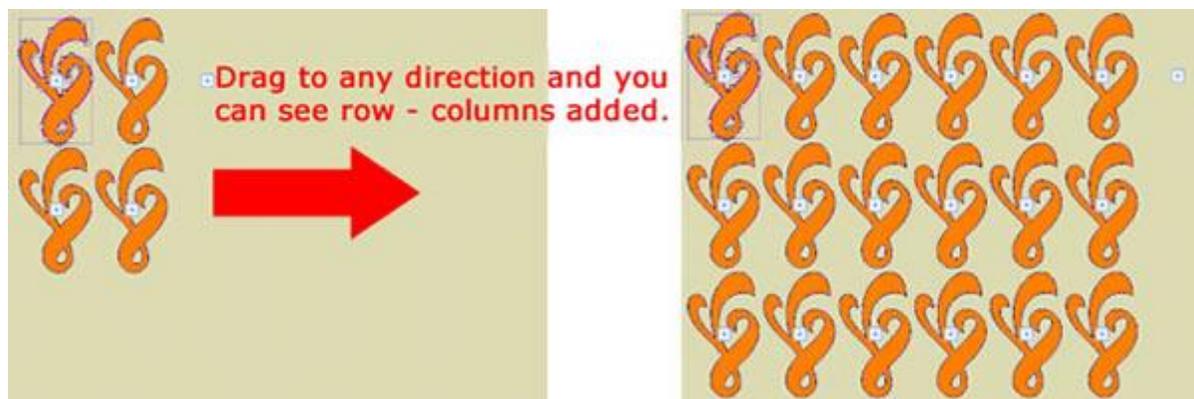
You can use this handle that is outside of the array grid in order to rotate the whole array.



Advanced Customizations

Change number of Horizontal and Vertical copies

You can easily change number of **Horizontal** and **Vertical** lines. Hold **Shift** key and then click and drag from any control handle to any direction you like. Drag to the right and you can see columns added. Drag to the left and they are removed. Drag to the bottom to add more lines and Diagonally to add Rows and Columns at the same time. The distance between the copies remains the same. Take this in consideration while dragging; you have to drag for a distance such as the distance between the copies, in order to create another row or Column.

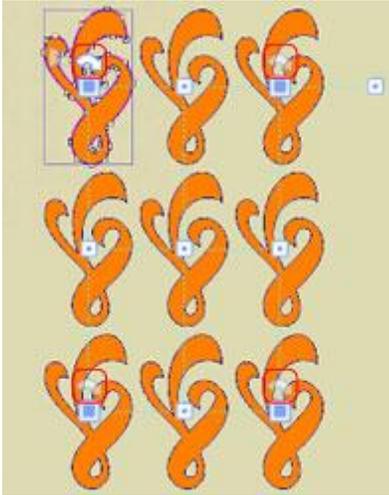


Change the orientation of copies and create mirrored objects

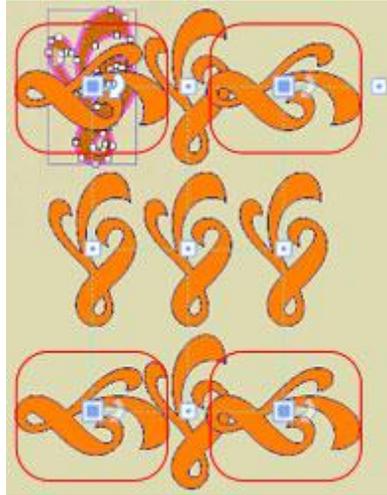
A very nice way to create unique patterns in your designs is by using different orientation or use mirrored copies in arrays. If you place your mouse over any of the control handles these 2 handles appear . These handles appear highlighted not only on the current clone but also on every 2 clones to any dimension (Horizontal-Vertical). It is like a 2x2 table pattern, the clone after the next of the clone horizontally and vertically is affected.

Rotate copies

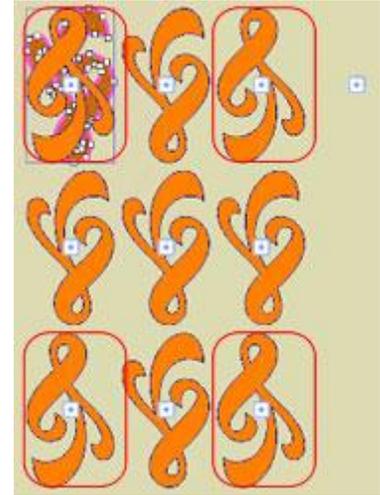
The first handle is a rotate handle . Change the orientation of the clones with 90 degrees step. With a simple left click you rotate the clone 90 degrees. Click once more to rotate again.



Place your mouse over any of the control handles. You can see all the affected copies with a highlighted handle over them, array



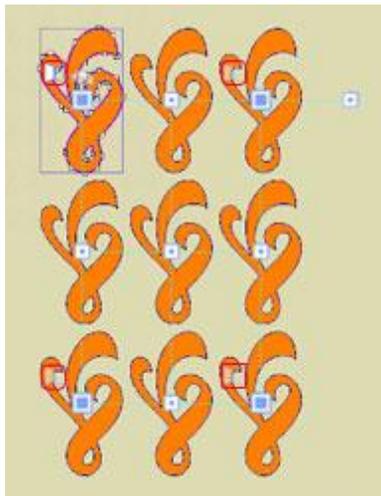
Click once on the rotate handle and the copies are rotated 90 degrees.



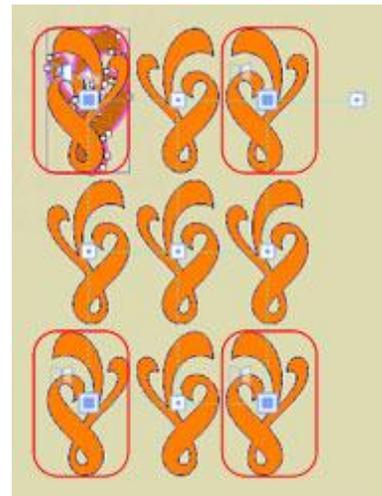
Click once more and they are rotated again 90 degrees.

Mirror copies

Next to the rotate handle there is a mirror handle , place your mouse over it. On this copy and on all other affected copies the same handle appears highlighted. Click once to Mirror all these copies.

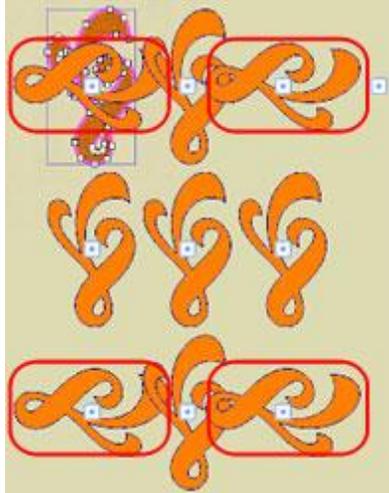


Place the mouse over any of the control handles, all affected copies are highlight too.

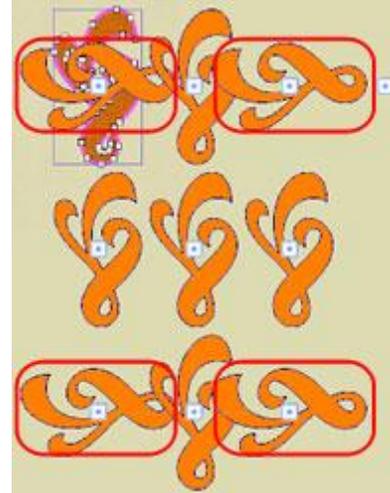


Left click once and all affected copies are mirrored.

You can mirror any copy in any state. Rotate any copy and then apply mirror, now it is mirrored vertically. The mirror is applied based on the horizontal center of the selected object.



Place the mouse over any of the control handles, all affected copies are highlight too.

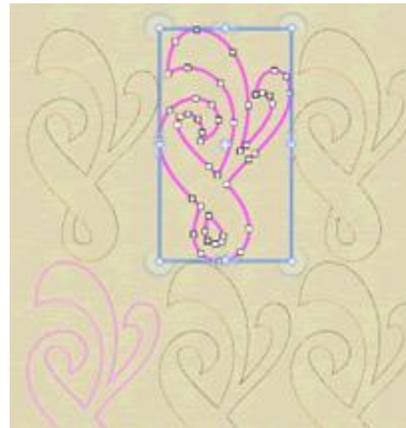


Left click once and all affected copies are mirrored.

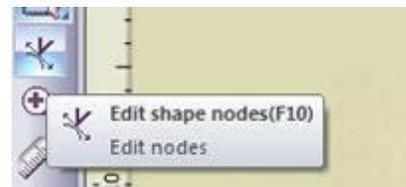
Edit clones

Once we have applied an array and we have enabled Clone objects option the we can edit the pattern of the array by reshaping any of the clones. In order to change the shape of all objects you have to follow the steps bellow:

Select any of the cloned objects.



Click on **Edit shape nodes** mode on **Tools toolbar** (F10 keyboard shortcut), to switch to **Edit Shape nodes** mode



Reshape the object by click and dragging the node segments to the direction you want.

The reshaping has been automatically applied to all clones.



There is also the functionality to select all clones and to detach one or more clones. More information about Cloned objects can be found in **Add new objects as clones** section.

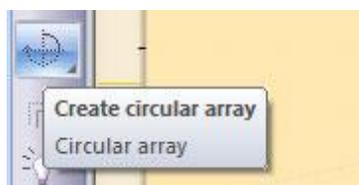
Circular array

The **Circular array** tool, works in the same as the rectangular, creates copies of the initial design, but the copies are placed on an **arc-circle**, instead of a rectangle. A virtual circle is created and the center of the circle is automatically placed at the center of the circle. Later in this section we will present how to change the virtual center and the size of the circle.

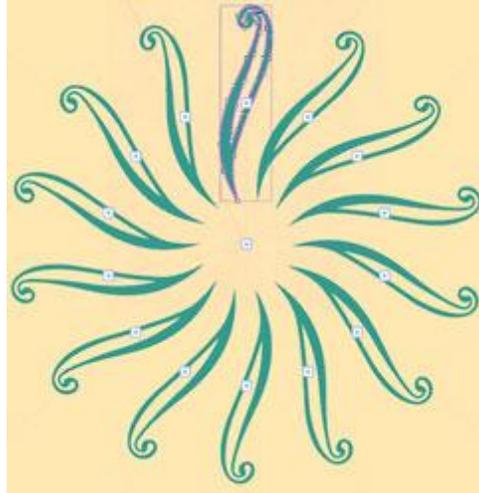
Select one or more objects that you want to multiply



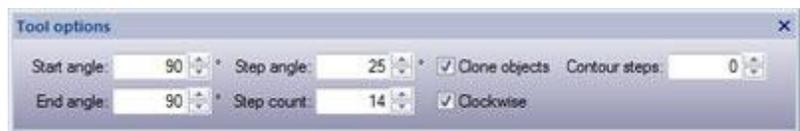
Press **Circular array** icon 



A virtual preview of the array appears.

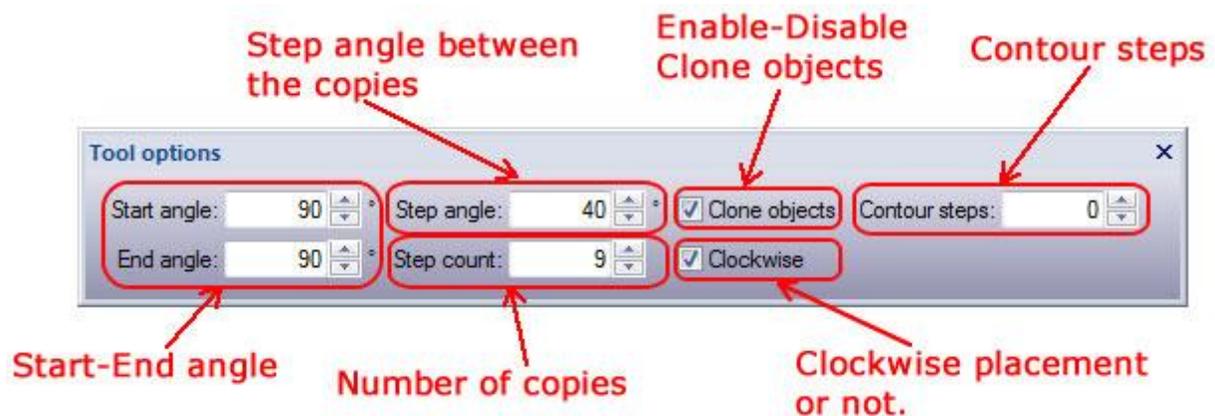


Customize the properties of the array.



Customize Circular array options

- **Start-End** angle
- The **angle** between the copies
- The **number of copies**
- Enable - Disable Clone objects.
- The rotation that the clones will be applied.
- Contour steps



Customize circular array

- **Select start/end angle**
With this option you can specify where the copies of the selected object(s) will be placed on the arc/circle. It is like selecting a part or whole circle to be filled with copies of the initial object. When setting **Start-End angle** the **Step count** option is also changing accordingly based on the size of the arc.
- **Step angle**

In this field you can specify the **angle step** (degrees) that each copy of the circular array will be placed on. For example if you type 150 degrees, every copy of the circular array will be placed on the arc with 150 degrees between them, until the end of the specified "start/end angle". The **Step angle** that you will specify affects also the number of object/design copies that will be added on the **Circular array**. The **Step angle** and the **Step count** options are connected and the value specified in the first options affect the value of the second and the opposite. The valid values of Step angle option is from 0o to 359o.

- **Step count**

In this field you can specify the number of copies that you want to be placed in the circular array, between the specified **start-end** angles. For example if you set **Step count** to 5 copies, it will place 5 copies of the selected object(s) on the specified **start/end** angle by adjusting the **Step angle** accordingly. The **step count** that you specify affects also the angle step (degrees) that each copy of the circular array will be placed on. The **Step angle** and the **Step count** options are connected and the value specified in the first options affect the value of the second and the opposite. Also the value of **Step count** from the size of "start/end angle" that you have specified.

- **Clockwise**

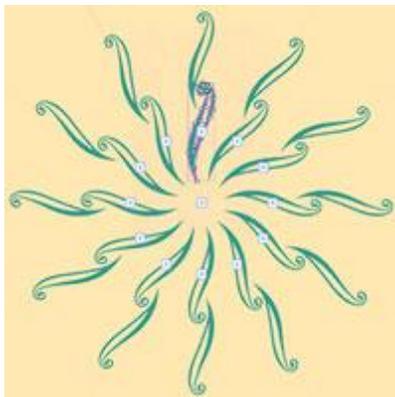
With this checkbox you can specify if you want the circular array to be created clockwise or anticlockwise. If the **Clockwise** option is checked, (this is the default option) then the objects/designs will be placed on the circular array with clockwise order and the opposite if it is not.

- **Clone objects if possible**

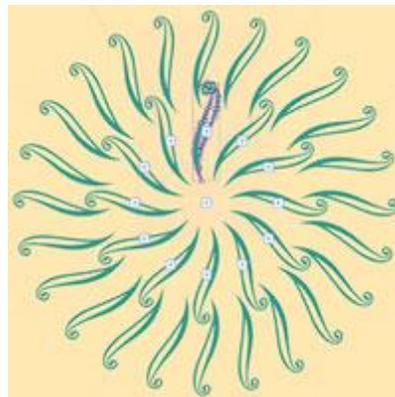
If this option is enabled, the copies of the original object will also be clones. This means that we can reshape them all together by simply reshaping one of them. This option saves us a lot of time and it is also a tool that can produce unique embroidery designs. Any shape transformation that you will make on any of the cloned objects/designs will be applied to all of them immediately.

- **Contour steps**

Contour lines are evenly spaced concentric lines on the outside border of an circular array. Using this option we select the number of the added contour lines. This way we can repeat the circular array. When contour steps are added an extra property appears



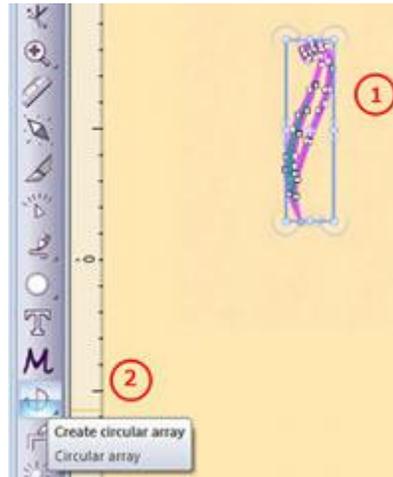
Added one contour step



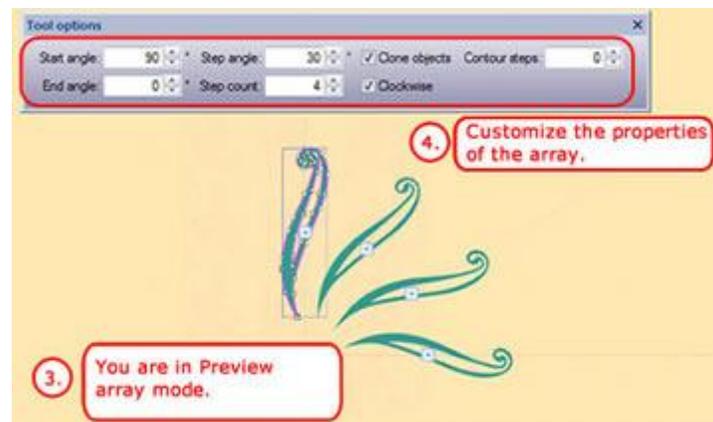
Added one contour step and Equal pieces.

Using Circular array

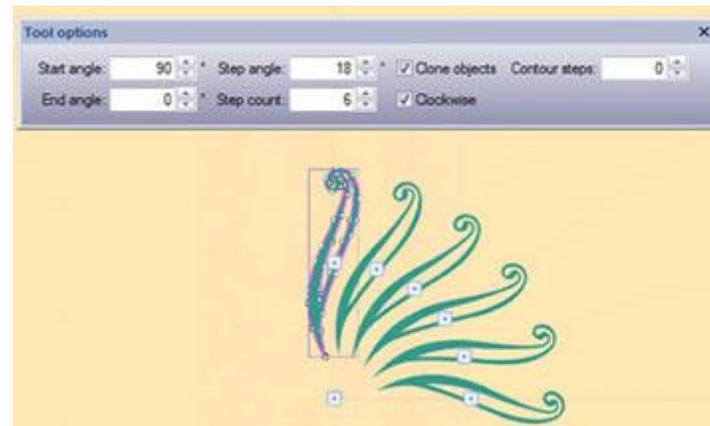
Create a design to multiply and then press **Circular array** icon to enter Preview array mode.



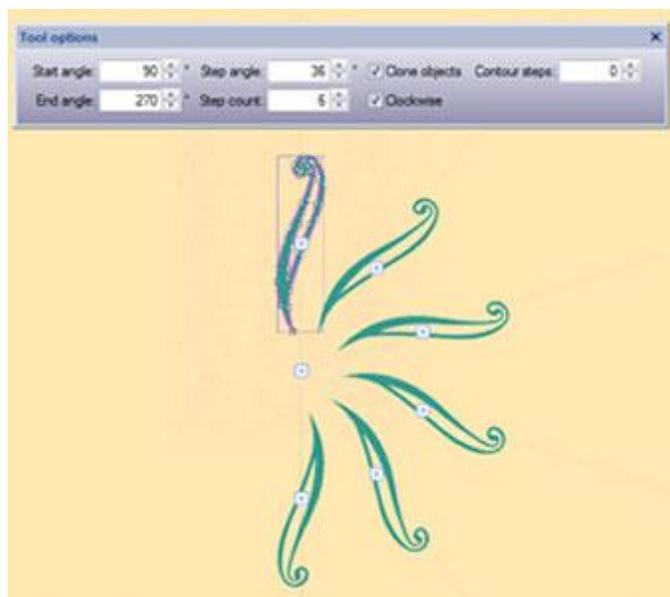
You are in preview array mode, your selection has been multiplied, the array hasn't been applied yet it is a just preview. Customize the dimensions and the distance for your array.



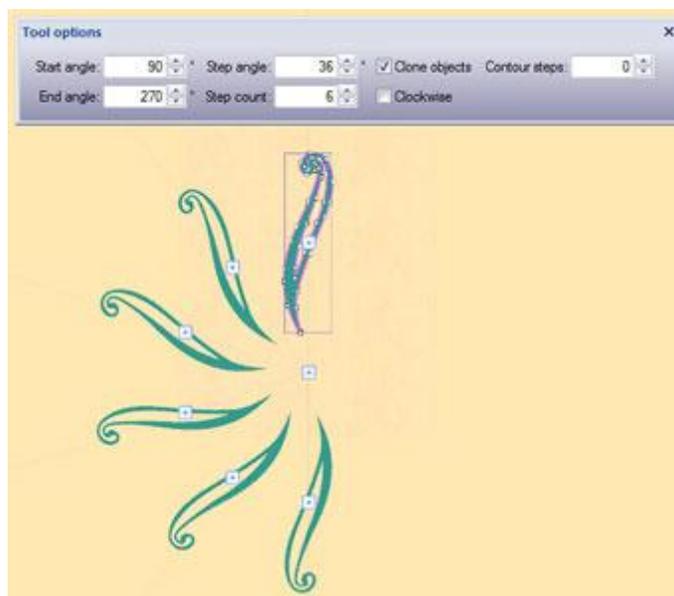
Change number of copies, in the same part of the circle we have now added 6 copies. When we change number of copies the program automatically changes the step angle to so that the specified number of copies fits into the provided angle.



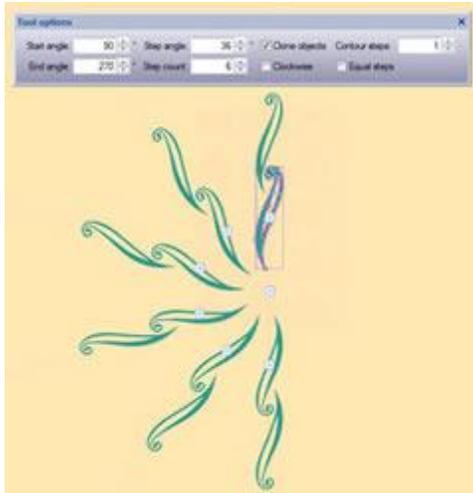
Change the End angle into 270 degrees.



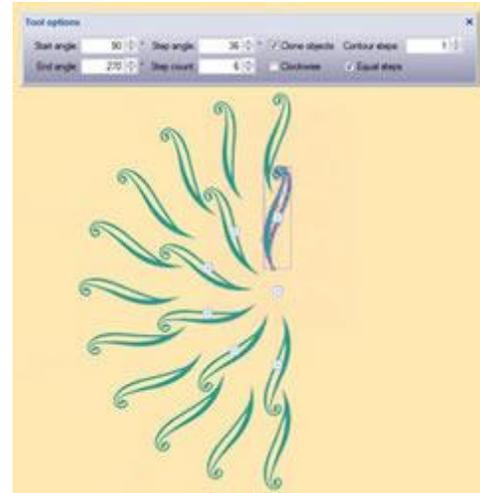
Change the placement into clockwise.



Add contour steps and then enable equal steps.



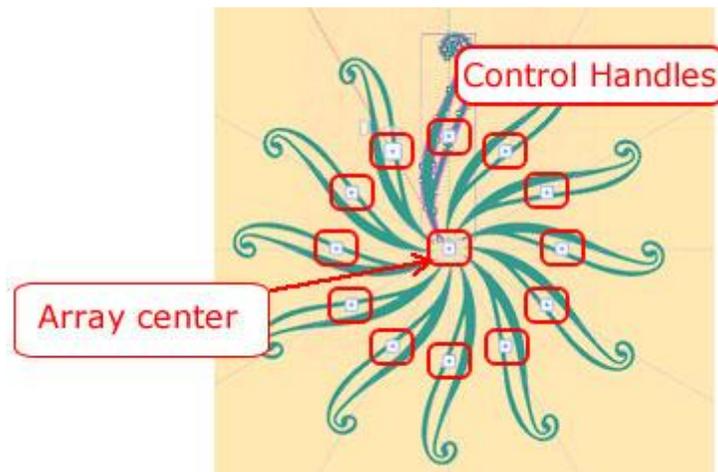
Added 1 Contour step



Added 1 Contour step with Equal steps

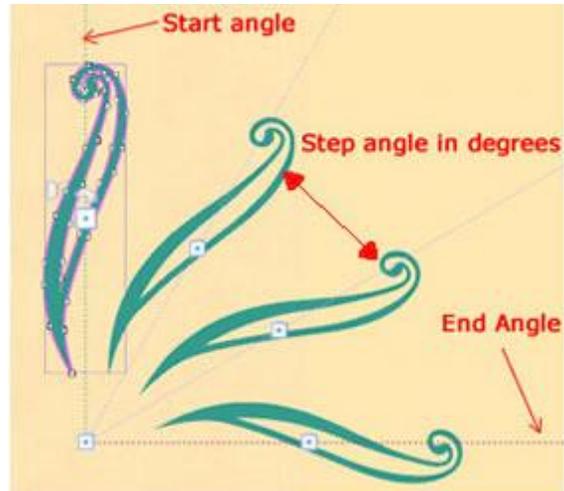
Basic customizations

When we press Circular array  icon, we are in preview array mode. While in preview array mode all the copies have various control handles on top of them. These control handles can be used to adjust the properties of the array in the same way as we can edit them using tool options toolbar. They can also be combined to mouse and keyboard in order to provide extra functionality.



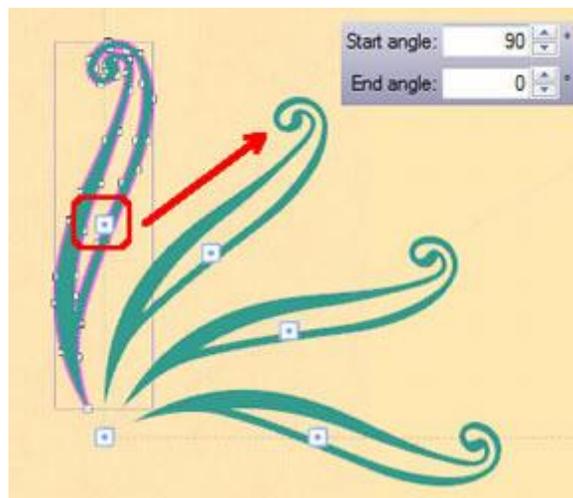
In this section we will make a brief description of the way that these control handles are used and present mouse and keyboard combinations. All the operations that we will describe below can only be used before we apply the array. The center of the array is by default on the center of the axis (0,0).

When we are in **Preview array** mode a copy is placed on the **Start angle** and one on the **End Angle**. For all the copies there are guidelines that connect them to the center of the array. The copy that is on the **Start angle** has a green guideline and the one on the **End angle** has a red guideline. All copies between Start and End angle have blue guideline.

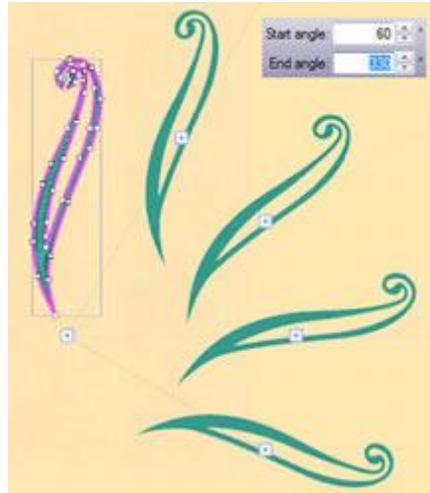


Initial object - node

We can use the handle that is on top of the first node in order to change the position of the arc-circle that the array is applied on and the distance from the center of the array. The rotation of the initial object is the same; the only thing that changes is the placement of the arc. Move the control handle of the first node in the direction that is shown by the arrow.



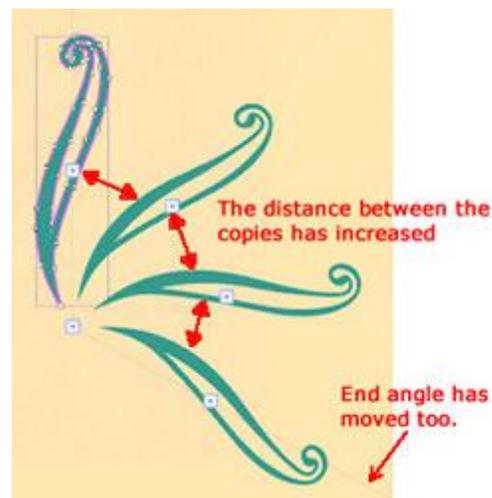
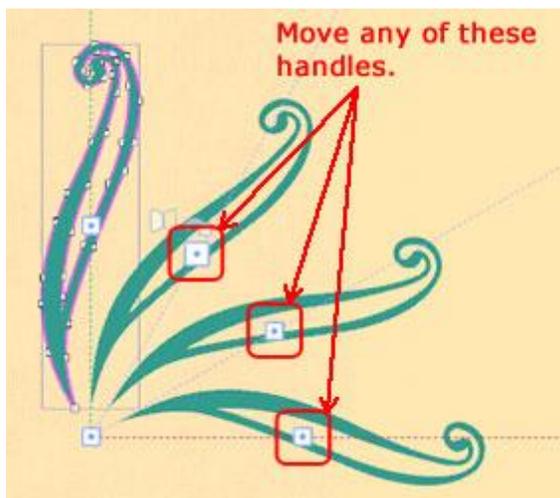
The arc that the array is applied on and the distance from the center have both changed. The item that has a magenta outline is the initial object. It is not part of the array and when we apply the array it will be discarded.



If we **Hold Ctrl** key while moving the first node, the movement of the array snaps on every 15 degrees. Hold **Alt** key and the movement snaps on the grid. If we **hold Shift** key, while moving the first node the arc doesn't change and only the distance from the rotation center.

Change distance between copies (Angle)

In any movement of the first node the distance between the copies is left unchanged (Step angle). In case that we want to change the distance (Step angle) between objects we have to move any other node. If we move any other node the distance between the copies will change and the **end angle** will change accordingly, so that the same number of copies fits, with the new distance between the copies. The arc has changed so that the number of copies and the distance between them can fit on it. If we reduce the distance the arc will shrink too.



If we **Hold Ctrl** key while adjusting the distance between the copies, the distance snaps every 15 degrees. This is very assisting in having more accurate angle changing.

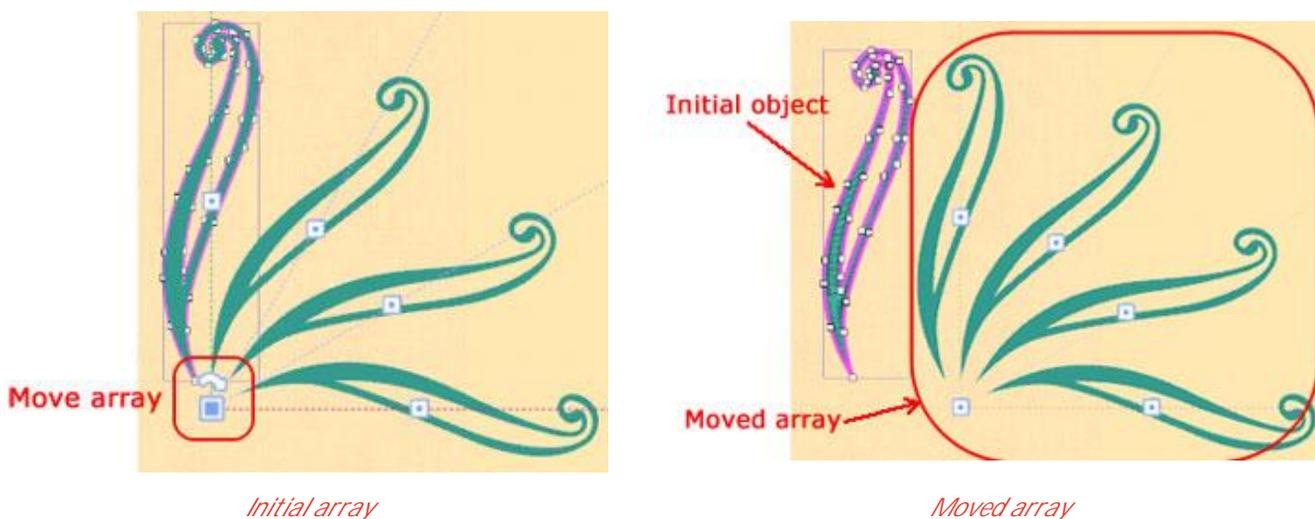
Change number of copies

In any of the above cases the number of copies doesn't change only the angle between the copies. While changing the angle there is an easy way to leave the angle the same and based on this angle to increase or decrease the number of copies. Select any of the control handles, **hold Shift** key and move to the direction

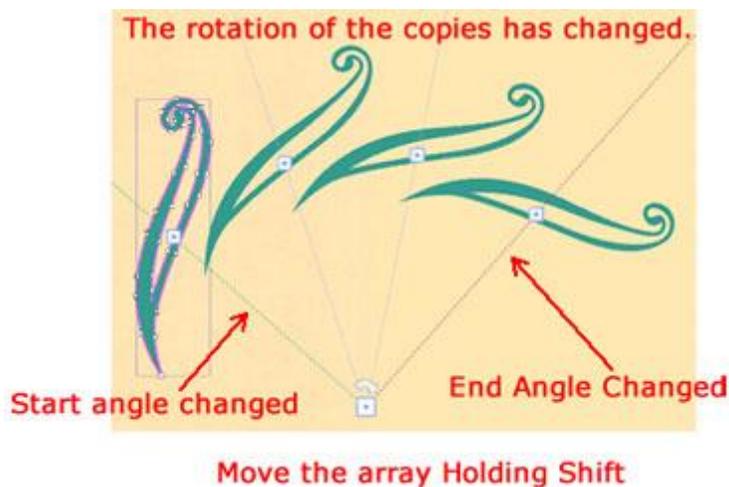
you like. Move your mouse circular and you will see that copies are created on the circle towards the direction you are moving. If you move backward copies are removed. The distance between them does not change, it is the same as it was at the start of the operation. In reality while **holding Shift** you define with the mouse the arc that the array will be placed on. The start angle stays the same and moving your mouse you define the **end angle**. You must take in consideration that you must move the mouse clockwise or not according to what has already been selected for the array on tool options toolbar.

Move array center

The rotation center of the array is by default set to the center of the axis (0,0). According to our design we may need to move the rotation center and its distance from our design in order to create the pattern we like for the array. If we move the array center we can see that the whole array is moved to a new position without changing the angle of arc or rotation of the items. When we press Apply array it will be placed in the position that is defined by the preview.



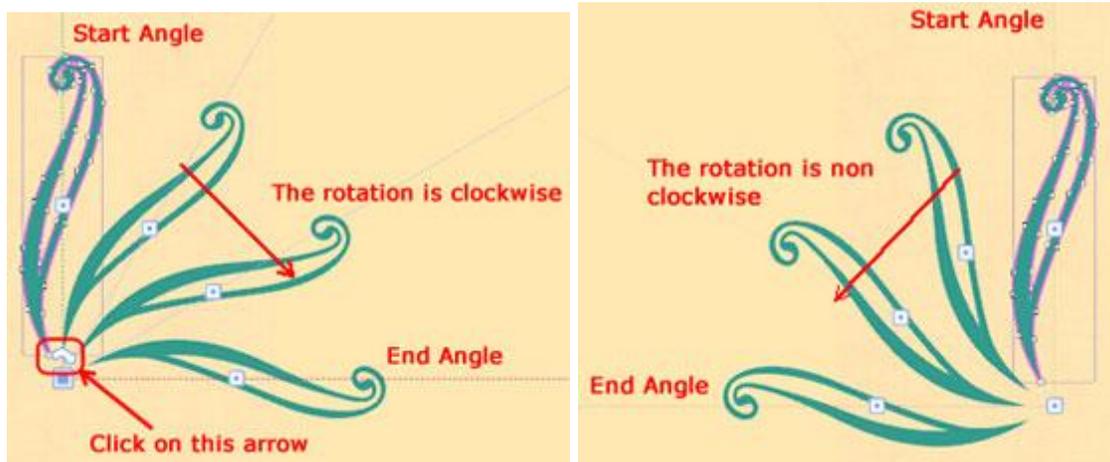
If we move the center of the array **Holding Shift**, the position of the initial object and the size of the arc remain the same, but the rotation of the copies and the placement of the arc, changes according to the new center. While moving the rotation center we can also move it closer to the initial object. In order to move the rotation center, we have to hold **Shift** key while moving the rotation center node.



When we move the center of the array holding Shift, in reality we perform multiple tasks at once. We change the distance from the center, the position of the arc and the rotation of the copies.

Change the rotation

The direction that the array is created is usually clockwise. You can reverse this direction easily by leaving unchecked the **Clockwise** option on **tool options** toolbar. Another way to change the direction is by clicking on the round arrow that appears when placing the mouse over the rotation center. Click once and the direction of the array becomes anti-clockwise. Click once more and it is reversed once more.



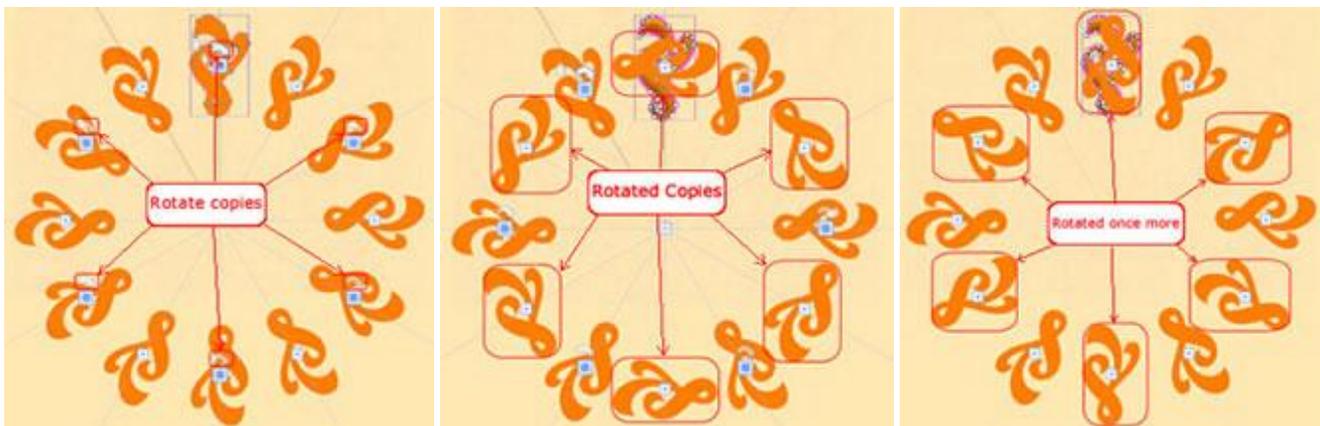
Click on this small round arrow and the direction of the array is reversed.

Rotate - mirror copies

A very nice way to create unique patterns in your designs is by using different orientation or use mirrored copies in arrays. If you place your mouse over any of the control handles these 2 handles appear . These handles appear highlighted not only on the current clone but also on every 2 clones, it is like a x2 pattern, and on every 2 clones the one is affected.

Rotate copies

The first handle is a rotate handle . Change the orientation of the clones with 90 degrees step. With a simple left click you rotate the clone 90 degrees. Click once more to rotate again.



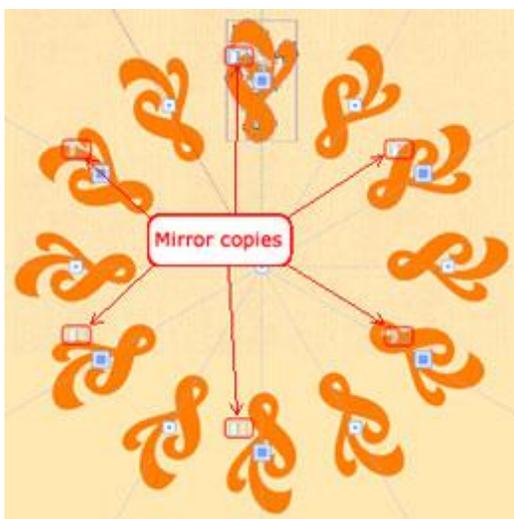
Place your mouse over any of the control handles; you can see all the affected copies with a highlighted handle over them.

Click once on the rotate handle and the copies are rotated 90 degrees

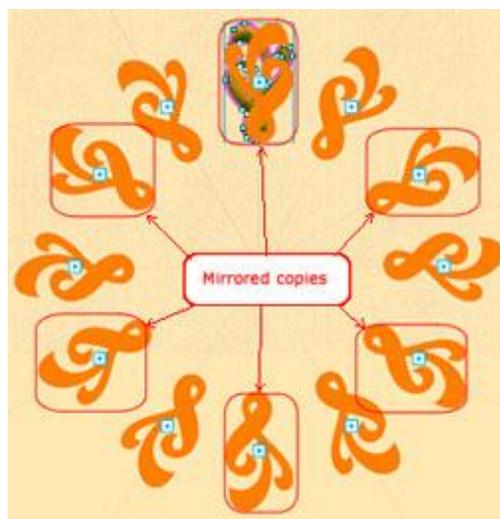
Click again and they are rotated again 90 degrees

Mirror copies

Next to the rotate handle there is a **mirror** handle , place your mouse over it. On this copy and on all other affected copies the same handle appears highlighted. Click once to Mirror all these copies.

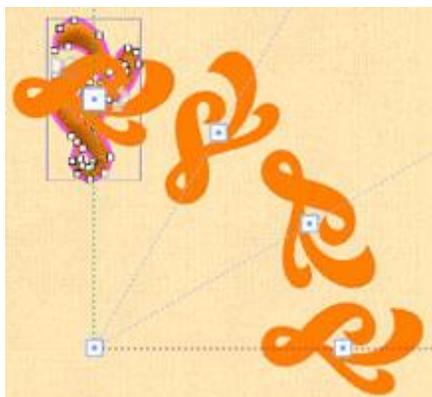


Place the mouse over any of the control handles, all the affected copies are highlighted too.

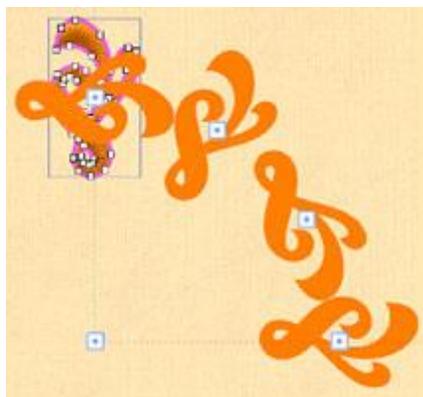


Left click once and all affected copies have been mirrored.

You can mirror any copy in any state. Rotate any copy and then apply mirror, now it is mirrored vertically. The mirror is applied based on the horizontal center of the selected object.



These 2 copies have been rotated.

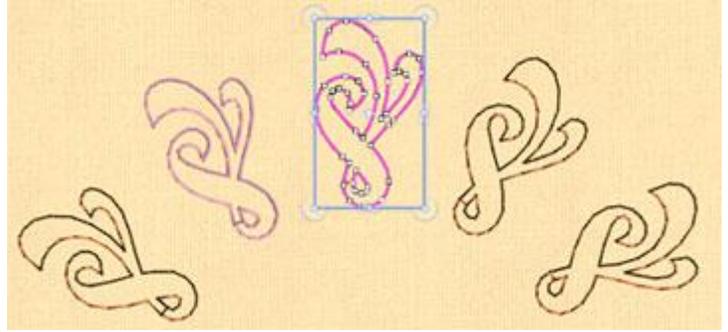


The rotated version is mirrored

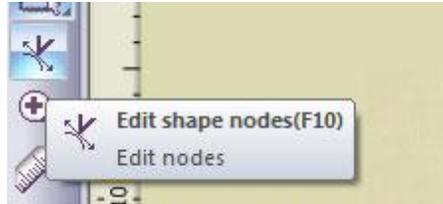
Edit Clones

Once we have applied an **array** and we have enabled **Clone objects** option the we can edit the pattern of the array by reshaping any of the clones. In order to change the shape of all objects you have to follow the steps bellow

Select any of the cloned objects.

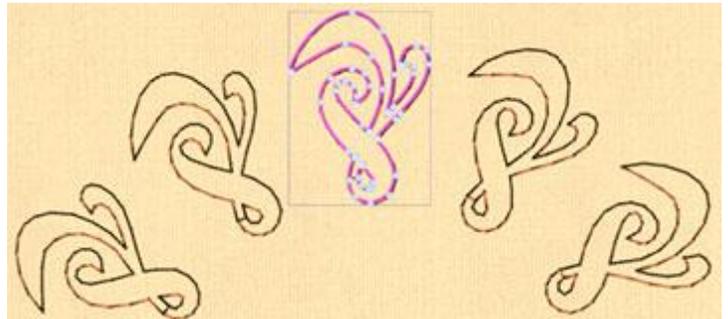


Click on **Edit shape nodes** mode on **Tools toolbar** (F10 keyboard shortcut), to switch to **Edit Shape nodes** mode



Reshape the object by click and dragging the node segments to the direction you want.

The reshaping has been automatically applied to all clones.



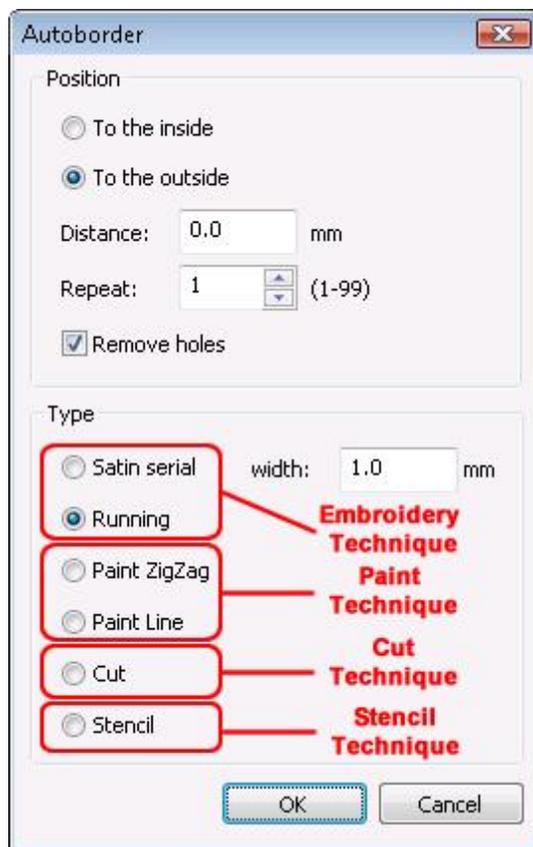
There is also the functionality to select all clones and to detach one or more clones. More information about Cloned objects can be found in **Add new objects as clones** section.

Autoborder

Auto border tool is a very useful tool for creating automatic borders. With this tool you can add a **Running**, **Satin serial**, **Paint ZigZag**, **Paint Line**, **Cut** and **Stencil** border to one or more objects in the design. The respective **Techniques** should be enabled in order the options to appear. In order to use Auto border tool you must first select one or more objects that you want to apply auto border. Then you can activate **Auto border** function in 3 ways:

- ∨ Press on **Auto border** icon  that is located on tools toolbar.
- ∨ Use the **Autoborder** option of right click menu
- ∨ Use **Autoborder** option of **Tools** menu.

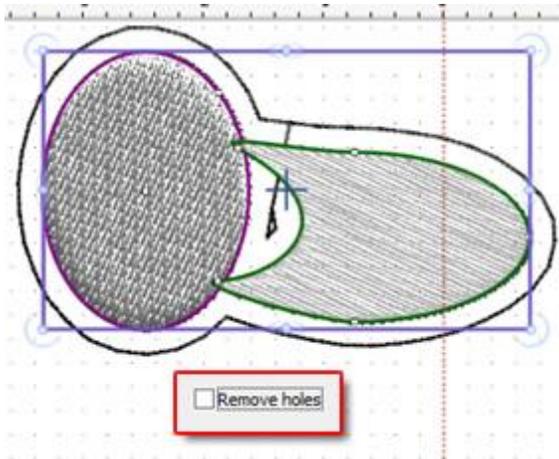
The following dialog box will appear.



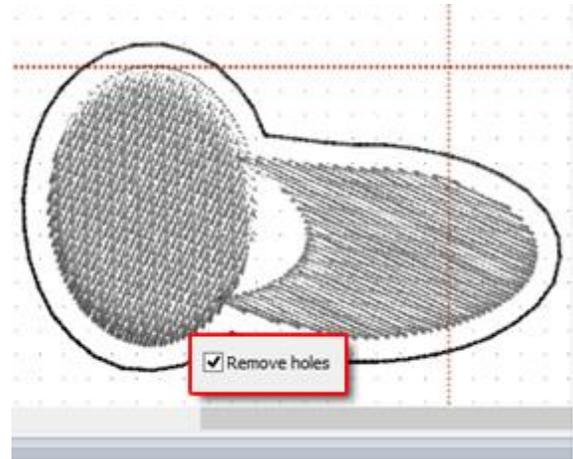
Auto border dialog

In **Auto Border** dialog box you can define the **Type**, the **Position** and the **number of repeats** of the border.

- **Type:** In this choice set you can define the type of the **Auto border**. You can select between **Running**, **Satin serial**, **Paint ZigZag**, **Paint Line**, **Cut** and **Stencil** types. The respective **Techniques** should be enabled in order the options to appear. For **Satin serial** and **Paint ZigZag** you can also adjust the **width** you want the border to have.
- **Position of border:** In this choice you can set the position you want the border to be placed. You can choose between **To the inside** and **To the outside**. Both options, if you do not enter a specific value in the **Distance** field, will be placed in the same position. The value that will be entered in the **Distance** field is in millimeters, defines the distance between the default position of the border and the new position, inside or outside the object, of the border.
- **Number of repeats:** in this field you can define a number of repetitions for the auto border. Any distance that you define in distance field will be the distance between the repetition of the auto border.
- **Remove holes:** This option is useful when you want to create an autoborder of many design objects.



Remove holes disabled



Remove holes enabled

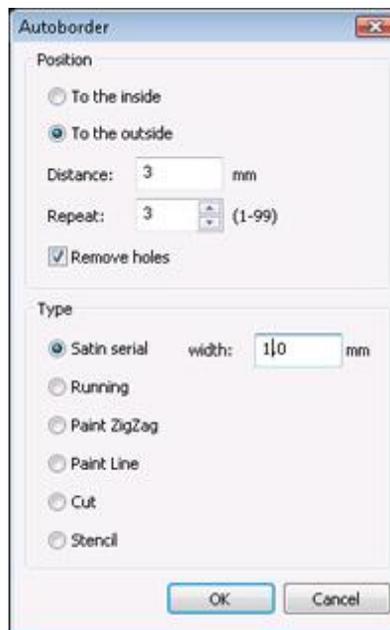
If this option is disabled, the smaller objects of the selection, tend to create autoborder around them and this autoborder is like a hole into the autoborder that is created around the whole selection. Enable this option in case that you don't like to have holes and create only an autoborder around a multiple object selection.

Autoborder Example

Let's see an example we have created the flower of the following figure.



We selected to create 3 satin serial border repeats in distance 3mm.



See these 3 created satin bars, in a distance from the initial flower.



Any inserted **autoborder** or any repetition is a separate object and can be handled and edited as any object. Edit it's shape, it's properties, transform and move in any way you like.

Chapter VIII

Transformations

In this chapter we will analyze all the available **transformation tools** that can be used for editing the objects of a design. You will learn how to **reposition** objects, how to **reorder** them and how to **duplicate** and **delete** them. You will also learn how to **change the shape** of an object. Additionally you will learn, object sizing, skewing, rotating, mirroring and some special functions such as **Trim**, **Intersection**, **Weld**, **Combine** and **group** that can be applied on multiple objects. Finally, we will analyze how to use the **color manager** and **adjust the colors** of the objects.

Positioning objects

There are various ways to position objects in *Creative DRAWings*. You can simply **drag** objects any position you like, move them using the arrow keys of your keyboard or define their position by specifying their horizontal and vertical position on the working area. Any of the positioning ways can help you work easier and more precisely

Move an object(s)

You can move an **object** or a **selection of objects** using a **left click and drag** them in their new position. Release the mouse click and the object(s) are placed in the specified position. Zoom into the object to make even more precise movements of objects.

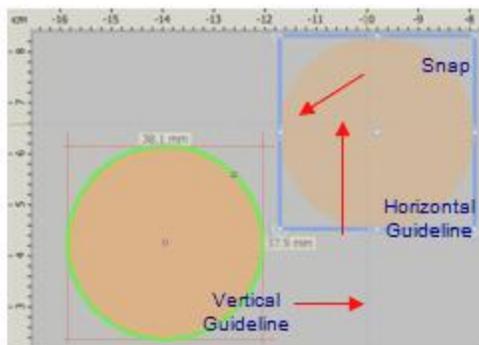
Hold the **Ctrl** key pressed while moving an object and guidelines will appear on every 22.5 degrees of the X and Y axes. Move the object and it will snap on the guidelines, allowing you to make accurate movements along the guidelines.



Hold Ctrl key and guidelines will appear on every 22.5 degrees

The point that you clicked when started dragging is used as the center point of the appearing guidelines. In case that you like to have guidelines according to the center of the object, you must first move the **center handle** outside of the shape and then move the object from its center while having the **Ctrl** key pressed. Additionally you can hold the **Alt** key pressed while moving an object and vertical - horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler. **Grid** option of **View** menu must be

enabled. While moving the object it will snap on the guidelines, allowing you to make accurate movements along the guidelines.



Hold Alt key - Horizontal and Vertical guidelines appear

When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can move the object to the position you want based on the ruler. The Alt key will work even if the ruler is disabled and the Grid enabled.

Move a shape while drawing it

You can also move a shape object while drawing it. This is an ability that you have when you are inserting any of the readymade shapes (Ellipses or Rectangles) in the **Create** mode of Creative DRAWings. While drawing a shape (after selecting the respective tool) by click and dragging you can change its position by holding also the **right click** of the mouse pressed. The shape object will start moving, allowing you to reposition it. If you release the right click without releasing the left click also, the shape will stop following the movement of your mouse but continue changing the shape of the object you want to create. If you release both mouse clicks, the object shape will be positioned on the working area by having the shape you gave to it. This is very useful because you can reposition the shape you want and place it exactly where you want it while designing, without having to do that afterwards.

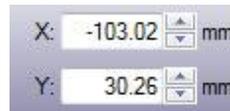
Move objects with arrow keys

The position of an object can be also changed by using the **Arrow keys** from the keyboard. Select one or more objects and then click on the respective arrow key to move towards the direction that you want to move. You can move the objects until you are satisfied with the position that objects have. Every time you click on the arrow key, the object(s) moves 1mm to the direction of the arrow. If you hold the **Ctrl** key pressed and then press the arrow key, the object(s) will move 5mm to the direction of the arrow. Finally, if you hold the **Shift** key pressed and the press the arrow key, the object(s) will move 0,10mm to the direction of the arrow. By using the arrow keys and its combinations you can position the object(s) exactly in the place you want.

You can change the movement step (distance) of the arrow keys from the **Tools** tab of **Options** dialog that you will find under **Tools** menu. In the tools tab you will find the **Selection movement step** option, where you can define the distance you want the selected object to move every time you press the arrow keys. The value that you will enter will also change the movement of objects when you are holding the **Ctrl** key pressed. The movement of objects when you hold the **Ctrl** key pressed will be multiplied with the value you have defines in the Selection movement step. For example, if you have set the Selection movement step to be 3mm, the movement while holding the **Ctrl** key pressed will become 3mm multiplied with 5mm, which is the default movement, equals 15mm movement.

Move an object with X and Y coordinates

Another way to change the position of a shape, which is also the most accurate one, is to move an object based on its X and Y coordinates. When you select an object its coordinates appear on the **Tool options** toolbar.

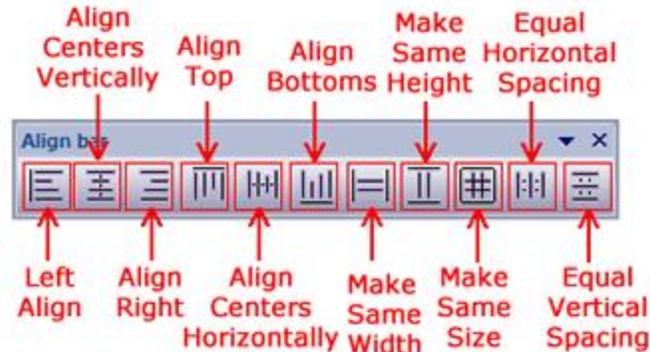


X & Y coordinates

Tool options is a proprietary toolbar that holds the options of the selected object. In order to change the position of the object you have to change its coordinates, X and Y and place new ones based on the ruler of the working area. From the Ruler you can find the exact portion you want the design to be placed and enter the respective values. The ruler is defining virtual X and Y axes and that is why you can enter negative numbers as values to X and Y fields. The specified coordinates define the position of the center of the object.

Aligning, distributing and auto-sizing objects

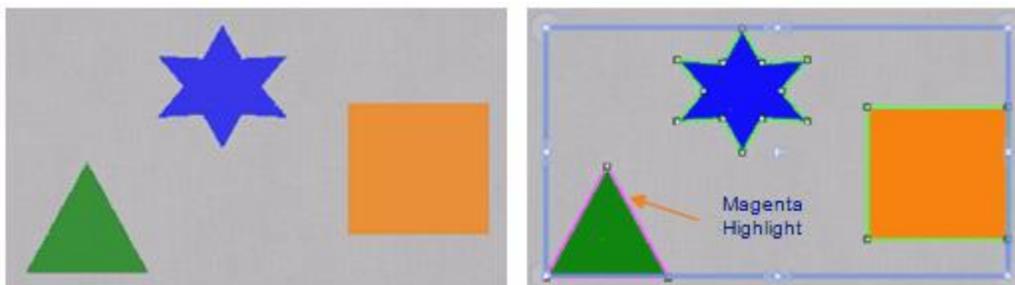
Using **align toolbar** you can **align-size-distribute** objects precisely in any design. **Align objects** to each other, and position them exactly where you want them to be. **Distribute** the objects automatically and make their sides appear at equal intervals (vertically or horizontally). Finally **size** the objects automatically based on the dimensions of a specific object. In case that the toolbar is not visible you can bring it up using the respective option of **View** menu.



Align bar

The **alignment** and the **auto-sizing** of objects is made based on the last selected object or on the **highlighted object** (the highlighted object has magenta outline). If you make multiple selection of objects by holding the **Shift** key pressed each time you add an object to your selection the last added object is the one that the alignment will be based on. If you make a lasso or rectangle selection, the highlighted object, with magenta outline, will be the one where the alignment will be based on.

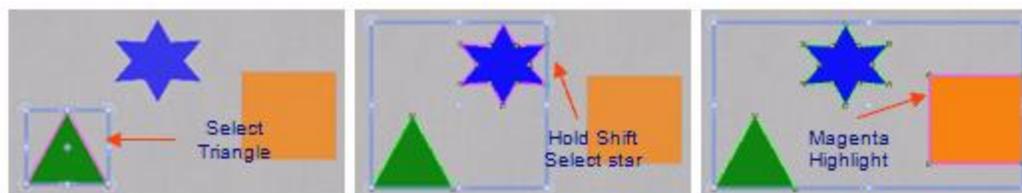
For example: If you have three objects like those in the figure below and you make a rectangle or lasso selection, the one that will have magenta outline will be the object that the align bar tools will use to align/auto-size the other two objects. As you can see from the figure below the Triangle is the highlighted object. The highlighted object is automatically selected and there is no way to specify which one will be highlighted inside a rectangle/lasso selection.



Rectangle / Lasso selection and the Highlighted object.

To specify the highlighted object you have to select the objects one by one while holding the **Shift** key pressed. Each time you click on an object, it will be added to your selection. The last object that you will select will be the object that the align bar tools will be based on.

Therefore, in our example, if we want the highlighted object to be the rectangle, we have to **select the triangle first**, hold the **shift** key down, then **select the star object**, keep the **Shift** key pressed and **select the rectangle object** which will be the highlighted one. View the figures below.



Define the highlighted object by making a multiple selection

Then you can apply any option from the **Align bar** based on the rectangle.

- **Aligning objects**
- **Auto-sizing objects**
- **Distributing objects**

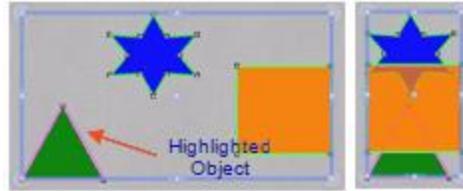
By aligning, distributing and auto-sizing objects you can create your designs even easier and quicker.

Aligning objects

The first six buttons of the **Align bar** are the available **aligning options** of the software. By default the **Align** options are disabled and they become available only if you select **two or more** objects. If you select only one object the options will remain disabled. After selecting the objects you have to select the alignment option you want to apply on them based on the highlighted object.

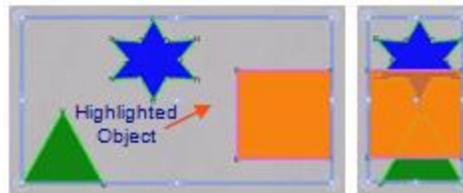
The Alignment options you have are the following:

- **Align Left** : To apply **Align Left** option at list two objects must be selected. After selecting the objects you want to align click on the **Align Left** icon from the **Align bar** or by pressing the '**L**' shortcut key from the keyboard. The selected objects will be aligned left, based on the highlighted object.



Align left based on the Triangle

- **Align Right** : To apply **Align Right** option at list two objects must be selected. After selecting the objects you want to align click on the **Align Right** icon from the **Align bar** or by pressing 'R' shortcut key from the keyboard. The selected objects will be aligned Right, based on the highlighted object.



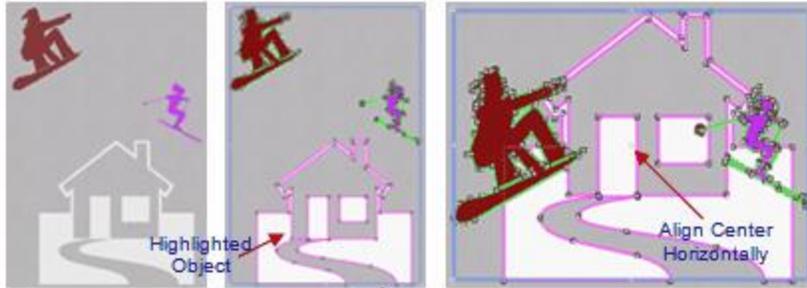
Align Right based on the Rectangle

- **Align Centers Vertically** : To apply **Align Centers Vertically** option at list two objects must be selected. After selecting the objects you want to align click on the **Align Center Vertically** icon from the **Align bar** or press the 'C' shortcut key from the keyboard. The centers of the selected objects will be aligned vertically (on the vertical axis), based on their center of highlighted object.



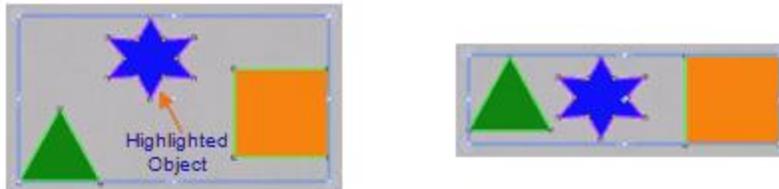
Align Center Horizontally based on the House drawing

- **Align Centers Horizontally** : To apply **Align Center Horizontally** option at list two objects must be selected. After selecting the objects you want to align click on the **Align Center Horizontally** icon from the **Align bar** or press the 'E' shortcut key from the keyboard. The selected objects will be aligned vertically, based on the center of highlighted object.



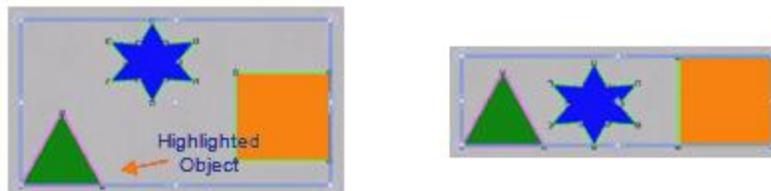
Align Center Vertically based on the House drawing

- **Align Top** : To apply **Align Top** option at list two objects must be selected. After selecting the objects you want to align click on the **Align Top** icon from the **Align bar** or press the 'T' shortcut key from the keyboard. The selected objects will be aligned Top, based on the highlighted object.



Align Top based on the Star

- **Align Bottom** : To apply **Align Bottom** option at list two objects must be selected. After selecting the objects you want to align click on the **Align Bottom** icon from the **Align bar** or press the 'B' shortcut key from the keyboard. The selected objects will be aligned Bottom, based on the highlighted object.

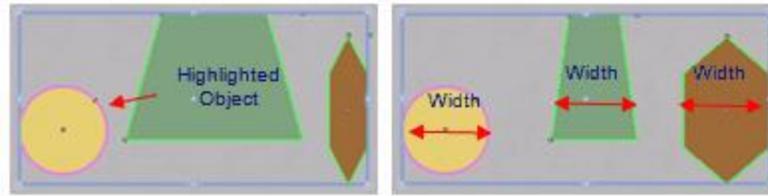


Align Bottom based on the Triangle

Auto-sizing objects

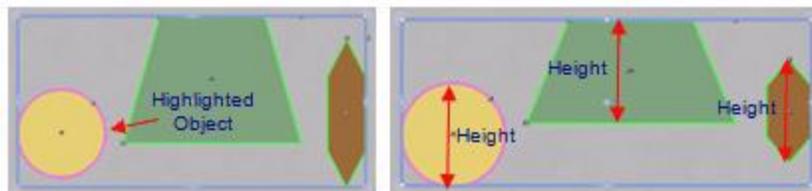
On the align bar there are three available **Auto-sizing** tools. By default the **Auto-sizing** options are disabled and they become available only if you select two or more objects. If you select only one object the options will remain disabled. After selecting the objects you want to auto-size you have to select the sizing option you want to apply on them based on the highlighted object.

- **Make same width** : To apply **Make same width** option at list two objects must be selected. This option allows you to make the selected objects to have same width with the highlighted object that it is also included in the selection. After selecting the objects you want to have the same width, click on the **Make same width** icon  from the **Align bar** or press the **Shift + W** shortcut keys from the keyboard. The selected objects will be resized and have the same width with the highlighted object.



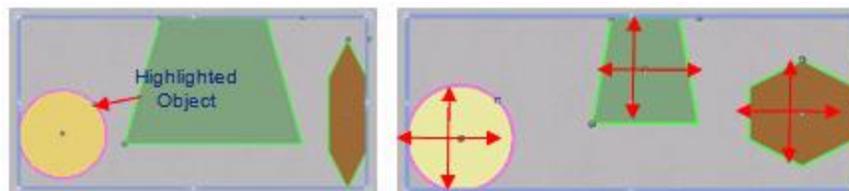
Make same width based on the Circle

- **Make same height** : To apply **Make same height** option at list two objects must be selected. This option allows you to make the selected objects to have same height with the highlighted object that it is also included in the selection. After selecting the objects you want to have the same height, click on the **Make same height** icon  from the **Align bar** or press the **Shift + H** shortcut keys from the keyboard. The selected objects will be resized and have the same height with the highlighted object.



Make same height based on the Circle

- **Make same size** : To apply **Make same size** option at list two objects must be selected. This option allows you to make the selected objects to have same size with the highlighted object that it is also included in the selection. After selecting the objects you want to have the same size/dimensions, click on the **Make same size** icon  from the **Align bar** or the **Shift + S** shortcut keys from the keyboard. The selected objects will be resized and have the same dimensions with the highlighted object.



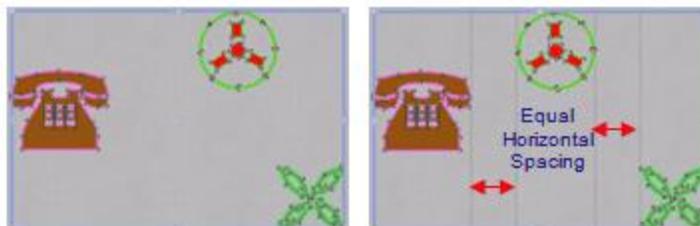
Make same height and width based on the Circle

Distributing objects

On the align bar there are two available **Distributing** tools. By default the **Distributing** options are disabled and they become available only if you select three or more objects. If you select only one or two objects the options will remain disabled. After selecting the objects you want to make their sides appear at equal intervals vertically or horizontally, you have to select the distributing option you want to apply on them and it will be applied immediately. While distributing objects the highlighted object it is ignored because it does not affect the functionality of the options. The available distributing options are the following:

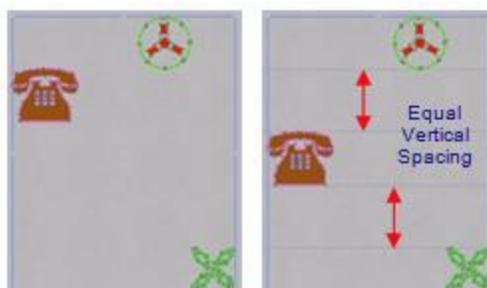
- **Equal horizontal spacing** : When this option is applied on the selected objects, the horizontal distance between objects becomes equal. Therefore this options places equal horizontal intervals between the

selected objects. To apply this option, select the objects you want and then click on the **Equal horizontal spacing** icon  from the standard toolbar or the **Shift + C** shortcut keys from the keyboard.



Equal horizontal spacing between objects

Equal Vertical spacing : When this option is applied on the selected objects, the vertical distance between objects becomes equal. Therefore this options places equal vertical intervals between the selected objects. To apply this option, select the objects you want and then click on the **Equal vertical spacing icon**  from the standard toolbar or the **Shift + E** shortcut keys from the keyboard.



Equal Vertical spacing between objects

By aligning, distributing and auto-sizing objects you can create your designs even easier and quicker.

Re-order objects

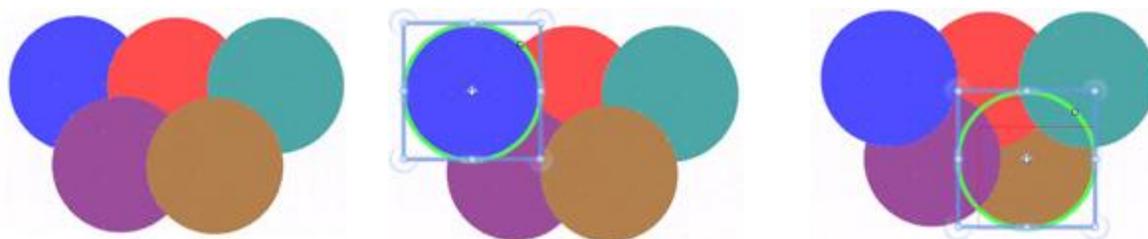
In the Create mode of Creative DRAWings you can change the order of objects. You can change their order by bringing one to front and send another to back. The re-ordering you are making is for the vector design mainly. The final embroidery sequence is only based on the design and it is not identical with the order that the vector design was created.

There are four available reordering options which are **To front one**, **To back one**, **To front of design**, **To back of design**. To apply any of the reordering options to the object(s) you have to select it and then right click on it in order the popup menu to appear. From the right click menu expand the **Order** submenu and select any of the four reordering options.

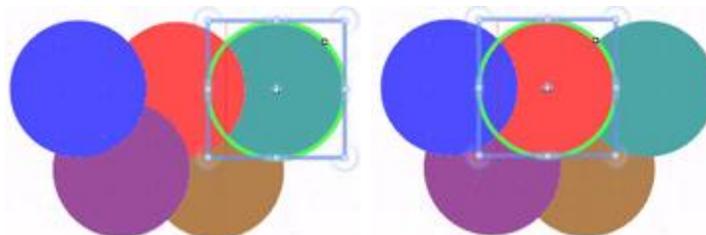
- **To front one:** With this option you can move the selected object forward one position. If the selected object is positioned at the top of the design then the **To front one** option will not be available. Another way to apply this option directly is by pressing **Page-Up** shortcut key (PgUp) together from the keyboard.

- **To back one:** With this option you can move the selected object behind one position. If the selected option is the last object of the design, this option will not be available. Another way to apply this option directly is by pressing **Page-Down** shortcut key (PgDn) together from the keyboard.
- **To front of the design:** With this option you can move the selected object(s) to be in front of all other objects of the designs. Another way to apply this option directly is by pressing **End** shortcut key (End) together from the keyboard.
- **To back of the design:** With this option you can move the selected object(s) to be behind of all other objects of the designs. Another way to apply this option directly is by pressing **Home** shortcut key (Home) together from the keyboard.

For example, in the figure below we have five circles; and the blue circle is at the lowest level, the red to the next level, the green to the next level, the purple to the next level and the brown at the top level. In order to change the order of the circles we have to select the blue one and from the right click menu select **Order > To front of the design** option. .



Initial position - Blue "To front of the design" - Brown "To back of the design"



Green "To back one" - Red "To front one"

Immediately the circle at the lowest level goes to the highest level. We can do also the opposite by selecting another circle (Brown object) and from the right click menu select **Order > To back of the design** option.

This option sends the circle to the lowest level of the design. If we want to change an object one level, upwards or downwards we can do it by selecting the object (Green object) and again from the right click menu select **Order > To back one** option.

The green circle will be re-ordered under the red circle that is one level down. We can do the opposite to the red circle by bringing it one step forward. The red object will be positioned over the purple object and under the blue object

When we finish reordering the design we can go to the stitch mode to see how the embroidery design will look like or enable the **Stitches** option from the **View** menu inside the **Create** mode. The reordering tools can help you create exactly the design you want to embroider.

Sequence manager

Sequence manager provides a graphical representation of the design's order and provides an easy way to change it. Sequence manager is a transparent floating dialog that appears on top of the design area. All the design items are represented as icons of the items to be embroidered. All these items have a number, in the lower left corner, which reveals their position in the embroidery sequence. In any sequence icon there are also 2 descriptive icons on the bottom right side of the icon that reveal the type of the **fill** or **outline** that is used for any object. These 2 icons represent the type of **fill** or **outline** of the object. The **left** icon reveals the **type of the fill** and the **right** icon reveals the **outline** type.

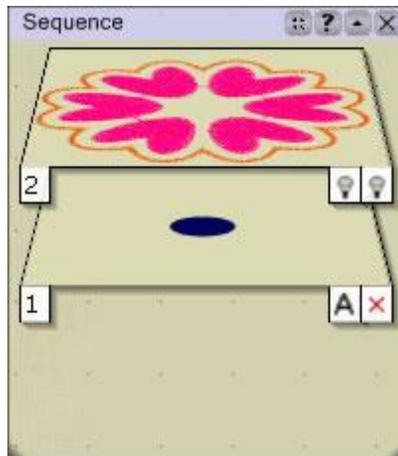
Auto-sequence option

Auto-sequence option is available only when the **Embroidery Technique** is **enabled**. When **Auto-sequence** is enabled, objects of multiple stitch types are grouped into one sequence manager icon. In this case the items that are included, are embroidery items that have various fill or outline types. This bulb icon  is used to reveal that in this sequence item multiple stitch items.

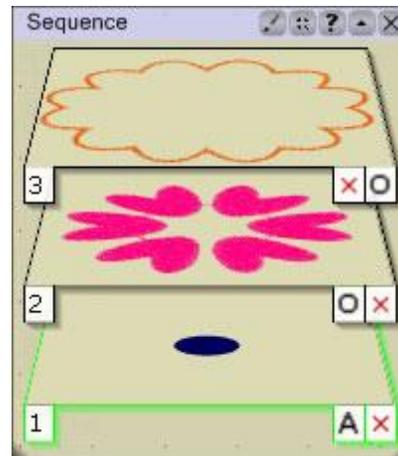
When **Auto-sequence** is disabled or when the **Embroidery Technique** is **disabled** you can see the icons and the type of the objects that they represent in the following table. As we have already mentioned the left icon represents the fill type and the right icon the outline type.

-  **Normal stitch** objects(Running, Satin serial, Netfill)
-  **Appliqué** objects
-  **Imported artwork** from stitch files
-  **Imported Cross-stitch or Photo-stitch**
-  **none** Fill or Outline
-  **Array** fill or Outline
-  **Crystal fill** or **Crystals** on outline
-  **Cut** on outline
-  **Paint** fill or Outline
-  **Stencil** on Outline

As we can see in the following figure the first item is at the bottom of sequence manager and the last is at the top.



Auto-sequence is enabled



Auto-sequence is disabled

Sequence manager floating dialog

At this point we must mention that a very special tool of Creative DRAWings, the **Auto-sequence**, affects the way that the items of sequence manager are viewable. When **Auto-sequence** is enabled the program automatically decides the sequence of all stitch objects, so you don't have any control of the sequence of the design items via sequence manager. The only items that are separated are the **Appliqué** objects.

As you can see on the above figure when **Auto-sequence** is enabled, there are multiple items grouped into one sequence icon and only the **Applique** object is separate. This bulb icon  reveals that **Auto sequence** is enabled and multiple objects are grouped into one sequence icon. The program uses intelligent mechanisms to automatically create the sequence of the stitch - crystal items and you don't have any kind of control of the order that they will be embroidered using sequence manager. When **Auto-sequence** is enabled you can easily separate normal stitch - crystal objects - cut object -stencil object -paint - object from **appliqué** objects and change the ordering between them.

If you want to have full control of the ordering of all stitch objects you can **disable** Auto-sequence. This can be easily done by pressing **Auto-sequence** icon  on **Tools** toolbar that is usually located on the left side of the application window. Once **Auto-sequence** is disabled all design items become separate icons on sequence manager. This can be clearly seen in the right part of the above figure.

At the left part of the figure, when **Auto-sequence** is enabled, you can see that the first design item at the bottom is an appliqué object and then you can see all stitch objects. In the right part where **Auto-sequence** is disabled every design item has a separate sequence item. By clicking and dragging any item you can change its order. You have full control of the embroidery sequence and all the intelligent mechanisms have been disabled.

More information about the usage and customizations of the **Auto-sequence** is provided in chapter Embroidery sequence.

Sequence manager dialog

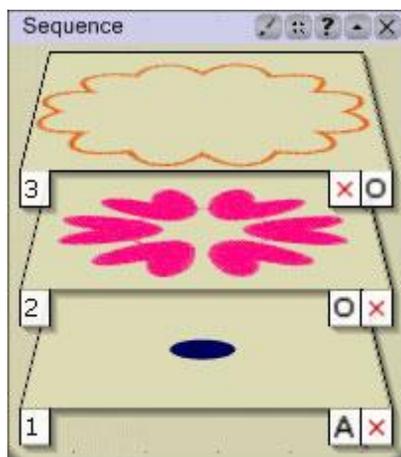
Sequence manager appears by default on the right area of the window **on top of the design area**. In case that it is not visible or you have closed it by mistake you can always reactivate it by selecting the respective option of **View** menu. If you place the mouse anywhere over the **Sequence manager** you can see an outline appearing around it. Place your mouse over any item of the sequence and you can see it appearing like highlighted and on top of the other items, revealing that it is currently selected. If you click on any item of the

sequence manager it gets selected and you can see it inside the design area with a highlight rectangle around it.

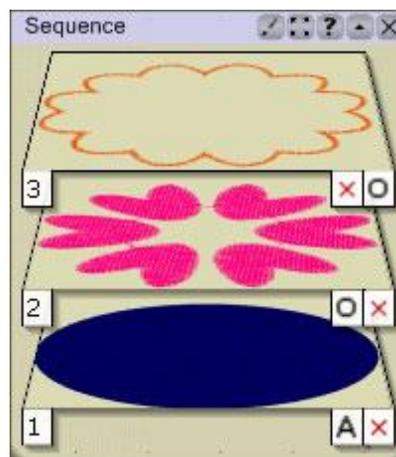
As we have already mentioned by click and drag you can move any sequence item up or down to change its place in the embroidery sequence.

The sequence manager window appears floating over the design area. Although you can select where it will be placed and you can easily customize its size.

You can also use this icon  or  to select a view mode for sequence manager. You can toggle between two modes, one that shows the object with a best fit on the icon of sequence manager and one that show the actual size of the object into the design.



Icons with actual size

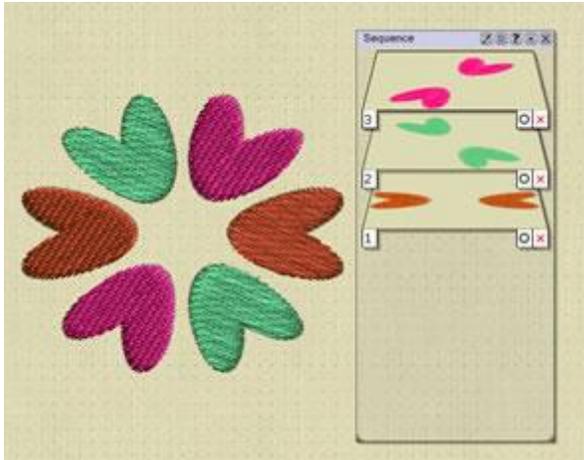


Icons in best viewable

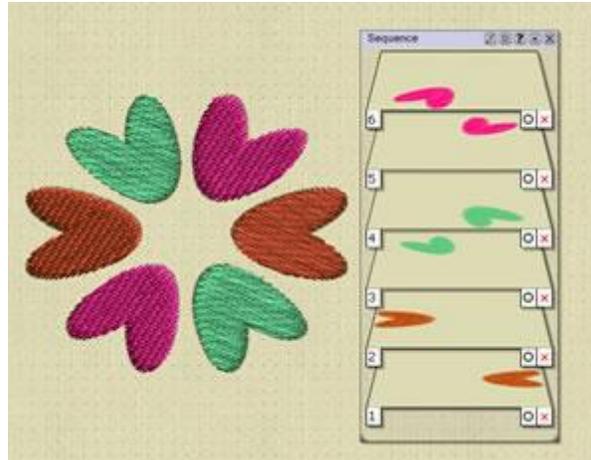
You can easily group the design objects on sequence manager according to their color (**Fill** and **Outline**). Use **Group by color** button  that is located on the **title bar** of **sequence manager**. **Cut**, **Paint**, **Stencil** and **Applique** objects cannot be grouped. It is a toggle button; any click on the button switches **Group by color** functionality from **enabled** state to **disabled** and vice versa. Using this option you can group multiple objects, into one sequence manager icon, according to the used color (Fill and Outline). When enabled all successive objects that use the same **fill and outline** color are grouped into one sequence manager icon.

You must always have in mind that the **Auto-sequence** or the **Embroidery Technique** must be disabled in order to be able to see all design objects into separate icons . In this case, (when Group by color option is enabled) the sequence manager icons are reduced and you are able to locate any design item easier. In advance, by clicking on any sequence manager icon that has multiple items grouped you can easily select all of them with one click.

For **Cut**, **Paint**, **Stencil** and **Applique** objects, the order that will be set at the sequence manager will be the same with the order that will appear, if you export the design to be cut(File > Export > To Crystals/Cutters).



Split by color enabled



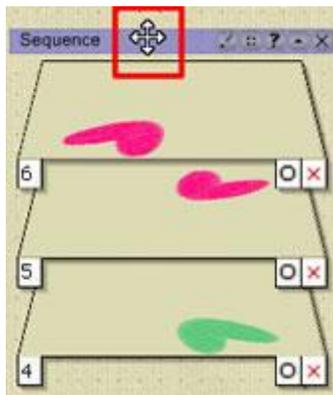
Split by color disabled

If you want to close the **Sequence manager** dialog you have to click on the **close** icon . In case that you have closed sequence manager you can reactivate it using the respective option of view menu. You can also minimize it by clicking on the hide icon . The minimize icon will make Sequence manager to disappear and leave its title bar floating over the design area. You can maximize the dialog by clicking once more on the show icon .



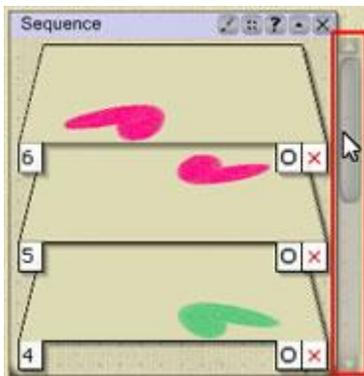
Minimize backdrop properties dialog

Place your mouse over the **title bar** of sequence manager and a **move handle** appears. Click and drag in order to place **Sequence manager** wherever you like.

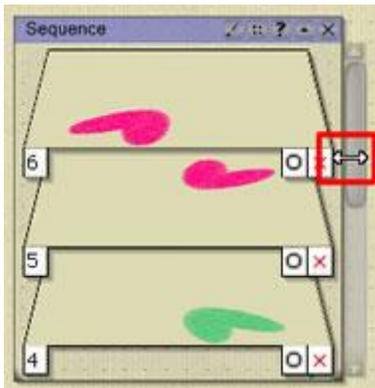


Move sequence manager

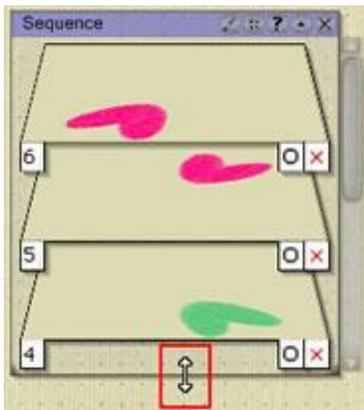
1. Place the mouse over its **title bar**
2. A **move handle** appears
3. Click and drag to move the sequence wherever you like.



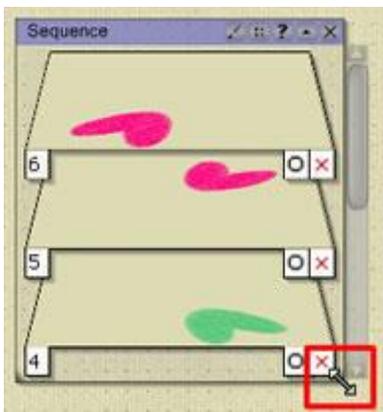
In case that not all sequence items can be seen with the current size of the window, a horizontal scrollbar appears. Use this scrollbar to see all sequence items.



In order to have larger sequence icons and have a better view of sequence items you can resize vertically the window. Place your mouse over any of the horizontal edges, a resize handle appears. Click and drag towards any of the provided directions, the window is enlarged and the size of icons has changed accordingly.



In the same way you can change the height of the dialog.



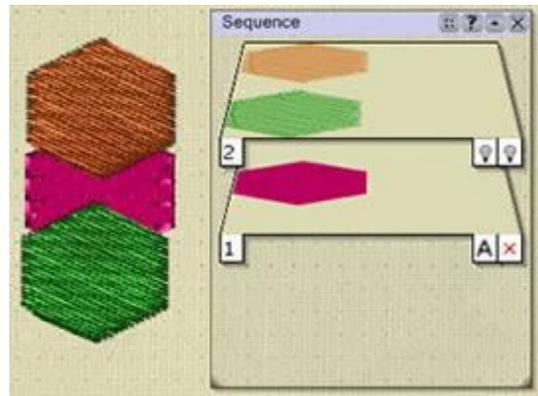
You can also enlarge diagonally to both dimensions.

The extra ability of this tool is that you can re-arrange the sewing order for the current design, and select one or more objects in the design area. This way you can organize the sequence of embroidery production in the way you prefer.

We can also change the sequence of design items using **Order options** that appear on right click menu. These ordering options will be described in a separate section. In order to simulate the embroidery sequence you can use **slow redraw** tool.

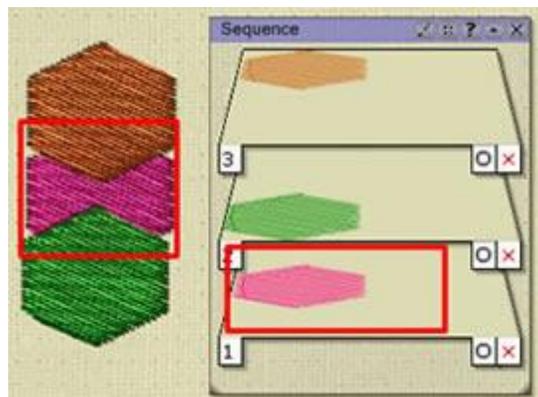
Re-sequence items

Using **sequence manager** you are able to easily see and change the sequence of all the designs objects. When **Auto-sequence** is enabled (**Embroidery Technique** is **enabled**) all design items are shown into separate sequence items and only embroidery items are organized as one. This way the **normal stitch** objects are separated from the rest design objects and change the order between them easily in case that is needed. As we can see on the following figure, all the embroidery parts are grouped into the first icon of sequence manager and only the applique object has a separate icon.

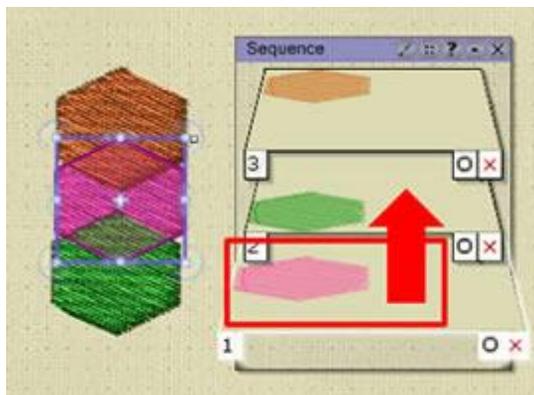


At this point we can only change the order between the applique/cut/stencil/paint/crystal object and all embroidery objects. If we disable the **Auto-sequence** or disable the **Embroidery Technique** all the design objects will be separated into sequence items. Now we must define the order of all objects in order to embroider them any way we like. You can Click and Drag any sequence item and reorder all design objects. Let's see how easily we can change this sequence.

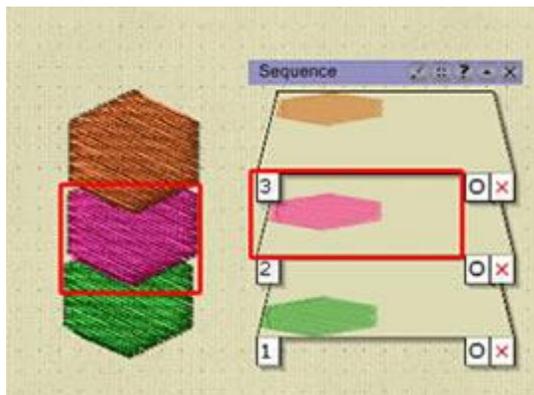
The **Red** polygon is embroidered first and it looks like it is below the other objects that are embroidered later.



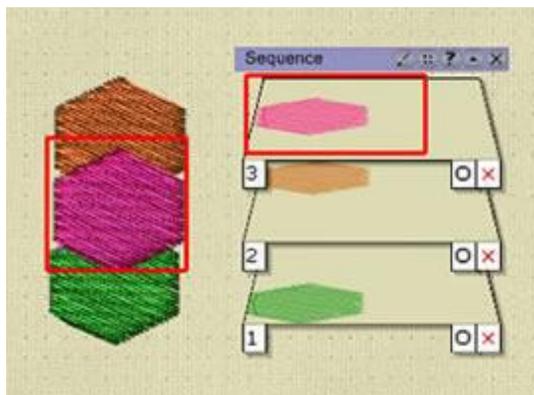
Place the mouse over the **Red** polygon icon and click to select the icon.
Click and Drag the icon on top of the **Green** polygon icon.



The part of the **Red** polygon that was under the **Green** polygon is now on top.



In the same way we can move the **Red** polygon icon on top of the **Brown** polygon and now we can see the the **Red** polygon is on top of all others.



We can select more than one sequence items, by holding Ctrl key and clicking on the items that we want to select. This way we can change the order of more than one sequence items at once.

Duplicating and deleting objects

In Creative DRAWings you can **duplicate** and **delete** objects with various ways. There are menu options to do that, mouse combinations and keyboard shortcuts. We will learn all of them and you can use any that fits most, your designing style. The only objects that you cannot apply the duplicate and delete options are stitch objects. Also, **duplicate** and **delete** are available only inside **Create** mode and inside the **stitch** mode that is combined with **Create mode**.

Cutting, copying and pasting

You can **Cut** or **Copy** an object or multiple objects to clipboard and paste them in the design area. The objects can come from any bitmap or vector designing application. You can copy or cut an object from another application and paste it in the Create mode of *Creative DRAWings*.

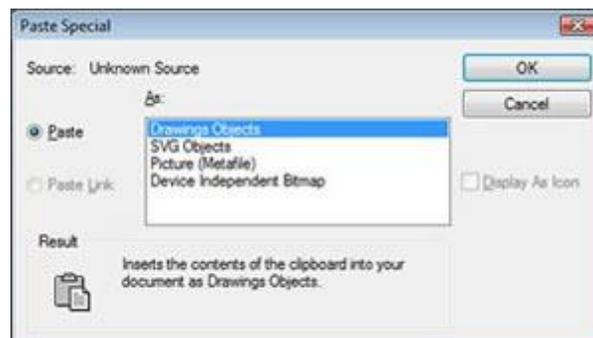
You can **Cut** an object by selecting the respective option from the **Edit** or the **right click** menu and by pressing **Ctrl + X** or **Shift+Delete** keys from the keyboard. The selected object will be placed to the clipboard and will be removed from the working area. In order to make it appear again you have to paste it in the location you want.

You can **Copy** an object or multiple objects by selecting the respective option from the **Edit** or the **right click** menu and by pressing **Ctrl + C** or **Ctrl+Insert** keys from the keyboard. The selected object(s) will be copied to the clipboard but will leave the object unchanged. The copied object can be used as many times as we want by pasting it on the working area.

You can **Paste** an object only when you have anything inside the clipboard. If the clipboard is empty, the Pasting function is disabled. You can paste a design that it is on the clipboard by selecting the respective option from the **Edit** or the **right click** menu or by pressing **Ctrl + V** or **Shift+Insert** keys from the keyboard. The object(s) that were on Clipboard will appear on the working area without being removed from the clipboard. The items on clipboard will stay there until something else is placed. Remember that only the last item stored in the Clipboard will be pasted in the working area, all the previous will be lost.

Paste special

With the **Paste special** option that you can activate from **Edit** menu you can specify how you want to paste items by selecting options in the **Paste Special** dialog box. The **Paste Special** dialog includes various options that you can adjust before pasting the object on the design.



Paste Special

- ✓ **Source:** The **Source** field displays the format, path, and name of the file from which you cut or copied vector, bitmap or text artwork.
- ✓ **Paste:** The **Paste** option inserts or embeds the clipboard contents at the insertion point in the format you select in the **As** box.
- ✓ **Paste link:** The **Paste link** option inserts the clipboard contents and creates a link to the source file for the data. This is an advanced way of pasting objects inside Creative DRAWings it is available only when the **clipboard** contents come from an application that supports linking. Be sure to save the source file in the source application before you link it to Creative DRAWings.

- ✓ **Display as icon:** This option is available only if the contents of the clipboard support linking. The **Display as icon** option displays the linked or embedded object as an icon inside the software. To open or edit the object that was paste in the working area you have to double-click the icon.
- ✓ **Result:** In the **Result** area, you can view the effect of the selected options. Please read the description of each option carefully, because it will help you decide which on you will use.

Once you have decided the way you will paste the objects inside Creative DRAWings you click **OK** button to complete the paste.

Duplicating a design

There is also a way to create duplicates of selected objects without using the clipboard and the **Copy, Paste** tools. In order to do that you have to select the object(s), click and drag it to the location you want to be placed, right click once without releasing the left click to activate the Duplicate function and then release the left click to insert the duplicated object. To understand that the duplicate function was activated you will see the cursor changing to  icon. When the duplicate function is enabled you can disable it by right clicking once more. The duplicate function is faster than Copy and Pasting and more precise because you duplicate the design exactly in the position you want it with two mouse clicks.

Another easy way to duplicate the selected objects is by clicking on the **Duplicate** button  that appears on the **Tool options** bar. By clicking the **Duplicate** button the selected objects are automatically duplicated and are placed exactly over the source objects. When you duplicate objects they always appear selected which allows you to move them easily to a different location by click and dragging with the mouse. This is the easiest way to move duplicate design to a different location and separate them from the original ones. If you want them to be exactly over the source objects, you can simply deselect them and they will remain in place.

Delete objects

To delete any selected object(s) you can either press the **Delete** key form the keyboard, or select **Delete** from the right click menu option. The selected objects will be removed from the design and can be recalled only by selecting the Undo from the standard toolbar.

Sizing and skewing objects

In Creative DRAWings you can size and skew the objects proportionally by preserving their aspect ratio or by change their dimensions/shape in the way you want. You can change the size of the object by specifying the dimensions of the object or by changing the object directly. These abilities are available only inside **Create** mode and inside **stitch** mode.

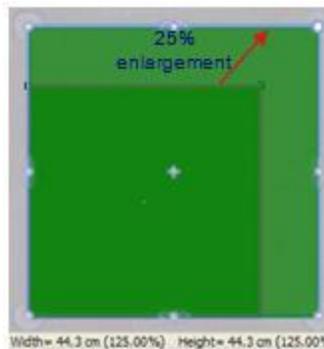
- **Size objects**
- **Skewing objects**

Size objects

When you select an object a selection rectangle appears around the shape. At the corners and at the middles of each side there are transformation handles that allow you to change the size of the object. If you position the mouse cursor exactly over the resize handles, the cursor will change to a two sided arrow that

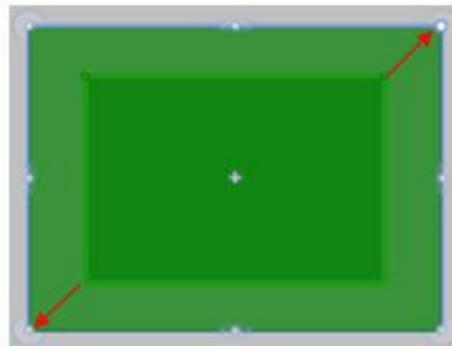
will show you the resizing directions. By click and dragging the transformation handles you can enlarge, shrink or stretch the object to the directions that the arrows show. If you click and drag the corner handle you can resize the object proportionally. On the **status bar** at the bottom of the screen you can view the percentage of resizing that you are making.

If you hold the **Ctrl** key pressed while sizing an object, the object will be sized proportionally and snap on every 25%. While sizing the object you can view the proportional change of the dimensions on the **Status bar** at the bottom of the application window. If you try to enlarge an object while holding the **Ctrl** key pressed, its size will increase with 25% step (125%, 150%, 175% etc.). The same step appears when you shrink an object. This ability allows you to make accurate changes on the shape and produce the result you prefer. Also, if you drag a handle to the opposite direction, until you see the proportional change on the status bar reaches the -100%, you will have produce the exact mirror of the object.



Hold Ctrl key and proportionally resize with 25% step

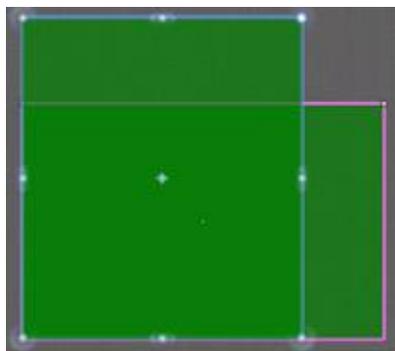
If you hold the **Shift** key pressed, while resizing the object from any corner handle, you can **Enlarge/Shrink** proportionally the design to all dimensions based on the initial center of the design.



Hold Shift key - Enlarge/Shrink proportionally the design

By holding both **Ctrl** and **Shift** keys pressed, while resizing the object from any corner handle, you can Enlarge/Shrink proportionally the design to all dimensions based on the initial center of the design and keep the original shape at the same time.

If you hold the **Alt** key pressed while sizing an object from the corner handles you will be able to resize the object freely, without keeping any proportion of its initial shape.

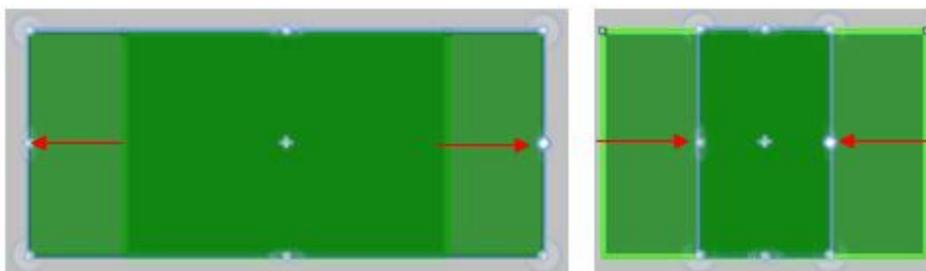


Hold Alt key – resize the object freely

Therefore, by holding the **Alt** key pressed while resizing you can not only resize the object but reshape it also.

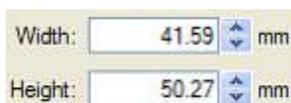
The handles at the middle of each side can be used to **Stretch** the design to the directions that the arrows show.

If you hold the **Shift** key pressed, while resizing the object from any corner handle, you can Stretch proportionally the design to two dimensions based on the initial center of the design.



Hold Shift key - Enlarge/Shrink proportionally the design

Another way to resize an object is by specifying the exact dimensions you want to have on the **Tool options** toolbar. When you select an object all related options appear on the Tool options toolbar.



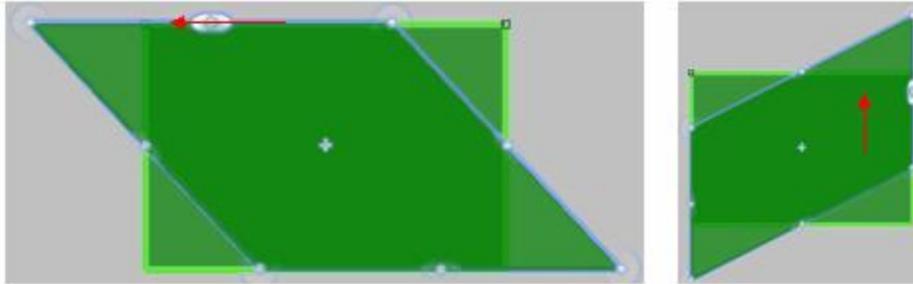
Width and Height of the shape

There are listed also the **Width** and **Height** of the object which you can change by inserting new ones. Select the values inside the field and then type the new value you want to have. Press enter to confirm the value or click outside the field. The change you made it is applied immediately on the object. This is a useful way to change the dimensions of an object or an entire design because you can do that precisely.

The same sizing abilities apply to Cross-stitch objects. You can select any Cross-stitch object and re-size it applying any method we described above. By changing the size of Cross-stitch objects you can increase or decrease the number of crosses in the design. More crosses in the design increase the quality of the cross-stitch embroidery result.

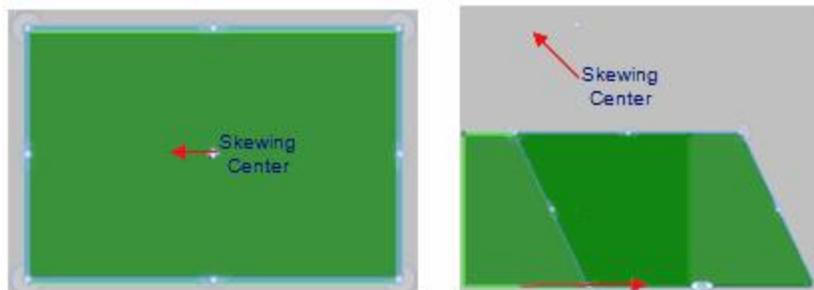
Skewing objects

At the middles of each side there are transformation handles that allow you to skew the objects. If you position the mouse cursor near the handles, the cursor will change to a two sided half arrow that will show you the skewing directions. By click and dragging the transformation handles you can skew the object to the directions that the arrows show.



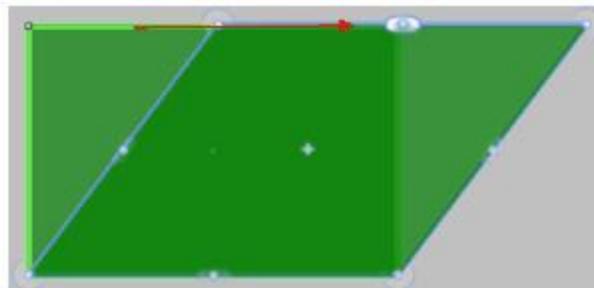
Skew horizontally and Vertically

By default the center of the design is located at the center of the object and all skewing transformations are made based on this. You can change the skewing center by click and dragging it to the position you want, even outside of the design. By positioning the center of the design outside of it you can skew the design based on the new center.



Skew based on Skewing Center

If you hold the **Shift** key pressed, while skewing the object, the center of the design will change automatically and will be positioned at the opposite side, based on which the skewing will be made.



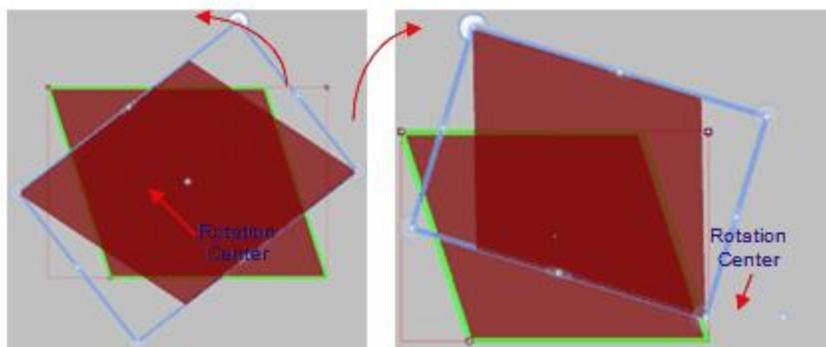
Hold Shift key - Skew based on the opposite side

Rotating and mirroring objects

Creative DRAWings allows you to rotate and mirror the designs you are creating easily. You can rotate and mirror the design by click and dragging the rectangle selection handles to the position you want.

Rotating objects

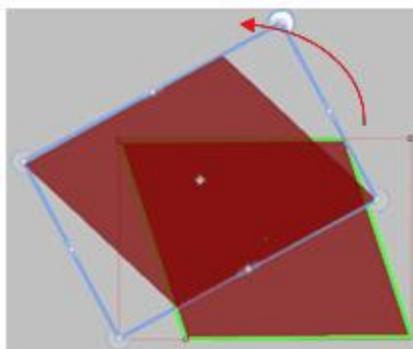
When you select an object a selection rectangle appears around the shape. At the corners there are transformation handles that allow you to rotate the object. If you position the mouse cursor on the handles, the cursor will change to a semi-circle arrow that will show you that you can rotate the design. By click and dragging the transformation handle you rotate the design clockwise or anticlockwise. The rotation of the design is made based on the center of the design. The rotation center of the design is by default at the center of the design but you have the ability to change its position. Select the rotation center and move it to position you want the rotation center to be. If you want you can move it outside of the design. Once you have moved the rotation center you can rotate the design based on the new rotation center.



Clockwise rotation – Anticlockwise Rotation with different rotation center

If you hold **Ctrl** key pressed while moving the rotation center, guidelines will appear on every 22.5 degrees of the X and Y axes based on the position you have moved it from. While moving the rotation center it will snap on the guidelines, allowing you to make accurate movements along the guidelines. The guidelines that appear have as center the point you click and dragged to move the rotation center. If you hold the **Alt** key pressed while moving the rotation center, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. While moving the rotation center it will snap on the guidelines, allowing you to make accurate movements along the guidelines. When you press the **Alt** key the rotation center automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can move the rotation center to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

If you hold the **Shift** key pressed, while rotating the object, the center of the design will change automatically and will be positioned at the diagonally opposite rotation handle, based on which the rotation will be made.



Hold Shift key - Rotation based on the opposite rotation handle

If you hold the **Ctrl** key pressed, while rotating the object, guidelines will appear on every 22.5 degrees of the X and Y axes based on the rotation center of the design. While Rotating the object, it will snap on the guidelines, allowing you to make accurate rotations along the guidelines. If you have changed the rotation center of the object the guidelines will start from the new position of the rotation center.



Rotate objects precisely

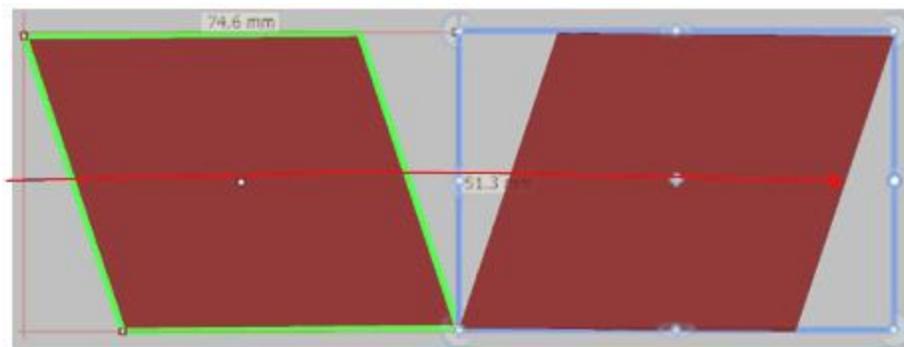
You can also rotate the objects you have created precisely by defining the exact rotation degrees on the Tool options toolbar. To do that you have to select the object you want to rotate, change the rotation center by dragging it to the position you prefer, type the exact degrees you want to rotate the design in the Rotate field from Tool options toolbar and press Enter key from the keyboard to apply the rotation. The object will be rotated the exact degrees you have defined.

The Rotate option can take values from 0o to 360o if you want to rotate the design anti-clockwise and from - 0o to -360o if you want to rotate the design clockwise. Besides inserting the degrees

Mirroring objects

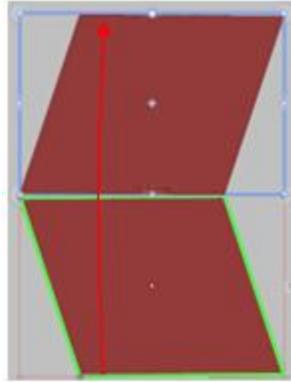
Mirroring an object in Creative DRAWings is similar with resizing procedure. Select an object in order the rectangle selection handles to appear at the corners and on each sides. If you position the mouse cursor exactly over the resize handles, the cursor will change to a two sided arrow that will show you the resizing directions. In order to mirror the design you have to drag the transformation handle all the way to the opposite direction until the complete mirror of the design appear on the working area. According the mirroring you want to do, you have to drag the respective handle that will give you the mirroring you want. You can mirror the design **Vertically**, **Horizontally** and **Diagonally**.

Horizontally, by dragging the handles of the vertical sides to the direction you want the mirror to be made.



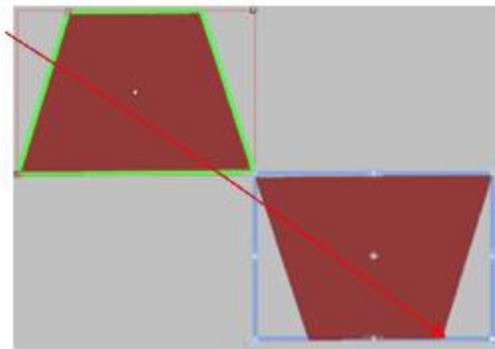
Mirror Horizontally

Vertically, by dragging the handles of the horizontal sides to the direction you want the mirror to be made..



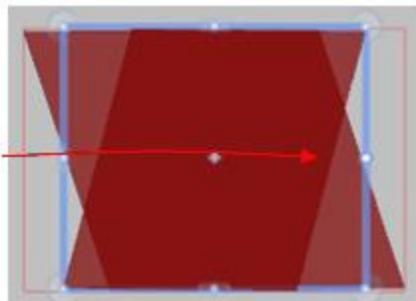
Mirror Vertically

Diagonally, by dragging the corner handles the direction you want the diagonal mirror to be made.



Mirror Diagonally

If you want in place mirroring of the object you have to hold **Shift** key pressed during the mirroring process. The object will mirror based on the center of the design and not on the opposite side/handle of the design.



Mirror while holding shift key pressed

To all above cases, if you want to make accurate mirroring you have to hold the **Ctrl** key from the keyboard pressed during the mirroring process. By holding the **Ctrl** key pressed the mouse will snap on every 25% of the mirroring movement allowing you to make an identical object mirror. Because you are dragging the transformation handle to the opposite side of the object, the percentage movement starts from 100% (original shape), decreases with 25% step until 0, and then increases with negative values until -100% which is the perfect mirror of the object. The percentage changes are shown on the **Status bar** that is located at the bottom of the application window and the negative numbers show that you are in the Mirroring process.

Also, you can make accurate mirroring by changing the **Width** and **Height** values from **Tool options** toolbar. This can be done by inserting negative size values to the respective size fields.

To mirror the shape you want based on the vertical axis you have to insert a minus in front of the current **Width** value and then press **Enter** key. The shape will be mirrored horizontally by keeping the same dimensions. You can mirror the design horizontally to the preferred width by changing also (except the sign) the width value.

To mirror the shape you want based on the horizontal axis you have to insert a minus in front of the current **Height** value and then press **Enter** key. The shape will be mirrored vertically by keeping the same dimensions. You can mirror the design vertically to the preferred height by changing also (except the sign) the height value.

To mirror the shape diagonally you have to insert negative values on both **Width** and **Height** values of **Tools options** toolbar. The diagonal mirroring will be made in the position where the shape is located.

Another way to mirror the selected design accurately is by clicking the Mirror X and Mirror Y buttons that you will appear on Tool options toolbar.

To mirror the design vertically you have to select it and click on the Mirror X button. The design will flip and you will view its vertical mirror.

To mirror the design horizontally you have to select it and click on the Mirror Y button. The design will flip and you will view its horizontal mirror.

Use any of the above methods to mirror your designs and produce the result you want.

Repeat transformation

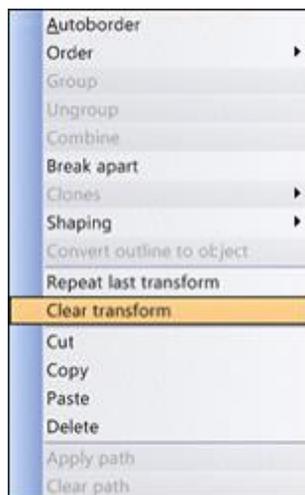
In Creative DRAWings you have the ability to **Repeat your last transformation** by using the respective option of the Right click menu. For example, if you have rotated an object you can repeat the last rotation as many times you want by selecting the Repeat last transform option from the right click menu or by pressing the **Ctrl+R** shortcut keys from the keyboard. The object will be rotated, by keeping the same rotation angle with the last made rotation, as many times as you used the Repeat last action option. This ability is available only inside Create mode of Creative DRAWings.

If you want to repeat your last transformation you have to select the object you want the last transformation you made to be applied. Then **Right click** on the object and select the **Repeat last transform** option from the popup menu. The last transformation you made will be applied to the selected object as many times as you used the **Repeat last transform** option. Every time you make a transformation it is automatically becoming the last transformation and this one will be used when the **Repeat last transform** option will be applied.

Clear transform

Clear transform option of object editor context menu provides the ability to **Cancel** all the transformations that have been done to an object in object editing mode. This option of Object editing context menu appears when

right clicking on any object that has been repositioned, resized, slanted, rotated or when any other transformation has been applied to it while you are in Object editing mode. The reverted transformations can be more than one. The object is reverted to its initial state and position that it was designed. When applying **Clear transform** you are prompted to select whether you like to keep the distorted shape or not. This way you can make the present state of an object have no transformations. This is used when you like the current state of an object and you want to be able to recover this state in case you apply any transformations.



Grouping objects

Creative DRAWings includes grouping tools that are very useful in the designing face of the embroidery. By grouping two or more objects the software treats them as a single unit. Any change you make on grouped objects is automatically applied to members of the group. A group in reality is a way to make a multiple selection of objects to be treated as one object. These options are available only inside **Create** mode of Creative DRAWings.

Group objects

In order to make a group you have to select the objects you want become one group by making a multiple selection of objects and from the right click menu select **Group** option or press the **Ctrl** and **G** shortcut keys (Ctrl+G) together from the keyboard. The selected objects will become one group and will be treated as one object.

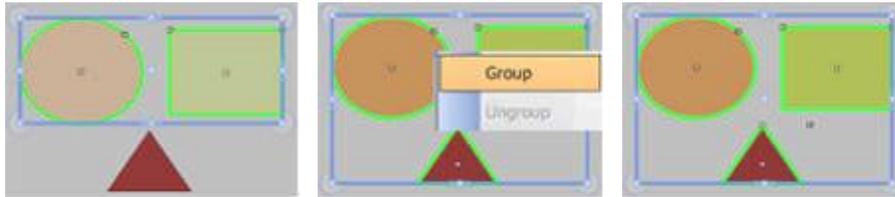


Two separate objects - Select both objects and group them - Grouped objects

Add object to a Group

If you want, you can add more objects to a group. In order to do that you have to select the object(s) and then select the group of objects. From the right click menu select **Group** option and the object will be added to the

group. If you want you can group multiple groups and make nested groups. To do that you have to select two or more groups of objects and from right click menu select **Group** option once more.



One group and one separate object – Add object to group - Grouped objects

Delete an object form a Group

To delete an object from a Group you have to ungroup it first, by selecting the respective option from the right click menu, delete the object you want and then re-group the objects. This is the standard way you can delete an object from a Group.

Edit an object form a Group

To edit an object from a Group you have to ungroup it first, by selecting the respective option from the right click menu, edit the object you want and re-group the object. This is the standard way to edit an object form a Group.

Ungroup objects

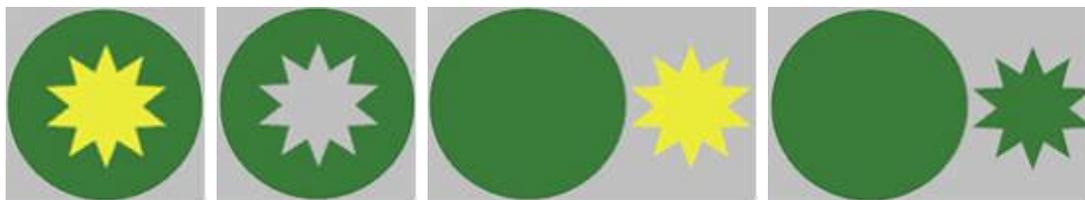
In order to **Ungroup** a group of objects or nested groups you have to select it and from the right click menu select **Ungroup** option or press the **Ctrl** and **U** shortcut keys (Ctrl+U) together from the keyboard. The group of objects will break and all objects will be handled as separate objects. The nested groups will be separated to its sub-groups and will be handled as separate groups. You can continue ungrouping the sub-groups of the nested groups until all groups become separate objects.



Grouped objects – Ungroup objects – Ungrouped objects

Combining and breaking apart objects

Combining two of more objects has as a result a single object with common fill and outline attributes. You can **combine** two or more objects and create one that will have common attribute. If you want to separate combined objects to the objects that they consist of you can **break** them **apart** and edit them separately. These options are available only inside **Create** mode of Creative DRAWings.



Combine overlapping objects – Combine objects that are not overlapping

To combine two or more objects you have to select them, **Right click** menu and from right click menu select **Combine** option or press the **Ctrl** and **L** shortcut keys (Ctrl+L) together from the keyboard. The two objects will become one with common fill and outline attributes. If the objects are overlapping then the shape of the object that is above will become a hole in the shape below. This is the way how the overlapped objects are combined. This is very useful when you want to create holes inside an object. If the objects are not overlapping then the objects will have the common attributes but the combine option will not affect the initial shape of the combined objects.

If you want to separate a combined object to its objects you have to select the object, right click on it, in order the **Right click** menu to appear and from the right click menu select the **Break apart** option or press the **Ctrl** and **K** shortcut keys (Ctrl+K) together from the keyboard. The objects will be separated to its initial objects but will retain their common fill and outline attributes. If you have just combined the objects and you want them back as they were you have to **Undo** your last action by selecting the respective option from the **Edit** menu or by clicking on the **Undo** button from the standard toolbar.

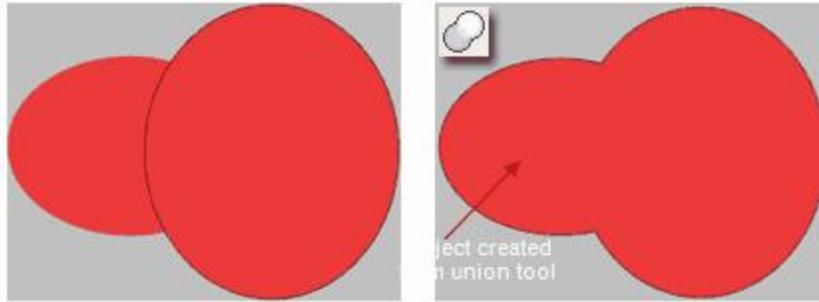
Combined objects that are not overlapping in embroidery are connected with a Jump-stitch between them. Therefore whenever you see two objects that are far one from the other and they are connected with Jump-stitch, this means that they are combined.

Intersection and Weld

Creative DRAWings includes two more editing tools that allow you to create irregular shapes. These tools are Intersection  and Weld . You can Intersect or Weld almost every object, including shape objects and text objects. However you cannot intersect or Weld bitmap images that were imported as backdrops or where filled with cross-stitch stitches.

These options are available only inside **Create** mode of Creative DRAWings.

You can **Weld** two or more overlapping objects by selecting them and then selecting the respective option from the **Edit** menu or by clicking on the Weld  icon from standard toolbar. The objects will become one with outline the perimeter of the objects that created the Weld shape.



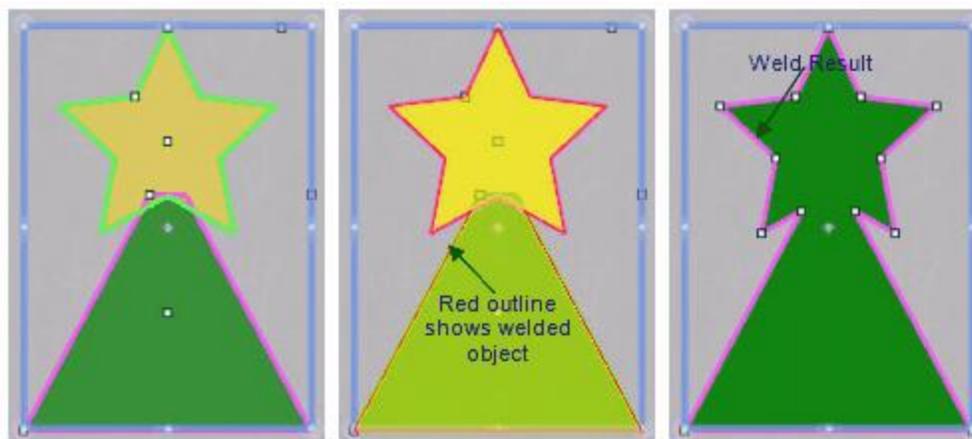
Weld overlapping objects

If you made a multiple selection of objects by selecting one object first and then the second object by holding the **Shift** key pressed, the new object will adopt the fill and outline properties of the last select object.

If you made a multiple selection of objects by making a **Rectangle** or **Lasso** selection, the new object will adopt the fill and outline properties of the object that is under the other objects in the order of objects.

You can Weld objects regardless if they are overlapping or not. If you try to Weld objects that do not overlap, you will have as a result a combined object. The objects will act as one object with many sub objects with the same attributes. In order to separate such Weld objects to its sub-objects you have to select the **Break apart** option from the right click menu.

If you want you can, preview the Welding result by selecting the objects you want to **Weld** and then positioning the mouse over the Weld  icon. The software will preview how the objects will look like after applying the Weld option on them. The red line that surrounds the two objects will be the outline of the object after applying the Weld option.

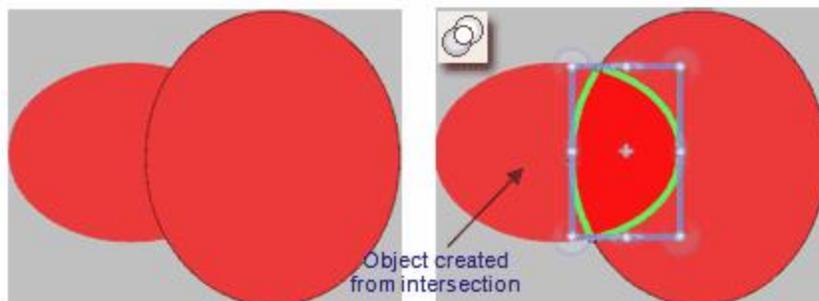


Weld Preview

After previewing the Weld option you can decide easier if you will apply it or not.

You can **Intersect** overlapping objects by selecting them and then selecting the respective option from the **Edit** menu or by clicking on the Intersection  icon from standard toolbar. Intersect option creates an

object from the area where the objects overlap. The shape that will be created from the intersection depend on the shapes of the objects you intersect.

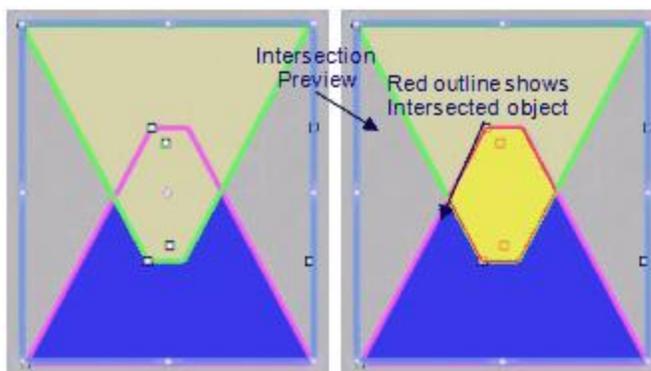


Intersect overlapping objects

If you made a multiple selection of objects by selecting one object first and then the second object by holding the **Shift** key pressed, the new object that will be created from the intersection will adopt the fill and outline properties of the last select object.

If you made a multiple selection of objects by making a **Rectangle** or **Lasso** selection, the new object will adopt the fill and outline properties of the object that is under the other objects in the order of objects.

If you want you can, preview the **Intersect** result by selecting the objects you want to **Intersect** and then positioning the mouse over the **Intersect**  icon. The software will preview how the objects will look like after applying the Intersect option on them. The red line that surrounds the object shows the object that will be produced after applying the Intersect option.



Intersect Preview

After previewing the Intersect option you can decide easier if you will apply it or not.

Both **Weld** and **Intersect** functions are helpful in the creation of irregular shapes that you can use to create the vector design you want.

Remove overlaps

The remove overlaps option is located on the **Object properties** toolbar and it appears when you select an object filled with Satin, Step, Row fill, Netfill Satin Serial or Running stitches.

It is used mainly for .draw file designs that have area fill and you have opened them inside Creative DRAWings software. With Creative DRAWings software you can only create designs with outline stitches

(Running, Satin Serial), but this functionality exists in case you open a design that have shape areas filled with stitches.



This is an automatic filter which removes all overlaps between the objects of the vector designs. This filter uses artificial intelligence and it is applied only where necessary. The application of the filter results in the reduction of stitches that will be placed on the fabric. It is also possible to manually alter the overlapping status of each object. There are three possible options that you can apply on a specific object, **Auto**, **Never** and **Always**. The **Auto** is the default option and the one that Creative DRAWings uses to create the best possible results on the design. When the **Never** option is applied on an object, the specific object will never trim the objects that overlaps. This means that all the objects/shapes that are under the selected objects will be embroidered normally, placing all their stitches on the fabric. The opposite option is **Always**. When it is applied to a specific object it trims all the objects that it overlaps. This means that all the parts of objects/shapes that are under the selected object will not be embroidered.

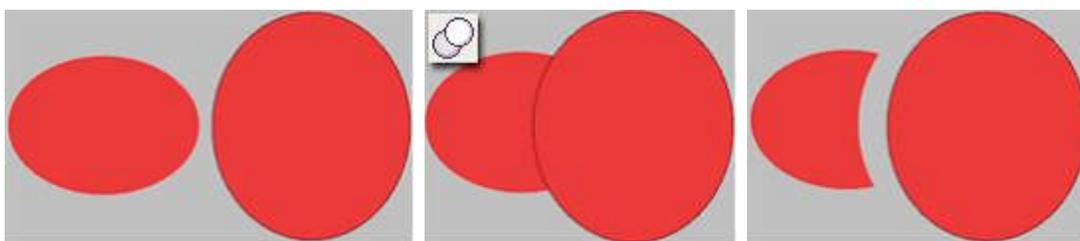
The advantage of this option is that it is applied automatically during the creation of the design without having to apply it manually. It will automatically decide which objects will trim and which not based on embroidery rules.

Trimming objects

With the Trim  function you can create wholes inside objects or reshape them by removing parts of their shape. You can trim any object you want in a vector design but you cannot trim a bitmap image that it is imported in the design.

This option is available only inside **Create** mode of Creative DRAWings.

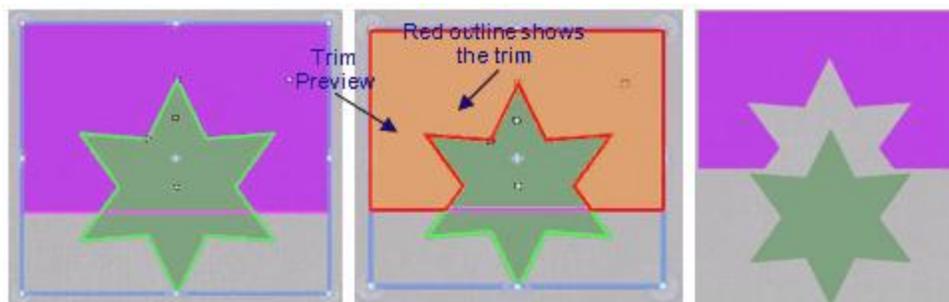
You can apply the **Trim** function only to objects that overlap partially or entirely. First you have to decide which object will be the one that will be trimmed (target object) and which object you will use to apply the trimming (source object). Then you have to select the source object first and then the target object by holding the **Shift** key pressed, to add it to your selection. From **Edit** menu or from the right click menu under **Shaping** submenu, select the **Trim** option to apply it on the selected objects. You can also apply the Trim option by pressing the  icon from standard toolbar. The trim will be applied on the target object and the area that was covered from the source object will be removed from the target object. The trimmed object will have a new shape but will retain its fill and outline attributes. If you make a rectangle selection the objects you want to trim and then apply the **Trim** tool, the only shape that will be trimmed is the one at the bottom in the overlapping order of the objects. You can make as many trims you want on overlapping objects to create the vector design you want.



Before trim – Apply trim tool on overlapping objects – Trimmed object

If you try to **Trim** two objects that are not overlapping, nothing will happen. Trim option it only applies on overlapping objects. If you want you can make a multiple trim of a target object with many source overlapping objects. To do that you have to select the source objects first one by one by holding the **Shift** key pressed to add them to your selection. The last object that you will add to your selection must be the target object that will be trimmed. After applying the **Trim** option all the source objects will trim the target object.

If you want you can, preview the Trimming result by selecting the objects you want to **Trim** and then positioning the mouse over the **Trim**  icon. The software will preview how the trimmed object will look like after applying the Trim option. The red line that surrounds the trimmed object shows the object that will be produced after applying the Trim option.



Trim Preview – Star trims Rectangle object

After previewing the Intersect option you can decide easier if you will apply it or not.

Trimming and **Remove overlaps** tools have similar functionality but not the same. Creative DRAWings with the **Remove overlaps** mechanism, removes the unneeded parts of the design from the final embroidery result but it is not removing the overlaps from the Vector artwork. Therefore, if you export the embroidery design to **Wings' modular** (select File>Export>To editor...) you will view that the overlapping areas are removed automatically, but if you export the same design to SVG vector file (select File>Export>To SVG) you will view that the overlapping areas are there as they were designed. On the other hand if you apply the **Trimming** function on the objects the embroidery result will be the same but the SVG vector artwork will differ. If you open the SVG file you will view that the objects you trimmed are remain there trimmed and not as they were before you apply the **Trim** tool. This is the main difference between **Trimming** and **Remove overlaps** tools. Trim tool alters the vector shape but **Remove overlaps** tool does not.

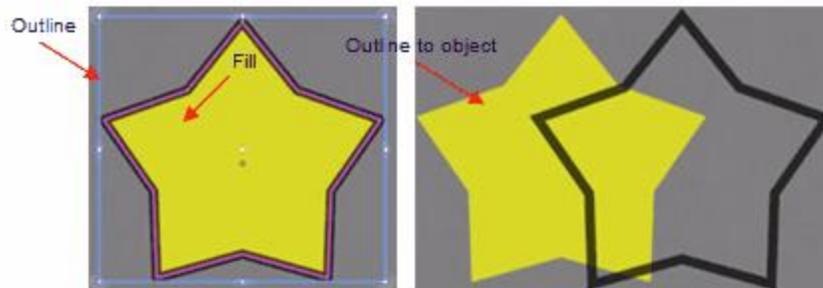
Note: If you apply **Trim** option on two objects, it is better to set the **Remove overlap** value of both objects to **Never** to ensure better embroidery results.

Convert outline to Object

To all fill objects (objects that are filled with Satin, Step, Row fill or Appliqué stitch type) can be added an outline easily by **left clicking** on the top left corner of the color you want the outline to have. The outline will be added around the object filled with Satin serial or Running stitch type but it will not be a separate object. Therefore you will not be able to reshape it separately. For this purpose the **Convert outline to Object** exists. This option allows you to convert the outline/border that is attached on an object to a separate object and handle it as a Fill or outline/pen object. If you convert the outline to a Fill object, you will be able to fill it with Step, Satin, Row fill or Appliqué stitch type that it is not possible to do it otherwise. Also, you will be able to apply all kind of shape transformations on it.

If the outline thickness is smaller than 0.9mm and you apply the **Convert outline to object** option, the outline will be converted to **Running** or **Satin Serial** object and not to a Fill object. Therefore whenever you want to separate the outline from the object but keep the stitch type as **Running** or **Satin Serial** you have to set the outline thickness lower than 0.9mm.

This option is available only inside build in **Designer** of Creative DRAWings. If you are working with a different designer, this ability will not be available to you.



Apply Convert outline to object option to star object

To apply **Convert outline to object** option you have to select an object that has an outline and from **Edit** menu select the respective option. You can also apply the same option by pressing the **Ctrl, Shift and Q** keys (Ctrl+Shift+Q) from the keyboard after selecting the object you want to apply it. The outline will be separated from the fill object and can be handled as a different object.

(Freehand, Bezier or Outline tool) and do not add an outline to the Fill object. This is the only way to do that.

Undo

Using this option in the Edit menu, you can undo the very last action you took. You can also access the Undo function from the Standard toolbar by clicking on the  icon. If you click the arrow next to the Undo  icon, Creative DRAWings displays a list of the most recent actions you can undo. Click the action you want to undo, to take your design back to the state you want. When you undo an action, you also undo all actions above it in the list. If you decide to cancel the undo you made, click on redo function.

You can also change the undo level from **Tools > Options** in the **General options** tab.

Redo

Using this option from the Edit menu, you can cancel the latest undo that you have performed. You can also access the Redo function from the Standard toolbar by clicking on the  icon. If you click the arrow next to the Redo  icon, Creative DRAWings displays a list of the most recent actions you can redo. Click the action you want to redo, to take your design to the state you want. When you redo an action, you also redo all actions above it in the list.

Add new objects as clones

A very useful capability for making designs with repeated shapes is **Add new objects as clones**. You can enable this option using **Add new objects as clone's** option of **Edit** menu. When this option is enabled, any created duplicate of an object is marked as a clone of the initial object. If you reshape any of the clones all other clones are reshaped too.

You can create clones in various ways. The easiest way is by selecting one or more object and the press  button on **Tools options** pane.

The other way is, while moving or transforming any object (resize, rotate, slant) you can right click and create a duplicate of the original object. This object has been created, leaving the original object intact.

Let's make a brief example of how it this function works.

1. Create a new design by pressing new design  icon
2. Press create ellipse  tool
3. Click and drag on the design area, to create an ellipse
4. Now the newly created object is selected.
5. Enable **Add new objects as clone's** option of **Edit** menu.
6. Move the rotation center simply by click and drag it, in order to rotate the object relative to another point.

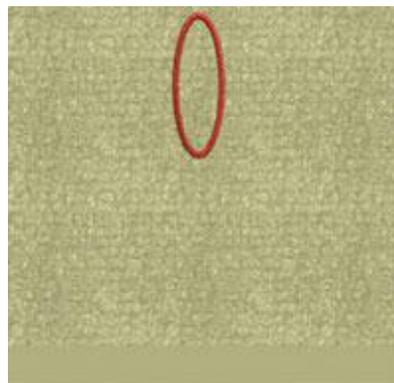
The rotation center is a small cross that is located at the center of the object.

7. Place your mouse over the upper right corner, a rotate handle will appear.

Notice the highlighted rectangle around the object. On the corners and on the middle of the sides there are some highlighted bullets that can be used to transform the object.

8. Click and drag to rotate the ellipse to the position you like, before you release the mouse Right click in order to create a duplicate.
9. Press **Ctrl+R** to repeat this transformation and create more clones
10. Once you have created the clones you like you can now take advantage of the clone editing.
11. You can now edit the shape of any clone (Node editing mode) and all other clones will be affected as well. This way you can improve the pattern in an aspect that you didn't imagine at first.

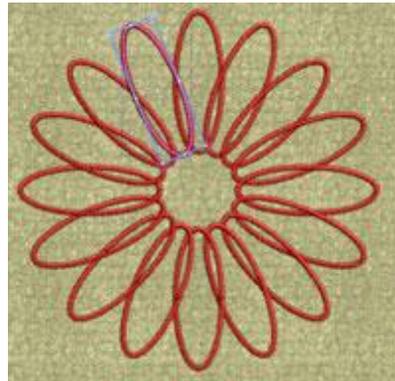
This is a created ellipse. Once you have created the ellipse make sure that Add new objects as clones of layout menu is selected.



Use any of the transform handles that appear while an object is selected to transform it and by right clicking create a clone of the first object.



Create as many clones as you like by applying Repeat last transform option from "Edit" menu.



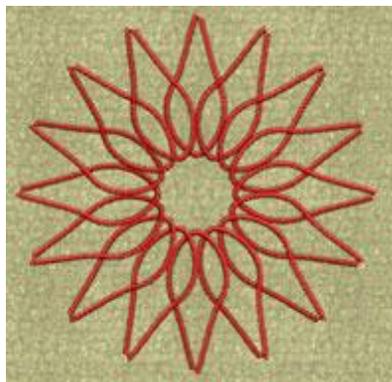
In node editing mode, select any of the clones. Reshape the object using Edit nodes mode, any change you make is immediately applied to all other clones



The flower like shape has changed



We have changed with a couple of clicks all these flower petals and created a different version of the flower.



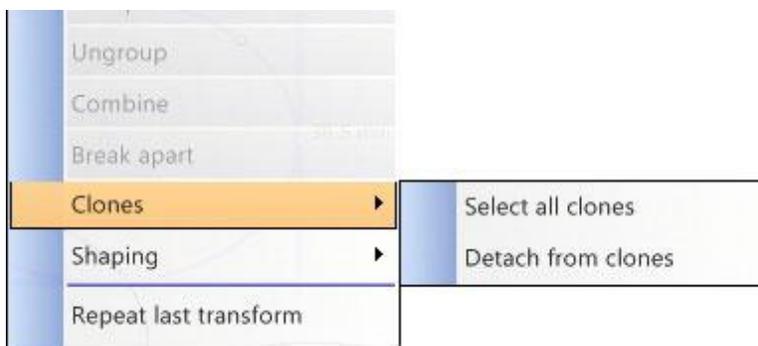
Once you have created cloned objects you can access some extra functionality that is located on the right click menu, in order to better control these items.

Select all clones

You can select all clones by using **Select all clones** option of **Clones** submenu that appears when right clicking on any of the clones. Now you move all of them or apply a change on all of them.

Detach from clones

Another useful option is that you can select one or more of the clones and detach it from the other clones by selecting **Detach from clone's** option of **Clones** submenu that appears when right clicking on any of the clones. The detached clone will no longer inherit the changes that are applied to any of the clones. It is a normal object now.



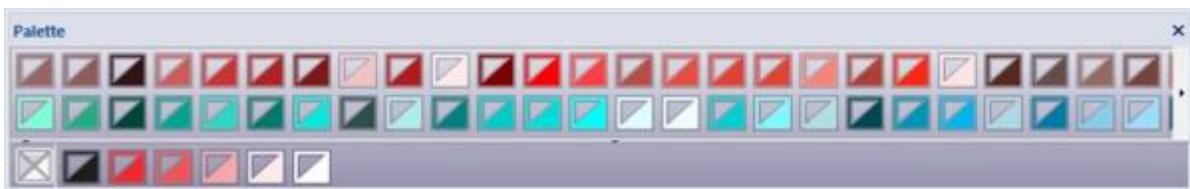
Available clone management options

Chapter IX

Color management

In this section we will present how to work with colors for your projects. When creating a new design either you are prompted to select a **Thread/Brush** palette (**Color reduction** wizard step) or you are working with the default **Thread/Brush** palette that contains RGB colors. In any case you can select which

Thread/Brush palette to use using the **Edit palette** icon  on standard toolbar. When using Edit Palette option you can select a **Thread/Brush** palette to use, among the color palettes of the major **Thread/Brush** manufacturers or use the default RGB (Red Green Blue) color palette. You can select the **Thread/Brush** palette that actually use, to create the design you want based on the colors that actually exist. If you have selected a **Thread/Brush** manufacturer palette then the colors of the palette will be available on color palette. According to the Techniques you have enabled for a design you may have more than one color palettes available on the Palette toolbar. All the Techniques, besides **Paint** technique, are using the same palette as you can see on the following figure.

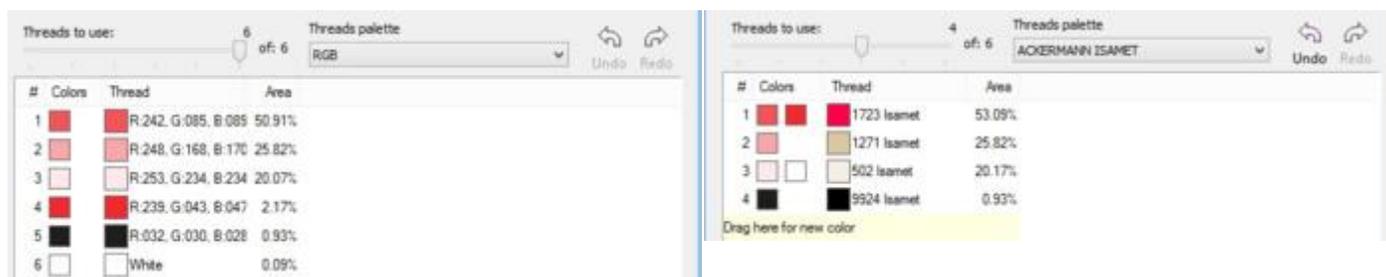


If we have any technique enabled when **Paint** technique is enabled, then an extra **Brush** palette is added to the palette toolbar in order to be able to add colors to your **Paint** objects as you can see on the following figure.



At this point we will not analyze how to work with **Paint** colors since they are presented into a separate section in the chapter about Paint. One thing to have in mind is that generally the **Thread/Brush** palettes have a limited number of colors. When importing **Vector graphics** or **Bitmap images** that have too many colors, the program can not automatically set identical color, from a **Thread/Brush** palette, as on the original artwork. There is a mechanism that can make a color match and reduce the produced colors, use **Edit palette** icon  to bring up **color reduction** dialog. For example we have imported a cmx design that contains 6 colors, as you can see on the left area of the following figure, If we do not select any **Thread** palette and leave the default RGB palette. In the right part we have selected **ACKERMANN ISAMET** palette

and as we can see the color reduction mechanism has matched the colors to the Threads of the selected palette.



RGB palette used, no color reduction

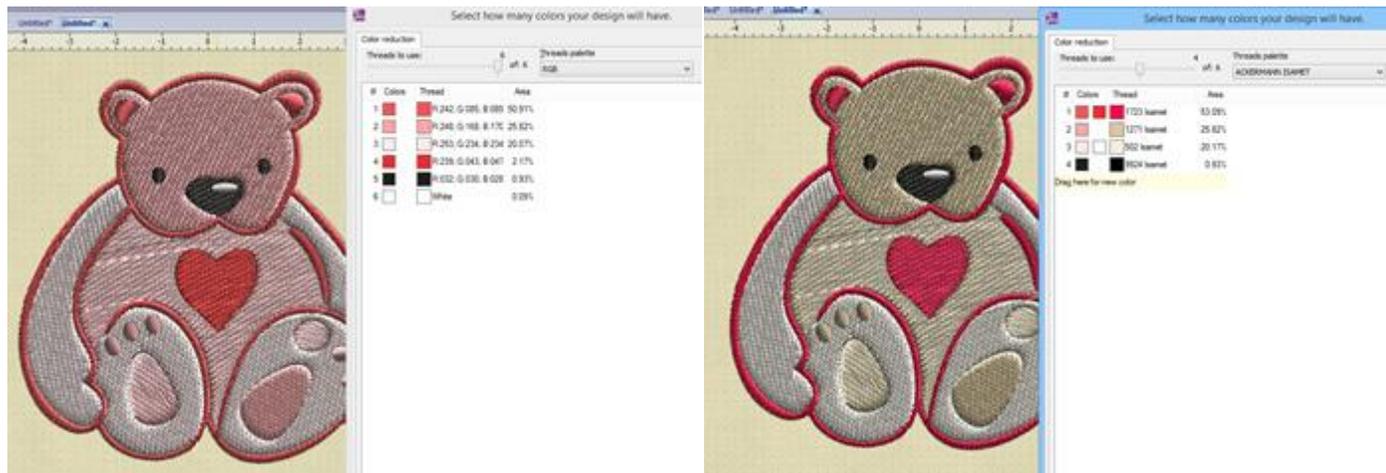
Brush palette selected automatic color reduction

This is happening because there is no limitation to the colors that you can use on a vector artwork, but there are limitations to the colors you can use on an embroidery design. The software has a limitation of 99 colors on the embroidery designs. But considering the max needles that your embroidery machine can support you have to make a choice about the final number of colors. You must always keep in mind this limitation whenever you use stitch mode. If you have a design with 6 colors but in Edit palette you have defined 4 colors (According to your embroidery machine needle carriers). Then in stitch mode you will see you design changing and using only the number of colors that are selected for embroidery. When this automatic conversion takes place it does not change the color of the original artwork, the colors that you can see on the design are the default RGB colors and not the automatically matched colors from Color reduction. In order to

preview the design with the palette matched colors you must switch **Stitch** mode  (Ctrl+2) where you can see the final colors. To summarize, the colors of the final design can be adjusted using the **Edit palette**,

but you can only see final colors when switched in stitch  mode. You must always keep in mind this

limitation whenever you click on the **stitch**  button and you see changes on the colors you have assigned to the design. This is becoming clearly obvious when you are working with a specific manufacturer's thread palette where all RGB colors are not available. The color match will not be identical and when you are in the stitch tab you will see the design preview with slightly different colors but closer to the final results.



Thread palette

Thread palette toolbar

The **Thread/Brush palette** toolbar is located at the bottom of the application window (Visible only in **Draw** mode). Using the color icons you can choose colors (**Fill** or **Outline**) for any part of the design. In case that the toolbar is not visible you can use the respective option of **View** menu - **Toolbar** section. The toolbar is consisted of two parts, the **available colors** and the **colors that are currently used**.



Color palette

Available colors

The **available colors** are the colors of the color palette you have selected to use. The colors are located at the top rectangle area of the Palette toolbar and by default the RGB palette is loaded. You can change the default color palette and use a specific **Thread/Brush** color palette from the **Edit palette** dialog (we will explain it thoroughly later in this chapter).



Available colors

Currently used colors

There is also the **currently used colors** area where all the currently used colors are listed. If the design has five different colors they will be listed at the bottom of the palette toolbar.



Currently Used Colors

As you can see any color icon is consisted of 2 triangles , one on the upper left part and one on the lower right part. If you place the mouse on top of the upper left part of a color you can see a **pen** icon. This means that the selected color will be used for the outline of the object. If you place the mouse over the lower right part you will see a **bucket** icon revealing that the selected color will be used for the object fill. For any object we select the colors (outline-fill) that are used for it are marked with icons in currently used colors. If you

select an object of the design the color that was used to be filled will be highlighted with a fill bucket  on the currently used colors area. If the object has outline, also, the color of the outline will be highlighted with a

pen  icon. The used colors can be reused to new created objects by selecting the object on the working area and then the color you want to be filled.

At the beginning of the currently used color palette there is a square , which is the **empty/none** color. If a selected object does not have a Fill color, then the **fill** bucket will appear inside the **None color**  square. If the selected object does not have an **Outline** color then the pen icon will appear inside the **None color**  square. Also, if you do not want an object to have a **Fill** or an **Outline** color, you have to select the object it and then click on both part of the none color square  to remove the colors from the object.

The **palette** toolbar is movable and re-sizable. You can change its position by click and dragging the **Title bar** to a new position. The toolbar will float on the working area and become re-sizable. You can change its dimensions and position on the software. You can keep it as a floating toolbar or you can position it back to its initial position by click and dragging it at the bottom of application window.

Setting colors

By default when creating an object, the default **Fill - Outline** color is applied on it. The software has a pre-defined set of Fill - outline colors to be used by default. Later in this topic we will present how to set the colors that you wish to have as defaults. When you select an object, on the design area, you can see the color that was used for the specific object's fill to be highlighted with a **Fill bucket**  on the bottom right corner of the color. In the same way If the object has an outline color, the outline color will be highlighted with a **Pen**  icon on the top left corner. Any of the used colors can be reused for newly created objects easily by creating the object and then selecting on a the color from currently used colors.

In order to change the **Fill color** of an object you have to select it and then **click** on the bottom right area of the color you want from the color palette or from the used colors. You can also **Right click** on the color and from the right click menu select the **Set fill color** option. The object will be filled with the selected color and the color will be added in the used colors area (if it is not already there). In addition, the color you have selected can be easily recognized from the **Fill bucket**  icon that will have on it when it will be added in the used colors area.

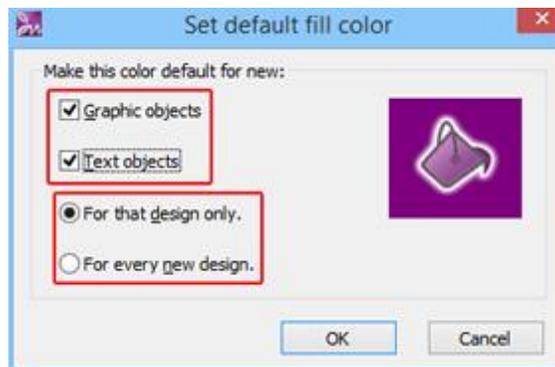
Furthermore, in order to change the **Outline color** of an object, you must select the object, and then **click** on the top left corner of the color you want from the color palette or from the used colors. You can also **Right click** on the color and from the right click menu that will appear select **Set pen color option**. The color you have selected will be added in the currently used colors area (if it is not already there) and it will have the **Pen**  icon on the top left corner. The selected object is colored immediately with the **Fill** or **Outline** color that we have clicked.

If you do not want an object to have **Fill** or **Outline** color you can click on the bottom right or on the top left corner on the **Empty/None color**  box, that it is located in the currently used colors area, according to whether you want to remove the **Fill** or **Outline/Pen** color. The **Fill**  or the **Outline**  color will be immediately removed from the object allowing you to create the design you want.

Set default Fill or Outline colors

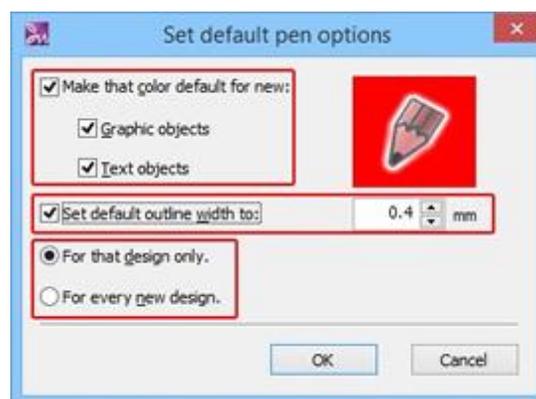
As we have already mentioned when creating an object a set of default Fill or Outline colors is automatically applied on the created object. We can easily change the **default** set of **Fill** and **Outline** colors and decide whether to make the new selection a program default or use only as default set for the specific design.

When no object is selected if we click on lower right area of any color, then the **Set default fill color** dialog will appear displaying the color you have selected. On this dialog you can select for which types of objects **Graphic objects - Text objects** the selected color will be used as default **Fill** color. Furthermore you can select whether this fill color will be used only for the **current** design or for **every** design from now on. In case that have a selection that you do not want to release but you want to set a default fill color, you must hold **Ctrl** key on your keyboard and then click on the **Fill** color that you want to set. The same dialog will appear, your selection will not be filled with the clicked color, it will be just set as default **Fill** color.



Set default Fill color dialog

In the same way we can change the **Default Outline** color. When no object is selected if we click on upper left area of any color, then the **Set default Pen color** dialog will appear displaying the color you have selected. On this dialog you can select for which types of objects **Graphic objects - Text objects** the selected color will be used as default Pen color. Furthermore you can select whether this Pen color will be used only for the **current** design or for **every** design from now on. In case that have a selection that you do not want to release but you want to set a default **Pen** color, you must hold **Ctrl** key on your keyboard and then click on the **Pen** color that you want to set. The same dialog will appear you can apply default **Pen** color and your current select will not be changed.



Set default Outline color dialog

From the same dialog you can change the Width of the default outline/pen. Check the **Set default color width to** checkbox and type the width you want in the respective field. The default outline will set to the new value and will be applied to the current design or on every design according the changes you have made in the **Set default pen options** dialog.

In case that you want the created objects not to have **Fill** or **Outline** color, by default, you can click on the bottom right or on the top left corner on the **Empty/None color**  box, according to whether you want not to have **Fill**  or the **Outline**  color.

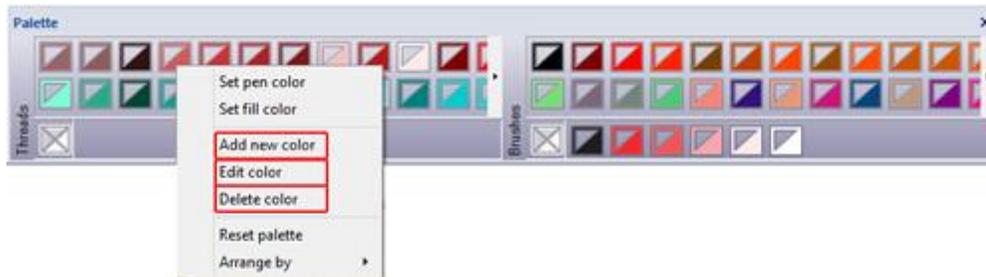
Editing default color palette (RGB)

The default color palette of the application is the **RGB** (Red, Green, Blue). This color palette consists of 358 colors selected from all available colors as representatives. Since this palette has generic colors we can **Add**, **Edit** or **Remove** colors from this palette. **Threads** and **Brushes** palettes are using the same **RGB** palette, so if we edit the **Threads RGB palette** then the color changes will also be applied on the **Brushes / Pen RGB palette**. In order to Edit the **RGB** palette we must edit the **Threads** palette part.

In order to edit the **RGB palette** you must also have enabled the **Embroidery** technique. When embroidery technique is enabled you can also see Threads palette as on the following figure.

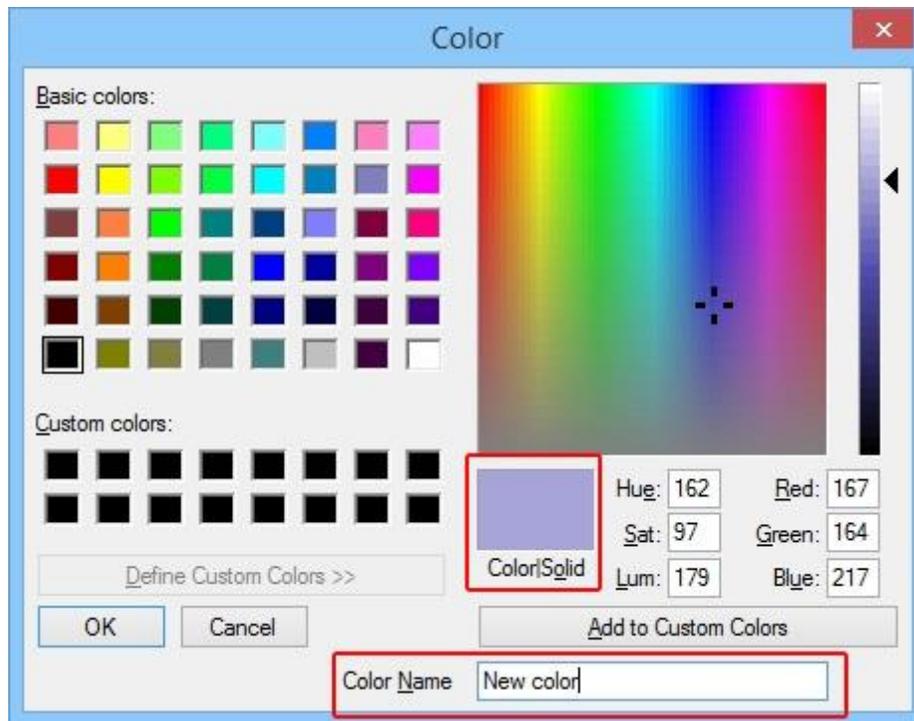


To **Add a new color** you have to **Right** click on the RGB color palette that is listed on the **Thread palette** toolbar and select the respective option.



Right click menu

The **Color** dialog box will appear from where you can choose the color you want the new color to have. There are various ways you can choose a color from the **Color** dialog. You can choose a color by clicking on the respective one from the **Basic colors** list, or by clicking on the color rectangle where all possible colors are listed, or you can type the exact code number of the color you want on the Red – Green – Blue / Hue – Sat – Lum fields and produce the color you want.



Color dialog

After choosing the color, you can set the name of the color in the **Color name** field or leave the suggested name and click **Ok** button to confirm your selection. The color you have chosen will appear at the end of the existing RGB color palette. The newly added color can be used normally.

To **Edit an existing** or newly added color you have to right click on the color and select the **Edit color** option from the right click menu. The **Color** dialog box will appear from where you can choose a different color or name for the color that you are editing. There are various ways you can change the color from the **Color** dialog. You can change the color by clicking on a different one from the **Basic colors** list, or by clicking on the color rectangle where all possible colors are listed, or you can type the exact code number of the color you want on the Red – Green – Blue / Hue – Sat – Lum fields and produce the color you want. If you want you can edit also the **Color name** by typing a new one in the respective field. When you finish you can click the **OK** button to confirm the changes or **Cancel** button if you want to discard the changes you made. The changes you made will be applied on the selected color and it will be ready for use.

To **Delete** an existing or newly created color you have to **Right click** on the color and select the respective option from the right click menu. The color will be deleted immediately.

Important: Be careful when you use the Delete function because you cannot Undo the deletion of a color.

If you want to Reset the RGB palette to its default status you have to right click on any color and select the **Reset palette** option. The color palette will return to its default status and all the changes you have made will be lost.

Important: All the above options are available only for RGB color palette.

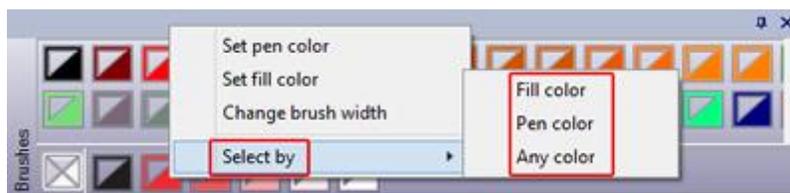
Selections by color

The palette toolbar includes the ability to select objects by color. This option is very useful when you want to make a change to all objects that have the same color. You can select them and then make the change you want. You can change colors or fill types to all objects or apply any other option you want. You can select objects by **Fill** color, by **Pen** (outline) color or simply by color.

To select the objects by color you have to **right click** on the **color** you want from those that are listed on the **currently used area** and from the right click menu select one of the three available selection options: **Select by Fill**, **Select by Pen** and **Select by color**.

- If you select **Fill color** option, all objects that have the fill color you right clicked on will be selected.
- If you select **Pen color** option, all objects that have the Pen (outline) color you right clicked on will be selected.
- If you select **Any color** option all objects that have Fill or Pen (outline) color you right clicked on will be selected.

Any change you make on the selected objects, affects all objects.



Select by color right click menu

Cross-stitch designs

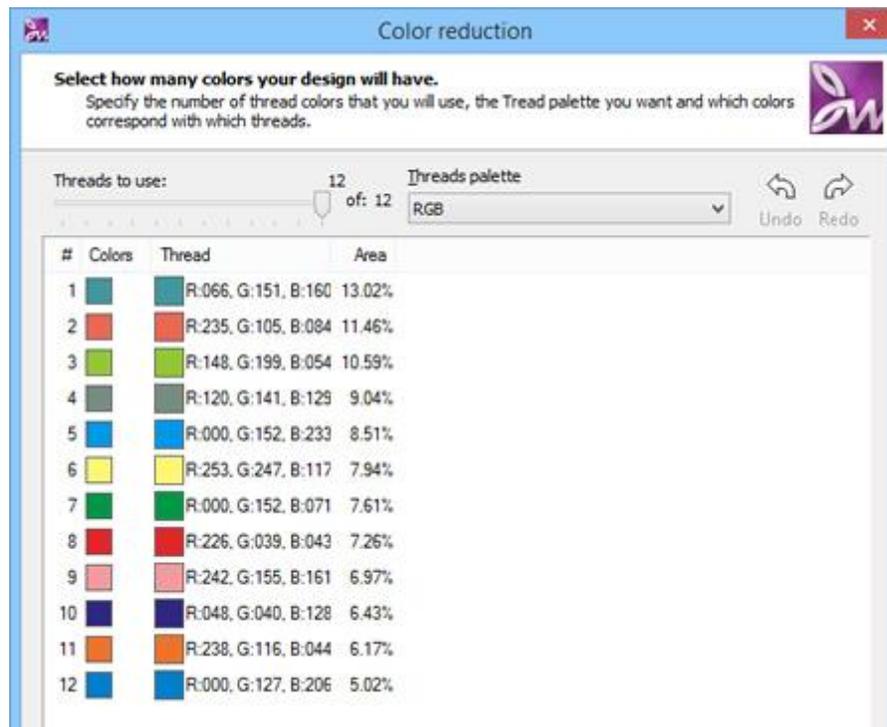
The Thread palette toolbar does not have any use on Cross-stitch designs. The colors that are used to fill the cross-stitch designs are listed on the **Object properties** toolbar. In order to make them appear you have to change to stitch mode, select the cross-stitch and its options will appear on the object properties toolbar, from where you can edit the colors of the design. More information on how to handle cross-stitch colors you will find in the respective section of **Embroidery transformations** chapter.

After creating the design you want to embroider in the **Create** mode, you can click on the **stitch** mode and view how the final embroidery will look like. To avoid the automatic reduction of colors you have to reduce them yourself in the **Create** mode of Creative DRAWings. You have to count the **currently used colors** from the **Thread palette** bar and reduce them, by re-assigning colors to objects, to the number of **Thread colors** you want to use with a maximum of 20 colors. If the currently used colors are less than 20 then there will be no change on the colors when you will click on the stitch mode.

Edit Palette

Creative DRAWings includes various mechanisms that make conversion of artwork files (**Bitmap**, **Vector** images, **Embroidery** files) a simple procedure. The only thing we must have in mind is that those artwork files may have hundreds of colors, something that cannot be easily handled in **Embroidery/Paint** designs because there are limited **Thread/Brush** colors on the market, which means that not all **RGB** color variations are available. This is the reason of existence for the **Color reduction** mechanism. The color reduction dialog exist to help us select a **Thread/Brush** palette and reduce the production colors by matching multiple colors to a representative color. Let's see how **Color reduction** works, while creating a

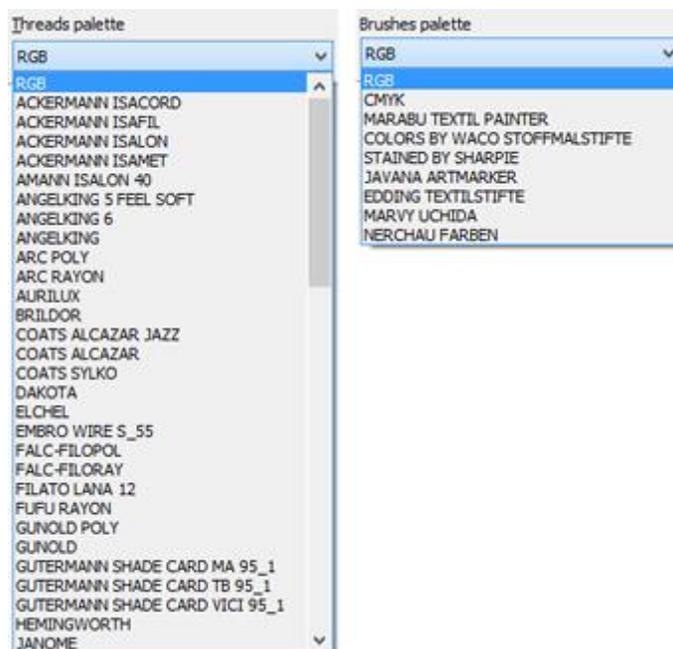
new design, if you import any artwork file the **Color reduction** wizard step appears. In this dialog you can set the number of the **Thread/Brush** colors that will be used for the design and how they are matched to the colors of any manufacturer palettes. You can also use Color reduction at any time using **Edit palette**  option on standard toolbar (**Ctrl+L** keyboard shortcut) or using the respective option of **Tools** menu. In this topic we will present the usage of color reduction with an example. We will import a vector design, once we get to the color reduction step, by default the program has RGB Thread/Brush palette enabled. In the list you can see the number of colors of the imported artwork and their area coverage percent.



Edit palette dialog

Select Palette

In the drop down menu the color palettes of the major **Thread/Brush** manufacturers are listed as well as the default RGB (Red Green Blue) color palette. You can choose one of them to change your current palette. Your changes are automatically previewed behind the dialog box for your convenience. For example, if you choose **Janome** color palette all RGB colors will be assigned to their respective ones from the selected palette. All the changes can be viewed in the color reduction area and visualized behind the dialog box.



Palette drop down menu

It is important to remember that if you use any other palette besides RGB palette the actual colors of the palette which will be closer to the final **Embroidery** or **Paint** result can be viewed only in the **Stitch** mode.

To continue our example we will select **Janome** thread color palette for the imported vector design. As you can see on the following figure all the colors of the design have been assigned to a thread color from **Janome** palette. The colors were automatically reduced from 12 to 11, because the specific palette does not have a close match for one of the colors, it matches to another color that has already been used, so both of the colors are substituted by this one color.

#	Colors	Thread	Area
1		263 Sola Blue	13.53%
2		229 Powder Blue	13.02%
3		234 Coral	11.46%
4		218 Yellow Green	10.59%
5		221 Gray	9.04%
6		210 Pale Yellow	7.94%
7		206 Bright Green	7.61%
8		235 Burnt Orange	7.26%
9		233 Salmon Pink	6.97%
10		262 Blue Ink	6.43%
11		271 Yellow Ocher	6.17%

Drag here for new color

Palette selection - Color assignment

Reduce colors

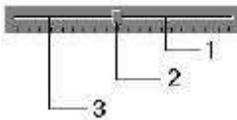
Using **Threads to use** or **Brushes to use** track bar you can decide how many colors you want to be used for the design. If you click and drag the track bar to the left side, you will reduce the number of colors in the design. If you do the opposite you will increase them until the initial point. The changes are automatically calculated and previewed in the color reduction area, where you can see multiple colors grouped and substituted by one color.



Threads to use track bar

According to the enabled techniques your design may be converted into **Embroidery**, **Paint**, **Cut** or **Artwork** design. When it is converted into **Embroidery** you are selecting **Threads to use** and when converted into **Paint** you are selecting **Brushes to use**.

Track bar



1. Click to increase three scale units.
2. Drag to move to the point you want.
3. Click to decrease three scale units.

Also you can change the value of the track bar by pressing the **Left & Right** arrows of the keyboard.

To continue our example we will use the track bar and we will reduce the colors from 11 to 8. Now as you can see there 2 thread colors that are used to substitute 6 colors of the artwork design. We can reduce the number of colors to a number of colors that is easy to produce with our embroidery machine.

Threads to use: 8 of 12

Threads palette: JANOME

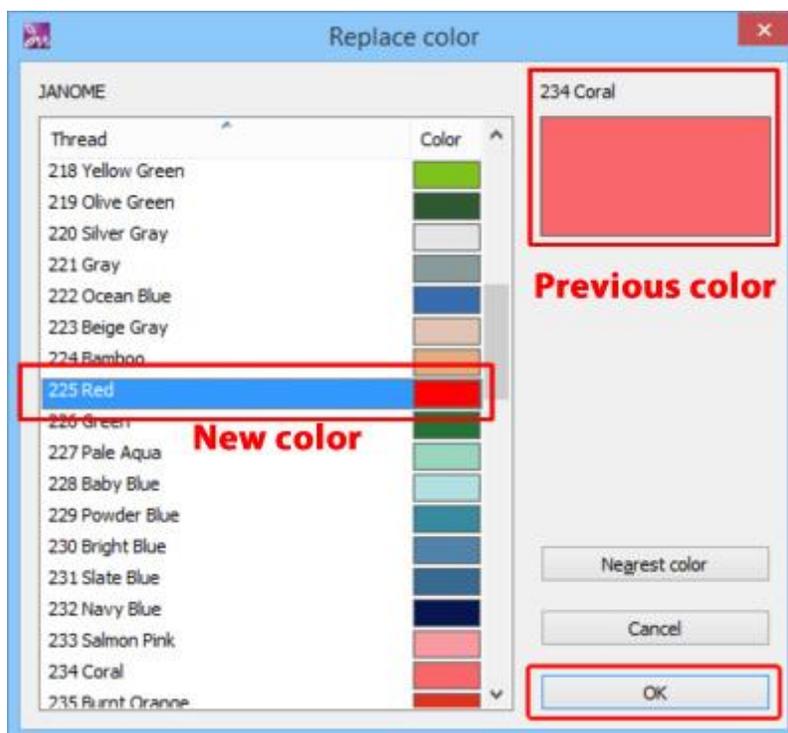
#	Colors	Thread	Area
1	[Red, Pink, Orange]	214 Coral	24.59%
2	[Blue, Dark Blue]	203 Sola Blue	19.95%
3	[Teal]	229 Powder Blue	13.02%
4	[Light Green]	218 Yellow Green	10.59%
5	[Gray]	221 Gray	9.04%
6	[Yellow]	210 Pale Yellow	7.94%
7	[Green]	206 Bright Green	7.61%
8	[Red]	215 Burnt Orange	7.26%

Drag here for new color

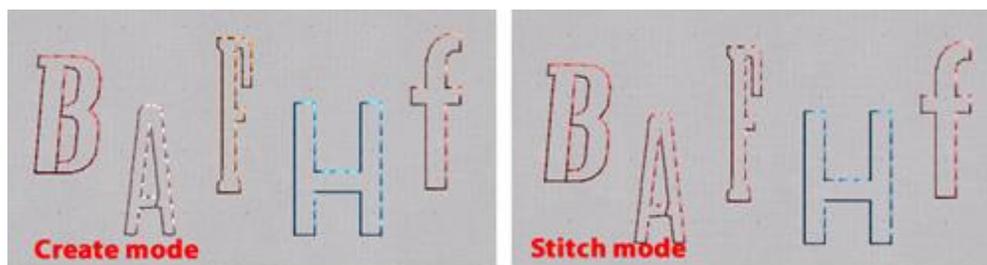
Reduce number of colors

Always have in mind that you can Undo any change you have made by clicking on the undo  icon or click on the Redo  icon to cancel the last Undo you have made.

Each color palette contains a number of **Thread/Brush** colors that the specific manufacturer produces. We can view the available colors of the **Palette** by double click on any of the color squares in the **Thread/Brush** list of the color reduction area, see the above figure. The **Replace color** dialog box window will appear where all colors are listed. Using this dialog you can see all available colors and replace the clicked color with another one that you want. As you can see on the following figure we have clicked on the **234 Coral** color and selected to replace with **225 Red**.



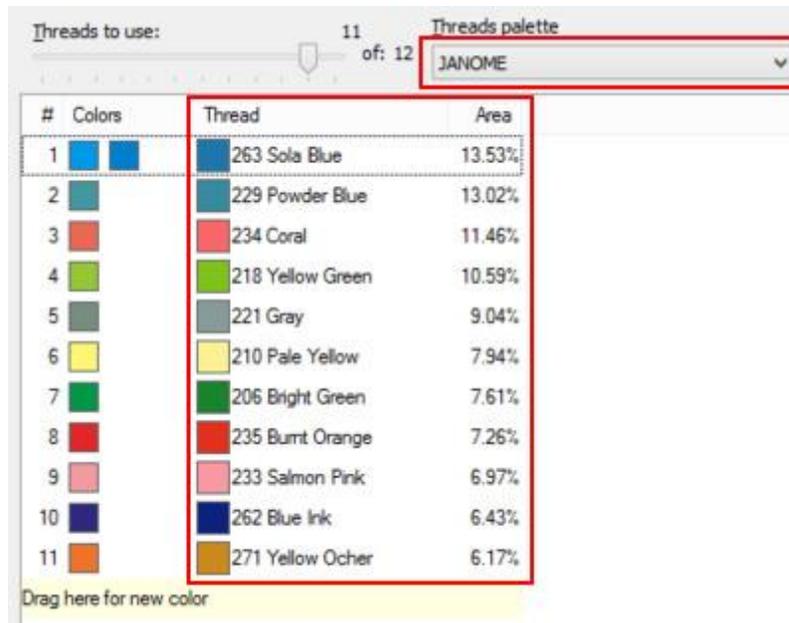
Now all colors that were substituted by Coral color will be substituted with Red color. Finally we will mention that if you close color reduction dialog and you see the imported artwork in the design area you will see the design with original colors and only when you switch to **Stitch** mode  you will see the final matched colors.



Import artwork design

Color reduction area

The color reduction area includes functionality that can not be seen on first look, so we will spend some time to say some things about extra functionality.



Color reduction area

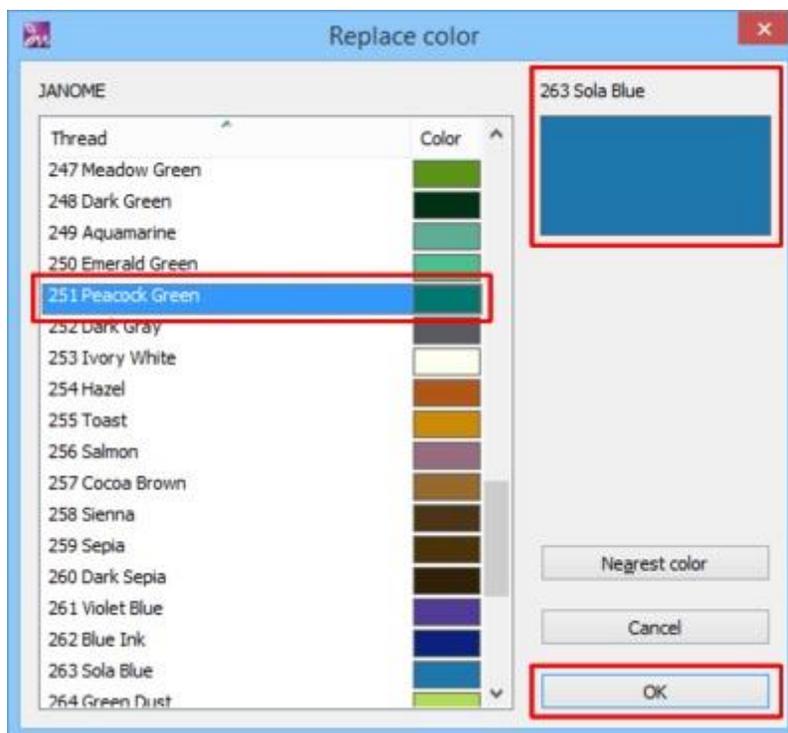
The color reduction area contains all the information about the colors of a design. You can see the colors of the vector design, the **Thread/Brush** colors that are assigned to the artwork colors and the percentage of area that any **Thread/Brush** color covers. It also shows any changes that are made in the **Palette** and **Thread to use** functions. In addition, you can make manual changes that will have an instant effect.

If your design has too many colors or you have used the **Threads/Brushes to use** function and reduced the number of colors in your design, the **Design colors** list in the color reduction area, will contain more than one color in each **Thread/Brush**. This means that colors that cover the smallest area on the design are automatically put together with similar ones and replaced with the one that represents it from the **Thread/Brush** list.

You can also change the color position manually. Click and drag a colored square in the **Design colors** list, from one thread to another, and view how the thread color changes. Using the same procedure you can drag a color in the bottom of the color reduction area, where it says **Drag here for new color**, and add a new thread with the dragged color.

When you finish setting the color groups you can change the thread color. Double click on a colored square in the **Thread/Brush** list of the color reduction area. A dialog box window will appear where all thread manufacturers' colors are listed.

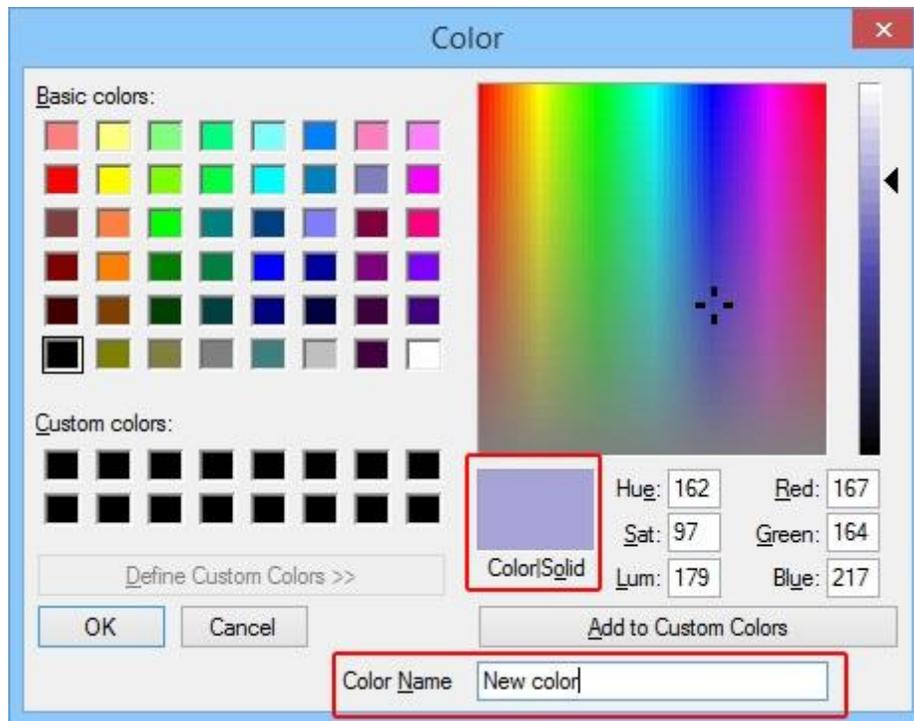
There you can choose another color and click **OK**. The thread color in the area changes. If you want to change back to the color you had before, you must double click on the color and, in the dialog box, Click on the **Nearest color** button. Select it and click **OK** to confirm your change.



Change color dialog

If you have set a thread manufacturers' color palette, in the dialog you will see the names/numbers of the respective threads and you can choose exactly the thread you want. You can also navigate in the thread list by typing the name/number of the thread. According with the typed letters/numbers, the respective thread will be selected from the list. In addition, when you click on the list headers (**Thread**, **Color**, **Used**), the contents of the list will be reordered according the type on the list. Therefore, if you click on the **Color** list header, the colors will be listed according the color tone.

Color palettes from thread manufacturers have a fixed number of thread colors. The only palette that has infinite colors is the RGB palette. If you try to change any thread color in RGB palette, through the way we explained previously, you will see that in the color palette there are only the thread colors are used in the design. You can add more colors by clicking on the **New color...** button. Select the color you want to add by using the available tools, type the **Color Name** in the respective field and click **OK** button to add it.



Choose color

If for any reason you want to remove a color from the list you can click on the **Remove color...** button. Confirmation will be requested from a pop-up dialog and the color will be removed from the list.

If you want to make any changes on a specific color you can click on the **Edit color...** button, make any changes you want in the **Color** dialog and click **OK** to apply the changes.

The software by default finds and applies the closest color from the available ones. If for any reason you have changed this color and you want to change it back to the nearest color possible you can click on the **Nearest color** button. The Nearest color will be found immediately and applied on the dialog.

Any changes in the **Edit palette** dialog box are automatically previewed in the embroidery design area behind the dialog box. In addition, every time you pass the mouse over a color in the dialog box, you can view in the design area which parts of the design this color fills. Click **OK** to confirm your changes.

Finally, in the **Edit palette** dialog, you can Undo any change you have made by clicking on the undo  icon or click on the Redo  icon to cancel the last Undo you have made.

Chapter X

Node editor

In this chapter we will analyze all the node editing abilities that **Create** mode of Creative DRAWings has. You will learn how to select, move, add, delete and split the nodes of a vector design. In addition, you will learn all the terminology that will help you to understand node editing better and how to use the functions of the node editor's right click menu.

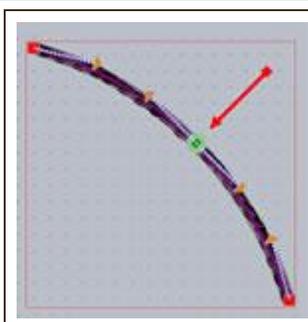
All the options that are described in this chapter are only available inside **Create** mode.

What is a node

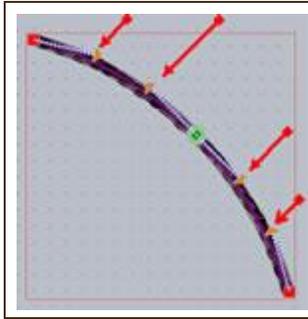
There are two kinds of nodes. The **Smooth** nodes which are indicated with  icon and the **Cusp** nodes

which are shown with the  icon. During designing the nodes that you are adding can be **Smooth** nodes or **Cusp** nodes according to the tool you are using and the design you are creating. You can easily convert a **Smooth** node, to a **Cusp** node by selecting the respective option from the right click menu in node editing mode. Even if you did not create the design you wanted with your first try, you can adjust the shape you created later by changing the position of the nodes and their segments.

Note: The starting or connection point of a line or a curve segment. Any movement of a node affects the shape of the line or the curve segment.



A node is the point indicated with the arrow in the drawing at the left.



A curve can be controlled by the control handles, which are indicated with the arrows in the drawing at the left.

Segment: The line between two nodes is called a segment.

The nodes are connected between them with a line that is called segment. Moving an object's segments lets you make coarse adjustments to the object's shape; while changing the position of its nodes lets you fine-tune the shape of the object.

Cusp nodes

Cusp nodes are called these that are shown with this icon  or with this icon  (when the node is selected). Usually cusp nodes are added to the design automatically at the corners of the design or when the curvature is changing. With cusp nodes you can change one segment of the node without affecting the other. This is useful when you want to make precise adjustments on one part of the design without affecting another.

Smooth nodes

Smooth nodes are those that are shown with the icon  or with the icon  (when the node is selected). Usually smooth nodes are added to the design automatically at the middle of a curve or on the higher point of a curve. With smooth nodes you can adjust both segments of a node by moving the position of the control handle and changing its length. Smooth nodes are preferred on designs that will be converted to stitches.

Curve objects

We can call a **Curve object**, any shape that we can draw inside Creative DRAWings. A curve object consists of segments and nodes that construct the shape of the each object. Most shape objects that are inserted (rectangles, ellipses etc.) together with the Text objects, are not curve object because they have special abilities when you are edit them in **Edit shape nodes** mode. On the other hand freehand lines, Bezier lines and outline lines are curve objects and their nodes/segments can be edited directly in **Edit shape nodes** mode.

To make an object a curve object you have to select it, right click on it and from the right click menu select the **Convert to curves** option or press the **Ctrl** and **Q** shortcut keys (Ctrl+Q) together from the keyboard. The object will be converted to a curve object that you can edit its nodes and segments in **Edit shape nodes** mode. Every time you convert an object to curve you must know that you cannot convert it back to a standard object. The only way to do that is to **Undo** your last actions, if you have converted it to curves recently.

Edit shape nodes

Every shape that you are creating is consisted of a number of nodes and segments/lines. You can edit the nodes and the segments/lines to change the shape of the design you have created in node editing mode. The nodes of the object will become visible only if it is a curve object. To change to node editing mode, first you have to click on the **Edit shape nodes** icon  that you will find on the vertical toolbar (Tools toolbar) of **Create** mode or pressing the **F10** shortcut key from the keyboard, which will change the mode to node editing. The outlines of the selected objects are highlighted and you can see all existing nodes. In node editing mode you can change the shape of the selected object by using the mouse and by using the available options of right click menu.

Select Node(s)

If you want to select a node, click on the node and it will become bigger and change color indicating that it is selected. In order to select more than one node, click and drag the mouse on the screen forming a rectangle. All the nodes contained within this rectangle will be selected.

By holding the Ctrl key down while you selecting nodes you can reverse the current status of the nodes. If they were selected they will become deselected and the opposite. The same functionality applies either on separate node selections or on rectangle selections.

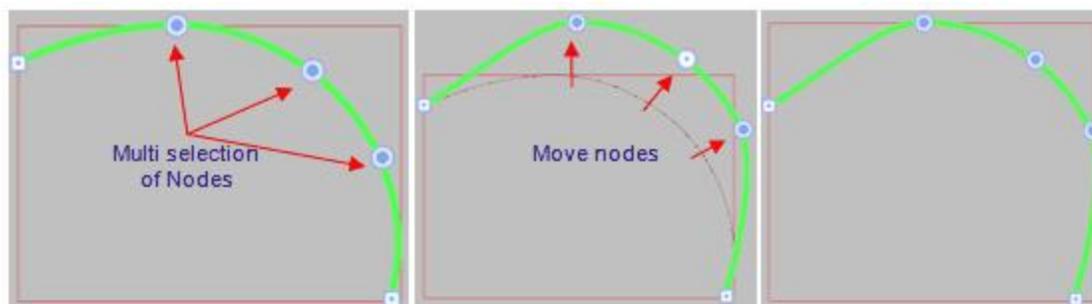
By holding the Shift key down you can add more nodes on the current selection or make a new multiple selection. You can either add nodes to the current selection by clicking on the nodes you want to add or by making rectangle selections.

If you have selected more than one node you can move or delete them but you cannot change the tangents that are controlling them. To edit the tangents of the nodes you have to select a single node and adjust its tangents.

In addition, you can use the Select All or Select polyline options of the right click menu that we will describe later on.

Move node(s)

To move specific nodes of the design you have to select them first by using any of the available methods (Rectangle selection or single click selection). Then you have to click on any node that is included in the selection and drag the mouse to the point you want. The nodes will be moved to position you want them to be. If you want to move a single node you have to click and drag it to its new position with your mouse.



Move multi nodes

By moving the selected nodes all the segments that are attached to them are also changing.

If you hold the **Ctrl** key pressed while moving a node, guidelines will appear on every 22.5 degrees of the X and Y axes. While moving the node it will snap on the guidelines, allowing you to make accurate movements along the guidelines. The guidelines that appear have as center the initial position of the node.

If you hold the **Alt** key pressed while moving a node, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. While moving the node it will snap on the guidelines, allowing you to make accurate movements along the guidelines. When you press the **Alt** key the node automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can move the node to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

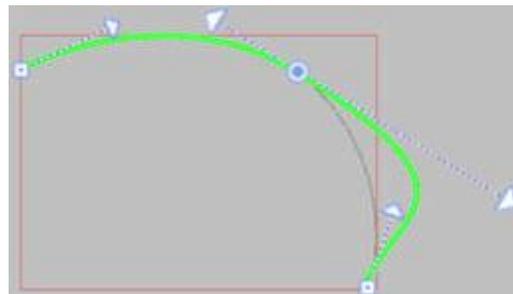
Using control handles of a node

If you want to change a curve you can move, insert or delete one or more nodes. You can also edit a curve using the control handles of a node. The control handles of a node appear whenever you select a node. You can change the position of the control handle by click and dragging the control point (the arrow at the end of the control handle) to the position you want. The curve from the side of the control handle you are moving will change accordingly. By changing the direction and the length of the control handle, you can make precise coarse adjustments on the curve. For example:

Normal Curve



By changing the length of the control handle.

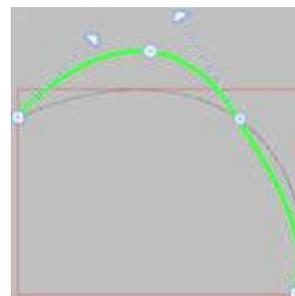


By changing the direction of the control handle.



Also the control handles of a curve can be changed by clicking on this curve and drag it on another point, as you can see in the following draw.

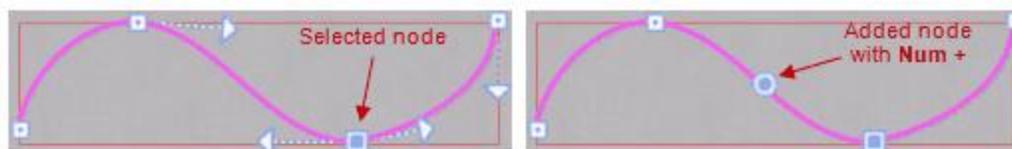
The arrow shows the movement of the temporary node.
The blue line shows the curve prior to the movement and the green line indicates its shape after the changes.



Add a node

While shaping objects in node editing mode you will need to insert an additional node inside a curve that will help you re-shape it easier. To insert a new node, right click on the point where you wish to insert it. The right click menu will appear with all the available options. If this is not the exact point that you wanted to insert it, you can click on another point of the curve. By selecting the **Add node** option from the **right click menu** a new node will be inserted in the position you wanted. Another way to add a node is by **double clicking** on the position you want the node to be added or position the mouse over the point you want the node to be added and press the **Num +** button from the keyboard to insert it. The new inserted node can be edited as any existing node. The new node that is inserted is always a smooth node. If you want to insert a cusp node you have to insert a Smooth node first and by right clicking on the node select the **Cusp node** option.

You can also add automatically a node between two nodes by selecting the node and pressing the **Num +** key from the keyboard. A node will be added at the middle of the curve segment before the selected node.



Num + adds a node at the middle of previous segment

You can also add automatic nodes to more than one selected nodes. To do that you have to select the nodes that are after the segment you want the automatic node to be added and press the **Num+** key from the keyboard. To all curve segments before the selected nodes, automatic nodes will be added.

Delete a node

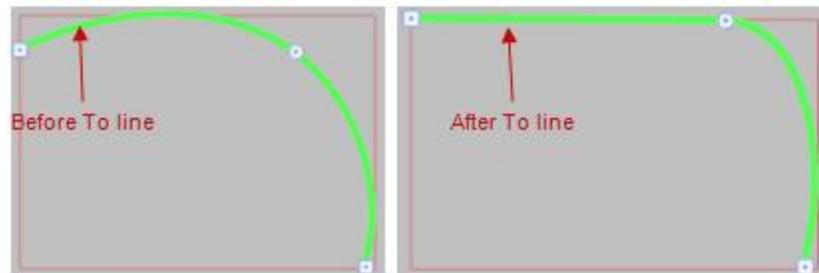
If you don't need a node you can delete it. First select the node(s) that you want to delete and then click the **Delete** key on your keyboard. You can also right click on the node you want to remove and select the **Delete node** option from the right click menu.

Note: If you delete one or more nodes of a curve, the shape of the object it might change.

To line

If you have a curve and you want two nodes to be connected with a straight line, you can use the option **To line** from the right click menu. First you have to select the node, from which the line will start. Right click on

the node and from the popup menu select the **To line** option. You can apply also the same option to more than one selected nodes.



Apply To line option

This option changes the type of the selected node(s) and the next node(s) to cusp nodes.

You can also apply the **To line** option directly on the curve you want to convert. Right click on the curve you want and from the right click menu select the **To line** option. The curve will be automatically converted to a straight line.

To curve

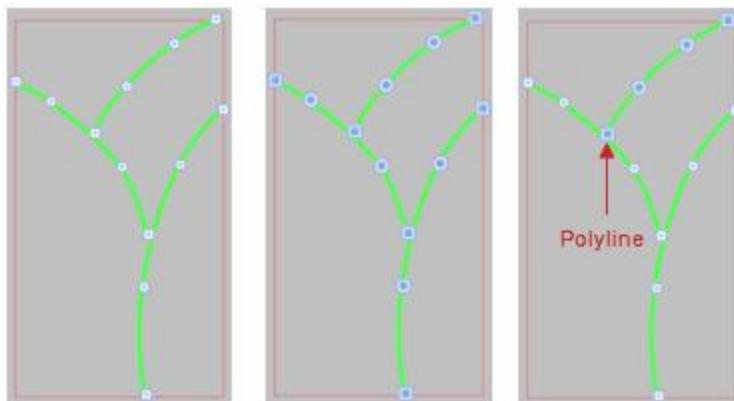
The **To curve** option is the opposite of the **To line** option. Therefore if the shape has two or more nodes connected with straight lines and you want to convert them to curve lines you have to use the **To curve** option from the right click menu. There are two ways to apply the **To curve** option. The first is to select the node that is before the line you want to convert to curve, right click on it and from the right click menu select the **To curve** option. The line next to the node will become a curve allowing you to change its shape. You can apply also the **To curve** option to multiple nodes, by following the same steps.

The second way that you can apply the **To curve** option on a line is by right clicking directly on the line and from the right click menu that will appear select the respective option. The line will become a curve and allowing you to re-shape it.

If you have applied the To curve option to multiple cusp nodes , they will automatically be converted to smooth nodes .

Select all and Select Polyline

With the **Select all** option you can select all nodes of an object and with the **Select Polyline** option you can select all nodes of a specific curve (or line or closed shape) of a complex object (combined objects).

*Nodes of Shape**Select all nodes**Select polyline*

If you want to use **Select all nodes** of the object, first you have to select the object, change to **Edit shape nodes** mode from the **Tools** toolbar and select a node of a curve by clicking on it. Right click on the selected node and from the node editing menu select the **Select all** option. This option selects all nodes of the current object. You can use the same option through the **Edit** menu.

On the other hand, if you want to select all nodes of a single curve (or line or closed shape) that it is part of a complex object (combined objects) you have to select a node of the curve and then from the right click menu select the **Select Polyline** option. All nodes of the specific curve (or line or closed shape) with selected nodes will then be selected.

Close outline

With this option you can connect two nodes with a line or by making them one node. You can close an outline that belongs to the same curve object such as line art designs or shapes with open outlines.

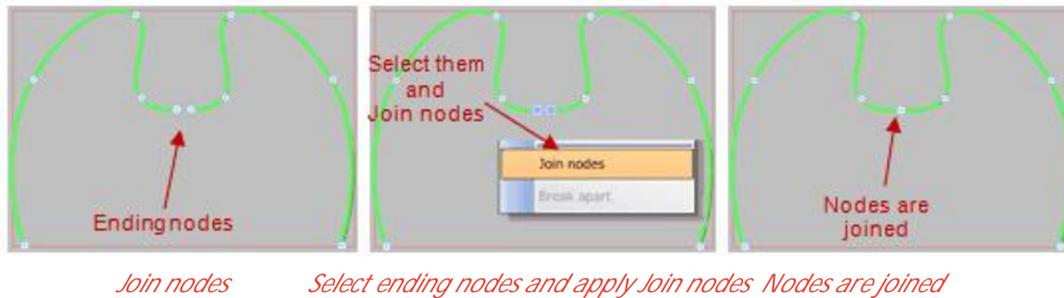
In order to close an open outline or make a line art design a closed shape you have to select the ending node of the object and right click on it. From the right click menu select the **Close outline** option and Creative DRAWings will connect the selected node with the starting node of the object with a line and make it closed shape. Then the object can be handled as a closed shape.

Another way to create a closed shape is to select the ending/starting node of an open shape or line art design and move it towards to the starting/ending node. When the ending node will reach the starting node they will be automatically connected and make the object a closed shape.

Join nodes

If you want to connect the nodes of two different curves and make them a single curve you have to follow a different procedure.

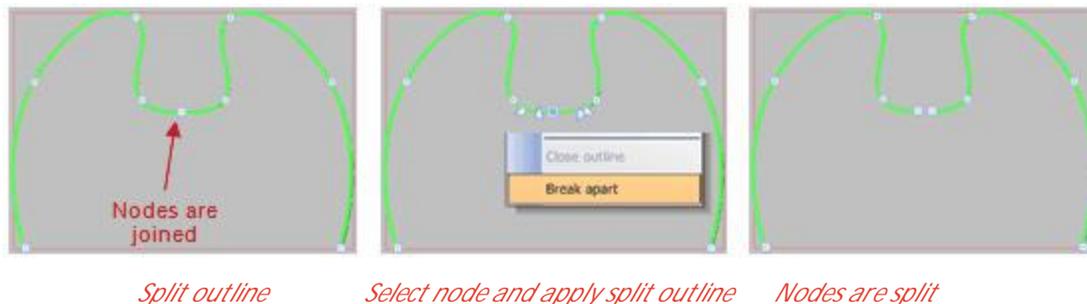
Note: These nodes should be the first or the last node of each curve, but not necessarily the same type of node (curve or curve break). These nodes should be near each other and the two curves should be in the same section.



Click on the **rectangle selection** tool from the **Tools** toolbar in order to change to **Object editing** mode and then select the two curves you want to connect. Right click on the selected curve objects and from the right click menu select **Combine** option. The two curves will become one object with two sub sections (the two curves). Click on the **Edit shape nodes** to change to Node editing mode. Select the ending nodes of the two curves and right click on them. From the right click menu select the **Join nodes** option. The two nodes and curves will become one. The two objects will become one but not a close object. In order to make it a closed object you can try any of the two methods we described in the Close outline section above.

Split outline

With this option of right click menu you can split the selected node or the current curve in two sections. If this function is applied on a closed shape it will become an open shape without fill color. If this function is applied on an open shape like a line art object it will be split in two line art objects.



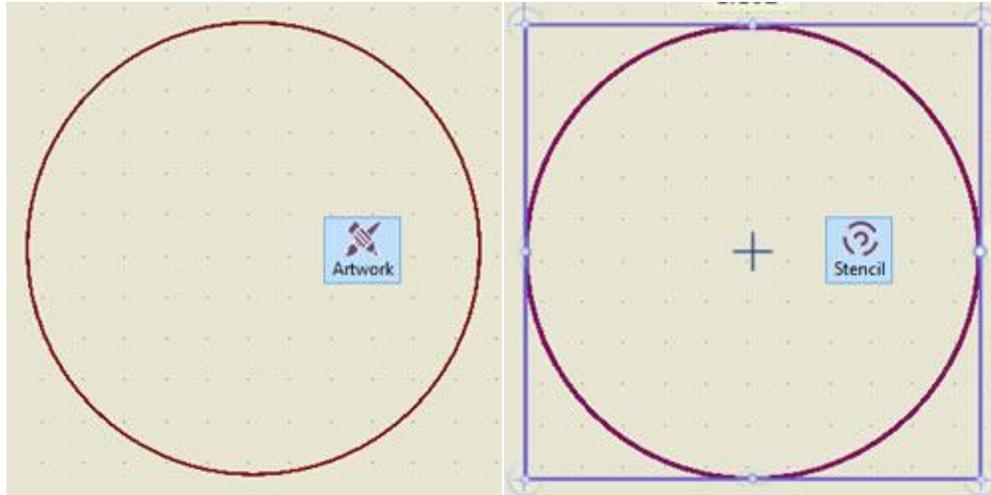
In order to split a node, you have to right click on the selected node and click on **Split outline** option. The selected node will become two nodes that belong to the same object but in two different sections, if the object was a closed shape, or in two open objects if the shape was a line art object.

In case that you have applied the **Split outline** option on a segment of a shape, the shape will be split and two separate nodes will be added. The split nodes that will be created can be joined again by moving the one node over the other. The two nodes will be automatically become one. For the same purpose you can also select both nodes and then from right click menu select **Join nodes**.

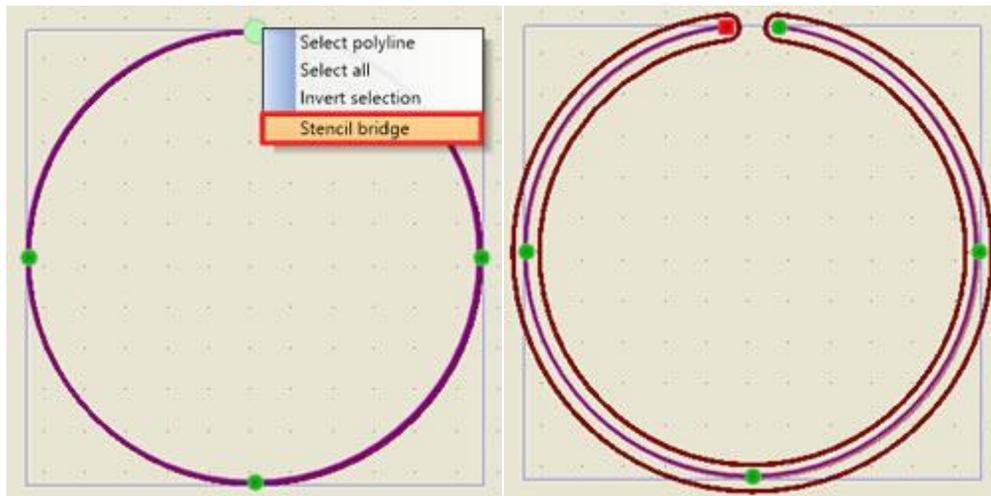
Stencil bridge

There is a special chapter that shows how the Stencil mechanism works, in this article we will present how to easily change normal closed shapes into stencil designs in just a few clicks.

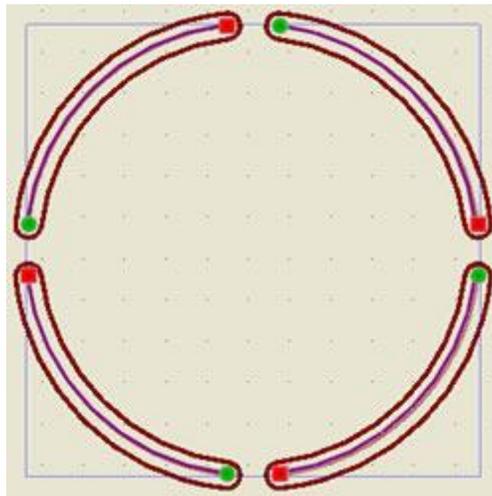
This is the initial artwork (left part) and in the right part of the figure you can see the same object with stencil type applied. As you can see the object has not changed since it is a closed shape.



In order to convert it into stencil outline, we must create stencil bridges. Start node editing mode and right click at any point you like and from appearing menu use **Stencil bridge** option.



A special split is made to the outline of the object, in the same way we can easily create as many stencil bridges as we like.

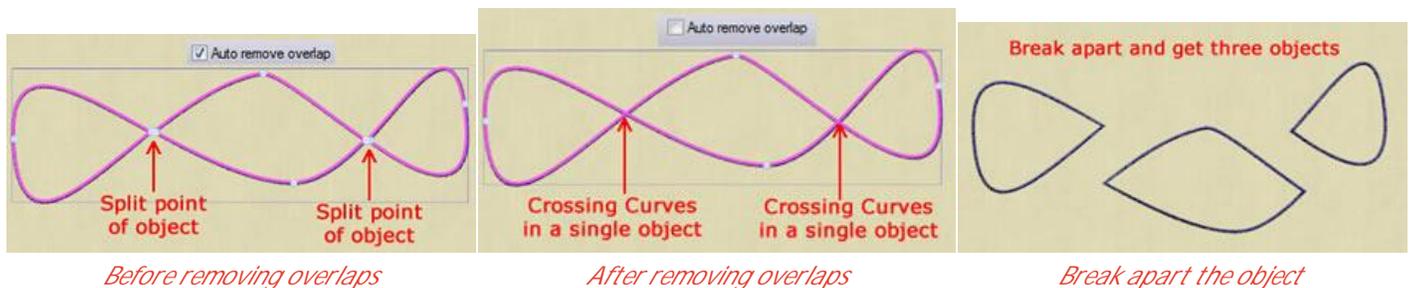


Auto remove overlaps

Auto remove overlap

Auto remove overlap checkbox

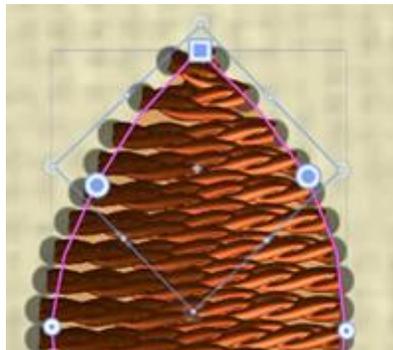
The **Auto remove overlap** option appear on the **Tools options** toolbar inside **Edit shape nodes** mode, from where you can activate it. This option allows you to convert crossing curves inside an object (object that looks like the 8 shape) to separate ones that can be handled as subsections of the same object.



These objects can be created by editing the nodes of a shape in **Edit shape nodes** mode , and then automatically remove overlaps by simply checking the **Auto remove overlap** checkbox. Once you check the **Auto remove overlap** button it remains checked. Therefore if you want to continue editing nodes without applying the option you have to uncheck the checkbox by clicking on it.

Transform in Node editor (Multiple node selection)_2

A very powerfull capability of Creative DRAWings is that we can transform multiple nodes selection. This can help us in many cases when editing shape nodes. Let's se how this works.



Once you have selected a number of nodes you can see a **highlight rectangle** appearing around the selection to indicate the selected section. This highlight rectangle is like a holder for a number of control handles. The bullets that exist on the sides and corners of the rectangle are **transform handles**. When placing the mouse over any of the transform handles it gets highlighted and shows a cursor that reveals the functionality of the control. By using these control handles you can freely transform the selected section(s) of the object. Using the available transform capabilities you can **Move, Rotate, Scale and Slant** a selection of nodes.

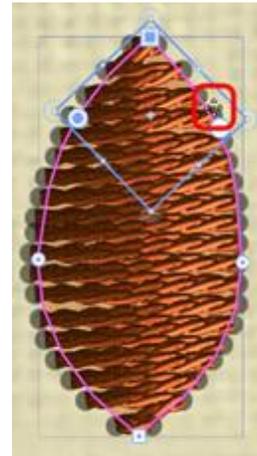
- Move selection
- Rotate selection

- Scale selection
- Slant selection

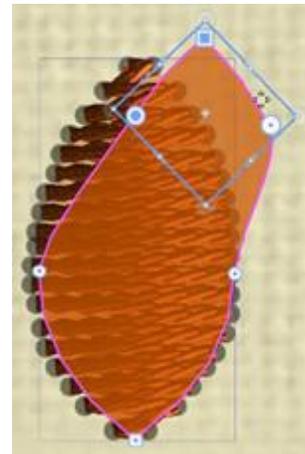
Move selection

By pointing your mouse over any of the selected nodes or over the lines of the highlight rectangle you can see a move cursor like the one in the figure below. Click and drag to move the selection anywhere you wish.

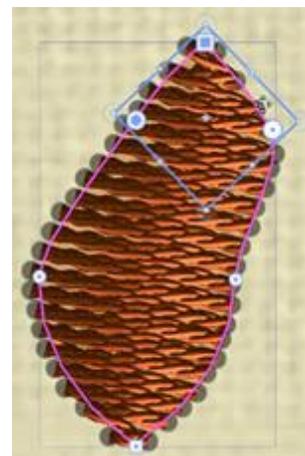
Place the mouse over the selection of nodes, until you see the cursor turning into a **four arrow cross**.



Click and Drag to any direction that you want to move the selection of nodes.



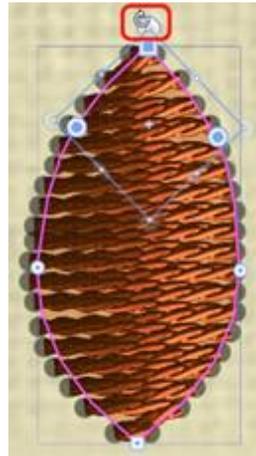
The nodes affect the size and shape of the object. The movement of the selection of nodes has changed the shape and size of the object.



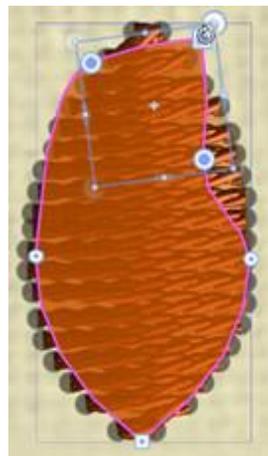
Rotate selection

As described before when placing the mouse over any of the corners of the selection highlight rectangle you can see a rotation handle. Click and drag in order to rotate the selected section. You can rotate to any direction you like. The section is rotated based on the rotation center which is the cross that is usually located into the center of the highlight rectangle. You can move the rotation center in order to make any rotation you like. You can also rotate the section based on the opposite diagonally corner by holding "Shift" key.

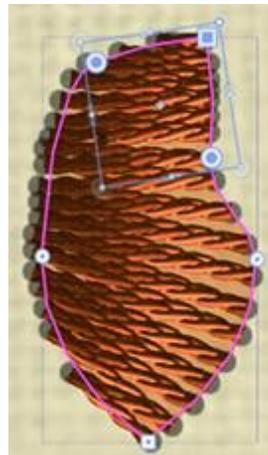
Place the mouse over any corner of the selection rectangle until the cursor changes into this **rotate** symbol.



Click and Drag to rotate the selection



The rotated selection of nodes applies this shape change.



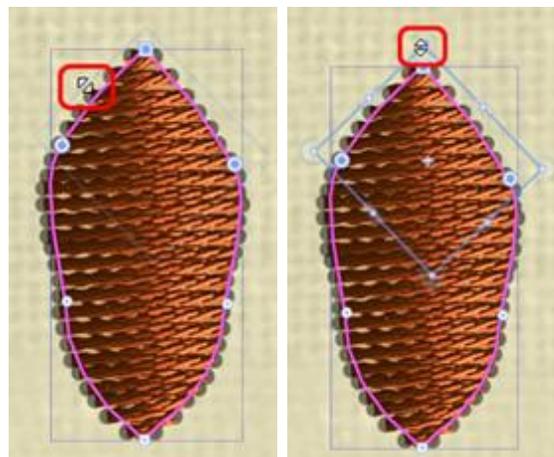
Resize selection

While placing your mouse over any corner of the highlight rectangle you see the available control handles. There are 2 available controls handles, resize and rotate. When your mouse is over the corner towards the inside of the highlight rectangle the resize handle appears and when placing your mouse a little to the outside of the rectangle, the rotate handle appears.

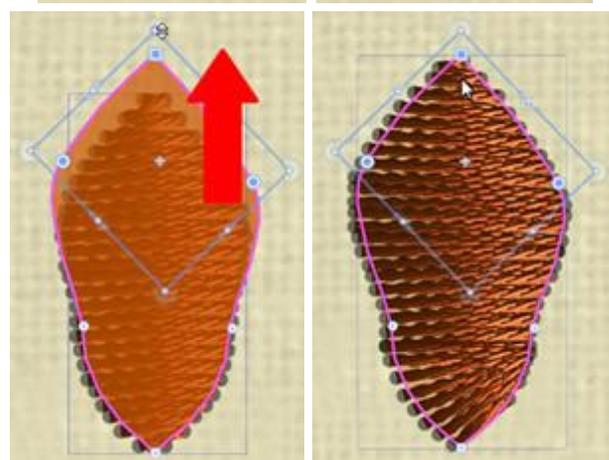
On the sides there is a resize handle on top of the control handle and a slant handle if you move a little to the outside.

At this point we will present how to use the resize handles.

Place the mouse over any of the highlighted control handles that are on the **corners** and on the **middle of sides** until you see a 2-side arrow.



Click and drag towards any direction that the arrow shows in order to resize the node selection in any way you like.



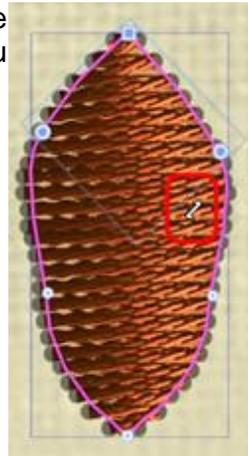
If you hold "Shift" key pressed while resizing the section, it is resized on both sides based on the horizontal center of the section.

If you hold "Ctrl" key pressed while resizing, the section is resized on a 25% basis. This way the selected section gets resized on a step of 25% of the starting size. You can see the percentage you have used while you are in the process by checking out the status bar.

Slant selection

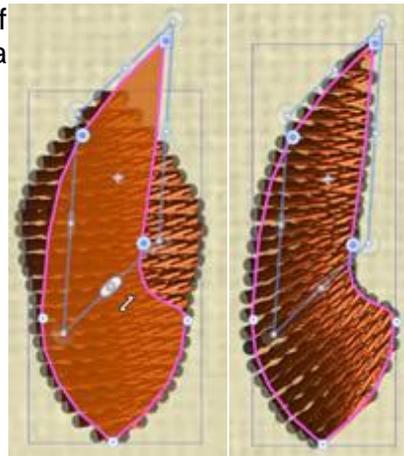
Another useful transformation handle is the **Slant** handle.

Place the mouse over any handle that there is on the middle of the sides and a little to the outside until you see a slant handle.



Click and drag to the directions that are shown by half arrows at the edges of the handle in order to apply a slant transformation.

The slant operation is based on the rotation center.



As you know you can move the rotation center in order to create any shape you like. You can also hold "Shift" key pressed while applying Slant transformation and then the transformation will be applied based on control handle of the opposite side.

Chapter XI

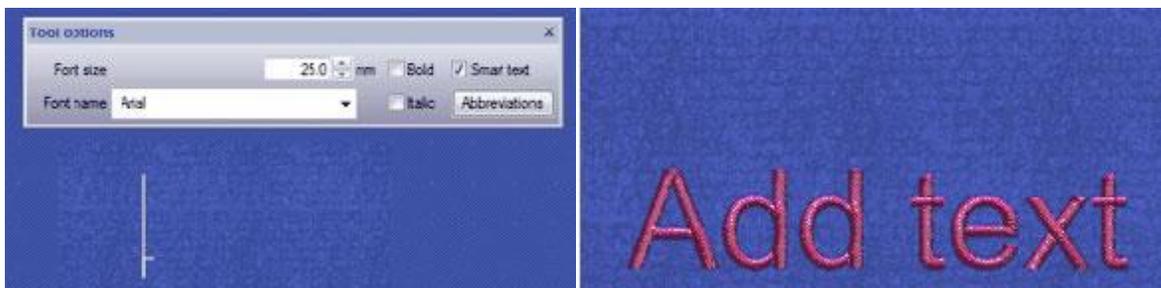
Working with text

In this section we will analyze all the Text art abilities that the software has. Inside Creative DRAWings you can add text in different languages and convert them to stitches. Creative DRAWings supports most existing languages and allows you to create Text Art designs easily. All the fonts that are installed in windows are available and can be used inside Creative DRAWings. You can even copy and paste Text from any text editor inside Creative DRAWings and convert it to stitches.

Whenever you create Text art designs, the software will fill the text with the default fill type and the default outline/pen type, based on the active Techniques.

To add text

To insert text in the working area you have to select the **Text** tool  from the **Tools** toolbar or by pressing the **F8** shortcut key from the keyboard and then click on the position you want the text to be placed on the working area. The Text cursor will appear waiting from you to type the text you want to convert to stitches. While the Text cursor is active you can even paste any text that it is copied on the clipboard. To paste the text you have to select the **Paste** option from **Edit** menu or by selecting the respective option from the right click menu. The pasted text will be inserted allowing you to edit it further. The small dash on the Text cursor shows the horizontal axis where the text will be placed and the direction of the text.



Inserted text

If you are writing from left to right the dash will be at the right side of the Text cursor. On the other hand if you are writing from Right to Left the Text cursor will be at the left side. While Text cursor is still active you can delete or type more text to the same Text object and make paragraphs by pressing **Enter** key from keyboard. To confirm the inserted text you have to select the **Selection tool** from the Tools toolbar or any other tool.

If you have the 3D preview of stitches enabled you will view the Text filled with stitches, otherwise you will view the vector artwork of the Text design.

Selecting Text

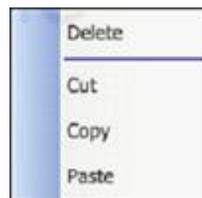
Add Text tool, works like an ordinary text editor, you can **type** text or **edit** the inserted text. The selection options while working with text, are similar with those of an ordinary text editor. In order to edit a **text** object, select the object and the start text tool ( or **F8**), it will become editable allowing you to edit the text. You can easily select the text to be edited using the **mouse**, using the **arrow keys** or by using the **Ctrl + Home** and **Ctrl + End** keys from the keyboard.

Click and drag to select any part of the text. Click on the position from where you want the selection to start and then select the characters by click and dragging with the mouse until the character you want. Then you can type a different text that will replace the specific selected characters.

To select the text by using the **arrow keys**, click on the position you want the selection to start, hold **Shift** key pressed and start pressing the arrow key that shows the direction where the characters you want to select are located. Keep pressing the arrow key until all the characters you want are selected. By holding both **Shift** and **Ctrl** keys from the keyboard pressed, you can select the text word by word. Each time that you will press the arrow key, a word will be selected instead of a character. Then you can type a different text that will replace the specific selected characters.

To select the text by using the **Ctrl + Home** and **Ctrl + End** keys from the keyboard you have to click on the position you want the selection to start and by holding the **Shift** key pressed, press the **Ctrl + Home** or **Ctrl + End** Key from the keyboard according the direction you want to make a selection. If you want to select the characters to the right, you have to press the **Ctrl + End** key from the keyboard. All characters between the cursor and the end of the line will be selected. If you want to select the characters to the left you have to press the **Ctrl + Home** key from the keyboard. All the characters between the cursor and the beginning of the text will be selected. Then you can type a different text that will replace the specific selected characters.

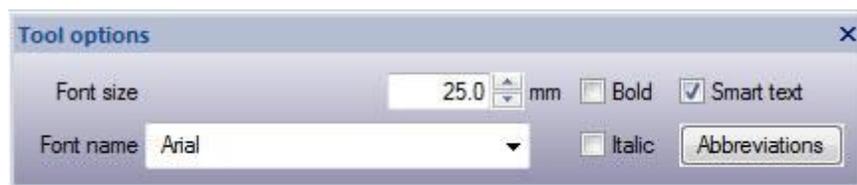
The selected text can be also copied, cut and deleted by selecting the respective options from the **right click** menu.



Right click menu options

Change Font and Size

We can start **Text** tool in order to **add** text or **edit** existing text. In both cases while **Text** tool is active you can see on **Tool options** pane various options of the text. We can edit these options before adding the text and they are applied to the inserted text or alter them on an existing text object. You can change the **Font name** and the **Font size**, you can also make the text **Bold** or **Italic**. Finally you can enable/disable **Smart text** and edit text **abbreviations**.



Tool options – Font size, Font name, Bold, Italic

To change the **Font name** you have to click on the drop down menu on **Tool options** and select the Font you want. The Font will change on the text allowing you to visualize how the embroidery will look like with a different font.

To change the **Font size** you have to select the value of the **Font size** field and type a new one. To confirm the change you have to press the **Enter** key from the keyboard. The size of the selected Text will change on the working area.

You have also the option to make the inserted text **Bold** or **Italic** (or Bold and Italic) by checking respective checkbox of **Tools options** toolbar. Any change it is directly applied on the inserted Text. Checking **Smart text** to enable - disable the usage of abbreviations for inserted text. Finally press **Abbreviations** button in order to add-edit-remove items on the abbreviations set.

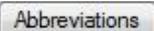
Text abbreviations

We call an **Abbreviation** any combination of letters – characters that can be used in order to represent a special character which we can't easily add using the keyboard. The software includes a list with commonly used abbreviations that can be easily added to our text designs.

In order to see the list of the available abbreviations we must first activate text tool by using this icon  or by pressing **F8** keyboard shortcut. When text tool is activated various options appear in **tools toolbar** that can be used to customize the inserted text.



Text tool options

We can Press  button in order to bring up the abbreviations editor.

In this dialog we can see the list of available abbreviations.

We can also manage abbreviations

1. Create **new**
2. **Edit** existing
3. **Delete**
4. **Reset** all modifications

The usage of these options will be described in a separate section.



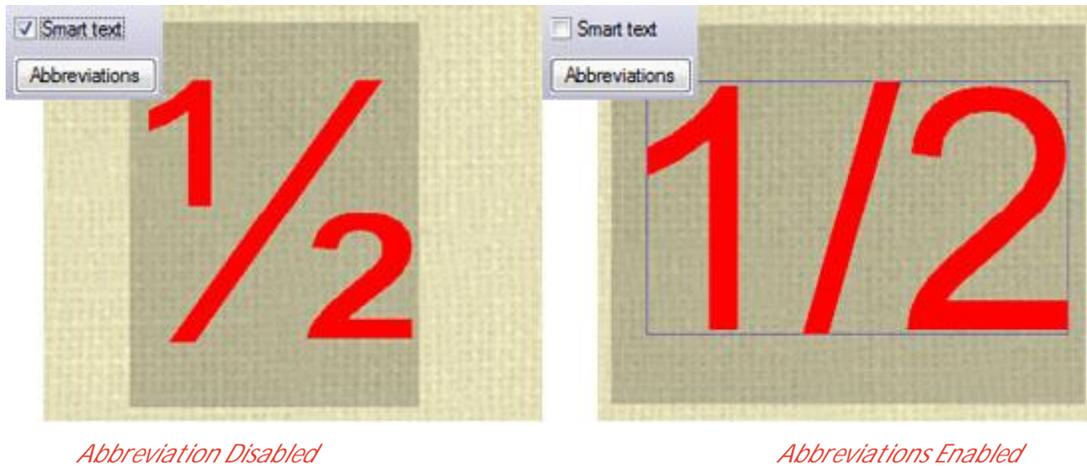
Using Abbreviations

When typing text we can use any of the available character combinations in order to add various special characters. For example if we type "1/2" it will be automatically converted into the "½", as there is an

abbreviation for that special type.

In the same way we can use any of the available abbreviations. The program automatically recognizes the pressed keys and replaces the inserted text with the interconnected abbreviation.

 <p><input checked="" type="checkbox"/> Smart text <input type="button" value="Abbreviations"/></p>	<p>In order to use that feature and have abbreviations automatically applied on inserted text make sure that Smart Text option is enabled. In case that we want to write normally without applying abbreviations we must disable smart text option.</p>
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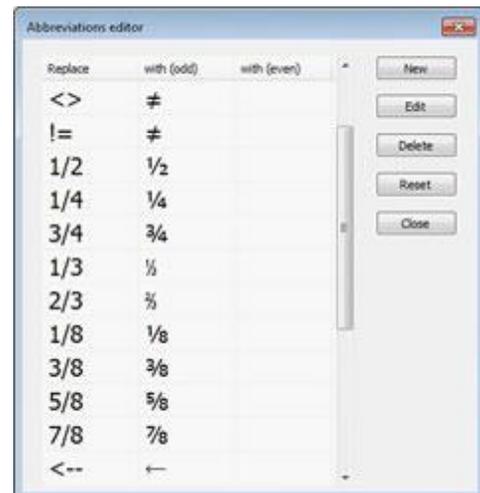


Creating - Editing Abbreviations

Creating abbreviations

There are special characters that we may like to use in our designs.

Use new option to create your own abbreviations.



For example

Press new button of Abbreviations editor dialog.

On the lower part of the dialog this part will appear

Define the text that will be replaced and then the symbol that will be added.

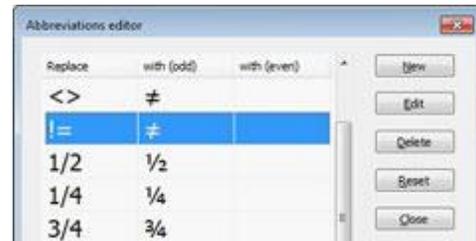


Press OK to apply the new abbreviation.

In our case when we type “e=” then it will be replaced by the Euro “€” sign.

Edit abbreviation

Select any of the available abbreviations
Use Edit button

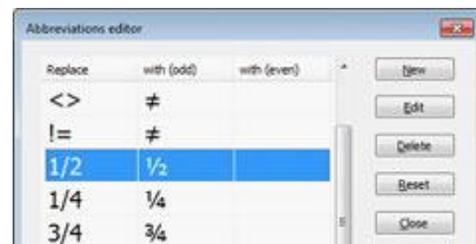


On the lower part of the dialog this part will appear.
We can change the replace text or the special character.

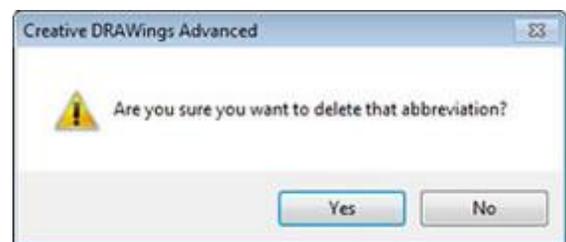


Delete abbreviation

Select any of the available abbreviations.
Press delete to remove it



A confirmation message will appear.
Confirm the deletion and it has been removed.



Reset abbreviations

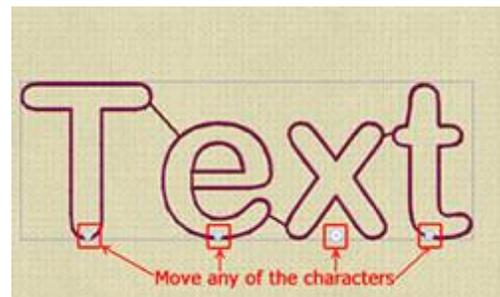
Use Reset button to alter all abbreviations to the default set and remove all custom abbreviations.



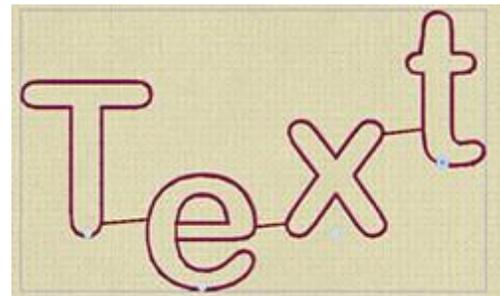
Edit Text shape

In **Edit shape nodes** mode (**F10**) you can edit the shape of the text objects. You have the ability to change the position of each **Text character** and create complex text artwork. Select the text object and activate **Edit shape nodes** mode. In this mode you can see a handle sign on the bottom part of each character. **Click and drag** to move any letter into a new position. Move any character to any position you like and create a text art design.

Move any of the letters.



Just like that you can reposition the characters easily and create text art designs.



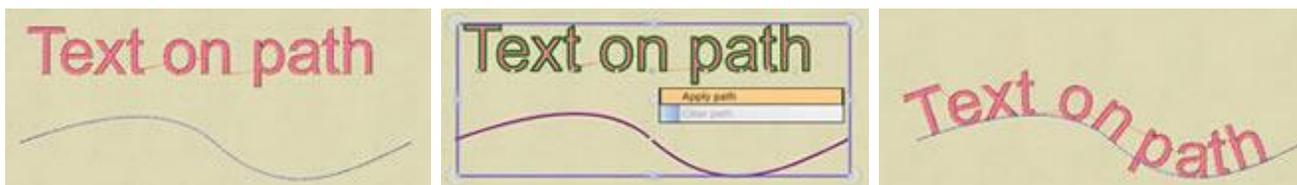
You can change the position of each character as long as it still a text object. In case that a text object is **Converted into curves** then the text options are removed and you can only handle it as any other curve object. Another way to separate the characters and deal with them as separate objects is by converting the **text** object into curves and then **break the object apart** into curves. Select a text object, **right click** and from the appearing menu select **Convert to curves** option. Then right click once more on the object and from the appearing menu, select the **Break apart** option. The text object now is split to its characters and can be handled as any curve object.

Text on path

With the text tool you can also add text on a path that you have created. The text that will be added on the path will follow its curvature and create a text art design. To add a text on path, first, you have to create the

path you want the text to be placed on by using any of the drawing tools such as freehand or outline tools. Then you have to insert the Text that you want to be placed on the path on the working area by using the Text tool from the Tools toolbar. Make the needed adjustments on the text object by changing the Font size and type from the tool options bar to make it proper for placing it on the path you have created. Also, you can adjust the curvature of the path you have created in Node editing mode by clicking on the **Edit shape nodes**  from the Tools toolbar. Adjustments on both Text and curve objects can be made, also, after placing the Text on path.

Before applying the text on a path you have to make sure that the text is a text object and it is not converted to curves. Otherwise the Apply path option will not be available.



Apply path procedure

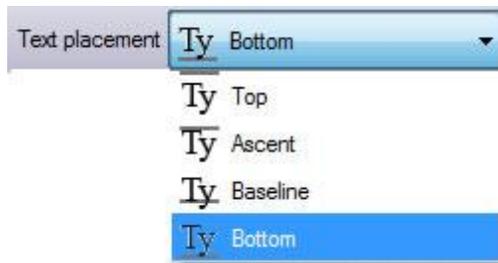
To place the text on the path you have to select them both by making multi selection, right click on them and from the right click menu select the Apply path option. The Text object will be placed on the path and follow its curvature. The two objects will become one but they can be edited separately. This means that you can edit the Text and the curve object as you did before applying the Apply path option.



Edit text on a path

To edit the text that is on the path you have to select the Text on path object and select the **Text** tool from **Tools** toolbar that will make the Text editable. You can change the type, the size, the style (bold or italic) and add or delete text to the existing text object from the tool options bar. The additional option you have on Text on path objects is that you can change the **Text placement**, the **Text alignment**, the **Offset** and the **Direction** of the text on the path.

Text placement: You can change the text placement by selecting any of the four prefix text positions from the Text placement drop down menu of the tool options toolbar. The four options define the position that the path (curve) will have on the Text on path object and are the following:



Text Placement

- ∨ **Baseline (Default):** The **Baseline** option is the default option and positions the text on the curve having characters such as small 'g' to expand under the curve.



Baseline

- ∨ **Bottom:** The **Bottom** option positions the text over the curve completely. The curve (path) will be positioned at the bottom of the text. The characters such as small 'g' will be positioned over the curve completely.



Bottom

- ∨ **Ascent:** The **Ascent** option positions the text exactly under the curve, having the capital letter or characters such as 'h', touching the curve from below. The curve line is positioned over exactly over the text.



Ascent

- ∨ **Top:** The **Top** option positions the text under the curve by keeping a small distance from the curve.



Top

Text alignment: You can change the **Text alignment** by selecting any of the three prefix text positions from the Text alignment drop down menu of the tool options toolbar. The three options define the alignment of the Text on a path or a shape object and are the following:

- ∨ **Left:** The **Left** option is the default option and sets the Text on path to start from the Left side of the path.

*Left Alignment*

- v **Right:** The **Right** option sets the Text on path to start from the Right side of the path.

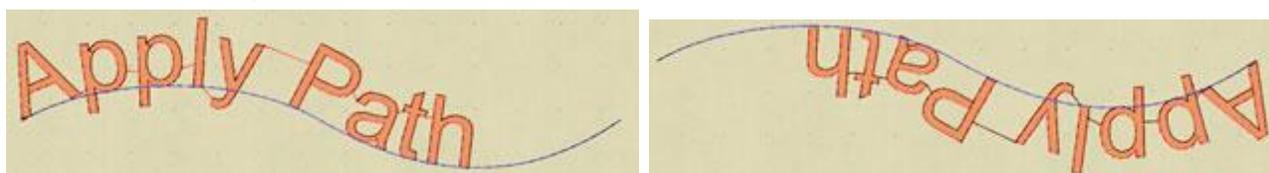
*Right Alignment*

- v **Center:** The **Center** option centers the Text on the path.

*Center Alignment*

Offset: The **Offset** numerical field specifies the distance of the Text from its current position. The default offset value is zero and you can change it by either typing a new value in the field, and then press enter key from the keyboard to apply it, or use the arrow buttons next to the field to increase or decrease the current value. The **Offset** value can take positive or negative values and move the Text on the path accordingly.

Reverse Direction: When you place Text on a path or on a shape the text takes the direction of the path. If the path was drawn from left to right, then the Text will be also placed from left to right and over the path. On the other hand if the path was drawn from right to left then the Text will be also placed from right to left but will be positioned below the path.

*Path right to left - Path left to right*

When the path or the shape was designed from right to left and the text you have placed on appears in the opposite way from what you expected, you can simply check the **Reverse direction** checkbox and the text will appear in the way you wanted to be.

You can also edit the **curve** that the text was placed one. To edit the curve (path) you have to select the **Edit shape nodes** option from the tools tab and edit its nodes. Any change you are making on the curve (path), affects also the way the Text is placed on the curve.

Remove text from path

If you have Text placed on a path you can easily remove it by right clicking on it and selecting the **Clear path** option from the right click menu that will appear. The Text will be removed from the path (curve object) and will lose its curvature. The Text object will keep its attributes (Font type, size, style etc.) and it will position on a virtual straight line which is the default position of every text you are inserting on the working area.

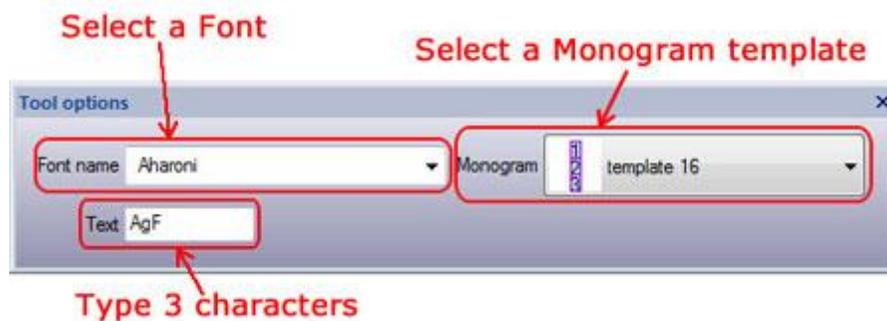
The curve (path) object where the Text was placed on will remain as it was before applying the text on path option.



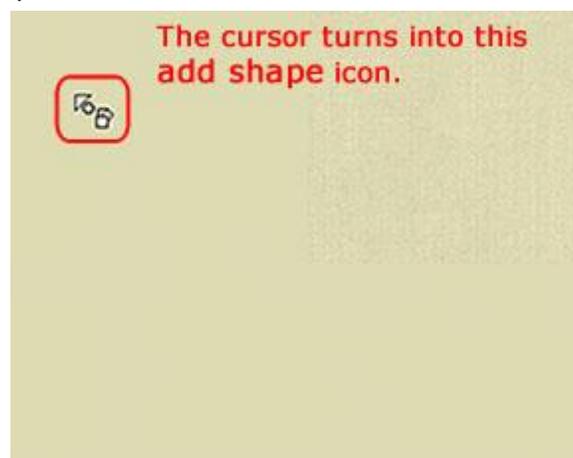
Monogramming

As we have already described we can create a monogram design using the new design wizard. We can also create a monogram design manually from scratch.

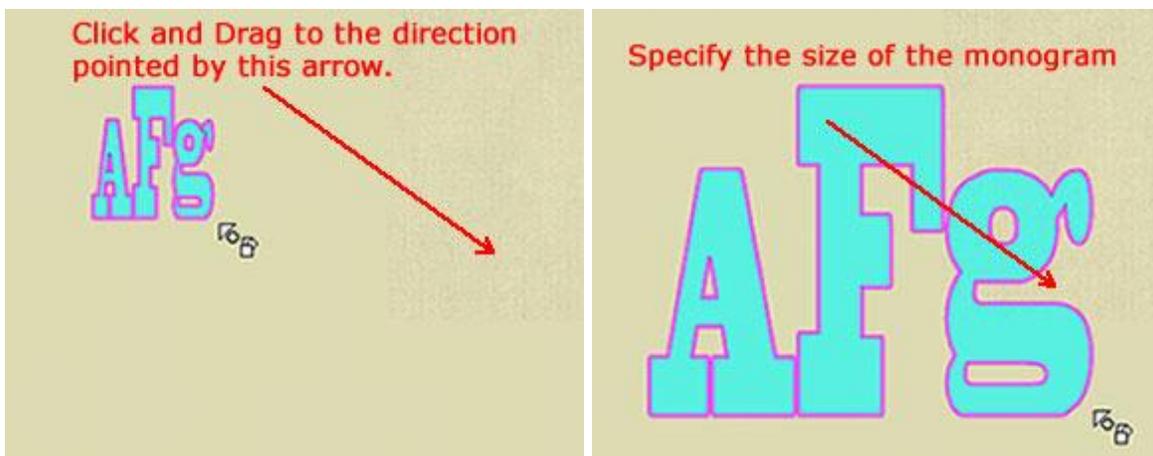
1. Click on Monogram icon  that is located on Tool toolbar.
2. On **tool options** toolbar we can see monogram customization options.



3. The cursor turns into add shape icon



4. **Click and Drag** to define the size of the Monogram. While dragging you can see a preview of the created monogram.



5. **Right click** to apply the monogram.



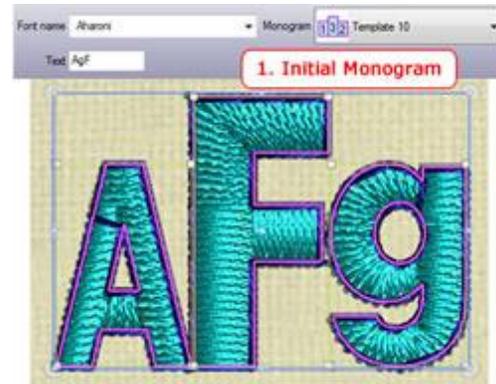
6. After the monogram is applied, when we select the monogram object, the monogram customization options are enabled on tools options and we can edit the created monogram. We can change all the properties of created monogram (Font, Text and Monogram template).
7. At this point you can use the **Insert Clipart** library option in order to add a **Frame** to your monogram. There is also a more automated way to create a monogram. Many users may find it more useful to follow the wizard steps to create a monogram and then copy the created design into an existing design.

More information about can be located in New monogram section. We will now present available ways to edit a monogram despite the way it has been created.

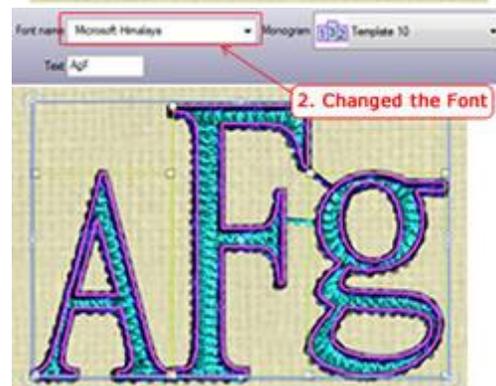
Edit Caption

As we already mention in previous section we can edit an applied monogram at any time. First of all we can simply change **Characters**, **Font** and-or **Monogram template** using **tool options** toolbar.

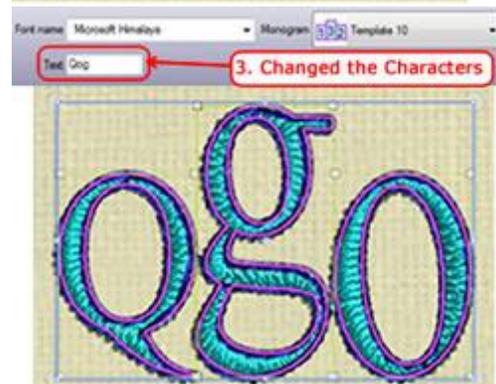
Starting from the monogram of the previous section we can change any of the parameters and the monogram is automatically updated.



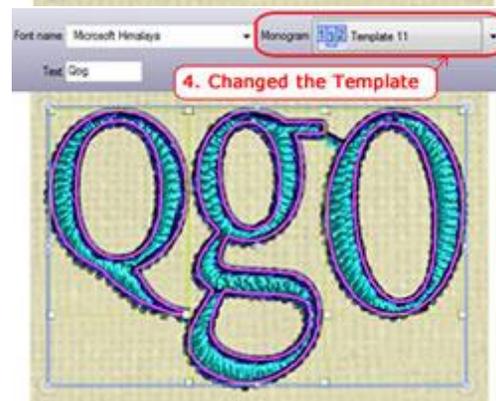
We can change the used Font.



We can change the used Characters.



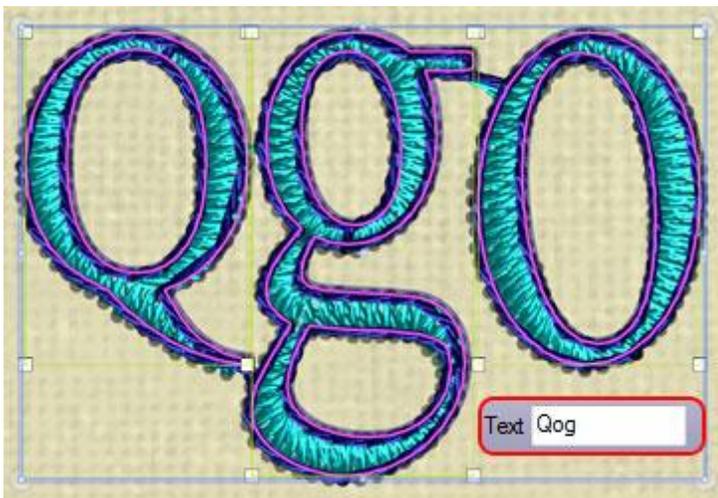
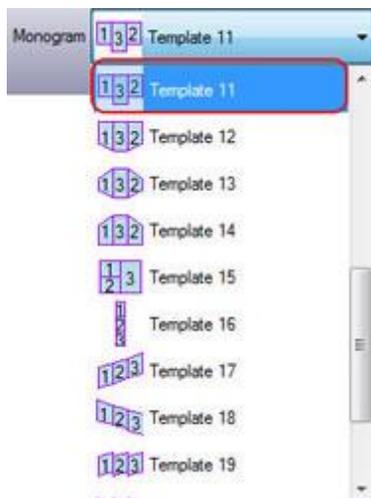
Finally we can change the monogram template. This final monogram is a completely new monogram.



In following section we will demonstrate how to Edit the template of the **monogram** using node editor.

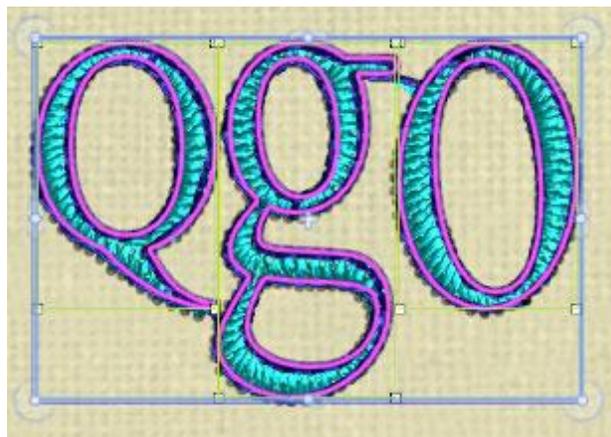
Edit monogram template

The program comes with a set of monogram templates and we can select any of them using **artwork source wizard - new monogram** or using **tool options** toolbar. All the monogram templates are consisted of 2 or 3 rectangular areas that the letters are added into them. The monogram mechanism makes the best fit of any added character into any of the rectangular areas. Any of the templates has some 1,2,3 numbers on top of its icon. The number on top of any rectangular area is the number of the used character. For example in Template 11, the third character will be placed in the rectangular area of the center. From the characters "Qog" when applying the "Template 11" we have the "Qog" monogram of the following figure.



At this point we must mention that we have the ability to edit freely the inserted monogram containers inside the Node editor and transform their shape. In the following example we will edit a created monogram using **Node editor** mode.

Select any applied monogram.



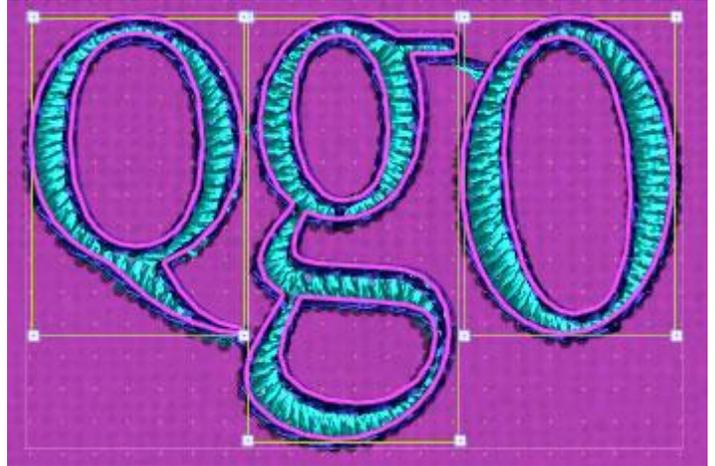
Edit shape nodes.



As we can see any of the monogram characters is surrounded by a rectangle that implements some handles on the corners.

Using node editing options we can completely change the shape, the position, the orientation of this area.

When editing the area around of any letter the program tries to automatically best fit the letter into the new area.

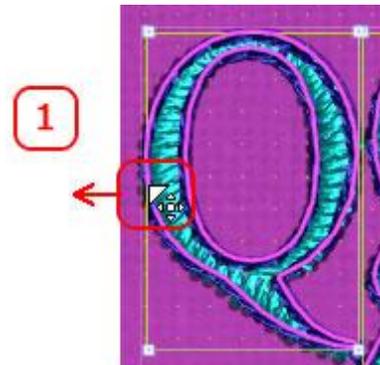


We will provide some examples of how we can edit the holding area of any letter. But as you are getting more familiar to node editing functionalities you will find out that are various other ways to manipulate the node of an object.

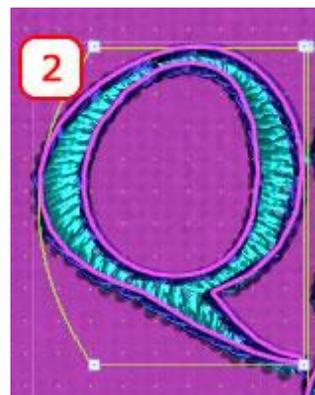
Edit curve - Move node(s)

In any of these cases the area that the character is placed changes and the letter is transformed in order to fit the new area.

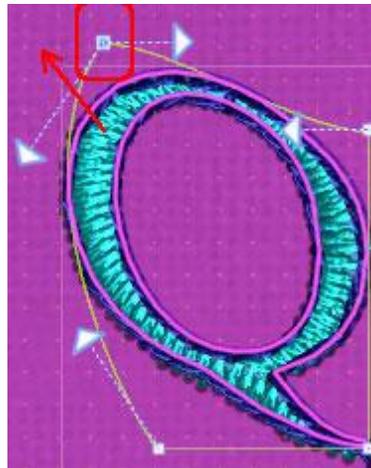
Place the mouse over any curve and by click and drag we can change the curve.



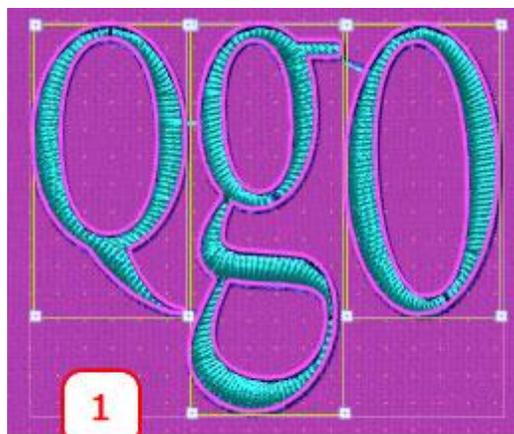
The shape of the **Character area** changes and the characters shape changes in order to fit the new area.



In the same way we can move any **corner node** to change the shape of the area.

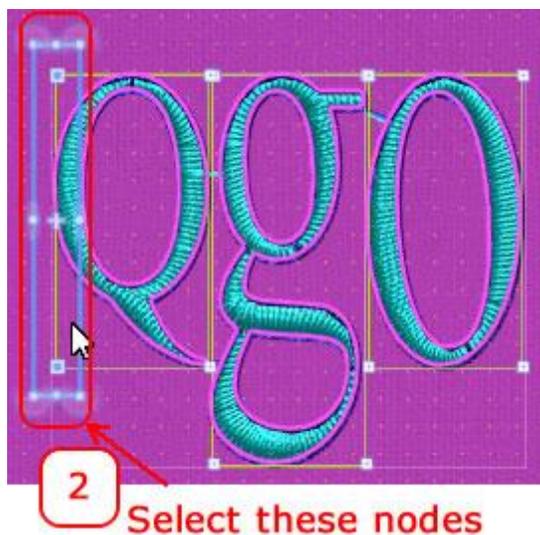


In the following example we will move more than one nodes in order to reshape a monogram template.
Initially applied monogram



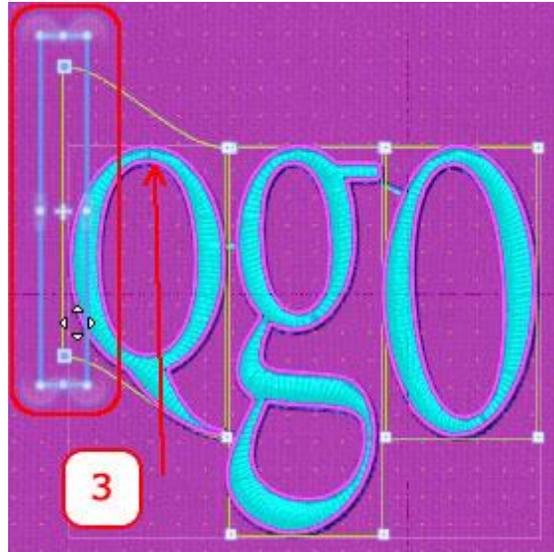
Starting from this design

Select the 2 nodes on the left side of the left letter.



Select these nodes

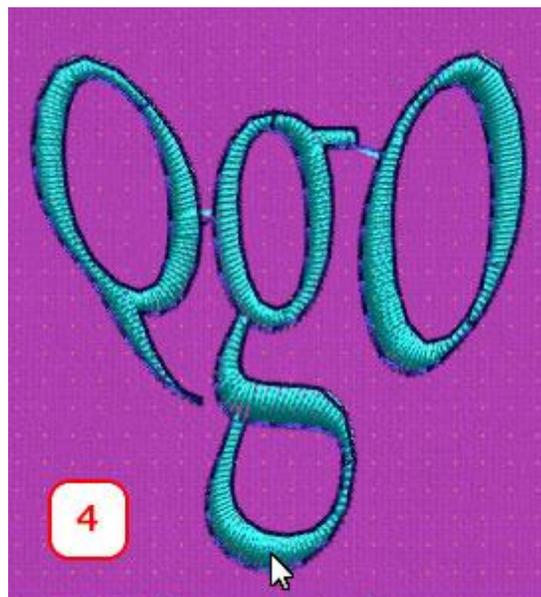
Move the selection up in order to create a curvature to the letter



Move the selection.

We will move the same nodes on the right letter in order to create the same curvature on the right side of the monogram.

Just like that in a few clicks, we have transformed the monogram template and created a much different version of the monogram.



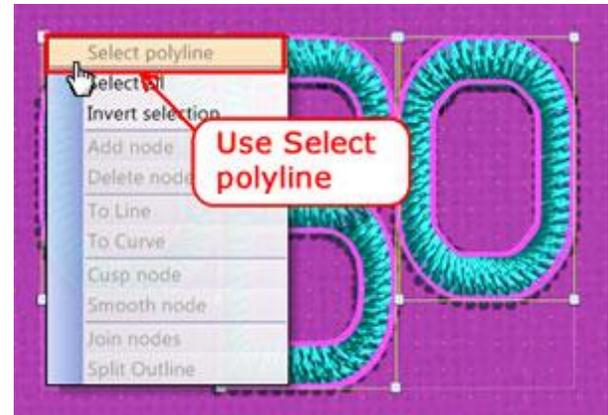
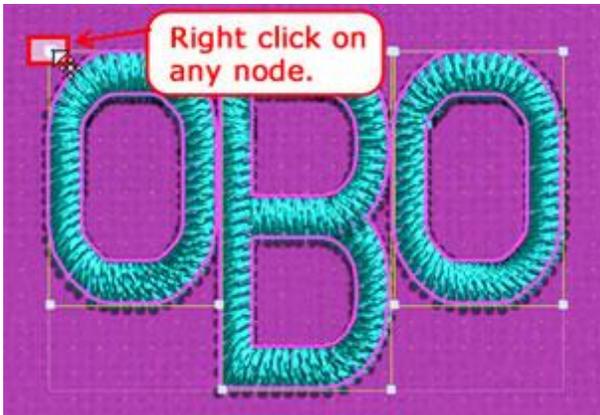
Transform the other side too.

Transform monogram area

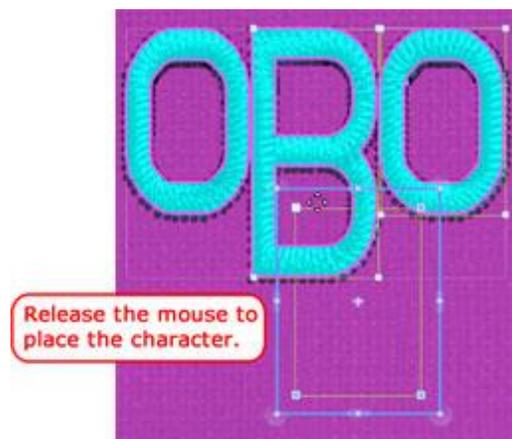
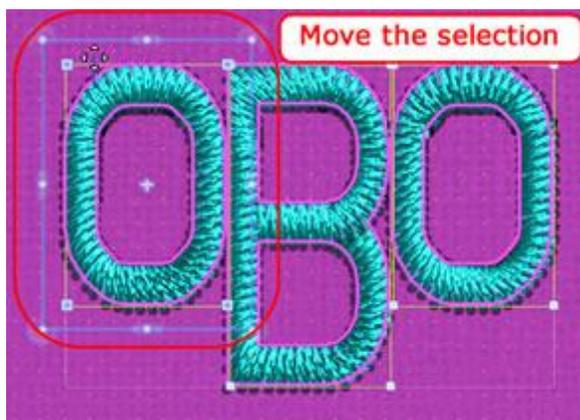
Move - transform the whole character area.

We want to select all the nodes of the 2 "o" letters and move the letter in order to create overlapping of the letters.

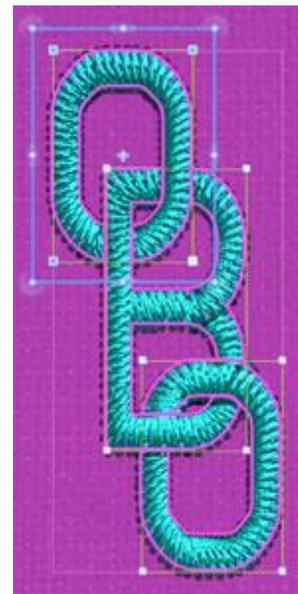
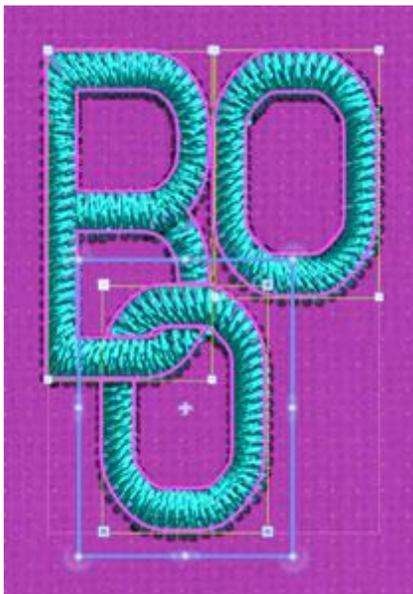
Right click on any node and from appearing menu use **"Select polyline"** option.



Click and Drag to move the selection and release on top of lower part of the "B" letter.

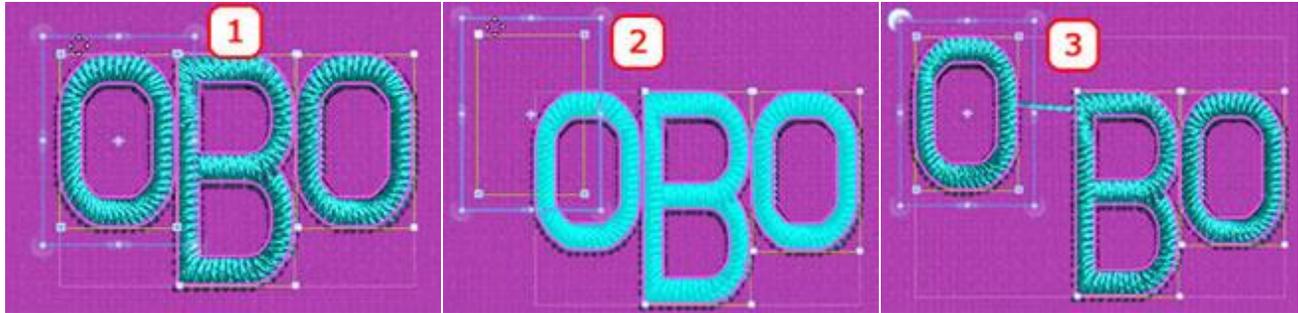


We will do the same for the "o" letter that is on the right side of the monogram.

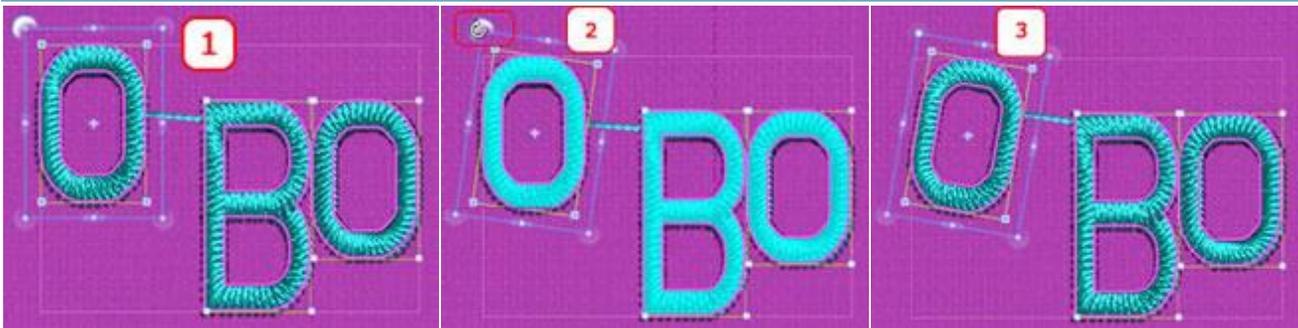


At this point we must mention that you can use Transform options of Node editor menu in order to **Move, Rotate, Scale and Slant** a selection of nodes.

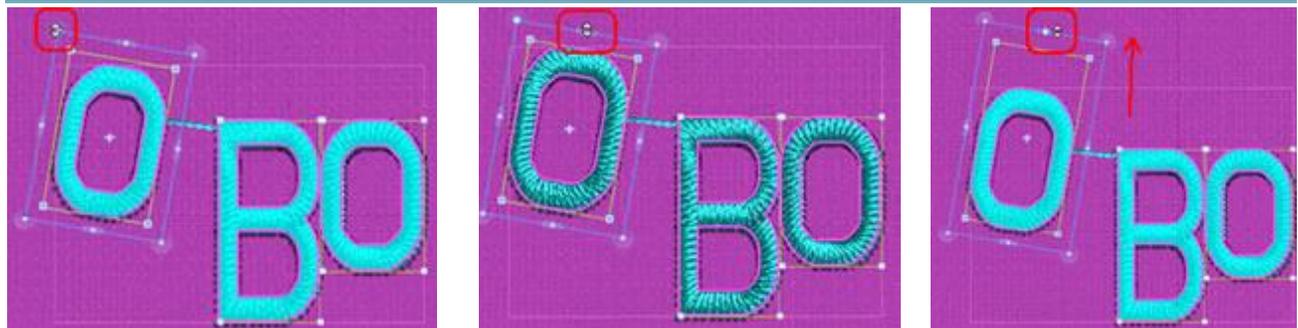
Move selection



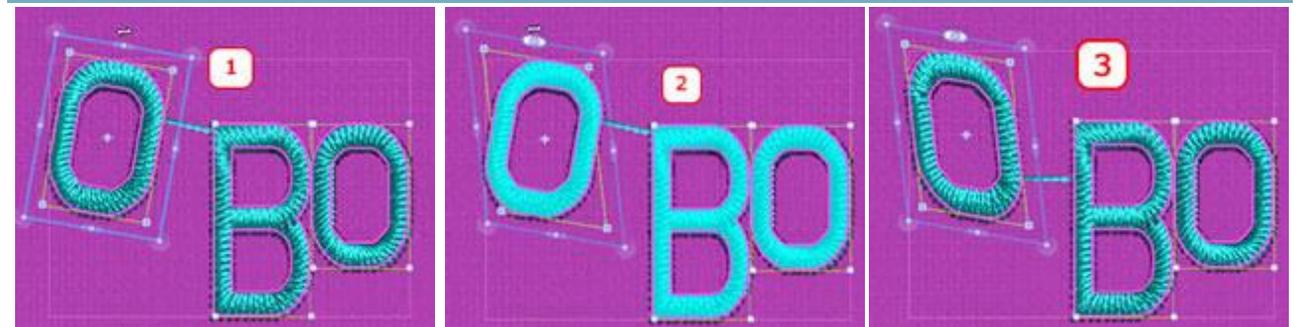
Rotate selection



Scale selection

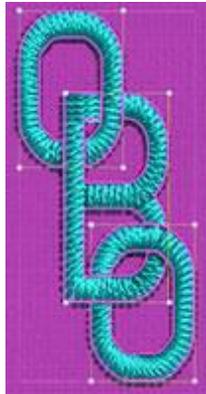


Slant selection



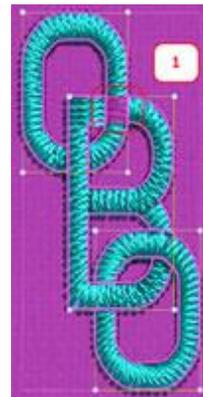
Overlapping areas

As we have already described if we use Node editing mode to transform - move monogram characters then we may create monogram with overlapping letters. At this point we must mention that we have the ability to specify which section of a character will be under or above when two or more are overlapping.

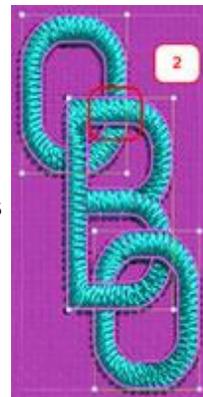


In cases like that there are overlapping areas there is a mechanism to help us change the overlapping order.

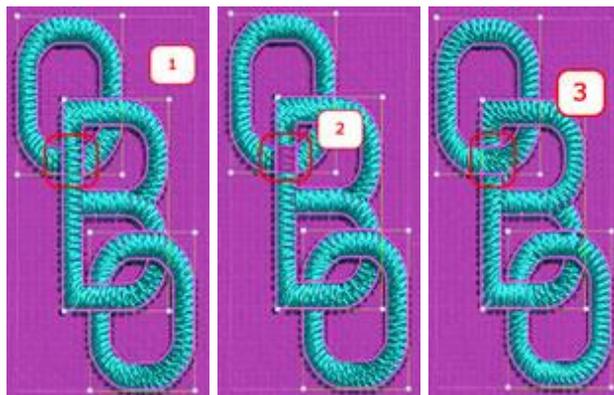
Place the mouse pointer over any overlapping area.
The area is highlighted.

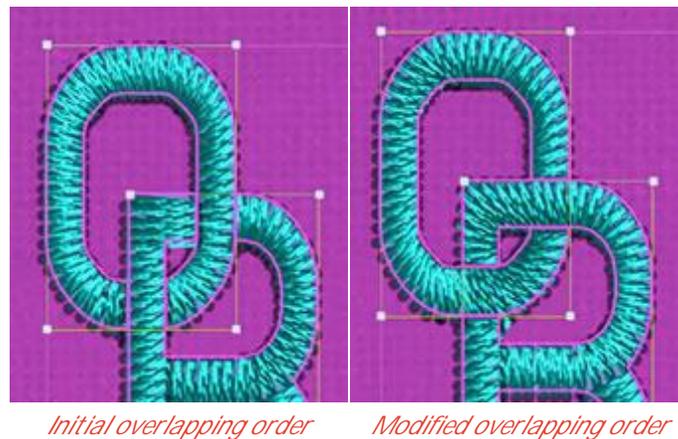


Left Click on the highlighted area.
The overlapping order has changed. The part that was on top is now underneath.



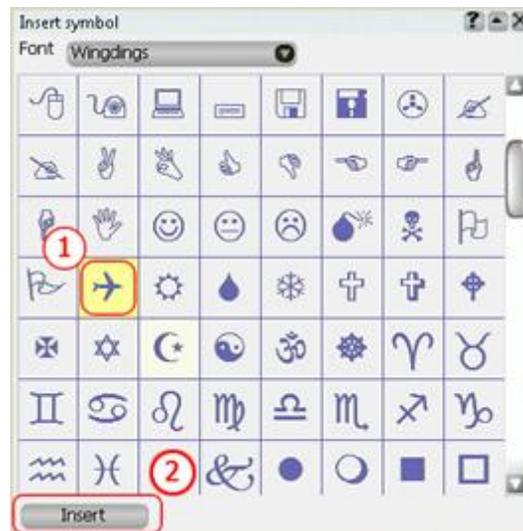
In the same way we can change the overlapping order for the bottom part of the letter.



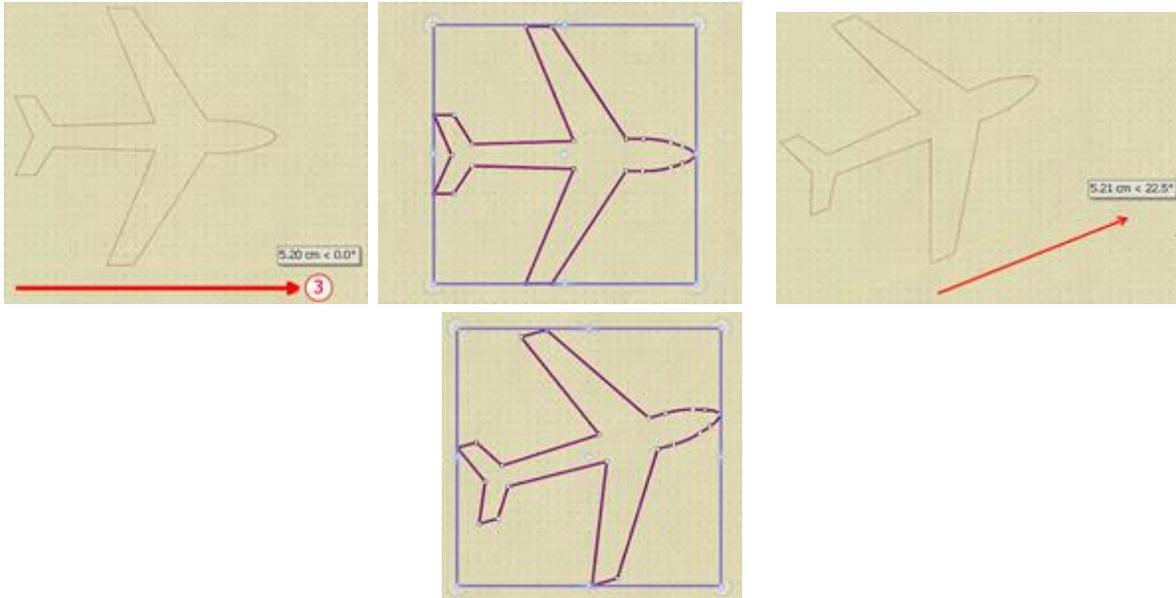
*Initial overlapping order**Modified overlapping order*

Insert symbol

Furthermore from adding text you can also insert symbols. **Insert symbol** option, takes advantage of the symbols that accompany any font that is installed into your computer. Each font type includes its own list of symbols that are based on the artwork of Font. You can easily insert a symbol by activating the **Insert symbol** option from **Tools** menu or by pressing **Ctrl + F11** shortcut keys. The **Insert symbol** dialog will appear where all symbols of a specific font will be listed. You can navigate yourself between the symbols by scrolling with the scroll bar at the right side of the dialog. Once you have found the symbol you want to use you have to select it and click the **Insert** button.

*Insert symbol dialog*

By clicking the **Insert** button the cursor changes to **cross**, allowing you to insert the selected symbol on the working area and the **Insert symbol** dialog disappears making more working space visible.



Horizontal placement with 5,33 mm width – Placed on an angle with 5,33 width

To insert the selected symbol on the working area you have to click and drag with the mouse specifying the width of the symbol and the angle you want to have from the horizontal axis. After releasing the mouse click the symbol appears on the working area with the default fill and outline colors and the **Insert symbol** dialog turned back on. You can insert as many symbols you want by following the same steps.

While dragging with the mouse useful information appear next to the cursor such as the **Width** and **Angle**. If you hold the **Ctrl** key pressed while dragging, the cursor will snap on every 22.50 degrees allowing you to insert the symbol on a specific angle.

You can also change the symbols list you are viewing by changing the **Font** type. On top of **Select Symbol** dialog you can view the current font that you are using. You can change the font by clicking on the current font and from the list that will appear select a different one. The symbols will change accordingly allowing you to insert new symbols on the working area.

If you want to close the **Insert symbol** dialog you have to click on the close icon . You can also minimize it by clicking on the hide icon . The minimize icon will make Backdrop properties to disappear and leave the title bar to float on the working area.



Minimize backdrop properties dialog

You can maximize the dialog by clicking once more on the show icon.

Chapter XII

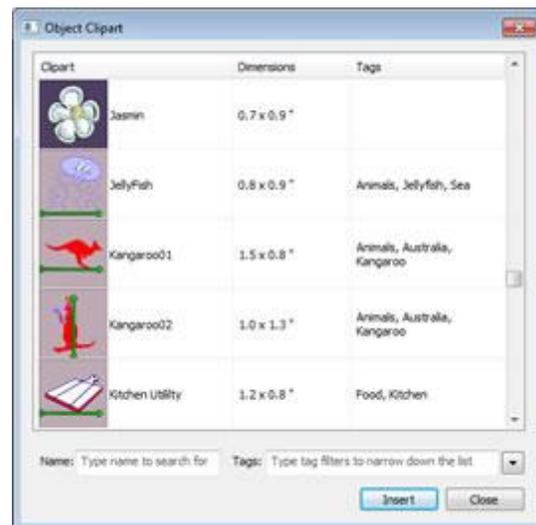
Clipart Library

The software includes a very useful tool that allows you to insert existing or create your own clip-art designs that you can reuse easily.

Whenever you inset a clip-art the software will fill it with the default fill type and the default outline/pen type, based on the active Techniques.

In this section we will discuss the following:

- ✓ **Insert item from library**
- ✓ **Filter visible clipart items**
- ✓ **Change view**
- ✓ **Clipart names and Tags**
- ✓ **Adding items to clipart library**



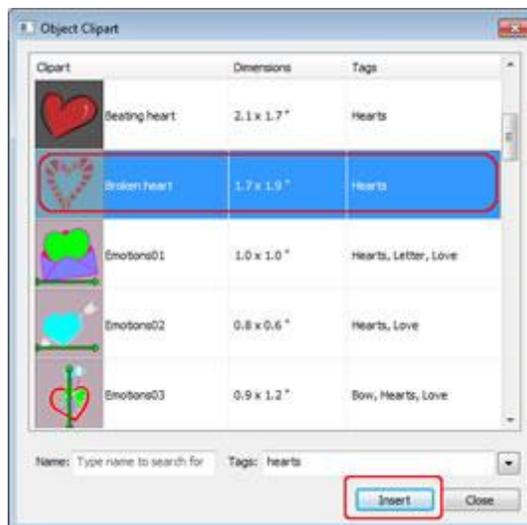
Insert item from library

1. From **Tools** menu use **Clipart Library** item and **Insert** sub item.
2. You can also use **Ctrl+I** keyboard shortcut in order to open **Object clipart** dialog.



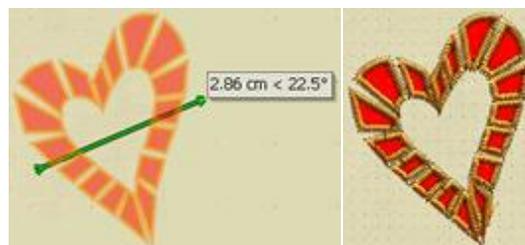
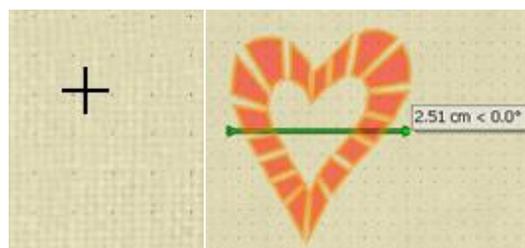
3. The **object clipart** dialog will appear.
4. We can select any of the available clipart to add in the design area.

5. Simply **Click** to select any item and by pressing **Insert** we can add it on the design area.
6. We can also right click on any item and use Insert option.



7. The cursor turns into a **Cross** waiting to specify the position.
8. Click and drag to add a reference line.

9. The item is sized according to the size of the arrow.
10. Release the mouse and the clipart is automatically added.



We can also use a **left click** to place the clipart item into its original dimensions.

Filter visible clipart items

We can easily filter visible items in order to see more relevant icons according to what we are looking for.

We can also search for any clipart by searching by name. In the lower part of the clipart library dialog there are 2 type texts areas.



Search by name

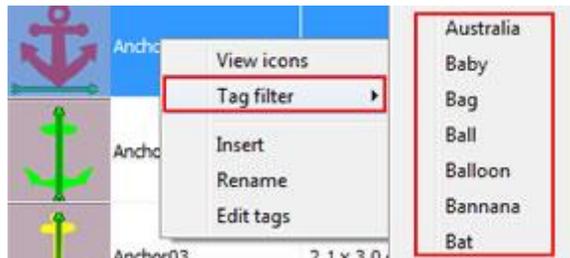
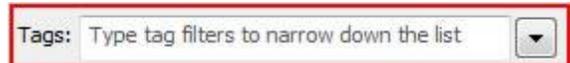
Type in **Name** text entry area to search for a clipart by name. While typing the list is automatically updated to show the item that its name is a closest match to the text that has been types.

Name: Type name to search for

Filter visible items

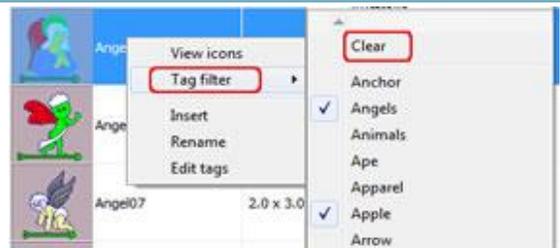
There 3 ways to apply filters

1. Type any term, in **Tags** text area.
2. Use the plus sign to pick any term from the drop down menu.
3. **Right click** on any item and from **Tags** submenu select any of the available filter terms.



Remove applied filters

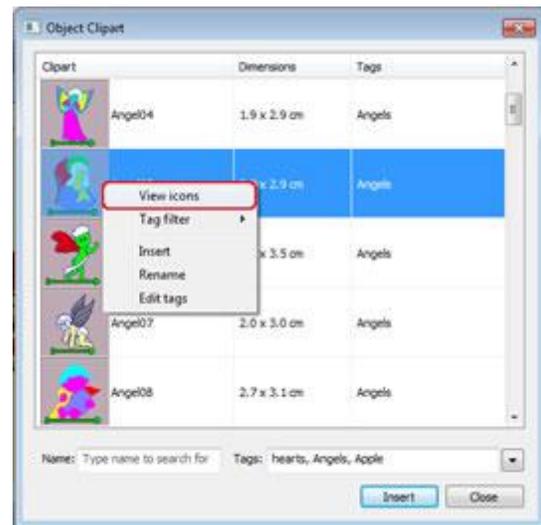
1. **Delete** the text that from the text area.
2. **Right click** on any item and from tags menu item use clear option.



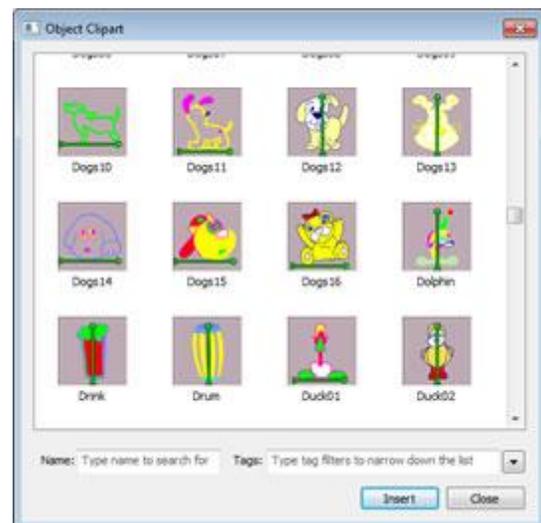
Change view

We can easily change from detail view into icon view.

1. Right click on any item
2. From appearing menu select **View icons**

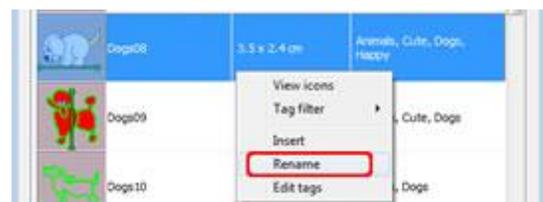


Now we can see only the icon of any clipart item, not its dimension or the currently used tags. In the same way we can change into detail view.



Clipart names and Tags

1. **Right click** on any item
2. Use **rename** option to change the name of the clip.
3. Edit the name and press **Enter** key to apply



1. In the same way as above we can also change the available **tags** of any clip.
2. Use a **comma**, to add more than one tags.



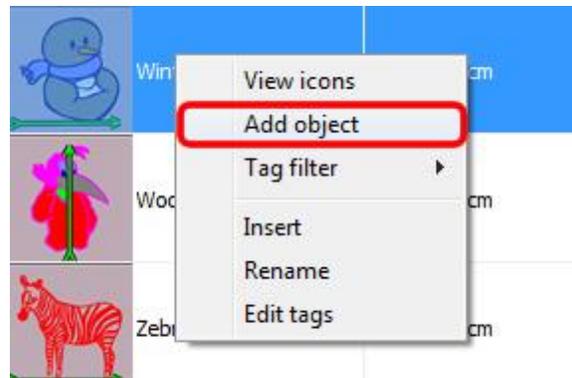
Adding items to clipart library

The power of the clipart library is that we can always create our own clipart items. **Add items** that you like in library and you can have a powerful set of objects for reuse in any design.

There are 2 ways to add a design part into the library.

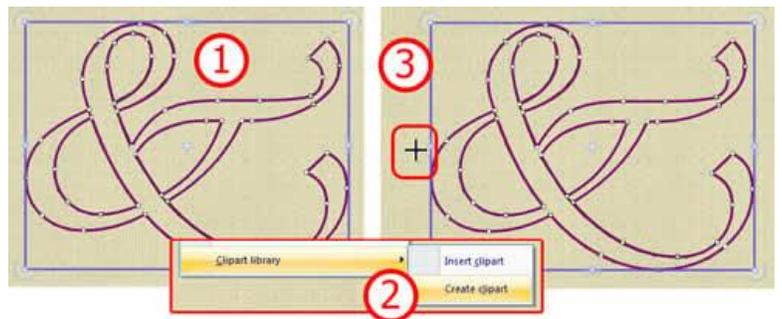
Method 1:

1. Select any object
2. Start **Insert clipart** dialog
3. From right click menu select **Add object** option.
4. The selected object is added into the clipart library.

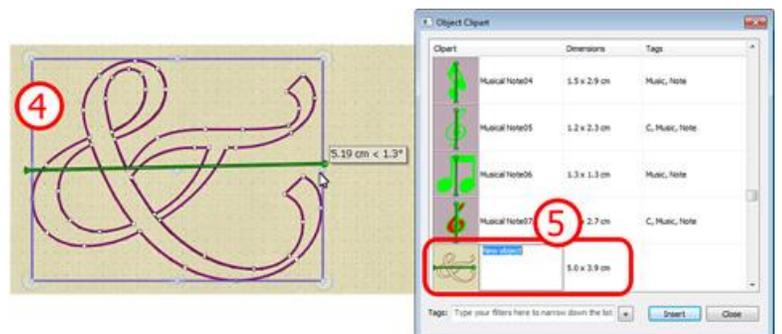


Method 2:

1. Select one or more objects
2. Use **Create clipart** option of Tools menu.
3. The cursor turns into a cross



4. Click and drag to specify a reference line.
5. Type a name and the clipart item has been added.



It is a very good practice too add names relative to the item and tags in order to reuse the item easy at any time.

Chapter XIII

Array

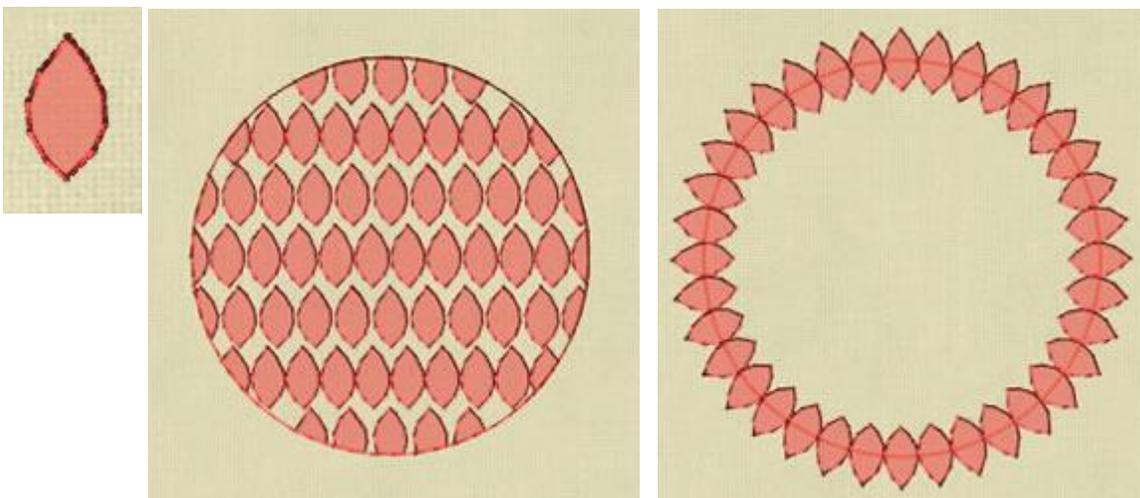
The **Array** is a new fill type that uses a **base object** or a **clipart** item to create an **area fill** or an **outline fill** using the base object. When applying **Array** fill, a pattern grid is created and copies of the base object are placed on the grid in a patterned way.

Whenever you apply Array fill the software will fill the shape used with the default fill type and the default outline/pen type, based on the active Techniques.

You can use any shape for creating an array fill/outline, such as embroidery, cut, stencil, crystals and paint objects.

For example the shape on the left part of the following figure is used as a base object. Using the base object we have applied **Array** on the fill area of the circle (middle part of the figure), and array on the outline of the same circle (Right part of the figure).

Using **Array** (Fill or Outline) you can create amazing effects. In the following sections we will present how to apply **Fill** or **Outline** array, the customizations that can be applied and the various tools that the **Array** can be combined to.



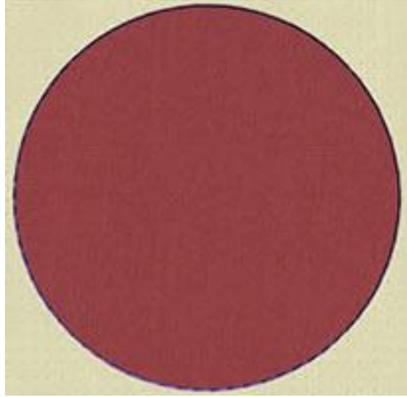
Base object

Array on object fill

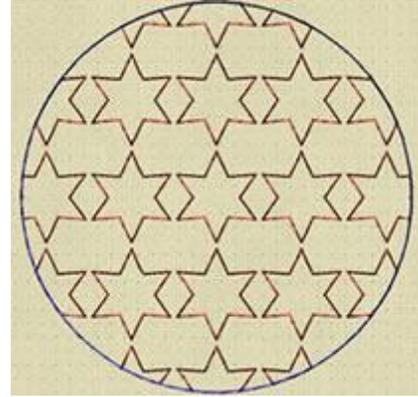
Array on object outline

Array on Object Fill

In this section we will demonstrate how to apply **Array** on an object's fill. In order to apply the **array fill** you must first select one or more objects to be used as fill object. You can use as fill object **any part of your design** or any item from the **Clipart library**. There are 2 methods to apply the **array fill**, In the following example we will present in detail the available methods.



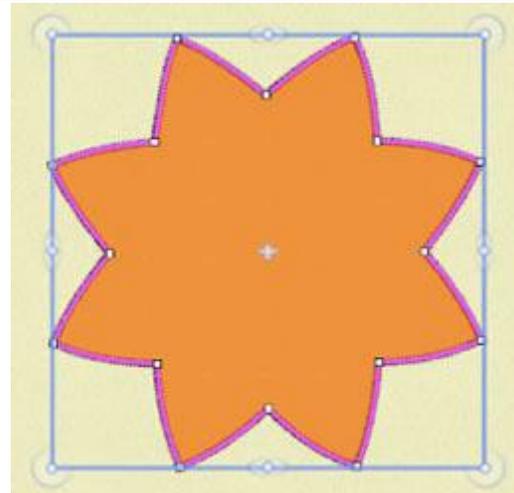
Object with applique fill

*Array fill with a design object*

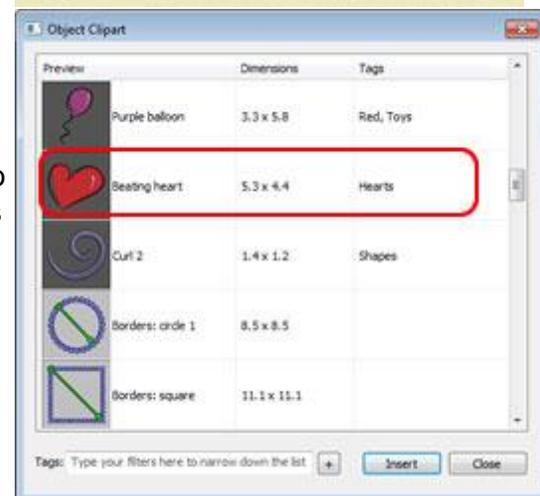
Method 1. Use any item from clipart library

Select any object that you to apply **Array** fill on.

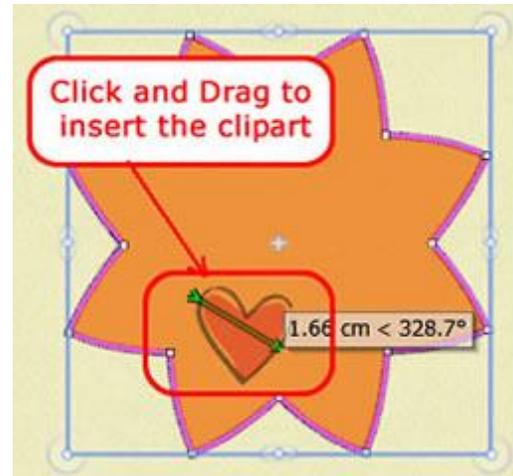
Press **Array**  icon.



The **Clipart dialog** appears to select any clipart item to be used in order to fill the area of the objects with copies of the clipart.



Select a Clipart item and insert it like adding a clipart.



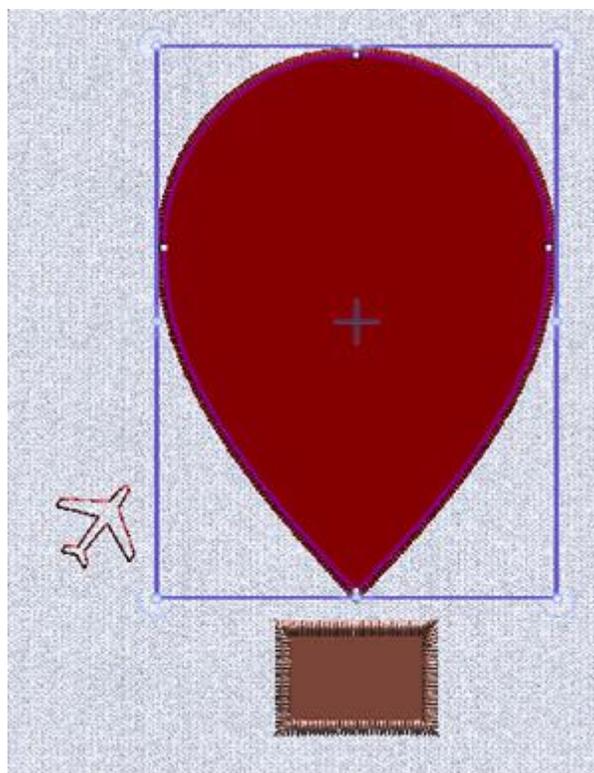
By releasing the mouse the selected **clipart item** will be applied as array. It is not added on the design area only in the selected **object's fill**, in a patterned way.



We can always select the object with the array fill and by pressing again **Array icon** , the **Clipart library** dialog will appear again to select another clipart item. The second method to apply the Array fill is described below. In this method we are not using a **Clipart** item as fill object, but we are using a part of the design.

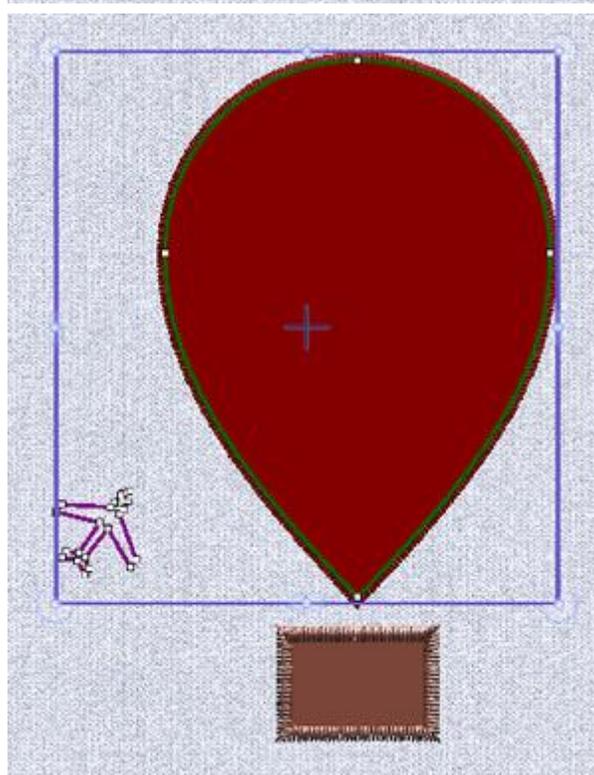
Method 2. Use a part of the design as fill item.

Select an object to be filled.

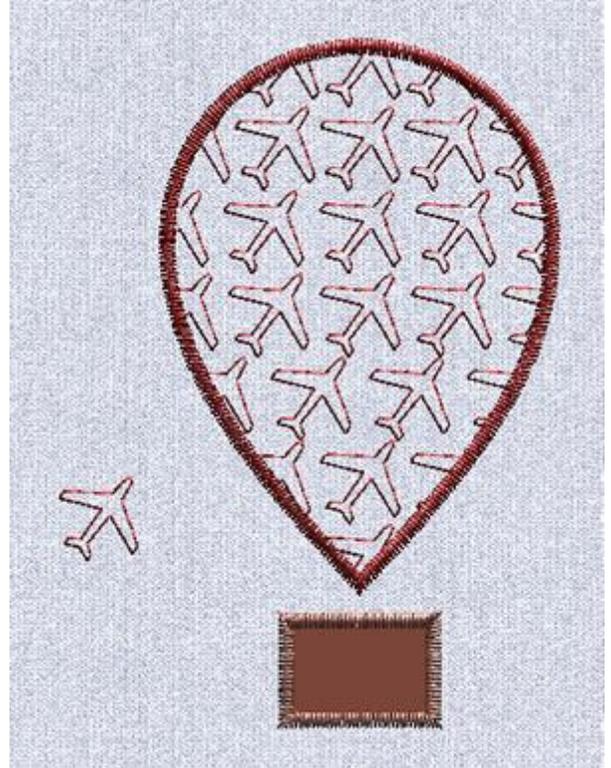


Use **Ctrl** key in order to add one or more objects to the selection. This object will be used as fill object.
The **base object** must be smaller than the object to be filled.

Press **Array**  icon or **right click** on the selection and from appearing menu use **Create Fill from Shapes** option of **Array** submenu.



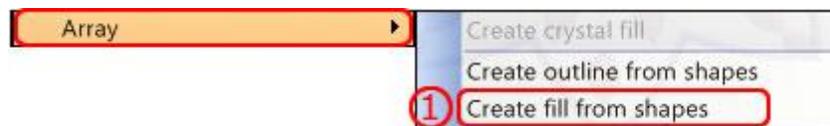
The larger object is automatically filled with the smaller object placed in a patterned way.



When an **Array fill** is applied we can replace the fill object at any time in various ways.

1. Press **Array icon** to use a **clipart** item
2. Select a design object together with the already filled object and click on **array** icon to change the existing fill and use the newly selected fill object.

Any of the above ways to replace can be also performed by using a right click on the filled object and then using **Create fill from shapes** option.

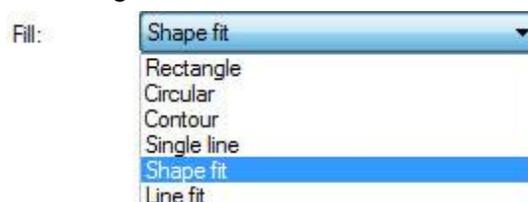


There are various options that you can adjust in order to customize the way that the array is applied and edit the applied array. These options will be presented in the following section.

Edit Array fill

When you have applied an **Array fill**, you can see that the **Array** object has various parameters that you can adjust. There are some parameters that are common for all **Array** objects and the others vary according to the selected fill pattern. You can edit the fill pattern in 2 ways. First by using the parameters of each pattern provides or by the pattern handles of Node editor.

The available fill patterns are 5 as shown in the following figure. The usage and the ways to edit the fill patterns will be described in the following section.



In this section we will present the common parameters of the **array objects (Offset, Item rotation, Trim Shapes and Separate to objects)**.

Offset

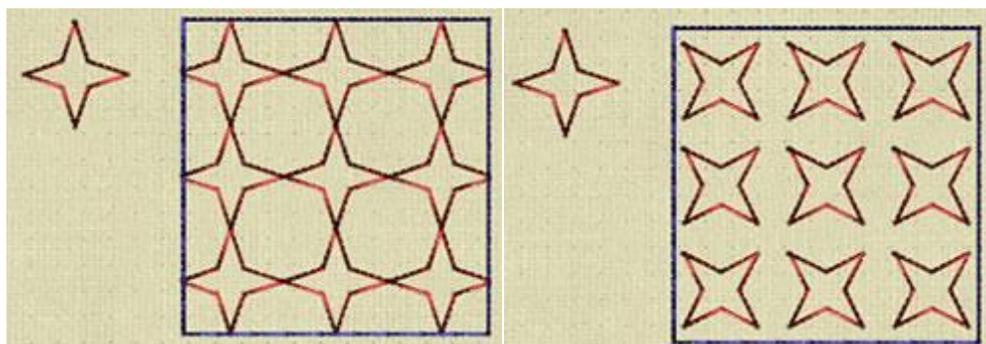


The **Offset** parameter specifies the distance between the outline and the cut edge of the repeated object.

Item rotation



This parameter rotates the base object. Specify the rotation of the object in degrees and all the copies of the array are rotated like if the initial object was rotated in these degrees.

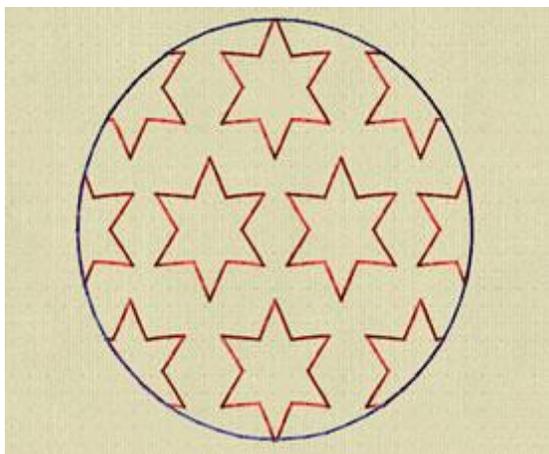


Item rotation 0

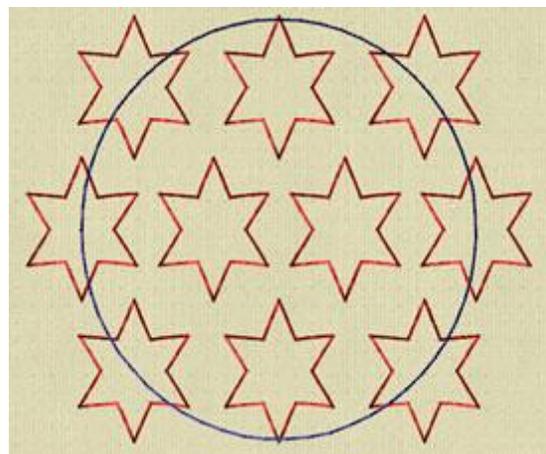
Item rotation 45

Trim Shapes

With **trim shapes** parameter you can specify whether the repeated objects will be cut according to the outline of the object in which they are repeated or if the software will nevertheless repeat the objects on the edge.



With trim shapes



Without trim shapes

Separate to objects

By using the **Separate to Objects** button you can convert the repeats of the array into individual objects. This means that you are able to delete, move or manually add/copy objects. This option is mainly used to avoid overlaps and to refine certain designs.

More information about the available parameters of **Array fill** can be located in **Embroidery Transformations** chapter in the respective section of **Fill properties**.

Array - Fill patterns

The **Fill pattern** is the most important parameter of the **Array fill**. When applying Array fill we must first select one of the available fill pattern and then customize the pattern using:

H. Spacing: mm

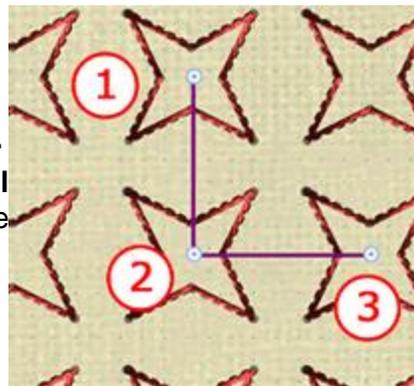
V. spacing: mm

Start angle: °

Slant angle: °

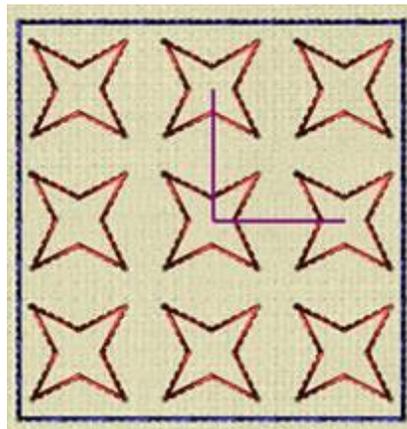
The available **parameters** of each fill pattern.

The **pattern handles** that appear when using **Node editor**. All the options that are used in order to customize the **fill pattern** of the array can also be adjusted visually using the available pattern handles of **Node editor**.

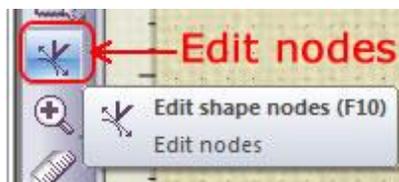


The available **pattern handles** and their usage also vary according to the **Fill pattern**. The following example will provide information on how we can access these pattern handle but their usage will be presented into following section separately according to the selected fill pattern.

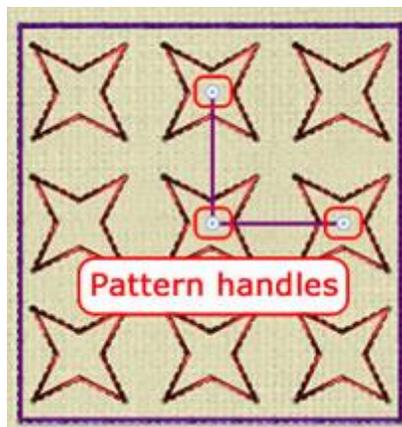
Select the **object** with the **array fill**.



Start **Node editing** mode by pressing on **Node editor** icon.



On the center of the object the pattern handles appear.



Using the pattern handles of the above figure we can change various parameters that vary according to the fill pattern.

- **Rectangle**
- **Circular**
- **Contour**
- **Single Line**
- **Shape Fit**
- **Line Fit**

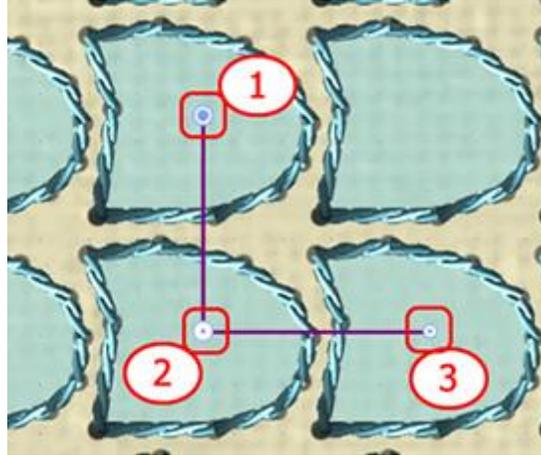
For normal objects when entering **Node editing** mode you can edit their outline. When using Node editing mode for object with applied **Array fill** only some pattern editing handles are available. We can also edit the outline of these objects but this process will be described later into a separate section.

Rectangle

When applying **Array** using **Rectangle fill**, a rectangular grid is created and copies of the **fill object** are placed on the grid. You can edit the look of the array in 2 ways. First by using the object properties to control the **Horizontal - Vertical** distance and **Start - Slant** angle.

- | | | | | | |
|-----------------------------|--------------|----------------------------------|----------------------------------|----------------------------------|----|
| • Horizontal Spacing | H. Spacing: | <input type="text" value="0.5"/> | <input type="button" value="↑"/> | <input type="button" value="↓"/> | mm |
| • Vertical Spacing | V. spacing: | <input type="text" value="0.5"/> | <input type="button" value="↑"/> | <input type="button" value="↓"/> | mm |
| • Start angle | Start angle: | <input type="text" value="30"/> | <input type="button" value="↑"/> | <input type="button" value="↓"/> | ° |
| • Slant angle | Slant angle: | <input type="text" value="90"/> | <input type="button" value="↑"/> | <input type="button" value="↓"/> | ° |

You can also edit the look of the array using the controls that appear on node editing mode. As you can see on the following figure a corner pattern handle appears in node editing mode.



There are three control points:

- Using **control handle 1** you can adjust both **Vertical distance** and **Slant angle**.
- Using **control handle 2** you can change the **center** of the array. This is the first object of the array the whole rectangular grid is based on this object. All the other objects will be placed based on the position of the first, following the parameters of the array fill type.
- Using **control handle 3** you can adjust the **Horizontal distance** and the **start angle**.

The distance between control points **2 and 3** specifies the **Spacing** parameter.

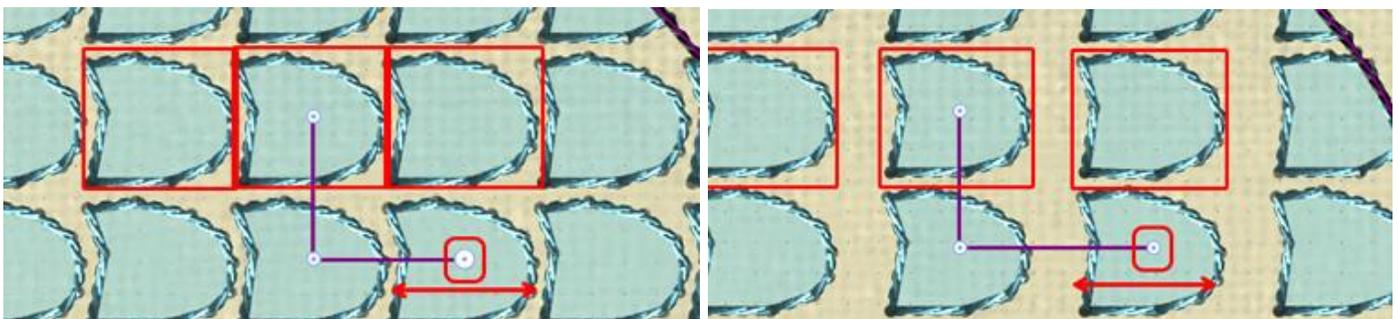
The angle of 2-3 line, specifies the **Starting angle**.

The distance between control points 1 and 2 specifies the **Vertical Spacing** parameter.

The angle of 1-2 line, specifies the **Slant angle**.

Horizontal Spacing

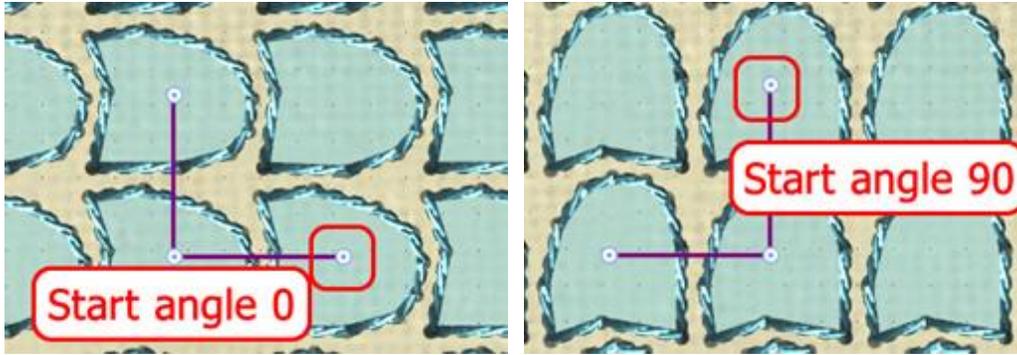
This numeric value defines the **horizontal distance** between the copies of the same horizontal line. You can type any numeric value in millimeters and press **Enter** to apply. You can also adjust the spacing between horizontal copies, in **node editing** mode, using the control handle that is indicated on the following figure. **Click and drag** to change the length of the line that ends on the handle, the horizontal distance changes according to the movement of the control handle. At this point we must mention that you can hold Ctrl key so that the movement will snap on the horizontal axis.



Horizontal Spacing 0

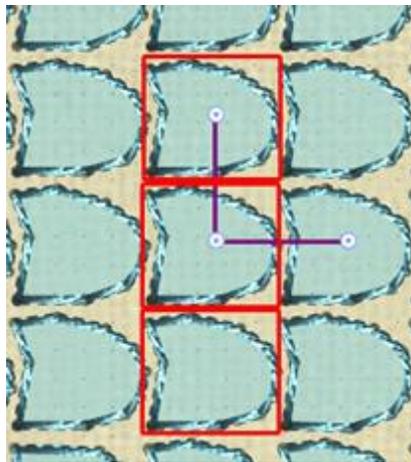
Horizontal Spacing 1,5

The part of the line that this handle is placed on is also the **Start angle** that the rectangular grid is based on. If the **Start Angle** is 90 degrees as on the figure below then it looks like we are editing the vertical distance, but the direction of the object has also changed.

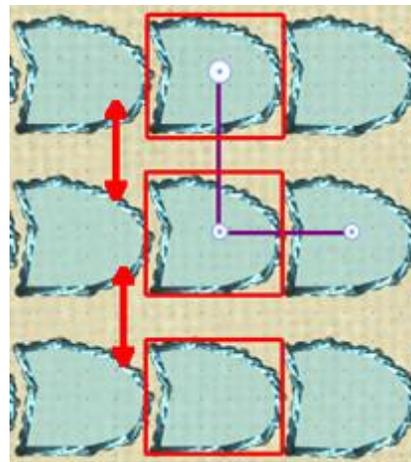


Vertical Spacing

This numeric value defines the vertical distance between the lines. This part of pattern handle is placed on top of the slant angle. You can enlarge this handle to increase the vertical distance.



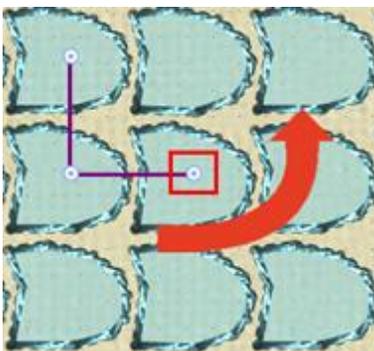
Vertical distance 0



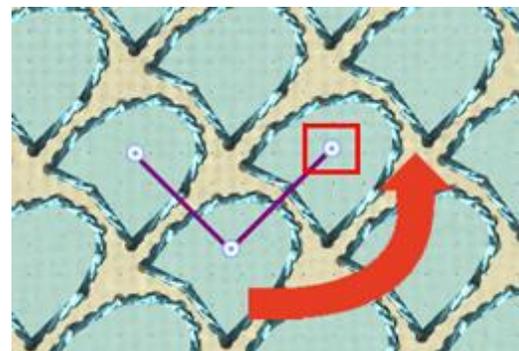
Vertical distance 2mm

Start angle

This numeric value defines the degrees that the pattern fill will start from. You can also move the node as indicated in the following figures in order to change the start angle. In reality the placement pattern changes angle at once. The pattern handle is moving as is. The angle between the lines of the handle remains the same when editing the the handle that adjusts the start angle.



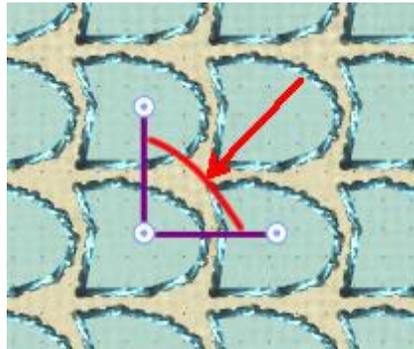
Move this node to change the start angle



The start angle has changed and the whole place of the pattern.

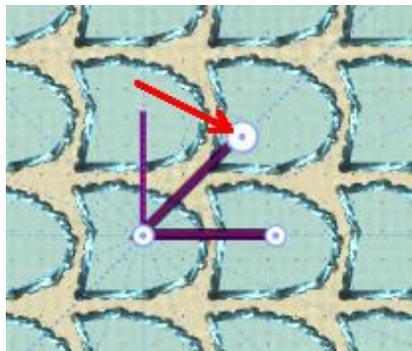
Slant angle

The **slant angle** defines the pattern placement. This numeric value defines the degrees of the pattern handle corner. As we can see on the following figure Slant angle is 90 degrees.

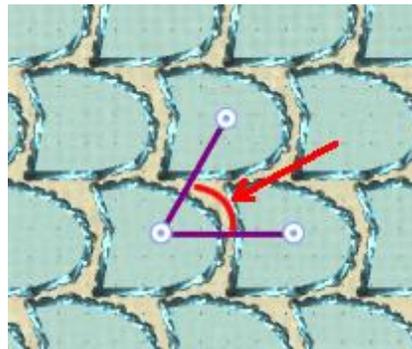


Slant angle: °

You edit the numeric value on Object properties toolbar but we can also move this node as shown on the following figure in order to change the Slant angle.

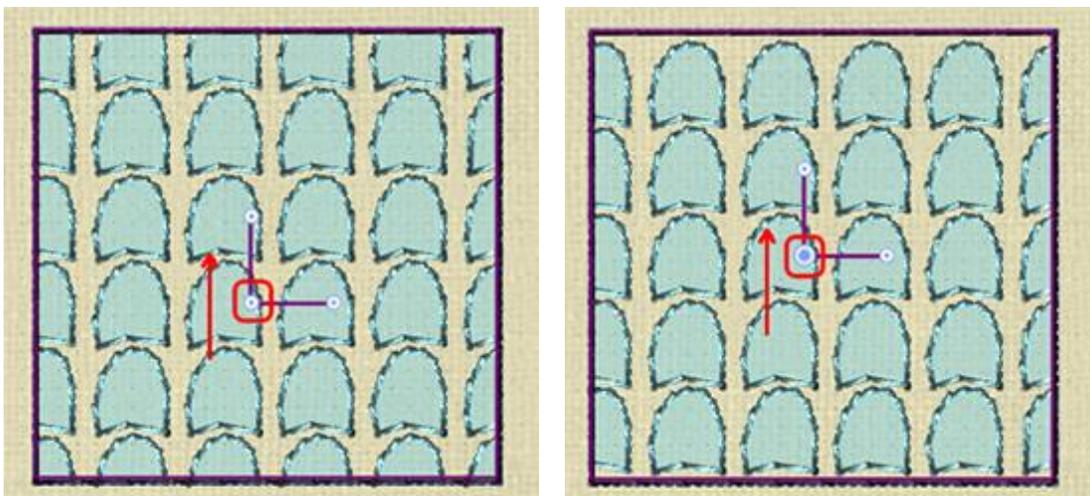


The slant angle has changed and you can see that the fill pattern is a lot different. All other option remain unchanged, that's why we have this overlapping. You must now change Horizontal - Vertical distance in order to improve array appearance.



Slant angle: °

Finally we must mention that we can move the **center** of Array fill (Control point 1) in order to change how copies the copies are placed. By default the center of the array is placed on the center of the object. As we can see the center of the first copy starts from the center but all the copies on the bottom- top of are not whole. We don't like the placement of the copies at the edges of the object as we can see the left part of the figure. Move the center of the array as indicated in the right part of the figure below and see how all copies fit inside the shape.

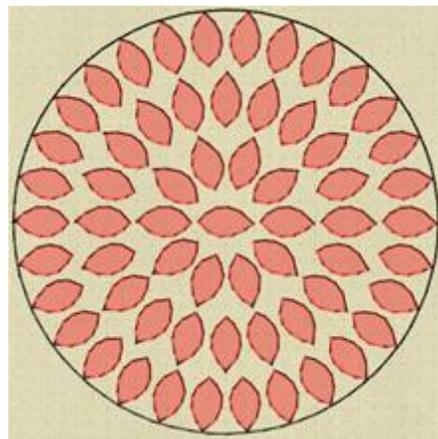


Circular

When applying **Array** using **Circular fill**, a Circular grid is created and copies of the fill object are placed on the circle. Detailed information about all the properties of **Array** fill can be located in the respective section of **Embroidery transformations** chapter. At this point we will only present the properties that affect the **array** fill pattern.

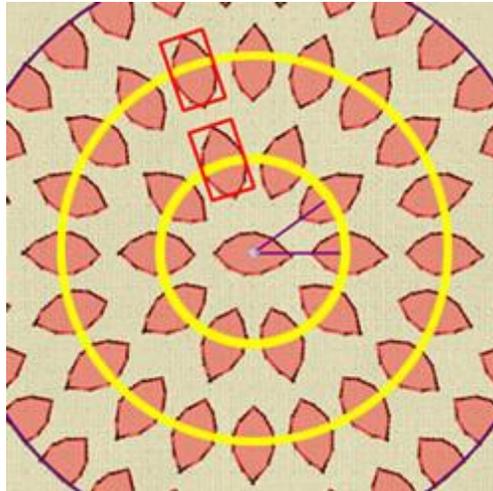
- **Horizontal Spacing**
- **Start angle**
- **Steps**

H. Spacing: ▲▼
 Start angle: ▲▼
 Steps: ▲▼

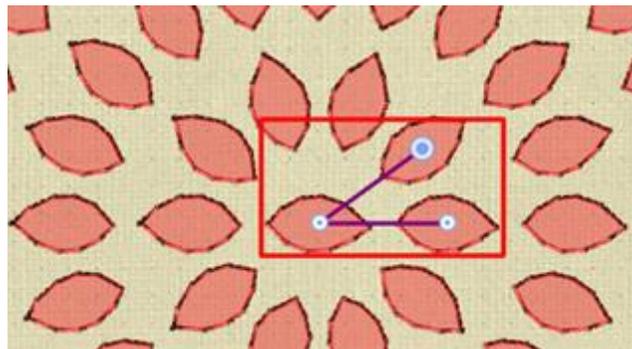


Horizontal Spacing

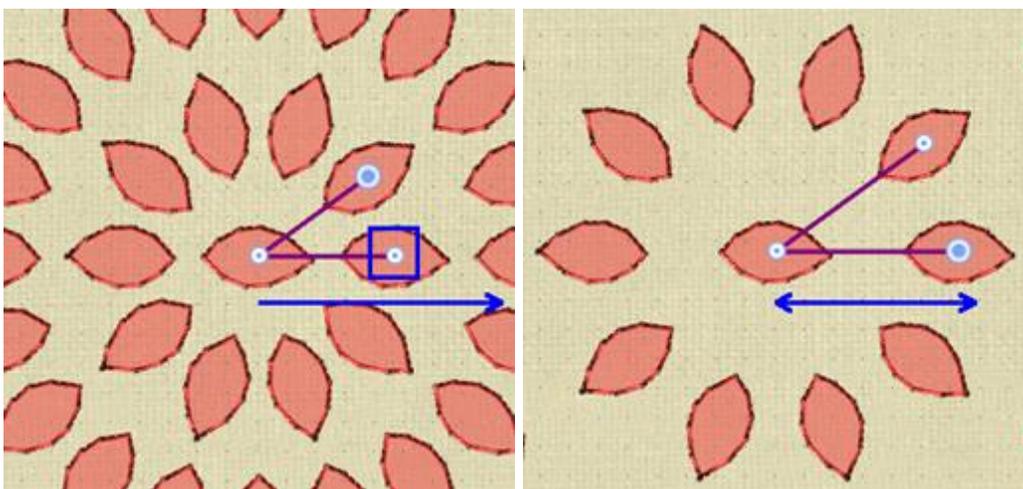
When applying **Array fill** using **Circular** appliance option, the program creates copies of a base object and places the copies on a **Circular grid**. The circular grid has inner circles. Using this option you can define the distance between the circles. In reality the Spacing parameter specifies the distance between the rectangles which include any of the copies.



In **node editing** mode a pattern handle appears. Using the nodes of this pattern handle we can adjust Horizontal spacing.

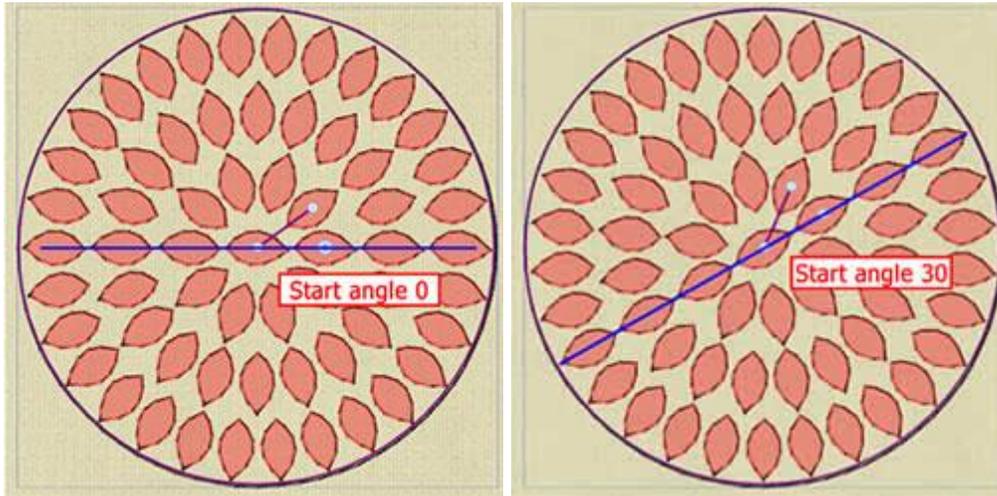


Click and Drag to move this node, in the direction that is shown by the arrow in order to to increase the Horizontal spacing or to the opposite direction in order to decrease the Horizontal Spacing. While Dragging you can see the handles enlarging, release the mouse to apply the operation.



Start angle

In **circular** placement there is always a line that the copies are placed on a straight line and the rest of the copies follow the placement of this start angle line. The whole pattern changes to follow the start angle, the copies of each circle are placed according to the start angle line.



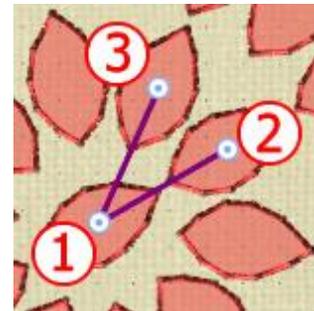
Steps

The **Steps** parameter, defines the **increase** Step of added copies on inner circles of Circular placement, starting from the center of the Array. First a copy is added to the center of the circle. Then in first circle the number of copies is the number that is defined by Steps property, in our case we have 8 copies. The next circle increases the number of included copies by the Step number, so the second circle has 16 copies. The third circle will have 24 copy objects etc. The object of the same circle are distributed evenly.

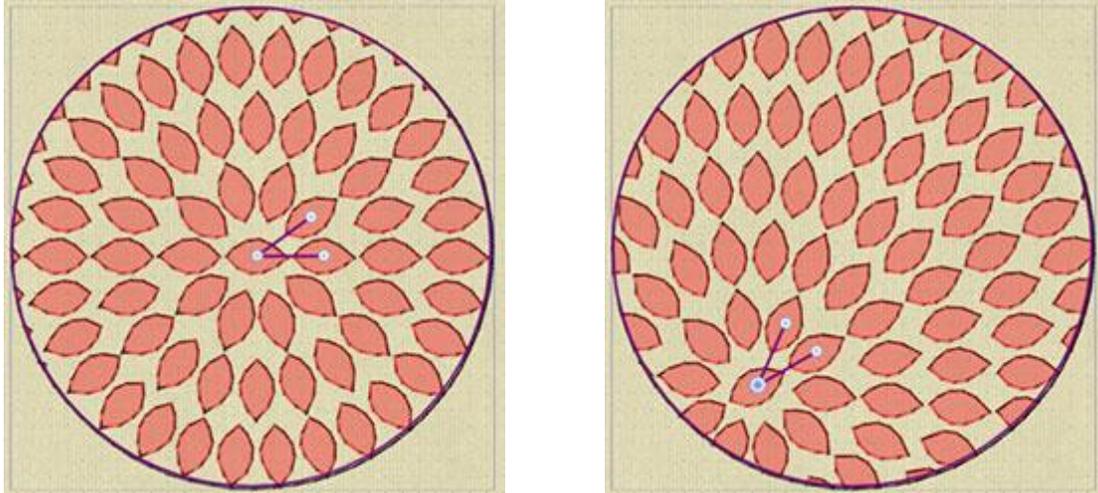
Steps:

When editing Circular array fill using node editor there are three control points:

- √ Control point 1 specifies the position of the first object that will be repeated. All the other objects will be placed based on the first one, following the parameters of the Circular array. We can move this control point and change the center of the circle.
- √ The distance between control points 1 and 2 specifies the Spacing parameter. In reality the numeric value defines the distance between the rectangles that include any of the copies and not the length from node1 to node2.
- √ Using the Control node 2 you can specify the Start angle.
- √ Using the control node 3, you can adjust number of Steps property.

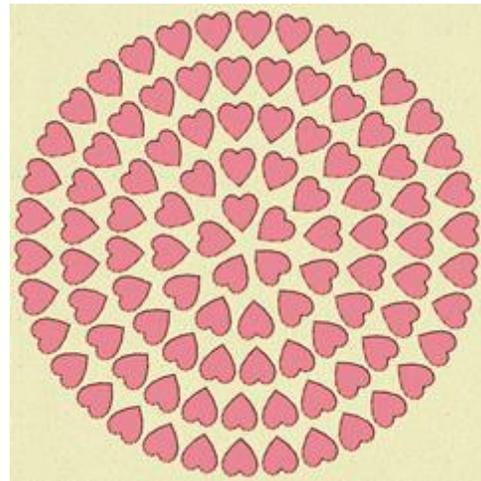


As we have mentioned before we can move **control point 1** (The center of the circle) in order to create design like the above. Starting from the design on the left with the standard circular pattern we can easily change into the design on the right with the modified center of the circle.



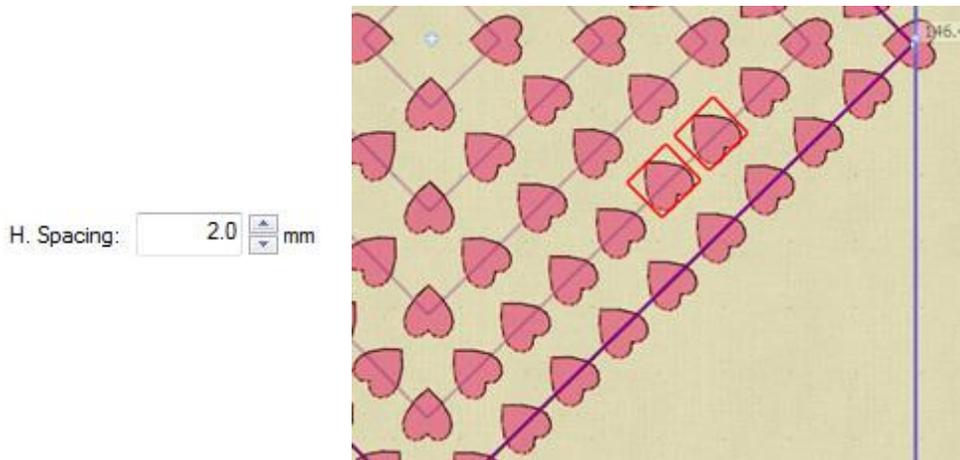
Contour

Contour array has the following parameters:



H. Spacing

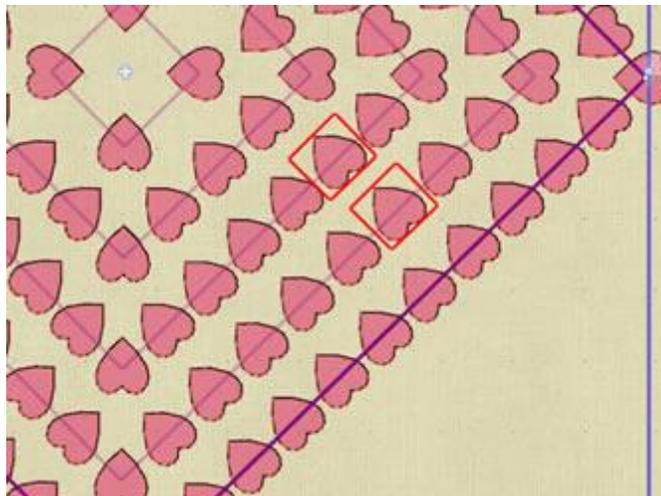
The **Horizontal spacing** parameter specifies the distance between the rectangles that include each repeated object of the same contour. The Spacing in this case may not be precise, since the objects of the same contour should be distributed evenly.



V. Spacing

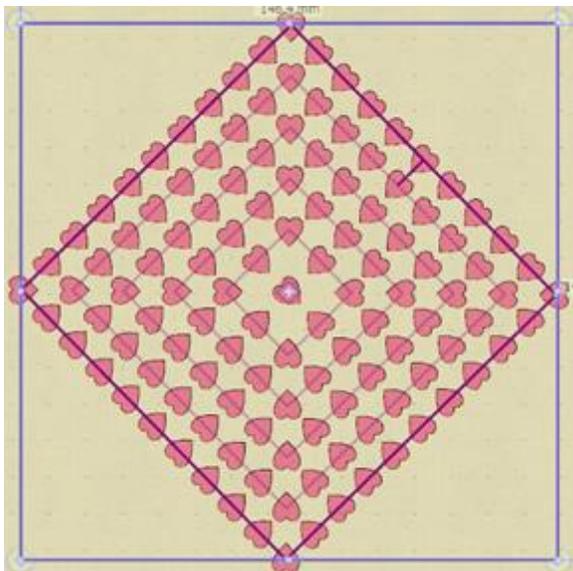
The Vertical spacing parameter specifies the distance between the rectangles that include each repeated object, of different (adjacent) contours. The Spacing in this case may not be precise, since the contours should be placed in a way that does not leave big gaps in the middle of the object.

V. spacing: mm

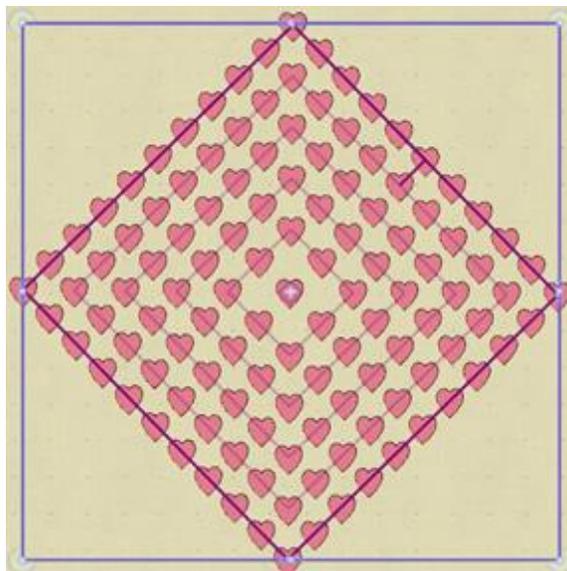


Follow angle

With the Follow angle parameter you can specify if the repeated object will be rotated, to follow the direction of the outline or if it will keep the angle of the original object.



With "Follow angle"



Without "Follow angle"

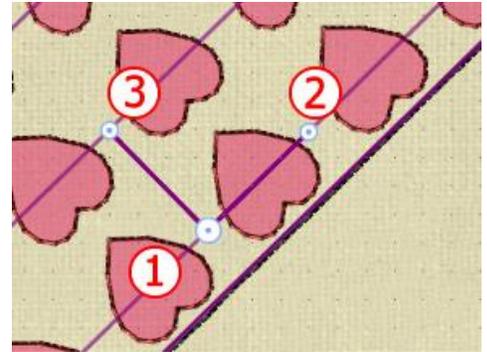
Node editing of Contour array

When selecting an object which is filled with Contour array and clicking on the **Node Editor** icon, you can edit the control points of the objects placement. There are three control points

- √ Control point 1 specifies the offset of the parameter, where the first contour will be placed.
- √ The distance between control points 1 and 2 specifies the Spacing parameter.
- √ The distance between control points 1 and 3 specifies the Vertical Spacing parameter.

You cannot change the angle of 1-2 and 1-3 lines since there is no meaning in changing the starting or slant angle in contour fill type.

If you wish to edit the outlines of the object you have to enable the parameter "Edit outline" from the "Tool options" toolbar



Single Line

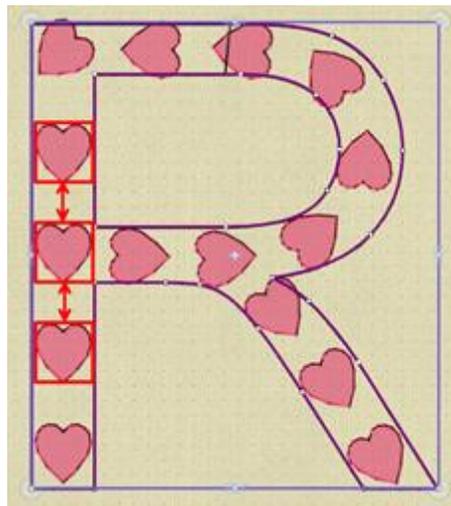
Single line array has only the following parameter:



Spacing

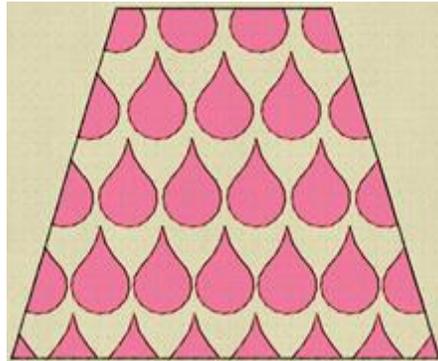
The Spacing parameter specifies the distance between the rectangles that include each repeated object. The Spacing in this case may not be precise, since the array of the same letter should be evenly distributed.

H. Spacing: mm



Shape Fit

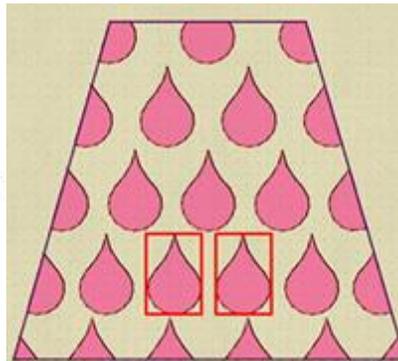
Shape fit array has the following parameters:



H. Spacing

The **H. Spacing** parameter specifies the distance between the rectangles that include each repeated object. The Spacing in this case may not be precise, since the objects of the same letter should be evenly distributed.

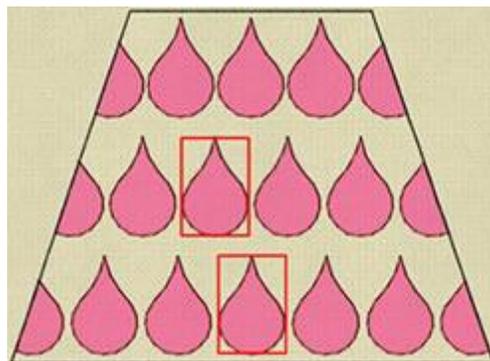
H. Spacing: mm



V. Spacing

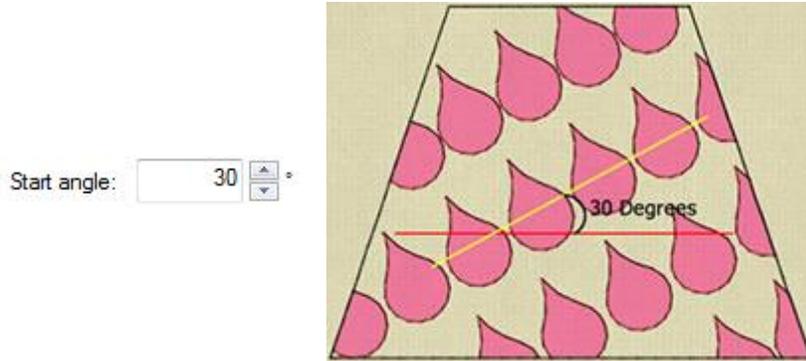
The Spacing parameter specifies the distance between the rectangles which can include each repeated object.

V. spacing: mm



Start angle

The Starting angle parameter specifies the angle of the horizontal lines of repeated objects, which will fill the area you specified. When the starting angle is set to 0 degrees, the lines will be horizontal.



Node editing of Shape fit array

When editing an object which is filled with **Shape fit** array in Node editing mode, you can edit the control points of the array placement.

There are three control points:

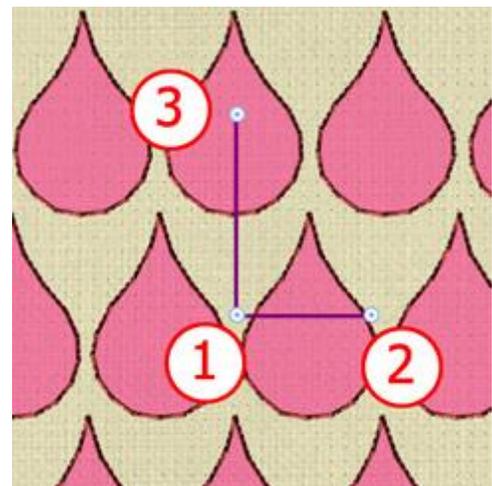
Control point 1 specifies the Vertical position of the first object of the array. All the other objects will be placed based on the first one following the parameters of the array fill type.

The distance between control points 1 and 2 specifies the Spacing parameter.

- The angle of 1-2 line, specifies the Starting angle.
- The distance between control points 1 and 3 specifies the Vertical Spacing parameter.

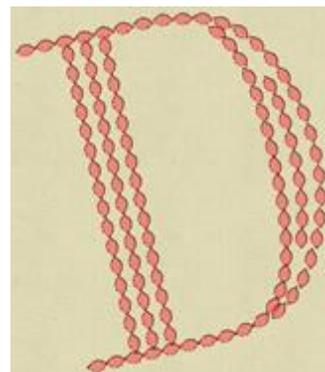
The angle of 1-3 line cannot be changed since it has no meaning for the Shape fit array.

If you wish to edit the outlines of the object, you need to enable the parameter "Edit outline" from the "Tool options" toolbar.



Line Fit

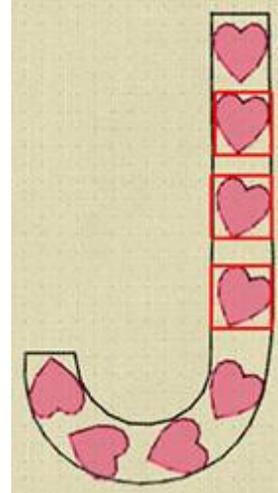
Line fit array has the following parameter:



H. Spacing

The Spacing parameter specifies the distance between the rectangles that include each repeated object.

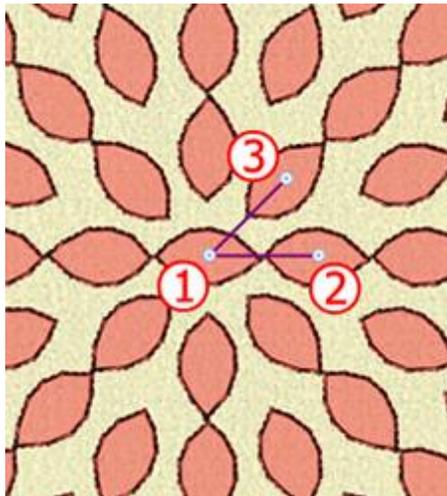
The Spacing in this case may not be precise, since the copies of the same letter should be evenly distributed.



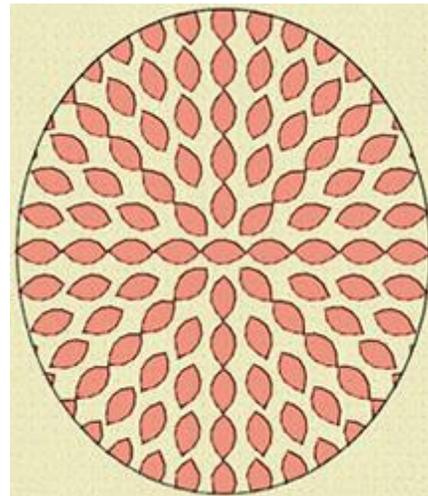
Line fit fill array does not have control points in node editor.

Edit outline

One very powerful feature of Creative DRAWings is that can **edit the shape** of any created object at any time using **Node editor**. For the objects that have **Array Fill applied** by default we can't edit their outline. As we have already mentioned when using Node editing mode for these object we can edit the fill pattern using the pattern handles.

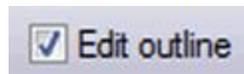


Pattern Handles



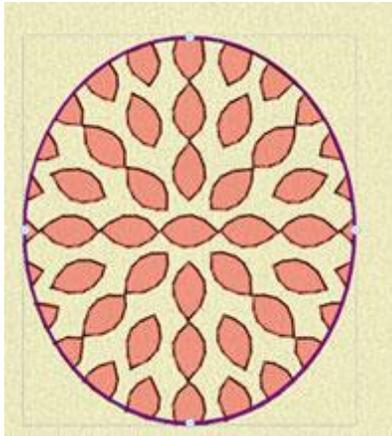
Array Fill

In case that we want to edit the shape-outline of the object when using node editor as for any normal object we must enable Edit outline option of **Tools options** toolbar.

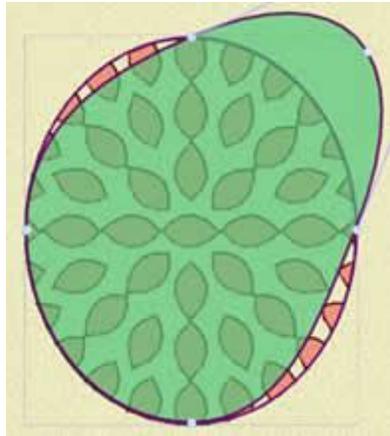


Edit the outline of object's with Array fill.

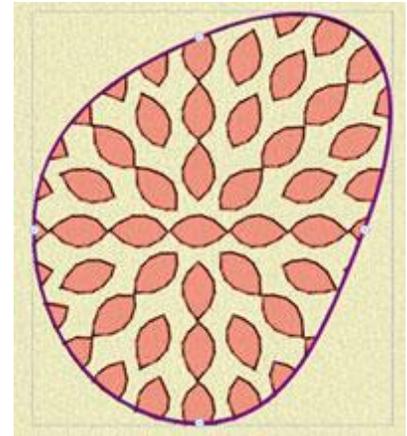
After enabling **Edit outline** option we can Edit the outline of the object as any normal other object.



Edit outline enabled



Move any node

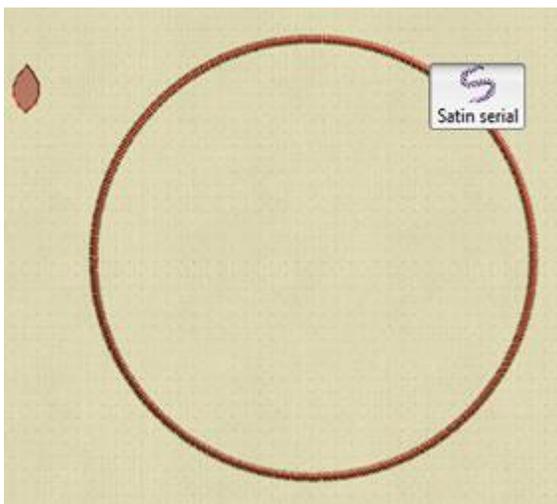


The shape of the object has changed

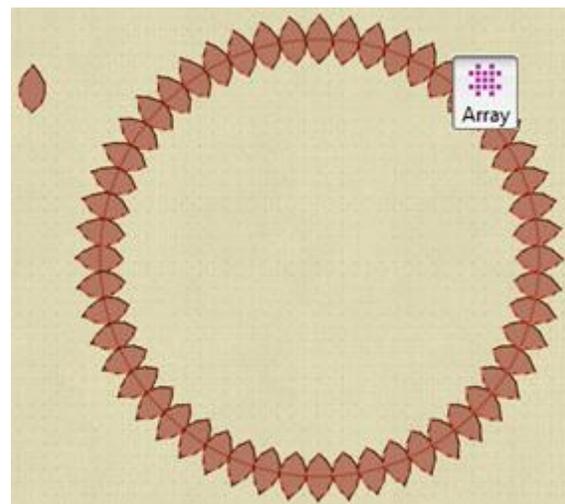
More information about **Editing Nodes** is provided into a separate chapter.

Array on Object Outline

Array can also be used for object's outline. We can select an object to be added on the outline of any object. When this option is applied the selected **design part** or **Clipart** item is added on the outline of the selected object. For example in the following figure you can see the initial **Satin serial** object on the left part, and on the right part the initial object after we have applied **Array outline** using this small leaf.



Satin Serial outline



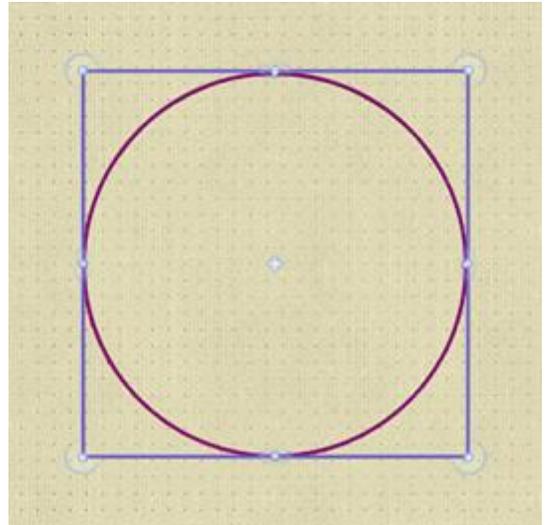
Array outline with this leaf

In this section we will demonstrate how to apply **Array** on the outline of any object. In order to apply the **array**, you must first select one or more objects to be used as copy object. You can use as copy object, **any part of your design** or any item from the **Clipart library**. There are 2 methods to apply the **array fill**, in the following example we will present in detail the available methods.

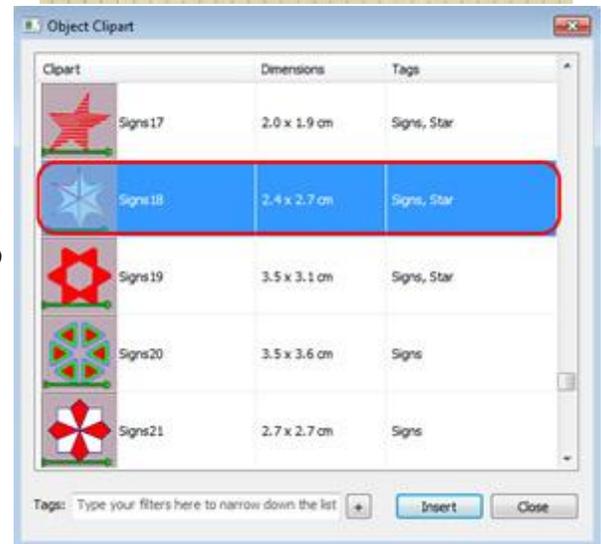
Method 1. Use any item from clipart library

Select any object that you to apply **Array** on.

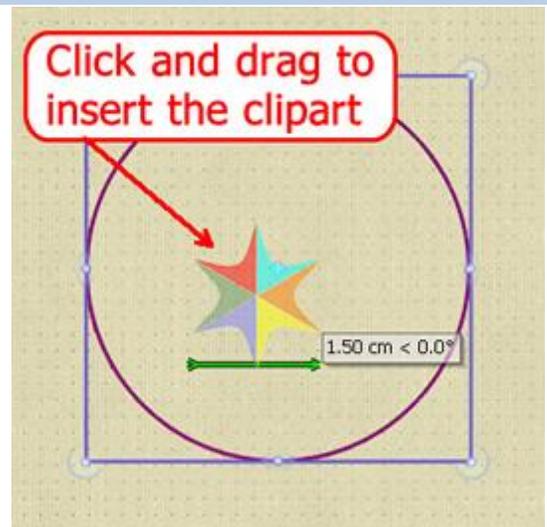
Press **Array**  icon.



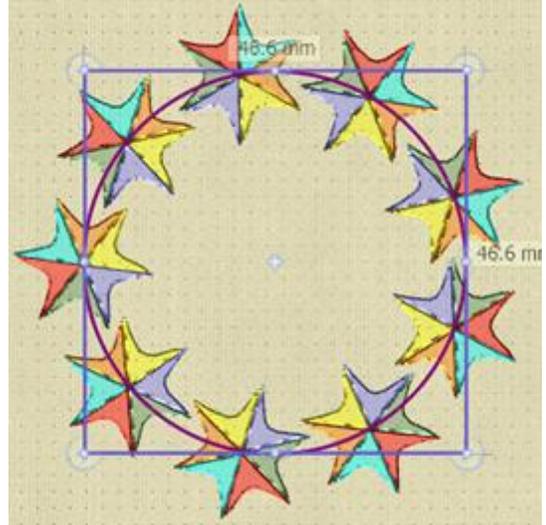
The Clipart dialog appears to select any clipart item to be placed on the outline of the selected object.



Select a Clipart item and insert it like adding a clipart.



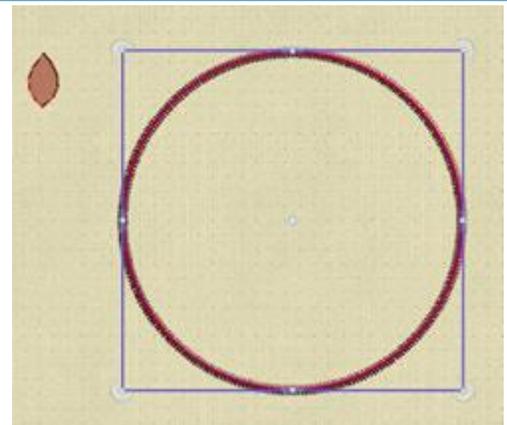
By releasing the mouse the selected **clipart item** will be applied as array. It is not added on the design area only in the selected **object's outline**.



We can always select the object with the array outline and by pressing again **Array icon** , the **Clipart library** dialog will appear again to select another clipart item. The second method to apply the Array on outline is described below. In this method we are not using a **Clipart** item as fill object, but we are using a part of the design.

Method 2. Use a part of the design as outline item.

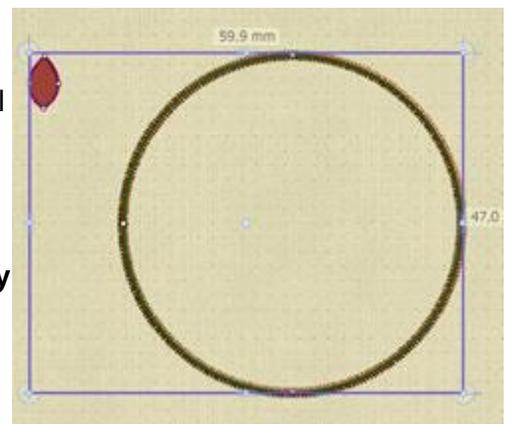
Select an object.



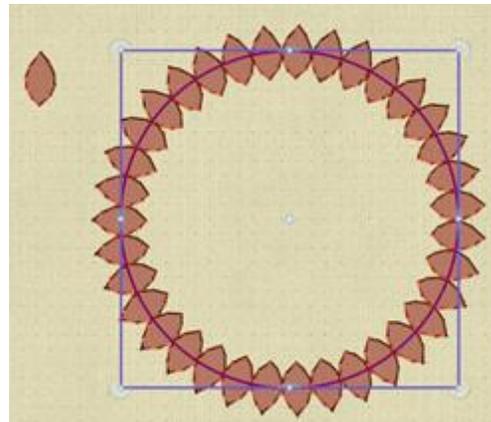
Use **Ctrl** key in order to add one or more objects to the selection. This object will be used as copy object.

The **copy object** must be smaller than the object that the array will be applied.

Press **Array**  icon or **right click** on the selection and from appearing menu use **Create Outline from Shapes** option of **Array** submenu.



The outline of the larger object is automatically filled with the smaller object.



When an outline **Array** is applied we can replace the copy object at any time in various ways.

1. Press **Array icon** to use a **clipart** item
2. Select a design object together with the already filled object and click on **array** icon to change the existing outline and use the newly selected object. You can also right click on the filled object and then use **Create outline from shapes** option.



The available options that you can adjust in order to customize the way that the array is applied are described into the following section. Outlines array does not have control points in node editor. We can only edit the **outline** (shape) of the object but this procedure will be described into a separate section.

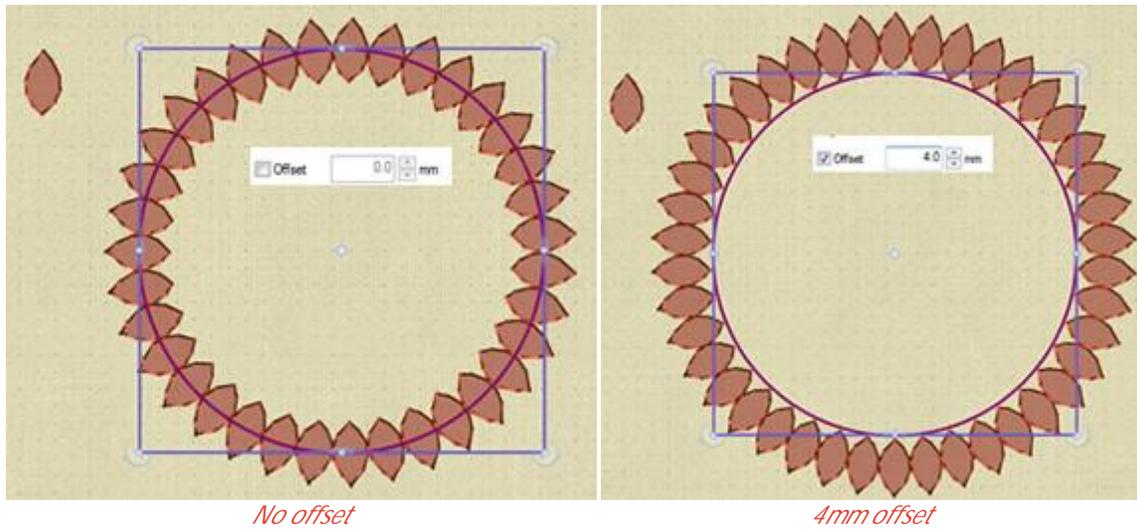
Outline array options

Offset



The offset parameter specifies the distance between the outline and the center of the repeated object. The offset parameter can also accept negative values from -15 to + 15 mm.

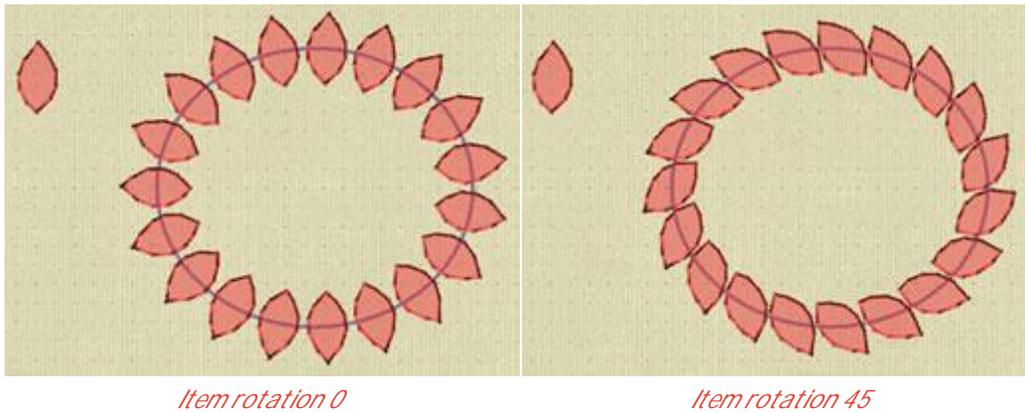
You can activate the **Offset** option by checking the checkbox next to it. In the numeric field you can enter the value of offset you want, with lowest value of -15mm and highest value 15mm. Also, you can increase or decrease the offset value by clicking on the arrows next to the value or by clicking on the value and rotating the mouse wheel, if there is one. The value that you are inserting defines the exact distance you want the outline to have from its initial position. The default offset value is zero and can be changed only from you. Any changes you are making on the offset value it is previewed on the design.



Item rotation

Item rotation °

This parameter rotates the base object. Specify the rotation of the object in degrees and all the copies of the array are rotated like if the initial object was rotated in these degrees.

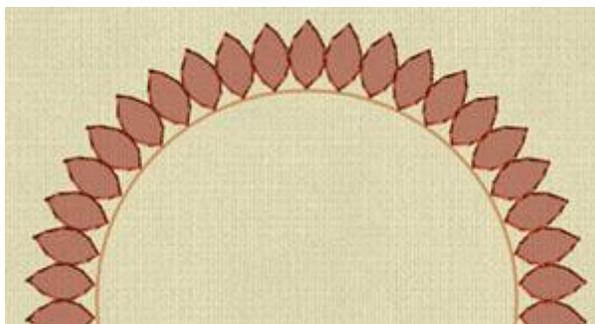
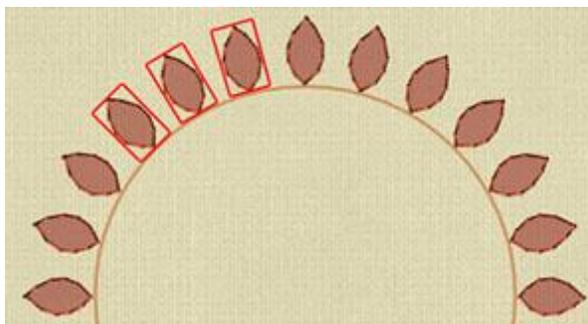


Spacing

Spacing: mm

The **Spacing** parameter specifies the distance between the rectangles which can include each repeated object. The Spacing in this case may not be precise, since the copies letter should be evenly distributed and the software also places repeated objects on sharp corners (1-135 degrees). Using this option you can define the distance between the copies of the array. The distance is defined in Millimeters. In the numeric field you can type the distance in "mm". You can also adjust **Spacing** by clicking the arrows next to the value

or by clicking on the value and rotating the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field.

*No spacing**2mm Spacing*

Array and Cloned objects

When using tools, like **Array fill**, that create repetitive patterns it is very useful to change any part of the pattern and improve - change the whole pattern. Using the control handles of the array we can change the placement of the array copies but using Array together with Cloned objects can help us create amazing patterns.

We will provide 2 simple examples on how this toll combination works.

- **Array on Object fill**
- **Array on Object Outline**

Edit Clones (Fill)

One of the powerful combinations of **Array fill** is that it can be used together with Cloned objects in order to create amazing repetitive fill or Outline patterns. In this section we will provide a simple example on how combine these tools.

This is the **initial object** that we will use to fill a rectangular area.

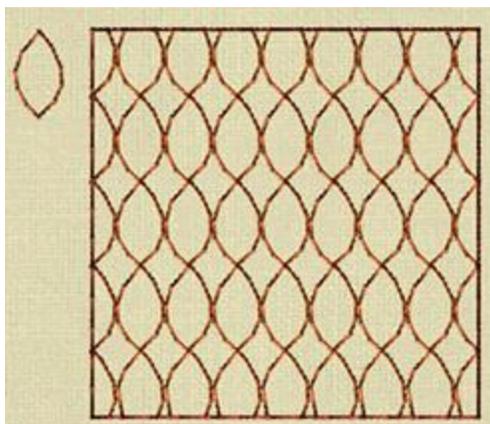


Make sure that **Add new objects as clones** option of **Edit** menu is enabled.

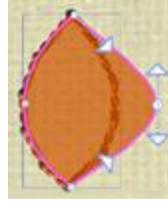


Apply **Array fill** on this rectangular area.

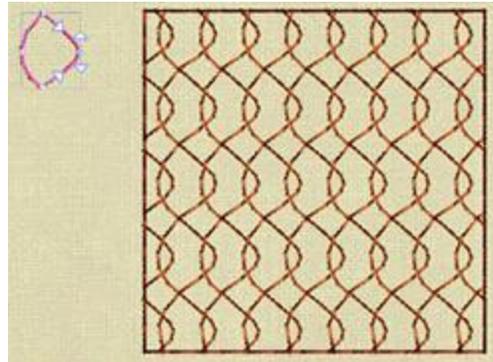
For the purpose of this example we are using **Rectangle** fill, the procedure is the same in any fill pattern.



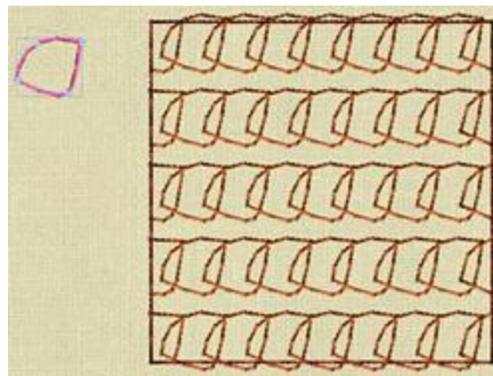
Using **Node editor**, edit the shape of the initial object.



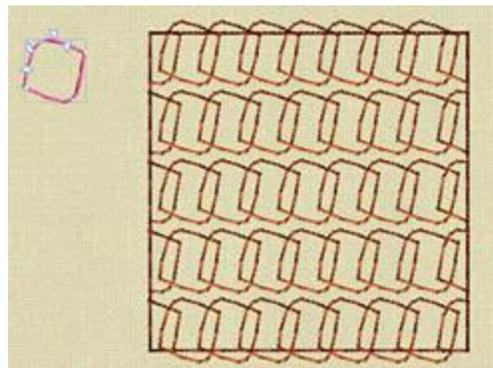
Any shape change on the initial object is automatically applied on the array fill.



Using **select polyline** option you can rotate the whole object and change the pattern completely.



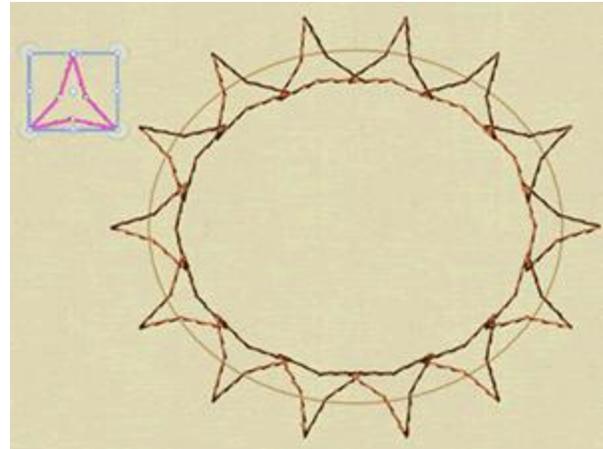
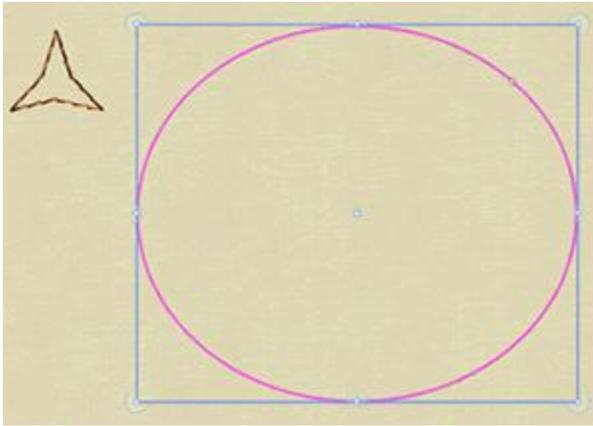
Make as many transformations you like in order to create any fill pattern you like.



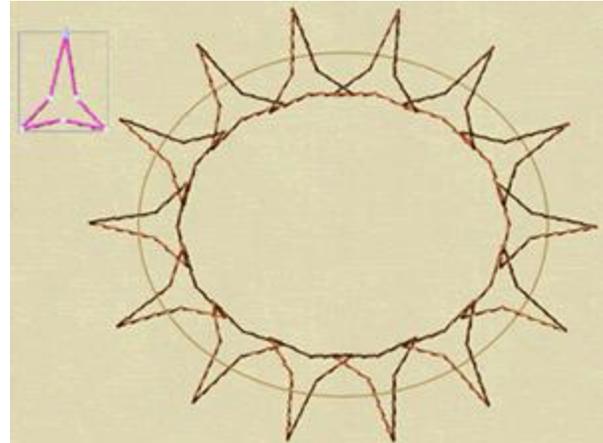
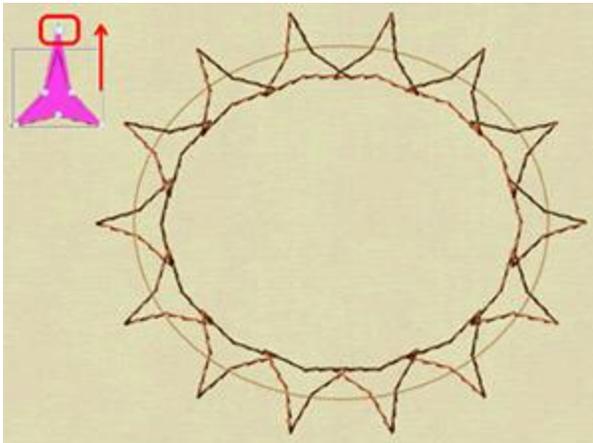
Edit clones (Outline)

As we presented in previous section using **Add new objects as clones** option together with **Array fill** we can create amazing fill effects - patterns. In the same way we can use Cloned object for Outline array.

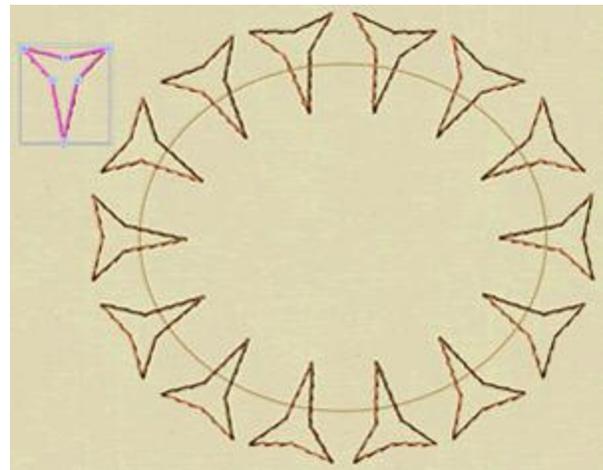
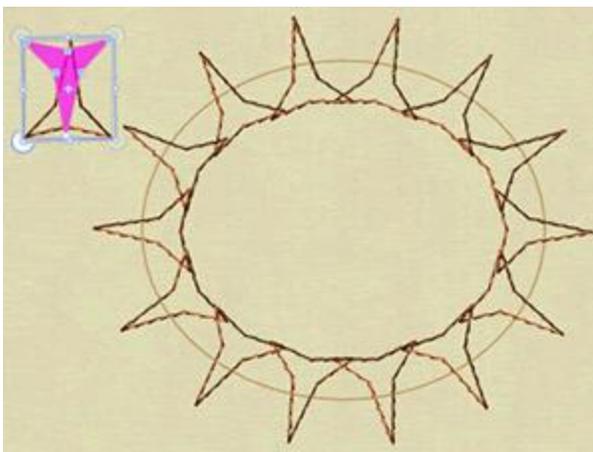
Starting with this shape like triangle we will place it on the outline of the circle. See how the shape has been applied.



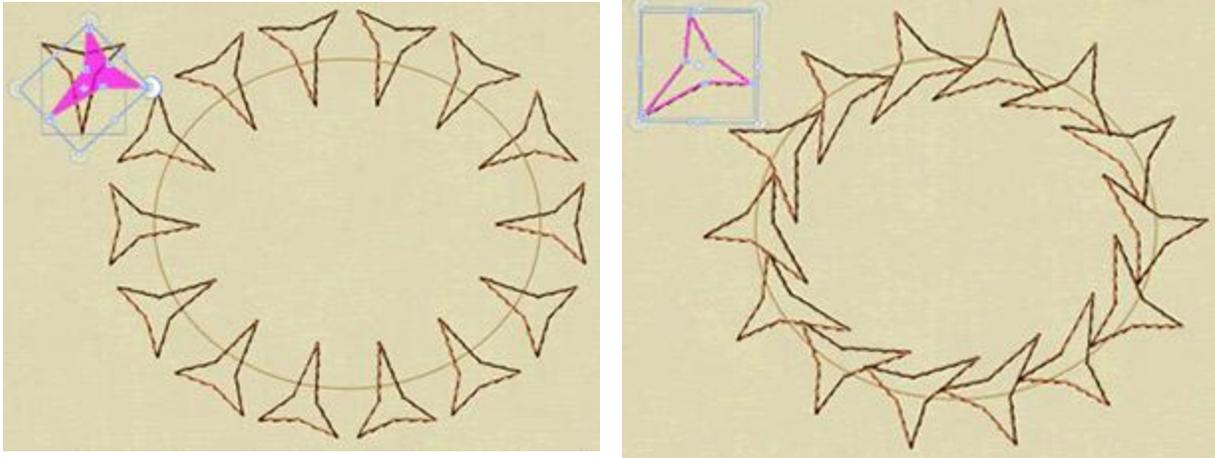
We will move this **upper node** of the triangle in order to change the shape. The shape outline array object is updated at once.



Using **select polyline** option we will rotate the whole object 180 degrees. The placement pattern changes completely.



Finally, using **Select polyline** once more will rotate the object again in order to create the outline pattern of the figure below.

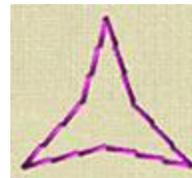


You can see how easily we have started from this initial applied array and with a few clicks we have created a whole new outline pattern.

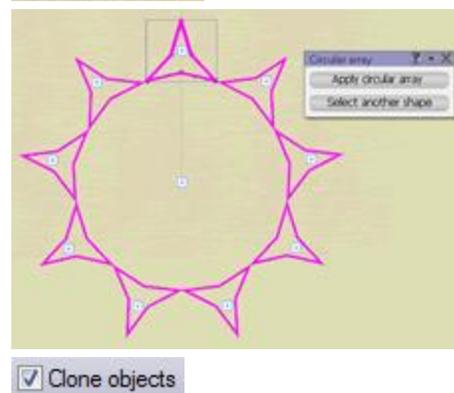
Nested array

In this section we will present a way to use **Circular array** tool together with **Array on objects fill** and **Cloned objects**. The combination of these 3 tools can be used in order to create amazing fill patterns. In the same way we can use **Rectangular** or **Circular** array with **Array on Fill** or on **Outline** and **Clone objects** in any combination between them. Any combination of them can be used in order to create different types of patterns.

Starting from this simple shape.



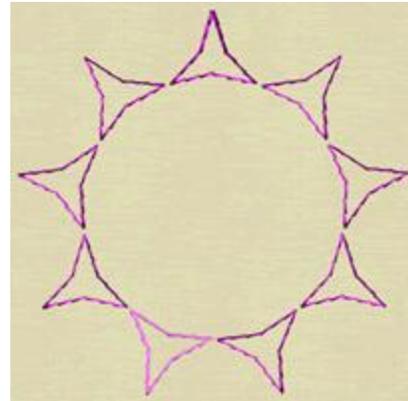
Use **Circular array** tool and customize the array in any way you like.



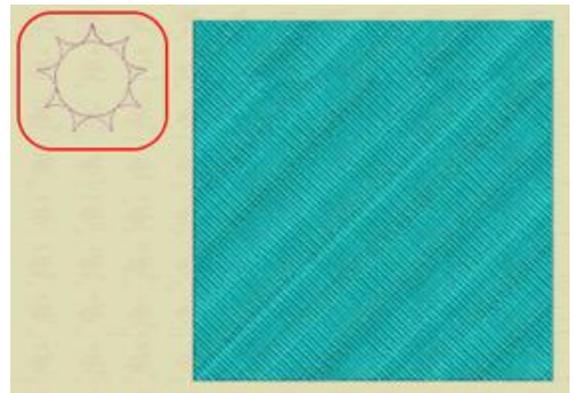
Before applying the array make sure that **Clone objects** option is enabled.

Using **Circular array** tool we have created this set of objects.
We will now use the created set of objects in order to fill an area using **Array on Object fill**.

Each of the produced objects is handled separately. We can group them in order to be able to work with them easier.

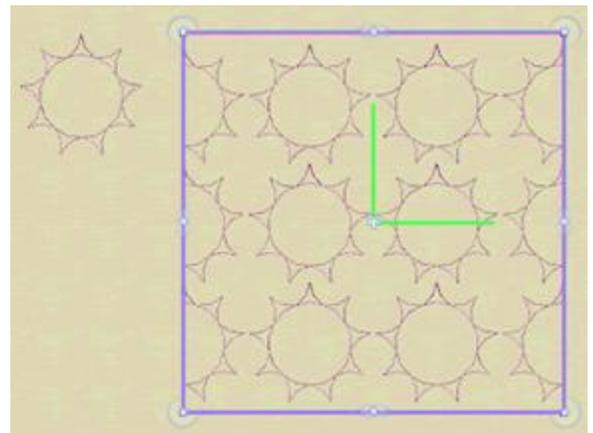


We will use this circular set of objects, in order to create a fill on the rectangular object.

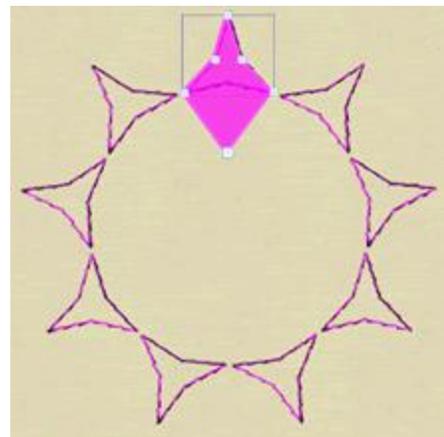


Select both objects and Click on **Array** icon of **Fill** tab of **object properties** toolbar.

The rectangular area is filled with the initial set of objects in a patterned way. In our case we have used rectangular fill pattern.

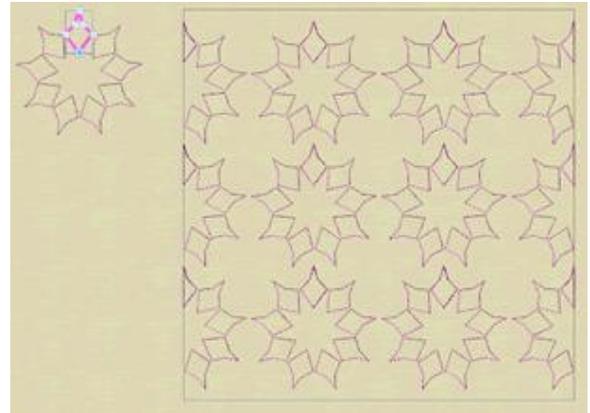


Use **Node editor** to edit the shape of any of the copies.

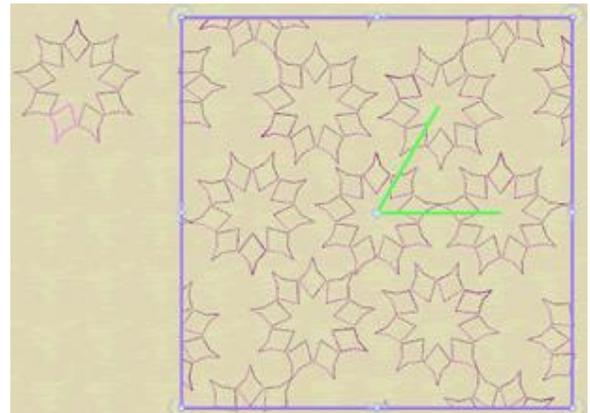


The shape of all the objects has changed to reflect the shape change.

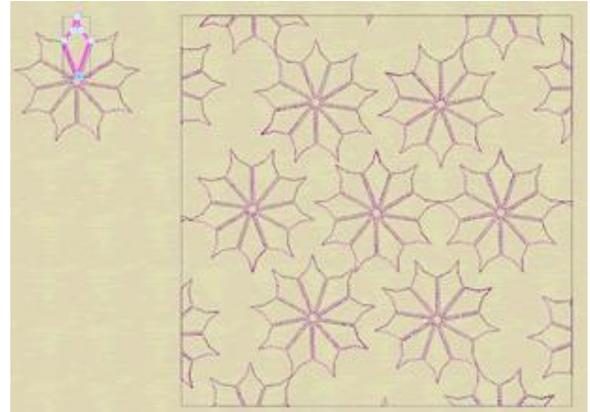
Just like that you can see that the pattern has changed completely.



Change the pattern fill From **Rectangle** to **Circular**.



Change the shape a little more and the pattern has completely changed.

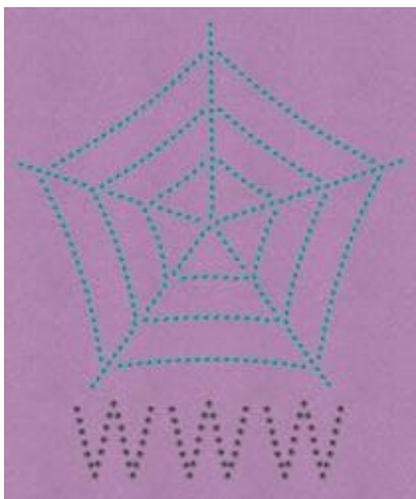


Chapter XIV

Crystals - Creating designs with Crystals

Creative DRAWings gives you the ability to add **crystals/rhinestones/strass** in your designs and make them look beautiful. It includes various methods to add crystals in the designs. You can add them crystal by crystal, fill shapes with crystals, create line art designs with crystals and fill outline shapes with crystals. Each method gives you a lot of options that can help produce the result you want.

In order to be able to use the Embroidery tools of the software you will have to enable the **Crystals Technique** from the **Techniques**  option.



Design with crystals

The various methods that you can use to create crystal design will be analysed in this section.

The material you need in order to produce cutting templates are:

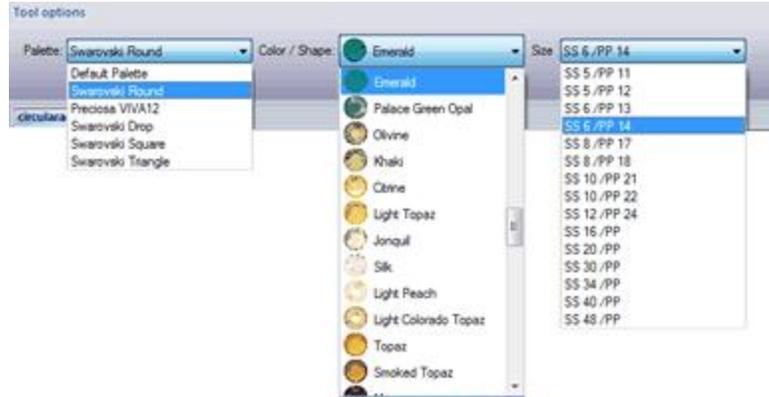
- Template material
- Backing board for a firm surface to mount the template
- A Brush to position the rhinestones
- Transfer tape to move the crystals/Rhinestones to your project
- and of course Rhinestones

Insert Crystal shapes

With the **Insert crystal shapes**  designing tool you can insert crystals anywhere in the design by simply selecting the tool and left clicking once in the position you want each crystal to be added. If you want to

end the insertion of crystals you have to right click once or to select a different tool from the **Tools toolbar** like the **Rectangle selection** tool.

When you select the **Insert crystal shapes** designing tool, relevant options appear on the **Tools options** toolbar. These options allow you to select the **Palette** of the crystals you want to add crystals from, specify the **Color/Shape** you want to use and the **Size** of the crystal you want to add.

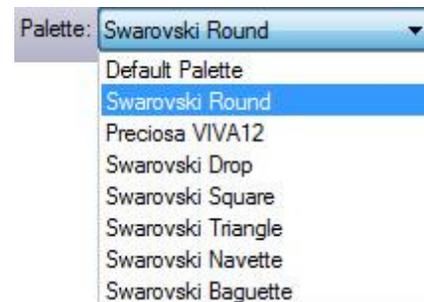


crystal options

Make the adjustment you want on the Tool options toolbar and you can start inserting single crystals on the design by simply clicking on the position you want to add them. You can change the **Palette**, the **Color/Shape** and the **Size** after the crystal insertion from the **Object Properties** toolbar. Select the crystal you want and you will be able change its properties from the **Object Properties** toolbar. Also, you can make multiple selection of crystals and make changes to all of them at the same time.

Create a design with crystals

1. Select the **Insert crystal shapes**  designing tool from **Tools toolbar**.
2. From the **Tool options** toolbar select the **Palette** you want to use from the respective drop down menu.



select palette

3. Then from the **Color/Shape** drop down menu select the crystal/rhinestone you want to use by clicking on its name.



Select crystal Color/Shape

- From the third drop down menu you can select the **Size** of the crystal you want to add.



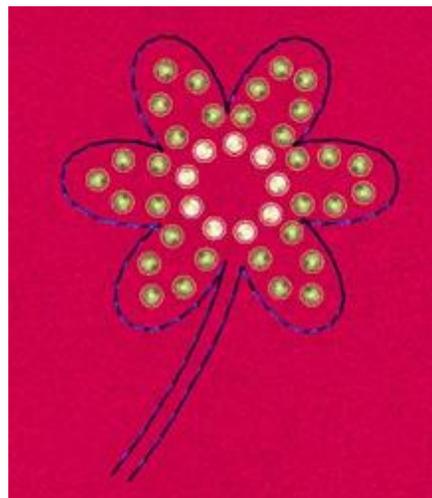
crystal size

The actual size of the crystals varies between the rhinestone manufacturers and this is the reason why there are two values with the same crystal size. You have to select the correct size based on the dimensions of the crystals you have purchased. Each crystal manufacturer states the actual crystal size on the packaging. the following table will help you select the correct size for the crystals you have purchased.

SS	PP	mm	inch
5	11	1.7-1.8	0.071
5	12	1.8-1.9	0.075
6	13	1.9-2.0	0.079
6	14	2.0-2.1	0.083
8	17	2.3-2.4	0.094
8	18	2.4-2.5	0.098
10	21	2.7-2.8	0.110
10	22	2.8-2.9	0.114
12	24	3.0-3.2	0.126
16		3.8-4.0	0.157
20		4.6-4.8	0.189
30		6.3-6.5	0.256
34		7.1-7.3	0.286
40		8.4-8.7	0.341
48		10.9-11.3	0.445

Crystal size table

- Now you can start inserting crystals in the design by simply left clicking on the position you want to be added.
- With some clicks you can create easily a design like this one.

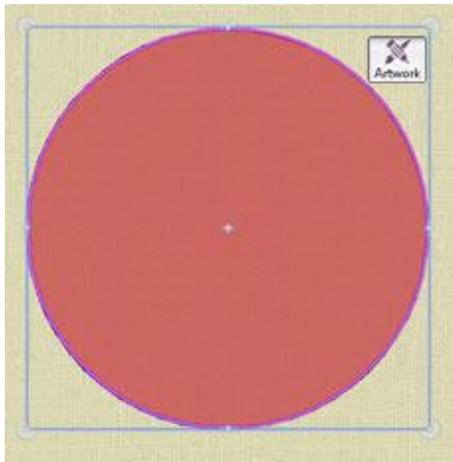


design with single crystals

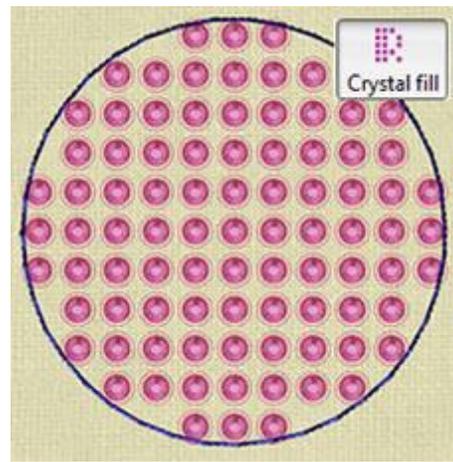
Crystal Fill

Creative DRAWings gives you the ability to fill objects with crystals with a single click. You can load existing designs or create your own and produce the results you want.

The **Crystal fill** is a new fill type. When it is applied, the object is filled with **Crystals**, in a patterned way. For example, the circle of the following figure, in the beginning, it is filled with step. Then by using **Crystal fill** it is filled with Crystals in a patterned way (Rectangular).



Applique fill

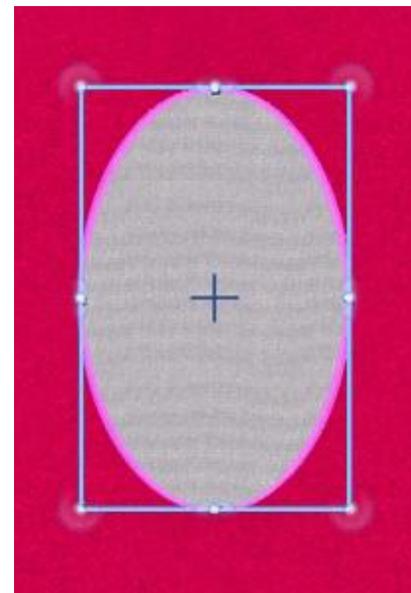


Crystal fill

When applying **Crystal fill** there are various options that you can adjust in order to customize the way that the **Crystals** will be applied.

Create a design with Crystal fill

1. Select the **Create ellipse**  tool and draw an ellipse by clicking and dragging on the working area.



Create ellipse

2. Select the **Create outline shape**  tool and draw a curve line to make it look as a string attached on a balloon.



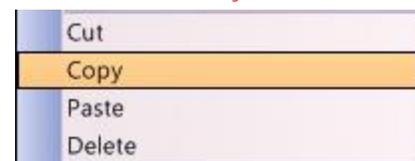
balloon string

3. Select the ellipse and click on **Crystal fill**  icon from **Object properties** toolbar.



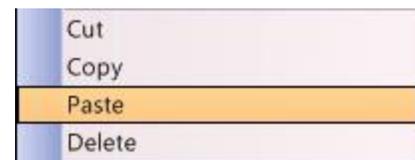
Balloon Crystal fill

4. Select the entire design by using the rectangle selection tool, and from the right click menu select **Copy** option.



Right click and select Copy

5. Then right click once more and from the pop up menu select **Paste** option.



Right click and select Paste

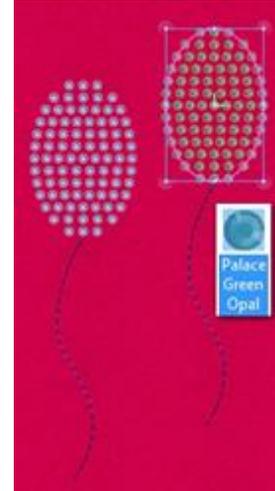
6. The design will be pasted exactly over the original one. While it is selected click and drag it in a new position.

7. The pasted designs are always coming grouped. Right click on the pasted design and select **Ungroup** option.



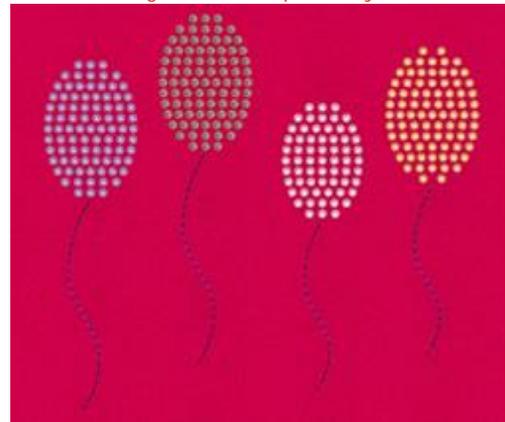
Right click and select Ungroup

8. Select the ellipse with the crystals and select **Palace green opal** crystal from the **Color/Shape** list.



Change Color/shape of crystals

9. You can repeat steps 4-8 as many times you want and produce great balloon design with crystals for your kid.



Beautiful balloon design

10. Optionally you can resize the balloon design and have it various sizes.

Create a design with crystals

Every crystal fill object that you are creating can be adjusted with the options that appear in the **Object properties** toolbar. You can change the fill pattern, the spacing between the crystals, the crystal size, the crystal color/shape and other options that will be explained through examples in this section.

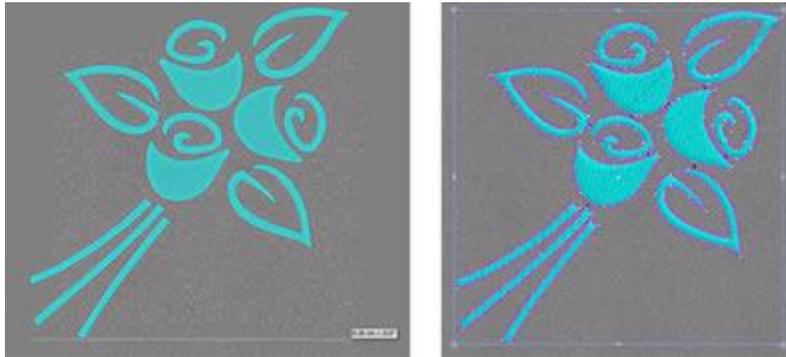
We will analyze the available options through the creation process of a design with crystals. We will use a symbol and transform it to a beautiful design.

1. From **Tools** menu select **Insert symbol** option.
2. From the **Font** list select **Webdings** and then design with the bouquet of flowers.



Insert symbol dialog

3. Insert the bouquet of flowers in the working area by selecting **Insert** and then click and dragging to specify the design's size.



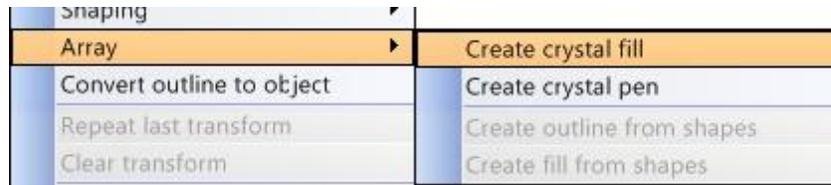
bouquet symbol design

4. Remove the outline from the design by setting the pen color to empty  and from the right click menu select **Break apart** option.



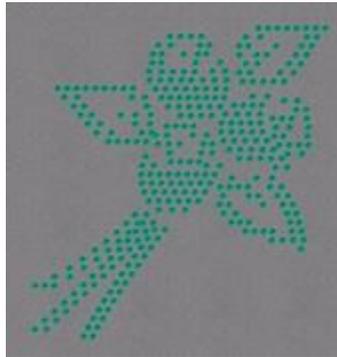
Break apart the design

5. Select the entire design and click on the **Crystal fill**  icon from the **Object properties** toolbar or from the right click menu expand **Array** option and then select **Create crystal fill**.



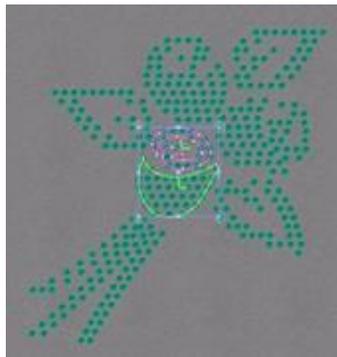
Break apart the design

6. The design will be filled with crystals automatically. with a first look the result is not attractive but Creative DRAWings gives you all the needed to make it so.



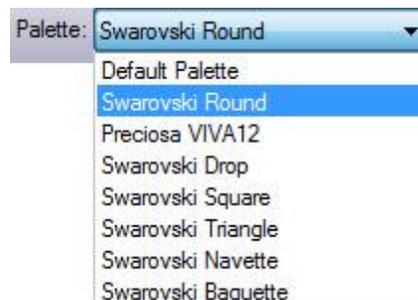
bouquet filled with crystals

7. First we will change the **Color/Shape** of the crystals that are placed on the flowers. Select a bud by holding the **Shift** key pressed and clicking first on the bottom object and then on the top object.



select bud

8. From the **Object properties** toolbar select the **Palette** of crystals you are using. Currently there are three palettes available. The **Default Palette**, the **Swarovski Round** and the **Preciosa VIVA12**.



select palette

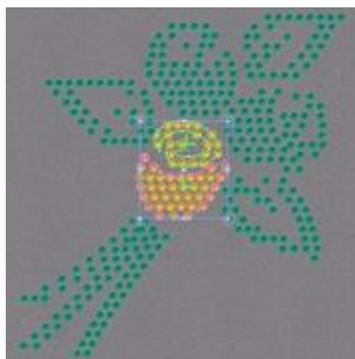
Each crystals' creator palette contains only the crystals that are included in the specific collection. After selecting, for example **Swarovski Round** palette the crystals that includes appear on the **Color/Shape** list from where you can select any crystal by simply clicking on it.



Color/Shape

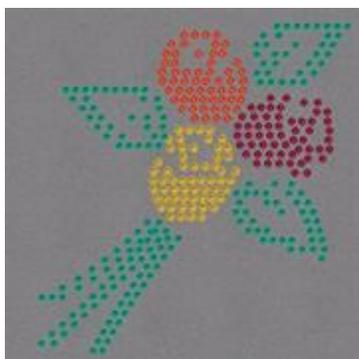
If you do not have any of the available palettes your only alternative is to use the **Default palette**. The **Default palette** contains only one crystal. You can use this crystal to fill all your crystal designs and change its color by simply changing the color of the shape where crystal was placed. Therefore with only one crystal you can apply any color you like by changing the color of the shape.

In our example with will select the Swarovski Round palette and apply the **Topaz** crystal on the selected bud.



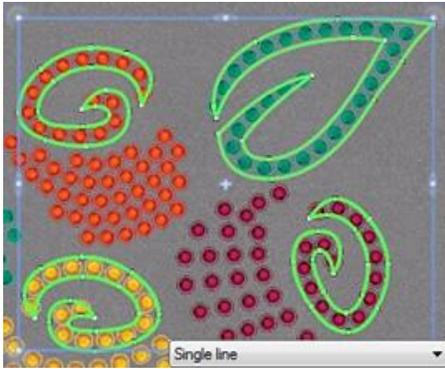
apply Topaz color/shape

9. We will do the same for the rest buds by assigning different Crystal **Colors/Shapes**.

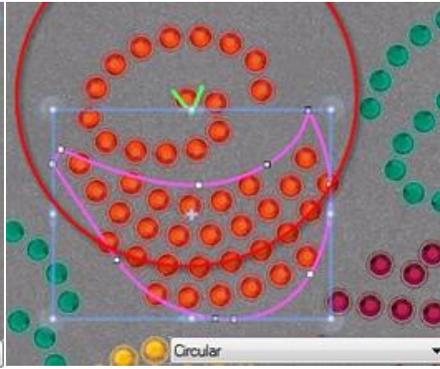


change colors/shapes to crystals

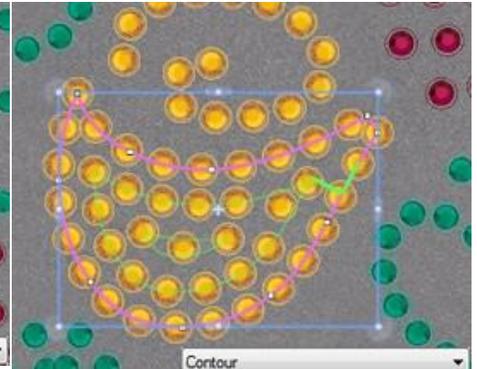
10. The next thing we have to do to improve our design is to adjust the **Fill** pattern of each shape in the design. This is important because not all **Fill** patterns fit on all shapes. Therefore based on the shape and the look we want to give to our design, we set a different fill pattern. By default the fill pattern to all shapes is set to **Shape fit**. To change that you have to select the object you want and from the **Fill** pattern drop down menu select a different one.



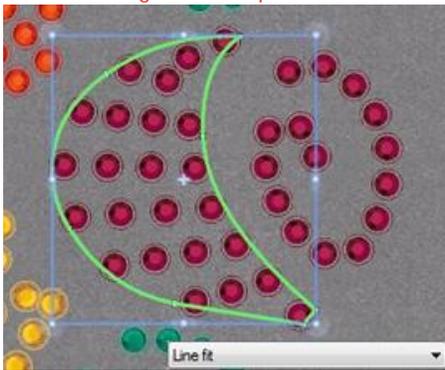
Single line Fill pattern



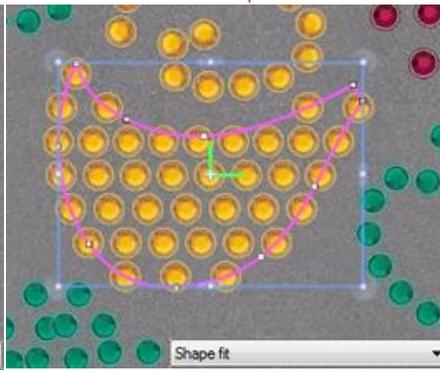
Circular Fill pattern



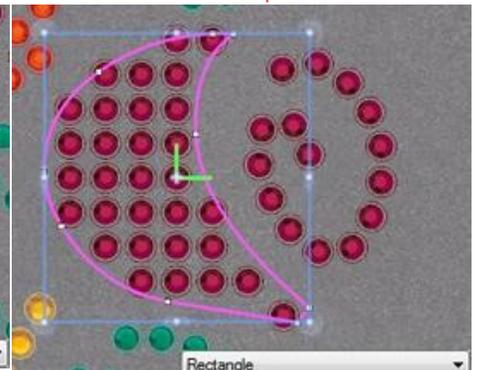
Contour Fill pattern



line fit Fill pattern

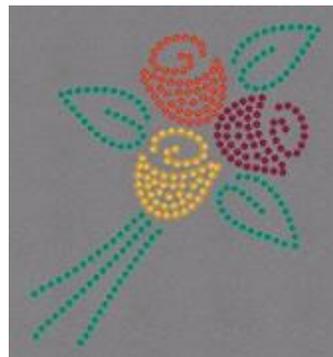


Shape fit Fill pattern

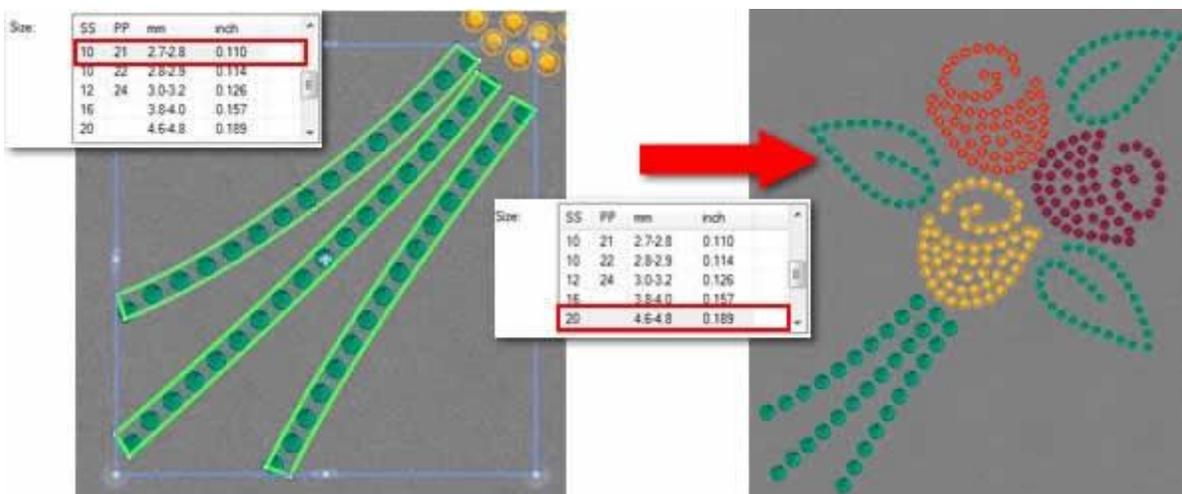


Rectangle Fill pattern

Each Crystal **Fill** pattern has different parameters that you can adjust to produce the results you want. We explain each Crystal **Fill** pattern and its options later in this chapter. In this example we will set all buds to **Contour Fill** pattern and the rest objects to **Single line Fill** pattern.

*Contour & Single line fill pattern*

11. If you want you can edit each **Fill** pattern by adjusting the vertical (**V.Spacing**) or horizontal (**H.Spacing**) spacing of crystals, the **Start angle** and the **Slant angle** (Rectangle fill pattern), the expansion **Steps** (Circular fill pattern) and add offset to increase or decrease the distance of crystals from the shape's outline.
12. One final adjustment that we will do to our design is to change the **Size** of crystals. Select the three stem objects and set the crystal size to **SS20** from the respective option of the Object properties toolbar.



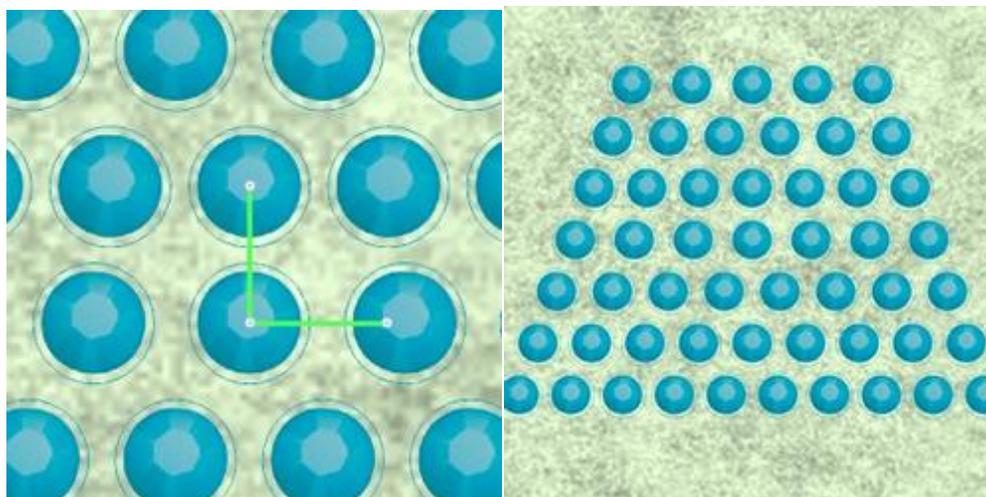
Change crystal size

The sizes list varies based on the crystal **Palette** you have selected. The sizes that are available on the list are those that the specific palette supports. Only the **Default palette** contains all crystal sizes.

13. The design is ready. Within some simple steps we managed to create a beautiful design that can be created from everyone easily.
14. The only thing that remains is to export the design to the cutting machine and start creating the holes where the crystals will be placed on.

Edit Crystal fill object's outline

One very powerful feature of Creative DRAWings is that can **edit the shape** of any created object at any time using **Node editor**. For the objects that have **Crystal Fill applied** by default we can't edit their outline. Only **single line** and **Line fit Fill** patterns retain the ability to edit the outline directly. As we have already mentioned when using **Node editing**  mode for these object we can edit the fill pattern using the pattern handles.



Pattern Handles

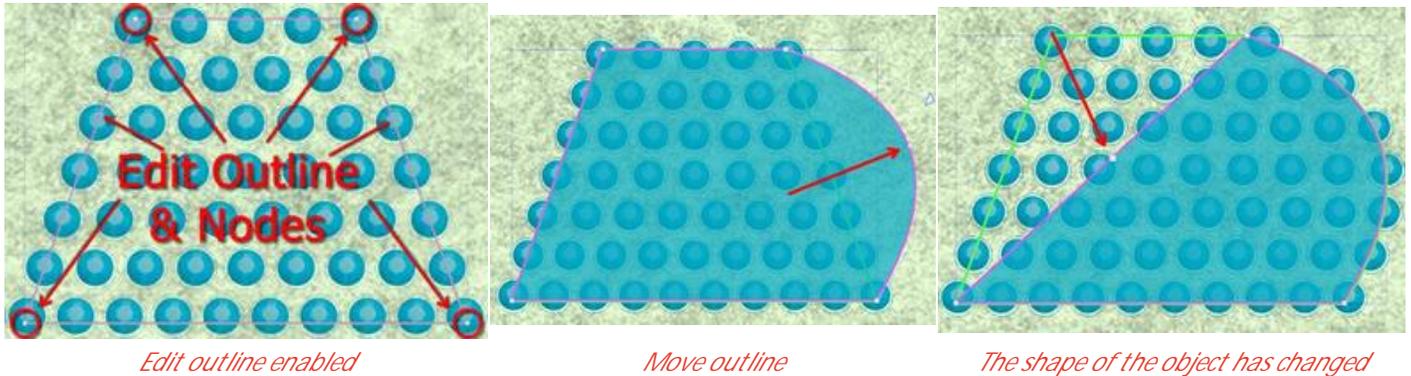
Crystals shape fit

In case that we want to edit the shape-outline of the crystal object when using node editor as for any normal object we must enable Edit outline option of **Tools options** toolbar.

Edit outline

Edit the outline of object's with Array fill.

After enabling **Edit outline** option we can Edit the outline of the object as any other object.

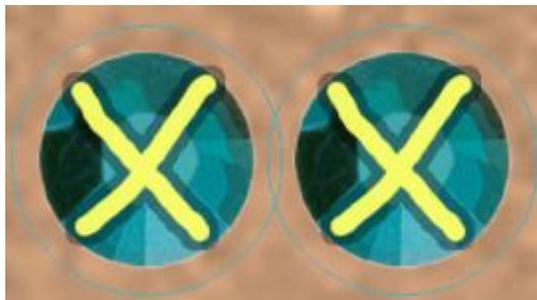


More information about **Editing Nodes** is provided into a separate chapter.

Overlapping Crystals

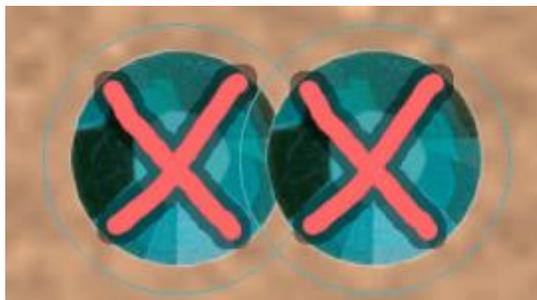
This option is very useful when you are creating designs with crystals. You can enable this option from **View** menu by selecting **Overlapping crystals**. By enabling this view all crystals that overlapping will be marked with an 'X' in order to be easily recognizable.

If the overlapping between the crystals is limited on the outline of the crystals the 'X' will be yellow.



Crystals outline overlapping

If the overlapping between the crystals is on the actual crystals the 'X' will be red.



Actual crystals overlapping

Every time you finish a design with crystals it is a good practice to enable the **Overlapping crystals** option in order to check if there is any overlapping in your crystals that you have not noticed and needs to be fixed.

Notice: It is advisable not to leave the Overlapping Crystals always on because it might slow down your PC.

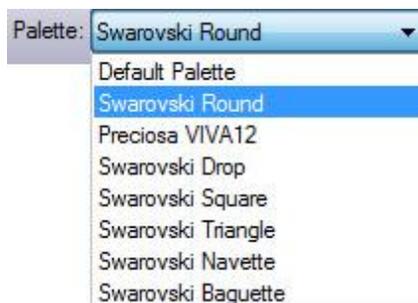
Crystal fill - Common parameters

There are **Crystal fill** parameters in the **Object properties** toolbar which are common for all types of fill areas. Those are:

- **Palette**
- **Size**
- **Color / Shape**
- **Offset**
- **Item rotation**
- **Separate to Crystals**

Palette

From the **Object properties** toolbar select the **Palette** of crystals you are using. Currently there are three palettes available. The **Default Palette**, the **Swarovski Round** the **Preciosa VIVA12**, the **Swarovski Drop**, the **Swarovski Square** and the **Swarovski Triangle** .



select palette

Each crystals' creator palette contains only the crystals that are included in the specific collection. After selecting, for example **Swarovski Round** palette the crystals that includes appear on the **Color/Shape** list from where you can select any crystal by simply clicking on it.



Color/Shape

If you do not have any of the available palettes your only alternative is to use the **Default palette**. The **Default palette** contains only one crystal. You can use this crystal to fill all your crystal designs and change its color by simply changing the color of the shape where the crystal was placed. Therefore with only one crystal you can apply any color you like by changing the color of the shape.

Color-Shape

The available crystal colors/shapes depend on the **Palette** you have selected. Currently there are two palettes available with rounded crystals Swarovski and Preciosa.



Color/shape Swarovski

Color/shape Preciosa

The Swarovski palette has 85 crystals and the Preciosa 59. You can apply any one of them by simply selecting it. Also the **Color / Shape** list has special selection abilities that you can view in the **Make Selections** chapter.

There are three more Swarovski palettes with different shapes: **Triangle**, **Square** and **Drop**. You can select any of them and use them in your designs.



Different crystal shapes

If you do not have any of the available palettes your only alternative is to use the **Default palette**. You can use this crystal to fill all your crystal designs and change its color by simply changing the color of the shape where crystal was placed. Therefore with only one crystal you can apply any color you like by changing the color of the shape.

Size

The available crystal sizes depends on the palette you have selected. For example:

SS	PP	mm	inch
5	11	1.7-1.8	0.071
5	12	1.8-1.9	0.075
6	13	1.9-2.0	0.079
6	14	2.0-2.1	0.083
8	17	2.3-2.4	0.094
8	18	2.4-2.5	0.098
10	21	2.7-2.8	0.110
10	22	2.8-2.9	0.114
12	24	3.0-3.2	0.126
16		3.8-4.0	0.157
20		4.6-4.8	0.189
30		6.3-6.5	0.256
34		7.1-7.3	0.286
40		8.4-8.7	0.341
48		10.9-11.3	0.445

SS	PP	mm	inch
3	7	1.35-1.4	0.055
3	8	1.4-1.5	0.059
4	9	1.5-1.6	0.063
4	10	1.6-1.7	0.067
5	11	1.7-1.8	0.071
5	12	1.8-1.9	0.075
6		1.9-2.1	0.083
6	13	1.9-2.0	0.079
6	14	2.0-2.1	0.083
7	15	2.1-2.2	0.087
7	16	2.2-2.3	0.091
8	17	2.3-2.4	0.094
8	18	2.4-2.5	0.098
9	19	2.5-2.6	0.102
9	20	2.6-2.7	0.106
10		2.7-2.9	0.114
10	21	2.7-2.8	0.110
10	22	2.8-2.9	0.114
11	23	2.9-3.0	0.118
12	24	3.0-3.2	0.126
13	25	3.2-3.3	0.129
13	26	3.3-3.4	0.133
14	27	3.4-3.5	0.137
14	28	3.5-3.6	0.141
15	29	3.6-3.7	0.145
15	30	3.7-3.8	0.149
16		3.8-4.0	0.157
18		4.2-4.4	0.173
20		4.6-4.8	0.189
30		6.3-6.5	0.256
34		7.1-7.3	0.286
40		8.4-8.7	0.341
48		10.9-11.3	0.445

Swarovski has 15 different sizes

SS	PP	mm	inch
6		1.9-2.1	0.083
10		2.7-2.9	0.114
16		3.8-4.0	0.157
20		4.6-4.8	0.189

Preciosa has 4 different sizes

Default Palette 33 different sizes

The Swarovski Round palette has 15 different crystal sizes, the Preciosa has 4 and the Default palette includes all possible sizes that can be cut from the cutting machines, 33 sizes. The Size selection table includes different values in order to be easier from the user to select the one that corresponds to the crystal/rhinestone he wants to use.

- **SS:** SS stands for **Stone Size**. This name is used for flat back and larger pointed back stones
- **PP:** PP stands for **Pearl Plate**. This name is used for stones and it comes from pearl sizing techniques. The size approximation is $1/2 \text{ PP} = \text{SS}$
- **mm:** This value shows the approximate size range of the crystals in millimeters.
- **inch:** This value shows the exact size of the crystals in inches.

Usually the crystal packages mention the actual size of each crystal. The size is very important for the software because all the crystal hole sizes are calculated based on this value. If for example you select a larger size from the actual size of the crystal you want to use, the holes will be larger and the pattern after placing the crystals might not be correct. If you do the opposite the crystals will not fit in the holes you have cut.

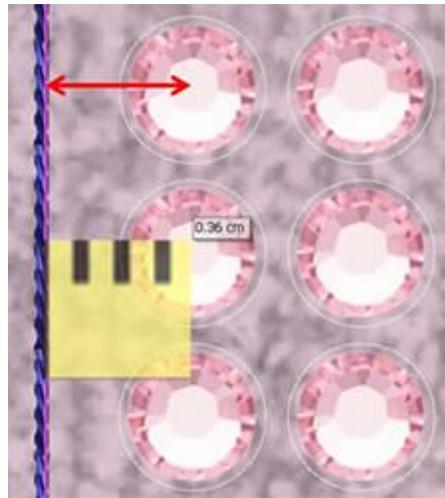
The default crystal size of the software is SS10 or PP21- PP22.

Offset

The offset parameter specifies the minimum distance between the outline and the center of the Crystal.



You can activate the **Offset** option by checking the checkbox next to it. In the numeric field you can enter the value of offset you want, with lowest value of -15mm and highest value 15mm. Also, you can increase or decrease the offset value by clicking on the arrows next to the value or by clicking on the value and rotating the mouse wheel, if there is one. The value that you are inserting defines the exact distance you want the outline to have from its initial position. The default offset value is zero and can be changed only from you. Any changes you are making on the offset value it is previewed on the design.



Offset distance

The offset distance value starts from the outline until the center of the crystal. Therefore, every time you want to set offset you have to keep in mind the way the software calculates it.

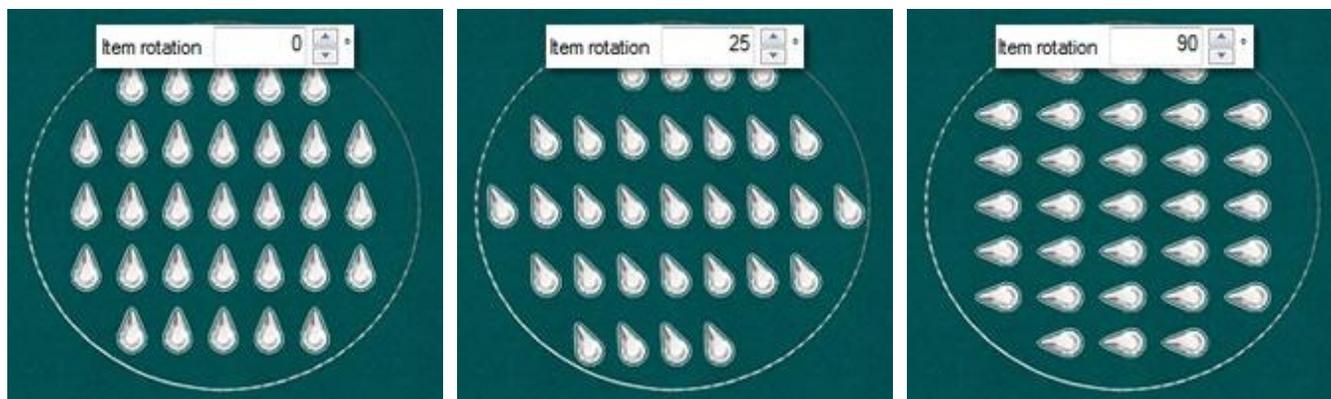
Item rotation

With the **Item rotation** you have the ability to rotate the crystals you have inserted in the shape.



Item rotation

You can increase or decrease the **Item rotation** value by clicking on the arrows next to the value or by clicking on the value and rotating the mouse wheel. The value that you are inserting defines the exact rotation angle you want the crystals to have from their initial position. The default **Item rotation** value is zero and can be changed only from you. Any changes you are making on the **Item rotation** value it is previewed on the design. The crystal rotation is always counter-clockwise.

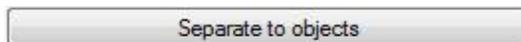
*0 degrees**25 degrees**90 degrees*

A proper combination of **Item rotation** option with **Circular** or **Contour Fill** patterns can produce beautiful crystal designs.

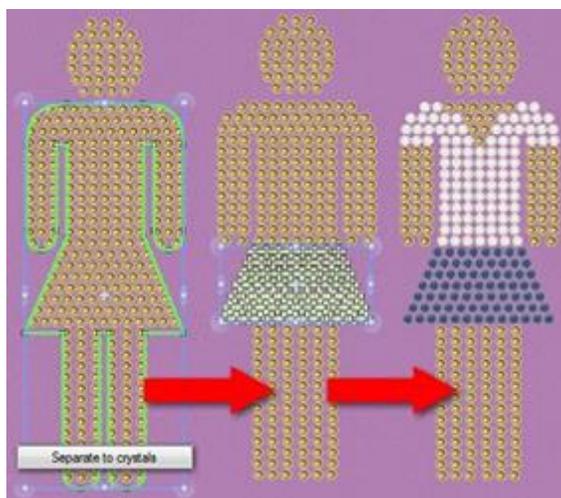
Separate to crystals

By using the **Separate to Crystals** button you can convert the selected object into individual Crystals. That means that you are able to delete, move or manually add Crystals.

This option is mainly used to avoid overlaps and to refine certain designs.



Also, is very useful when you want to create a shape filled with crystals and then assign different crystal **Color/Shape** to parts of the design.

*Separate to crystals*

Keep in mind though that you cannot group the separated crystals back to an crystal fill object. Therefore keep the **Separate to crystals** option as your last choice or keep a duplicate object of the one that you will **Separate to crystals** in order to be able to go back and edit it again

Crystal Fill patterns

In this section we will analyze the rest options that are available for editing **Crystal fill** objects separated by their **Fill** pattern. Each **Fill** pattern has some unique options that affect differently the pattern where they belong. We will analyze them separately in order to be clear how they work and what you can create by editing them. The **Fill** patterns that we will analyze are the following:

- Rectangle
- Circular
- Contour
- Single line
- Shape fit
- Line fit

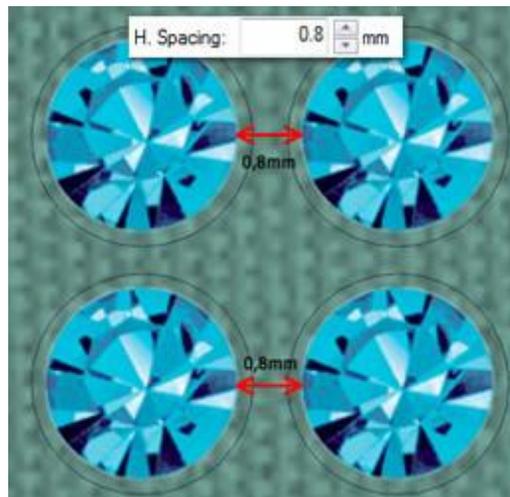
Rectangle

The **Rectangle fill** pattern has the following extra parameters:

1. **H. Spacing**
2. **V. Spacing**
3. **Start angle**
4. **Slant angle**

H. Spacing

The **H.Spacing** (Horizontal Spacing) parameter specifies the distance between the outlines of the crystals. For this calculation the “Crystals cut offset” (blue circle around the crystals) is not taken under consideration .

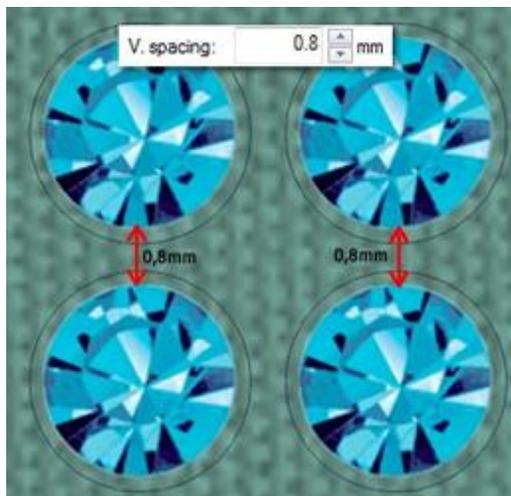


Horizontal Spacing

The default value of the **H.Spacing** is 0.8mm and is calculated by adding the **Crystal cut offset (0.4mm)** together with the **Crystal minimum hole spacing (0.4mm)**. These values can be adjusted from **Tools >Optimizer options...** dialog.

V. Spacing

The **V.Spacing** (Vertical Spacing) parameter specifies the vertical distance between the outlines of the crystals. For this calculation the “Crystals cut offset” (white circle around the crystals) is not taken under consideration.



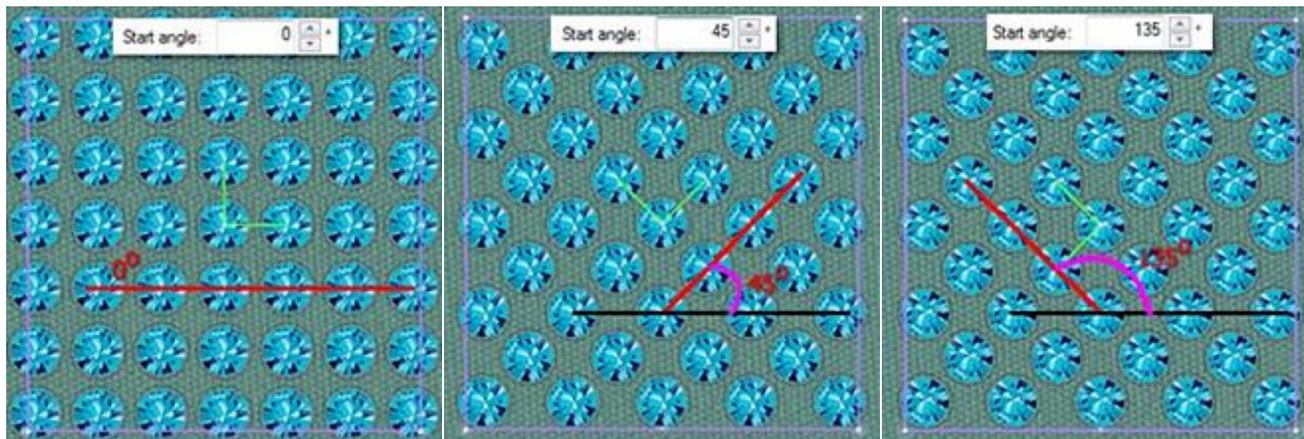
Horizontal Spacing

The default value of the **V.Spacing** is 0.8mm and is calculated by adding the **Crystal cut offset (0.4mm)** together with the **Crystal minimum hole spacing (0.4mm)**. These values can be adjusted from **Tools >Optimizer options...** dialog.

Start angle

The Starting angle parameter specifies the angle of the horizontal lines of crystals which will fill the object you created. When the starting angle is set to 0 degrees, the lines will be horizontal. By changing the angle you will get different results on the Rectangle fill pattern. Each shape might need different Start angle in order the pattern to fit in the design. Therefore it is good practice to change values until you find the one that is appropriate with the design.

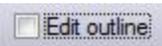
For better result also you will have to adjust the H.Spacing and V.Spacing values. By adjusting the spacing between the crystals you will be able to apply the pattern you want.



Start Angle 0°

Start Angle 45°

Start Angle 135°

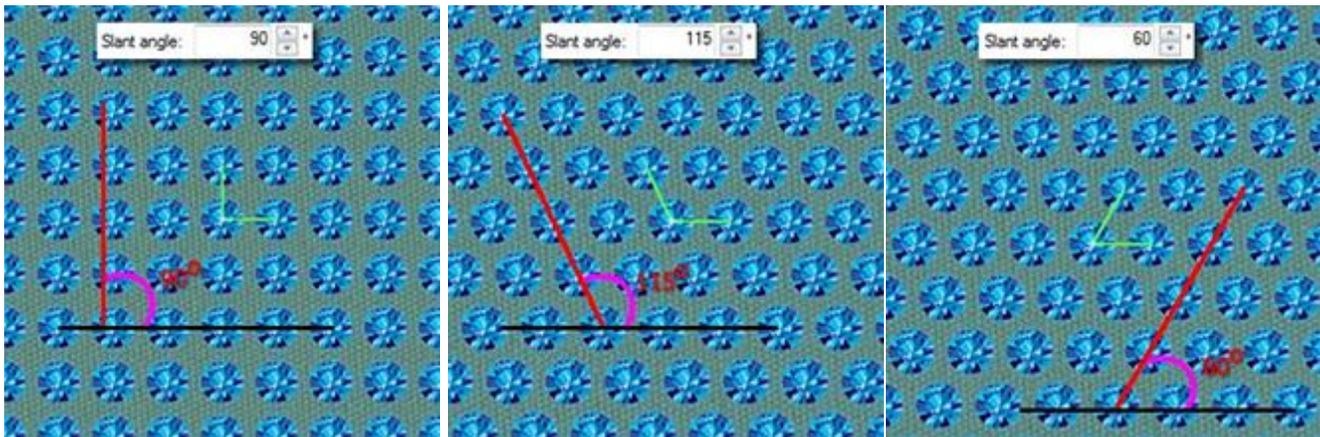
The **Start angle** parameter it is also specified in the design with the horizontal green handle. This handle can be edited while you are in **Edit shape nodes**  mode and the **Edit outline**  option is unchecked from the **Tools options** bar.

This parameter is especially useful when you want to force pattern to start from a specific angle that fit better on a specific shape.

Slant angle

The **Slant angle** parameter specifies the way in which the crystals will be repeated vertically. When the Slant angle is set to 90° degrees the crystals will be placed vertically in lines. The range of values that this parameter can take varies from 10° degrees up to 170° degrees. By changing the Slant angle you can create different patterns that will fill better in the design you are creating.

For better result also you will have to adjust the **H.Spacing** and **V.Spacing** values. By adjusting the spacing between the crystals you will be able to apply the pattern you want.



Start Angle 90°

Start Angle 115°

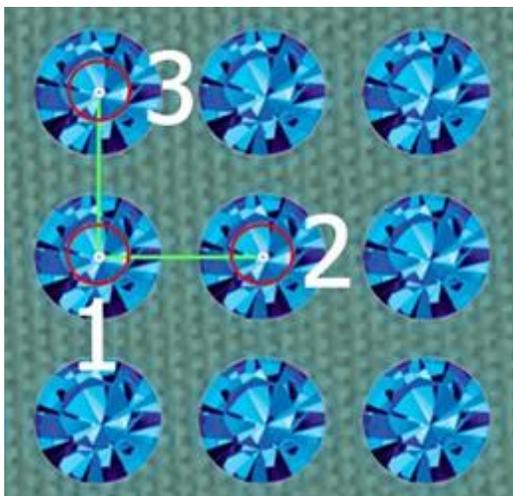
Start Angle 60°

The **Slant angle** parameter it is also specified in the design with the vertical green handle. This handle can be edited while you are in **Edit shape nodes**  mode and the **Edit outline** **Edit outline** option is unchecked from the **Tools options** bar.

Node editing of Rectangle fill area with Crystals

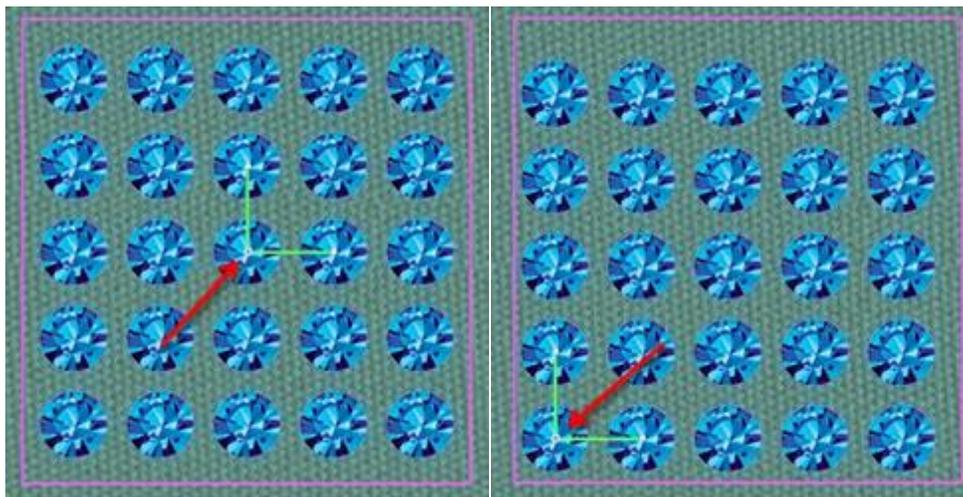
When selecting an object which is filled in with Rectangle Fill pattern and clicking on Edit shape nodes  icon, you can edit the control handles of the crystal placement. If you cannot see the control handles as they appear in the images below you will have to uncheck the Edit outline **Edit outline** option from the Tools options bar. Then you will see a 90o green corner at the middle of the design.

There are three control points:



Control handles

- Control point **1** specifies the position of the first crystal in the design. All the other crystals will be placed based on the first one, following the parameters of the **Crystal fill** type that were specified on the **Object properties** toolbar. You can **click and drag** the starting point of the design and change the way that crystals are positioned in shape. Also, you can select the control point and use the arrow keys to move it for more precise adjustments. By holding the **Ctrl** key pressed and using the arrow key the movement step is larger for quicker movements.

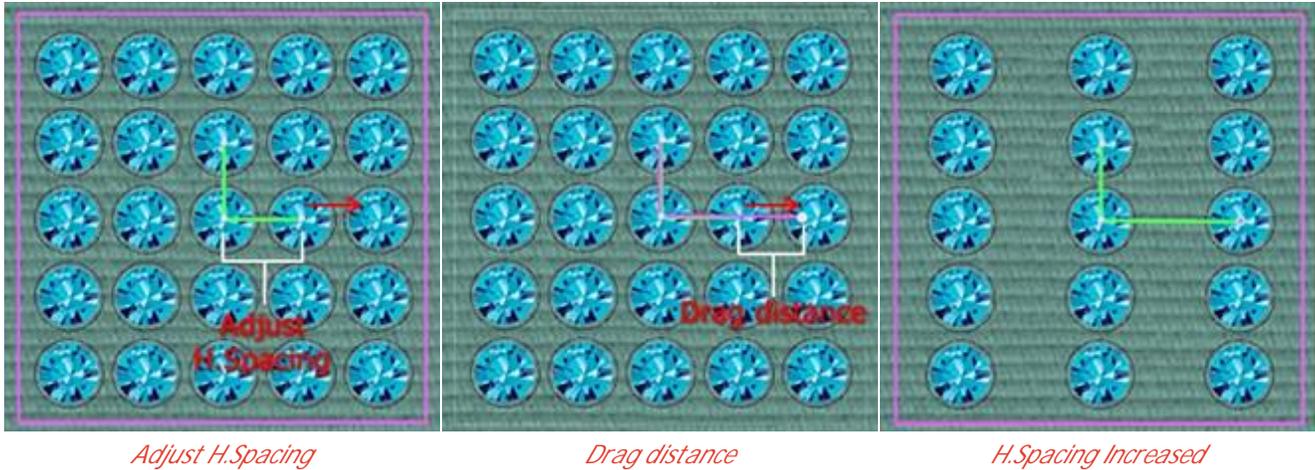


Starting Point

Start Point at bottom left corner

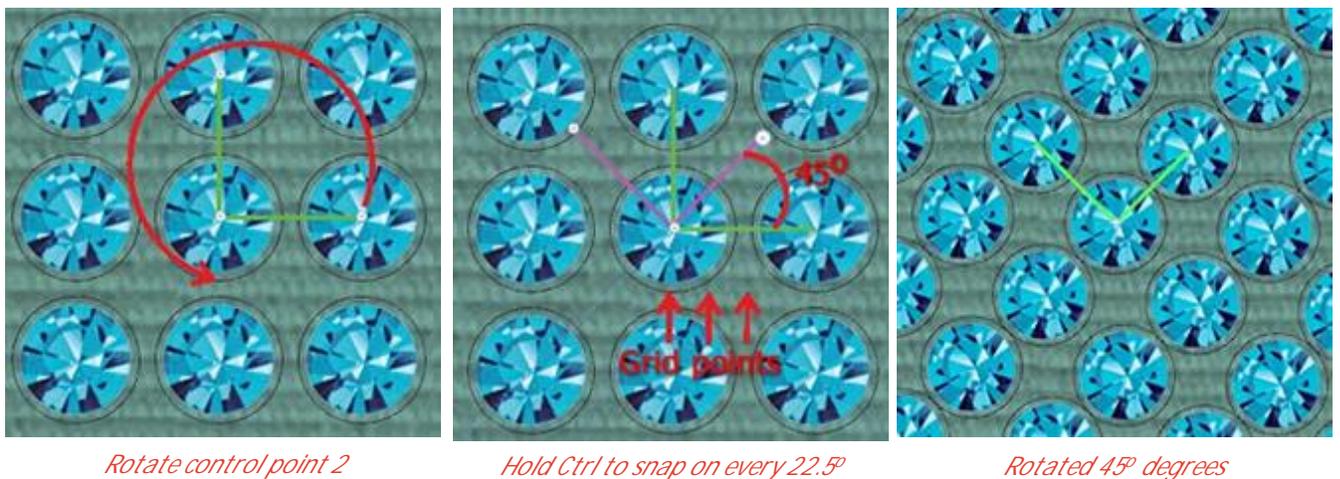
The way that the crystals are positioned inside the shape will change immediately

- The distance between control points 1 and 2 specifies the H.Spacing parameter. This means that by dragging the control point 2 you can change the horizontal spacing (H.Spacing) of the crystals.



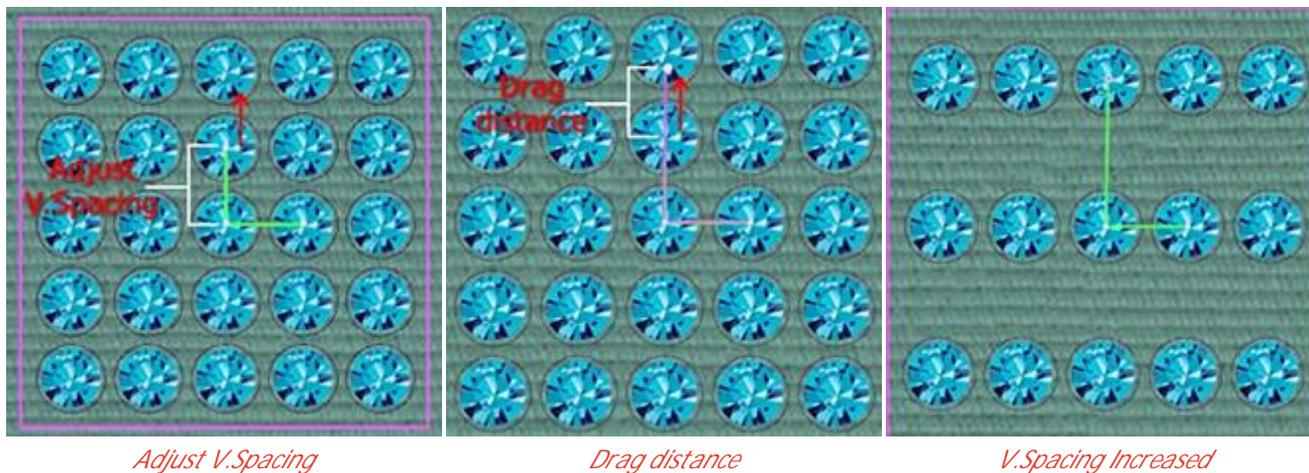
Important: The distance between control points 1 and 2 is not the actual value that you see on the H.Spacing parameter but the handle that is defined from these two points can change this parameter by dragging the control point 2.

3. The angle of 1-2 line, specifies the Starting angle.
By rotating the control point 2 clockwise or counter clockwise you can change the Starting angle of the crystal fill.



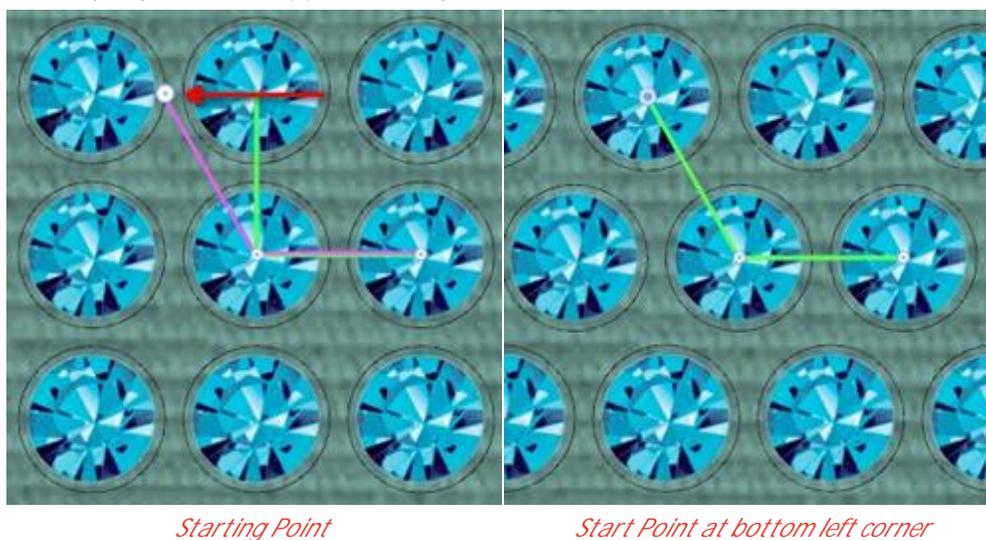
If you hold the **Ctrl** key pressed the handle will snap on every **22.5°** degrees. Also, if you hold the **Alt** key pressed the handle will snap on the grid points.

4. The distance between control points 1 and 3 specifies the Vertical Spacing parameter.
This means that by dragging the control point 3 you can change the horizontal spacing (V.Spacing) of the crystals.



Important: The distance between control points 1 and 3 is not the actual value that you see on the V.Spacing parameter but the handle that is defined from these two points can change this parameter by dragging the control point 3.

5. The angle of 1-3 line, specifies the Slant angle.
This means that by dragging the control point 3, you can change the fill pattern of the crystal fill by changing the way crystals are applied line by line.



If you hold the **Ctrl** key pressed the handle will snap on every **22.5°** degrees. Also, if you hold the **Alt** key pressed the handle will snap on the grid points.

6. If you wish to edit the outlines of the object, you have to enable the parameter **Edit outline** from the **Tool options** toolbar.

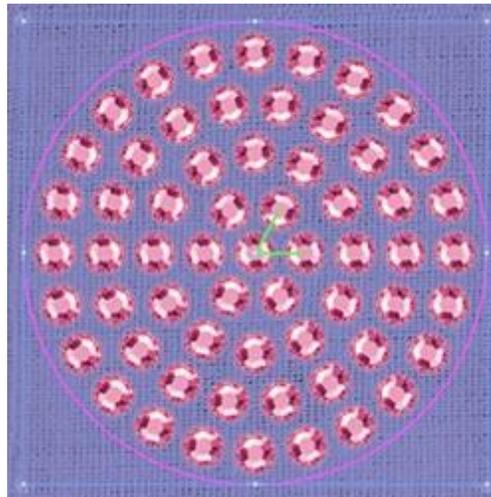
Circular

Circular pattern fill it is very useful especially for rounded shapes or shapes that are curvy. With the special parameters that includes you can create unique and complex crystal patterns.

Circular way of filling areas with Crystals has the following parameters:

- **Spacing**
- **Start angle**

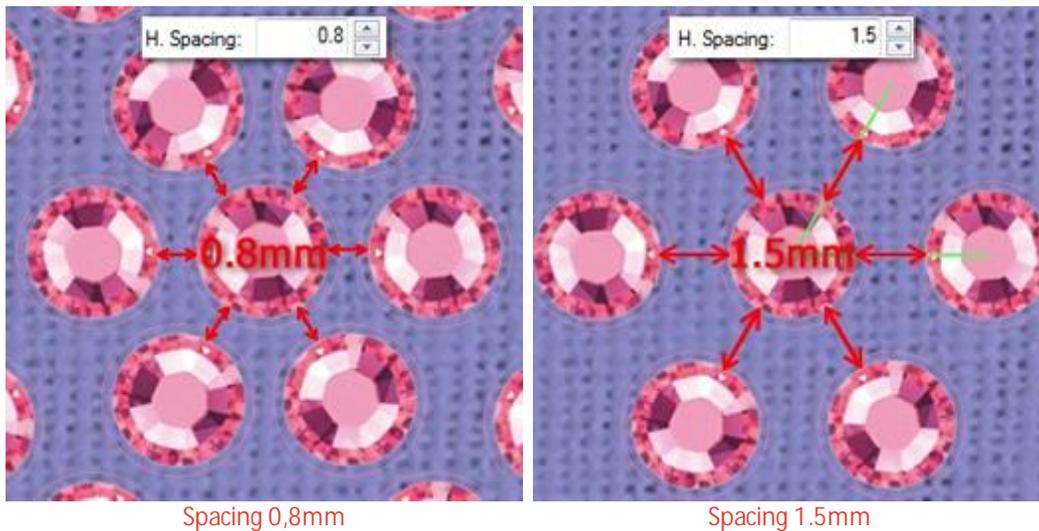
- Steps



H.Spacing

Spacing: mm

The Spacing parameter specifies the distance between the outlines of the crystals placed on different circles. The distance between the crystals of the same circle are specified by the Step parameter. For this calculation the **Crystals cut offset** (white circle around the crystals) is not taken under consideration.

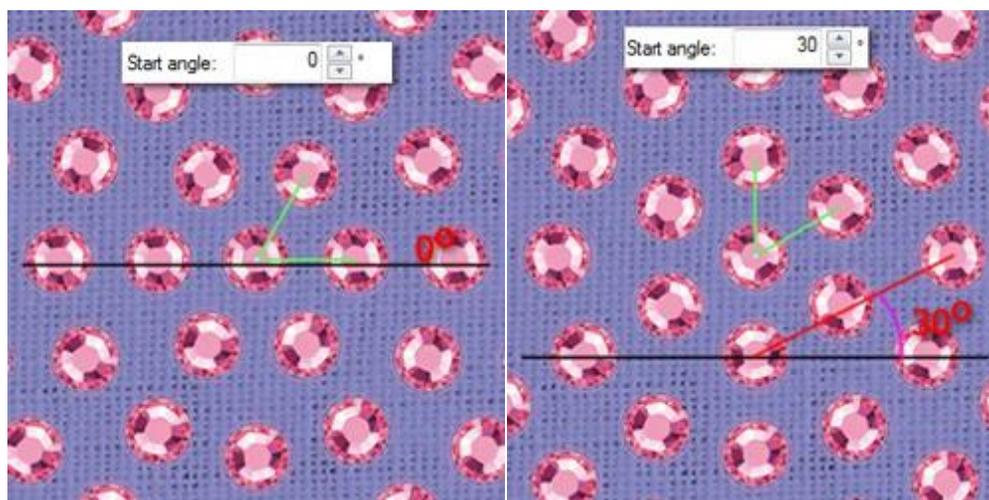


The default value of the **Spacing** is 0.8mm and is calculated by adding the **Crystal cut offset (0.4mm)** together with the **Crystal minimum hole spacing (0.4mm)**. These values can be adjusted from **Tools >Optimizer options...** dialog.

Start angle

Start angle: °

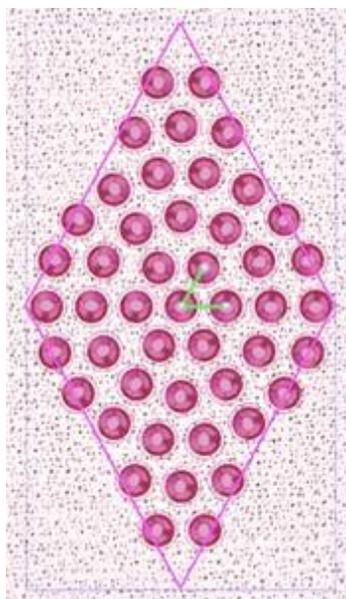
The **Start angle** parameter specifies the angle of the horizontal lines of crystals which will fill the object you created. When the starting angle is set to 0 degrees, the lines will be horizontal. The **Start angle** also is defined from the horizontal green handle of the **Circular Fill** pattern.



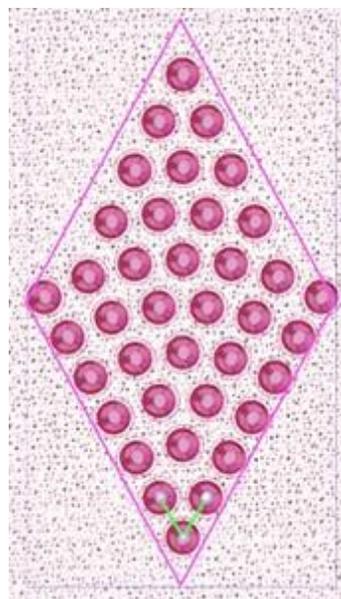
0° degrees angle

30° degrees angle

This parameter is especially useful when you want to force pattern to start from a specific angle that fit better on a specific shape. For example if you want to add a circular fill pattern inside a rhombus and you want the center of the circular pattern to start from the bottom corner and the start angle to be parallel with the side of the rhombus you have to use this parameter. The **Start angle** must be set equal with the angle that the rhombus shape side has.



Start Angle 0°



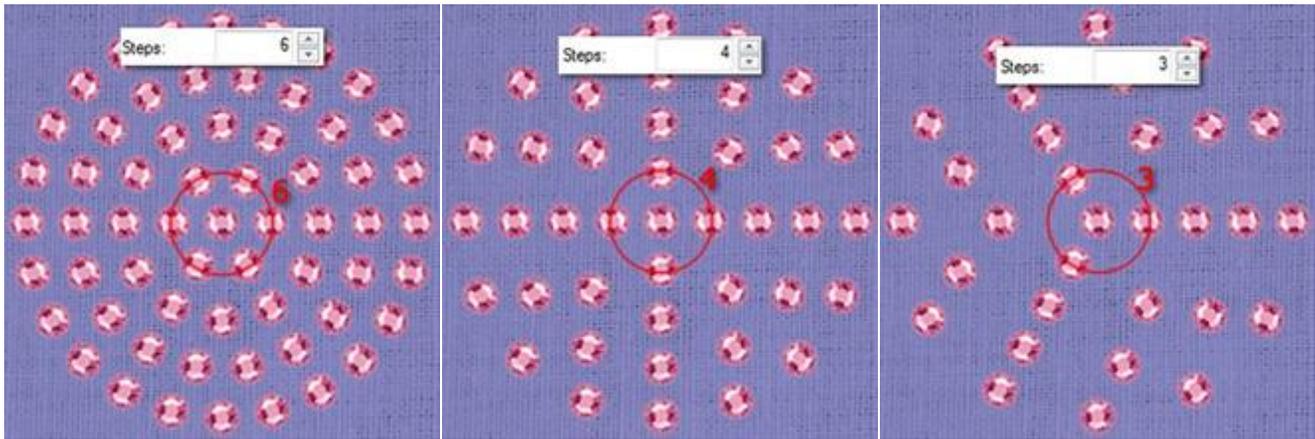
Start Angle 60°

Steps

Steps:

The **Steps** parameter specifies the number of crystals which will be added in any circle pattern starting from the center of the object to the outside.

In the center of the object the software will put one crystal. Then, if for example the **Steps** value is set to 6, it will make the first circle with 6 crystals, the second with 12 crystals, the third with 18 crystals etc. The crystals that belong to the same circle pattern will be distributed evenly.



Steps set to 6

Steps set to 4

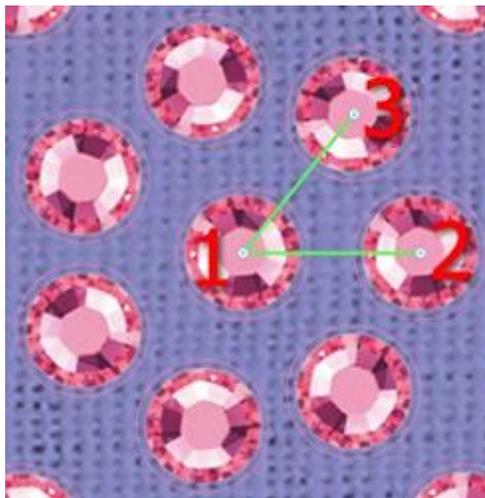
Steps set to 3

By trying various **Steps** values you will see that the pattern changes accordingly.

Node editing of Circular fill area with Crystals

When selecting an object which is filled in with **Circular Fill** pattern and clicking on **Edit shape nodes** icon, you can edit the control handles of the crystal placement. If you cannot see the control handles as they appear in the images below you will have to uncheck the **Edit outline** **Edit outline** option from the **Tools options** bar. Then you will see a 90o green corner at the middle of the design.

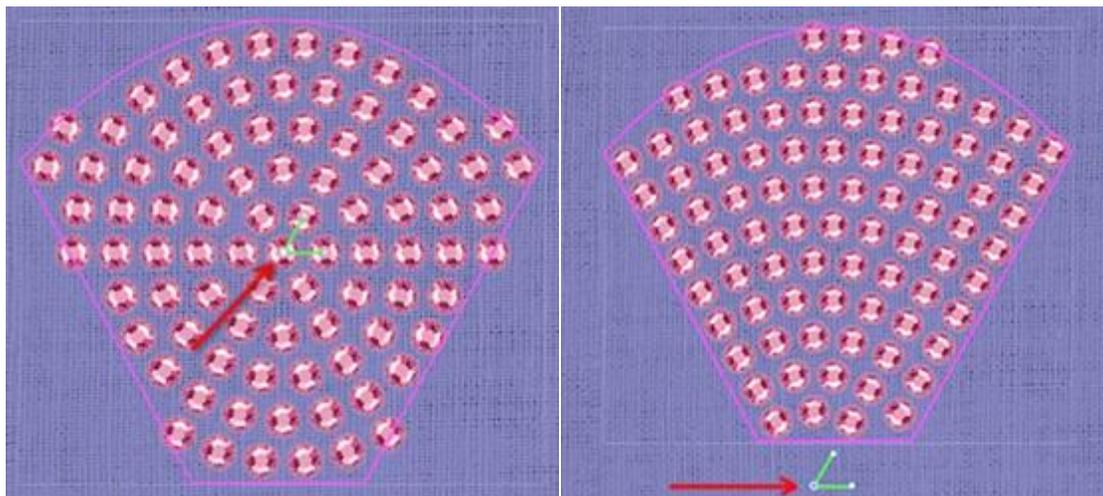
There are three control points:



Control handles

1. Control point **1** specifies the position of the first crystal. All the other crystals will be placed based on the first one, following the parameters of the **Crystal fill** type. All the other crystals will be placed based on the first one, following the parameters of the **Crystal fill** type that were specified on the **Object properties** toolbar. You can **click and drag** the starting point of the design and change the way that crystals are positioned in shape. Also, you can select the control point and use the arrow keys to move

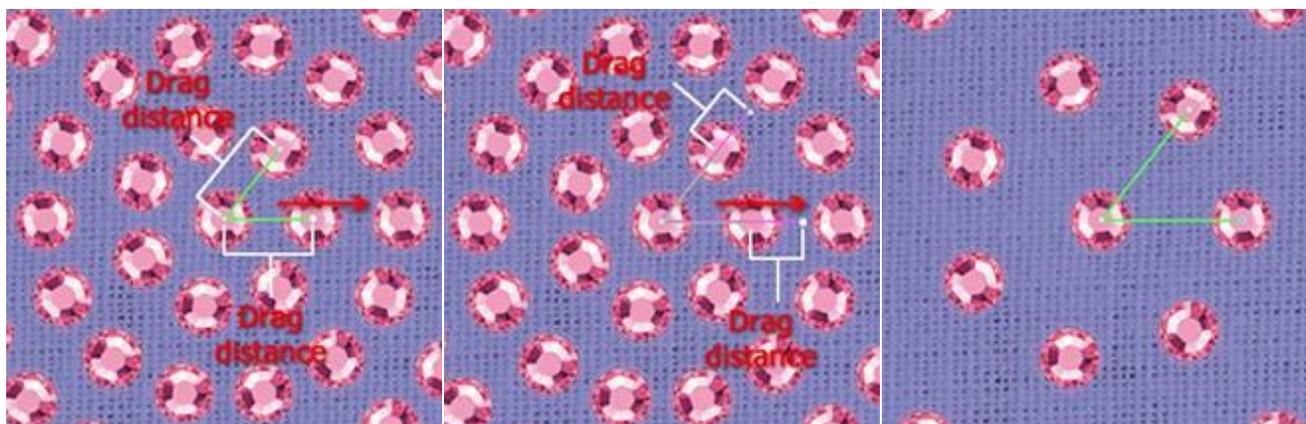
it for more precise adjustments. By holding the **Ctrl** key pressed and using the arrow key the movement step is larger for quicker movements.



Starting Point

Start Point at the bottom out of the shape

- The distance between control points 1 and 2 specifies the Spacing parameter. This means that by dragging the control point 2 you can change the horizontal spacing (H.Spacing) of the crystals.

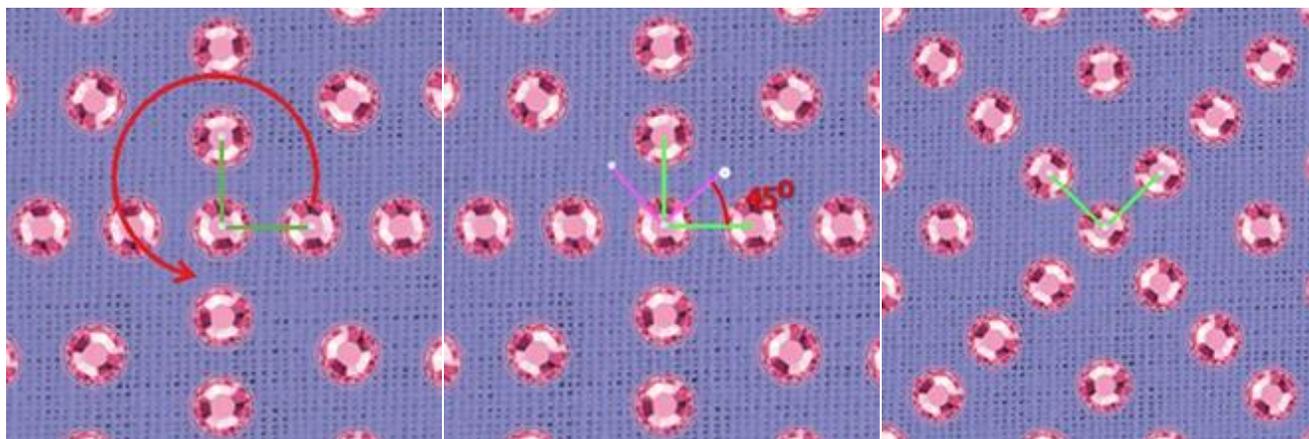


Adjust H.Spacing

Drag distance

H.Spacing Increased

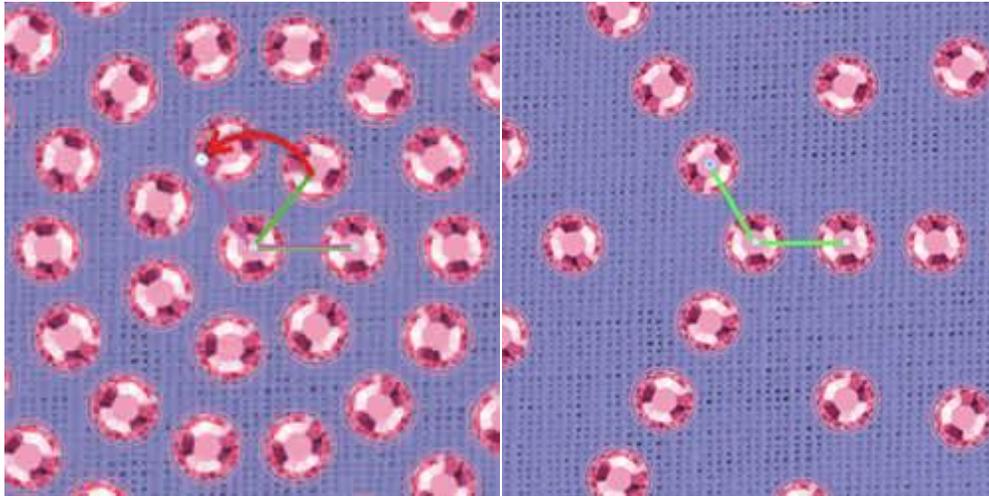
- The angle of 1-2 line, specifies the Starting angle. By rotating the control point 2 clockwise or counter clockwise you can change the Starting angle of the crystal fill.



*Rotate control point 2**Hold Ctrl to snap on every 22.5°**Rotated 45° degrees*

If you hold the **Ctrl** key pressed the handle will snap on every **22.5°** degrees. Also, if you hold the **Alt** key pressed the handle will snap on the grid points.

- The angle of 1-3 line, specifies the Steps parameter. By dragging the 3 control point you can change the circular fill pattern steps.

*from 6 Steps change to 3 steps**3 steps*

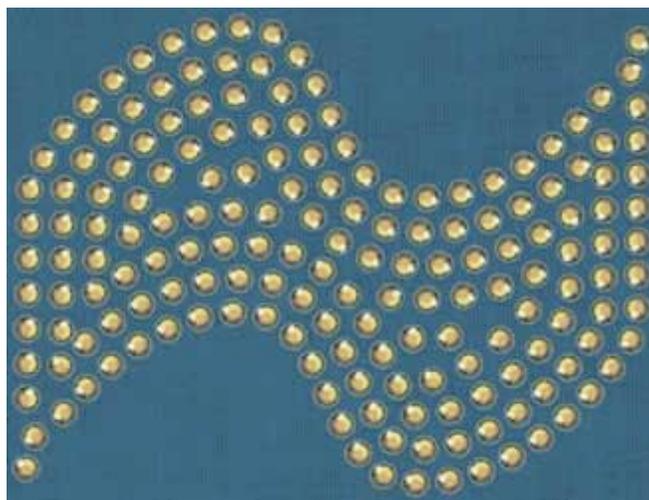
- If you wish to edit the outlines of the object, you need to enable the parameter **Edit outline** from the **Tool options** toolbar.

Contour

Contour fill pattern is a very useful crystal fill pattern which can give an echoing effect to the designs. It can fill complex designs easily and produce unique results.

Contour way of filling areas with Crystals has the following parameters:

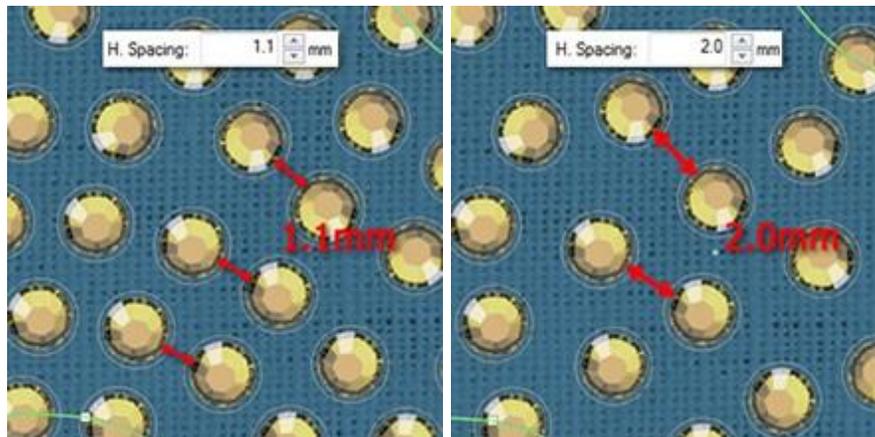
- **H.Spacing**
- **V. Spacing**

*Contour Crystal fill*

H. Spacing

H. Spacing: mm

The H.Spacing parameter specifies the distance between the outlines of the crystals which are on the same contour. The H.Spacing in this case may not be precise, since the crystals of the same contour should be distributed evenly. Therefore whenever you set a H.Spacing value for the contour fill pattern you must always keep in mind the fluctuation of the distance between the crystals.



horizontal Spacing 1.1 mm

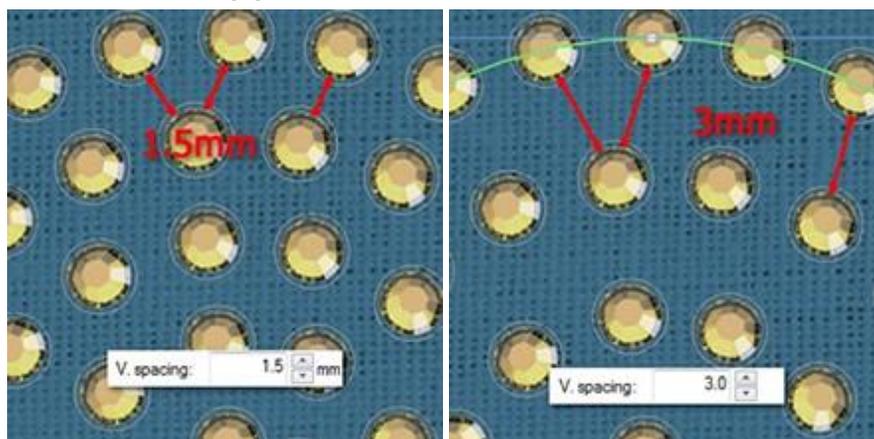
Horizontal Spacing 2mm

horizontal spacing

V. Spacing

V. spacing: mm

The Vertical Spacing parameter specifies the distance between the outlines of the crystals which are on different but adjacent contours. The spacing in this case may not be precise, since the contours should be placed in a way that does not leave big gaps in the middle of the object.



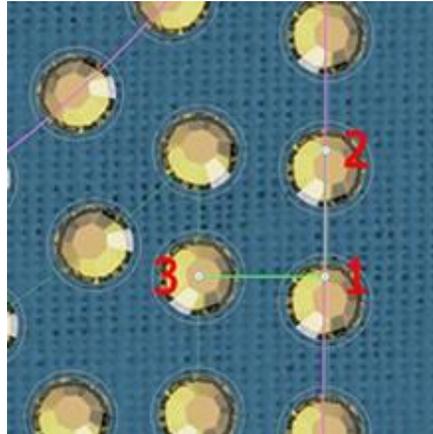
Vertical Spacing 1.5mm

Vertical Spacing 3mm

When the **contour Fill** pattern is selected the **V.Spacing** option could not be accurate because the software in order to produce the contour fit result needs to average the distances between the crystals. Therefore sometimes the **V.Spacing** option you have defined might not be exactly the same on the actual design.

Node editing of Circular fill area with Crystals

When selecting an object which is filled with Contour fill type of crystals and clicking on the **Edit Shape nodes** icon , you can edit the control points of the crystal placement. There are three control points:



Control handles

1. Control point 1 specifies the offset of the parameter, where the first contour will be placed.
2. The distance between control points 1 and 2 specifies the H.Spacing parameter. This means that by dragging the control point 2 you can change the horizontal spacing (H.Spacing) of the crystals.



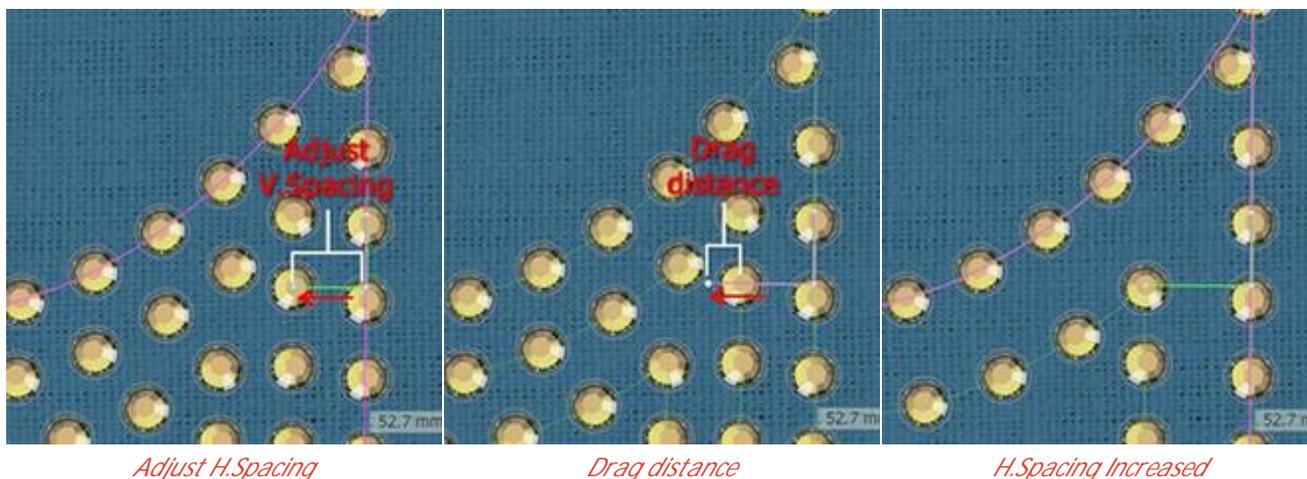
Adjust H.Spacing

Drag distance

H.Spacing Increased

Important: The distance between control points 1 and 2 is not the actual value that you see on the H.Spacing parameter but the handle that is defined from these two points can change this parameter by dragging the control point 2.

3. The distance between control points 1 and 3 specifies the Vertical Spacing (V.Spacing) parameter. This means that by dragging the control point 3 you can change the horizontal spacing (V.Spacing) of the crystals.



Important: The distance between control points 1 and 3 is not the actual value that you see on the V.Spacing parameter but the handle that is defined from these two points can change this parameter by dragging the control point 3.

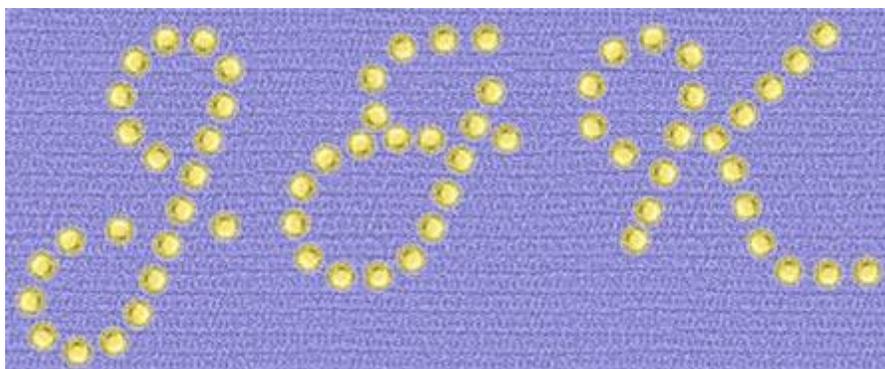
- You cannot rotate 1-2 and 1-3 handles since there is no meaning in changing the starting or slant angle in contour fill type. Therefore the only changes that you can make to the handles are only on their axis. The only limit you have is that you cannot shrink the handles and make the crystals to overlap.
- If you wish to edit the outlines of the object you have to enable the parameter **Edit outline** from the **Tool options** toolbar.

Single Line

Single line fill pattern is filling areas with Crystals in a continuous line order and it has the following parameter:

- **H. Spacing**

It is very useful for filling text art designs which otherwise is very difficult to match their shapes.

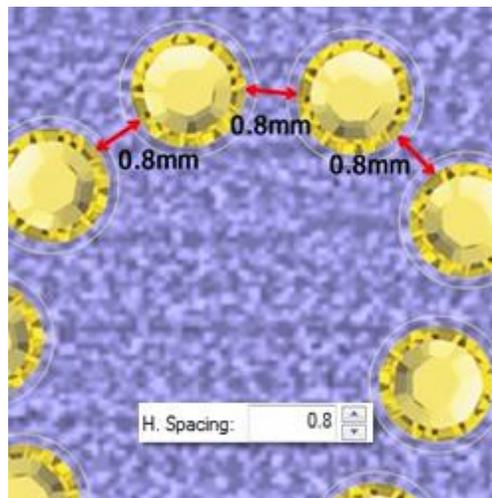


Single line Crystal fill

H. Spacing

H. Spacing:

The **H.Spacing** (Horizontal Spacing) parameter specifies the distance between the outlines of the crystals. The H. Spacing in this case may not be precise, since the crystals inside the shape should be distributed evenly. Therefore whenever you set a **H.Spacing** value for the Single line fill pattern you must always keep in mind the fluctuation of the distance between the crystals.



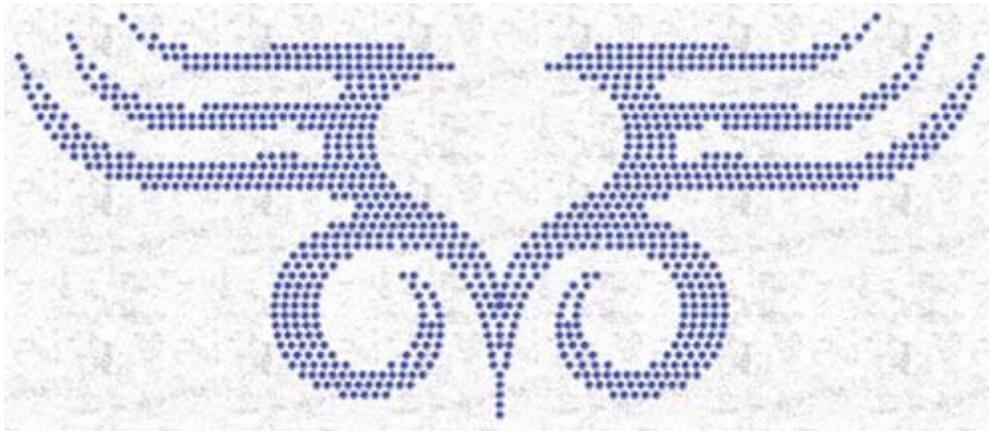
Horizontal Spacing

Shape fit

Shape fit is the default way of filling crystal fill designs because it fits better to the most designs that you will try to fill with crystals. Its major advantage is that it adjusts the way that the crystals will be placed by not keeping the distance between objects standard and by following better the shape's flow.

Shape fit way of filling areas with Crystals has the following parameters:

- **H.Spacing**
- **V. Spacing**
- **Start angle**

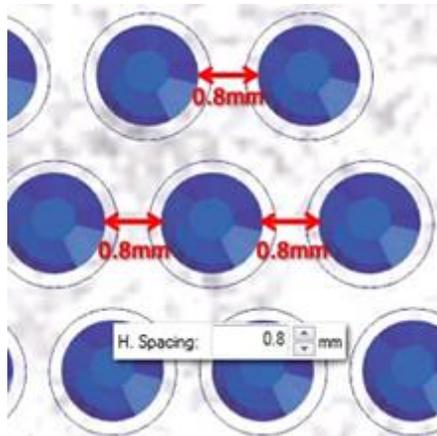


Shape fit fill type

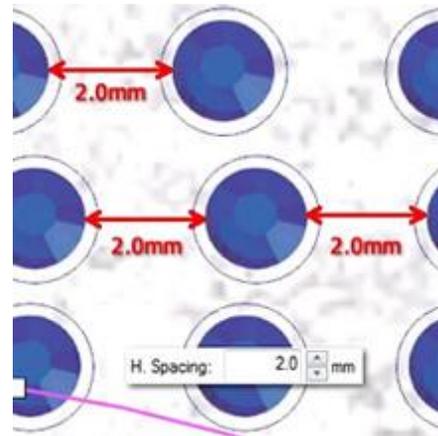
H. Spacing

H. Spacing:

The H.Spacing parameter specifies the distance between crystals. The H.Spacing in this case may not be precise, since the crystals may not be distributed evenly. Therefore whenever you set a H.Spacing value for the Shape fill pattern you must always keep in mind the fluctuation of the distance between the crystals.



horizontal Spacing 0.8 mm



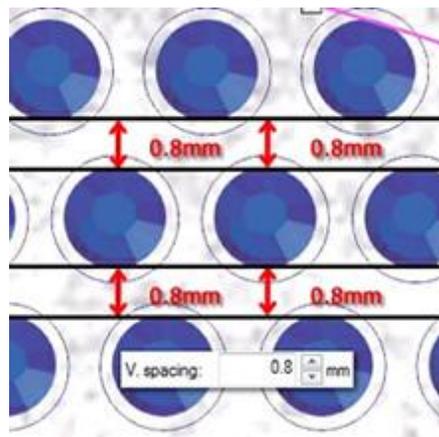
Horizontal Spacing 2mm

horizontal spacing

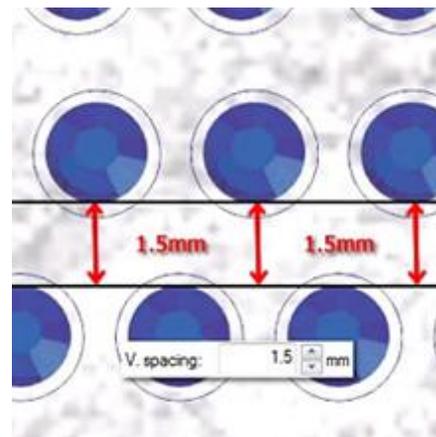
V. Spacing

V. spacing: mm

The Vertical Spacing parameter specifies the distance between the outlines of the crystals which are on different but adjacent contours. The spacing in this case may not be precise, since the contours should be placed in a way that does not leave big gaps in the middle of the object.



Vertical Spacing 1.5mm



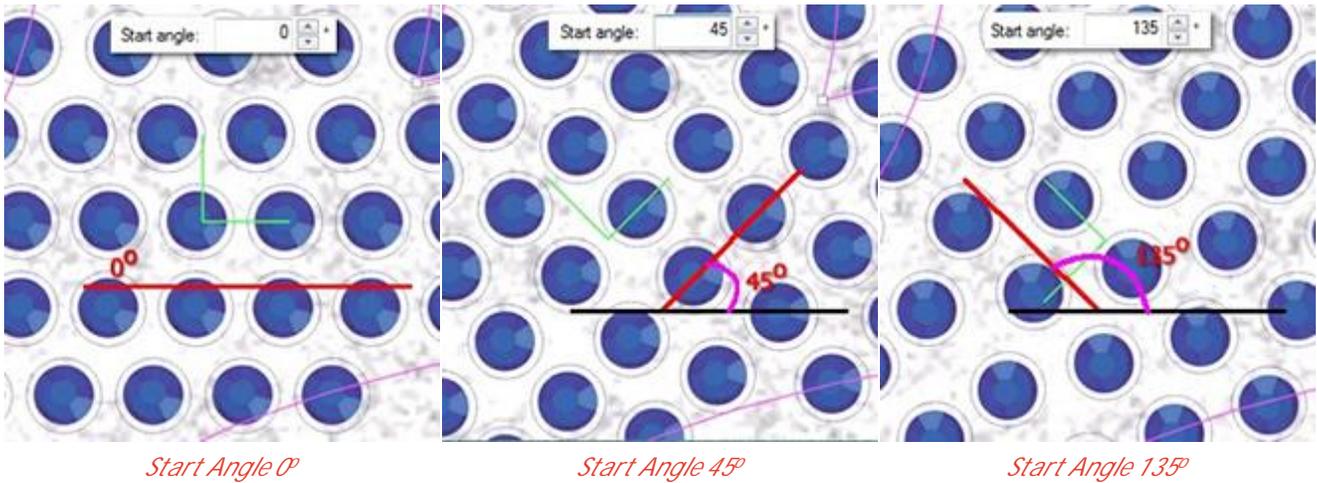
Vertical Spacing 3mm

When the **contour Fill** pattern is selected the **V.Spacing** option could not be accurate because the software in order to produce the contour fit result needs to average the distances between the crystals. Therefore sometimes the **V.Spacing** option you have defined might not be exactly the same on the actual design.

Start angle

The Starting angle parameter specifies the angle of the horizontal lines of crystals which will fill the object you created. When the starting angle is set to 0 degrees, the lines will be horizontal. By changing the angle you will get different results on the Shape fit fill pattern. Each shape might need different Start angle in order the pattern to fit in the design. Therefore it is good practice to change values until you find the one that is appropriate with the design.

For better result also you will have to adjust the H.Spacing and V.Spacing values. By adjusting the spacing between the crystals you will be able to apply the pattern you want.



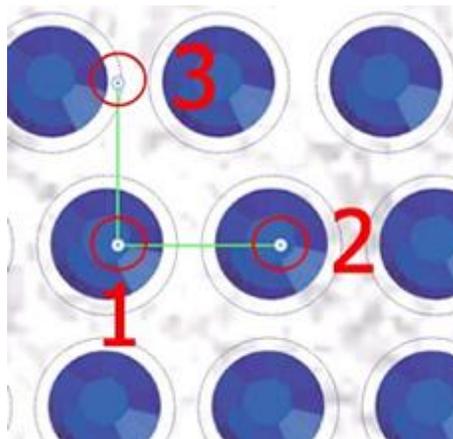
The **Start angle** parameter it is also specified in the design with the horizontal green handle. This handle can be edited while you are in **Edit shape nodes**  mode and the **Edit outline** **Edit outline** option is unchecked from the **Tools options** bar.

This parameter is especially useful when you want to force pattern to start from a specific angle that fit better on a specific shape.

Node editing of Shape fit fill area with Crystals

When selecting an object which is filled in with Shape fit Fill pattern and clicking on Edit shape nodes  icon , you can edit the control handles of the crystal placement. If you cannot see the control handles as they appear in the images below you will have to uncheck the Edit outline **Edit outline** option from the **Tools options** bar. Then you will see a 90o green corner at the middle of the design.

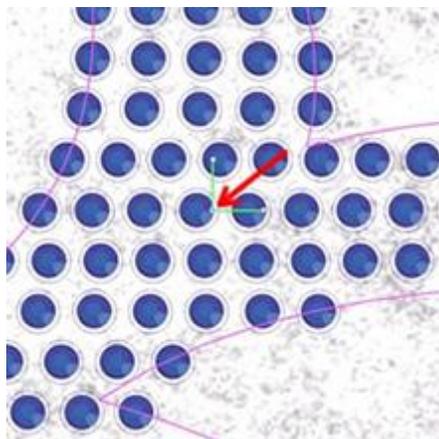
There are three control points:



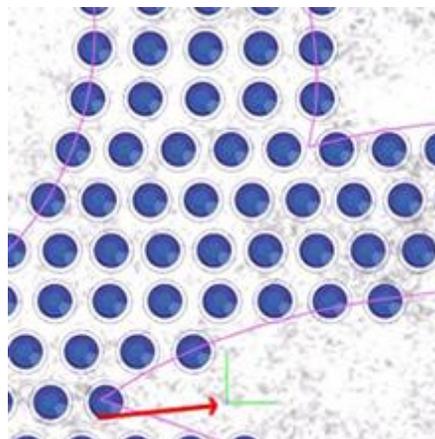
Control handles

1. Control point **1** specifies the position of the first crystal in the design. All the other crystals will be placed based on the first one, following the parameters of the **Crystal fill** type that were specified on the

Object properties toolbar. You can **click and drag** the starting point of the design and change the way that crystals are positioned in shape. Also, you can select the control point and use the arrow keys to move it for more precise adjustments. By holding the **Ctrl** key pressed and using the arrow key the movement step is larger for quicker movements.



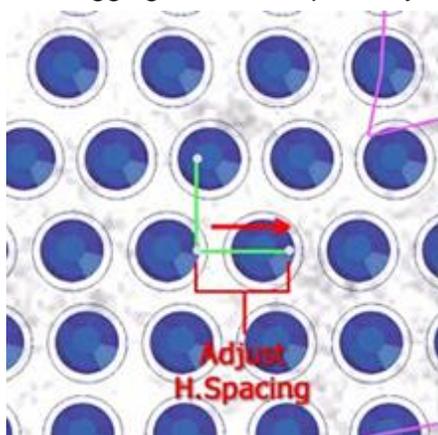
Starting Point



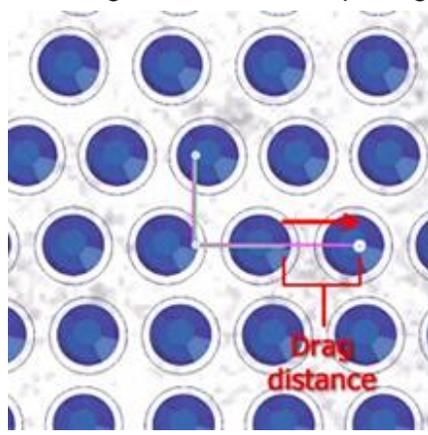
Start Point at bottom left corner

The way that the crystals are positioned inside the shape will change immediately

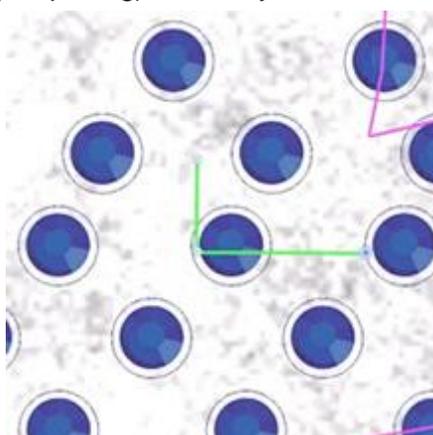
- The distance between control points 1 and 2 specifies the H.Spacing parameter. This means that by dragging the control point 2 you can change the horizontal spacing (H.Spacing) of the crystals.



Adjust H.Spacing



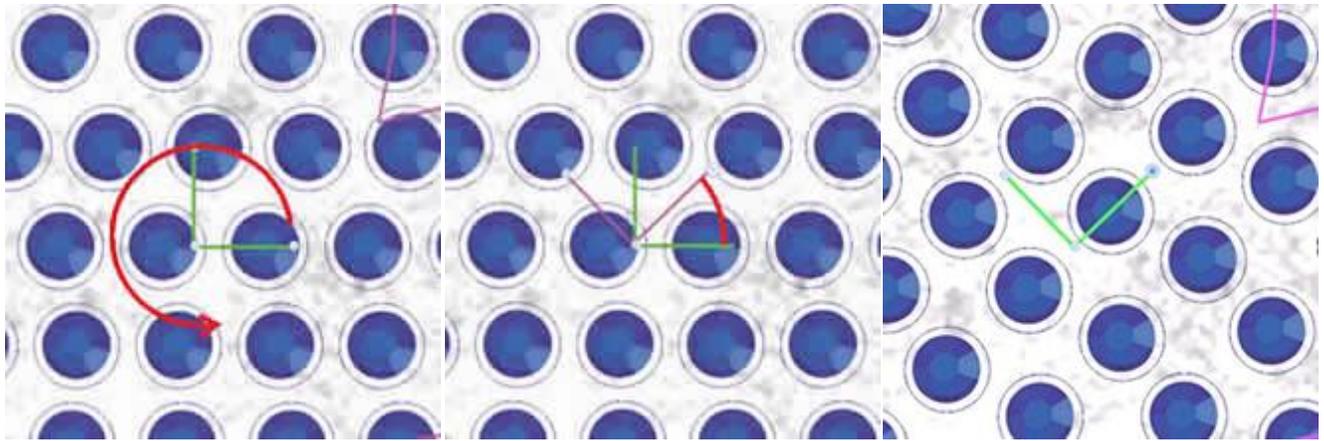
Drag distance



H.Spacing Increased

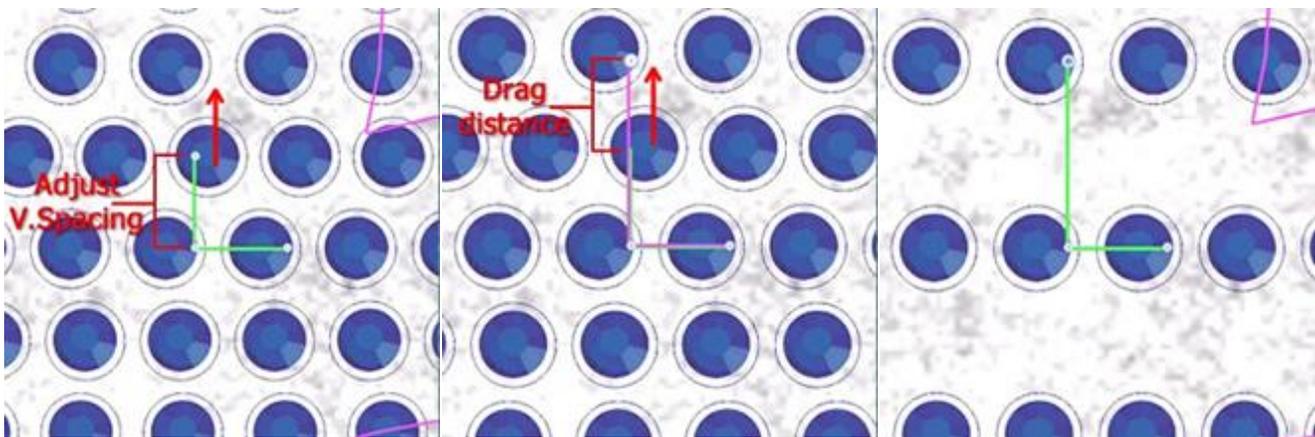
Important: The distance between control points 1 and 2 is not the actual value that you see on the H.Spacing parameter but the handle that is defined from these two points can change this parameter by dragging the control point 2.

- The angle of 1-2 line, specifies the Starting angle. By rotating the control point 2 clockwise or counter clockwise you can change the Starting angle of the crystal fill.

*Rotate control point 2**Hold Ctrl to snap on every 22.5°**Rotated 45° degrees*

If you hold the **Ctrl** key pressed the handle will snap on every **22.5°** degrees. Also, if you hold the **Alt** key pressed the handle will snap on the grid points.

- The distance between control points 1 and 3 specifies the Vertical Spacing parameter. This means that by dragging the control point 3 you can change the horizontal spacing (V.Spacing) of the crystals.

*Adjust V.Spacing**Drag distance**V.Spacing Increased*

Important: The distance between control points 1 and 3 is not the actual value that you see on the V.Spacing parameter but the handle that is defined from these two points can change this parameter by dragging the control point 3.

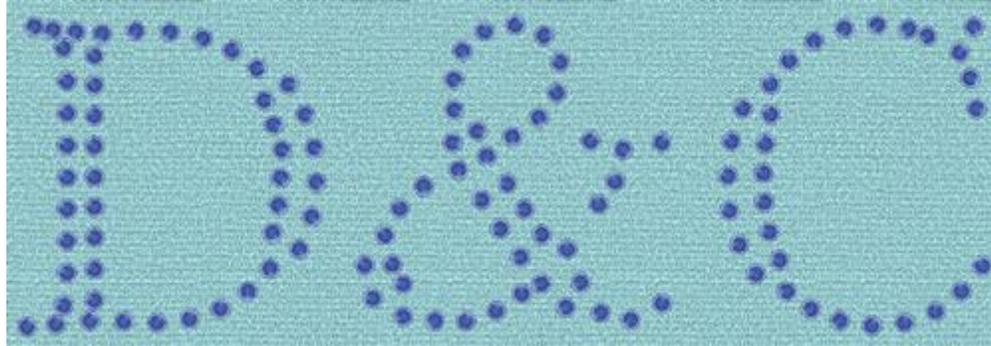
- If you wish to edit the outlines of the object, you have to enable the parameter **Edit outline** from the **Tool options** toolbar.

Line fit

Line fit fill pattern is filling areas with Crystals in a continuous line order and where is needed it adds more lines. This fill pattern it has the following parameter:

- **H. Spacing**

It is very useful for filling text art designs which otherwise is very difficult to match their shapes. Line fit pattern will add single line crystals in narrow areas and will double/triple the lines in wider areas. With this procedure will match better the text art design or any other design that has narrow and wide areas.

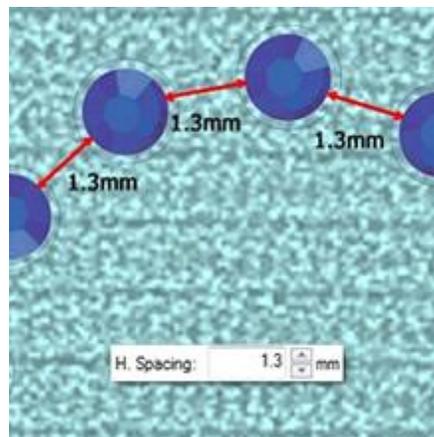


Single line Crystal fill

H. Spacing

H. Spacing:

The **H.Spacing** (Horizontal Spacing) parameter specifies the distance between the outlines of the crystals. The H. Spacing in this case may not be precise, since the crystals inside the shape should be distributed evenly. Therefore whenever you set a **H.Spacing** value for the Single line fill pattern you must always keep in mind the fluctuation of the distance between the crystals.

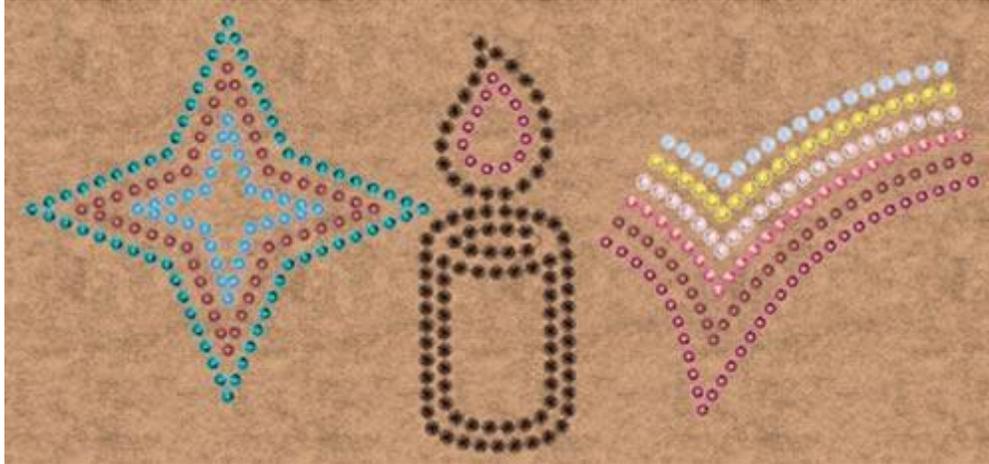


Horizontal Spacing

Edit Crystal fill outline

Outlines with Crystals has the following parameters:

- Offset
- Spacing

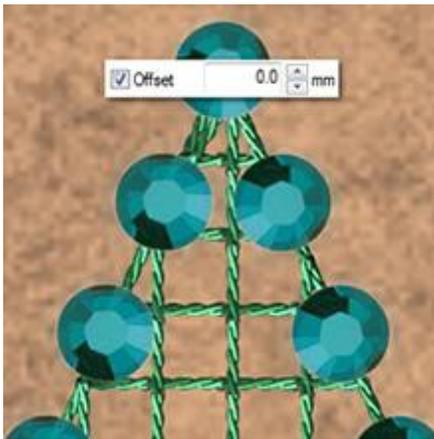


Crystal fill outline

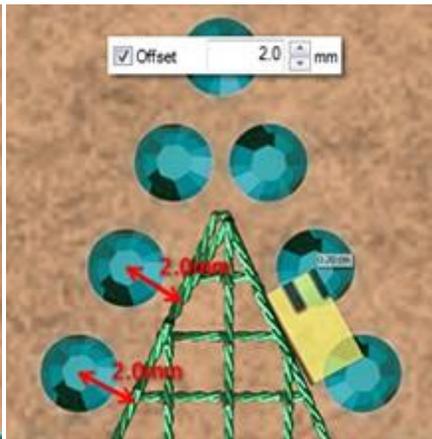
Outlines for crystals does not have control points in node editor.

Offset

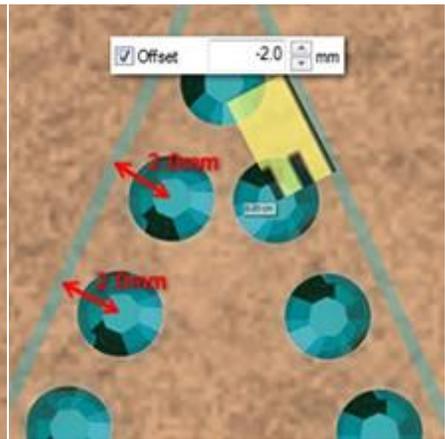
The **Offset** parameter specifies the distance between the outline and the center of the Crystal. The Offset parameter can also accept negative values from -15 to + 15 mm. This is a very useful parameter when you want to move the crystals placed on the outlines away from the design and the opposite. Usually when you apply crystals on the outline, they are placed along the outline which makes them overlap with the fill area of the shape. This is the reason why the offset value is there, to allow you make changes on the outline easily.



Crystal fill offset 0mm



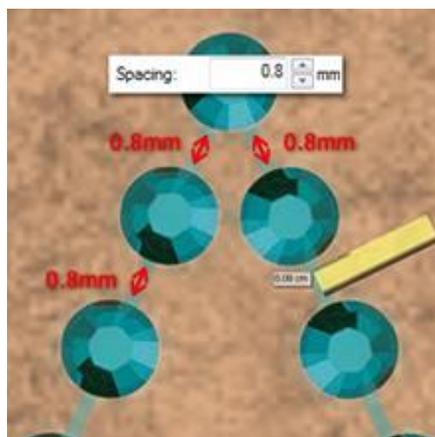
Crystal fill offset 2.0mm



Crystal fill offset -2.0mm

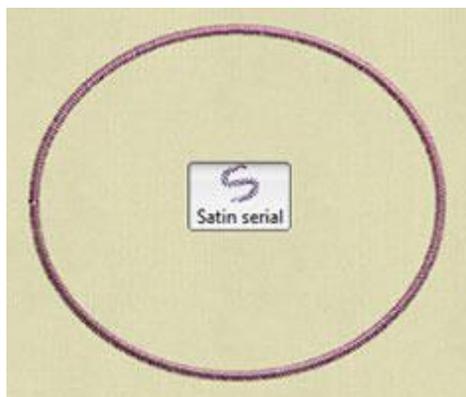
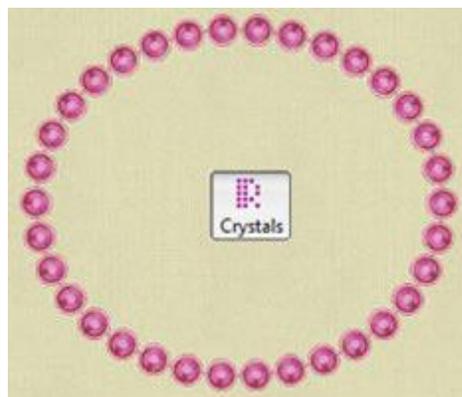
Spacing

The Spacing parameter specifies the distance between the outlines of the crystals. For this calculation the **Crystals cut offset** (green circle around the crystals) is not taken under consideration. The Spacing in this case may not be precise, since the crystals of the same outline should be distributed evenly and the software also adds crystals on sharp corners. This is a very important options because it allows you to create perfect crystal holes on the material you want and avoid crystals' overlapping.

*Horizontal Spacing*

Crystal outline/pen Fill

The **Crystal outline** is a new outline type. When it is applied, the object's outline is filled with **Crystals**. For example, the circle of the following figure, in the beginning, it is filled with step. Then by using **Crystal fill** it is filled with Crystals in a patterned way.

*Satin serial stitch fill**Crystals outline fill*

When applying **Crystal outline** there are a few options that you can adjust in order to customize the way that the **Crystals** will be applied.

Separate to Crystals

Separate to crystals

Use this option to separate the **Crystals** into individual Crystal objects. The separated crystals can not be rejoined into one object with the same properties. Each Crystal will be converted into a separate object. The only way to reverse this operation is by using Undo option.

Offset

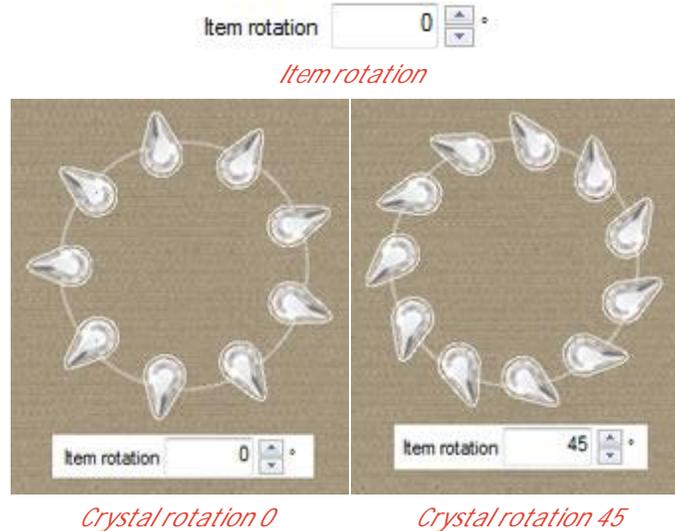
Offset 0.0 mm

You can activate the **Offset** option by checking the checkbox next to it. In the numeric field you can enter the value of offset you want, with lowest value of -15mm and highest value 15mm. Also, you can increase or

decrease the offset value by clicking on the arrows next to the value or by clicking on the value and rotating the mouse wheel, if there is one. The value that you are inserting defines the exact distance you want the outline to have from its initial position. The default offset value is zero and can be changed only from you. Any changes you are making on the offset value it is previewed on the design.

Item rotation

With the **Item rotation** you have the ability to rotate the crystals you have inserted in the shape.



You can increase or decrease the **Item rotation** value by clicking on the arrows next to the value or by clicking on the value and rotating the mouse wheel. The value that you are inserting defines the exact rotation angle you want the crystals to have from their initial position. The default **Item rotation** value is zero and can be changed only from you. Any changes you are making on the **Item rotation** value it is previewed on the design. The crystal rotation is always counter-clockwise.

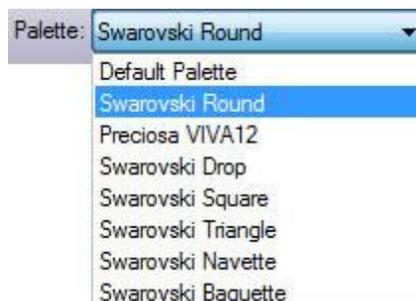
Spacing

Spacing: mm

Using this option you can define the distance between the Crystals. The distance is defined in Millimeters. In the numeric field you can type the distance in "mm". You can also adjust **Spacing** by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field.

Palette

Using this option we can select one of the available **Crystal** palettes.



Size

Select the Size of the used Crystal. In this table you can find useful information about the **Codes** (SS, PO) that may be used to label the various Crystals and the actual size of the Crystals in Millimeters and in Inches. The visible Sizes vary according to the selected palette.

Size:

SS	PP	mm	inch
10	22	2.8-2.9	0.114
12	24	3.0-3.2	0.126
16		3.8-4.0	0.157
20		4.6-4.8	0.189
30		6.3-6.5	0.256

Color /Shape

Click to select one of the available Crystals. The visible Crystal icons vary according to the selected palette.



Chapter XV

Cut - Creating designs with Cuts

Creative DRAWings implements **Cut** capability in a way that cutting was made simple. In the following topics we will present how **Cutting** works with Creative DRAWings. Connect to your Digital cutter and your possibilities are endless. You can easily connect to a variety of Digital Cutters (Artistic Edge, Zing, Silhouette Cameo-Portrait-SD, eCraft, Foison, eClips USB 2, Redsail and GCC Jaguar) or export to an file format that your cutter supports (*.HPGL,*.SVG,*.DXF,*.Brother FCM file).You have the ability to create shapes, motifs and designs in the software and cut it out of virtually any material. You can cut fabric for applique, templates for crystal designs, vinyl to adhere to shirts, glassware, walls or mirrors, magnets for your car or fridge, paper for any scrap-booking or paper-crafting projects. Be prepared to find yourself experimenting with new techniques, materials and designs in no time! In the following topics we will present some samples of how to create **Cut** designs.

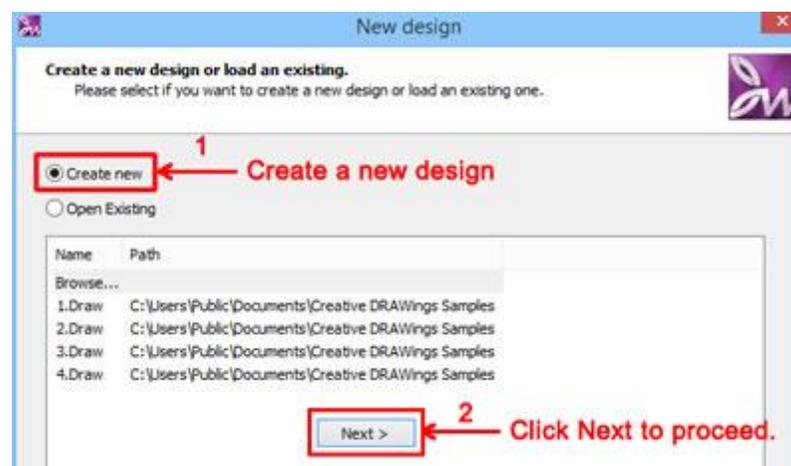
All the functionality that is described into the following topics (**Cut** chapter) is enabled only if you have enabled **Cut** Technique technique for the created/edited design.

Generally we can easily change any design part into a Cut line by apply **Cut** Outline type.

Create your first Cut design

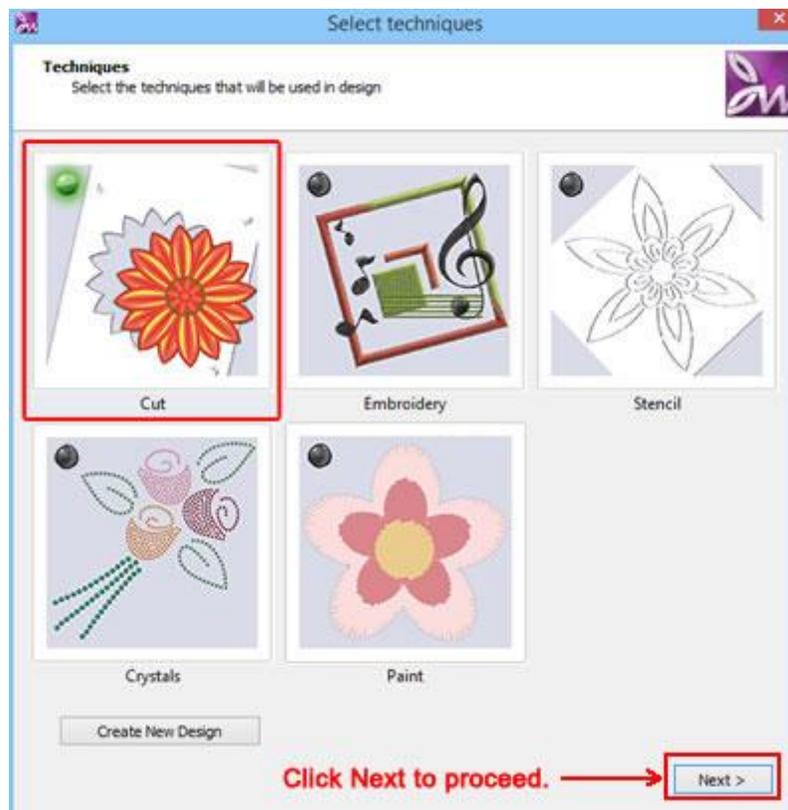
This is a step-by-step tutorial to guide you in importing an artwork file and convert automatically into **Cut** lines.

1. Start **Creative DRAWings** by double clicking on shortcut icon  that you will find on your **Desktop**.
2. The application will load and the **startup wizard** will prompt you to **create a new design** or **load an existing**.

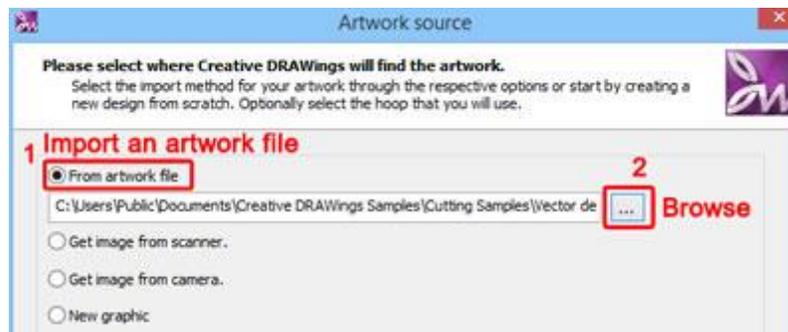


Starting dialog

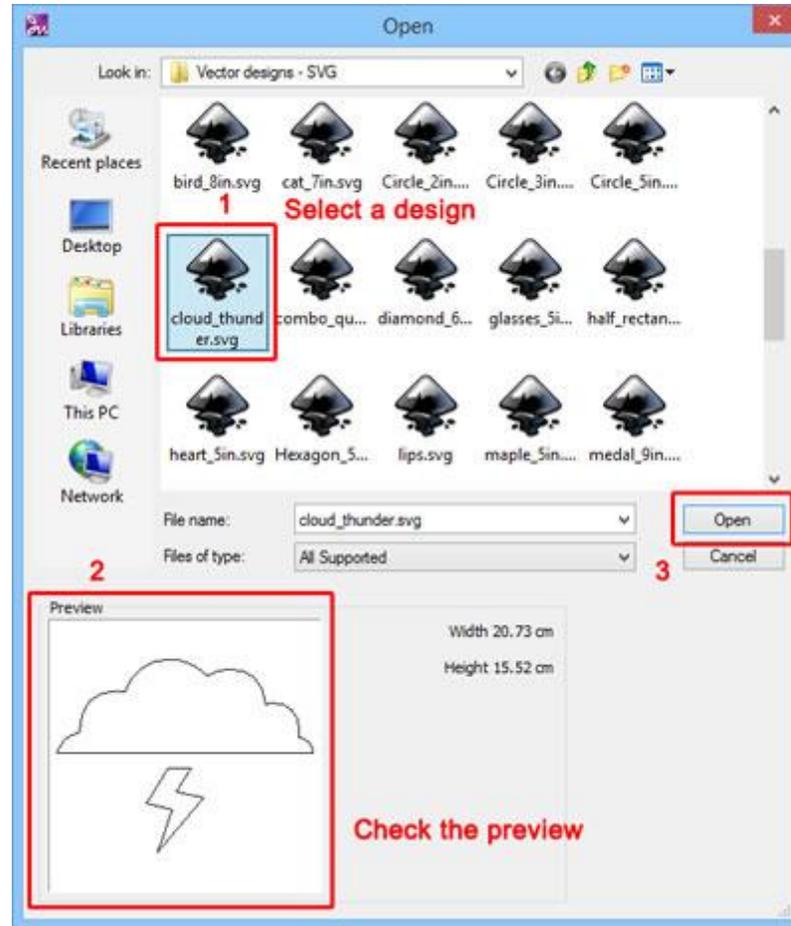
3. Select the **Create new** option and click **Next>** button to proceed.
4. In the appearing dialog you must select which Techniques you want to be enabled for the created design. For the purposes of this sample we will enable only **Cut** technique. Then click on **Next** button to proceed.

*Select Techniques*

5. The **Artwork source** dialog will appear.
6. Select the **From artwork file** option and click on the **Browse** button , to import the design you want to convert to **Cut**. Since we have enabled only **Cut** technique all the parts of the design will be converted into **Cut** lines.

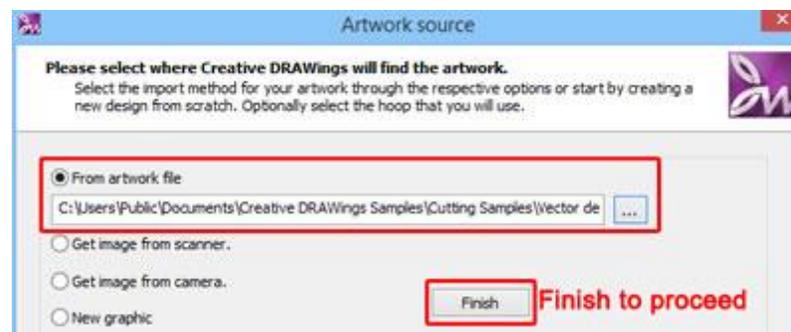
*Artwork source*

7. The **Open** dialog box will appear to locate the design that you want to embroider.



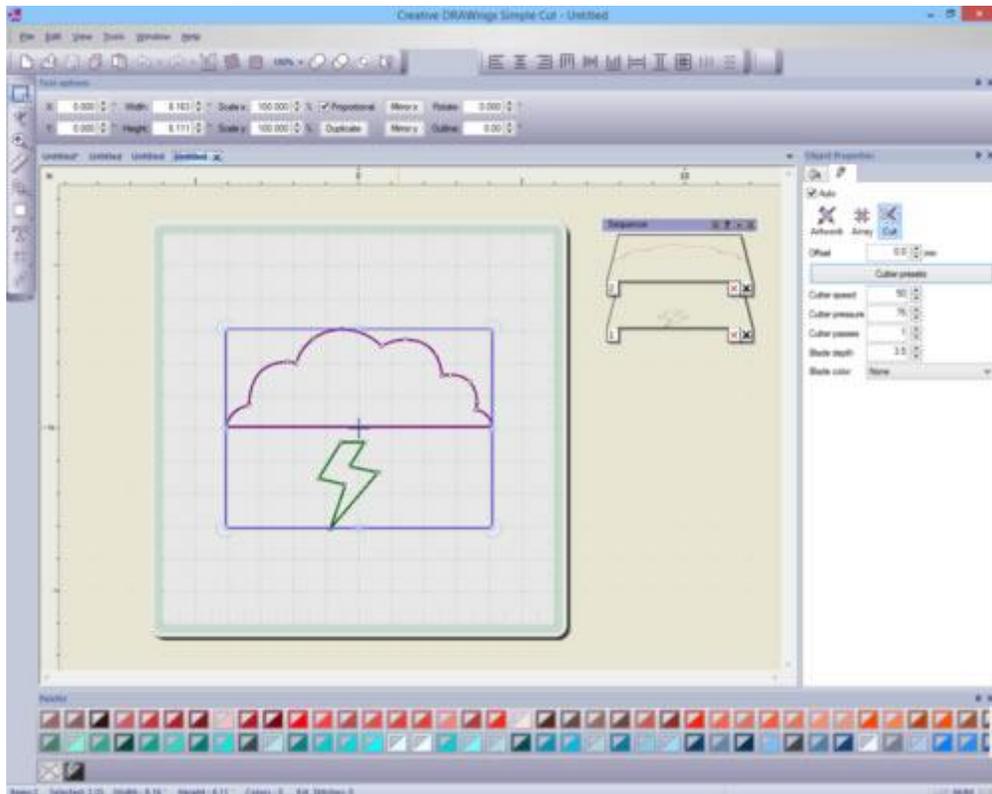
Open design dialog

8. On **My documents** folder there is an **Embroidery designs** folder.
9. Inside **Embroidery designs** folder you will find another folder called **Creative DRAWings samples**.
10. For the purposes of this example we will select one of the files that are located **Cutting samples** folder.
11. Select any sample, in our example we will use the **cloud_thunder.svg** file.
12. Left click to select any sample, take a look on the preview to confirm that it is as you like and then click the **Open** button to confirm the selection.
13. The **Artwork source** dialog will appear once more with the design you selected under **From file** field.



Artwork source

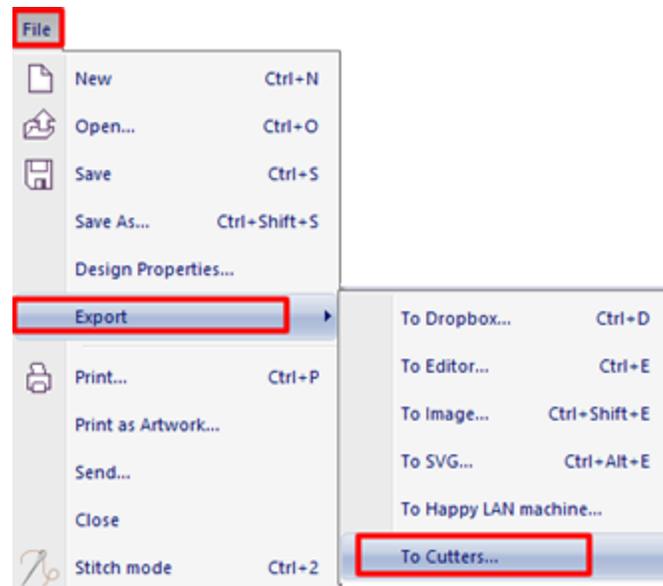
14. You can also select the cutting mat to preview the design on.
15. Click **Finish** to end the process and convert the imported design to Cut lines.
16. The design will appear in the working area previewed on a matte surface.

*The imported artwork converted into cut lines*

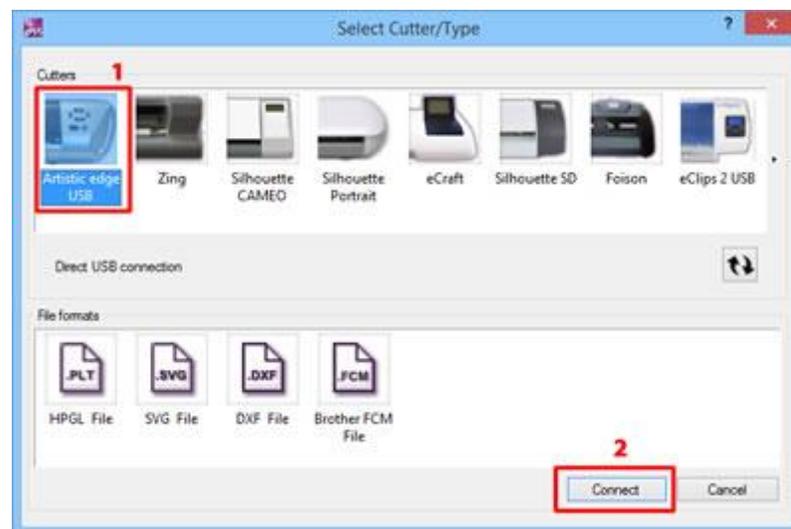
17. There are many changes that you can do on the artwork or create new parts, but we will not present them now in this **Quick Start** topic. We will only present the procedure of producing this **Cut** design with a digital cutter.

At this point we must mention that any design part - artwork can be converted into a cut line simply by selecting the desired part and click on the **Cut** outline type . You can use the design tools to add new parts on this design and by selecting cut outline type  you can easily changes created parts into **Cut** lines

18. Let's suppose that we are done with the design and we are ready to Cut the parts using our digital cutter.
19. From **File** menu, **Export** sub-menu activate **Export to Cutters** option.



20. From the appearing dialog we must select one of the **Cutters** to connect or a **File format** if we want to export to a file and import to our cutter in a manual way. In our sample we will use **Artistic Edge** cutter, click on the **Artistic Edge** Cutter icon and then click on **Connect** to proceed.



Select a Cutter or Export to a file

21. The **Export to Cutter** dialog will appear, using this dialog you can **Cut** any design part with your cutter. If the Digital Cutter is properly connected and powered ON, then at this point you should be able to directly communicate with the Cutter through this dialog.

Before proceeding you must have loaded the **cutting mat** with the **cutting material** into the Cutter.

22. First select the design parts that you want to cut from the **Templates** area.
23. Then you should select an **origin**. This is the point that you want the cutter to begin from.
24. If you have never used this material on your Cutter you should first perform a **Test** cut to verify that the material is **Cut** properly with the current settings. Using the arrow buttons move the Blade to a

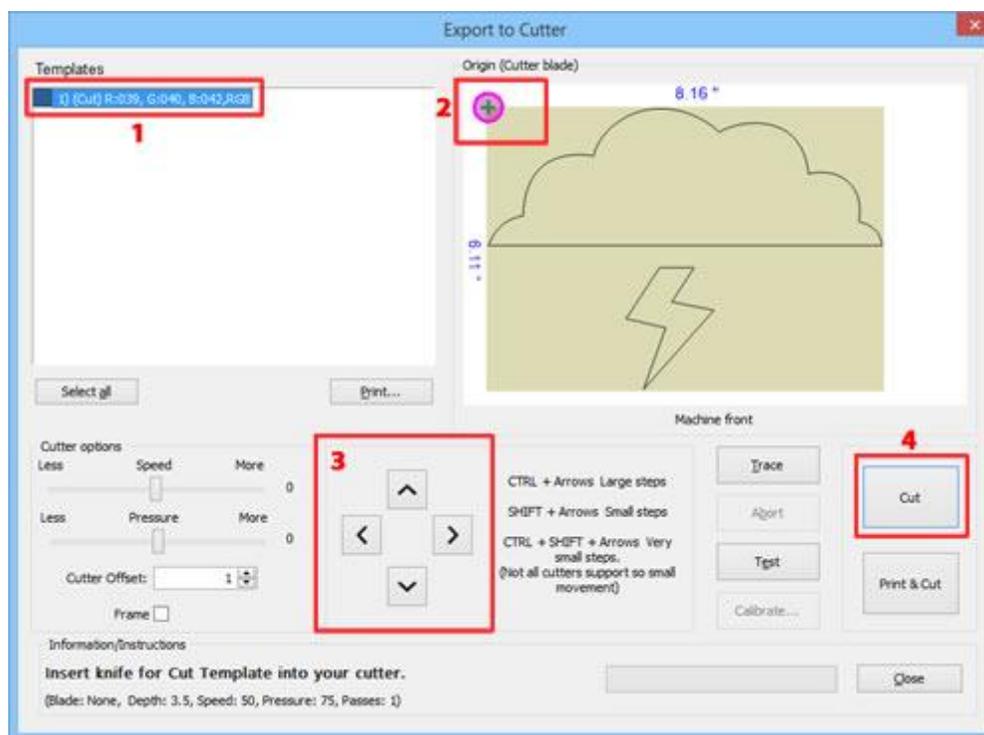
position that will not be used for the actual Cut and press **Test** button. The cutter will perform a test Cut of the material, peel the cut part in order to verify if it was correctly Cut. If it was not adequate adjust the cutter options until you are satisfied by the result.

25. Now you must position the **Blade** for the actual **Cutting** of the material. In our case we must move the **Blade** close to the edge of the upper left part of the material according to the origin we have selected. Use the arrow buttons to move the Blade to a desired position. If you need to fine tune the position of the Blade you can use **Ctrl** , **Shift** keys on your keyboard to adjust the step of the movement.

- § Hold **Shift** key  in order to make the movement small.
- § Hold **Ctrl** key  in order to have a large movement step.
- § Use **Ctrl and Shift** keys together ( + ) to make a very small movement step.

26. You can **Trace** the area that the design will need to make sure that it fits into the material you have placed.

27. Finally press **Cut** in order to start the actual cutting process.



28. After the cutting process remove the cutting mat with the material and peel the cut Cloud and Thunder parts. That's all for now if you have followed the guide you should now have on hands the Cut thunder and the Cloud parts.

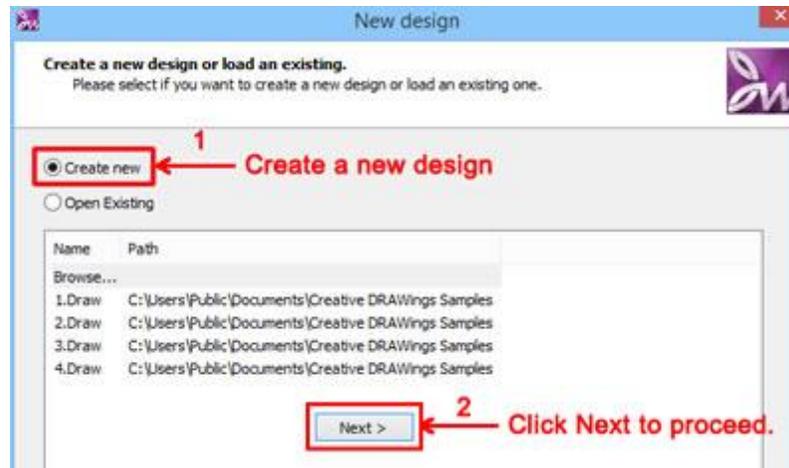
Import from scanner and Cut

Many times you find a design in a magazine or a flyer which you would like to embroider but don't realize how easy it is to acquire the image. If your computer has a scanner installed, you can scan and import almost any design you want to embroider.

Important: The image you import must be suitable for **Cut** according to the material you wish to **Cut**. Real time images are too complex to use them for Cutting.

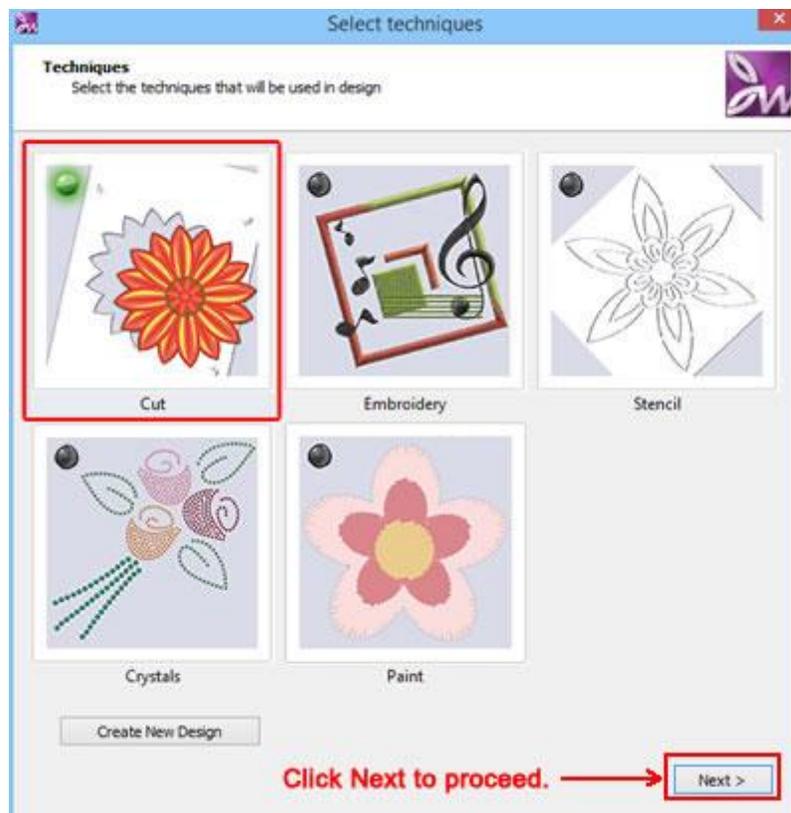
Follow these steps to scan an image and automatically convert into a design with **Cut** lines.

1. Start *Creative DRAWings* by double clicking on the shortcut icon  that is located on your **Desktop**.
2. *Creative DRAWings* will open and the **New Design** start-up wizard will appear.



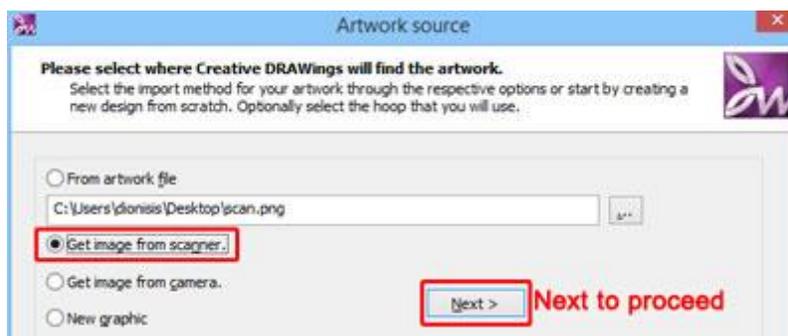
Start-up wizard

3. Select the **Create new** option and click **Next>** button.
4. In the following step you must select which Techniques you want to be enabled for the created design. For the purposes of this sample we will enable only **Cut** technique. Then click on **Next** button to proceed.



Select Techniques

5. The **Artwork source** dialog will appear. In this guide we present how to acquire an image from scanner so you must select the **Get image from scanner** option and click **Next** to proceed.



Artwork source dialog - 2nd page

6. The **Image Scan** dialog appears.

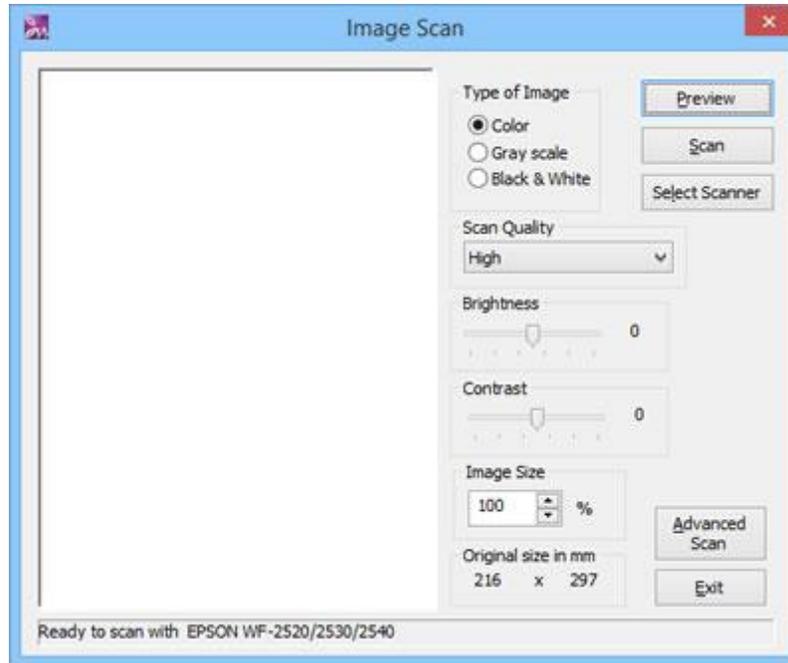
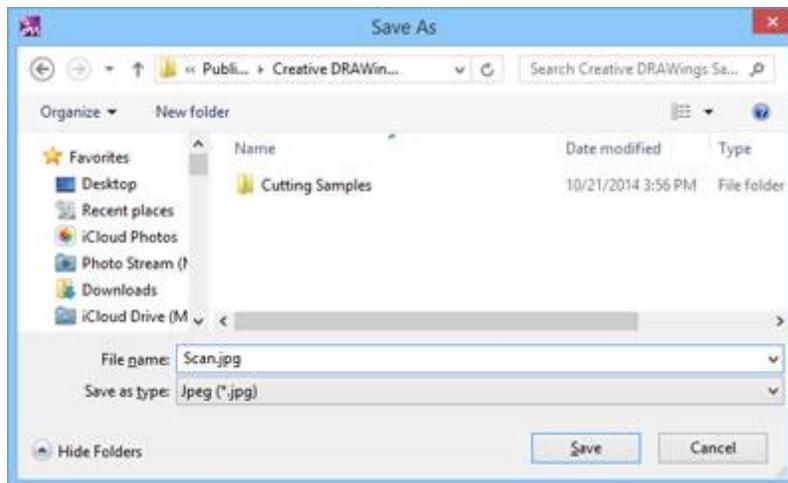


Image scan dialog

7. The **Image Scan** dialog helps you scan the image you want to import it into *Creative DRAWings*. If your scanner is correctly installed, all you have to do is press the **Preview** button.
8. The design will be scanned and the image will appear in **Preview**. You can specify the exact image to want to embroider in **Preview** by drawing a rectangle with your cursor. Only the area inside the rectangle will be embroidered.

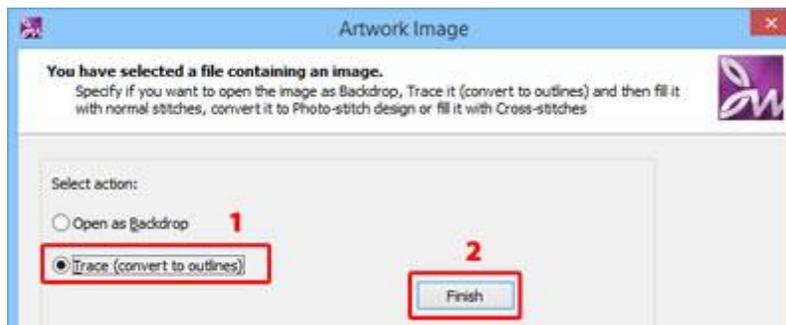


9. If the design in the **Preview** is what you want to embroider, press the **Scan** button to continue.
10. Then you will be asked to save the design on your hard disk, using the **Save As** dialog.



Save as dialog

11. Browse to select a location for the scanned image. Select **Documents** icon from the left side and then double click on the **Embroidery designs** folder.
12. In the **File name** field type a name for your image. Select **Save** button to save the scanned image. The scanned image is saved as bitmap image (like photo) with **.jpg** file extension.
13. The **Artwork Image** dialog will appear offering various conversion options.



Artwork image dialog

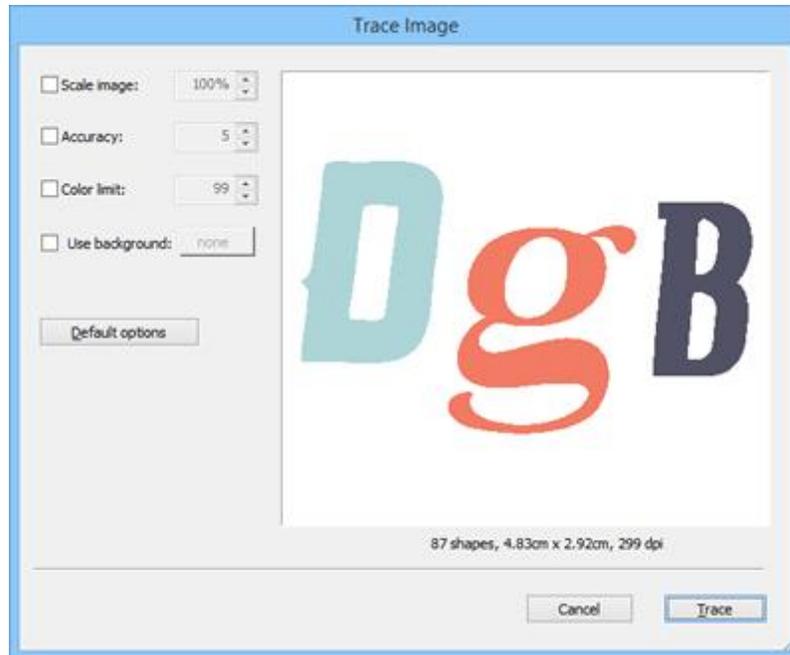
14. In our example we will select the **Trace** option and press the **Next>** button.

Trace (Convert to outlines): This option will guide you to convert the **Bitmap** (picture) image that you are importing to a **Vector** (clipart) based image which will be automatically converted into Cut lines. Tracing a Bitmap image is not an easy procedure; therefore you must be careful with the images which you are tracing. They must be clear and ones that can be actually used.

15. The **Trace Image** dialog will appear with the scanned image imported. In the **Preview** on the right you can see what the traced result of the **Bitmap** (picture) image will look like. The **Vector** (clipart) design from tracing the scanned image is the same image you see in the **Preview** of the **Trace Image** dialog. What you see is what you get.
 - You can also adjust the traced result by changing the available options which are listed at the left side of the dialog.
 - You can change the size of the **Trace** result by adjusting the **Scale image** option.
 - You can set how exact the traced image will be to the scanned image by adjusting the **Accuracy** value.

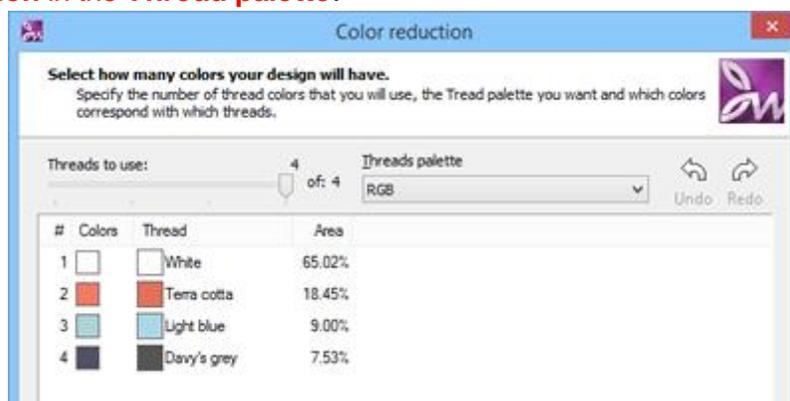
- You can select the number of colors for your traced image by adjusting the **Color limit** value.
- And you can remove the background color that the scanned **Bitmap** images usually have by using the **Use background** option.

Any changes you make to these options are automatically adjusted by *Creative DRAWings* and shown in **Preview**.



Trace image dialog

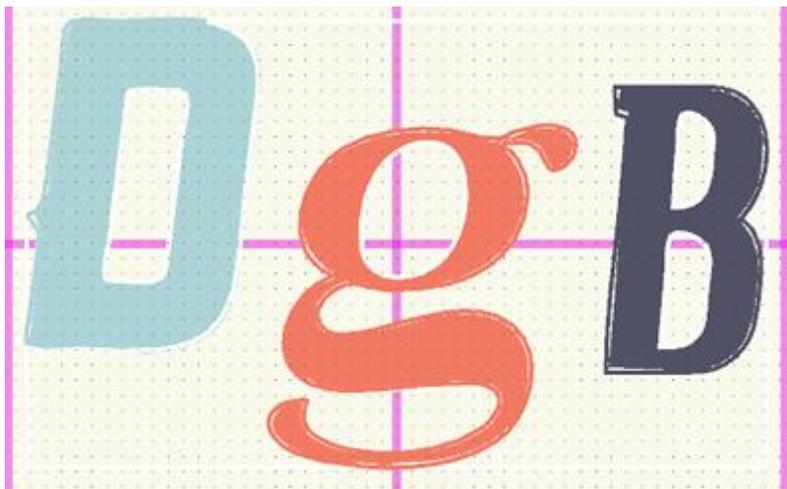
16. The **Color reduction** dialog will appear where you can select a **Thread palette** to use.
17. Click on the arrow of the **Palette** drop-down menu and the available thread manufacturers will appear.
18. Select the brand-name thread you want by choosing it from the list. For example, select **Mettler Seralon**.
19. The colors of the design you are importing will automatically be assigned to the closest thread color of the **Mettler Seralon** in the **Thread palette**.



Color reduction dialog

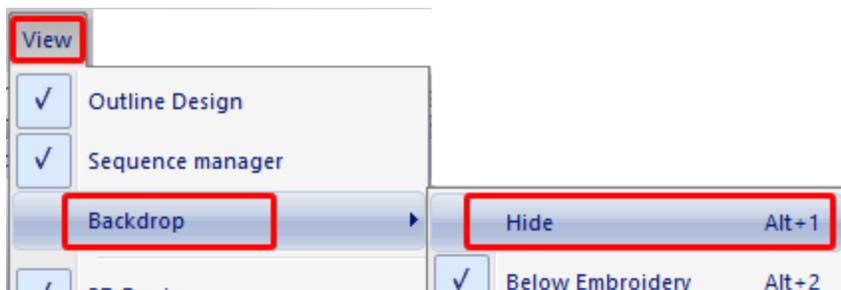
20. In the same dialog you can see that your design has 4 different colors. The number of colors can be reduced now by sliding the **Threads to Use** arrow to the left, or later inside the software. The reduction of colors sometimes is not noticeable, but will reduce sew-out time. Experiment with the **Threads to use** slider.
21. Click **Finish** to end the process and imported the converted artwork into the design area.

22. The scanned image will appear in the design area. Since we only have **Cut technique** enabled it has been converted into Cut lines.



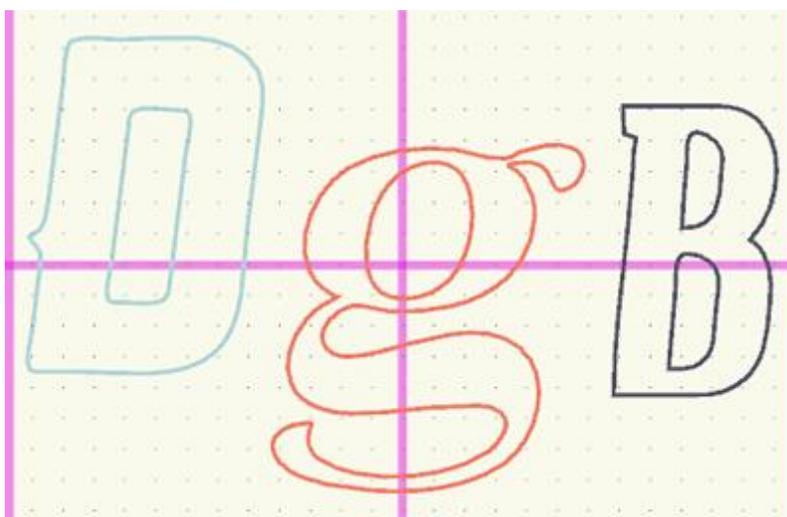
The scanned design in the design area.

23. In order to be able to see the result clearly we will hide the automatically added backdrop. From menu **View**, sub-menu **Backdrop**, enable **Hide** option. You can also use **Alt+1** keyboard combination in order to hide the backdrop.



Hide backdrop

24. Now as you can see on the following figure the scanned image has been converted into **Cut** outlines. At this point we must mention that there may be various unneeded parts that you may need to delete from the design. We have already removed them as you can see in the figure.

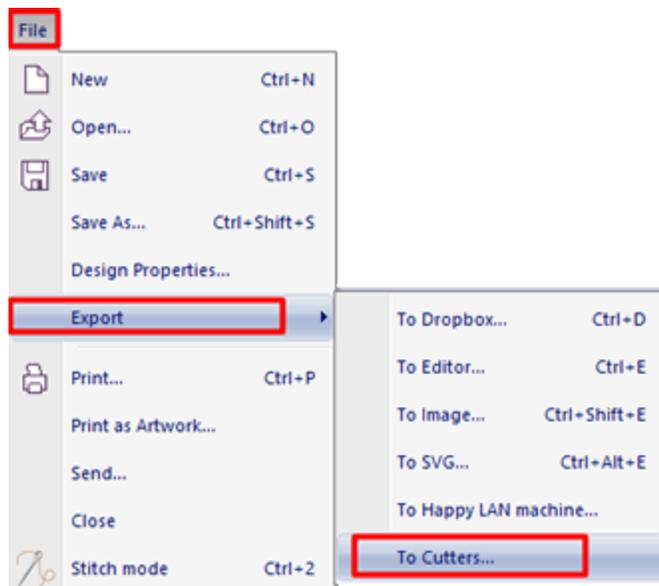


The imported design

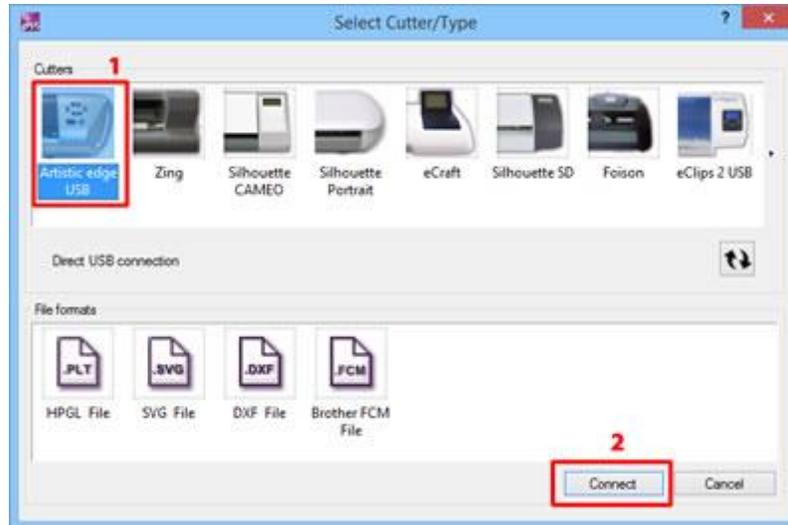
25. There are many changes that you can do on the artwork or create new parts, but we will not present them now in this **Quick Start** topic. We will only present the procedure of producing this **Cut** design with a digital cutter.

At this point we must mention that **any** design part - artwork can be converted into a **cut** line simply by selecting the desired part and click on the **Cut** outline type . You can use the design tools to add new parts on this design and by selecting **cut** outline type  you can easily changes created parts into **Cut** lines

26. Let's suppose that we are done with the design and we are ready to Cut the parts using our digital cutter.
27. From **File** menu, **Export** sub-menu activate **Export to Cutters** option.



28. From the appearing dialog we must select one of the **Cutters** to connect or a **File format** if we want to export to a file and import to our cutter in a manual way. In our sample we will use **Artistic Edge** cutter, click on the **Artistic Edge** Cutter icon and then click on **Connect** to proceed.



Select a Cutter or Export to a file

29. The **Export to Cutter dialog** will appear, using this dialog you can **Cut** any design part with your cutter. If the Digital Cutter is properly connected and powered ON, then at this point you should be able to directly communicate with the Cutter through this dialog.

Before proceeding you must have loaded the **cutting mat** with the **cutting material** into the Cutter.

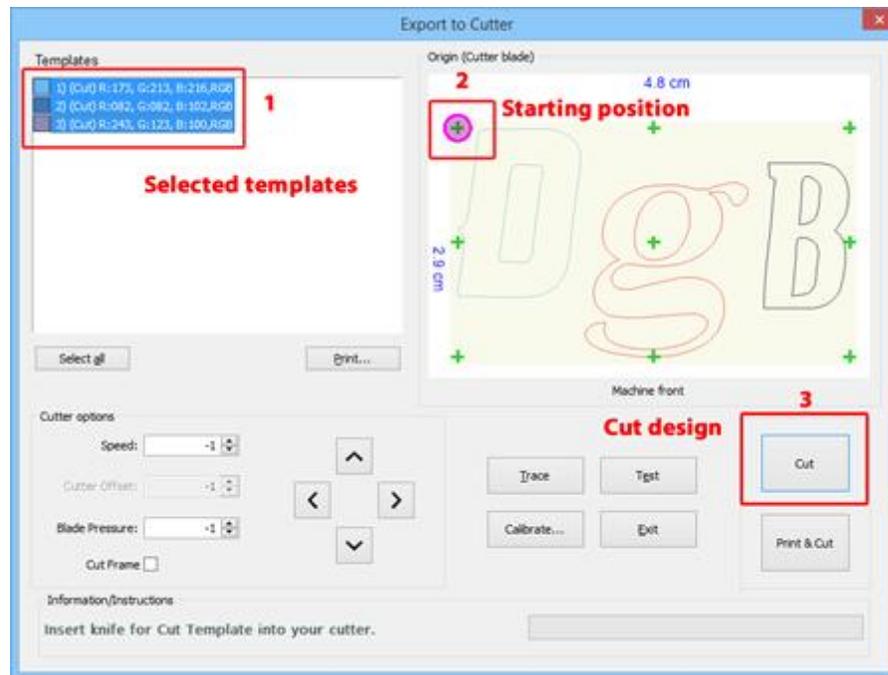
30. First select the design parts that you want to cut from the **Templates** area.
31. Then you should select an **origin**. This is the point that you want the cutter to begin from.
32. If you have never used this material on your Cutter you should first perform a **Test** cut to verify that the material is **Cut** properly with the current settings. Using the arrow buttons move the Blade to a position that will not be used for the actual Cut and press **Test** button. The cutter will perform a test Cut of the material, peel the cut part in order to verify if it was correctly Cut. if it was not adequate adjust the cutter options until you are satisfied by the result.
33. Now you must position the **Blade** for the actual **Cutting** of the material. In our case we must move the **Blade** close to the edge of the upper left part of the material according to the origin we have selected. Use the arrow buttons to move the Blade to a desired position. If you need to fine tune the position of the Blade you can use **Ctrl** , **Shift** keys on your keyboard to adjust the step of the movement.

§ Hold **Shift** key  in order to make the movement small.

§ Hold **Ctrl** key  in order to have a large movement step.

§ Use **Ctrl and Shift** keys together ( + ) to make a very small movement step.

34. You can **Trace** the area that the design will need to make sure that it fits into the material you have placed.
35. Finally press **Cut** in order to start the actual cutting process.



36. After the cutting process remove the cutting mat with the material and peel the letters. That's all for now if you have followed the guide you should now have on hands the letters of the scanned image.

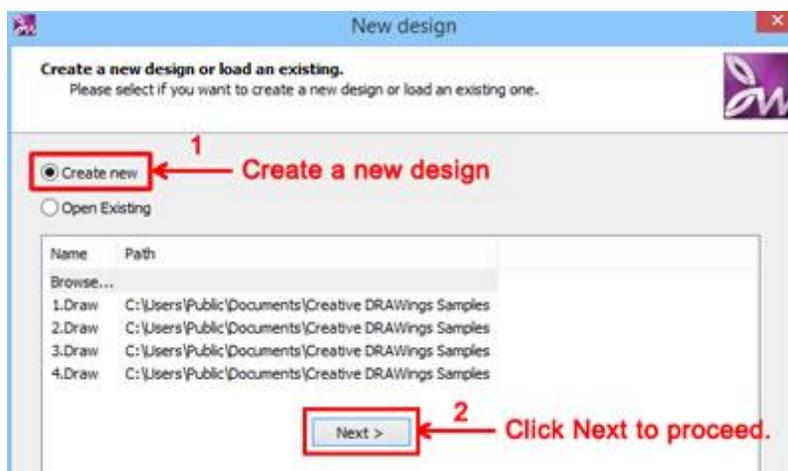
Import from camera and Cut

Another way to acquire an image from a magazine or a flyer or from a drawing you have created on a page is by using any **camera** that is attached on your pc. If your computer has a camera installed (most modern laptops have a camera already installed), you can capture a snapshot image and import almost any design. At this point we are demonstrating the usage of **Cut** technique so please make sure that the artwork that you wish to import is suitable for Cutting. If we have only Cut technique enabled the imported artwork will be converted into **Cut** lines, so a very complex design with lines passing on top of others and a material that is not stable on the cutting mat may fail to produce. If you wish to import a complex design and **Cut** only parts of it you must edit the imported artwork and select which parts to be Cut.

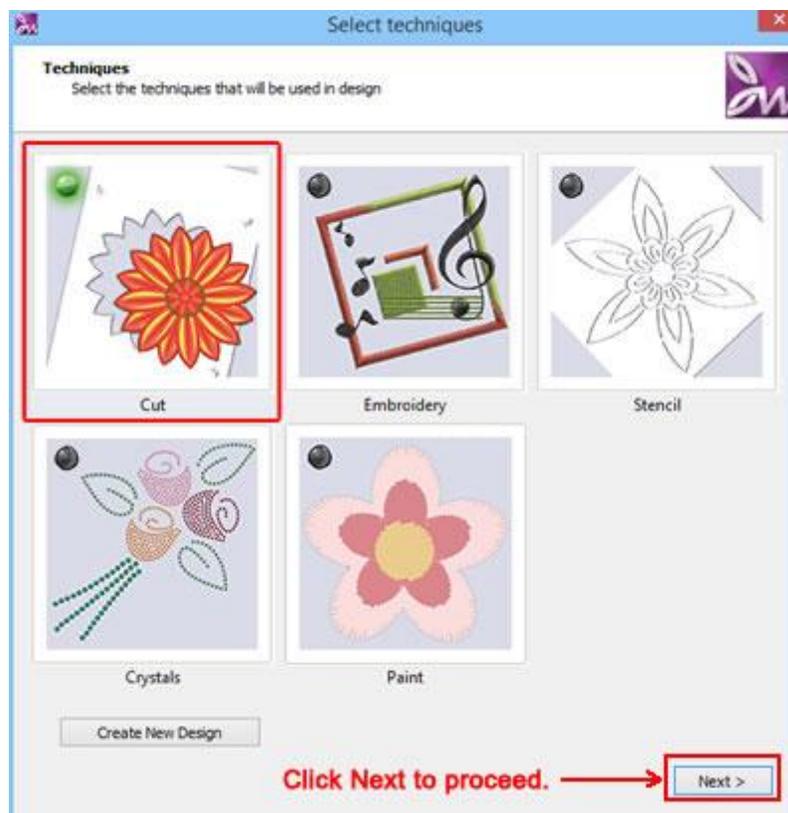
Important: The image which you desire to import must be suitable for Cut according to the material you wish to Cut. Real time images are too complex to use them for Cutting.

Follow these steps to convert a **Bitmap** (picture) images to an embroidery design with your **camera**:

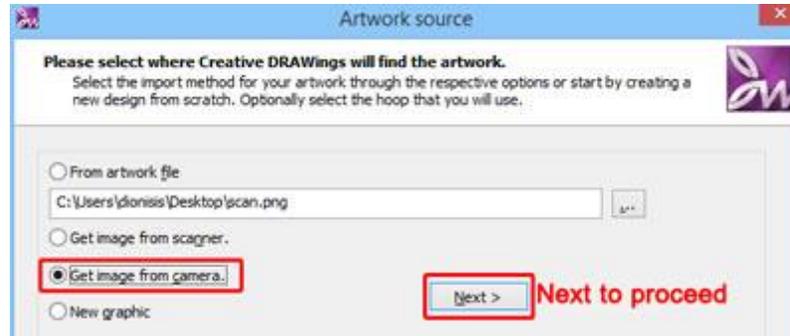
1. Start **Creative DRAWings** by double clicking on shortcut icon  that you will find on your Desktop.
2. **Creative DRAWings** will open and the starting dialog named **New Design** will appear.

*Starting dialog*

3. Select the **Create new** option and click **Next>** button to proceed.
4. In the following step you must select which Techniques you want to be enabled for the created design. For the purposes of this sample we will enable only **Cut** technique. Then click on **Next** button to proceed.

*Select Techniques*

5. The **Artwork source** dialog will appear. In this guide we present how to acquire an image from camera so you must select the **Get image from camera** option and click **Next** to proceed.



Artwork source dialog

6. The camera **Preview** dialog appears.

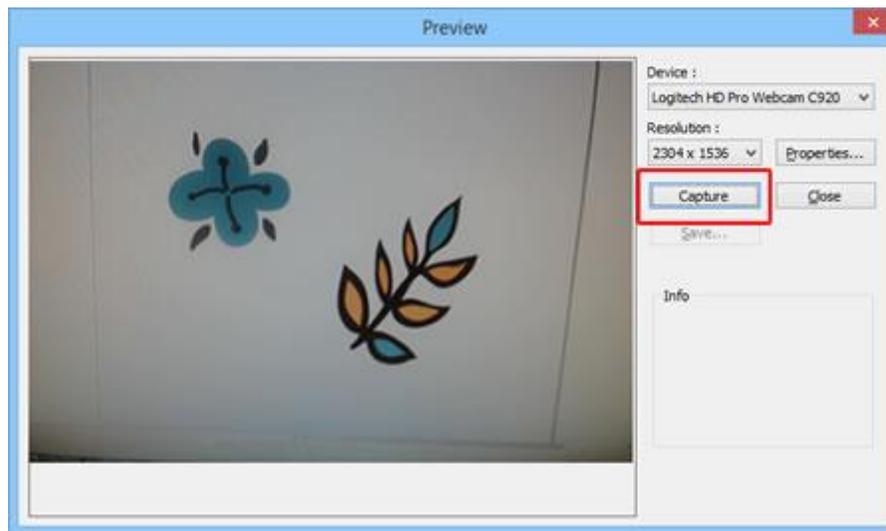


Image scan dialog

7. The camera **Preview** dialog helps you capture the image you want to import into **Creative DRAWings**. If your camera is correctly installed, all you have to do is press the **Capture** button and take a snapshot of the design you want.
8. The design will be captured and the image will appear in **Preview** area. You can specify the exact image to want to embroider (crop image) in **Preview** by drawing a rectangle with your cursor. Only the area inside the rectangle will be embroidered. We will leave it as it is.

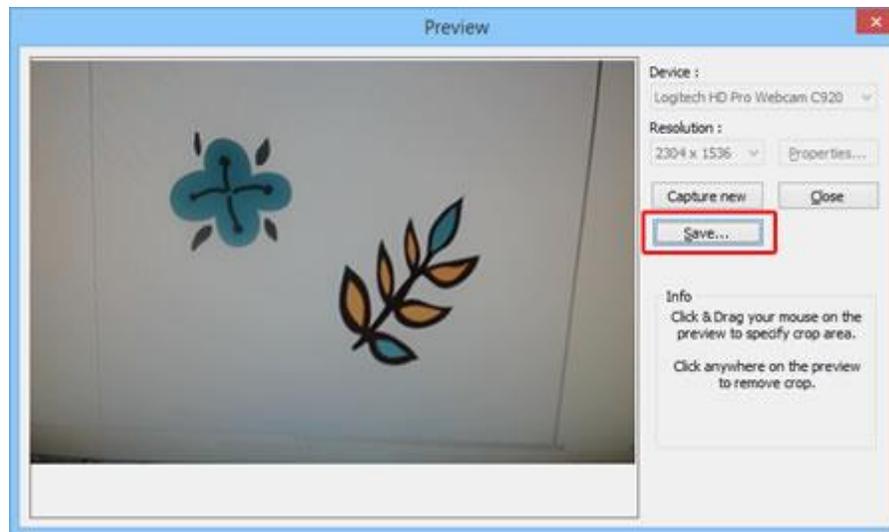
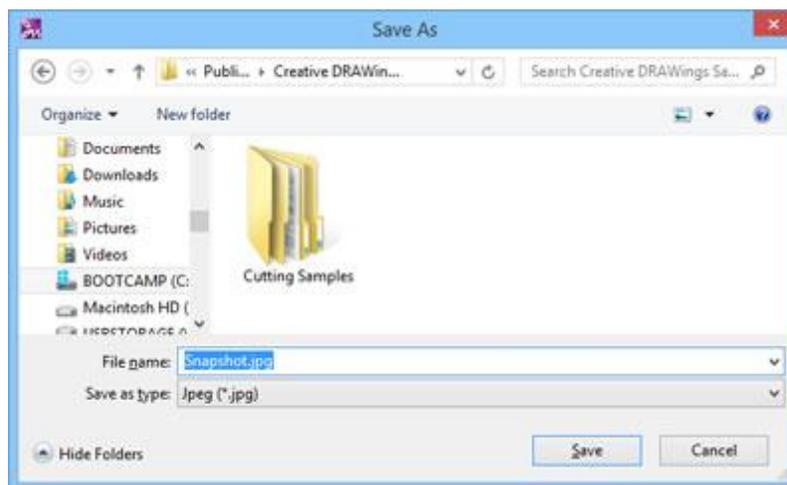


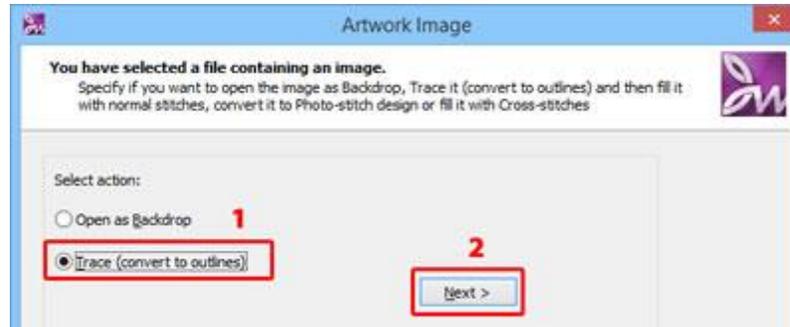
Image scan dialog

9. If you are not satisfied with the image you captured you can click on the **Capture new** button and take a new snapshot.
10. If the design in the **Preview** is what you want to convert to Cut, press the **Save** button to continue.
11. Then you will be asked to save the design on your hard disk. The **Save As** dialog will appear.
12. Select **Documents** icon from the left side and then double click on the **Embroidery designs** folder.
13. In the **File name** field type a name for your image.
14. Select **Save** button to save the scanned image. The captured image is saved as bitmap image (like photo) with **.jpg** file extension.



Save as dialog

15. The **Artwork Image** dialog will appear offering various conversion options.



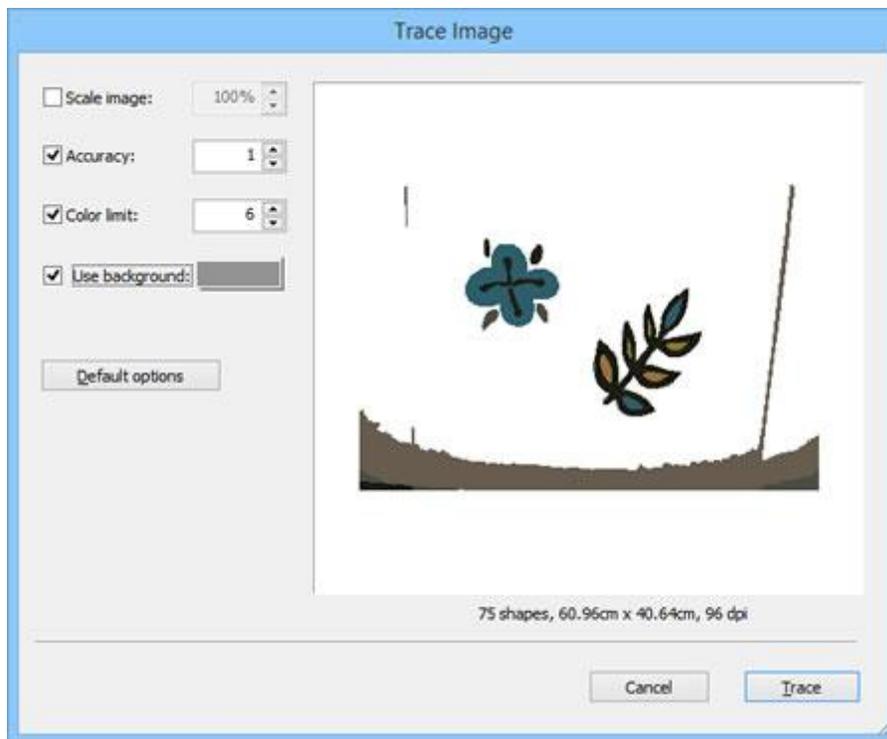
Artwork image dialog

16. In our example we will select the **Trace** option and press the **Next>** button.

Trace (Convert to outlines): This option will guide you to convert the Bitmap (picture) image that you are importing to a Vector (clipart) based image which will be automatically converted into Cut lines. Tracing a Bitmap image is not an easy procedure; therefore you must be careful with the images which you are tracing. They must be clear and ones that can be actually used.

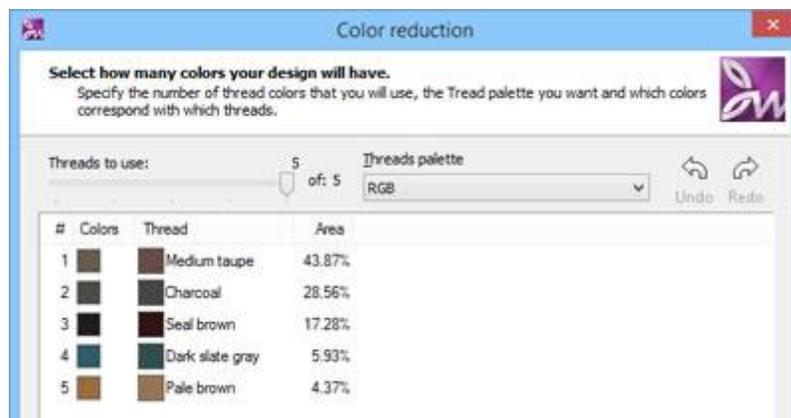
17. The **Trace Image** dialog will appear with the captured image imported. In the **Preview** on the right you can see what the traced result of the **Bitmap** (picture) image will look like. The **Vector** (clipart) design from tracing the scanned image is the same image you see in the **Preview** of the **Trace Image** dialog. What you see is what you get.
18. The conditions of lighting are very important when importing from camera. In order to improve the result we have adjusted some options of the Trace dialog.
19. We have changed the **Accuracy** value by setting to 1.
20. We have set the Color limit to 6.
21. And we have removed the Gray background by enabling Use background and selecting the background color.

Any changes you make to these options are automatically adjusted by *Creative DRAWings* and shown in **Preview**.



Trace image dialog

22. Click on **Trace** to proceed.



Color reduction dialog

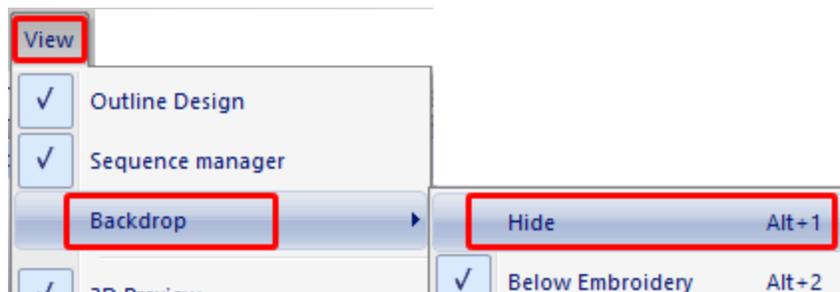
23. Click **Finish** to end the process and convert the imported design into **Cut** lines.

24. The camera capture will appear in the design area. Since we only have **Cut technique** enabled it has been converted into Cut lines.



The traced image filled with stitches

25. In order to be able to see the result clearly we will hide the automatically added backdrop. From menu **View**, sub-menu **Backdrop**, enable **Hide** option. You can also use **Alt+1** keyboard combination in order to hide the backdrop.



Hide backdrop

26. Now as you can see on the following figure the scanned image has been converted into **Cut** outlines.
27. At this point we must mention that there may be various unneeded parts that you may need to delete from the design. We have already removed them as you can see in the figure below.



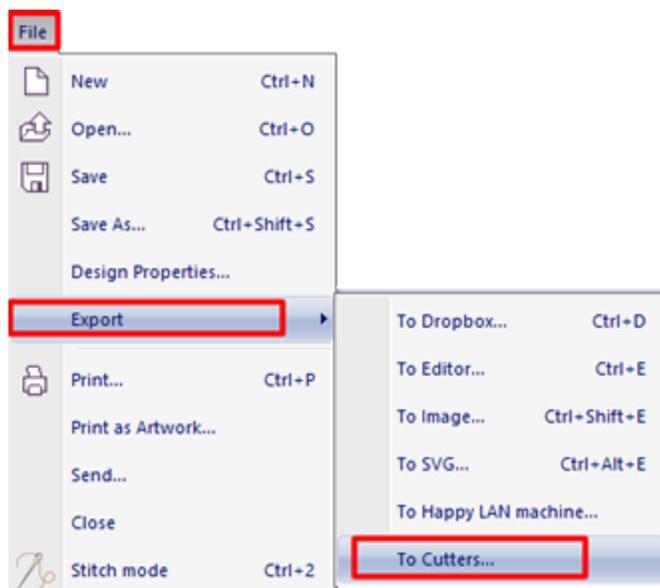
The imported design

28. There are many changes that you can do on the artwork or create new parts, but we will not present them now in this **Quick Start** topic. We will only present the procedure of producing this **Cut** design with a digital cutter.

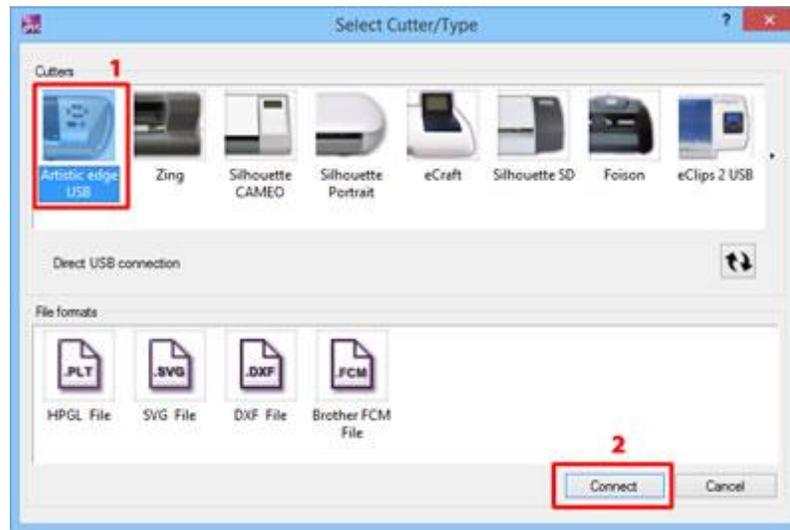
At this point we must mention that any design part - artwork can be converted into a cut line simply by selecting the desired part and click on the Cut outline type . You can use the design tools to add new parts on this design and by selecting cut outline type  you can easily changes created parts into Cut lines

29. Let's suppose that we are done with the design and we are ready to Cut the parts using our digital cutter.

30. From **File** menu, **Export** sub-menu activate **Export to Cutters** option.

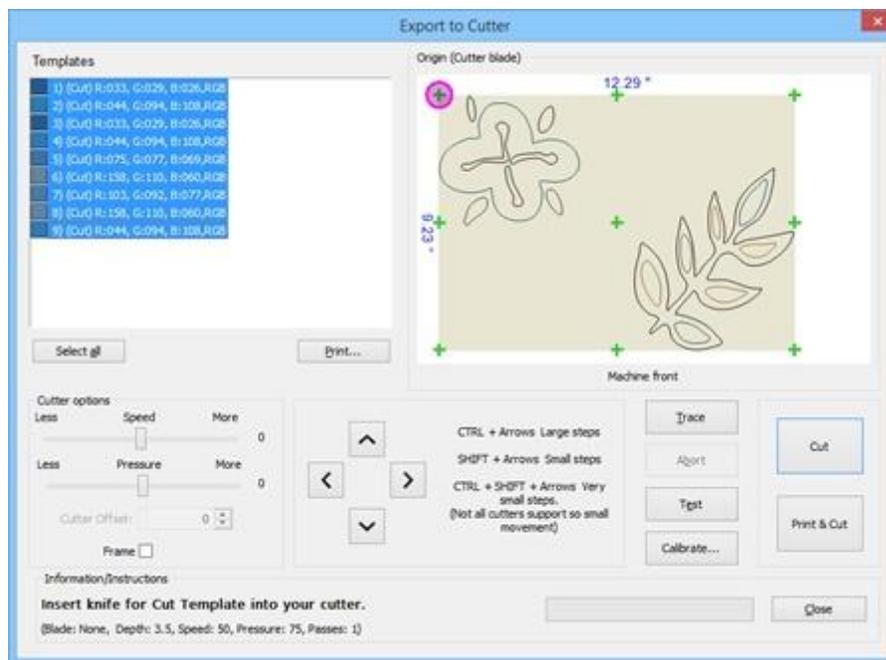


31. From the appearing dialog we must select one of the **Cutters** to connect or a **File format** if we want to export to a file and import to our cutter in a manual way. In our sample we will use **Artistic Edge** cutter, click on the **Artistic Edge** Cutter icon and then click on **Connect** to proceed.



Select a Cutter or Export to a file

32. The **Export to Cutter dialog** will appear, using this dialog you can **Cut** any design part with your cutter. If the Digital Cutter is properly connected and powered ON, then at this point you should be able to directly communicate with the Cutter through this dialog.
33. Before proceeding you must have loaded the cutting mat with the cutting material into the Cutter.
34. First select the design parts that you want to cut from the **Templates** area.
35. Then you should select an **origin**. This is the point that you want the cutter to begin from.
36. If you have never used this material on your Cutter you should first perform a **Test** cut to verify that the material is **Cut** properly with the current settings. Using the arrow buttons move the Blade to a position that will not be used for the actual Cut and press **Test** button. The cutter will perform a test Cut of the material, peel the cut part in order to verify if it was correctly Cut. if it was not adequate adjust the cutter options until you are satisfied by the result.
37. Now you must position the **Blade** for the actual **Cutting** of the material. In our case we must move the **Blade** close to the edge of the upper left part of the material according to the origin we have selected. Use the arrow buttons to move the Blade to a desired position. If you need to fine tune the position of the Blade you can use **Ctrl** , **Shift** keys on your keyboard to adjust the step of the movement.
- § Hold **Shift** key  in order to make the movement small.
 - § Hold **Ctrl** key  in order to have a large movement step.
 - § Use **Ctrl and Shift** keys together ( + ) to make a very small movement step.
38. You can **Trace** the area that the design will need to make sure that it fits into the material you have placed.
39. Finally press **Cut** in order to start the actual cutting process.

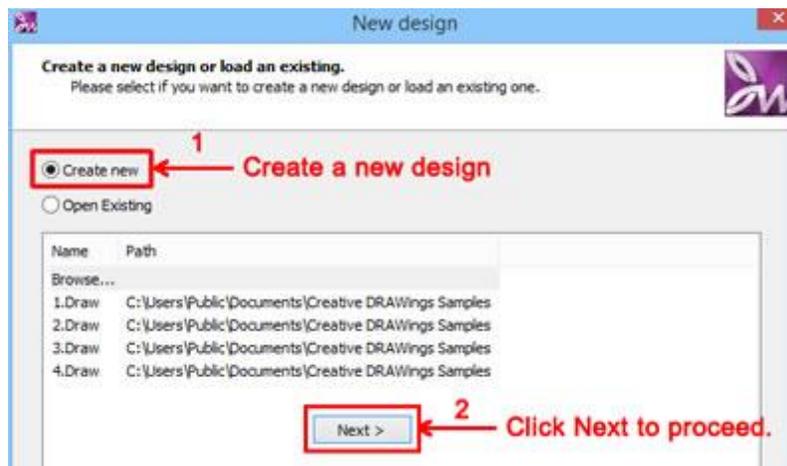


40. After the cutting process remove the cutting mat with the material and peel the letters. That's all for now if you have followed the guide you should now have on hands the letters of the scanned image.

Create a Cut design from scratch

In the previous **Quick start** topics we have described the various ways to import artwork and automatically convert into a design with **Cut** objects. Now we will create a design from scratch, without using any artwork source and using the available design tools and we will design some objects and make them **Cut** objects.

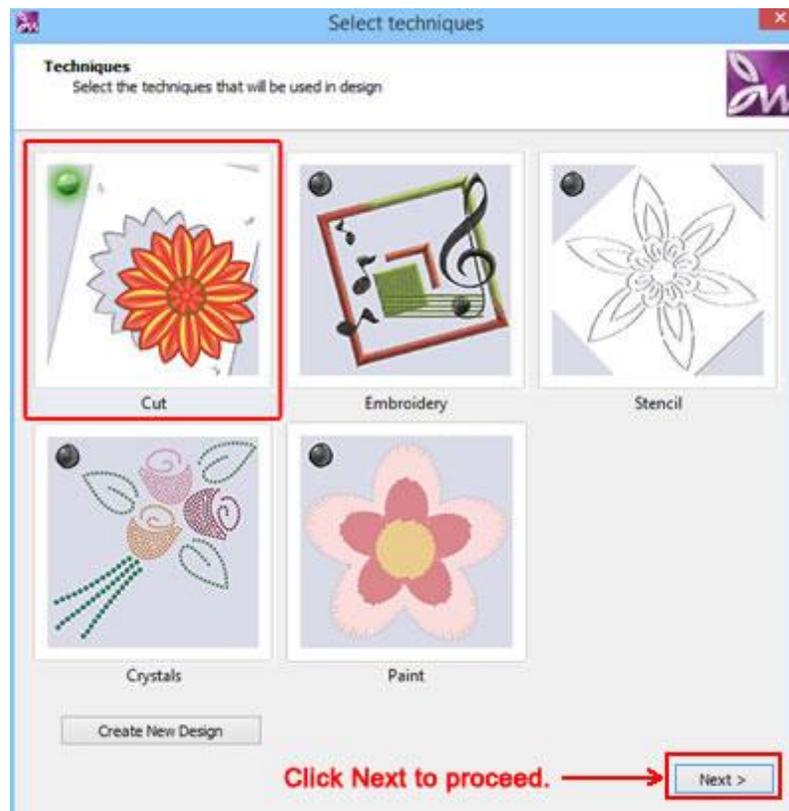
1. Start **Creative DRAWings** by double clicking on shortcut icon  that you will find on your **Desktop**.
2. The application will load and the **startup wizard** will prompt you to **create a new design** or **load an existing**.



Starting dialog

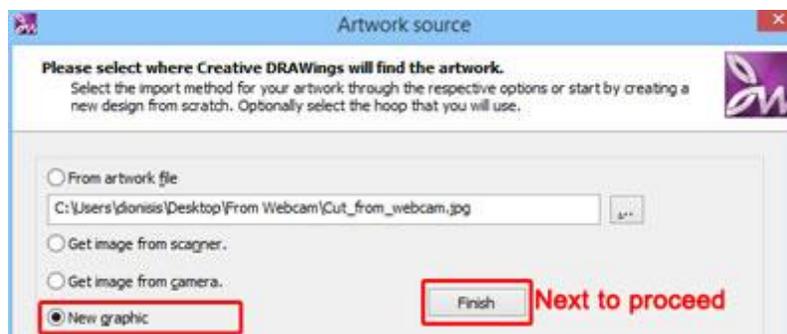
3. Select the **Create new** option and click **Next>** button

4. In the following step you must select which Techniques you want to be enabled for the created design. For the purposes of this sample we will enable only **Cut** technique. Then click on **Next** button to proceed.



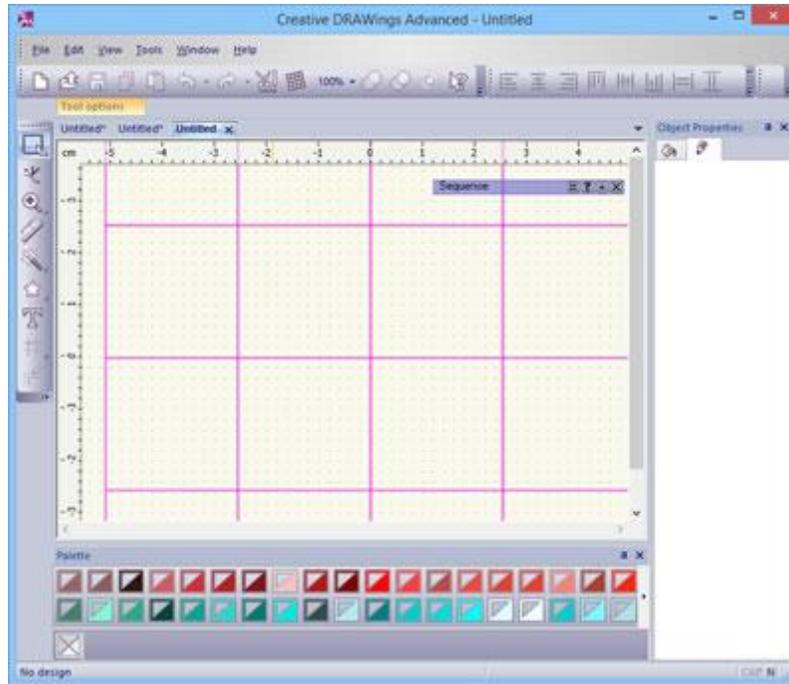
Select Techniques

5. The **Artwork source** dialog will appear. In this guide we will create a design from scratch so we must select **New Graphic** option and click **Finish** to proceed.



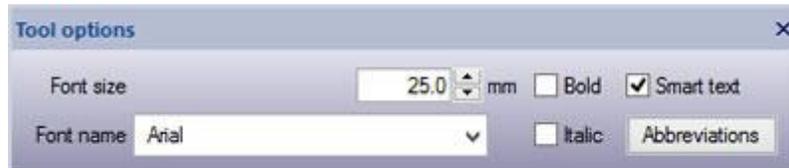
Artwork source dialog - 2nd page.

6. The workspace will appear, with a grid that looks like a **cutting mat** but without any design in it.



Empty workspace

7. We will create a logo like design with a **Text** object and a **Symbol**, and then cut the letters and the symbol into a material with different color. From the **Tools** toolbar that is located at the left side of the working space, and holds all the designing tools select the text tool .
8. First of all you should notice that using **Tools options** toolbar you can adjust the options of the added text.



Adjust Text options

9. Now click on the position that you like to place the text. The text cursor will appear waiting for you to type the text. We will type Water and the we will left click the Rectangle selection  to finalize the entered text and release the text tool.

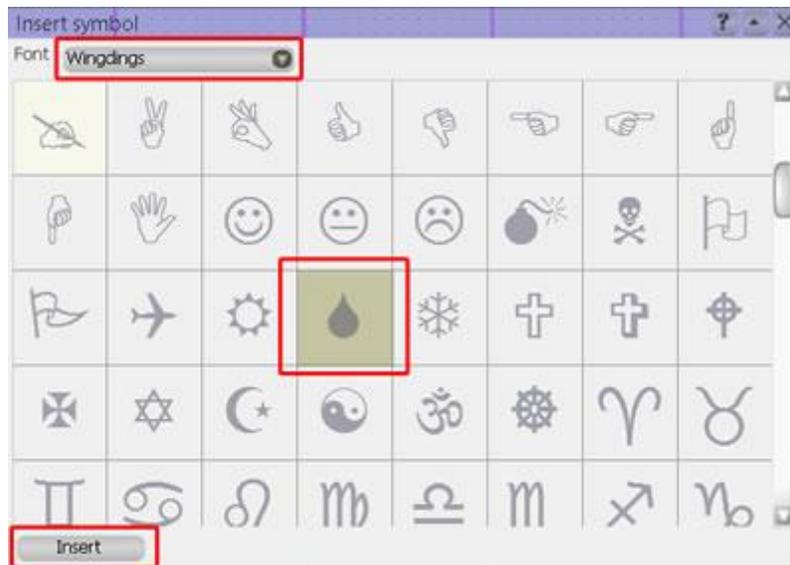


Entered text

10. In order to be able to separate text object i will select a light Fill color and a darker outline color as you can see in the following figure.

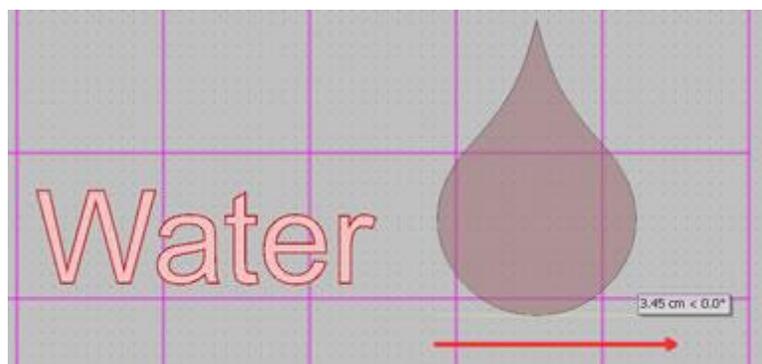


11. Now we will use **Insert symbol** of **Tools** menu option in order to add a drop shape. Activate **Insert symbol** option, on the appearing 3D dialog, select **Wingdings** font, select the **drop** icon as on the following figure and press **Insert** button.



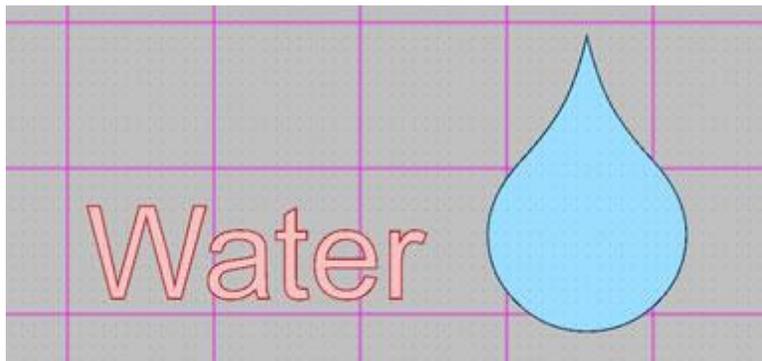
Insert symbol

12. The **insert symbol** dialog closes and the cursor turns into a cross waiting for you to specify the position of the symbol. Click and drag to define position and size of the the symbol.

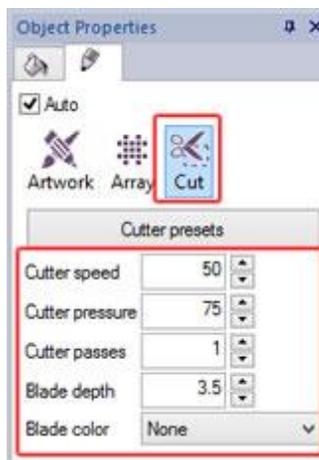


Insert symbol

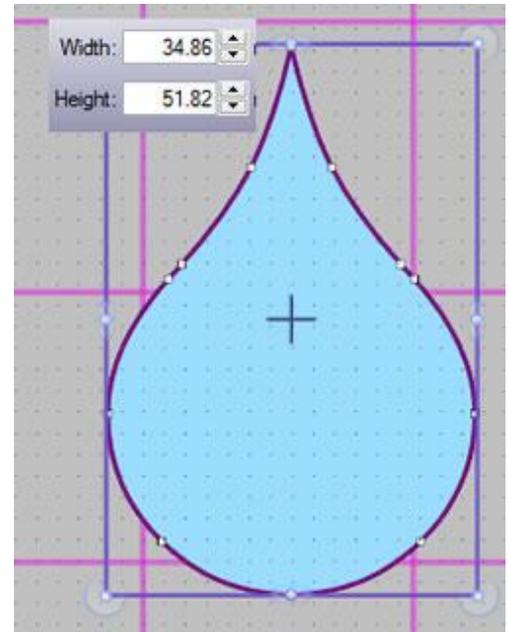
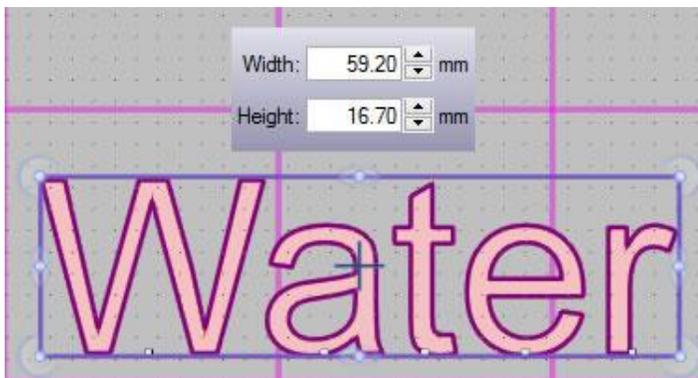
13. We will select a light blue color for the fill of the symbol and a darker blue for the outline of the symbol.



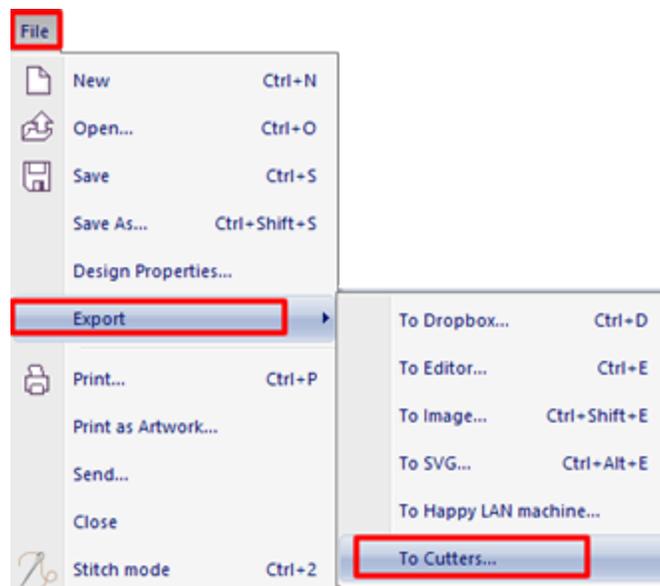
14. Since we have only **Cut** technique enabled any object we design is automatically set to have a **Cut** outline type. So we do not need to do anything, the created objects are already Cut objects. Select both the Text object and the Symbol and check the **outline properties**. As you can see on the following figure there are also some options about the Cutter we will present them later in detail.



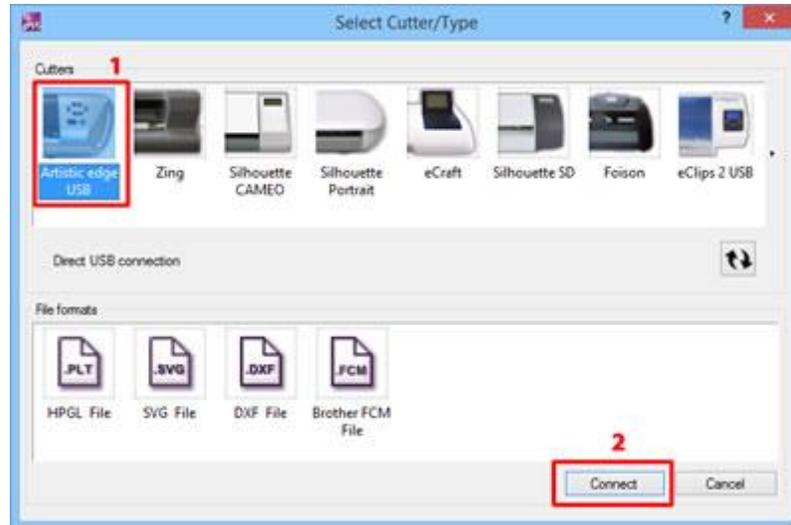
15. Let's suppose that we are done with the design and we are ready to Cut the parts using our digital cutter. We want to Cut the characters on a Red color material and the symbol on a Blue color material. So we need a Red adhesive material sized Width 6.5 and Height 2,5 according to the size of the Text part to be placed on the cutting mat and Blue one according to the size of the drop symbol.



16. From **File** menu, **Export** sub-menu activate **Export to Cutters** option.

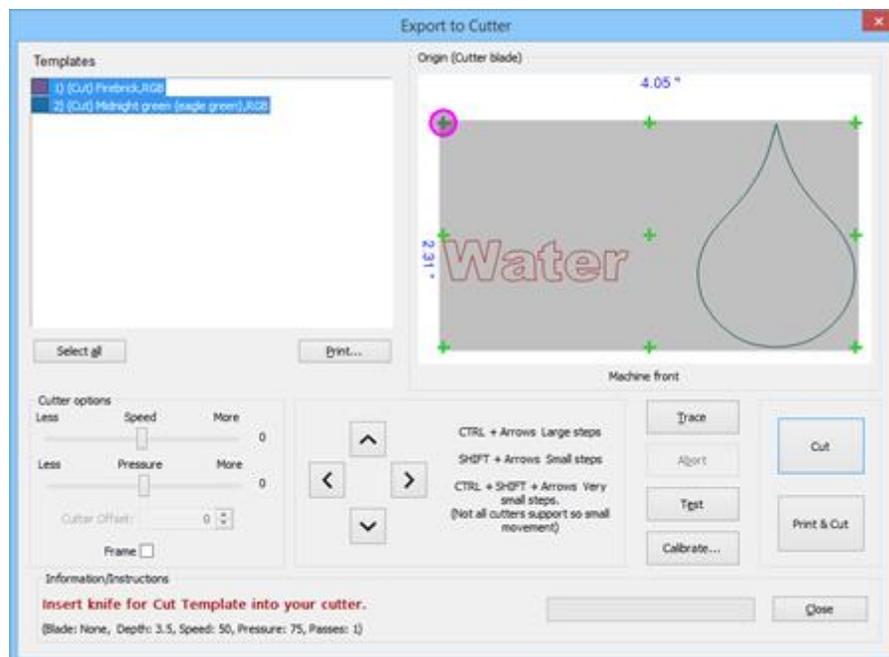


17. From the appearing dialog we must select one of the **Cutters** to connect or a **File format** if we want to export to a file and import to our cutter in a manual way. In our sample we will use **Artistic Edge** cutter, click on the **Artistic Edge** Cutter icon and then click on **Connect** to proceed



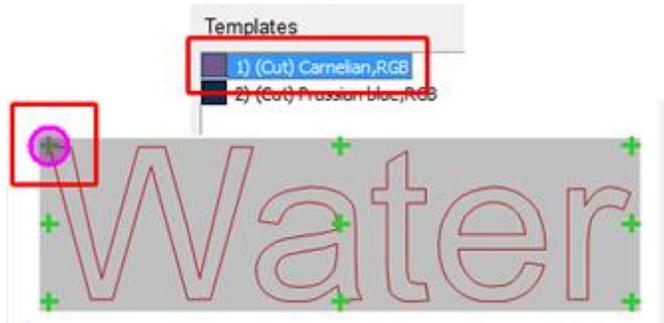
Select a Cutter or Export to a file

18. The **Export to Cutter** dialog will appear, using this dialog you can **Cut** any design part with your cutter. If the Digital Cutter is properly connected and powered ON, then at this point you should be able to directly communicate with the Cutter through this dialog.

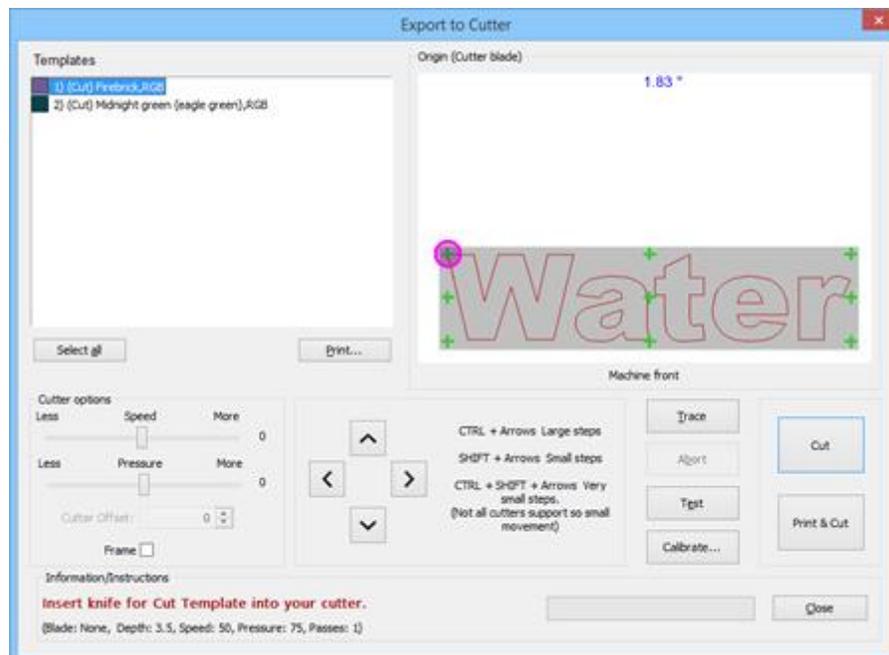


Before proceeding you must have loaded the cutting mat with the cutting materials into the Cutter.

19. First we will select the Text part to be cut from the **Templates** area and set the starting point o the upper left corner. This is the point that you want the cutter to begin from.



20. If you have never used this material on your Cutter you should first perform a **Test** cut to verify that the material is **Cut** properly with the current settings. Using the arrow buttons move the Blade to a position that will not be used for the actual Cut and press **Test** button. The cutter will perform a test Cut of the material, peel the cut part in order to verify if it was correctly Cut. If it was not adequate adjust the cutter options until you are satisfied by the result.
21. Now you must position the **Blade** for the actual **Cutting** of the material. In our case we must move the **Blade** close to the edge of the upper left part of the material according to the origin we have selected. Use the arrow buttons to move the Blade to a desired position. If you need to fine tune the position of the Blade you can use **Ctrl** , **Shift** keys on your keyboard to adjust the step of the movement.
- § Hold **Shift** key  in order to make the movement small.
 - § Hold **Ctrl** key  in order to have a large movement step.
 - § Use **Ctrl and Shift** keys together ( + ) to make a very small movement step.
22. You can **Trace** the area that the design will need to make sure that it fits into the material you have placed.
23. Finally press **Cut** in order to start the actual cutting process..



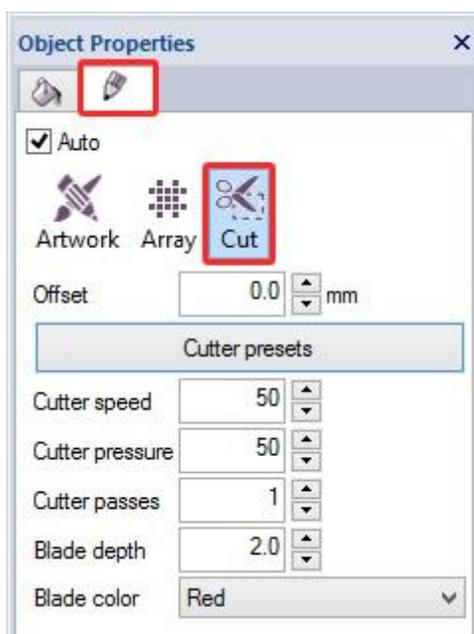
24. After the cutting process of the text part is complete you must Cut the symbol part. Select the symbol template, set the same starting point and move the Blade to the upper left corner of the blue material on the cutting mat using the arrows. Press Cut to proceed cutting the Symbol part. If you have followed all the steps correctly then at this point you must be peeling out the part to use them for your projects.

Cut properties

As we have already mentioned we can easily create any design and by applying the **Cut**  outline type we

can Cut the design using our digital cutter. **Cut**  outline type is applied only on objects that have outline, otherwise it is not available. If we import a vector design, with only **Cut** Technique enabled then the vector design is automatically converted into Cut lines. In any other case the imported - created artwork will have another type of outline. We can apply **Cut** on any object simply by selecting the object and then select the

Cut  option from the **Outline** tab .



Cut properties

The options that can be adjusted, in order to produce the Cut you want, are cutting offset and various cutting options.

Offset

Offset mm

Using **offset** option for **cut** outlines  you can specify the distance, inner or outer, you want the **Cut** to be moved. For example: if you set the **Cutting offset** value to 3mm the Cut will move its outline by 3mm to all directions outside its starting position. On the other hand if you set the value to -3mm the Cut will move its outline by 3mm to all direction inside its starting position. In the **Offset** numeric field you can enter the value

of offset you want (Cut offset), with lowest value of -15mm and highest value 15mm. Also, you can increase or decrease the offset value by clicking on the arrows next to the value or by clicking on the value and rotating the mouse wheel, if there is one. The value that you are inserting defines the exact distance you want the Cutting to have from the initial artwork position. If the value is negative an inner offset will occur and the opposite, if it is positive. The default offset value is zero and can be changed only from you. Any changes you are making on the offset value they are automatically previewed on the design

Cutter presets

All the **Cut** objects are produced by placing a **Blade** to your digital cutter and then exporting the design to the cutter. The following cutter options (**Cutter pressure, Speed, Passes, Blade color** and **Depth**) should be adjusted correctly in order to produce any design using your digital cutter. The following cutter options must be adjusted either for each object, here in object properties, or at the **Export to Cutter** dialog. In order to assist you in selecting the proper settings according to the material and the type of the operation we have prepared various operation presets. Click on the **Cutter presets** button and from the drop down menu, select any of the available presets for your **Cutter** and the **material** that you are going to use. This preset selection affects only the selected objects

Cutter speed	52	▲ ▼
Cutter pressure	50	▲ ▼
Cutter passes	1	▲ ▼
Blade depth	3.5	▲ ▼
Blade color	Red ▼	

Artistic Edge - Vinyl preset

For example, if you are going to cut a design onto **Vinyl** using **Artistic Edge** cutter you must select the appropriate preset. If we select **Edge - Vinyl** preset then all the cutter options we be set as on the above figure.

Cutter presets			
Name	Material	Blade color	Blade depth
Edge	Vinyl	Red	3.5
Edge	Fabric treated with Terialmagic	Yellow	2.0
Edge	Fabric backed with "fusible iron-on"	Yellow	2.5
Edge	Wool Felt - treated with Terialmagic	Yellow	4.5
Edge	Naugahyde	Blue	4.5
Edge	Card stock -N exact index 110lbs	Red	2.0
Edge	Card stock	Red	2.5
Edge	Heavy metallic card stock	Blue	4.0
Edge	Contact paper	Red	2.0
Edge	Crystals (green or back)	Blue	3.5
Edge	Stencil	Blue	6.0
Edge	Paint	None	0.0
Zing	25mil Rhinestone template	None	0.0
Zing	18mil PVC Rhinestone Template	None	0.0
Zing	Fabric + Freezer	None	0.0
CAMEO	25mil Rhinestone template	None	0.0
CAMEO	18mil PVC Rhinestone Template	None	0.0
eCraft	25mil Rhinestone template	None	0.0
eCraft	18mil PVC Rhinestone Template	None	0.0
Foison	25mil Rhinestone template	None	0.0
REDSail	25mil Rhinestone template	None	0.0
GCC_Jaguar	25mil Rhinestone template	None	0.0

Cutter speed

Cutter speed

With this value, you can specify the speed that the machine will cut the design. This value varies from cutting machine to cutting machine and some machines does not allow you to change this value at all through our software. You can make adjustments though, through the machine's panel. Feel free to change the **Speed** setting based on the speed you want the design to be cut.

The **Cutter speed** field can take values from 0 up to 100.

Cutter pressure

Cutter pressure

With this value, if it is enabled, you can specify the force that the machine will add on the blade in order to cut the design or to the Pen/brush in order to draw the design. This value varies from cutting machine to cutting machine and some machines does not allow you to change this value at all through our software. You can make adjustments though through the machine's panel.

Feel free to change the **Cutter Pressure** setting based on the depth you want the material to be cut or paint. The value of Cutter Pressure varies from cutting material to cutting material. Thicker material need more pressure and thinner less.

The **Cutter pressure** field can take values from 0 up to 100.

Passes

Cutter passes

You can specify the number of **Passes** you want the design to be made with. It actually defines how many times each shape will be made by the machine.

Blade depth

Blade depth

With this option you can set the **Blade depth** of the cutter blade. This value varies from cutting machine to cutting machine and it depends on the blade selection (some digital cutter have more than one blades) . This option is some kind of informational because you may need to adjust the blade depth manually by hand when placing the blade to the digital cutter. The value of **Blade depth** varies from cutting material to cutting material. Thicker material need more depth and thinner less.

The **Blade depth** field can take values from 1 up to 12.

Blade color

Blade color

This drop down menu lists the **Blade color** that you have to use in order to cut the specific material. This is applicable on specific machines that include various blades, with different colors. Usually each color is for cutting different material. Check the cutters manual for more information about which blade is from which material.

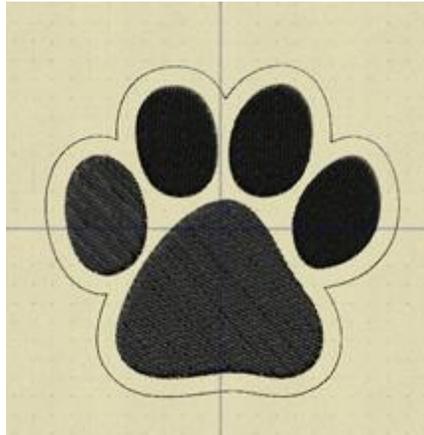
For example, for Artistic Edge cutter the Blades are for the following use:

- Blue Cap Blades is for cutting thicker materials
- Red Cap Blades is for cutting thin materials
- Yellow Cap Blades is for cutting fabrics

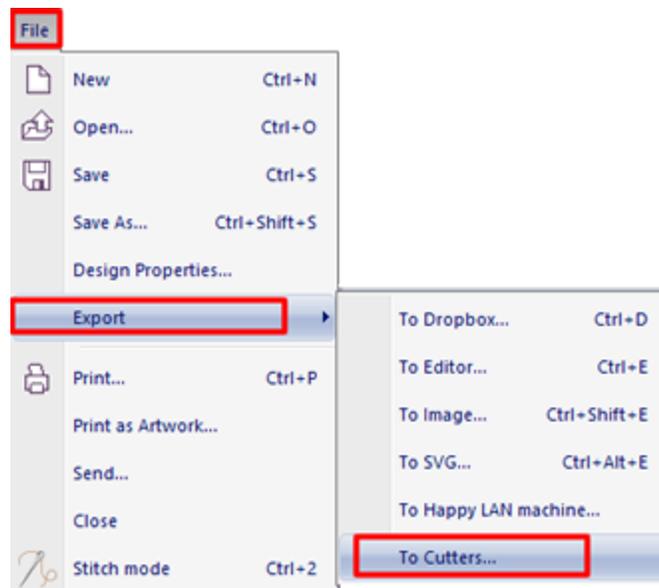
Select the Blade color that you will use for the currently selected object and during the Cutting process the Software will notify you that you will have to use the respective Blade color in order to cut the shape.

Print & Cut

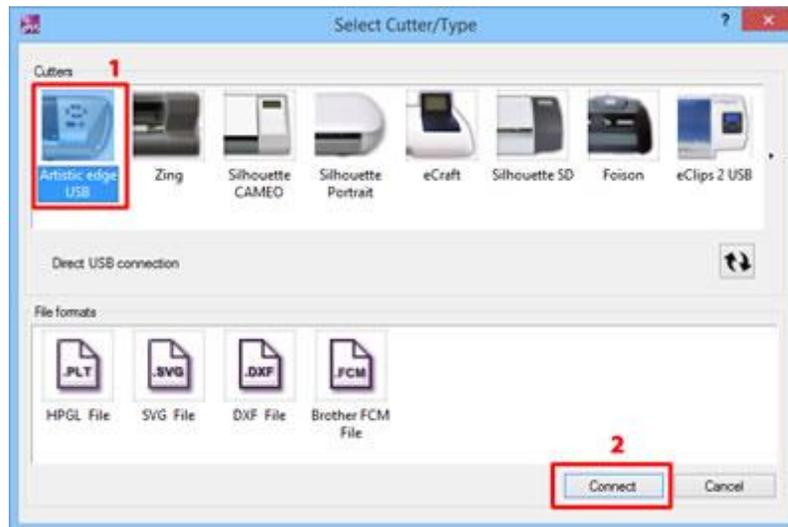
Let's make a brief presentation on how **Print & Cut** functionality works. As we have already mentioned **Print & Cut** functionality works in 2 ways according to the used cutter. For **Zing** and **Foison Koala** that have a laser pointer we must point (on the printed paper) with the laser pointer these special marks during the procedure so that the print and the cut are properly aligned. For **Silhouette CAMEO** that has a special optical recognition mechanism we must place the printed paper to the cutter and the Cutter will recognize the special marks using optical recognition. For the following example we have used **Zing** cutter that uses a laser pointer. We will start from the design of the following figure.



From **File** menu, expand option **Export** and from appearing menu use **To Cutters** option.

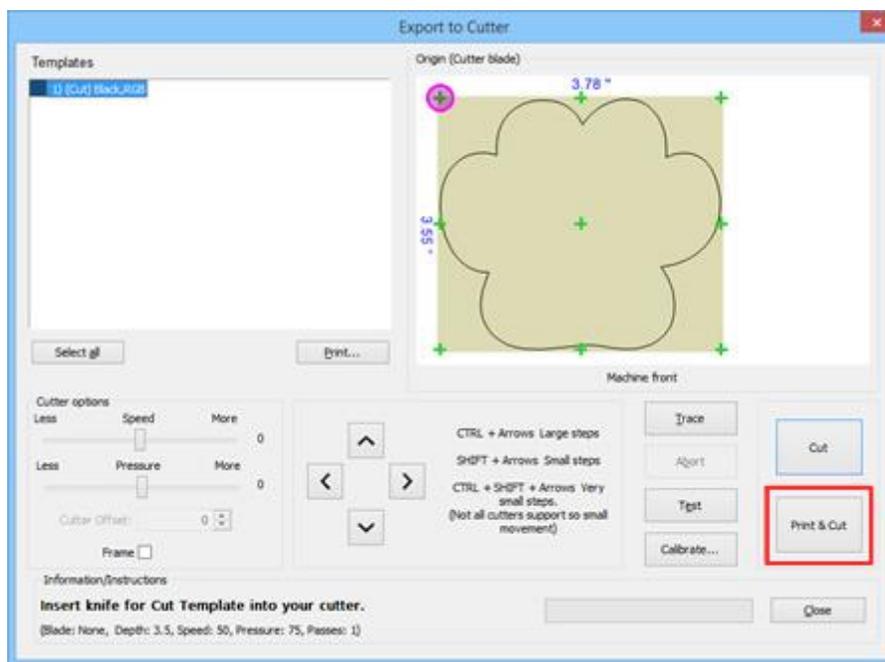


From the appearing dialog we must select one of the **Cutters** to connect or a **File format** if we want to export to a file and import to our cutter in a manual way. In our sample we will use **Artistic Edge** cutter, click on the **Artistic Edge** Cutter icon and then click on **Connect** to proceed.

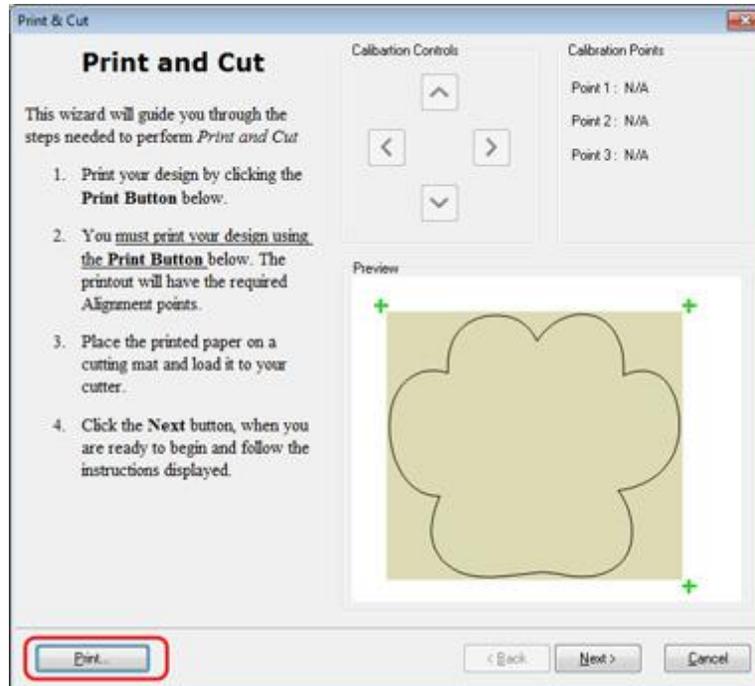


Select a Cutter or Export to a file

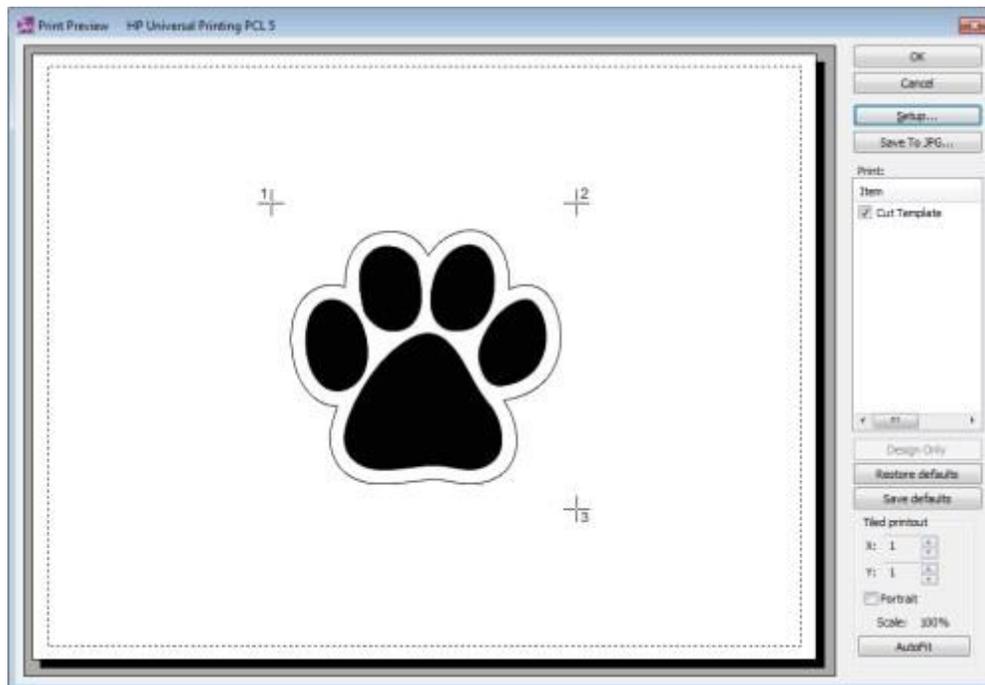
The **Export to Cutter** dialog will appear, using this dialog you can **Cut** any design part with your cutter. If the Digital Cutter is properly connected and powered ON, then at this point you should be able to directly communicate with the Cutter through this dialog. For the purposes of this demonstration we will present **Print & Cut** functionality.



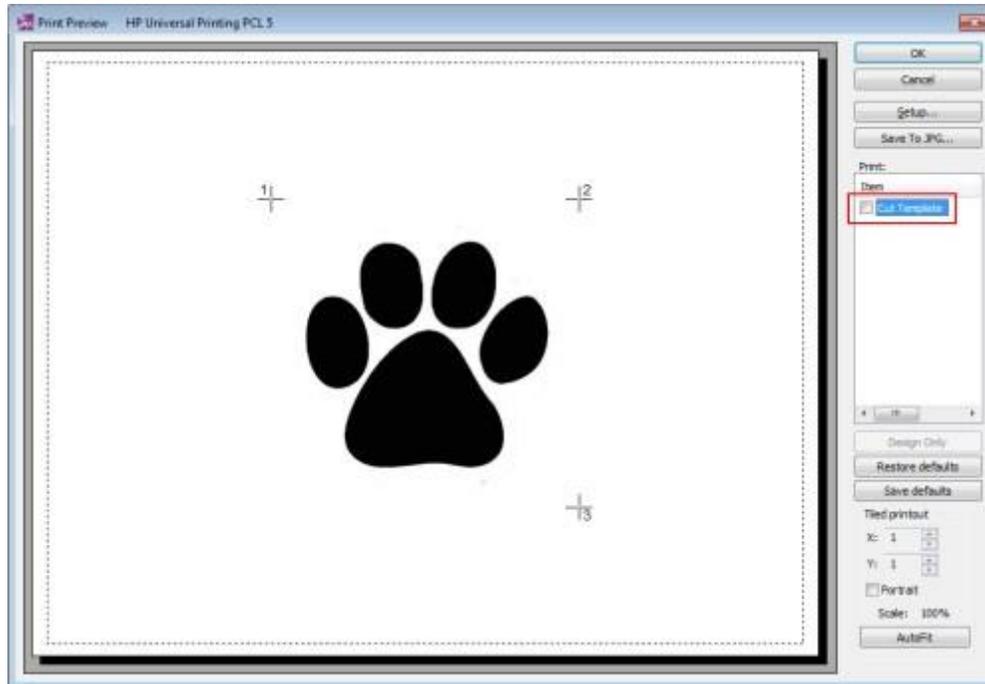
A wizard will start to guide us through the procedure. First you must press **print** to send the design to your printer.



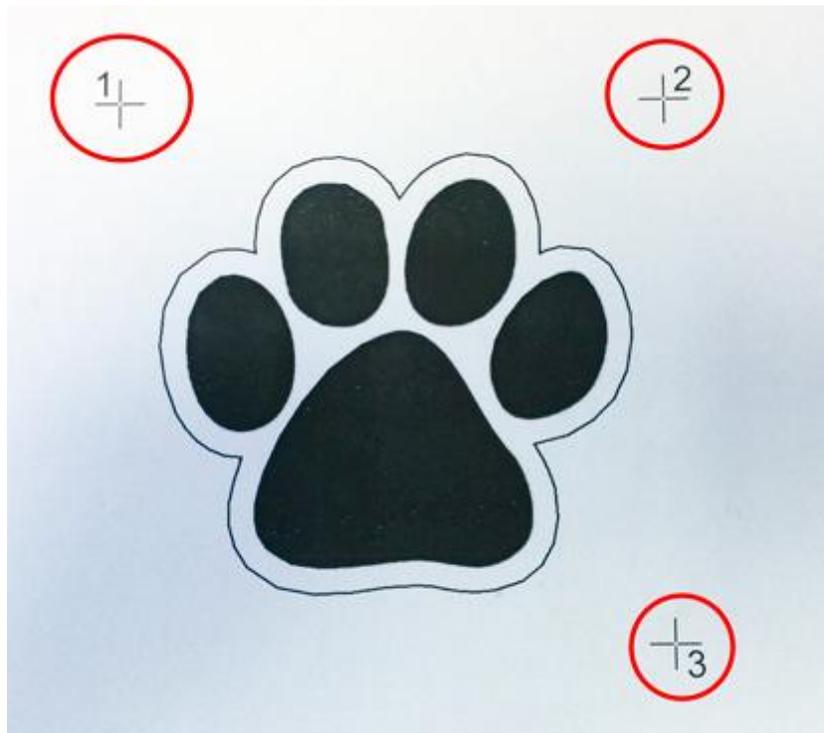
Adjust printing options and press OK to send to your printer.



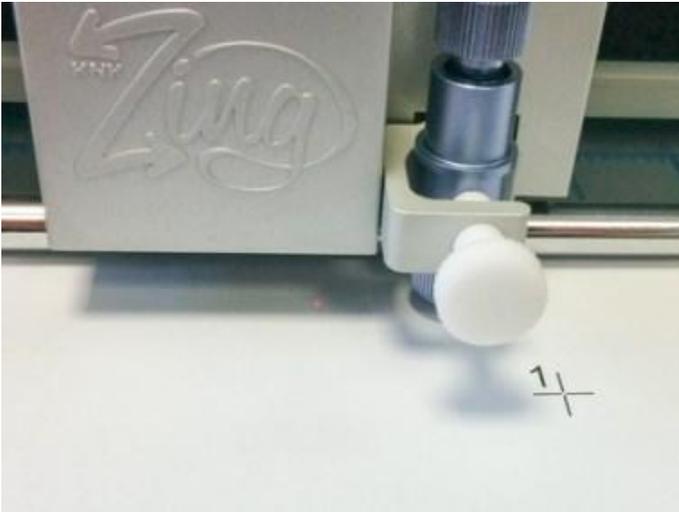
At this point we must mention that you can remove the cutting line from the print in order to have only the artwork and not the cut line.



Now you must place the printed paper onto the cutting mat and place the mat to the Cutter. The printed paper appears on the following figure. Now by pressing next on the **Print & Cut** wizard we are prompted to move the laser pointer to the 3 points that are pointed by the red ellipses.



Press Next to define the first one, move the laser pointer using the arrow keys to the center of the cross of each point.



Move the laser pointer using the arrow keys on your keyboard to move the pointer at the center of axis of the first point



Move to the center of the first point using the arrow keys and press Next.



Move the pointer to the center of the second point using the arrow keys and press Next.



Move to the center of the third point using the arrow keys and press Cut to start the actual cutting process.

At the end you can remove extra paper and you have the outline of your design cut.



Chapter XVI

Stencil - Creating stencil designs

In this section we will describe the ability of the software to create Stencil designs. Stencil produces an image or pattern by coloring a surface over an intermediate object with designed gaps in it, which create the pattern or image by only allowing the color to reach some parts of the surface. There are stencil designs that have large cut areas that need to be bridged before cutting them, otherwise the pattern/shape will not be applied correctly. To do that, you have to add a bridge in the outline of the design and increase the support of the material.

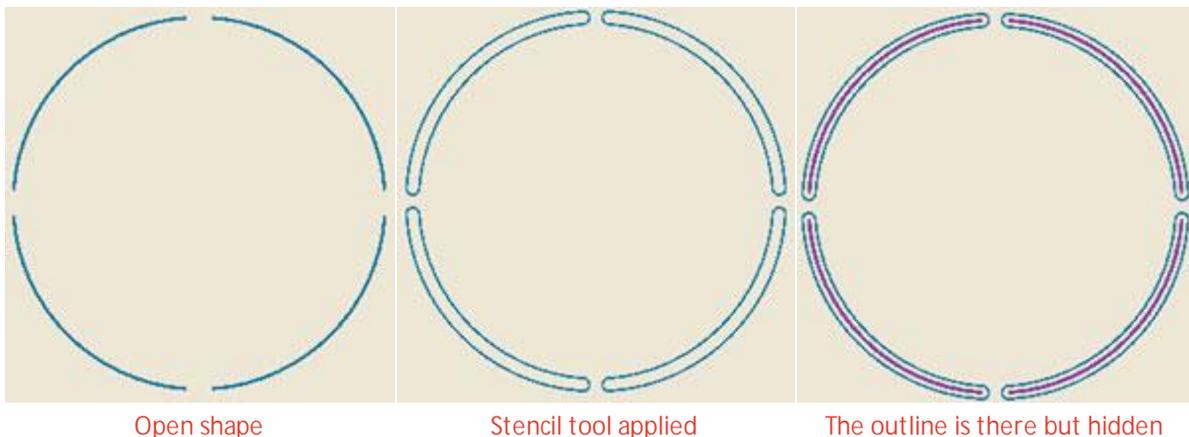
There are many parameters in the software that can help you adjust the stencil design and produce the result you want.

In order to be able to use the Embroidery tools of the software you will have to enable the Stencil Technique from the Techniques  option.

Stencil how it works

Creative DRAWings includes a special **Pen/Outline** type that can convert any open shape to **stencil** shape.

To apply it on an open shape you have to select it and then click on the Stencil  icon at the object properties toolbar. The open shape will become stencil shape without altering the artwork. A curve outline will be drawn around it to specify the area that will be cut.



Open shape

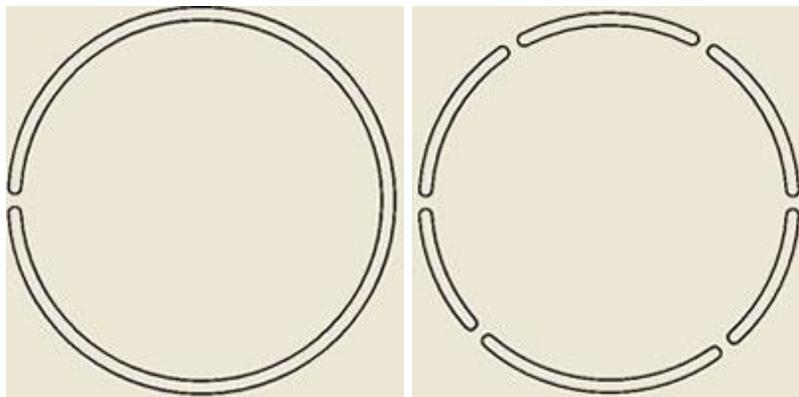
Stencil tool applied

The outline is there but hidden

If you try to apply stencil on a closed shape you will see no difference. To create a stencil based on a closed shape you will have to make it an open shape first and then apply the stencil tool. To make it open shape you will have to click on the **Edit shape nodes**  option, right click on the outline of the closed shape (at the location where the stencil bridge will be added) and select **Stencil bridge** option. The closed shape will

become open and the stencil outline will be applied. If you want you can continue adding more stencil bridges, in order to make your stencil more stable.

For example if you have a stencil shape circle, you cannot have only one stencil Bridge. You have to add more than one bridges in order to make the stencil design more stable.



Only one stencil Bridge

Many stencil Bridges

It is important to know that if the closed shape you want to apply stencil bridge is any of the build in shapes

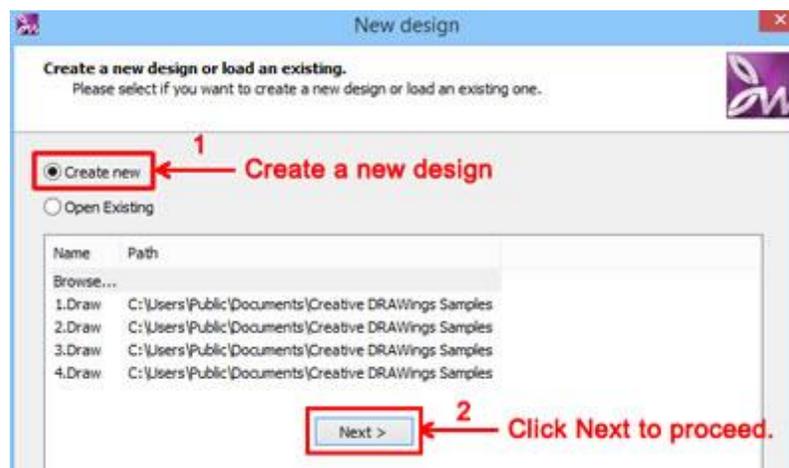


, you will have to **convert it to curves** first by selecting the respective option from the right click menu, while you are in the **Rectangle/Lasso selection**  mode. Otherwise you will not be able to apply the **Stencil bridge** option.

Create your first stencil design

This is a step-by-step tutorial to guide you in importing an artwork file and convert automatically into **Stencil** lines.

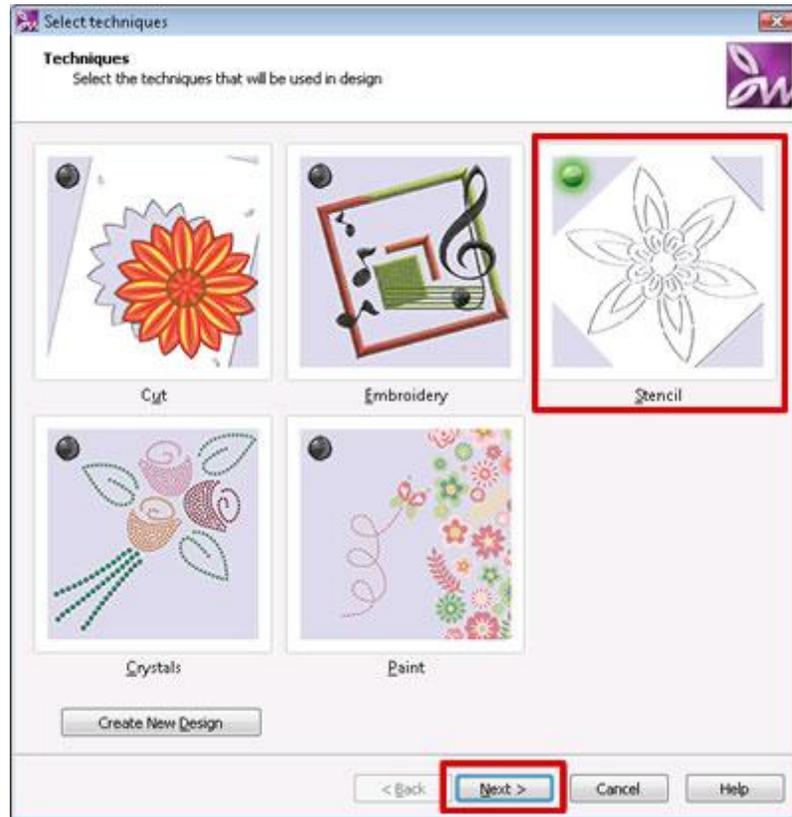
1. Start **Creative DRAWings** by double clicking on shortcut icon  that you will find on your **Desktop**.
2. The application will load and the **startup wizard** will prompt you to **create a new design** or **load an existing**.



Starting dialog

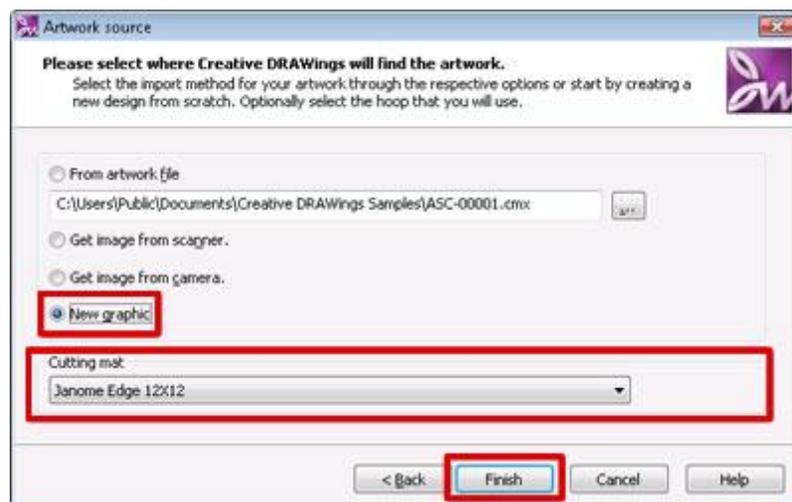
3. Select the **Create new** option and click **Next>** button to proceed.

- In the appearing dialog you must select which Techniques you want to be enabled for the created design. For the purposes of this sample we will enable only **Stencil** technique. Then click on **Next** button to proceed.



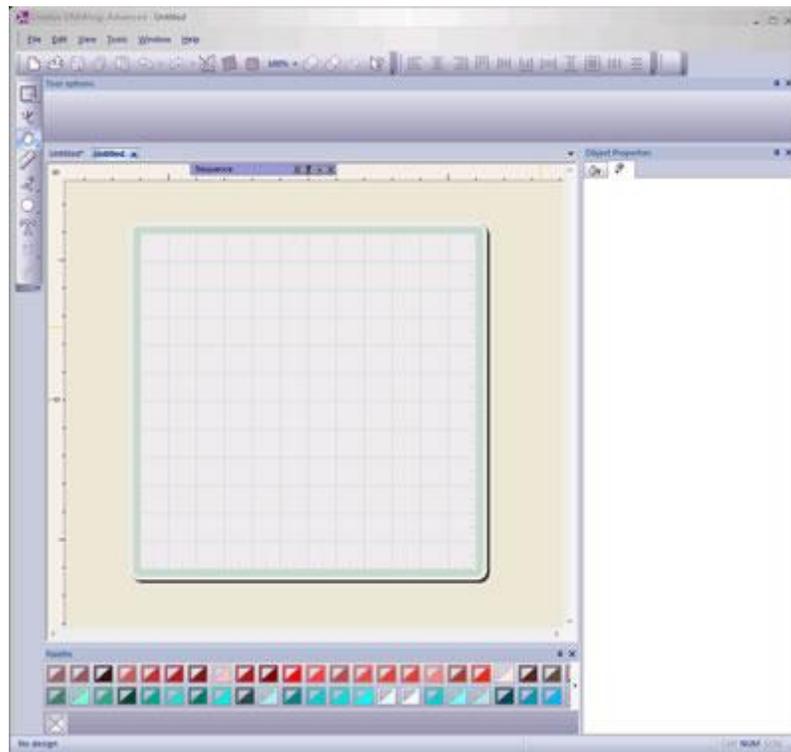
Select Techniques

- The **Artwork source** dialog will appear.
- Select the **New graphic** option, select the Cutting mat that you will use from the drop down menu and click **Finish**.



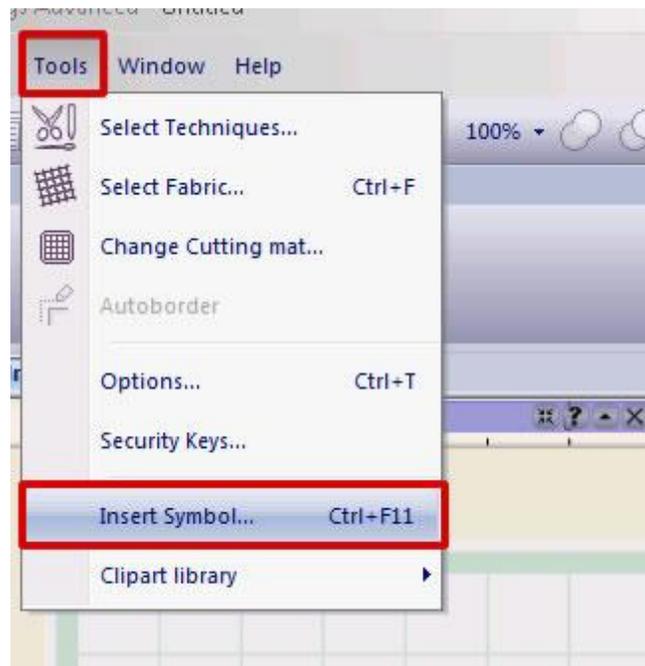
New graphic - Select Cutting mat

- The dialog will finish and the working area will appear empty, showing only the cutting mat that you have selected to use. If the cutting mat is not visible, from **View** menu select **Cutting mat** and it will become visible.



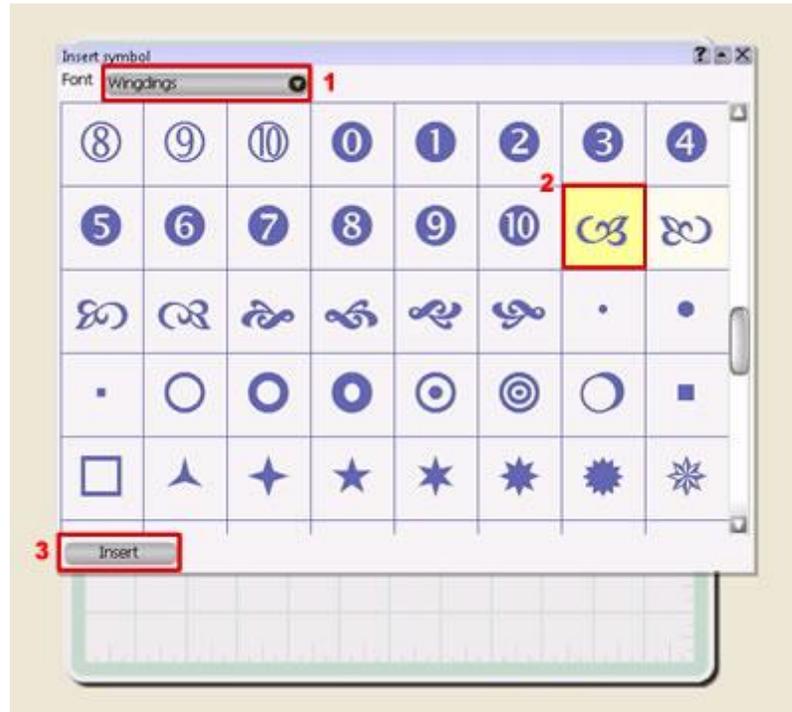
New empty design with cutting mat

- From **Tools** menu select **Insert Symbol** option.



Tools - Insert Symbol

9. Select the **Wdings** font from the font list and select the symbol shown below. Click **Insert** to insert it on the cutting mat.



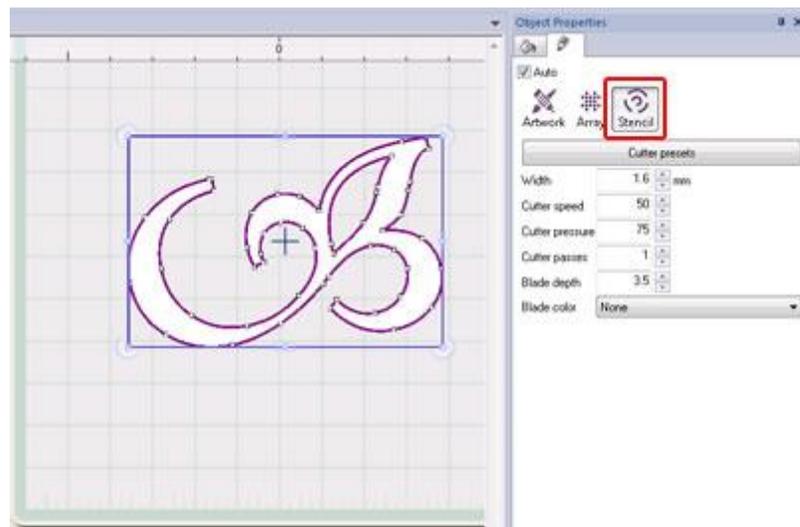
Select the Symbol you want

10. Click and drag on the cutting mat to draw the symbol on the cutting mat. Release the mouse to insert it.



Insert Symbol on the working area

11. The symbol will inserted without fill type (**Artwork fill**)  and with **Stencil**  outline/pen type.



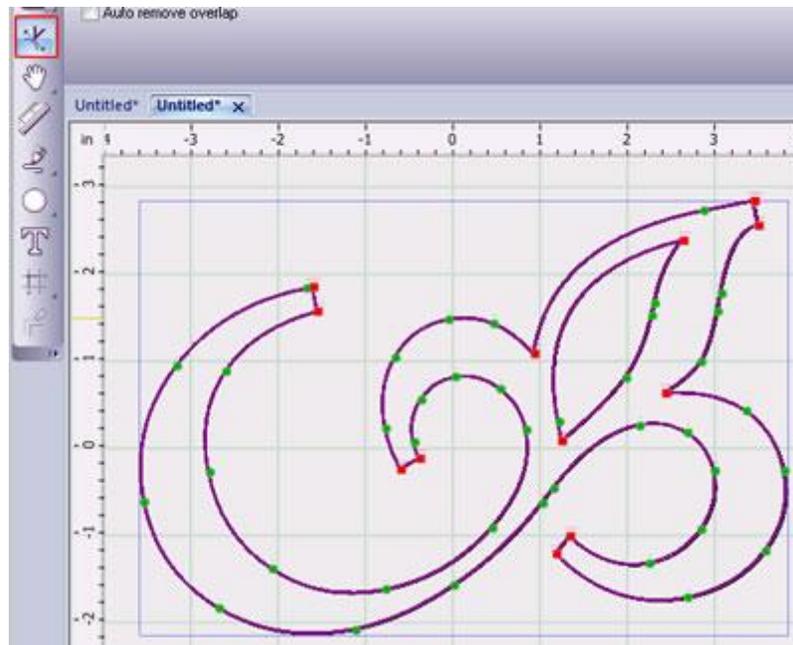
Stencil outline/pen type

12. Set **fill color** to **none** by clicking on the **none fill**  icon.



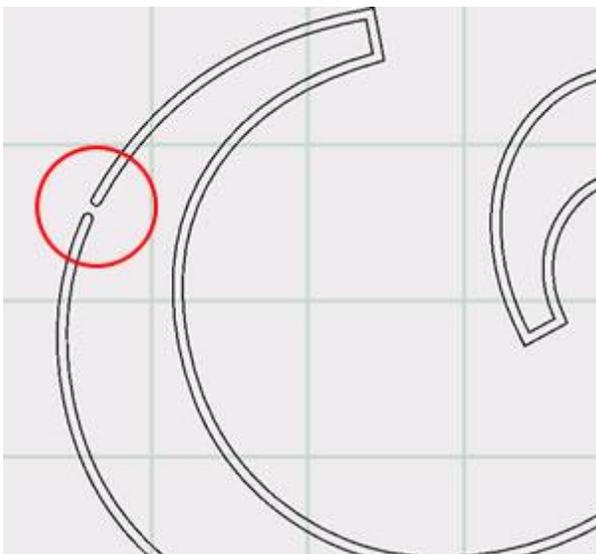
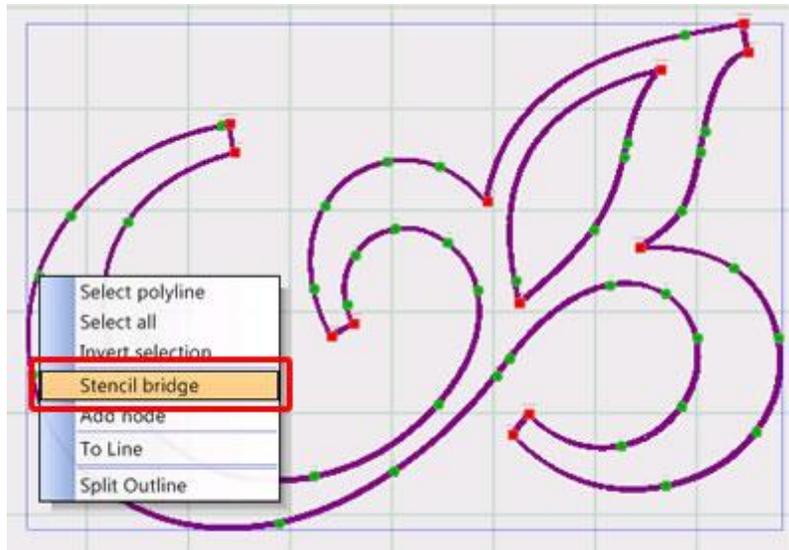
Set fill type to none

13. The design is a closed shape and the Stencil cutting area is not visible. To convert it to a proper stencil design you have to convert it to an open shape by adding stencil bridges. To do that you have to click on the **edit shape nodes**  from the options toolbar.



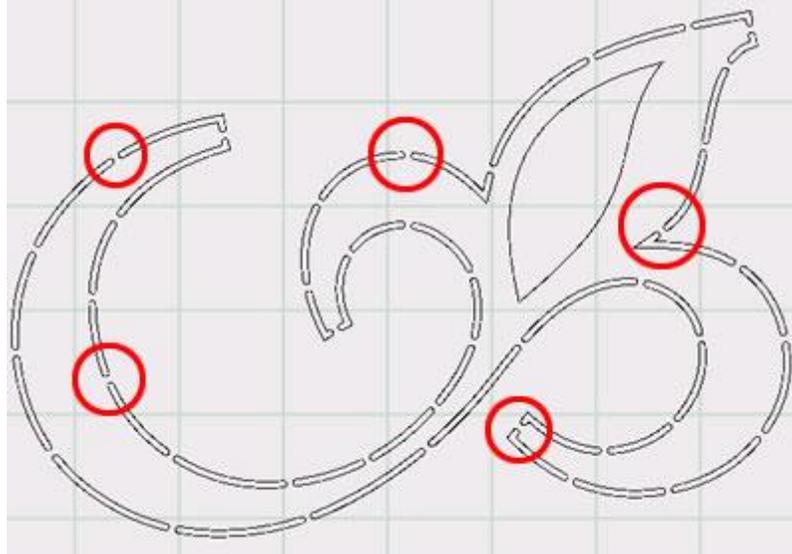
Edit Shape nodes of the symbol

14. To add **stencil bridges** you have to right click on the location where the bridges will be added and select the respective option from the pop-up menu.



Add stencil bridge on the symbol

15. Continue adding Stencil bridges in generally close distances to make the stencil more stable.



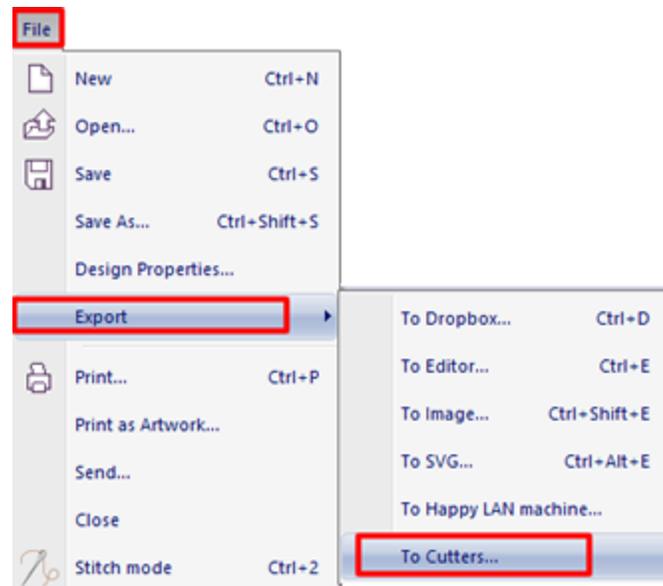
Add more stencil bridges on the symbol

16. The outline of the symbol is correctly converted to stencil and can be send to the cutter. If you want also convert the inner part of the symbol to stencil you can add stencil bridges to this object tool



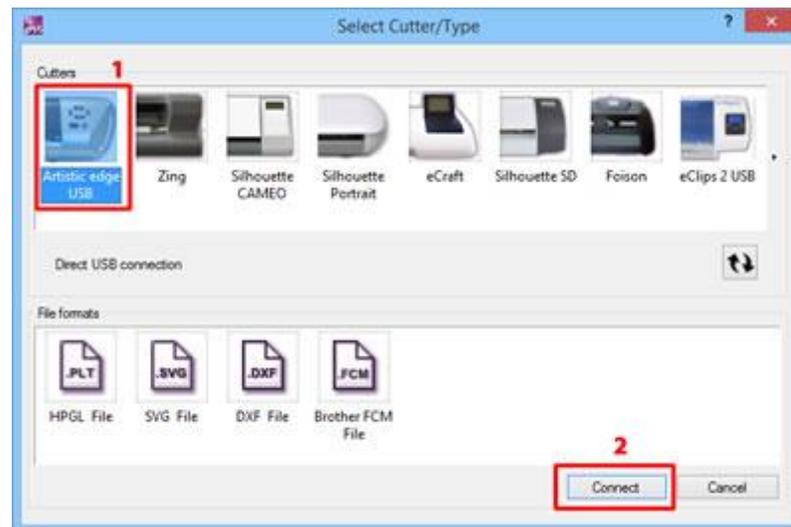
Add stencil bridges at the shape inside

17. The stencil design is ready and you can send it to your cutter.
18. From **File** menu, **Export** sub-menu activate **Export to Cutters** option.



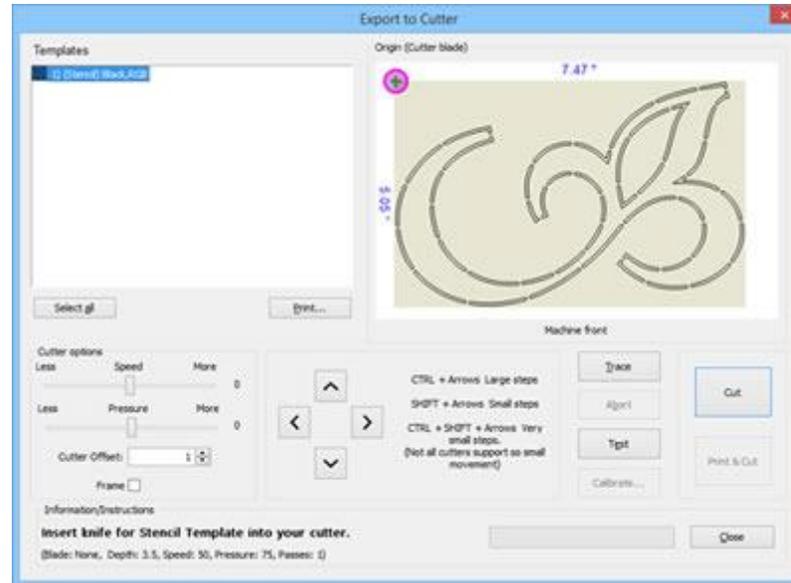
File > Export > To Cutters

19. From the appearing dialog we must select one of the **Cutters** to connect or a **File format** if we want to export to a file and import to our cutter in a manual way. In our sample we will use **Artistic Edge** cutter, click on the **Artistic Edge** Cutter icon and then click on **Connect** to proceed.



Select a Cutter or Export to a file

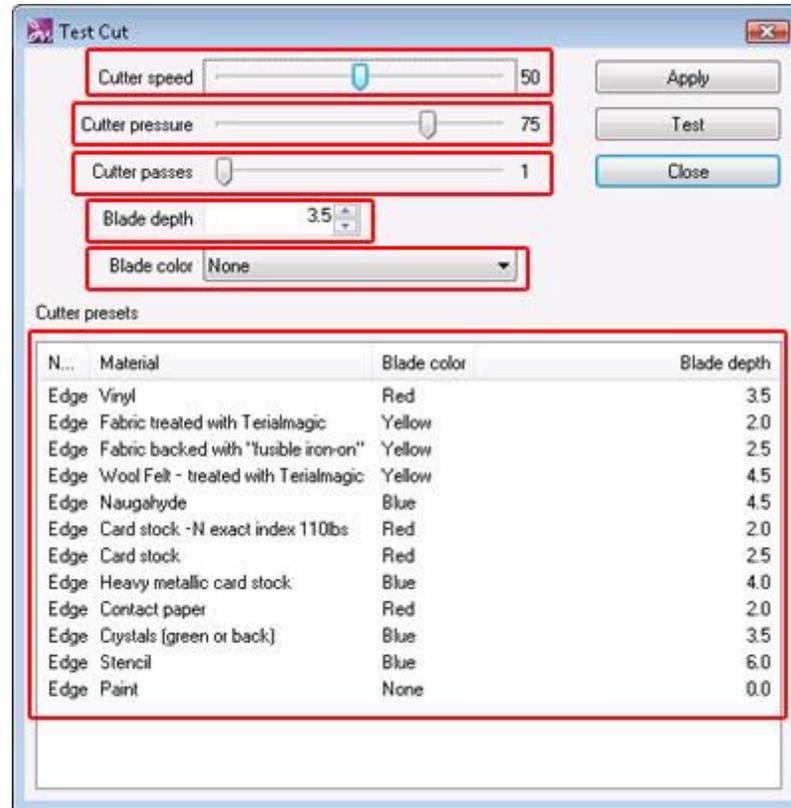
20. The **Export to Cutter** dialog will appear, using this dialog you can cut the **Stencil** design with your cutter. If the **Digital Cutter** is properly connected and powered **ON**, then at this point you should be able to directly communicate with the Cutter through this dialog.



Ready to send the design to the cutter

Before proceeding you must have loaded the **Cutting mat** with the **cutting material** into the **Cutter**.

21. First select the design parts that you want to cut from the **Templates** area.
22. Then you should select an **origin**. This is the point that you want the cutter to begin from.
23. If you have never used this material on your Cutter you should first perform a **Test** cut to verify that the material is cut properly with the current settings. Using the arrow buttons move the Blade to a position that will not be used for the actual Cut and press **Test** button.
24. The **Test Cut** dialog will appear listing all the cutter settings that you can adjust. Make the adjustments you prefer or select any **cutter preset** from the available ones. Click **Test** to cut the test design, which will be made based on the specific settings. Peel the cut part in order to verify if it was correctly Cut. If you are satisfied with the specific settings you can click **Apply**. The settings will be updated on the Object properties toolbar.



send the design to the cutter

25. Now you must position the **Blade** for the actual **Cutting** of the material. In our case we must move the **Blade** close to the edge of the upper left part of the material according to the origin we have selected. Use the arrow buttons to move the Blade to a desired position. If you need to fine tune the position of the Blade you can use **Ctrl** , **Shift** keys on your keyboard to adjust the step of the movement.

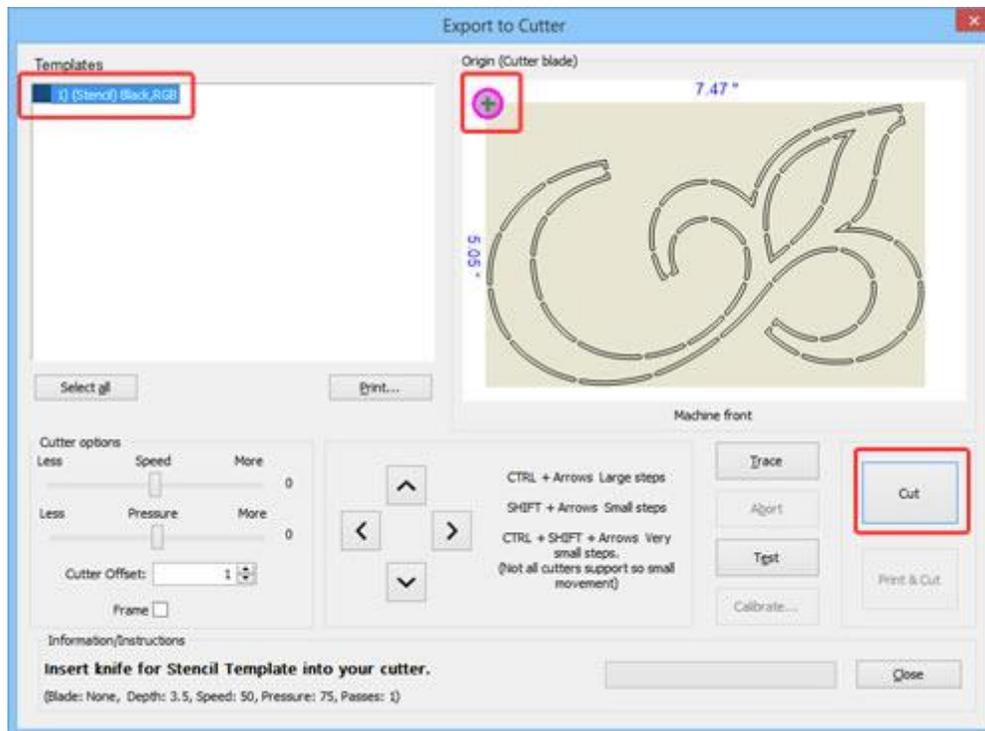
§ Hold **Shift** key  in order to make the movement small.

§ Hold **Ctrl** key  in order to have a large movement step.

§ Use **Ctrl and Shift** keys together ( + ) to make a very small movement step.

26. You can **Trace** the area that the design will need to make sure that it fits into the material you have placed.

27. Finally press **Cut** in order to start the actual cutting process.

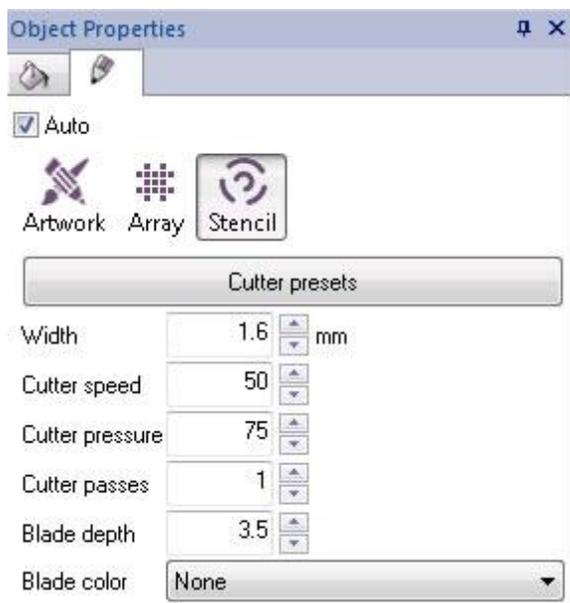


Export to Cutter

28. After the cutting process remove the Cutting mat with the material and peel the cut shapes to produce the final stencil design. That's all for now if you have followed the guide you should now have your first stencil design created.

Stencil parameters

To every stencil design you are creating you have the ability to make adjustments on the stencil width and to the cutter parameters that will affect the way the stencil will be cut. Therefore it is important to make the correct adjustments, to ensure the best results. All adjustment can be made on the **Object properties** toolbar **Outline/Pen** tab, where the stencil's parameters will appear after selecting the object. The parameters that you can adjust are the following:

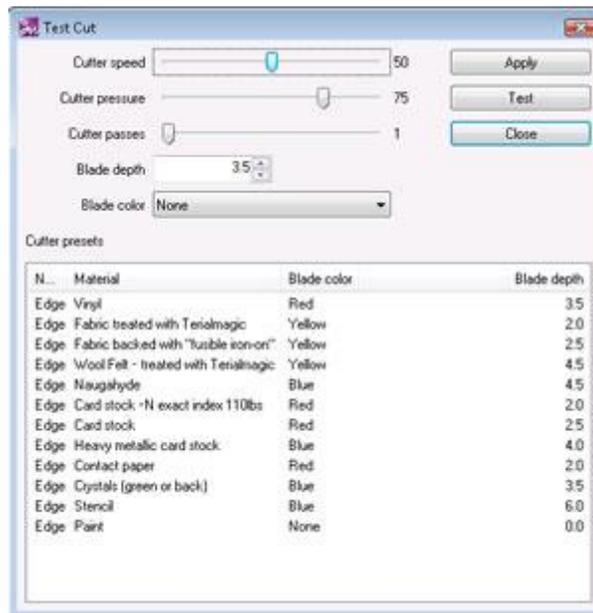


Stencil Parameters

All options except the **Width** option are referring to the cutter and the way that it will cut the stencil. Some machines does not allow you to change some or any of these values through our software. You can make adjustments though, through the machine's panel.

These options will be available always at **Object properties** toolbar because no cutter is selected. If you want to see which options the cutter allows you to adjust,

1. you can go to **File > Export > Cutters...** and from the wizard dialog that will appear select the cutter you have connected on the PC.
2. Click **Connect** and from the next dialog select **Test**.

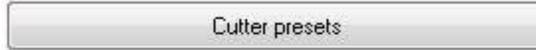


Test Cut dialog

3. A dialog will appear that will show you only the options that you can adjust at the connected cutter.
4. You can adjust the settings and even test them on the cutter.

- If you are satisfied with the setting you have selected you can click **Apply** apply them to the object(the object properties toolbar will be updated automatically).

Cutter presets



The **Cutter presets** button allows you to select cutter settings presets, based on the material that you will cut and the blade that you will use, and apply them on the currently selected object. By clicking on the **Cutter presets** button a pop up list will appear with the available cutter presets. The cutter presets are listed with the following information **Name**, **Material**, **Blade color** and **Blade depth**.

- Name:** Lists the Cutter's name that the the template is made for
- Material:** Lists the Material that you can cut by using the preset. Those are referring to Rhinestones, are mainly for Vinyl material.
- Blade color:** Lists the Blade color that you have to use in order to cut the specific material. This is applicable on specific machines that include various blades. Usually each color is for cutting different material. Check the cutters manual for more information about which blade is from which material.
- Blade depth:** Lists the Blade depth that you have to set on the cutters blade. Usually the Blade depth is set manually. Therefore you have to check the Cutter's manual and find how to change the Blade depth.

Name	Material	Blade color	Blade depth
Edge	Vinyl	Red	3.5
Edge	Fabric treated with Terialmagic	Yellow	2.0
Edge	Fabric backed with "fusible iron-on"	Yellow	2.5
Edge	Wool Felt - treated with Terialmagic	Yellow	4.5
Edge	Naugahyde	Blue	4.5
Edge	Card stock -N exact index 110lb	Red	2.0
Edge	Card stock	Red	2.5
Edge	Heavy metallic card stock	Blue	4.0
Edge	Contact paper	Red	2.0
Edge	Crystals (green or back)	Blue	3.5
Edge	Stencil	Blue	6.0
Edge	Paint	None	0.0
Zing	25mil Rhinestone template	None	0.0
Zing	18mil PVC Rhinestone Template	None	0.0
Zing	Fabric + Freezer	None	0.0
CAMEO	25mil Rhinestone template	None	0.0
CAMEO	18mil PVC Rhinestone Template	None	0.0
eCraft	25mil Rhinestone template	None	0.0
eCraft	18mil PVC Rhinestone Template	None	0.0
Foison	25mil Rhinestone template	None	0.0
REDSail	25mil Rhinestone template	None	0.0
GCC_Jaguar	25mil Rhinestone template	None	0.0

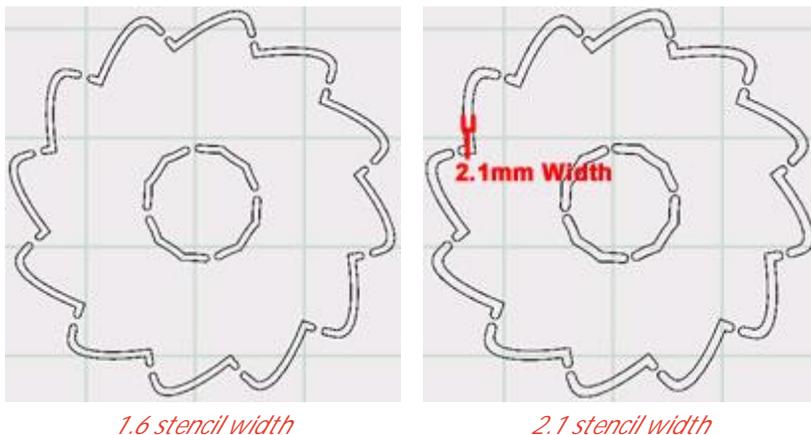
Cutter Presets

To apply the preset you want you can simply click on it. The settings of Object properties toolbar will be adjusted accordingly.

Width



With the width property you can change the stencil width. The default value is 1.6mm and the one that most of the times you will use in your designs. The minimum value is 0.5mm and the maximum 3.0mm.



The higher the width value the smaller the stencil bridge gap. If you set the width to 3.0mm, bridge would be tiny. If you want to keep this stencil width but you want to increase the bridge width you will have to edit the shape's outline and manually increase the bridge width.

Cutter Speed

Cutter speed

With this value, you can specify the speed that the machine will cut the design. This value varies from cutting machine to cutting machine and some machines does not allow you to change this value at all through our software. You can make adjustments though, through the machine's panel. Fill free to change the **Speed** setting based on the speed you want the design to be cut.

The **Cutter speed** field can take values from 0 up to 100.

Cutter Pressure

Cutter pressure

With this value, if it is enabled, you can specify the force that the machine will add on the blade in order to cut the design or to the Pen/brush in order to draw the design. This value varies from cutting machine to cutting machine and some machines does not allow you to change this value at all through our software. You can make adjustments though through the machine's panel.

Fill free to change the **Cutter Pressure** setting based on the depth you want the material to be cut or paint. The value of Cutter Pressure varies from cutting material to cutting material. Thicker material need more pressure and thinner less.

The **Cutter pressure** field can take values from 0 up to 100.

Cutter Passes

Cutter passes

You can specify the number of **Passes** you want the design to be made with. It actually defines how many times each shape will be made by the machine.

Blade depth

Blade depth

With this option you can set the **Blade depth** of the cutter blade. This value varies from cutting machine to cutting machine and some machines does not allow you to change this value at all through our software. You can make adjustments though on the actual machine.

Fill free to change the **Blade depth** setting based on the depth you want the material to be cut. This value is there only for your information, to remind you that for this object you have to change the Blade depth on the machine. The value of **Blade depth** varies from cutting material to cutting material. Thicker material need more depth and thinner less.

Blade color

Blade color

This drop down menu lists the **Blade color** that you have to use in order to cut the specific material. This is applicable on specific machines that include various blades, with different colors. Usually each color is for cutting different material. Check the cutters manual for more information about which blade is from which material.

For example, for Artistic Edge cutter the Blades are for the following use:

- Blue Cap Blades is for cutting thicker materials
- Red Cap Blades is for cutting thin materials
- Yellow Cap Blades is for cutting fabrics

Select the Blade color that you will use for the currently selected object and during the Cutting process the Software will notify you that you will have to use the respective Blade color in order to cut the shape.

Chapter XVII

Paint - Painting designs

Creative DRAWings gives you the ability to create **Paint** designs by mounting a **Pen/Brush** to your Digital cutter. It is a totally new way to create **Paint** designs on garments or any other material. There are various **Paint** fill types and various **Paint** outline types. Each design will be applied on the material by drawing the paint pattern you have created using the software. The Digital cutter moves back and forth with the **Pen/Brush** attached on it and draws the design you have created, object by object, following a similar sequence of action that you usually follow when you **Cut** a design. Although this time instead of **Blades** you are changing **Pen/Brush** colors.



Paint design

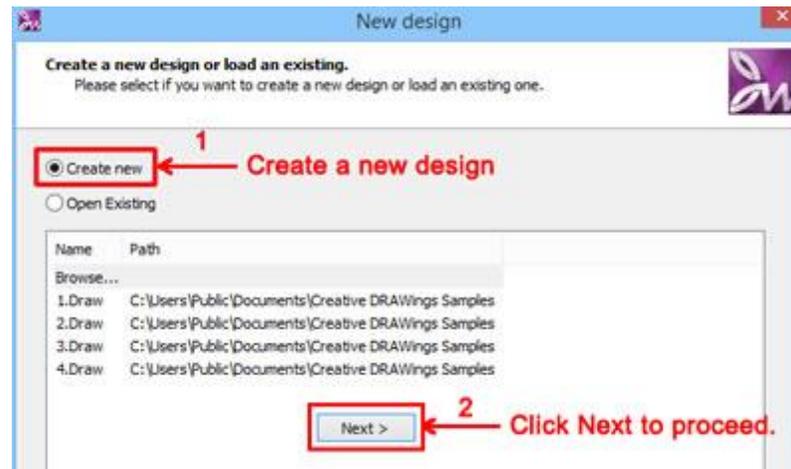
All options that are listed in the following topics will be available to you only if you have the **Paint** technique activated when you create a design or if you enable **Paint** technique using the **Select techniques**  option.

Create your first Paint design

This is a step-by-step tutorial to guide you in creating your first **Paint** design.

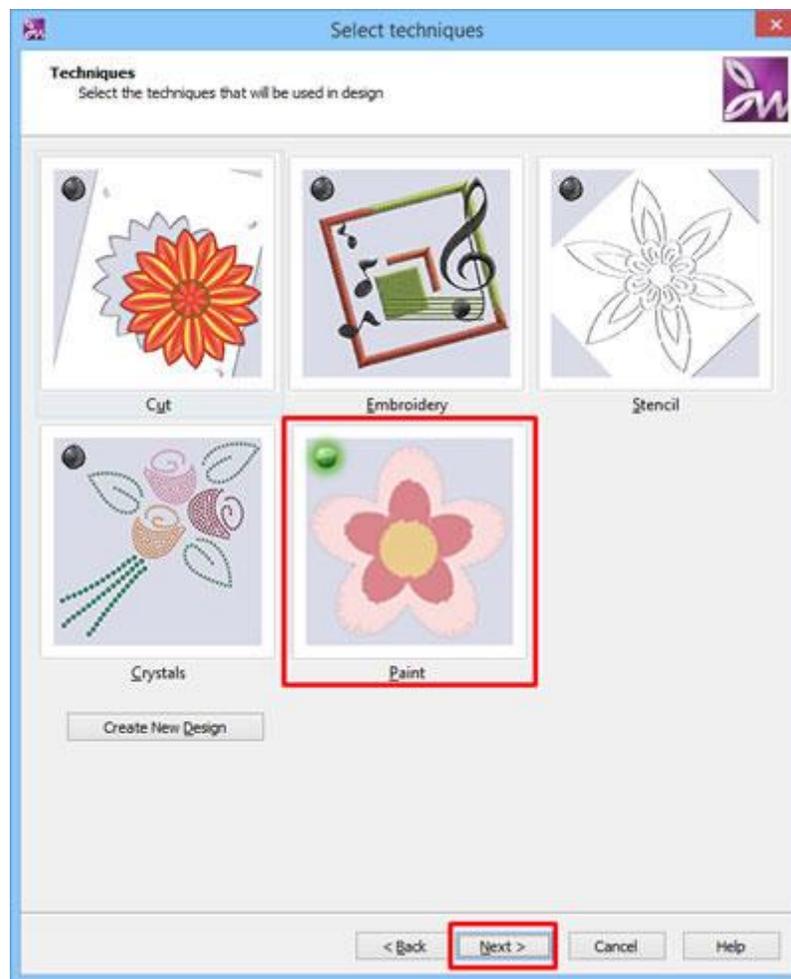
1. Start **Creative DRAWings** by double clicking on shortcut icon  that you will find on your **Desktop**.

- The application will load and the **startup wizard** will prompt you to **create a new design** or **load an existing**.



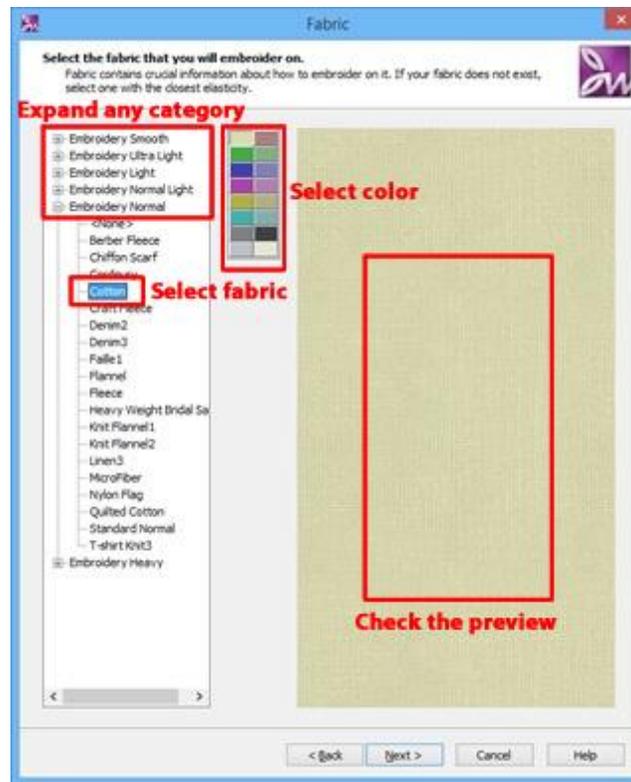
Starting dialog

- Select the **Create new** option and click **Next>** button to proceed.
- In the next step you must select which Techniques you want to be enabled for the created design. For the purposes of this sample we will enable only **Paint** technique. Then click on **Next** button to proceed.



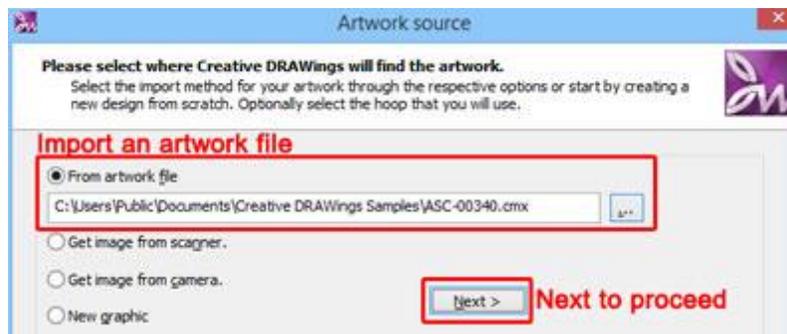
Select Techniques

5. The **Fabric** dialog will appear, using this dialog you must select a fabric type and a color that is as close as possible to the one you are going to produce the design on. Expand any of the fabric categories, by clicking on the + icon next to it, to select a fabric and-or a color for the fabric. After selecting the **Fabric**, choose the color from the list at the middle of the dialog. The Fabric selection is not just an issue of previewing the design on the fabric. The software automatically adjusts, according to the selected fabric, various embroidery parameters. Embroidery quality depends on some of these parameters. The software suggests the appropriate backing materials for every fabric, in the printout of each design. In case that you don't want to preview the design on any fabric you can select the **none** option that exists in any of the fabric categories. In this case only the color that is select in fabric dialog will appear in the background of the created design. More information about Fabric selection is provided into a separate topic. After selecting a Fabric and a color for the fabric click on Next to proceed.



Select fabric dialog

6. The **Artwork source** dialog will appear.
7. Select the **From artwork file** option and Click on the browse button  at the right to select a design.



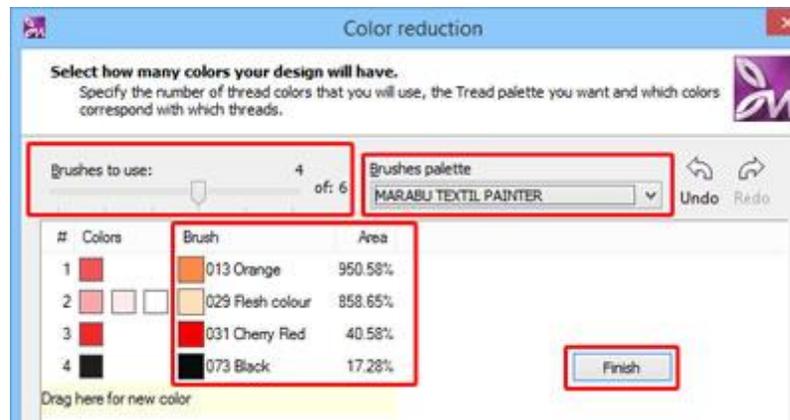
Starting dialog - 2nd page

8. The **Open** dialog box will appear from where you can browse to find any bitmap or Vector image to be used as artwork for the new design.



Open design dialog

9. Click on **My documents** folder at left side of the dialog.
10. Then find and double click on the **Embroidery designs** folder
11. Inside **Embroidery designs** folder you will find another folder called **Creative DRAWings samples**. Double click on it.
12. Inside the **samples** folder you will find ready-made **Vector** (clipart) designs that you can import and convert to a Paint design. Select any of them, in our example we will use the **ASC-00340.cmx** file. Select it and click the **Open** button.
13. The **Artwork source** dialog will appear once more with the design you selected under **From file** field. Click on **Next** to proceed.
14. The **Color reduction** (number of Brushes) dialog will appear where you can select the **Brushes palette**. Since only the Paint technique is enabled, the software will convert the imported design using paint types and paint colors.



Color reduction dialog

15. Click on the arrow under the **Brushes Palette** and the drop-down menu will show the available ones.
16. Select the brand-name brush palette you want to use by clicking on the list. For example, select the **MARABU TEXTIL PAINTER** brush palette.
17. The colors of the design you are importing will automatically be assigned to the closest brush color of the **MARABU TEXTIL PAINTER** palette.
18. In the **Color reduction** dialog you can see that the design has **6** different colors but the design is automatically reduced to 4 colors since the palette has only 4 brushes.
19. You can reduce the number of colors in the design by moving the arrow to the left. Click **Finish** to end the process and convert the imported design to a Paint design.
20. The design will appear in the working area filled with the available Paint types. You can have a better preview of the paint effect by activating Realistic paint



The imported design converted to Paint

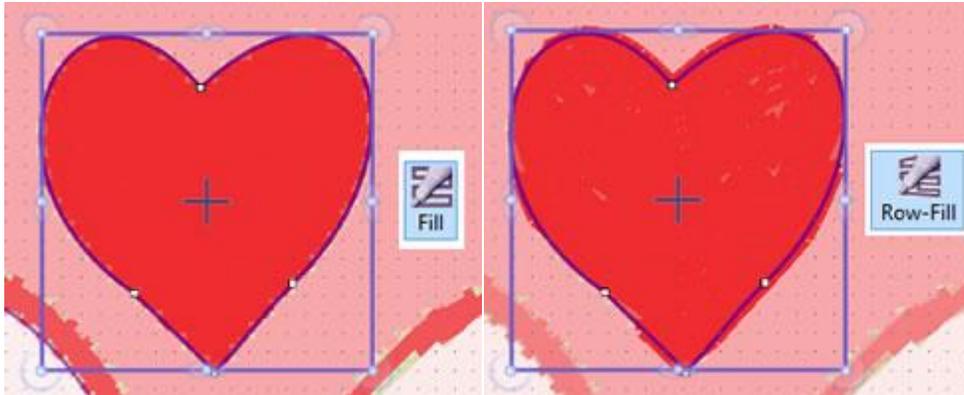


Realistic paint view

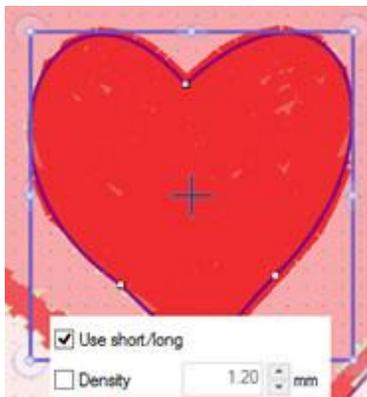
21. Select any of the design parts and see on **Object properties**, **Paint** fill or outline types have been automatically applied. Every time you select a Paint object its properties appear on the **Object**

properties Toolbar. You can select multiple object by holding the **Shift** key pressed and clicking on the objects you want to add it to the selection.

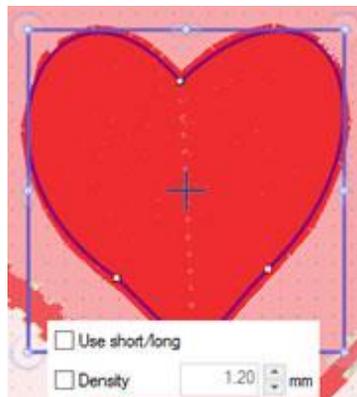
22. For example select the heart, as you can see **Paint fill** is the automatically select **Paint** type. You can easily change the fill type by clicking on any other fill type for example **Row-fill**.



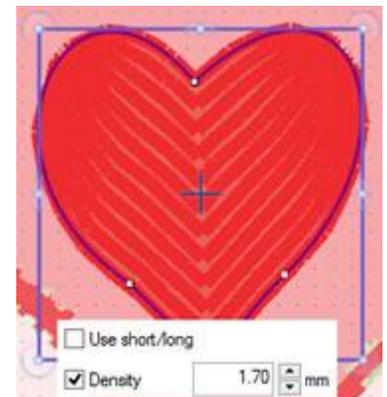
23. We can use all editing tools and perform various transformation on the artwork. At this point we will only mention something about object properties. There are various properties for any of the paint types. For example for the Paint Row fill of the previous figure we can adjust the **Density** and or use **Short/long** movements.



Initial object

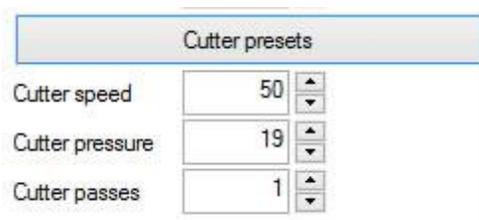


Disable short/long



Increased density

24. At this point we should mention about **Cutter settings**, let's suppose that we own **Artistic Edge** digital cutter and our design has only paint objects. We will select all objects and from **Cutter presets** we will select the preset **Edge - Paint**. The selected set of cutting options (Cutter speed, pressure, passes) will be applied to all selected objects. This cutter settings are suitable for Paint objects.

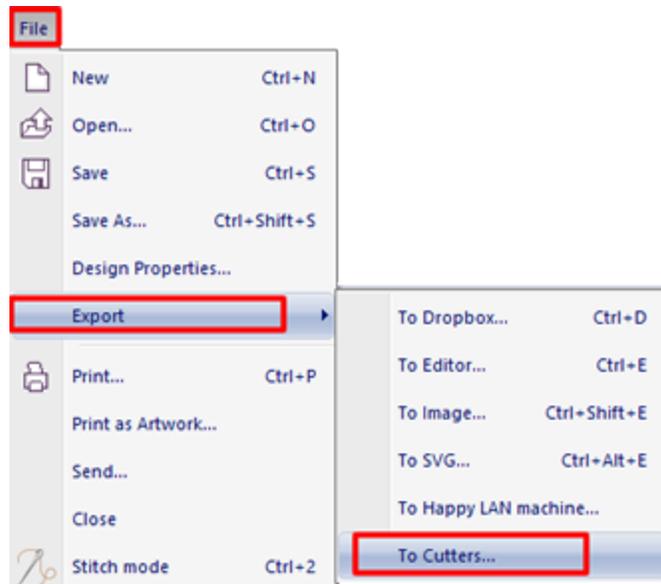


Paint preset - Cutter settings

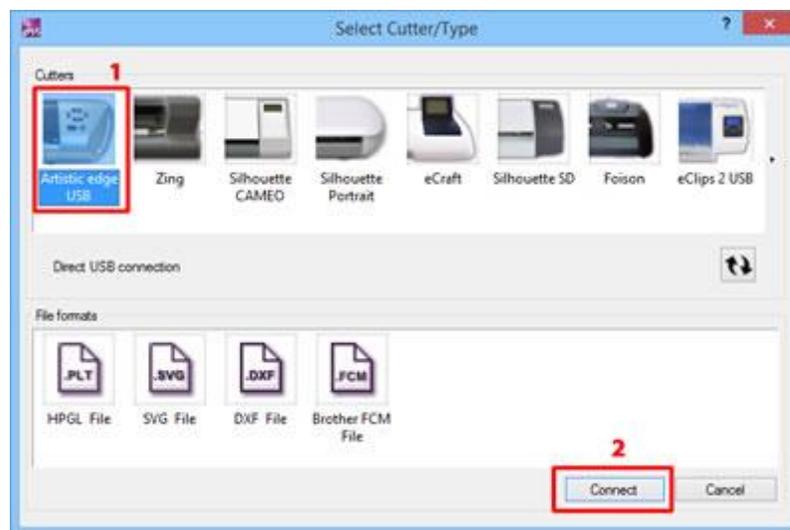
25. Let's suppose that we are done with the design and we are ready to **Paint** the parts using our Digital cutter (the cutter must support placing of a **Brush** instead of the Blade).

You should always save the design to **.draw** file format, in order to have it for later reference.

26. From **File** menu, **Export** sub-menu activate **Export to Cutters** option.

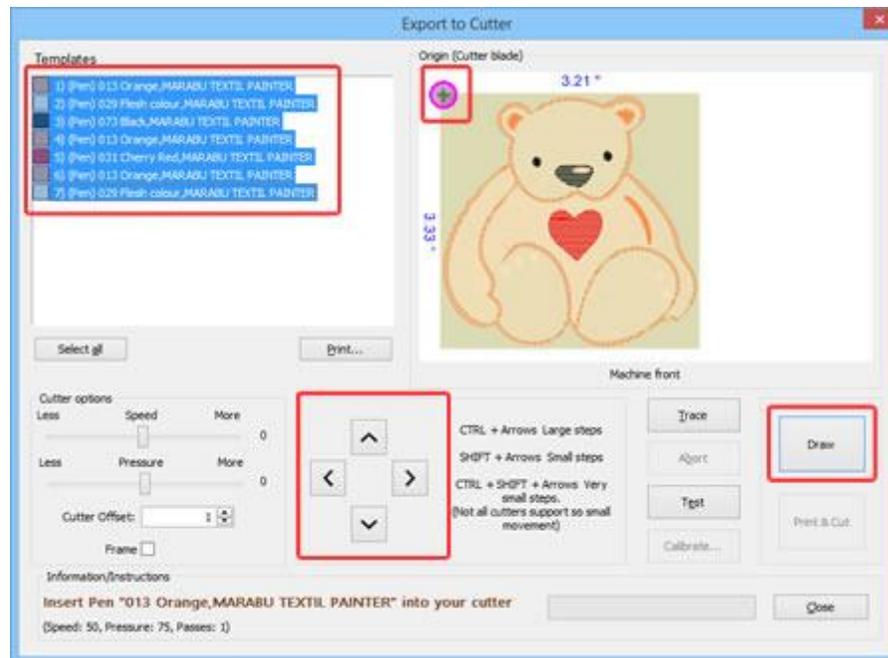


27. From the appearing dialog we must select one of the **Cutters** to connect or a **File format** if we want to export to a file and import to our cutter in a manual way. In our sample we will use **Artistic Edge** cutter, click on the **Artistic Edge** Cutter icon and then click on **Connect** to proceed.



Select a Cutter or Export to a file

28. The **Export to Cutter dialog** will appear, using this dialog you can DRAW any design part with your cutter. If the Digital Cutter is properly connected and powered ON, then at this point you should be able to directly communicate with the Cutter through this dialog. At this point that we must mention that on the preview you can see the actual colors of the Brush palette that you have selected for the design. Some colors have been substituted by their closest one from the Brush palette. For example the Pink color was substituted by this number 029 color called Flesh Color.



Before proceeding you must have loaded the **cutting mat** with the **material** to Draw into the Cutter.

29. We will now proceed and **Draw** the design parts onto any paper like material or onto a Fabric. Select all items from the **Templates** area.
30. Then you should select an **origin**. This is the point that you want the cutter to begin Drawing from.
31. If you have never used this material or the Pen on your Cutter you should first perform a **Test** to verify that the Pen/Brush Draws as you wish on the current material. More information about **Test** functionality setting is provided into separate topic.
32. Place the respective Pen on the pen holder and now you must position the head of Cutter with the first **Pen / Brush** at the position on top of the area the you want to Draw. More specifically we need to place the head close to the edge of the upper left part of the material according to the origin we have selected. Use the arrow buttons to move the Head to a desired position. If you need to fine tune the position of the Head you can use **Ctrl** , **Shift** keys on your keyboard to adjust the step of the movement.

§ Hold **Shift** key  in order to make the movement small.

§ Hold **Ctrl** key  in order to have a large movement step.

§ Use **Ctrl and Shift** keys together ( + ) to make a very small movement step.

33. You can **Trace** the area that the design will need to make sure that it fits into the material you have placed.
34. Finally press **Draw** in order to start the actual cutting process. When the part of the first **Pen** is complete the Cutter will stop and you will be prompted to place the next **Pen/Brush** onto the pen holder.

Color management

In this section we will present how to work with colors for your **Paint** projects. In the following topics we assume that you have only **Paint** technique enabled in order to present how to handle **Pen\Brush** colors for your designs. When creating a new design either you are prompted to select a **Brush** palette (**Color reduction** wizard step) or you are working with the default **Brush palette** that contains RGB colors. In any case you can select which **Brush** palette to use using the **Edit palette** icon  on standard toolbar. In the Edit Palette drop down menu are listed the color palettes of the major brush manufacturers as well as the default RGB (Red Green Blue) color palette. You can select the brush palette you are using (the manufacturer of the brushes you are using), to create the design you want based on the colors that actually exist. Select a brush palette and click **Ok** button to apply changes. The colors of the selected palette will now appear on the brush palette toolbar allowing you to use them to fill with color the objects you have designed or you will design. By following this procedure you can be sure that the color you used on the design actually exist and can be found in the market.



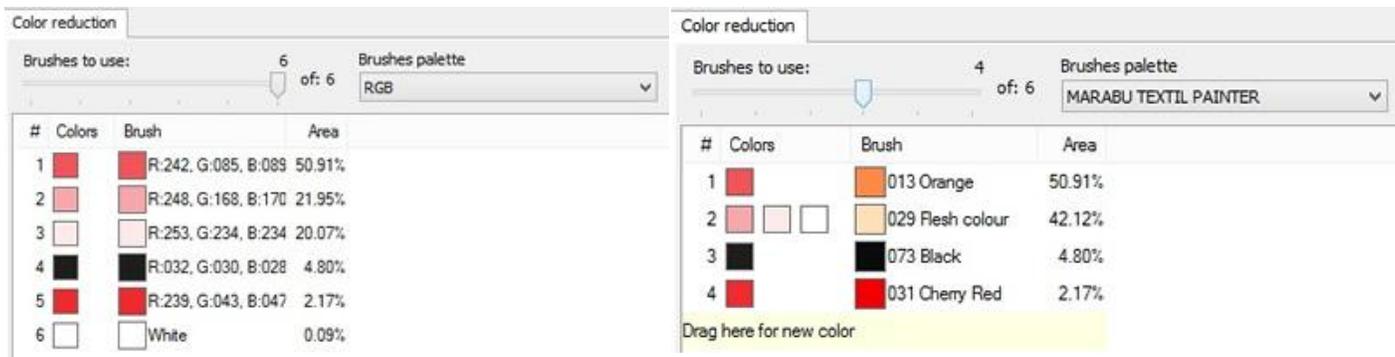
Palette drop down menu

On the lower part of the application window you can see the **Palette** toolbar. On the top area of the toolbar you can see the available colors and on the bottom area you can see the already used colors for the design. The available colors may differ according to the Brush palette you have selected. For example on the following figure the available colors are from the **Marabu Textil Painter** palette.



Color palette

Generally the **Brush/Pen** palettes have a limited number of colors. When importing **Vector graphics** or **Bitmap images** that have too many colors, the program can not automatically set identical color, from a **Brush** palette, as on the original artwork. There is a mechanism that can make a color match and reduce the produced colors, use **Edit palette** icon  to bring up **color reduction** dialog. For example we have imported a cmx design that contains 6 colors, as you can see on the left area of the following figure if i do not select any Brush palette and leave the default RGB palette. In the right part we have selected **Marabu Textil Painter** palette and as we see can the color reduction mechanism has matched the colors to the Brushes of the selected **Brush palette**.



RGB palette used, no color reduction

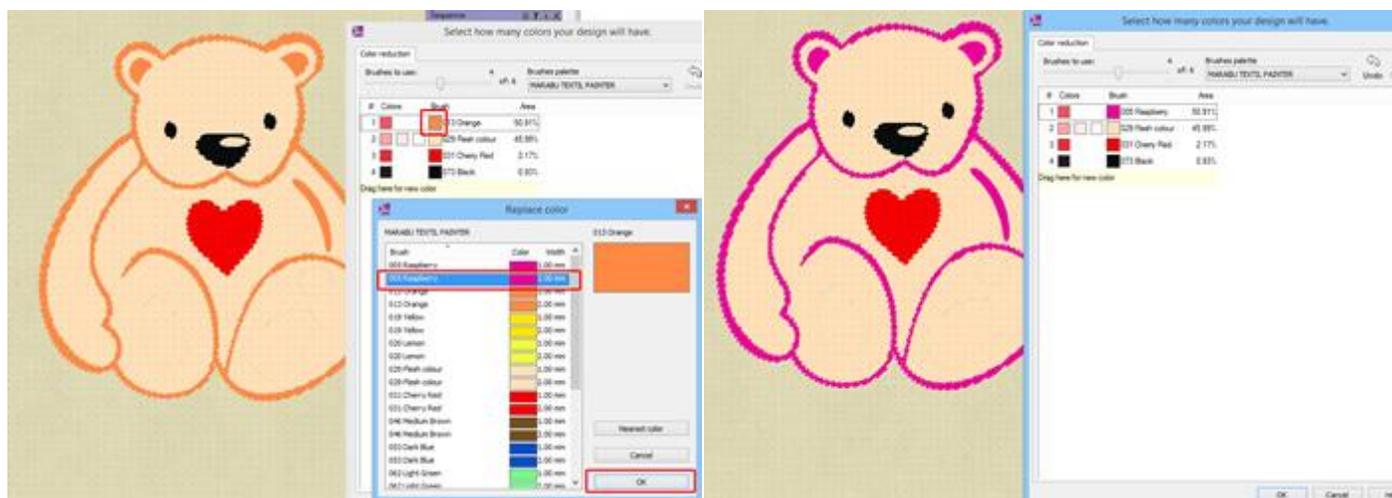
Brush palette selected automatic color reduction

One thing we must say is that in any case when the design appears in design area (DRAW mode) the colors that you can see on the design are the default RGB colors and not the automatically matched colors from Color reduction. In order to preview the design with the palette matched colors you must switch **Stitch** mode

 (Ctrl+2) when you can see the final colors. To summarize, the colors of the final design can be adjusted

using the **Edit palette**, but you can only see final colors when switched in stitch  mode. Double click on any of the matched colors and from appearing dialog select any of the available **Brush** palette colors. You will see the color applied on the design in the design area. This is happening because there is no limitation to the colors that you can use on a vector artwork, but there are limitations to the colors (brushes) you can use on an Paint design. The software has a limitation of 99 colors on the brushes designs. You must always keep in

mind this limitation whenever you click on the **stitch**  button and you see changes on the colors you have assigned to the design. This is becoming clearly obvious when you are working with a specific manufacturer's thread palette where all RGB colors are not available. The color match will not be identical and when you are in the stitch tab you will see the design preview with slightly different colors but closer to the final results.



Brush palette toolbar

The **Brush/Pen palette** toolbar is located at the bottom of the application window (Visible only in **Draw** mode). Using the color icons you can choose colors (**Fill** or **Outline**) for any part of the design. In case that

the toolbar is not visible you can use the respective option of **View** menu - **Toolbar** section. The toolbar is consisted of two parts, the **available colors** and the **colors that are currently used**.



Color palette

Available colors

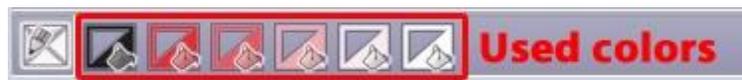
The **available colors** are the colors of the color palette you have selected to use. The colors are located at the top rectangle area of the Palette toolbar and by default the RGB palette is loaded. You can change the default color palette and use a specific Brush color palette from the **Edit palette** dialog (we will explain it thoroughly later in this chapter).



Available colors

Currently used colors

There is also the **currently used colors** area where all the currently used colors are listed. If the design has five different colors they will be listed at the bottom of the palette toolbar.



Currently Used Colors

As you can see any color icon is consisted of 2 triangles , one on the upper left part and one on the lower right part. If you place the mouse on top of the upper left part of a color you can see a **pen** icon. This means that the selected color will be used for the outline of the object. If you place the mouse over the lower right part you will see a **bucket** icon revealing that the selected color will be used for the object fill. For any object we select the colors (outline-fill) that are used for it are marked with icons in currently used colors are, in order to be able to see clearly the colors that are used for the object. If you select an object of the design the color that was used to be filled will be highlighted with a fill bucket  on the currently used colors area. If the object has outline, also, the color of the outline will be highlighted with a pen  icon. The used colors can be reused to new created objects by selecting the object on the working area and then the color you want to be filled.

At the beginning of the currently used color palette there is a square , which is the **empty/none** color. If a selected object does not have a Fill color, then the **fill** bucket will appear inside the **None color**  square.

If the selected object does not have an **Outline** color then the pen icon will appear inside the **None color**



square. Also, if you do not want an object to have a **Fill** or an **Outline** color, you have to select the object it and then click on both part of the none color square  to remove the colors from the object.

The **Brush palette** toolbar is movable and re-sizable. You can change its position by click and dragging the **Title bar** to a new position. The toolbar will float on the working area and become re-sizable. You can change its dimensions and position on the software. You can keep it as a floating toolbar or you can position it back to its initial position by click and dragging it at the bottom of application window.

Setting colors

By default when creating an object, the default **Fill - Outline** color is applied on it. The software has a pre-defined set of Fill - outline colors to be used by default. Later in this topic we will present how to set the colors that you wish to have as defaults. When you select an object, on the design area, you can see the color that

was used for the specific object's fill to be highlighted with a **Fill bucket**  on the bottom right corner of the

color. In the same way If the object has an outline color, the outline color will be highlighted with a **Pen**  icon on the top left corner. Any of the used colors can be reused for newly created objects easily by creating the object and then selecting on a the color from currently used colors.

In order to change the **Fill color** of an object you have to select it and then **click** on the bottom right area of the color you want from the color palette or from the used colors. You can also **Right click** on the color and from the right click menu select the **Set fill color** option. The object will be filled with the selected color and the color will be added in the used colors area (if it is not already there). In addition, the color you have selected can be easily recognized from the **Fill bucket**  icon that will have on it when it will be added in the used colors area.

Furthermore, in order to change the **Outline color** of an object, you must select the object, and then **click** on the top left corner of the color you want from the color palette or from the used colors. You can also **Right click** on the color and from the right click menu that will appear select **Set pen color option**. The color you have selected will be added in the currently used colors area (if it is not already there) and it will have the **Pen**  icon on the top left corner. The selected object is colored immediately with the **Fill** or **Outline** color that we have clicked.

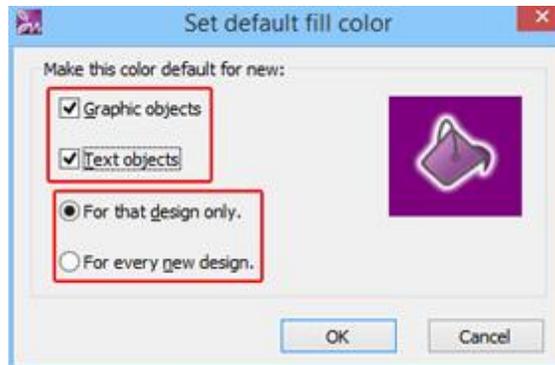
If you do not want an object to have **Fill** or **Outline** color you can click on the bottom right or on the top left corner on the **Empty/None color**  box, that it is located in the currently used colors area, according to whether you want to remove the **Fill** or **Outline/Pen** color. The **Fill**  or the **Outline**  color will be immediately removed from the object allowing you to create the design you want.

Set default Fill or Outline colors

As we have already mentioned when creating an object a set of default Fill or Outline colors is automatically applied on the created object. We can easily change the **default** set of **Fill** and **Outline** colors and decide whether to make the new selection a program default or use only as default set for the specific design.

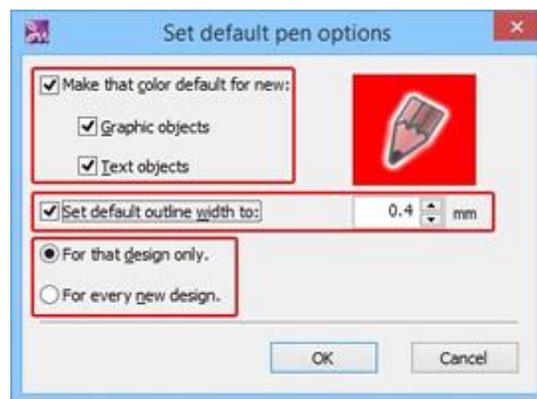
When no object is selected if we click on lower right area of any color, then the **Set default fill color** dialog will appear displaying the color you have selected. On this dialog you can select for which types of objects

Graphic objects - Text objects the selected color will be used as default **Fill** color. Furthermore you can select whether this fill color will be used only for the **current** design or for **every** design from now on. In case that have a selection that you do not want to release but you want to set a default fill color, you must hold **Ctrl** key on your keyboard and then click on the **Fill** color that you want to set. The same dialog will appear, your selection will not be filled with the clicked color, it will be just set as default **Fill** color.



Set default Fill color dialog

In the same way we can change the **Default Outline** color. When no object is selected if we click on upper left area of any color, then the **Set default Pen color** dialog will appear displaying the color you have selected. On this dialog you can select for which types of objects **Graphic objects - Text objects** the selected color will be used as default Pen color. Furthermore you can select whether this Pen color will be used only for the **current** design or for **every** design from now on. In case that have a selection that you do not want to release but you want to set a default **Pen** color, you must hold **Ctrl** key on your keyboard and then click on the **Pen** color that you want to set. The same dialog will appear you can apply default **Pen** color and your current select will not be changed.



Set default Outline color dialog

From the same dialog you can change the Width of the default outline/pen. Check the **Set default color width to** checkbox and type the width you want in the respective field. The default outline will set to the new value and will be applied to the current design or on every design according the changes you have made in the **Set default pen options** dialog.

In case that you want the created objects not to have **Fill** or **Outline** color, by default, you can click on the bottom right or on the top left corner on the **Empty/None color**  box, according to whether you want not to have **Fill**  or the **Outline**  color.

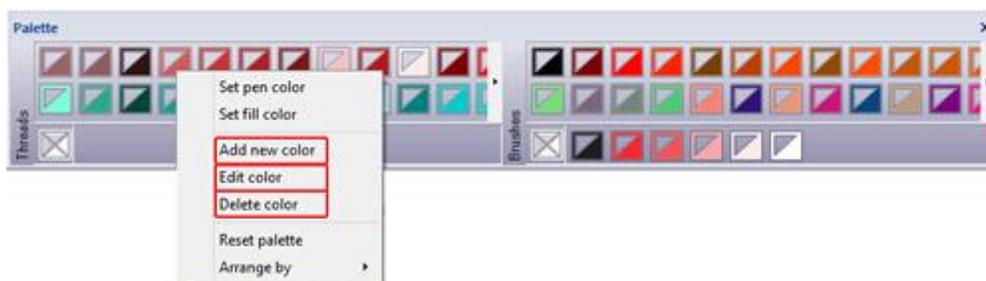
Editing default color palette (RGB)

The default color palette of the application is the **RGB** (Red, Green, Blue). This color palette consists of 358 colors selected from all available colors as representatives. Since this palette has generic colors we can **Add, Edit** or **Remove** colors from this palette. **Threads** and **Brushes** palettes are using the same **RGB** palette, so if we edit the **Threads RGB palette** then the color changes will also be applied on the **Brushes / Pen RGB palette**. In order to Edit the **RGB** palette we must edit the Threads palette part.

In order to edit the **RGB palette** you must also have enabled the **Embroidery** technique. When embroidery technique is enabled you can also see Threads palette as on the following figure.

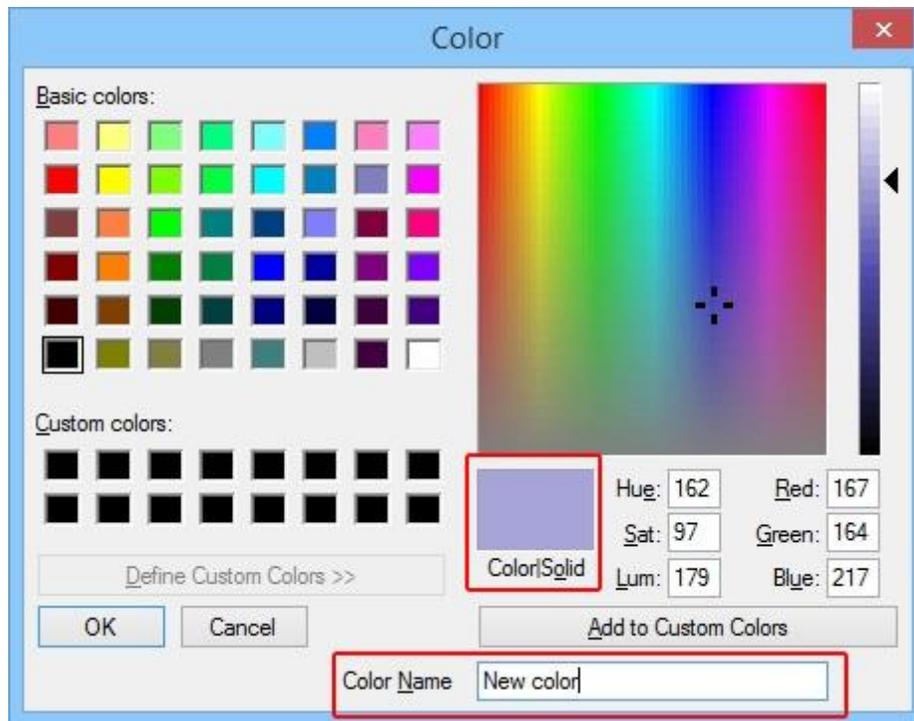


To **Add a new color** you have to **Right** click on the RGB color palette that is listed on the **Thread palette** toolbar and select the respective option.



Right click menu

The **Color** dialog box will appear from where you can choose the color you want the new color to have. There are various ways you can choose a color from the **Color** dialog. You can choose a color by clicking on the respective one from the **Basic colors** list, or by clicking on the color rectangle where all possible colors are listed, or you can type the exact code number of the color you want on the Red – Green – Blue / Hue – Sat – Lum fields and produce the color you want.



Color dialog

After choosing the color, you can set the name of the color in the **Color name** field or leave the suggested name and click **Ok** button to confirm your selection. The color you have chosen will appear at the end of the existing RGB color palette. The newly added color can be used normally.

To **Edit an existing** or newly added color you have to right click on the color and select the **Edit color** option from the right click menu. The **Color** dialog box will appear from where you can choose a different color or name for the color that you are editing. There are various ways you can change the color from the **Color** dialog. You can change the color by clicking on a different one from the **Basic colors** list, or by clicking on the color rectangle where all possible colors are listed, or you can type the exact code number of the color you want on the Red – Green – Blue / Hue – Sat – Lum fields and produce the color you want. If you want you can edit also the **Color name** by typing a new one in the respective field. When you finish you can click the **OK** button to confirm the changes or **Cancel** button if you want to discard the changes you made. The changes you made will be applied on the selected color and it will be ready for use.

To **Delete** an existing or newly created color you have to **Right click** on the color and select the respective option from the right click menu. The color will be deleted immediately.

Important: Be careful when you use the Delete function because you cannot Undo the deletion of a color.

If you want to Reset the RGB palette to its default status you have to right click on any color and select the **Reset palette** option. The color palette will return to its default status and all the changes you have made will be lost.

Important: All the above options are available only for RGB color palette.

Selections by color

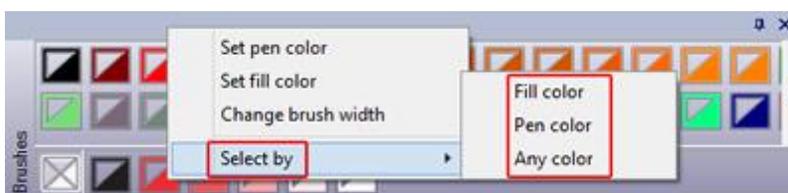
Brush palette toolbar includes the ability to select objects by color. This option is very useful when you want to make a change to all objects that have the same color. You can select them and then make the change

you want. You can change colors or fill types to all objects or apply any other option you want. You can select objects by **Fill** color, by **Pen** (outline) color or simply by color.

To select the objects by color you have to **right click** on the **color** you want from those that are listed on the **currently used area** and from the right click menu select one of the three available selection options: **Select by Fill**, **Select by Pen** and **Select by color**.

- If you select **Fill color** option, all objects that have the fill color you right clicked on will be selected.
- If you select **Pen color** option, all objects that have the Pen (outline) color you right clicked on will be selected.
- If you select **Any color** option all objects that have Fill or Pen (outline) color you right clicked on will be selected.

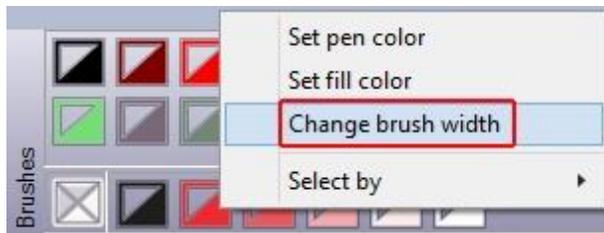
Any change you make on the selected objects, affects all objects.



Select by color right click menu

Change brush width

The actual brushes have various widths. Therefore in order the software to be more accurate, in the Brush palette you have the ability to define the width of the specific brush color you will use.



Right click menu

To do that you have to **right click** on any of the currently used colors and from the right click menu select the **Change brush width** option. The change width dialog will appear where you can set the width of the actual brush that you will use.



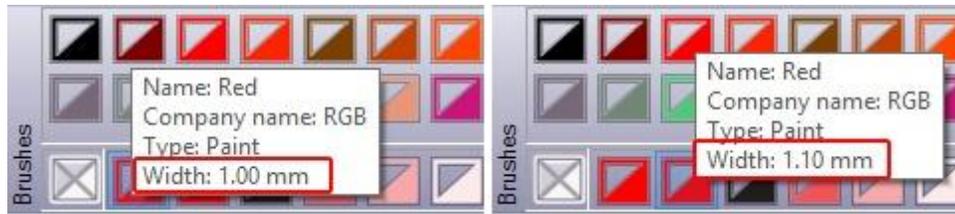
Change width dialog

In the **Change color's width** dialog type the brush width you like or use the up and down arrows to increase or decrease the current width. After making the appropriate changes click **OK** button to confirm the change or **Cancel** to exit. If you hover over the color you right clicked on you will see that in a pop-up info box shows you the **color width** of the specific color.



color width

If you want to use the same color but this time to set a different color width, you have to assign the same color on the object by clicking on it on the **Available colors** and then right click on it (on the currently used area) to change width.



same colors with different widths

Please remember that the brush manufacturer's palettes have a fixed brush width and if you try to change their width then the color will change to a custom RGB color. The brush colors from the manufacturer's palettes must be used as is.

Paint transformations

The **Object properties** bar holds all the available object types, there are various **Embroidery**, **Crystal** and **Paint** types. For the purposes of this chapter we will only present the properties of the available **Paint** types.

The object types are separated into types that are used to fill an area (Fill tab ) and types that are placed on the objects **Outline** (Outline tab ). If the property bar is not visible you can open it from the **View** menu or with the shortcut key **Alt + Enter**. Using the provided options you can change the **Fill** or **Outline** type of any design part just by clicking on the desired type.

Paint technique must be enabled for the current design in order to view the available Paint types.



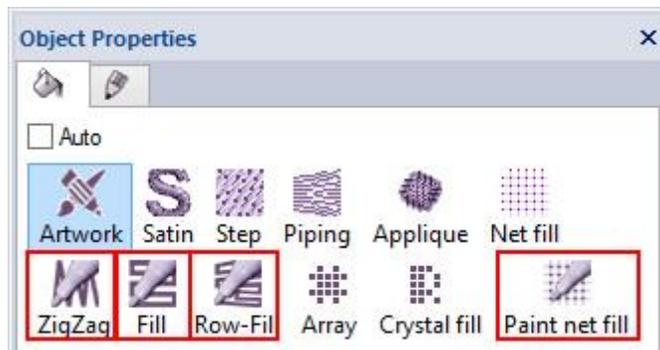
Click on each tab, on the above image, to view their options.

The **Paint fill types** that are added in **Paint technique** are **ZigZag**, **Fill**, **Row-Fill** and **Paint net fill** and the **Paint outline types** are **ZigZag** and **Line**. Using the available Paint types you can chose the method that will paint your objects. Each one of them uses a different method to paint a shape which allows you to give an embroidery feel to the paint designs you are creating.

•

Paint Fill

When **Paint** technique has been enabled, in the fill tab there are extra paint fill types, their icons have a **brush** to reveal that they are paint types. The available fill types are not visible until you select an object from a design or the whole design. When a vector design is imported and we have only **Paint** technique enabled, the design is filled with paint types automatically. You can apply any paint fill on the design manually by selecting the object and then clicking on the respective Fill you want (**Fill** , **ZigZag** , **Row-fill**  or **Paint Netfill** ). By default the Fill is set to **Fill**(paint Fill ).

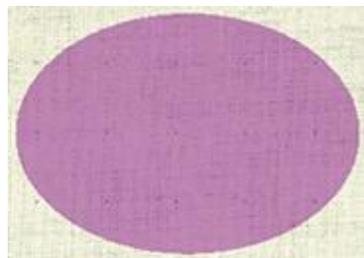


Fill stitch type options

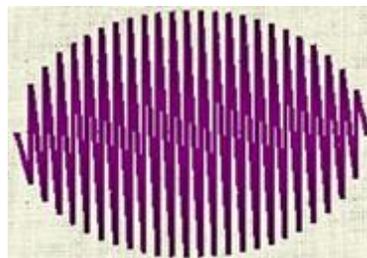
For designs that have only outlines or they are line art designs, the **Fill** option is not available. According to the enabled techniques, in the fill tab there may be various stitch type fills (**Embroidery** technique) which are explained in the Embroidery transformations chapter and Crystal Fill (Crystals technique) that is described into a separate chapter. All the Paint fill types may have some properties that are specific for each of them but mainly they have some common properties that will be described later in this topic in section **Common Paint fill properties (Density, Cutter settings and Remove overlaps)**.

ZigZag fill:

This paint type is a special fill type that brush-lines are connecting two points from one side of the object to the other. These points are formed like closely arranged zigzag lines along the shape of the object. The direction of the object defines the angle of the stitches. We can easily set the angle of **Zigzag** using the Directions tool  on standard toolbar. Generally small and oblong objects will be filled with **ZigZag** Paint type automatically. The **ZigZag** Fill includes some more options that allow us to customize the way that it will be applied (Density) and the way that it will be produced (Cutter presets, Cutter speed, Cutter pressure and passes). All these properties are common for all paint fill types and we will present them all together in section **Common properties**.



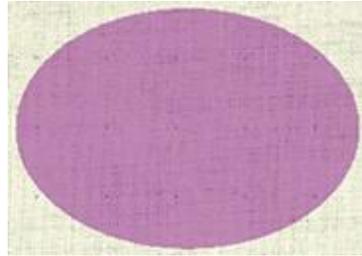
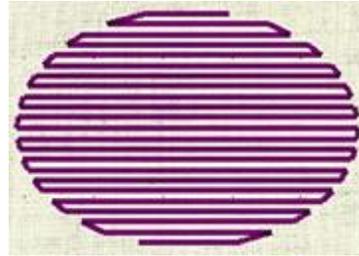
Vector object



Zig-Zag Fill Paint type

Fill:

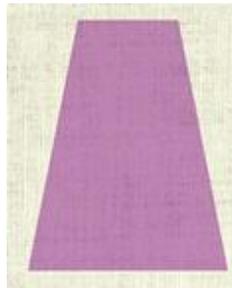
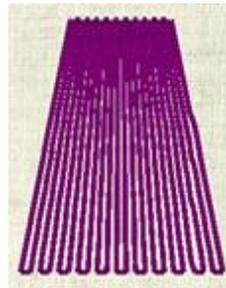
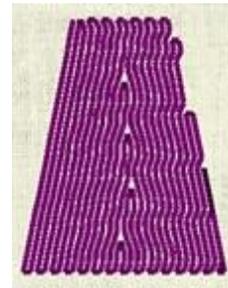
This paint type is a series of brush-lines commonly used to fill large areas. You can create various fill patterns by altering the angle and the density of the brush-lines. Most of the times the large objects are filled with **Fill** paint type. This is the default Paint fill for every object that will be filled with a Brush color.

*Vector object**Fill Paint type*

The Fill Paint includes some more options that allow us to customize the way that it will be applied on the selected object. These options are the following:

Row-Fill:

this paint type is a fill type similar to Fill paint type. It is longitudinal brush lines from one side to the other that are vertical to the defined direction that it is automatically defined from the software. Row-fill is commonly used to fountain like shapes. Row-fill type can be laid down at any angle and with varying densities. There is also an extra option, Use short/long, which allows you to fill the object with fill like stitches that will adjust the density based on the shape where they are placed in.

*Vector object**Row-fill Paint type**Row-fill Paint type with short-long***Use short/Long:**

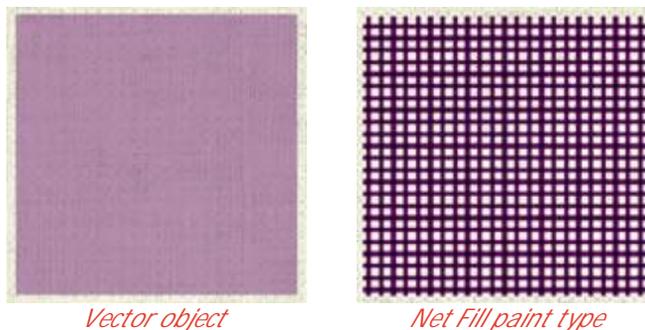
Use short/long

This parameter has to do with the brush-lines that will pass from the thick or narrow parts of the created piping. If you want to keep the same density in all parts of the Row-fill you should enable this parameter. With this way there will be less brush-lines passing from the narrow parts of the Row-fill and more brush-lines from the thick parts.

If this parameter is disabled, the same number of brush-lines will pass from all the parts of Row-fill. Therefore in some narrow areas of the shape, there may be too many brush-lines passing and the quality of the result may not be the expected one. On the other hand if this parameter is enabled, the Row-fill paint type will try to fill the shape with the best possible way by avoiding to paint areas that have been already covered with color by using short/long brush movements

Paint Net fill:

this type is a special paint type that adds two scan lines that are crossing with parallel equidistant paint lines. These two scan lines are forming a Net of paint lines. Using the available properties you can adjust the **size** of the cells the **angle** of the Net and finally add **offset** to the Net fill.



When **Paint Net fill** is applied it sets the fill type to be **Net Fill**. The **Paint Net fill** type is a special fill type that adds two scan lines that are crossing with parallel equidistant running paint lines. These two scan lines are forming a **Net of Paint lines**.

The Net Fill includes some more options that allow us to customize the way that will be applied on the selected object. These options are the following:

Cell size:

Cell size mm

Using this option you can specify the size of each square of the Net. For example by setting the **Cell size** to be 2.0 mm all squares of the net will have 2.0 mm side size. The maximum value that the **Cell size** can have is 9.9mm and the minimum is 0.5mm. To change the value of the Cell size option you have to either click on the up and down arrows next to the field to increase or decrease its value or type the exact value you want and then press the **Enter** key from the keyboard. Another way to increase or decrease the value is by clicking inside the Cell size field and use the mouse wheel to change its value. The changes that you will make will be immediately applied on the design. By changing this value you can create a net with large squares or small squares according your preferences.

Offset:

Offset mm

Using this option you can specify the distance, inner or outer, you want the Net fill to be moved. For example: if you set the **Offset** value to 3mm the Net fill will increase its size by 3mm to all directions outside its original outline. On the other hand if you set the value to -3mm the Net fill will decrease its size by 3mm to all direction inside its original outline.

The maximum value that the **Offset** can have is 9.0mm and the minimum is -9.0mm. To change the **Offset** value you have to either click on the up and down arrows next to the field to increase or decrease its value or type the exact value you want and then press the **Enter** key from the keyboard. Another way to increase or decrease the value is by clicking inside the Offset field and use the mouse wheel to change its value. The changes that you will make will be immediately applied on the design.

Angle:

With this option you can change the Angle that the Net fill will be applied. For example: When the angle is set to 0o degrees the **Net fill** will be aligned on the X and Y axes creating right angles. If you change the **Angle** value to 30o degrees the **Net fill** will be rotated 30o degrees anticlockwise and change completely its direction.

The **Angle** values that you can set are between 0o and 360o degrees. To change the **Angle** value you have to either click on the up and down arrows next to the field to increase or decrease its value or type the exact value you want and then press the **Enter** key from the keyboard. Another way to increase or decrease the value is by clicking inside the **Angle** field and use the mouse wheel to change its value. The changes that you will make will be immediately applied on the design.

By changing the **Angle** of the **Net fill** you can orientate it based on the shape that it is applied on. This ability allows you to produce better and more beautiful embroidery results.

There are also two more options that are very useful in customizing the way that the design will be produced. Those are the **Remove overlaps** option and the **Sequence** option.

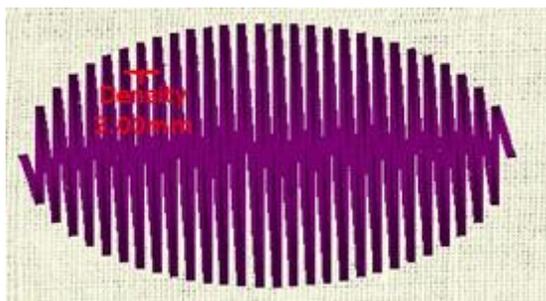
Common fill properties**Density:**

You can activate the **Density** option by checking the check-box next to it. In the numeric field, you can specify the density of the brush-lines that you are adding. You can also adjust density by clicking the

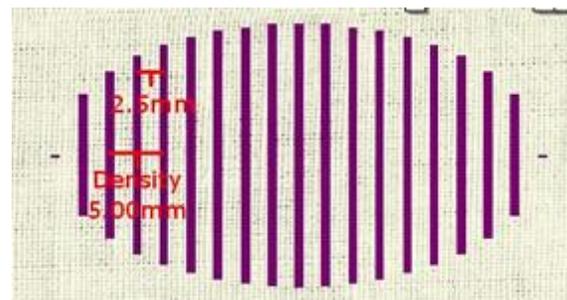
arrows next to the value or by clicking on the value and rotating the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field. The default Density is 1.20mm that ensures a good area coverage.

Zigzag

If you increase the density over 5mm then the ZigZag paint fill will change to single lines that will not be connected with a diagonal line. This means that if two successive lines go further away than 2.5mm width the ZigZag will switch to single lines.



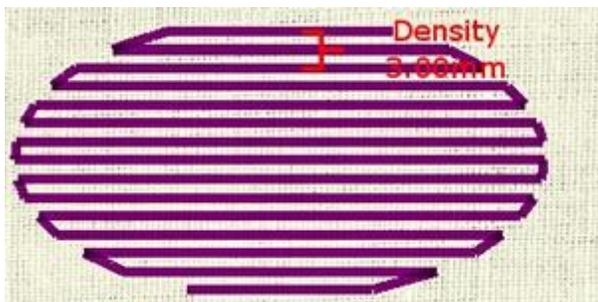
Zigzag Density 3.00mm



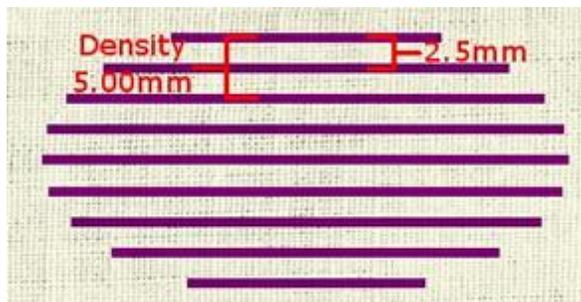
Zigzag Density 5.00mm

Fill

If you increase the density over 5mm then the Fill paint will change to single lines that will not be connected with each other. This means that if two successive lines go further away than 2.5mm width the Fill paint type will switch to single lines.



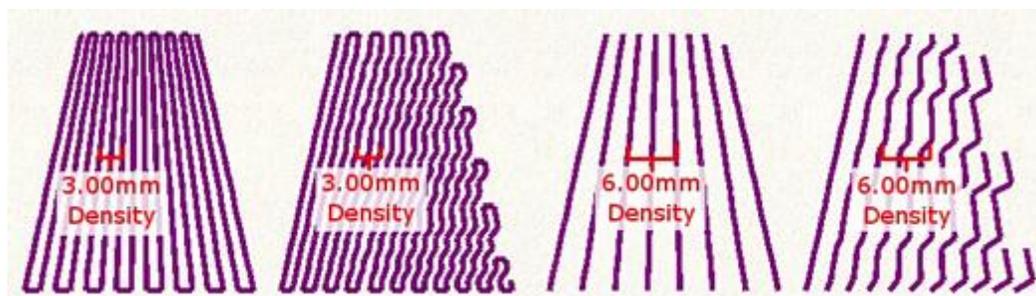
Density 3.00mm



Density 5.00mm

Row fill

If you increase the density over 5mm then the Row-Fill paint fill will change to single lines that will not be connected with each other. This means that if two successive lines go further away than 2.5mm width the Row-Fill will switch to single lines.



Density 3.00mm

Density 6.00mm

Cutter presets

All the **paint** objects are produced by placing a **Brush/Pen** to your digital cutter and then exporting the design to the cutter. When exporting **Paint** designs, the cutter must be instructed to use lower speed and less pressure in order to achieve best results. These are some settings that you must adjust either for each object, here in object properties, using the following properties (**Cutter pressure, Speed, Passes**) or at the **Export to Cutter** dialog. In order to assist you in selecting the proper settings according to the material and the type of the operation we have prepared various operation presets. Click on the **Cutter presets** button and from the drop down menu, select any of the available presets for your **Cutter** and the **material** that you are going to use. This preset selection affects only the selected objects. For example for painting tasks for users that own **Artistic Edge** cutter you can select the preset **Edge , Paint**. After selecting the preset you will see the values of the following properties change (**Cutter pressure, Speed, Passes**).

Cutter speed

With this value, you can specify the speed that the digital cutter will produce the design. This value takes values from 0 - 100, 100 is the max speed that each digital cutter can support. Some digital cutters may

not allow you to adjust this value at all through our software, you can make adjustments though through the machine's panel. So the selection of speed though this property may not be applied during production.

Cutter pressure

With this value, you can specify the pressure (force) that the digital cutter will use on its head. In our case, we will use a Brush/Pen to our digital cutter in order to paint a design the pressure must be less than when we actually use a Blade. This value takes values from 0 - 100, 100 is the max pressure that each digital cutter can support. Some digital cutters may not allow you to adjust this value at all through our software, you can make adjustments though through the machine's panel. So the value that you have selected may be ignored. The value of Pressure varies from material to material, thicker material need more pressure and thinner less.

Passes

You can specify the number of **Passes** you want the design to be made with. It actually defines how many times each shape will be made by the machine.

Remove overlaps:



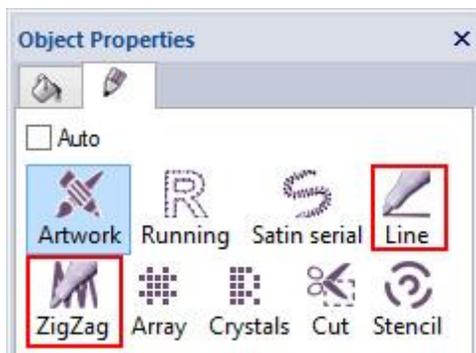
This is an automatic filter which removes all overlaps between the objects of the vector designs. This filter uses artificial Intelligence and it is applied only where necessary. The application of the filter results in the reduction of brush's paint that will be placed on the fabric or any other material used. It is also possible to manually alter the overlapping status of each object. There are three possible options that you can apply on a specific object, **Auto**, **Never** and **Always**. The **Auto** is the default option that is used to create the best possible results on the design. When the **Never** option is applied on an object, the specific object will never trim the objects that overlap. This means that all the objects/shapes that are under the selected objects will be painted normally, coloring the fabric with the color the specific object had. The opposite option is **Always**. When it is applied to a specific object trims all the objects that it overlaps. This means that all the parts of objects/shapes that are under the selected object will not be painted with color.

The software uses this tool to color your design more efficiently and effectively. But in order for this function to work well, avoid applying **trim** tool when in DRAW mode. Trim tool must always be used with care or after the setting **Remove overlaps** option to **Never**.

Paint Outline

When **Paint** technique has been enabled, in the **Outline/Pen** tab there are extra outline types, their icons have a **brush** to reveal that they are paint types. Using the extra **Outline/Pen** types we can create line-art objects with paint. The available outline types are not visible until you select an object from a design or the whole design. When a line-art vector design is imported and we have only **Paint** technique enabled, the program automatically puts paint pen fill on it automatically. You can apply any paint outline on the design manually by selecting the object and then clicking on the respective **Brush/Pen** outline you want (**Line** ,

ZigZag ). By default the outline is set to **Line** (). For designs that do not have border the **Outline** option is not available. Every time you select one, it is applied immediately to your design.

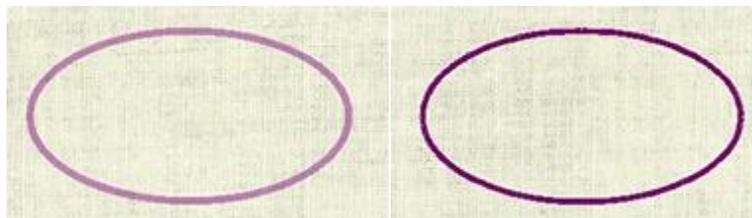


Click on each stitch type icon, on the above image, to view how they applied.

For designs that have only outlines or they are line art designs, the **Fill** option is not available. According to the enabled techniques, in the **Outline/Pen** tab there may be various stitch types (**Embroidery** technique) which are explained in the Embroidery transformations chapter, Crystals type (**Crystals** technique), Cut objects (**Cut** technique) and Stencil objects (**Stencil** technique) that are described into separate chapters. All the Paint outline types may have some properties that are specific for each of them but mainly they have some common properties that will be described later in this topic in section **Common Paint outline properties (Offset, Cutter settings and Remove overlaps)**.

Paint Line

this Paint type consists of a single brush-line between two points. It is used mainly for outlining, fine detail and complete designs or for creating redwork line art designs. The program automatically puts **Line pen** on line art designs and thin object outlines. For all Paint line objects there are some properties to adjust, Offset and various Cutting options, all these options are described later in this chapter in

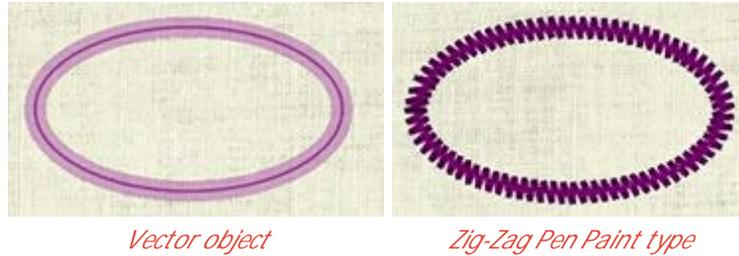


Vector object

Line Pen Paint type

ZigZag Pen:

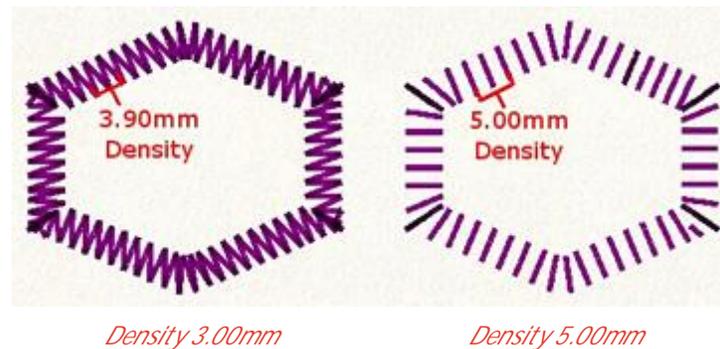
This Paint type is applied on thick outline objects by forming closely placed zigzag brush-lines along it. It is generally used to fill borders and line art designs. Generally all the thick line art designs and object outlines will be filled with ZigZag Pen Paint type. On this Paint type you can adjust the density and produce the design you want to paint with the brush.



Density:

Density mm

You can activate the **Density** option by checking the checkbox next to it. In the numeric field, you can specify the density of the ZigZag outline brush-lines that you are adding. You can also adjust density by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field. The default Density is 1.20mm that ensures a good area coverage. If you increase the density over 4mm then the ZigZag paint fill will change to single lines that will not be connected with a diagonal line. This means that if two successive lines go further away than 2.5mm width the ZigZag will switch to single lines.

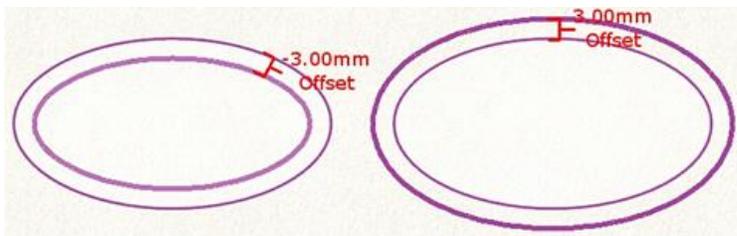


Common Paint outline properties

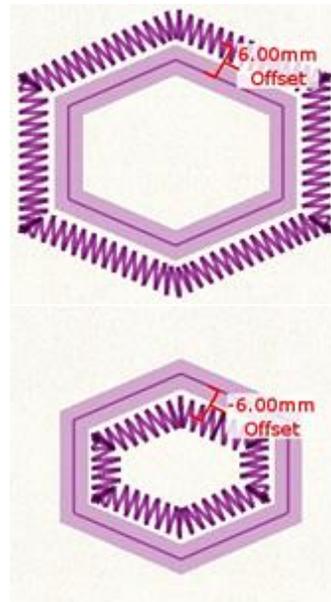
Offset:

Offset mm

You can activate the **Offset** option by checking the check-box next to it. In the numeric field you can enter the value of offset you want, with lowest value of -15mm and highest value 15mm. Also, you can increase or decrease the offset value by clicking on the arrows next to the value or by clicking on the value and rotating the mouse wheel, if there is one. The value that you are inserting defines the exact distance you want the running outline to have from its initial position. If the value is negative, running object will make an inner offset and the opposite, if it is positive. The default offset value is zero and can be changed only from you. Any changes you are making on the offset value they are automatically previewed on the design.



Paint line offset



Paint Zigzag offset

Cutter presets

All the **paint** objects are produced by placing a **Brush/Pen** to your digital cutter and then exporting the design to the cutter. When exporting **Paint** designs, the cutter must be instructed to use lower speed and less pressure in order to achieve best results. These are some settings that you must adjust either for each object, here in object properties, using the following properties (**Cutter pressure, Speed, Passes**) or at the **Export to Cutter** dialog. In order to assist you in selecting the proper settings according to the material and the type of the operation we have prepared various operation presets. Click on the **Cutter presets** button and from the drop down menu, select any of the available presets for your **Cutter** and the **material** that you are going to use. This preset selection affects only the selected objects. For example for painting tasks for users that own **Artistic Edge** cutter you can select the preset **Edge , Paint**. After selecting the preset you will see the values of the following properties change (**Cutter pressure, Speed, Passes**).

Cutter speed

With this value, you can specify the speed that the digital cutter will produce the design. This value takes values from 0 - 100, 100 is the max speed that each digital cutter can support. Some digital cutters may not allow you to adjust this value at all through our software, you can make adjustments though through the machine's panel. So the selection of speed though this property may not be applied during production.

Cutter pressure

With this value, you can specify the pressure (force) that the digital cutter will use on its head. In our case, we will use a **Brush/Pen** to our digital cutter in order to paint a design the pressure must be less than when we actually use a Blade. This value takes values from 0 - 100, 100 is the max pressure that each digital cutter can support. Some digital cutters may not allow you to adjust this value at all through our software, you can make adjustments though through the machine's panel. So the value that you have

selected may be ignored. The value of Pressure varies from material to material, thicker material need more pressure and thinner less.

Passes

You can specify the number of **Passes** you want the design to be made with. It actually defines how many times each shape will be made by the machine.

Remove overlaps:

Remove overlaps

This is an automatic filter which removes all overlaps between the objects of the vector designs. This filter uses artificial Intelligence and it is applied only where necessary. The application of the filter results in the reduction of brush's paint that will be placed on the fabric or any other material used. It is also possible to manually alter the overlapping status of each object. There are three possible options that you can apply on a specific object, **Auto**, **Never** and **Always**. The **Auto** is the default option and the one that Creative DRAWings uses to create the best possible results on the design. When the **Never** option is applied on an object, the specific object will never trim the objects that overlap. This means that all the objects/shapes that are under the selected objects will be painted normally, coloring the fabric with the color the specific object had. The opposite option is **Always**. When it is applied to a specific object trims all the objects that it overlaps. This means that all the parts of objects/shapes that are under the selected object will not be painted with color.

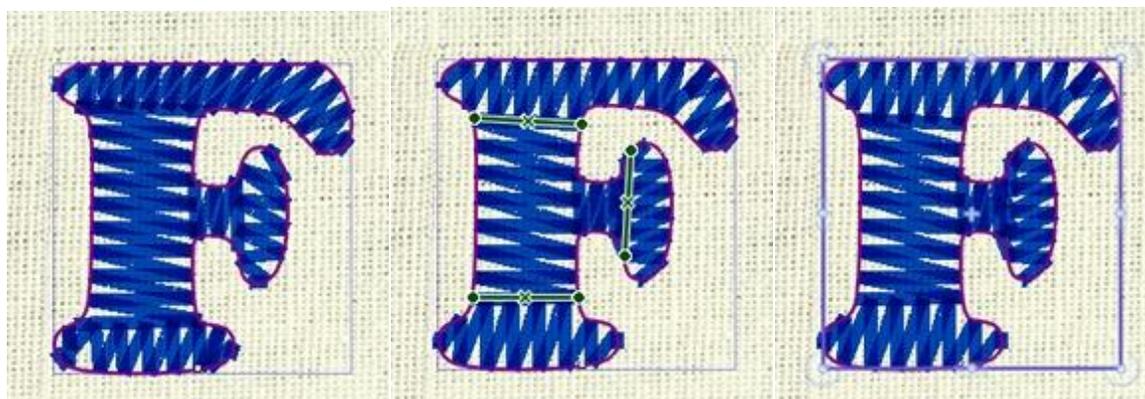
The software uses this tool to color your design more efficiently and effectively. But in order for this function to work well, avoid applying **trim** when in DRAW mode. Trim tool must always be used with care or after the setting **Remove overlaps** option to **Never**.

Directions and Divides

For the objects that have a paint fill there are 2 extra tools available in the **Tools** toolbar. Available only for **Paint, Embroidery** technique. These are **Divide**  and **Directions**  tools.

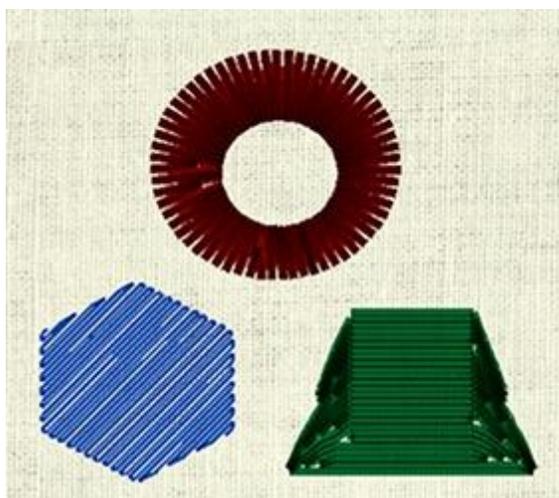
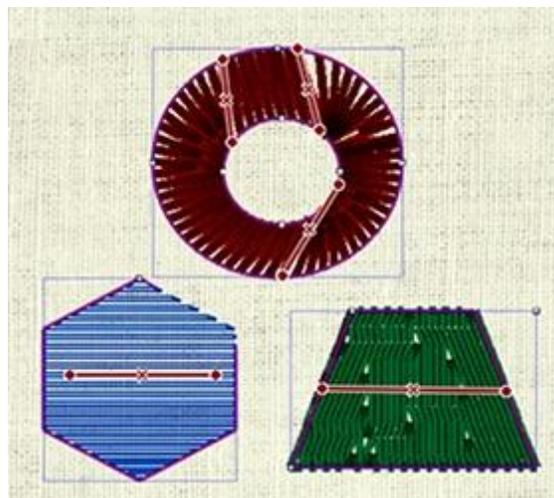
Divide

Using **Divide** tool , it is possible to divide **ZigZag** and **Row-fill** paint fill objects and manage the way in which the paint lines are split into sub sections. The objects are not increased but split to internal branches. This tool gives you the flexibility to customize the way ZigZag and Row-fill objects are painted on the fabric simulating even better the "embroidery look" style. In order to add a **Divide** line, click on  icon or press the **Shift + D** shortcut keys from the keyboard. Then click on the object you wish to divide (in order to select it). Click and drag from one side of the object to the other in order to specify the divide line. If you want to delete the divide line you have created, just click on the 'X' icon in the middle of the line. You can change any existing divide line by clicking and dragging the points of the line. The **Divide** lines have green color in order to distinguish them from the directions lines which are red. It is very useful also when you want to create designs with Text. You can divide sections of the the characters and define exactly the way you want to be painted.

*Before divide**Apply divide tool**After divide tool*

Directions

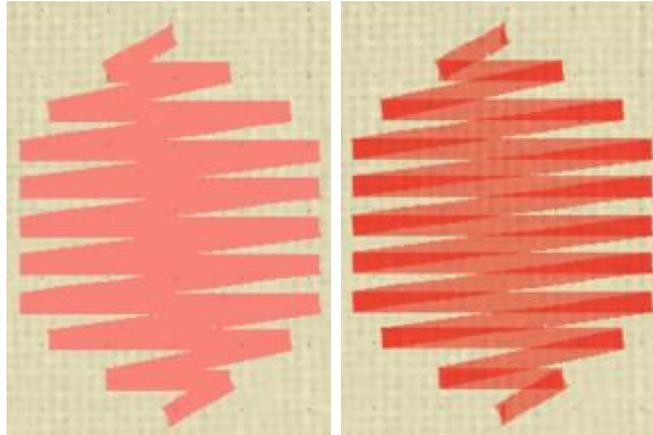
Using **Directions** tool , it is possible to change the direction of all paint fill objects except paint net fill. In order to add a direction first you have to click on  icon or press the 'D' shortcut key from the keyboard. Then click on the object, which direction you wish to change (in order to select it). Click and drag in order to specify the direction of the paint fill lines. To delete the direction you have created, just click on the 'X' icon at the middle of the direction. You can change any existing direction by clicking and dragging the points of the direction.

*Step Directions**Satin Directions*

By changing **Directions** in a design you can adjust the way the paint lines will be applied on the fabric and be able to produce different results. In **ZigZag** and **Row fill** objects you can have more than one paint directions allowing you have fluctuations in the way the paint lines will be applied. On the other hand in paint **Fill** objects you can have only one **Direction** of paint lines. With the combination of **Divide** and **Directions** tools you can create unique designs that can have many sub-objects as brunches and specific direction of paint lines for each sub-object.

Realistic Paint

You can enable or disable **Realistic Paint** option from the **View** menu. By enabling the **Realistic paint** option the software will try to create a more realistic preview of the Paint design you have created. The brush-lines will become transparent to a level that their overlapping areas will make the color appear darker. This will give you a more accurate preview of the final result. On the other hand if you disable the **Realistic Paint** option you will get a solid color coverage which is also the default way the objects are filled with brush-lines. This is a very useful option that allows you to have a better preview of the final Paint result.



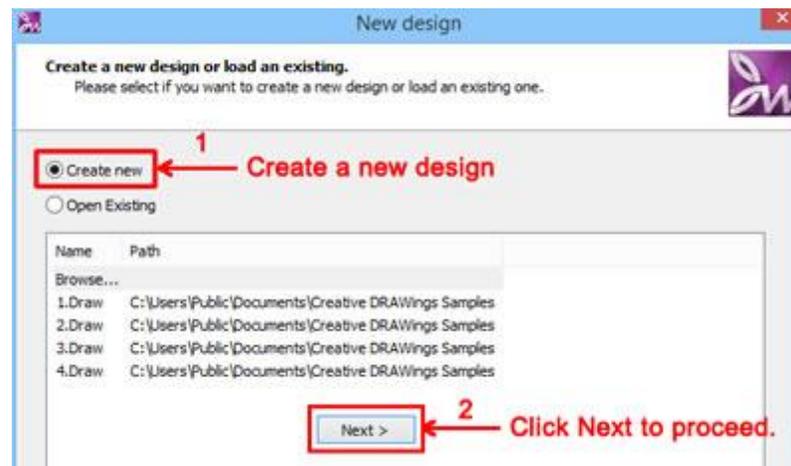
Realistic Paint Disabled

Realistic Paint Enabled

Open as Photopaint

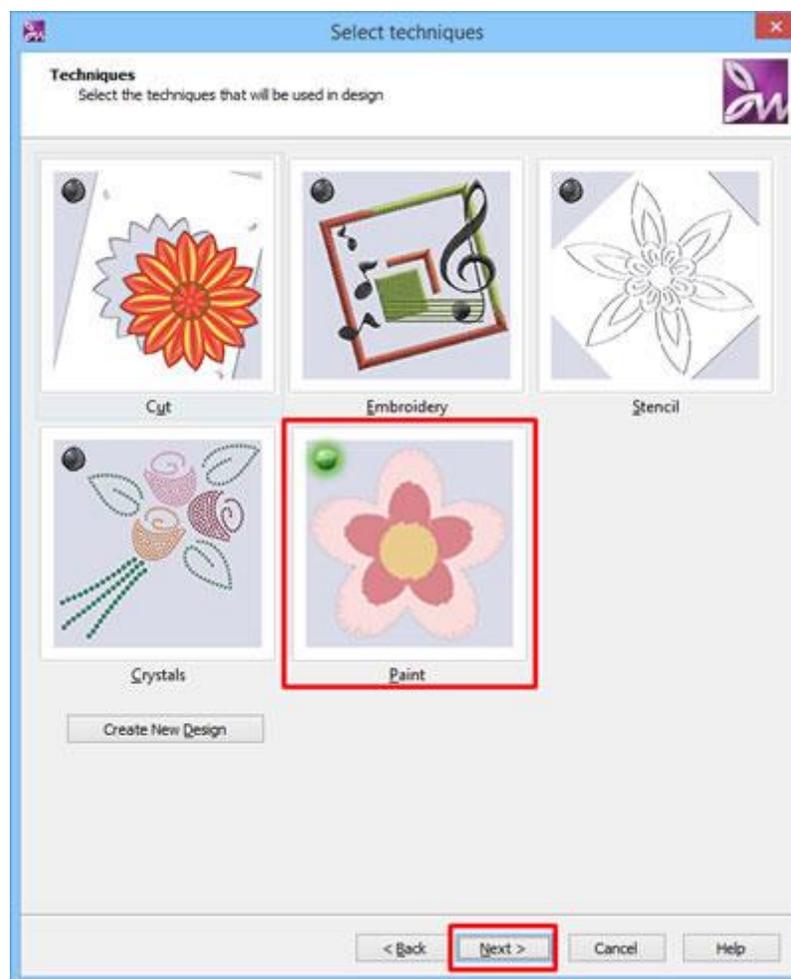
When creating a new design and you have only **Paint** technique enabled you can convert any Bitmap image directly into a **Photo-Paint** design, Let's see how it works.

1. From the start-up wizard select the **Create new** option and click **Next>** button to proceed..



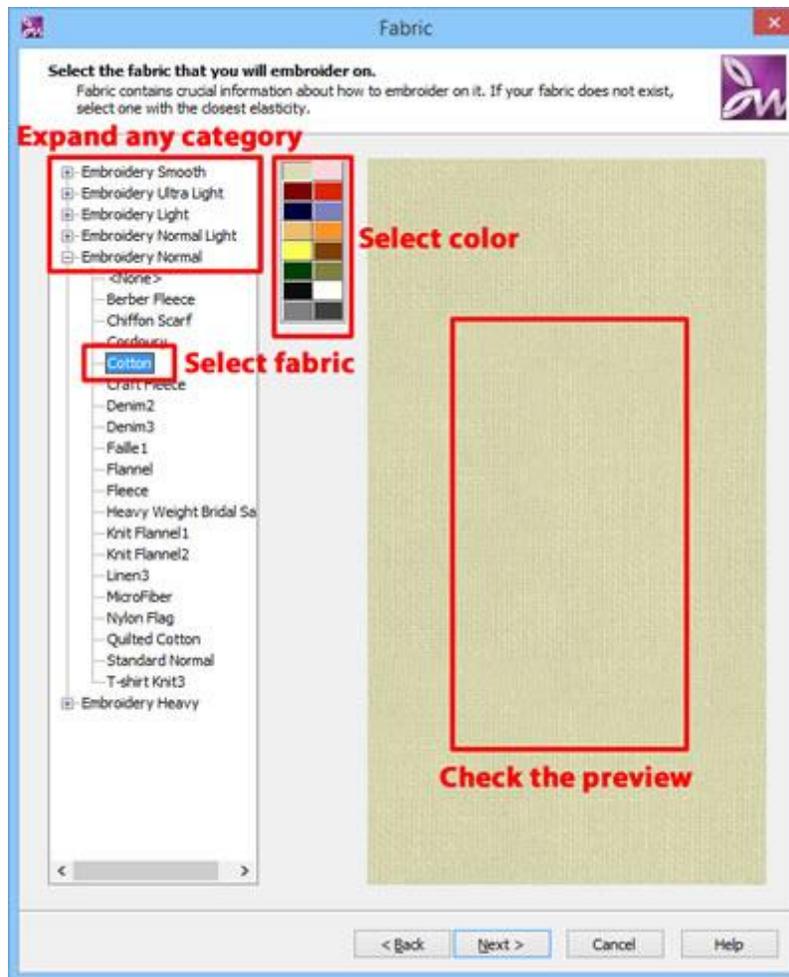
Starting dialog

2. Select which Techniques you want to be enabled for the created design. For the purposes of this sample we will enable only **Paint** technique. Then click on **Next** button to proceed.



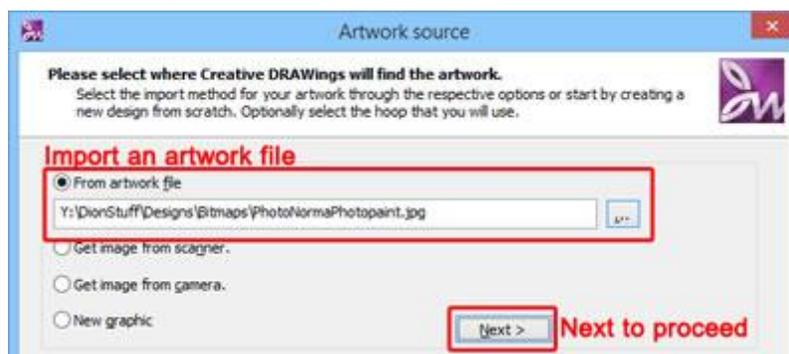
Select Techniques

3. The **Fabric** dialog will appear. Expand the **Embroidery normal** category from the list at the left by clicking on the + icon next to it.
4. Select the Fabric similar with the one you will actually use for your Paint project. For example, select **Cotton** fabric.
5. After selecting the **Fabric**, choose the color from the list at the middle of the dialog.
6. Click **Next>** button to continue.



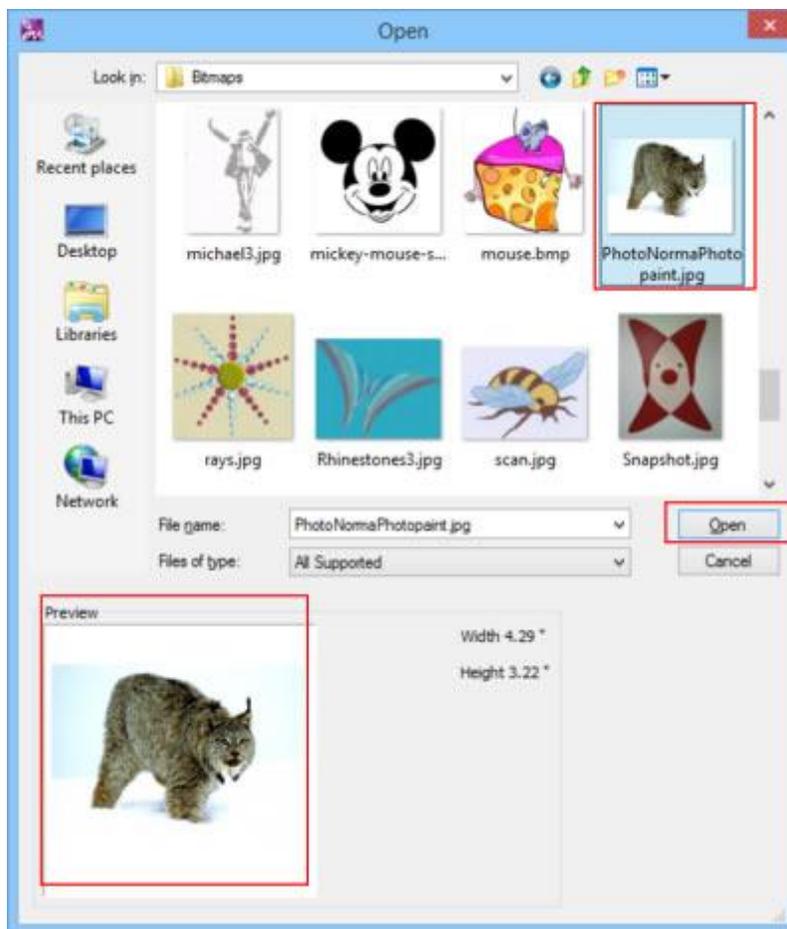
Select Fabric

7. The **Artwork source** dialog will appear. Select the **From artwork file** option and Click on the browse button  at the right to select a design. Se



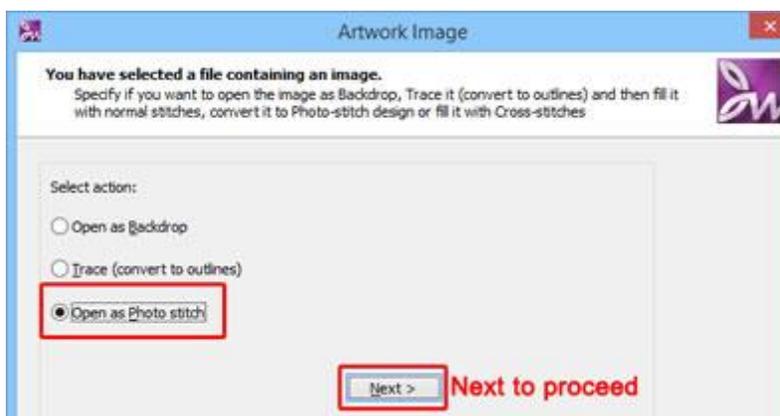
Starting dialog - 2nd page

8. The **Open** dialog box will appear from where you can browse to find any bitmap or Vector image to be used as artwork for the new design.
9. In order to open as Photo-paint we must select any Bitmap image (.jpg *.png *.bmp *.gif etc) using the open dialog.

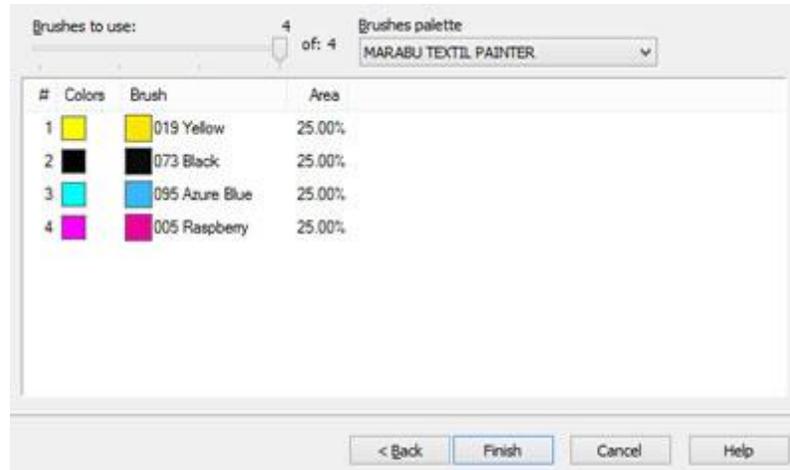


Open design dialog

10. The artwork source dialog will appear once more with the selected Bitmap in the path. Click on next to proceed to the Artwork image step. Select option Open as Photo-paint / Photo-stitch and click on next to proceed.



11. The **Color reduction** (number of Brushes) dialog will appear where you can select the **Brushes palette**. Since only the Paint technique is enabled, the software will convert the imported design using paint types and paint colors.



Color reduction dialog

Just like that you can convert the bitmap image to a perfect **Photo paint** design. The conversion is made automatically, the **Photo-paint** will appear in the design area where you can make the adjustments. **Photo-paint** is another alternative you have when it comes to filling bitmap images with paint. It consists of 4 paint layers that have different colors. Each brush color layer is one of the CMYK(Cyan, Magenta, Yellow and Black) color model. First the Magenta color is painted, then the Cyan color, the Yellow color follows and finally comes the Black color. These colors cannot be changed and you must use them exactly as they are produced, if you want to produce accurate Photo-paint results. Generally you cannot edit the actual bitmap image but you can re-size and change the position of the Photo-paint design. If you want to edit the actual bitmap image you have to use a Bitmap editing software and then import the edited bitmap back to Creative DRAWings to view the results. By editing the bitmap you can increase the quality of the painted result.



Photo to Photo-paint

You can increase the painted result of the Photo-paint design by adjusting the image contrast. By increasing the contrast of the image you will get thicker zigzag bars in the darker areas of the photos and add detail to the final colored design. Also, some adjustments to the image size might be needed to get more detail to your photo-paint. To increase the size of the bitmap inside Creative DRAWings you have to select the Photo-paint design, and then re-size it by click and dragging the corner handles of the bitmap or the handles at the middles of each side. The bitmap will be re-sized and the Photo-paint will be recalculated. By increasing the size of the bitmap you automatically increase the area that will be covered from the satin bars that will lead to detail increase.

The photo-paint object gives you the ability to adjust the satin bars' **Width** and the **Density** of each satin bar for more accurate results. With the **Width** value you can set the distance that two satin bars will have between them and with the **Density** value you can set the density that each satin bar will have when it passes over dark areas. By adjusting those two values you can get more detailed photo-paint results.

Also, you have the ability to create **Monochrome** Photo-paint by checking the respective option from the **Object properties** toolbar. The Photo-paint will become monochrome created from only one color (black or any other you have selected from the brushes color palette) . This is a great effect that can give an artistic feeling to your photo-paint.



Monochrome Photo-paint

Important: Creative DRAWings can import only Bitmap images that have been created with RGB (Red, Green, and Blue) colors. Any Bitmap that was created with CMYK (Cyan, Magenta, Yellow, and Black) will not convert properly.

Convert outline to Object

Any created object may have have outline or not. In case that an object does not have any outline we can easily add outline color simply by **left clicking** on the top left corner of the color you want the outline to have. In case that you click on a **Thread** color, running outline of that color will be automatically added. In the same way if you click on a **Brush** color, Paint line outline will be automatically added with the selected color.

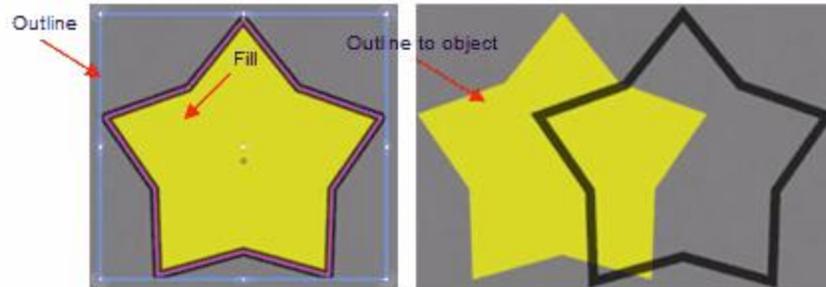
The added outline is not a separate object it belongs to the selected fill object.

if we want to reshape the outline then the fill will be reshaped as well because it is an object. **Convert outline to Object** exists in order to convert the outline/border that is attached on an object to a separate object and handle it as a **Fill** or **outline/pen object**.

If you convert the outline to a Fill object, you will be able to fill it with **Appliqué** stitch type that it is not possible to do it otherwise. Also, you will be able to apply all kind of shape transformations on it.

If the outline thickness is smaller than 0.9mm and you apply the **Convert outline to object** option, the outline will be converted to **Running** object and not to a Fill object.

If the outline thickness is greater than 0.9mm and you apply the **Convert outline to object** option, the outline will be converted to Paint ZigZag object (Fill object).



Apply Convert outline to object option to star object

To apply **Convert outline to object** option you have to select an object that has an outline and from **Edit** menu select the respective option. You can also apply the same option by pressing the **Ctrl, Shift and Q** keys (Ctrl+Shift+Q) from the keyboard after selecting the object you want to apply it. The outline will be separated from the fill object and can be handled as a different object.

Chapter XVIII

Embroidery - Creating embroidery designs

In this chapter we will describe all the stitch transformations that the software can perform. You will learn about Object Properties toolbar functionality, how you can adjust **Design properties**, how to change **Fabric** and how to add Divides and Directions.

In order to be able to use the Embroidery tools of the software you will have to enable the **Embroidery Technique** from the **Techniques**  option.

At the object properties toolbar all the stitch types that can be applied in the embroidery design will be added. Stitch types like **Satin**, **Step**, **Row fill**, **Appliqué**, **Photo stitch**, **Running** and **Satin Serial** are available for creating unique embroidery designs. Furthermore there are two fill types **Array** and **Crystal fill** that can be used for any object. Also, includes all the advanced stitch parameters that you can adjust according the needs of the embroidery design.

In addition, you can select the fabric and its color that you want to embroider your design on, from a large variety of fabrics and colors. This gives you a better visualization of how your embroidered design will look on your garment.

Finally, you can adjust the properties of your design by making optimization changes and adding useful comments.

Stitch types - Embroidery types

The software includes several **stitch types** some and Various **Special Embroidery types**. In the following table we can see them listed.

- Satin
- Step
- Row fill
- Running
- Satin Serial
- Photo-stitch,
- Cross-stitch
- Netfil
- Appliqué
- Array fill

Stitch types

Satin, **Step** and **Row fill** stitch types are used from the software to fill vector shapes with stitches. **Running** and **Satin serial** stitch types are used to fill **vector outlines** and line art designs.

Embroidery types

Cross-stitch and **Photo-stitch** are used mainly to fill bitmap images. **Appliqué** and **Net fill** embroidery types are special types of embroidery that are used from the software to fill vector shapes with **Appliqué** and create **Nets** with stitches.

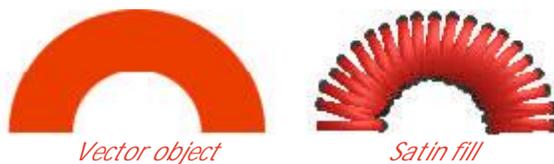
Special types

Array is a special type that is used in order to fill vector shapes or vector outlines using Clipart item or other design items creating repetitive patterns.

The same stitch types are used with the same or different names from the embroiderers around the world. To understand to which stitch types we refer with the names Satin, Step etc. we will analyze them for you.

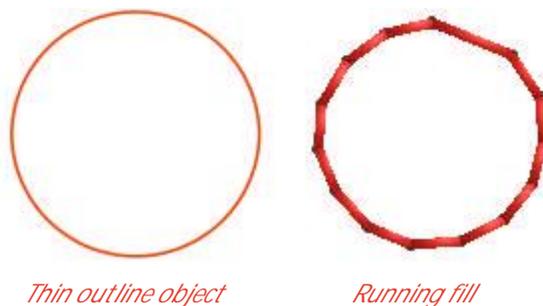
Satin stitch type

When the **Satin** stitch type is applied on any object, stitches are connecting two points from one side of the object to the other. These points are formed like closely arranged zigzag stitches along the shape of the object. Satin stitch type can be laid down at any angle and with varying stitch lengths. In Creative DRAWings small and oblong objects will be filled with Satin stitches.



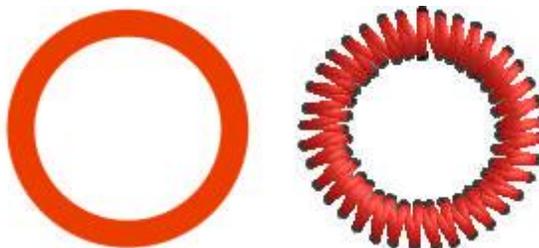
Running stitch type

Running stitch type consists of one stitch between two points. It is used mainly for outlining, fine detail and complete designs. Also known as a walk stitch. In Creative DRAWings all line art designs and thin object outlines will be filled with Running stitches.



Satin Serial stitch type

Satin serial stitch type is applied on thick outline objects by forming closely placed zigzag stitches along it. It is generally used to fill borders and line art designs. In Creative DRAWings all thick line art designs and object outline will be filled with Satin Serial stitch type.

*Thick outline object**Satin serial fill*

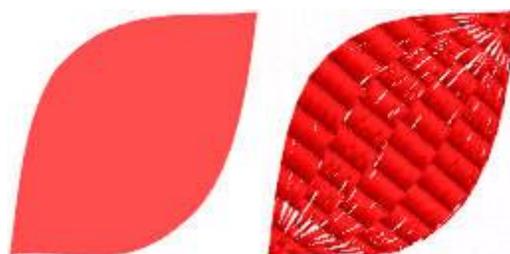
Step stitch type

Step stitch type (or Fill stitch type or Tatami stitch type) is a series of Running stitches commonly used to fill large areas. Different fill patterns can be created by altering the angle, length and repeat sequence of the stitches. In Creative DRAWings the large objects in the vector design most of the times are filled with step stitches.

*Vector object**Step fill*

Row fill stitch type

Row fill stitch type is a fill stitch similar with step stitch type. It is longitudinal stitches from one side to the other that are vertical to the defined direction that it is automatically defined from the software. Row fill stitch is commonly used to fountain like shapes. In Creative DRAWings you have to select it in order to apply it on the shape you want.

*Vector object**Row fill*

Appliqué

Appliqué is an embroidery type that allows you to create Appliqué on fabric easily. It is a fill embroidery type therefore you have to draw a shape similar with the appliqué fabric you want to apply on the garment and fill it with a color. Then you can apply the appliqué embroidery type that will apply the needed sequence of actions in order the design to be embroidered properly. Appliqué embroidery type is a complex type that includes "Running stitches before" to mark the appliqué position, "Running stitches after" to hold the appliqué in place and the E-stitches or Zig-Zag to decorate and hold the appliqué.

*Vector object**Appliqué embroidery type*

Cross-stitch embroidery type:

Each **cross-stitch** stitch consists of two running stitches that are crossed in between creating an 'X'. Cross-stitches of different colors are shaping the image by creating a grid. In Creative DRAWings every imported bitmap image can be filled with the Cross-stitch embroidery effect look.

*Bitmap image**Cross-stitch fill*

Photo-stitch embroidery type

Photo-stitch is an embroidery type that automatically recognizes the graduation of colors of any backdrop image and sets fill stitches on it. The fill stitches are satin bars that cover the backdrop image area.

*Actual Photo**Filled with Photo stitch*

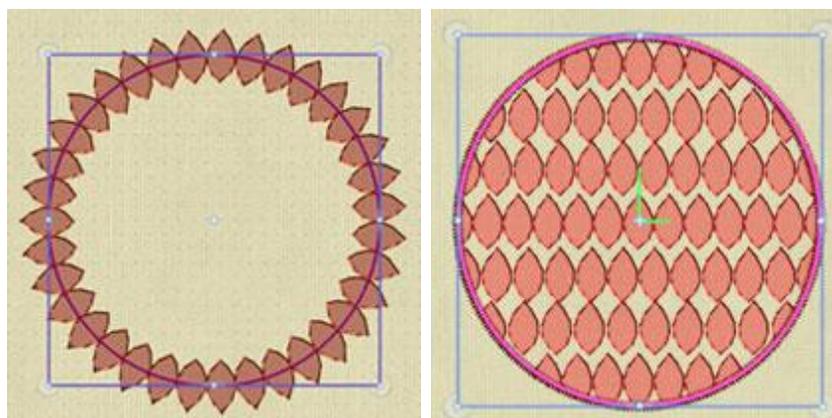
Net fill embroidery type

The Net fill embroidery type is a special fill type that adds two scan lines that are crossing with parallel equidistant running stitches. These two scan lines are forming a Net that can be used to create Laces and fill areas. It is a very useful embroidery type.

*Vector object**Net Fill embroidery type*

Array (Fill or Outline)

Array is a special type that we can use for both **Fill areas** and **objects outlines**. As we have mentioned **Array fill** uses a base object in order to fill an area with the base object copied and placed in a patterned way. In the same way we can apply Array on an object's outline.



Array on outline

Array fill

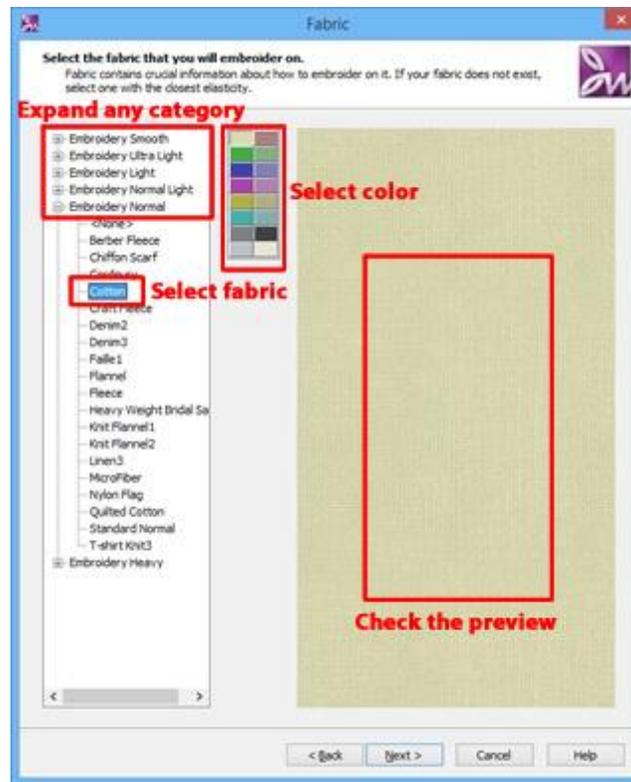
Fabric selection

Fabric selection is not just an issue of previewing the design on the fabric. The software automatically adjusts, according to the selected fabric, various embroidery parameters. Embroidery quality depends on some of these parameters. Import quality factor is also how the fabric is stabilized in the frame of the embroider machine. The software suggests the appropriate backing materials for every fabric, in the printout of each design. In case that you don't want to preview the design on any fabric you can select the **none** option that exists in any of the fabric categories. In this case only the color that is select in fabric dialog will appear in the background of the created design.

The fabrics in Creative DRAWings are categorized in groups of embroidery types with different preset parameters:

- **Embroidery smooth**, starting with Density 55 for normal thread No 40, with lighter underlay
- **Embroidery normal**, starting with Density 40 for normal thread No 40
- **Embroidery normal light**, starting with Density 40 for normal thread No 40, with lighter underlay
- **Embroidery light**, starting with Density 55 for thick thread No 30.
- **Embroidery Ultra light**, starting with Density 85 for thick thread such as wool
- **Embroidery Heavy**, starting with Density 35 for thin thread such as metallic.

All the designs can be previewed on different fabrics. There are various colors and types of fabrics. When you decide to save your design, in order to embroider it on a garment, you must be sure that the fabric you have chosen in Creative DRAWings is the same with the one that will be embroidered. Otherwise the results may not be the expected. There are 50 fabric types in any color spread to different categories, from which you can select the appropriate one.



Select fabric dialog

This option can be accessed from menu Tools > Select fabric, from the shortcut key Ctrl+F or from the standard toolbar by clicking the select fabric  icon. Select fabric option prompts you to a dialog box window where you can choose the fabric type and color by clicking on them. Your selection is automatically previewed in the dialog box and behind it for your convenience. The fabrics are under the six categories that are available. In order to view it, click on the + button at the left side of each category to be expanded.

The six fabric categories that are available are **Embroidery smooth**, **Embroidery Ultra Light**, **Embroidery Light**, **Embroidery Normal Light**, **Embroidery Normal** and **Embroidery Heavy**.

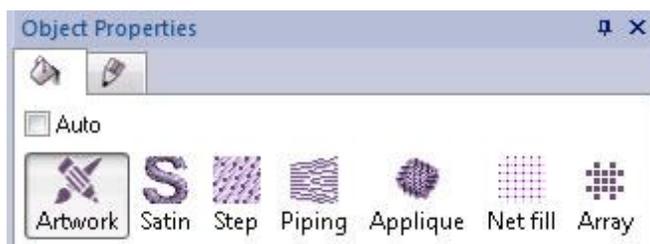
- **Embroidery smooth:** In this category you can choose between any of the fabrics that are listed. The embroidery that will be placed on these fabrics will be light and smooth. That is why the embroidery on the 3D preview will appear with low density. All the fabrics have specific internal embroidering parameters that needed for high quality embroidering. The embroidering parameters are adjusted to each fabric in order the embroidery that will be placed on to have smooth feel and keep the fabric soft.
- **Embroidery Ultra Light:** In this category you can choose between “Bridal Tulle”, “Waffle knit”, “Wool” and “Standard Ultra Light”. The embroidery that will be placed on these fabrics will be **Ultra light**. That is why the embroidery on the 3D preview will appear with low density. The first three fabrics have specific internal embroidering parameters that needed for high quality embroidering. The “Standard Ultra Light” fabric is not a specific fabric but can be used as an alternative for embroidering Ultra light on any fabric you want. The embroidery results of the “Standard Ultra light” settings will depend on the fabric.

- **Embroidery Light:** In this category you can choose a fabric between “Lycra lame”, “Sweat shirt knit”, “T-shirt knit2”, “Vinyl2”, “Wool Crepe” and “Standard Light”. The embroidery that will be placed on these fabrics will be **Light**. That is why the embroidery on the 3D preview will appear with low density. Each of these fabrics has specific settings in order to produce the best possible results if you embroider the design on the respective fabric. Be sure you have chosen the correct fabric from the fabric list. If you want to embroider a design with light settings in a fabric that is not included in the list, choose the “Standard Light” fabric that contains those settings. The embroidery results depend on the fabric that is used.
- **Embroidery Normal Light:** In this category you can choose a fabric between “Crepe Polyester”, “Denim1”, “Light weight bridal satin”, “Linen1”, “Panne velvet”, “Rayon”, “Rayon Sand washed”, “Sweater knit”, “T-shirt knit1”, “Towling”, “Vinyl1” and “Standard Normal Light”. The embroidery that will be placed on these fabrics will be **Normal** with a tension to **Light**. That is why the embroidery on the 3D preview will appear with normal density. Each of these fabrics has specific settings in order to produce the best possible results if you embroider the design on the respective fabric. Be sure you have chosen the correct fabric from the fabric list. If you want to embroider a design with **Normal Light** settings in a fabric that is not included in the list, choose the “Standard Normal Light” fabric that contains those settings. The embroidery result depend on the fabric that is used.
- **Embroidery Normal:** In this category you can choose a fabric between “Berber fleece”, “Chiffon scarf”, “Cordoury”, “Cotton”, “Craft Fleece”, “Denim2”, “Denim3”, “Faille1”, “Flannel”, “Fleece”, “Heavy weight Bridal satin”, “Knit flannel1”, “knit flannel2”, “Linen3”, “MicroFiber”, “Nylon flag”, “Quilted cotton”, “T-shirt knit3” and “Standard Normal”. The embroidery that will be placed on these fabrics will be **Normal**. That is why the embroidery on the 3D preview will appear with normal density. Each of these fabrics has specific settings in order to produce the best possible results, if you embroider the design on the respective fabric. Be sure you have chosen the correct fabric from the fabric list. If you want to embroider a design with Normal settings in a fabric that is not included in the list, choose the “Standard Normal” fabric that contains those settings. The embroidery result depends on the fabric that is used.
- **Embroidery Heavy:** In this category you can choose a fabric between “Burlap”, “Chenille”, “Cross-stitch cloth”, “Faille2”, “Fake fur”, “Linen2”, “Lycra bathing suit”, “Lycra workout clothes” and “Standard heavy”. The embroidery that will be placed on these fabrics will be **Heavy**. That is why the embroidery on the 3D preview will appear with high density. Each of these fabrics has specific settings in order to produce the best possible results, if you embroider the design on the respective fabric. Be sure that you have chosen the correct fabric from the fabric list. If you want to embroider a design with Heavy settings in a fabric that is not included in the list, choose the “Standard Heavy” fabric that contains those settings but the embroidery result depend on the fabric that is used.

You can change the color of the fabric by clicking on one from the list or by **double clicking** on a color from the list and select one from the color table. By clicking the **OK** button the selected color will replace the one that you double clicked on and will be previewed on the working area. If you want, you can continue changing colors until you find the one that will matches the fabric color you want to embroider your design on.

Object Properties

Object properties tool pane contains every embroidery design function of the program. It has two tabs **Fill** and **Outline**. If Object properties is not visible you can open it from the View menu or with the shortcut key Alt + Enter. You can view the Object properties tool pane both in Create or Stitch modes. With the options that are included you can change the stitch type of the design easily by just clicking on it.



Click on each tab, on the above image, to view their options.

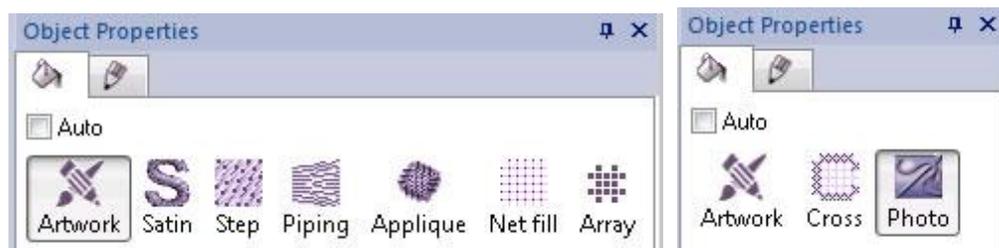
Fill Properties

This tab contains every function that can be applied to the **Fill** of a design. The functions are not visible until you select an object from a design or the whole design. When a vector design is embroidered for the first time, Creative DRAWings automatically puts fill stitches on it. That is why the Auto checkbox, at the top of the fill tab, is checked. When a change in the fill tab is made, the Auto becomes unchecked. You can check it again and restore the automatic created design from Creative DRAWings. This is very useful when you have made many changes to a design and you want to cancel all the changes you made by using the tool of Object properties toolbar and start again from the beginning.

For designs that have only outlines or they are line art designs, the Fill option is not available. In the fill tab there are eight stitch type fills: Artwork, Satin, Step, Row fill, Appliqué, Cross-stitch, Netfil and Photo-stitch.

Stitch types

In the fill tab there are seven embroidery fill types: **None**, **Satin**, **Step**, **Row fill**, **Appliqué**, **Net fill** and **Array**. When importing Bitmap files you can also find **Cross-Photo** stitch embroidery types.



Click on each stitch type icon, on the above image, to view how they applied.

Artwork

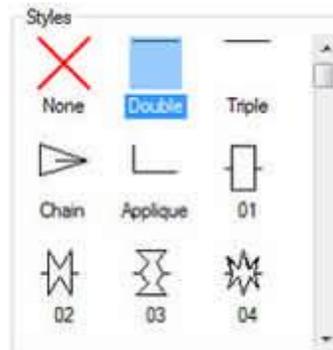
When this option is applied, sets the fill area to be artwork (vector design). All the fill stitches are removed from the design. Whenever you don't want to embroider a specific fill area you can set its' fill to Artwork and have the stitches instantly removed.

Satin

This option, when applied, sets the fill area to be **Satin**. All the fill stitches will change to Satin, which is automatically calculated and produced in the program. You can change the feel of Satin by changing its **Style** and **Pattern**. There are many different styles and patterns that you can apply on any stitch design. Also, you have the ability to change Underlay, stitch Density and Compensation.

Styles

The **Styles** area contains all the stitch styles that can be applied on the design. Style in Creative DRAWings is a way of movement from one point to another, which normally can be done by one stitch. Some styles when applied may not look good on the design. This happens because styles cannot fit correctly in all possible shapes.



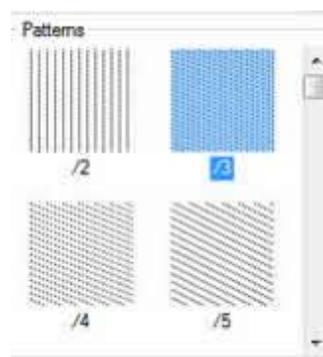
Satin Styles

Select the style you prefer by clicking on it and viewing it in your design. The none selection will restore the default satin type. Your selections are instantly displayed in the design area letting you experiment with your design. There are 325 styles that you can use to produce unique designs. The styles that are in film icon (for

example: ) are a series of different styles in one.

Patterns

The patterns area contains all the patterns that can be applied on the design. Patterns are shapes, created from stitches. You can make combinations between Styles and Patterns and produce your own designs. Some combinations when applied may not look good on the design. This happens because combinations do not always produce correct stitch results.



Satin Patterns

Select the pattern you prefer by clicking on it and viewing it in your design. The none selection will restore the default satin type. Your selections are instantly displayed in the design area letting you experiment with your design. There are 262 different patterns to apply to your design. If you want to view only the pattern you have selected and not a combination of styles, you must be sure that styles option is set to none. Otherwise you will view a pattern with a style in it.

There are also two more options that are very useful in customizing the way that the software will be embroidered. Those are the **Remove overlaps** option and the **Sequence** option.

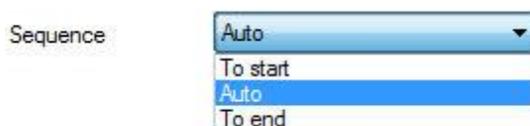
Remove overlaps:



This is an automatic filter which removes all overlaps between the objects of the vector designs. This filter uses artificial intelligence and it is applied only where necessary. The application of the filter results in the reduction of stitches that will be placed on the fabric. It is also possible to manually alter the overlapping status of each object. There are three possible options that you can apply on a specific object, **Auto**, **Never** and **Always**. The **Auto** is the default option and the one that Creative DRAWings uses to create the best possible results on the design. When the **Never** option is applied on an object, the specific object will never trim the objects that overlaps. This means that all the objects/shapes that are under the selected objects will be embroidered normally, placing all their stitches on the fabric. The opposite option is **Always**. When it is applied to a specific object it trims all the objects that it overlaps. This means that all the parts of objects/shapes that are under the selected object will not be embroidered.

Creative DRAWings uses this tool to embroider your design more efficiently and effectively. But in order for this function to work well, avoid applying **trim** tool in the Create mode of Creative DRAWings. You must always use it with care or after the setting **Remove overlaps** option to **Never**.

Sequence:



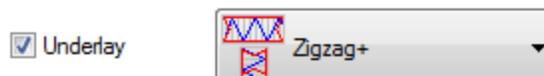
With this tool it is possible to change the embroidering sequence of the design. Specific objects of the design can be set to be embroidered at the start or at the end of the embroidering process. This gives you the ability to embroider the designs in the order you prefer. More specifically, the **Sequence** drop down menu has three options **Auto**, **To start** and **To end**. The **Auto** is the default option and the one that Creative DRAWings uses to create the best possible embroidering sequence results. In order to change the embroidering sequence manually, use the other two options. The **To start** option sets the selected object to be embroidered first. This means that if it was to be embroidered fifth in the embroidering sequence, now will be embroidered first in the row. Exactly the opposite for the **To end** option. When this is applied on an object of the embroidery design, it will be immediately become the last object that will be embroidered. By using the **To start** and **To end** options, you can change the embroidering sequence and embroider the design you have created the way you prefer. This tool is really useful for embroidering hats and on delicate fabrics that need special care regarding the placement of objects on the fabric.

If you have set more than one object to be embroidered **To start** and more than one **To end**, Creative DRAWings will decide automatically which one of those will be the first and which one will be last to be embroidered.

For example if you have a design with 20 objects and you have set 5 to be embroidered **To start** and 5 other **To end**, DRAWings will embroider those set **To start** first, deciding automatically their embroidering sequence, then those (10) set **To auto** and finally those set **To end**, deciding automatically the order of the last 5.

Also, there are three more options that can help you adjust the embroidery parameters of the design. As we have already mentioned in the Select fabric section previously in this chapter, each fabric has different presets that affect the way the embroidery design will be placed on it and some of them are visible at the bottom of the **Object properties** toolbar. For Satin stitch type they are **Underlay**, **Density** and **Compensation**. These options can help you make useful adjustments on the design and produce the embroidery results you prefer.

Underlay:



You can activate the underlay option by checking the checkbox next to it. Click on the **Underlay** you want, and your change will be calculated and stored in the saved design. If you don't select an underlay manually, Creative DRAWings will automatically select the appropriate one for you. The underlay stitches are placed on the fabric in order to create the base for the cover stitches that will follow. The Underlay is important for the quality of the embroidery designs.

For **Satin** stitch type, the following underlay patterns are available:

 Tacking	Tacking – If tacking is selected, there will be no underlay and the software will make running stitches in order to go from one position to another and cover the area with cover stitches.
 Single	Single - If single is selected, Creative DRAWings will make a single line with running stitches near the middle of the shape of the object and then cover this with cover stitches.
 Double	Double - If double is selected, Creative DRAWings will make running stitches following the shape of the object and position Double underlay near the edge of the outline.
 ZigZag	ZigZag - If zigzag is selected, Creative DRAWings will create a sophisticated ZigZag pattern which automatically changes directions (according to the direction of the cover stitches) and then fill the shape with cover stitches.
 Cross	Cross - If cross is selected, Creative DRAWings will create a thicker sophisticated ZigZag pattern which automatically changes directions (according to the direction of the cover stitches) and then fill the shape with cover stitches.

 Zigzag+	ZigZag+ - Is a combination of Zig-Zag and Double underlay.
 Cross+	Cross+ - Is a combination of Cross and Double underlay
 Netting	Netting - If netting is selected, Creative DRAWings will cover the area of the object with a thicker sophisticated ZigZag pattern, which automatically changes directions (according to the direction of the cover stitches) two times and then fills the shape with cover stitches.
 Netting+	Netting+ - Is a combination of Netting and Double underlay.
 Double Zigzag	Double ZigZag - If Double Zig-Zag is selected a Zig-Zag underlay is applied in both directions.
 Double Zigzag+	Double ZigZag+ - Is a combination of Double Zig-Zag and Double underlay.

Density:

Density mm

You can activate the **Density** option by checking the checkbox next to it. In the numeric field, you can specify the density of the satin stitches that you are adding. You can also adjust density by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field.

Compensation:

Compensation mm

You can activate the **Compensation** option by checking the checkbox next to it. In the numeric field you can enter the value of compensation you want with lower boundary-0,3mm and upper bounder 2.0mm. Also you can adjust density by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel if there is one.

The entered value changes the width of satin stitch that will be embroidered. The default compensation value depends on the fabric you are using. If you change fabric the compensation will adjust automatically. Changes are instantly previewed on the design area and can be set by clicking outside the density field.

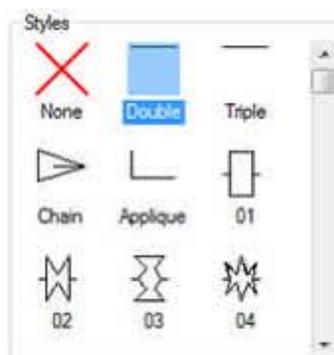
Step

This option, when applied, sets the fill area to be Step. All the fill stitches change to Step, which is automatically calculated. The Step type that was placed is the default. You can change **Steps** by changing its

Style and Pattern. There are many different styles and patterns that you can apply on any stitch design. Also, you have the ability to change Underlay, stitch Density, Length and Compensation.

Styles

The Styles area contains all the stitch styles that can be applied on the design. **Style** in Creative DRAWings is a way of movement from one point to another, which normally can be done in one stitch. Some styles, when applied, may not look good in the design. This happens because some stitch styles do not fit correctly in all shapes.



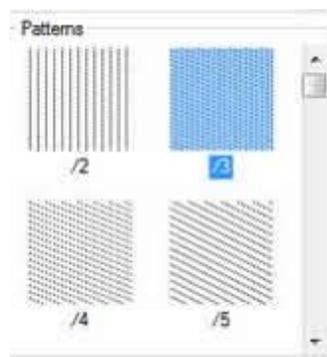
Step Styles

Select the style you prefer by clicking on it and view it in your design. If do not want any select none. The None selection will restore the default step type. Your selections are instantly displayed in the design area letting you experiment with your embroidery design. There are 325 styles that you can use to produce unique

designs. The styles that are in film icon (for example: ) are a serial of different styles in one.

Patterns

The patterns area contains all the patterns that can be applied on the design. **Patterns** are shapes created from stitches. You can make combinations between Styles and Patterns and produce your own designs. Some combinations when applied may not look right in the design. This happens because combinations do not always produce correct stitch results.



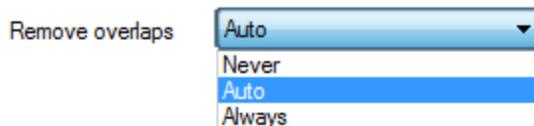
Step Patterns

Select the pattern you prefer by clicking on it and view it in your design. In step type you can't have **none** as a selection pattern. Step is based on patterns, which means that even if you don't select a pattern, Creative DRAWings will set the default for you. Your selections are instantly displayed in the design area letting you experiment with your embroidery design. There are 262 different patterns to apply in your design. If you want

to view only the pattern you have selected and not a combination of styles, you must be sure that the **Style** option is set to none. Otherwise you will view a pattern with a style in it.

There are also two more options that are very useful in customizing the way that the software will be embroidered. Those are the **Remove overlaps** option and the **Sequence** option.

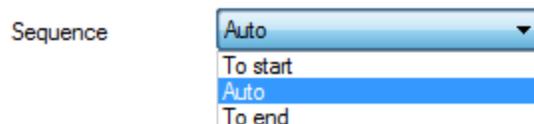
Remove overlaps:



This is an automatic filter which removes all overlaps between the objects of the vector designs. This filter uses Artificial Intelligence and it is applied only where necessary. The application of the filter results in the reduction of stitches that will be placed on the fabric. It is, also, possible to manually alter the overlapping status of each object. There are three possible options that you can apply on a specific object, **Auto**, **Never** and **Always**. The **Auto** is the default option and the one that Creative DRAWings uses to create the best possible results on the design. When the **Never** option is applied on an object, the specific object will never trim the objects that overlaps. This means that all the objects/shapes that are under the selected objects will be embroidered normally, placing all their stitches on the fabric. The opposite option is **Always**, when it is applied on a specific object, it trims all the objects that overlaps. This means that all the parts of objects/shapes that are under the selected object will not be embroidered.

Creative DRAWings uses this tool to embroider your design more efficiently and effectively. But in order for this function to work well, avoid applying **trim** tool in the Create part of Creative DRAWings. You must always use it with care or after the setting **Remove overlaps** option to **Never**.

Sequence:



With this tool it is possible to change the embroidering sequence of the design. Specific objects of the design can be set to be embroidered at the start or at the end of the embroidering process. This gives you the ability to embroider the designs in the order you prefer. The **Sequence** drop down menu has three options **Auto**, **To start** and **To end**. **Auto** is the default option and the one that Creative DRAWings uses to create the best possible embroidering sequence results. In order to change the embroidering sequence manually you have to use the other two options. The **To start** option sets the selected object to be embroidered first. This means that if it was to be embroidered fifth in the embroidering sequence, now will be embroidered first. Exactly the opposite for the **To end** option. Therefore, when it is applied on an object of the embroidery design, this will be immediately become the last object that will be embroidered. By using the **To start** and **To end** options, you can change the embroidering sequence and embroider the design you have created in the way you prefer. This tool is really useful for embroidering hats, or on delicate fabrics that need special care regarding the way that the objects will be placed on the fabric.

If you have set more than one object to be embroidered **To start** and more than one **To end**, Creative DRAWings will decide automatically which one from those that are set **To start** will be the first to be embroidered and which one from those set **To back** will be the last to be embroidered.

For example, if you have a design with 20 objects and you have set 5 to be embroidered **To start** and 5 other **To end**, Creative DRAWings will embroider those that are set **To start** first, deciding automatically their embroidering sequence, then those (10) that remained set **To auto** and finally those that set **To end**, deciding automatically the order of those last 5.

Also, there are four more options that can help you select the correct fabric for your embroidery design. As we have already mentioned in the **Select fabric** section previously in this chapter, each fabric has different presets that affect the way the embroidery design will be placed on it. These presets are visible at the bottom of the **Object properties** toolbar, and for Step stitch type they are **Underlay**, **Density**, **Length** and **Compensation**. The values that are shown, are there, only for your information and to help you decide the fabric you will use. Below we will describe what each option shows.

Underlay:



You can activate the underlay option by checking the checkbox next to it. Click on the **Underlay** you want, and your change will be calculated and stored in the saved design. If you don't select an underlay manually, Creative DRAWings will automatically select the appropriate one for you. Underlay is important for quality embroidery designs.

For **Step** stitch type, the following underlay patterns are available:

 Tacking	Tacking – If tacking is selected, there will be no underlay and the software will make running stitches in order to go from one position to another and cover the area with cover stitches.
 Edging	Edging - If edging is selected, Creative DRAWings will make running stitches following the shape of the object and position Edging underlay near the edge of the outline.
 Packing	Packing - If packing is selected, Creative DRAWings will cover the area of the object with vertical running stitches (according to the direction of cover stitches) as the icon shows.
 Netting	Netting - If netting is selected, Creative DRAWings will cover the area of the object with running stitches at 45o and -45o (according to the direction of the cover stitches) and then fill the shape with cover stitches.
 Packing+	Packing + - Is a combination of Packing and Edging underlay.
 Netting+	Netting + - Is a combination of Netting and Edging underlay

Density:



You can activate the **Density** option by checking the checkbox next to it. In the numeric field you can specify the distance between the stitches of step lines. The number of this field shows the distance between one line of stitches and the line after its next. Also you can adjust density by clicking the arrows next to the value or by

clicking on the value and rotating the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside of the density field.

Length:

Length mm

You can activate the **Length** option by checking the checkbox next to it. In the numeric field you can specify the length of each stitch in the step.

Compensation:

Compensation mm

You can activate the **Compensation** option by checking the checkbox next to it. The **Compensation** changes the width of the step object that will be embroidered to avoid shrinking. The compensation parameter has to do with the tendency of a punching object to shrink in itself in the stitching direction. This means that sometimes you have to adjust your stitch design from its original position. In the numeric field you can enter the value of compensation you want with lower boulder -0,3mm and upper boulder 2.0mm. Also, you can adjust density by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel if there is one.

The entered value changes the movement of stitches, to cover its shrink in. The default compensation value depends on the fabric you are using. If you change fabric the compensation will adjust automatically. The compensation becomes visible only if you export the design by using the **To editor** option from the **File > Export** submenu.

Row fill

This option, when applied, sets the fill area to be Row fill. All the fill stitches are changed to Row fill, which is automatically calculated and produced from the program. The Row fill type that was placed is the default. You can change **Row fill's** feel by changing its Style and Pattern. There are many different styles and patterns that you can apply on any stitch design. Also, you have the ability to change the stitch Density and Length.

Styles

The Styles area contains all the stitch styles that can be applied on the design. Style in Creative DRAWings is a way of movement from one point to another, which normally can be done by one stitch. Some styles when applied may not look good on the design. This happens because stitch styles cannot fit correctly in all possible shapes.



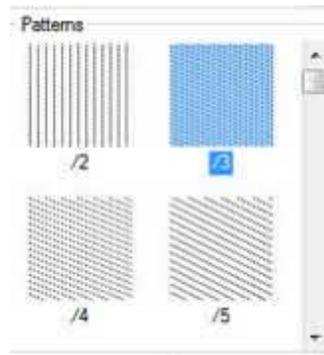
Row fill Styles

Select the style you prefer by clicking on it and view it on your design. If do not want any select none. The None selection will restore the default Row fill type. Your selections are instantly displayed in the design area letting you experiment with your embroidery design. There are 325 styles that you can use to produce unique

designs. The styles that are in film icon (for example: ) are a serial of different styles in one.

Patterns

The patterns area contains all the patterns that can be applied on the design. Patterns are shapes, created from stitches. You can make combinations between Styles and Patterns and produce your own designs. Some combinations when applied may not look good on the design. This happens because combinations do not always produce correct stitch results.



Row fill Patterns

Select the pattern you prefer by clicking on it and viewing it on your design. In Row fill type, like step, you can't have **none** selected. Step is based on patterns, which means that even if you don't select a pattern, Creative DRAWings will set the default for you. Your selections are instantly displayed in the design area letting you experiment with your embroidery design. There are 262 different patterns to apply in your design. If you want to view only the pattern you have selected and not a combination with styles, you must be sure that styles option is set to none. Otherwise you will view a pattern with a style in it.

There are also two more options that are very useful in customizing the way that the software will be embroidered. Those are the **Remove overlaps** option and the **Sequence** option.

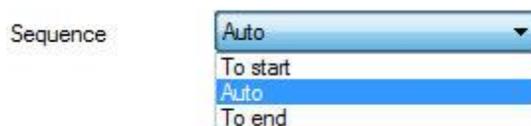
Remove overlaps:



This is an automatic filter which removes all overlaps between the objects of the vector designs. This filter uses Artificial Intelligence and it is applied only where necessary. The application of the filter results in the reduction of stitches that will be placed on the fabric. It is, also, possible to manually alter the overlapping status of each object. There are three possible options that you can apply on a specific object, **Auto**, **Never** and **Always**. The **Auto** is the default option and the one that Creative DRAWings uses to create the best possible results on the design. When the **Never** option is applied on an object, the specific object will never trim the objects that overlaps. This means that all the objects/shapes that are under the selected objects will be embroidered normally, placing all their stitches on the fabric. The opposite option is **Always**, which when applied on a specific object, trims all the objects that overlaps. This means that all the parts of objects/shapes that are under the selected object will not be embroidered.

Creative DRAWings uses this tool to embroider your design more efficiently and effectively. But in order for this function to work well, avoid applying **trim** tool in the Create part of Creative DRAWings. You must always use it with care or after the setting **Remove overlaps** option to **Never**.

Sequence



With this tool it is possible to change the embroidering sequence of the design. Specific objects of the design can be set to be embroidered at the start or at the end of the embroidering process. This gives you the ability to embroider the designs in the order you prefer. More specifically the **Sequence** drop down menu has three options **Auto**, **To start** and **To end**. The **Auto** is the default option and the one that Creative DRAWings uses to create the best possible embroidering sequence results. In order to change the embroidering sequence manually you have to use the other two options. The **To start** option set the selected object to be embroidered first. This means that if it was to be embroidered fifth in the embroidering sequence, now will be embroidered first in the row. Exactly the opposite for the **To end** option. Therefore when it is applied to an object of the embroidery design, this will immediately become the last object that will be embroidered. By using the **To start** and **To end** options you can change the embroidering sequence and embroider the design you have created in the way you prefer. This tool is really useful for embroidering hats or on delicate fabrics that need special care regarding the way that the objects will be placed on the fabric.

If you have set more than one object to be embroidered **To start** and more than one **To end**, Creative DRAWings will decide automatically which one of those that are set **To start** will be the first to be embroidered and which one from those set **To back** will be the last to be embroidered.

For example, if you have a design with 20 objects and you have set 5 to be embroidered **To start** and 5 other **To end**, Creative DRAWings will embroider those that set **To start** first, deciding their embroidering sequence automatically, then those (10) that remained set **To auto** and finally those that set **To end**, deciding automatically the order of those last 5.

Also, there are two more options that can help you adjust the embroidery parameters of the design. As we have already mentioned in the **Select fabric** section previously in this chapter, each fabric has different

presets that affect the way the embroidery design will be placed on it and some of them are visible at the bottom of the **Object properties** toolbar, and for Row fill stitch type they are **Density** and **Length**. These options can help you make useful adjustments on the design and produce the embroidery results you prefer.

Density:



You can activate the **Density** option by checking the checkbox next to it. In the numeric field you can specify the distance between the stitches of Row fill lines. The number of this field shows the distance between one line of stitches and the line after its next. Also you can adjust density by clicking the arrows next to the value

or by clicking on the value and rotating the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field.

Length:



You can activate the **Length** option by checking the checkbox next to it. In the numeric field you can specify the length of every stitch in Row fill.

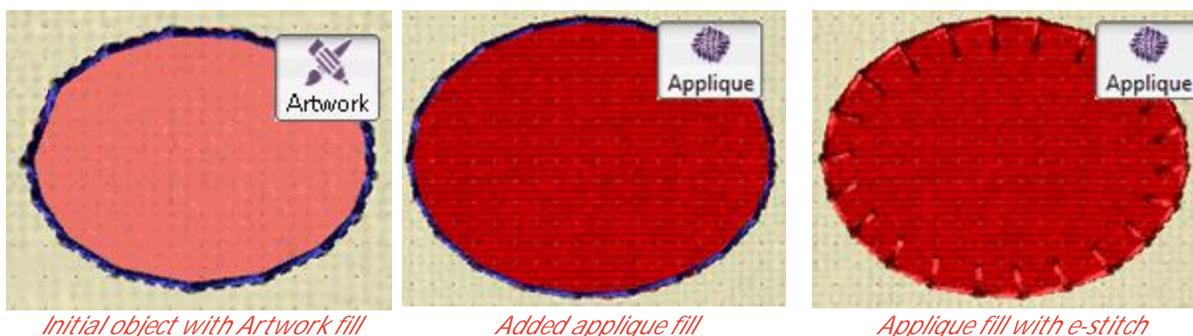
Applique

When setting the **Applique** fill type, the fill area of the object will be covered with a **fabric**. The fabric will be previewed with the selected fill color. The border will stay as it was surrounding the appliqué area. If the design does not have a border, the program will sew around the appliqué an E-stitch () in order to hold the appliqué on the fabric. If the object that you applied **appliqué** on it has a border, you can set a running style or satin serial stitches that will hold the appliqué on the fabric.

New zig-zag styles are added in the running stitch type that can be used for holding single or double laser cut appliqué.

For example:

Consider that we have an **ellipse** (like on the left part of the figure below). As we can see, it has a Red **fill color** and a Blue **outline**. If we set the fill type to be applique then the ellipse will look like in the middle part of the figure (Applique with running outline). if we remove the outline color then the program will automatically add **E-stitch** outline as shown in the right part of the figure.



In order to actually produce designs with applique, there is a standard procedure that must be followed. This production procedure needs interaction from the user during the embroidery process. In order to understand the production procedure, we will analyze how an embroidery machine will react when instructed to embroider an appliqué object.

When it is the time to produce the applique object:

1. A **running** line will be added to reveal the position that the applique must be placed.
2. A **jump stitch** will be made and the machine will stop in order to manually place the applique fabric.
3. Then **running** stitches will be added to create the shape of the applique.
4. Another **jump stitch** will be made and the machine will stop (again) in order to cut the applique according to the shape.
5. Finally the border of the appliqué will be added (E-stitch, Satin serial or Running) as it was selected.

Then the machine will continue embroidering the rest objects.

Using **to editor** option of **File -> Export** submenu you can also view/simulate the way that the design will be embroidered. Wings' modular will open with the design imported. In Wings' modular you can see the exact embroidery sequence and simulate the way the design will be embroidered in the embroidery machine.

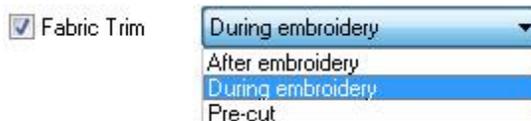
Offset:



You can activate the **Offset** option by checking the checkbox next to it. In the numeric field you can enter the value of offset you want, with lowest value of -8mm and highest value 8mm. Also you can increase or decrease the offset value by clicking on the arrows next to the value or by clicking on the value and rotating the mouse wheel, if there is one. The value that you are inserting defines the exact distance you want the appliqué holding stitches outline to have from its initial position. If the value is negative, the holding stitches will make an inner offset and the opposite, if it is positive. The default offset value is zero and can be changed only from you. Any changes you are making on the offset value it is previewed on the design.

In addition, if the appliqué shape has no pen/outline (Running or Satin Serial), the offset will move the holding stitches (E-stitch or Zig-Zag) according the value set. The offset will be calculated together with the **Position**, if any was set for Zig-Zag stitches. On the other hand, if the appliqué shape has a border (Running or Satin Serial), use the respective **Offset** field of Running or Satin serial border (Pen) tab option for the cover stitches and use the appliqué offset to control the offset of the placement/tack-down running stitches.

Fabric Trim:



You can activate the **Fabric Trim** option by checking the checkbox next to it. In the drop down menu there are three options: **After embroidery**, **During embroidery** and **Pre-cut**. In order to understand what exactly each option does, we will analyze how an embroidery machine will react on each one.

If **After embroidery** is selected, the following steps will be performed: First will make the shape of the appliqué with Running showing the area where the Appliqué must be placed. After that a jump stitch on top

will be made and the machine will stop in order for the appliqué to be placed on the fabric. Then the software will make the border of the appliqué (“**Default fixing**”: E-stitch, Zig Zag) or Satin Serial, running) as it was selected. Finally you will have to take the embroidery out of the machine and cut the appliqué accordingly.

If **During embroidery** is selected, the software will perform the following steps:

First it will make the shape of the appliqué with running showing the area where the Appliqué must be placed. After that a jump stitch on top will be made and the machine will stop in order the appliqué to be placed on the fabric. Then the software starts to sew a running stitch creating the shape of the appliqué. A jump stitch on top will be made and the machine will stop (again) in order to cut the appliqué according to the shape. At the end it will make the border of the appliqué (“**Default fixing**”: E-stitch, Zig Zag) as it was selected.

Finally, if **Pre-cut** is selected, the software will perform the following steps:

First it will make the shape of the appliqué with Running showing the area where the Appliqué must be placed. After that a jump stitch on top will be made and the machine will stop in order for the appliqué to be placed on the fabric. Since the appliqué has been cut on the shape of the object, the software will start to sew the border of the appliqué.

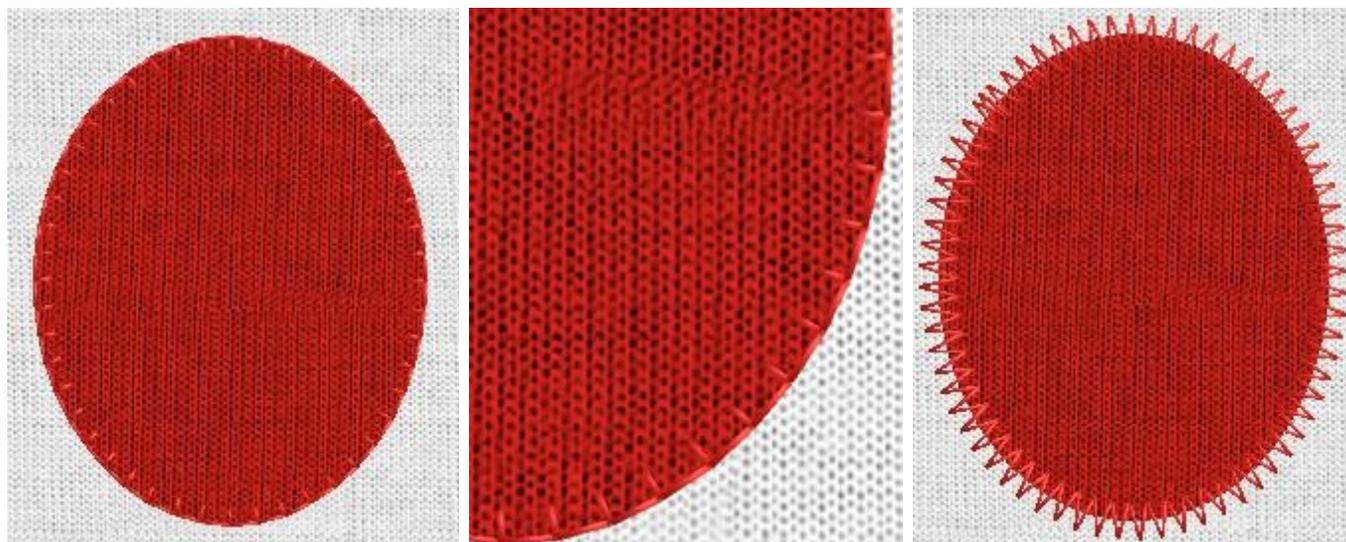
Notice: Do not use simple running stitch type as border because the appliqué will not be sewed correctly with the fabric.

Default fixing:

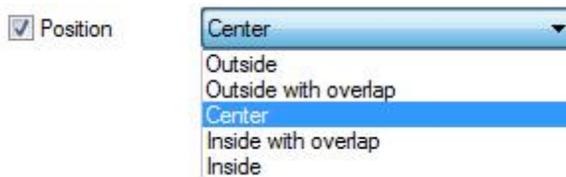


This field has two options:

E-stitch: By choosing this option the appliqué will be sewed on the fabric with stitches that will have the same color as the fill area and they will look like the **on the following figure..**

*E-stitch stitches**E-stitch zoom**Zig Zag stitches*

Zig Zag: In this case Zig Zag stitch type will sew the appliqué on the fabric. This Zig Zag stitch type is the default (**Position:** Center) type, aligned to center of the border. If you want to change the **Position** of Zig Zag you have to activate the **Position** option, which appear when Zig Zag is selected



This option aligns Zig Zag on the border. You can choose between five alignment ways that exist in the drop down menu. Those are: **Outside**, **Outside with Overlap**, **Center**, **inside with overlap** and **Inside**. Select the one that you prefer and view it on your design.

In addition, if the appliqué shape has not got a border (Running or Satin Serial), the offset will move the holding stitches (E-stitch or Zig-Zag) according the value set. The offset will be calculated together with the **Position**, if any was set for Zig-Zag stitches. On the other hand, if the appliqué shape has a border (Running or Satin Serial), use the respective **Offset** field of Running or Satin serial border (Pen) tab option for the cover stitches and use the appliqué offset to control the offset of the placement/tack-down running stitches.

Cutter parameters

All options below are referring to the cutter and the way that it will cut the Applique.

Therefore the **Cut Technique** or any other cutter relative technique should be enabled in order to be visible.

Some machines does not allow you to change some or any of these values through our software. You can make adjustments though, through the machine's panel. The parameters that you can adjust are the following:

- Cutter presets
- Cutter Speed
- Cutter Pressure
- Cutter Passes
- Blade depth
- Blade color

Cutter presets

Cutter speed: 50

Cutter pressure: 75

Cutter passes: 1

Blade depth: 3.5

Blade color: None

Applique Parameters

These options will be available always at **Object properties** toolbar because no cutter is selected. If you want to see which options the cutter allows you to adjust,

1. you can go to **File > Export > Cutters...** and from the wizard dialog that will appear select the cutter you have connected on the PC.
2. Click **Connect** and from the next dialog select **Test**.

Test Cut

Cutter speed: 50

Cutter pressure: 75

Cutter passes: 1

Blade depth: 3.5

Blade color: None

Apply

Test

Close

Cutter presets

N...	Material	Blade color	Blade depth
Edge	Vinyl	Red	3.5
Edge	Fabric treated with Terialmagic	Yellow	2.0
Edge	Fabric backed with "fusible iron-on"	Yellow	2.5
Edge	Wool Felt - treated with Terialmagic	Yellow	4.5
Edge	Naugahyde	Blue	4.5
Edge	Card stock -N exact index 110lb	Red	2.0
Edge	Card stock	Red	2.5
Edge	Heavy metallic card stock	Blue	4.0
Edge	Contact paper	Red	2.0
Edge	Crystals (green or back)	Blue	3.5
Edge	Stencil	Blue	6.0
Edge	Paint	None	0.0

Test Cut dialog

3. A dialog will appear that will show you only the options that you can adjust at the connected cutter.
4. You can adjust the settings and even test them on the cutter.
5. If you are satisfied with the setting you have selected you can click **Apply** apply them to the object(the object properties toolbar will be updated automatically).

Cutter presets

Cutter presets

The **Cutter presets** button allows you to select cutter settings presets, based on the material that you will cut and the blade that you will use, and apply them on the currently selected object. By clicking on the **Cutter presets** button a pop up list will appear with the available cutter presets. The cutter presets are listed with the following information **Name**, **Material**, **Blade color** and **Blade depth**.

- **Name:** Lists the Cutter's name that the the template is made for
- **Material:** Lists the Material that you can cut by using the preset. Those are referring to Rhinestones, are mainly for Vinyl material.
- **Blade color:** Lists the Blade color that you have to use in order to cut the specific material. This is applicable on specific machines that include various blades. Usually each color is for cutting different material. Check the cutters manual for more information about which blade is from which material.
- **Blade depth:** Lists the Blade depth that you have to set on the cutters blade. Usually the Blade depth is set manually. Therefore you have to check the Cutter's manual and find how to change the Blade depth.

Name	Material	Blade color	Blade depth
Edge	Vinyl	Red	3.5
Edge	Fabric treated with Terialmagic	Yellow	2.0
Edge	Fabric backed with "fusible iron-on"	Yellow	2.5
Edge	Wool Felt - treated with Terialmagic	Yellow	4.5
Edge	Naugahyde	Blue	4.5
Edge	Card stock -N exact index 110lbs	Red	2.0
Edge	Card stock	Red	2.5
Edge	Heavy metallic card stock	Blue	4.0
Edge	Contact paper	Red	2.0
Edge	Crystals (green or back)	Blue	3.5
Edge	Stencil	Blue	6.0
Edge	Paint	None	0.0
Zing	25mil Rhinestone template	None	0.0
Zing	18mil PVC Rhinestone Template	None	0.0
Zing	Fabric + Freezer	None	0.0
CAMEO	25mil Rhinestone template	None	0.0
CAMEO	18mil PVC Rhinestone Template	None	0.0
eCrafter	25mil Rhinestone template	None	0.0
eCrafter	18mil PVC Rhinestone Template	None	0.0
Foison	25mil Rhinestone template	None	0.0
REDSail	25mil Rhinestone template	None	0.0
GCC_Jaguar	25mil Rhinestone template	None	0.0

Cutter Presets

To apply the preset you want you can simply click on it. The settings of Object properties toolbar will be adjusted accordingly.

Cutter Speed

Cutter speed

With this value, you can specify the speed that the machine will cut the design. This value varies from cutting machine to cutting machine and some machines does not allow you to change this value at all through our

software. You can make adjustments though, through the machine's panel. Feel free to change the **Speed** setting based on the speed you want the design to be cut.

The **Cutter speed** field can take values from 0 up to 100.

Cutter Pressure

Cutter pressure

With this value, if it is enabled, you can specify the force that the machine will add on the blade in order to cut the design or to the Pen/brush in order to draw the design. This value varies from cutting machine to cutting machine and some machines does not allow you to change this value at all through our software. You can make adjustments though through the machine's panel.

Feel free to change the **Cutter Pressure** setting based on the depth you want the material to be cut or paint. The value of Cutter Pressure varies from cutting material to cutting material. Thicker material need more pressure and thinner less.

The **Cutter pressure** field can take values from 0 up to 100.

Cutter Passes

Cutter passes

You can specify the number of **Passes** you want the design to be made with. It actually defines how many times each shape will be made by the machine.

Blade depth

Blade depth

With this option you can set the **Blade depth** of the cutter blade. This value varies from cutting machine to cutting machine and some machines does not allow you to change this value at all through our software. You can make adjustments though on the actual machine.

Feel free to change the **Blade depth** setting based on the depth you want the material to be cut. This value is there only for your information, to remind you that for this object you have to change the Blade depth on the machine. The value of **Blade depth** varies from cutting material to cutting material. Thicker material need more depth and thinner less.

Blade color

Blade color

This drop down menu lists the **Blade color** that you have to use in order to cut the specific material. This is applicable on specific machines that include various blades, with different colors. Usually each color is for

cutting different material. Check the cutters manual for more information about which blade is from which material.

For example, for Artistic Edge cutter the Blades are for the following use:

- Blue Cap Blades is for cutting thicker materials
- Red Cap Blades is for cutting thin materials
- Yellow Cap Blades is for cutting fabrics

Select the Blade color that you will use for the currently selected object and during the Cutting process the Software will notify you that you will have to use the respective Blade color in order to cut the shape.

Sequence

Applique type does not have any customizable options, the only available option is **sequence** option. Using sequence option we can customize the way that the design will be embroidered. Specific objects of the design can be set to be embroidered at the **start** or at the **end** of the embroidery process. This gives you the ability to embroider a design in the order you prefer. More specifically, the **Sequence** drop down menu has three options **Auto**, **To start** and **To end**.

The program by default uses **Auto** option and the sequence is automatically generated by the intelligent mechanisms of the software. In order to change the embroidery sequence manually, use the other two options. Use **To start** option to set the selected object to be embroidered first. This means that if it was to be embroidered fifth, now will be embroidered first in the row. The **To end** option is the exact opposite, when it is applied on an object, this will immediately become the last object to be embroidered. This tool is really useful for producing hats, or on delicate fabrics that need special care regarding the way that the objects will be placed on the fabric.

If you have set more than one object to be embroidered **To start** and more than one **To end**, the software will decide automatically, which one from those set **To start** will be the first to be embroidered and which one from those that you have set **To back** will be the last to be embroidered.

For example, if you have a design with 20 objects and you have set 5 to be embroidered **To start** and 5 other **To end**, the software will embroider those that are set **To start** first, deciding automatically their embroidering sequence, then those (10) that remained set **To auto** and finally those that are set **To end**, deciding automatically the order of those last 5.

This is very useful because you can specify when the appliqué objects will be inserted on the fabric. Therefore you do not have to wait over the embroidery machine until it reaches the point where the appliqué has to be placed. You can order it to be embroidered at the start or at the end of the embroidering process. This will save you time and effort.

Cross-stitch

Cross-stitch fill option appears in Object properties pane only if we have imported and converted into Cross-stitch design any (RGB) bitmap. It is the easiest and quickest way to make cross-stitch embroidery designs. It is also possible to make combinations between normal embroidery (step, satin, Row fill and appliqué) and cross-stitches. By combining stitch-types you can end up with unique designs that you could never make before. Creative DRAWings automatically reduces the number of colors that the bitmap has. Therefore, in the stitch mode the maximum number of colors that the converted bitmap will have is 20.

In the created cross-stitch design it is possible to change the number of cross-stitch **Repeats**, the **Cell size** of the cross and the **Background** color.

Repeats:

Repeats

By changing the value of this cross-stitch option you can change the number of times that each cross-stitch will be embroidered. The bigger the number, the thicker the cross-stitch. The default value is 3 and it is the most suitable in most of the cases. There is an upper limit of 10 and a lower limit of 1. Therefore, the number of repeats must be between those two limits.

Cell size:

Cell size mm, Grid: 12.7 ct

By changing this value you can change the size of the cross container. The value represents the side size of the cross container square. Each point represents one 10th of mm, therefore, if you insert the value 20 in the field, this will mean that the side of the cross square will be 0,20cm or 0,082". The default value of **Cell size** is 20.

Next to the **Cell size** field there is some information about the cross-stitch grid that is useful for those that work with this kind of measurement. The **Grid is:** value shows the number of crosses per inch (ct). Therefore you can calculate easily the number of crosses in your design.

Background:

The Background list of colors contains all the colors that the bitmap has. Each time you pass the mouse cursor over a color, in the preview area you can view which part of the design will be filled with which color. This is really helpful when you do not want a color to be embroidered. This color might be an extensive background color of the bitmap or a thread color that is the same with the fabric that you will embroider on your cross-stitch design.



Cross-stitch background

For example, if you have a bitmap that has a white background and you want to embroider it on a white t-shirt, it would be better to check the white color's checkbox from the object properties toolbar and remove it completely.

There is a possibility, while you are over a color from the list, for it to appear inside an object that is filled with totally different color. This is happening because the bitmap images contain many colors and in order for Creative DRAWings to reduce the number of colors, it groups them and assigns one that is similar to the group. Therefore, many colors might be represented with one color on the design. You can edit the group colors from the **Edit palette** option from the **Tools** menu.

Photo-stitch

Any bitmap image that is imported in Creative DRAWings can be converted into **Photostitch** design. In **Photostitch** embroidery type Creative DRAWings automatically recognizes the graduation of colors of any backdrop image and sets fill stitches on it. The fill stitches are satin bars that cover the backdrop image area. The parameters that you can adjust are:

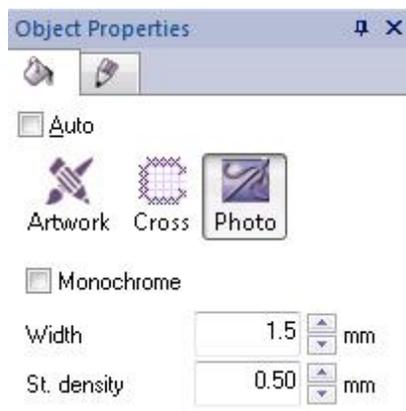
Monochrome

Monochrome

Using **Monochrome** option we can either create **CMYK** (Cyan, Magenta, Yellow, Black) photo-stitch designs or **Monochrome** in any color you prefer.

Check the box and the **photostitch** design changes into **monochrome photostitch**.

The design is based on the graduation of the colors of the selected image. At any point by unchecking this option we can change back to **CMYK photostitch**.



*Monochrome Photostitch**CMYK Photostitch*

Width

Width mm

With this parameter you can adjust the width of satin bars that photo-stitch consists of.

Starting density

St. density mm

Adjust the density of the satin bars that cover the backdrop image.

Net Fill

When this option is applied it sets the fill area to **Net Fill**. The Net fill embroidery type is a special fill type that adds two scan lines that are crossing with parallel equidistant running stitches. These two scan lines are forming a Net that can be used to create Laces. It is a very useful embroidery type that can produce great embroidery results. The Net Fill includes some more options that allow us to customize the way that will be applied on the selected object. These options are the following:

Cell size:

Cell size mm

With this option you can specify the size of each square side that the Net fill consists of. For example by setting the **Cell size** to be 2.0 mm all squares of the net will have 2.0 mm side size. The maximum value that the **Cell size** can have is 9.9mm and the minimum is 0.5mm. To change the value of the Cell size option you have to either click on the up and down arrows next to the field to increase or decrease its value or type the exact value you want and then press the **Enter** key from the keyboard. Another way to increase or decrease the value is by clicking inside the Cell size field and then by using the mouse wheel to change its value. The changes that you will make will be immediately applied on the design. By changing this value you can create a net with large squares or small squares according your preferences.

Offset:

Offset mm

With this option you can specify the distance, inner or outer, you want the Net fill to be moved. For example: if you set the **Offset** value to 3mm the Net fill will increase its size by 3mm to all directions outside its original outline. On the other hand if you set the value to -3mm the Net fill will decrease its size by 3mm to all direction inside its original outline.

The maximum value that the **Offset** can have is 15.0mm and the minimum is -15.0mm. To change the **Offset** value you have to either click on the up and down arrows next to the field to increase or decrease its value or type the exact value you want and then press the **Enter** key from the keyboard. Another way to increase or decrease the value is by clicking inside the Offset field and use the mouse wheel to change its value. The changes that you will make will be immediately applied on the design. By changing this value you can make adjustments on the **Net fill** size, which is really useful when you want to cover a hole and making sure that the net will be embroidered on the fabric and not inside the hole. This option is very important for creating proper Net fills.

Angle:

Angle °

With this option you can change the Angle that the Net fill will be applied. For example: When the angle is set to 0o degrees the **Net fill** will be aligned on the X and Y axes creating right angles. If you change the **Angle** value to 30o degrees the **Net fill** will be rotated 30o degrees anticlockwise and change completely its direction.

The **Angle** values that you can set are between 0o and 360o degrees. To change the **Angle** value you have to either click on the up and down arrows next to the field to increase or decrease its value or type the exact value you want and then press the **Enter** key from the keyboard. Another way to increase or decrease the value is by clicking inside the **Angle** field and use the mouse wheel to change its value. The changes that you will make will be immediately applied on the design.

By changing the **Angle** of the **Net fill** you can orientate it based on the shape that it is applied on. This ability allows you to produce better and more beautiful embroidery results.

There are also two more options that are very useful in customizing the way that the design will be embroidered. Those are the **Remove overlaps** option and the **Sequence** option.

Remove overlaps:

Remove overlaps

This is an automatic filter which removes all overlaps between the objects of the vector designs. This filter uses artificial Intelligence and it is applied only where necessary. The application of the filter results in the reduction of stitches that will be placed on the fabric. It is also possible to manually alter the overlapping status of each object. There are three possible options that you can apply on a specific object, **Auto**, **Never** and **Always**. The **Auto** is the default option and the one that Creative DRAWings uses to create the best possible results on the design. When the **Never** option is applied on an object, the specific object will never trim the objects that overlaps. This means that all the objects/shapes that are under the selected objects will be embroidered normally, placing all their stitches on the fabric. The opposite option is **Always**. When it is applied to a specific object it trims all the objects that it overlaps. This means that all the parts of objects/shapes that are under the selected object will not be embroidered.

Creative DRAWings uses this tool to embroider your design more efficiently and effectively. But in order for this function to work well, avoid applying **trim** tool in the Create mode of Creative DRAWings. You must always use it with care or after the setting **Remove overlaps** option to **Never**.

Sequence:

Sequence

With this tool it is possible to change the embroidering sequence of the design. Specific objects of the design can be set to be embroidered at the start or at the end of the embroidering process. This gives you the ability to embroider the designs in the order you prefer. More specifically, the **Sequence** drop down menu has three

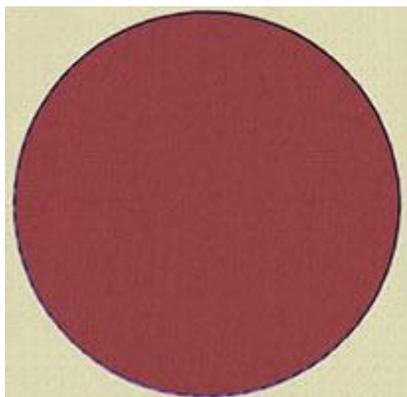
options **Auto**, **To start** and **To end**. The **Auto** is the default option and the one that Creative DRAWings uses to create the best possible embroidering sequence results. In order to change the embroidering sequence manually, use the other two options. The **To start** option sets the selected object to be embroidered first. This means that if it was to be embroidered fifth in the embroidering sequence, now will be embroidered first in the row. Exactly the opposite for the **To end** option. When this is applied on an object of the embroidery design, it will be immediately become the last object that will be embroidered. By using the **To start** and **To end** options, you can change the embroidering sequence and embroider the design you have created the way you prefer. This tool is really useful for embroidering hats and on delicate fabrics that need special care regarding the placement of objects on the fabric.

If you have set more than one object to be embroidered **To start** and more than one **To end**, Creative DRAWings will decide automatically which one of those will be the first and which one will be last to be embroidered.

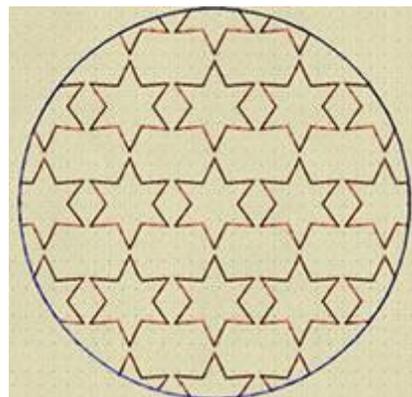
For example if you have a design with 20 objects and you have set 5 to be embroidered **To start** and 5 other **To end**, Creative DRAWings will embroider those set **To start** first, deciding automatically their embroidering sequence, then those (10) set **To auto** and finally those set **To end**, deciding automatically the order of the last 5.

Array fill

The **Array** is a new fill type. When it is applied for an object, the object is filled with a **design part** or with a **Clipart item**, in a patterned way. For example, the circle of the following figure, in the beginning, it is filled with applique. Then by using **array fill** it is filled with a design part in a patterned way (Rectangular).



Object with applique fill



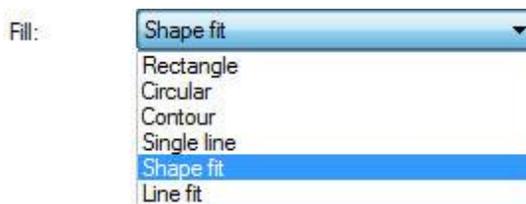
Array fill with a design object

When applying **array fill** there are various options that you can adjust in order to customize the way that the array is applied. There are some parameters that are common for all **Array** objects and the others vary according to the selected fill pattern. More information about using Array can be located into a separate chapter.

Fill

The available fill patterns are 5 as shown in the following figure. The usage and the ways to edit the fill patterns will be described into the following section.

- Rectangle
- Circular
- Contour
- Single Line
- Shape Fit
- Line Fit



In this section we will present the common parameters of the **array objects (Offset, Trim Shapes and Separate to objects)**.

Offset

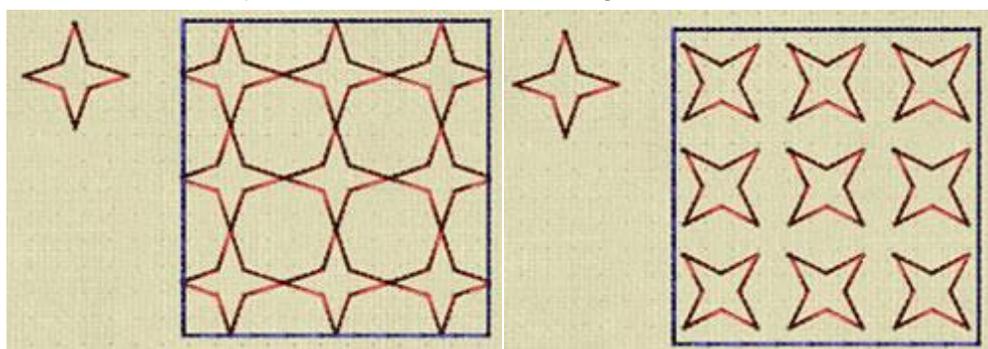


The **Offset** parameter specifies the distance between the outline and the cut edge of the repeated object.

Item rotation



This parameter rotates the base object. Specify the rotation of the object in degrees and all the copies of the array are rotated like if the initial object was rotated in these degrees.

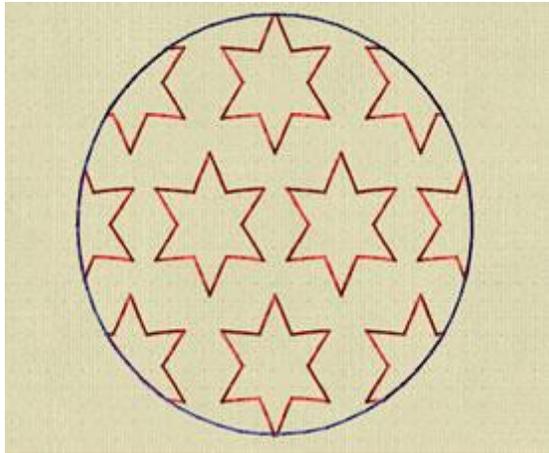


Item rotation 0

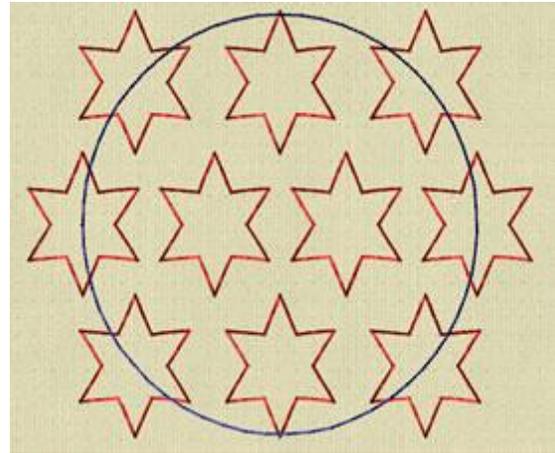
Item rotation 45

Trim Shapes

With **trim shapes** parameter you can specify whether the repeated objects will be cut according to the outline of the object in which they are repeated or if the software will nevertheless repeat the objects on the edge.



With trim shapes

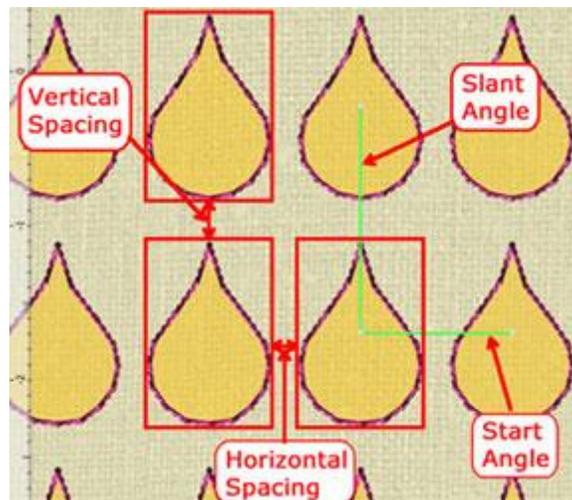


Without trim shapes

Separate to objects

By using the **Separate to Objects** button you can convert the repeats of the array into individual objects. This means that you are able to delete, move or manually add/copy objects. This option is mainly used to avoid overlaps and to refine certain designs.

When applying **Array fill** in **Rectangular** way the software creates copies of a base object and places them in Rectangular way. A copy of the base object is placed on the center of the object. A line of copies is created on the **Start angle** according to the Horizontal spacing and then other line are placed in order to fill the object according to the Vertical spacing. Finally the copies are placed vertically according to the slant angle.



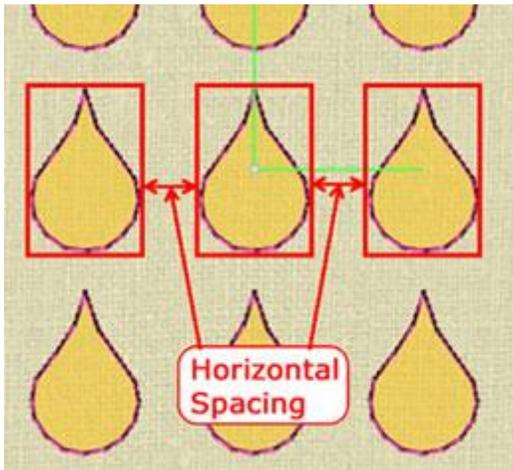
The properties of the **Array fill** when selecting **Rectangle fill** appliance are:

H. Spacing

Spacing: mm

When applying **Array fill** using **Rectangle** appliance option, the program creates copies of a base object and places the copies on a **rectangular grid**. Using this option you can define the distance between the copies of the baseline. The distance is defined in Millimeters. In the numeric field you can type the distance in "mm". You can also adjust **Spacing** by clicking the arrows next to the value or by clicking on the value and rotating

the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field.

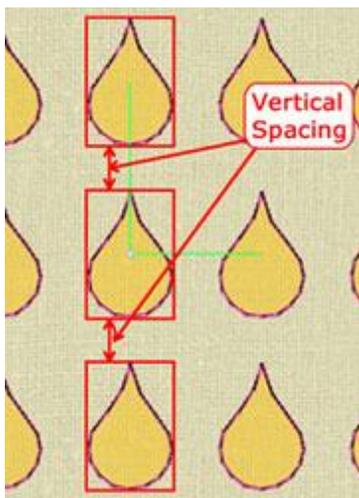


V. Spacing

V. spacing:   mm

When applying **Array fill** using **Rectangle** fill appliance option, the program creates copies of a base object and places the copies on a rectangular grid. Using this option you can define the distance between the lines of the rectangle grid. The distance is defined in Millimeters. In the numeric field you can type the distance in "mm". You can also adjust **Spacing** by clicking the arrows next to the value or by clicking on the value and

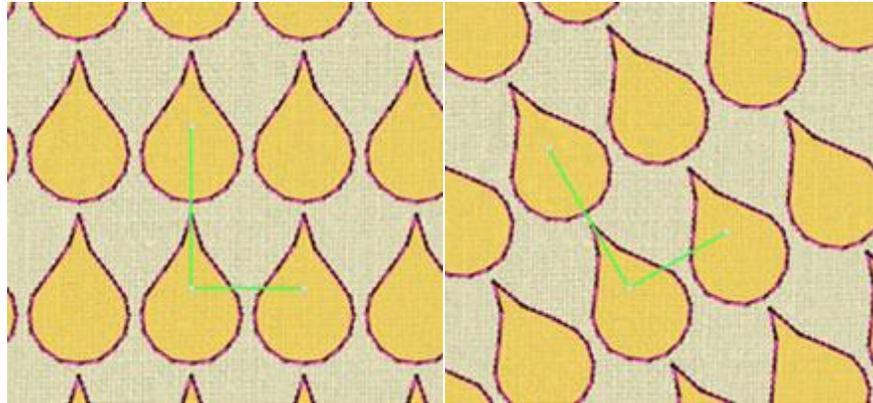
rotating the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field.



Start angle

Start angle:   °

With this option you can change the **Start Angle** that **Array fill** will be applied.

*Start Angle 0 degrees**Start Angle 15 degrees*

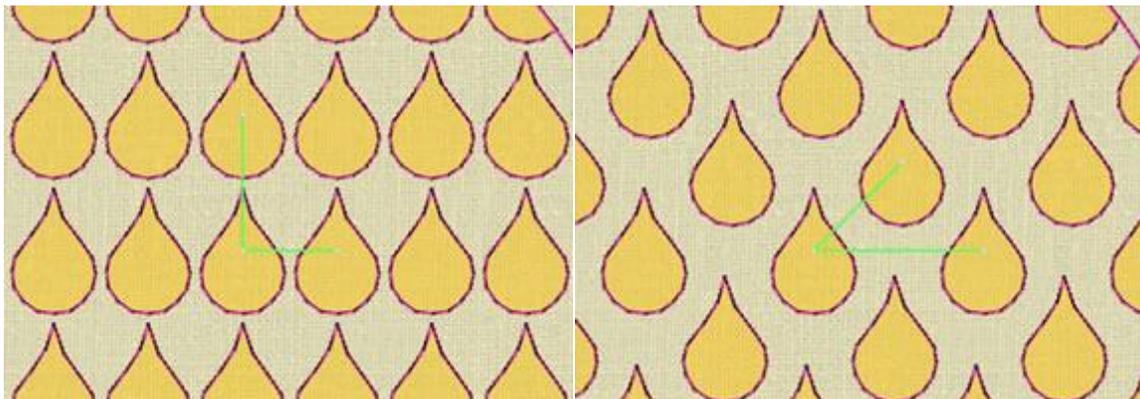
The **Start Angle** values that you can set are between 0o and 360o degrees. To change the **Start Angle** value you have to either click on the up and down arrows next to the field to increase or decrease its value or type the exact value you want and then press the **Enter** key from the keyboard. Another way to increase or decrease the value is by clicking inside the **Angle** field and use the mouse wheel to change its value. The changes that you will make will be immediately applied on the design.

By changing the **Angle** of the **Array fill** you can orientate it in any way you like. This ability allows you to produce better and more beautiful embroidery results.

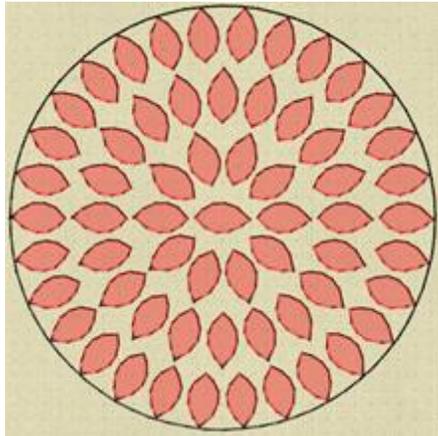
Slant angle

Slant angle: °

Using Slant angle option you can adjust the placement pattern. The angle that you define measures the angle from the **Start angle**.

*Slant Angle 90 degrees**Slant Angle 45 degrees*

The following options appear when applying Array fill in Circular way.



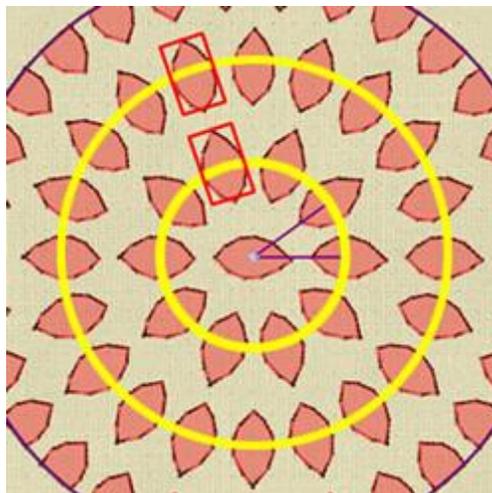
H. Spacing

H. Spacing: mm

When applying **Array fill** using **Circular** appliance option, the program creates copies of a base object and places the copies on a **Circular grid**. Using this option you can define the distance between the circles. The distance is defined in Millimeters. In the numeric field you can type the distance in "mm". You can also adjust **H.Spacing** by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel

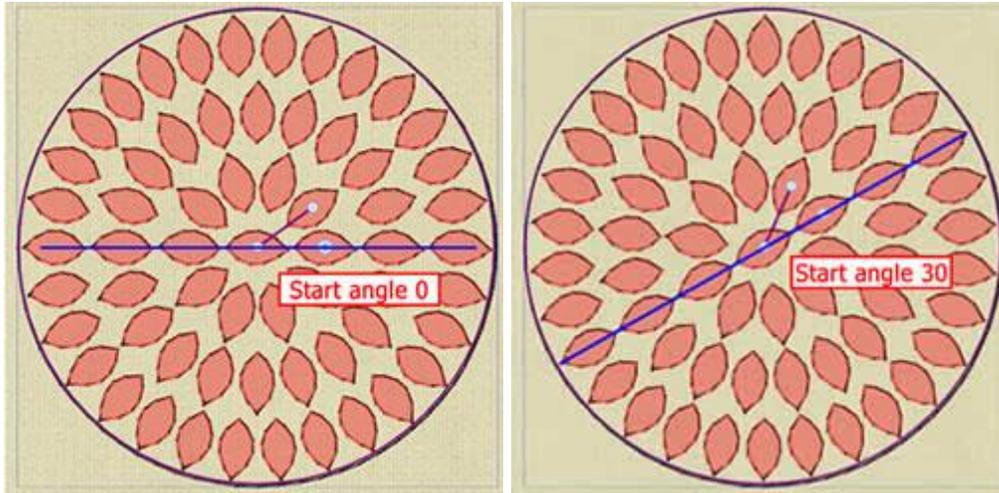


if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field.



Start angle

The Starting angle parameter specifies the angle of the horizontal lines of repeated objects, which will fill the area you specified. When the starting angle is set to 0 degrees, the lines will be horizontal.



Start angle 0 degrees

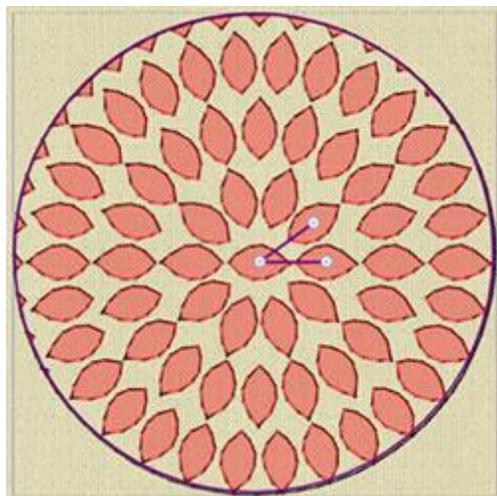
The start angle has changed and the whole place of the pattern.

Steps

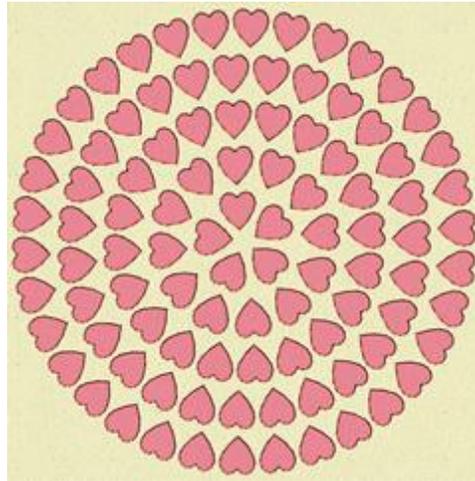
The **Steps** parameter, defines the increase Step of added copies on inner circles of Circular placement, starting from the center of the Array. First a copy is added to the center of the circle. Then in first circle the number of copies is the number that is defined by Steps property, in our case we have 8 copies. The next circle increases the number of included copies by the Step number, so the second circle has 16 copies. The third circle will have 24 copy objects etc. The object of the same circle are distributed evenly.

Steps:

8

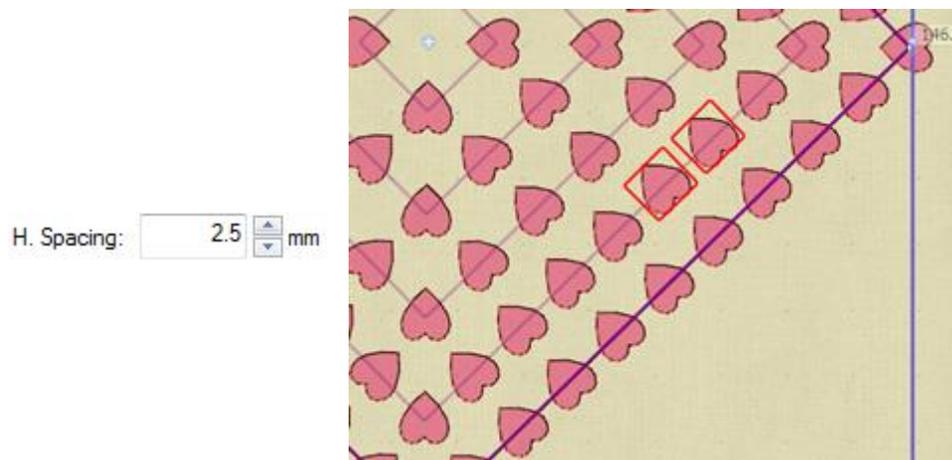


The following options appear when applying **Array fill** using **Contour** pattern.



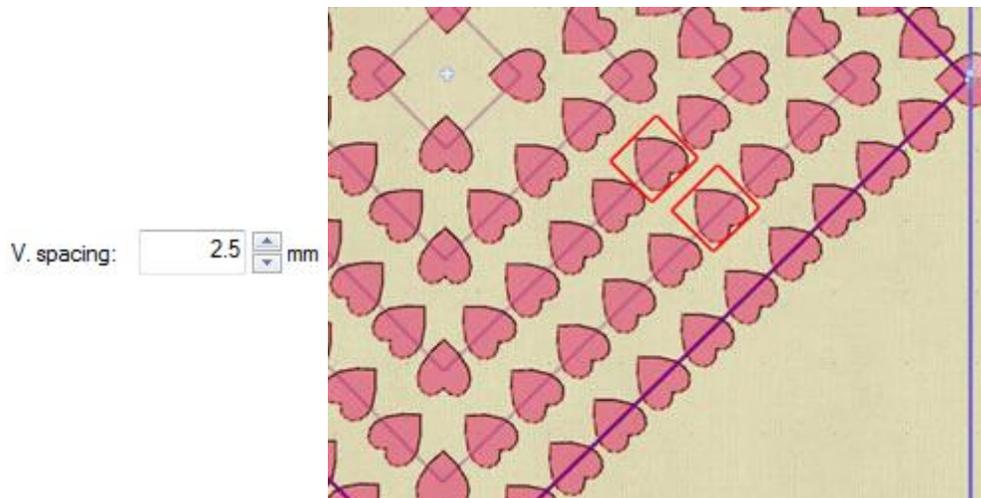
H. Spacing

The **Horizontal spacing** parameter specifies the distance between the rectangles that include each repeated object of the same contour. The Spacing in this case may not be precise, since the objects of the same contour should be distributed evenly.



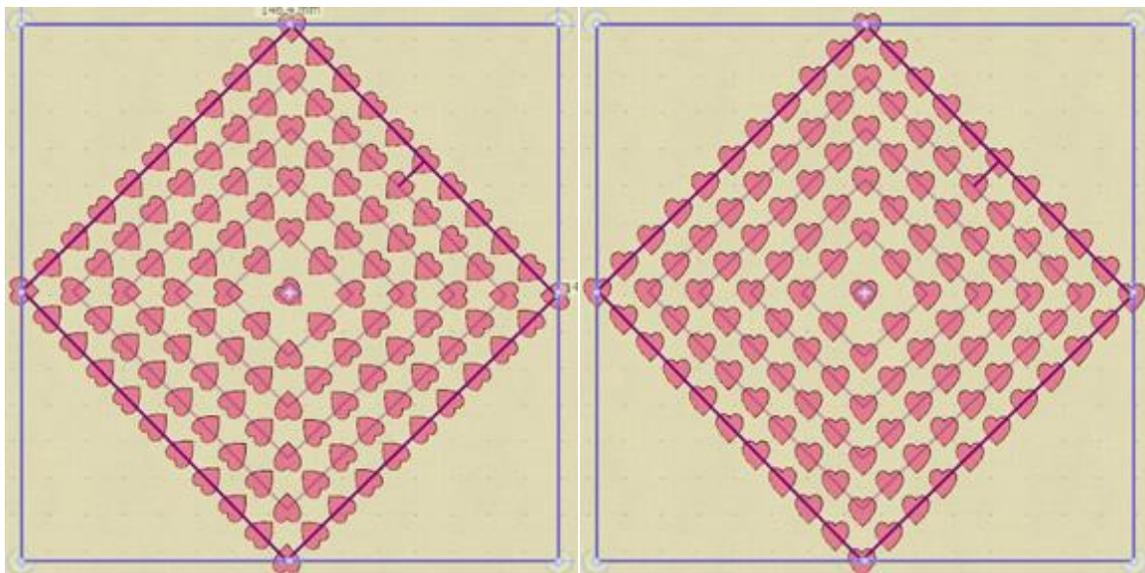
V. Spacing

The **Vertical spacing** parameter specifies the distance between the rectangles that include each repeated object, of different (adjacent) contours. The Spacing in this case may not be precise, since the contours should be placed in a way that does not leave big gaps in the middle of the object.



Follow angle

With the Follow angle parameter you can specify if the repeated object will be rotated, to follow the direction of the outline or if it will keep the angle of the original object.



With "Follow angle"

Without "Follow angle"

Single line apply pattern is used for designs that we have a small area to fill. Like the letter on the following figure. When using Rectangle fill we can see that in most of the areas in reality one copy of the object fits in. When using Single line fill then only a copy is added into middle part of the outline of the object to be filled.



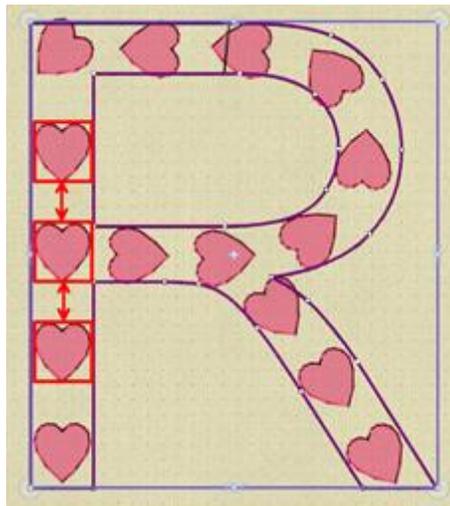
Single line

H. Spacing

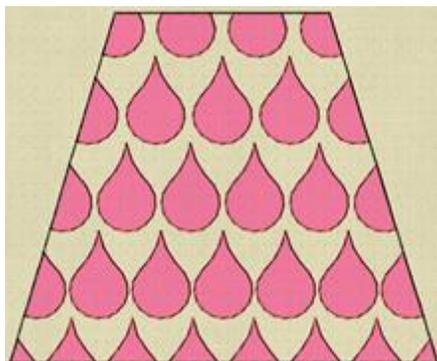
H. Spacing: mm

Using this option you can define the distance between the copies. The distance is defined in Millimeters. In the numeric field you can type the distance in "mm". You can also adjust **Spacing** by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field.

H. Spacing: mm



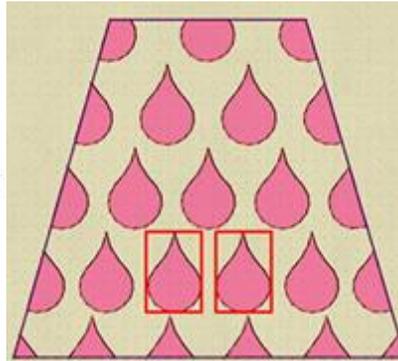
When you are using **Shape fit** fill pattern the software tries to make the best fit according to the shape of the filled object.



*Shape fit***H. Spacing**

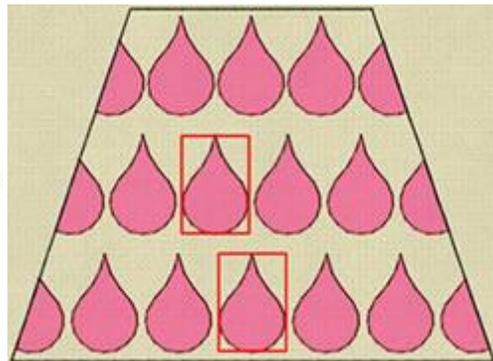
The **Spacing** parameter specifies the distance between the rectangles that include each repeated object. The Spacing in this case may not be precise, since the objects of the same letter should be evenly distributed.

H. Spacing: mm

**V. Spacing**

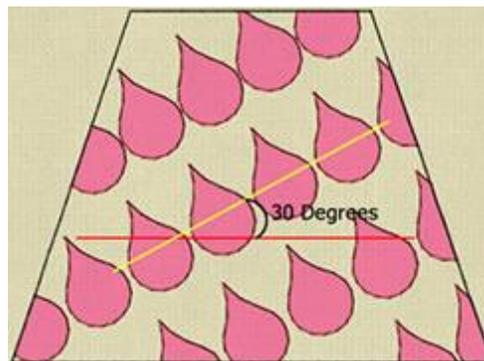
The Spacing parameter specifies the distance between the rectangles which can include each repeated object.

V. spacing: mm

**Start angle**

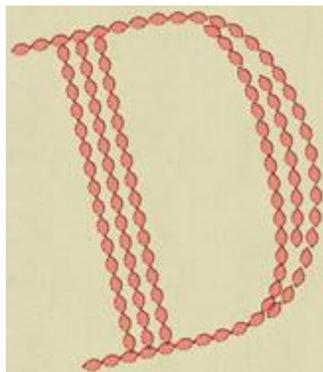
The Starting angle parameter specifies the angle of the horizontal lines of repeated objects, which will fill the area you specified. When the starting angle is set to 0 degrees, the lines will be horizontal.

Start angle: °



By changing the **Angle** of the **Shape fit** you can orientate it based on the shape that it is applied on. This ability allows you to produce better and more beautiful embroidery results.

Line fit works like **Single line** fill but there is a major difference. When there are points in the shape that more than one copies may fit then the program adds them. Single line creates a line in the middle of the outline and fill with the array design. Line fit tries to fit as much copies as possible inside the outline of the object.



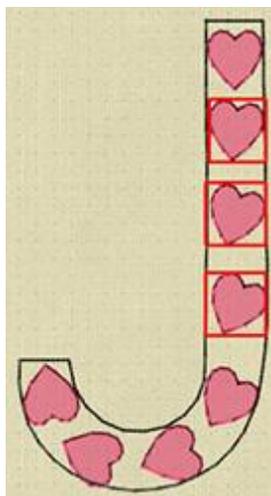
Line Fit

H. Spacing

H. Spacing: mm

When applying **Array fill** using **Rectangle** appliance option, the program creates copies of a base object and places the copies on a **rectangular grid**. Using this option you can define the distance between the copies of the baseline. The distance is defined in millimeters. In the numeric field you can type the distance in "mm". You can also adjust **Spacing** by clicking the arrows next to the value or by clicking on the value and rotating

the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field.



Outline properties

This tab contains every function that can be applied to the outline of a design and in every line design. The functions are not visible until you select an object from a design. When a vector design is embroidered for the

first time, DRAWings automatically puts outline stitches on it. That is why the **Auto** checkbox, at the top of the outline tab, is checked. When a change in the outline tab is made, **Auto** becomes unchecked. You can check it again and restore programs initial outline design.



Click on each stitch type icon, on the above image, to view how they applied.

For designs that do not have a border the **Outline** option is not available.

Stitch types

In the outline tab there are four embroidery type fills: **Artwork**, **Running**, **Satin Serial** and **Array**. Every time you select one, it is applied immediately to your stitch design.

Artwork

This option, when applied, sets the fill area to be empty. All the fill stitches are removed from the design and only the border remains, if one exists. Whenever you don't need to embroider a specific fill area you can set its fill to **Artwork** and have the stitches instantly removed.

Running

This option, when applied, sets the border outline of a design or a line design to Running. All the border and line stitches are changed to Running, which is automatically calculated and produced from the program. The Running type that was placed is the default. You can change **Running's** feel by changing its Thickness and Style. There are different thicknesses and Styles that you can apply on any stitch design. Also, you have the ability to change the stitch **Offset** and **Length**.

Mirror style

Mirror style

Using this option we can mirror any applied style.

Offset:

Offset mm

You can activate the **Offset** option by checking the checkbox next to it. In the numeric field you can enter the value of offset you want, with lowest value of -15mm and highest value 15mm. Also, you can increase or decrease the offset value by clicking on the arrows next to the value or by clicking on the value and rotating the mouse wheel, if there is one. The value that you are inserting defines the exact distance you want the running outline to have from its initial position. If the value is negative, running object will make an inner offset and the opposite, if it is positive. The default offset value is zero and can be changed only from you. Any changes you are making on the offset value it is previewed on the design.

Passes

Passes

Define the number of passes that running will make to create a line or border design. This way we can create thickness in running stitch. The minimum value is 1 (Single pass) and the maximum is 9 (9 passes). Any change in running thickness is not viewable in the 3D preview area but it is stored when the design is saved. When the design is embroidered, the option you have selected will be applied. You can also see the multiple passes using slow redraw.

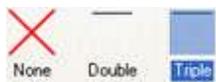
Styles

The Styles area contains all the stitch styles that can be applied on the design. Style in Creative DRAWings is a way of movement from one point to another, which normally can be done by one stitch. Styles, when applied, are placed on the border one after another. Applying different styles you can create unique embroidery designs.



Running styles

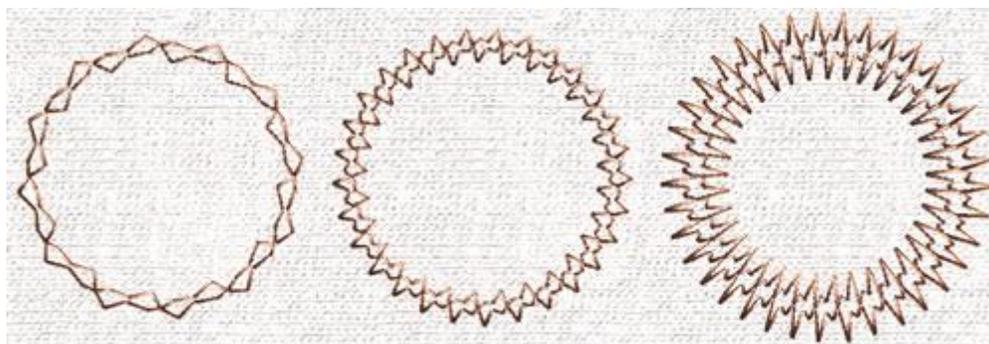
Select the style you prefer by clicking on it and viewing it on your design. Your selections are instantly displayed in the design area letting you experiment with your embroidery design.



The first three styles **None**, **Double**, and **Triple** are automatically selected from the program and you cannot make any changes between them. Their selection depends on the border width and the only way to change them is by changing the border width of the vector design. All the other styles can be selected by clicking on them.

There are 325 styles that you can use to produce unique designs. The styles that are in film icon (for example: ) are a serial of different styles in one.

You can also stretch the styles applied on running stitches by adjusting the **length** (from **Object properties** toolbar) and the **Outline** width (from **Tool options** toolbar). The moment you set a length manually, you start stretching the styles on the running border. If you want proportional scale, you can leave the **length** at **auto** (leave **Length** value unchecked) and adjust the **Outline** width, or set both of them to the same number.



Length: 6.0mm - Outline:2.0mm

Length: 2.5mm - Outline:0,4mm

Length: 1.0mm - Outline: 5.0mm

The length value has by default a suggested value that is based on the selected style. You can increase or decrease the length value according your preferences and you will view the change applied immediately on the running object.

By increasing the **Outline** value and decreasing the **Length** value you can make the style thinner. By doing the opposite, decrease the **Outline** and increase the **Length** you can make the style wider.

Keep in mind thought that the styles have an internal minimum length that you cannot lower further. Every Length decrease below the minimum value will not affect the style size that you can check by either exporting the file to the Editor (File > Export > to Editor) or by using the **Slow redraw** tool.

Length:

Length mm

You can activate the Length option by checking the checkbox next to it. In the numeric field you can specify the length of stitches for the punching object that you are adding. Also you can adjust length by clicking the

arrows next to the value or by clicking on the value and rotating the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside of the length field.

Satin Serial

This option, when applied, sets the border outline of a design or a line design to be Satin serial. All the border and line stitches are changing to Satin serial, which is automatically calculated and produced from the program. The Satin serial type that was placed was selected from the program and is the default. You can change Satin Serial's feel by changing its Pattern. As you can see in the figure below, there are different Patterns that you can apply on any stitch design. Also, you have the ability to change Underlay, offset, stitch Density and Compensation.

Offset

Offset mm

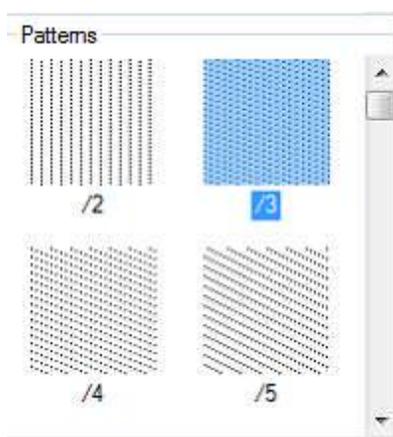
You can activate the **Offset** option by checking the checkbox next to it. In the numeric field you can enter the value of offset you want, with lowest value of -8mm and highest value 8mm. Also you can increase or decrease the offset value by clicking on the arrows next to the value or by clicking on the value and rotating the mouse wheel, if there is one. The value that you are inserting defines the exact distance you want the

satin serial outline to have from its initial position. If the value is negative, satin serial object will make an inner offset and the opposite, if it is positive. The default offset value is zero and can be changed only from you. Any changes you are making on the offset value it is previewed on the design.

The measurement system of Creative DRAWings in all **Object properties** parameters can only be metric.

Patterns

The patterns area contains all the patterns that can be applied on the design. Patterns are shapes, created from stitches. You can apply patterns only in wide lines or border outlines. If you have a thin border, any change in patterns will not take effect.



Satin serial patterns

Select the pattern you prefer by clicking on it and viewing it in your design. If you do not want any select none. None will restore the default satin serial type. Your selections are instantly displayed in the design area letting you experiment with your embroidery design. There are 262 different patterns to apply in your design.

Also, there are four more options that can help you adjust the embroidery parameters of the design. All four of them are located at the bottom of the **Object properties** toolbar, and for **Satin serial** stitch type they are **Underlay**, **Density**, **Offset** and **Compensation**. Below we will describe how its option affects the embroidery design.

Also, there are four more options that can help you select the correct fabric for your embroidery design. As we have already mentioned in the select fabric section previously in this chapter, each fabric has different presets that affect the way the embroidery design will be placed on it. These presets are visible at the bottom of the **Object properties** toolbar, and for Satin serial stitch type they are **Underlay**, **Density**, **Offset** and **Compensation**. The values that are shown, are there, only for your information and to help you decide the fabric you will use. Below we will describe what each option shows.

Density:



You can activate the **Density** option by checking the checkbox next to it. In the numeric field you can specify the density of the satin serial stitches that you are adding. Also, you can adjust density by clicking the arrows

next to the value or by clicking on the value and rotating the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field.

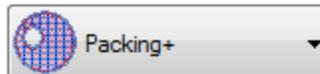
Compensation:

Compensation mm

You can activate the **Compensation** option by checking the checkbox next to it. In the numeric field you can enter the value of compensation you want with lower bounder -0,3mm and upper bounder 2.0mm. Also you can adjust Compensation by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel if there is one. The entered value changes the width of satin serial stitch that will be embroidered. The default compensation value depends on the fabric you are using. If you change fabric the compensation will adjust automatically. Changes are instantly previewed on the design area and can be set by clicking outside the density field.

Underlay:

Underlay



You can activate the underlay option by checking the checkbox next to it. Click on the **Underlay** you want, and your change will be calculated and stored in the saved design. If you don't select an underlay manually, Creative DRAWings will automatically select the appropriate one for you. Underlay is important for quality embroidery designs.

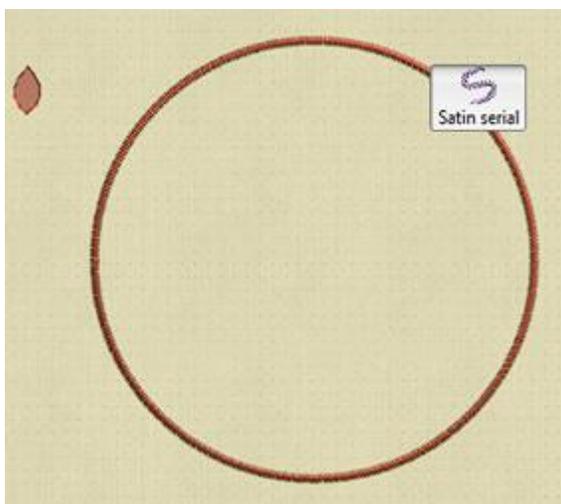
For **Satin** serial stitch type, the following underlay patterns are available:

 Tacking	Tracking – If tacking is selected, there will be no underlay and the software will make running stitches in order to go from one position to another and cover the area with cover stitches.
 Single	Single - If single is selected, Creative DRAWings will make a single line with running stitches near the middle of the shape of the object and then cover this with cover stitches.
 Double	Double - If double is selected, Creative DRAWings will make running stitches following the shape of the object and position Double underlay near the edge of the outline.
 ZigZag	ZigZag - If zigzag is selected, Creative DRAWings will create a sophisticated ZigZag pattern which automatically changes directions (according to the direction of the cover stitches) and then fill the shape with cover stitches.
 Cross	Cross - If cross is selected, Creative DRAWings will create a thicker sophisticated ZigZag pattern which automatically changes directions (according to the direction of the cover stitches) and then fill the shape with cover stitches.
 Zigzag+	ZigZag+ - Is a combination of Zig-Zag and Double underlay.

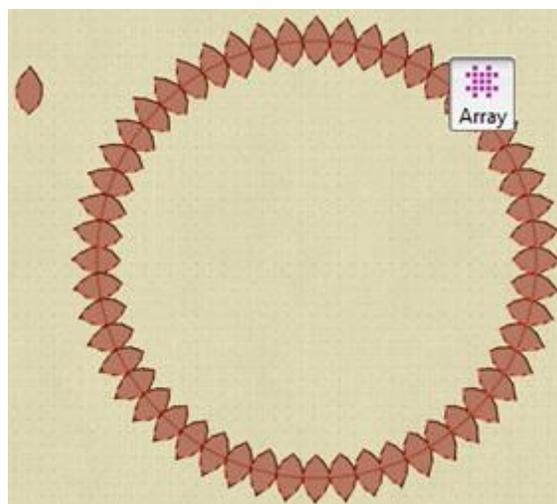
 Cross+	Cross+ - Is a combination of Cross and Double underlay
 Netting	Netting - If netting is selected, Creative DRAWings will cover the area of the object with a thicker sophisticated ZigZag pattern, which automatically changes directions (according to the direction of the cover stitches) two times and then fills the shape with cover stitches.
 Netting+	Netting+ - Is a combination of Netting and Double underlay.
 Double Zigzag	Double ZigZag - If Double Zig-Zag is selected a Zig-Zag underlay is applied in both directions.
 Double Zigzag+	Double ZigZag+ - Is a combination of Double Zig-Zag and Double underlay.

Array

When this option is applied for an object's outline, a **design part** or a **Clipart** item is added on the outline of the selected object. For example in the following figure you can see the initial **Satin serial** object on the left part, and on the right part the initial object after we have applied **Array outline** using this small leaf.



Satin Serial outline



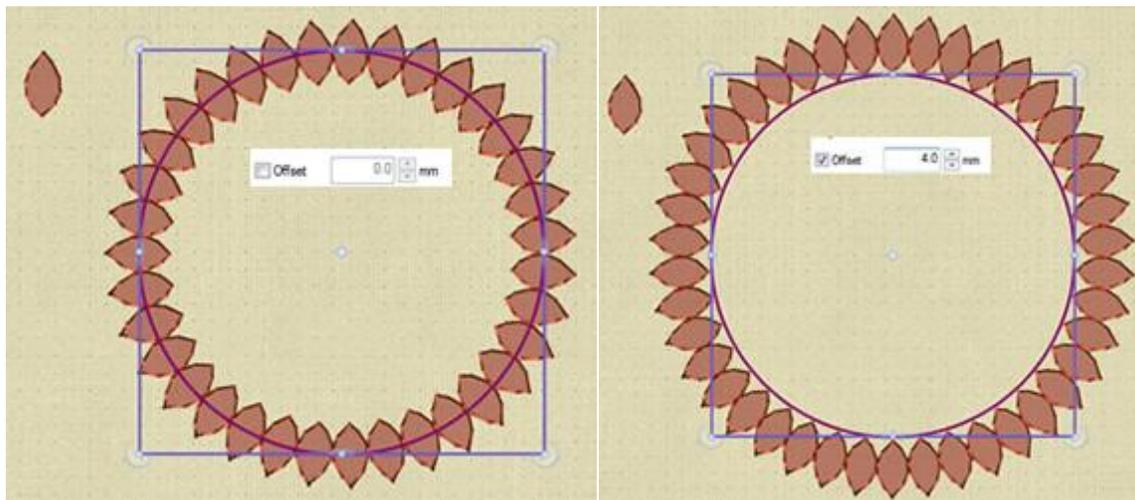
Array outline with this leaf

Offset

Offset 0.0 mm

You can activate the **Offset** option by checking the checkbox next to it. In the numeric field you can enter the value of offset you want, with lowest value of -15mm and highest value 15mm. Also, you can increase or decrease the offset value by clicking on the arrows next to the value or by clicking on the value and rotating the mouse wheel, if there is one. The value that you are inserting defines the exact distance you want the

outline to have from its initial position. The default offset value is zero and can be changed only from you. Any changes you are making on the offset value it is previewed on the design.



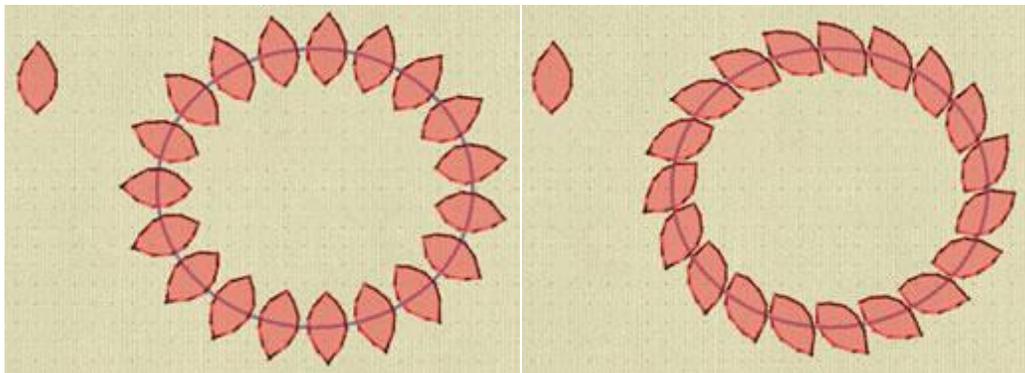
No offset

4mm offset

Item rotation

Item rotation

This parameter rotates the base object. Specify the rotation of the object in degrees and all the copies of the array are rotated like if the initial object was rotated in these degrees.



Item rotation 0

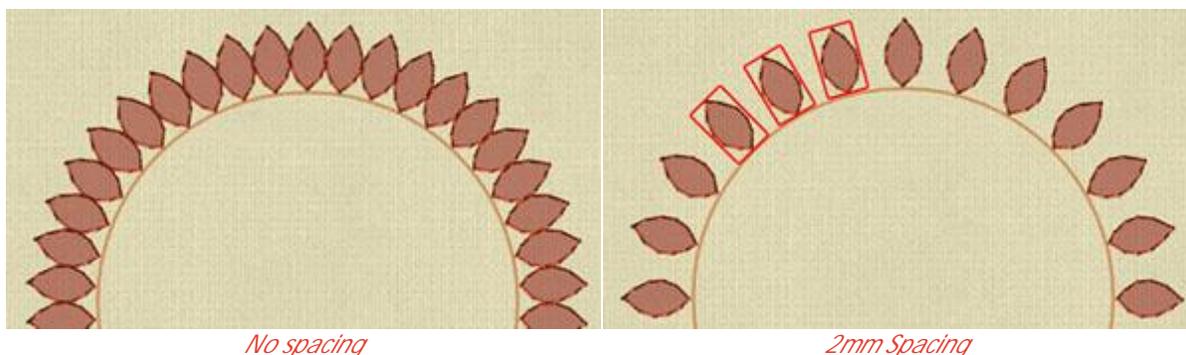
Item rotation 45

Spacing

Spacing: mm

Using this option you can define the distance between the copies of the array. The distance is defined in Millimeters. In the numeric field you can type the distance in "mm". You can also adjust **Spacing** by clicking

the arrows next to the value or by clicking on the value and rotating the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field.



Divide and Directions tools

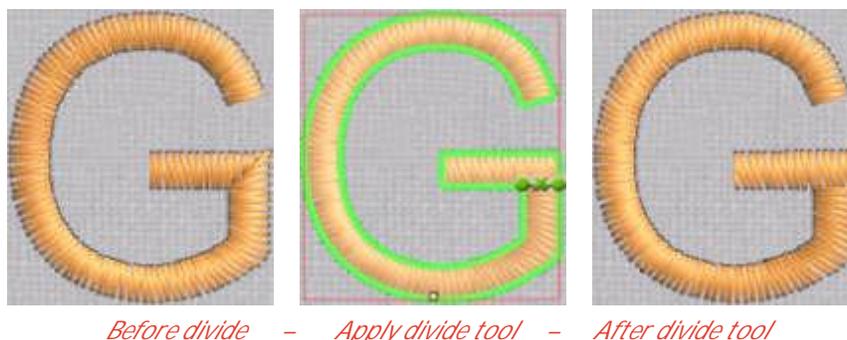
In the **Tools** toolbar of Creative DRAWings when **create, stitch** mode is enabled, two more tools exist to help improve embroidery quality. These are **Divide**  and **Directions**  tools.

Divide

With this tool is possible to **Divide** Satin objects and manage the way in which the outlines are split into satin bars. The objects are not increased but split to internal branches. This tool gives you the flexibility to customize the way Satin objects will be embroidered and create exactly the design you want. In order to add a **Divide** line, click on  icon or press the **Shift + D** shortcut keys from the keyboard. Then click on the object you wish to divide (in order to select it). Click and drag from one side of the object to the other in order to specify the divide line. In order to delete the divide line you have created, just click on the 'X' icon in the middle of the line. You can change any existing divide line by clicking and dragging the points of the line. The Divide line has green color in order to distinguish them from the directions lines that are red.

The Divide tool can be applied with the same procedure and on objects filled with Row fill stitch type. Row fill is a special stitch type that when you apply the Divide tool you must be careful and keep in mind its distinctiveness to avoid having strange embroidering results.

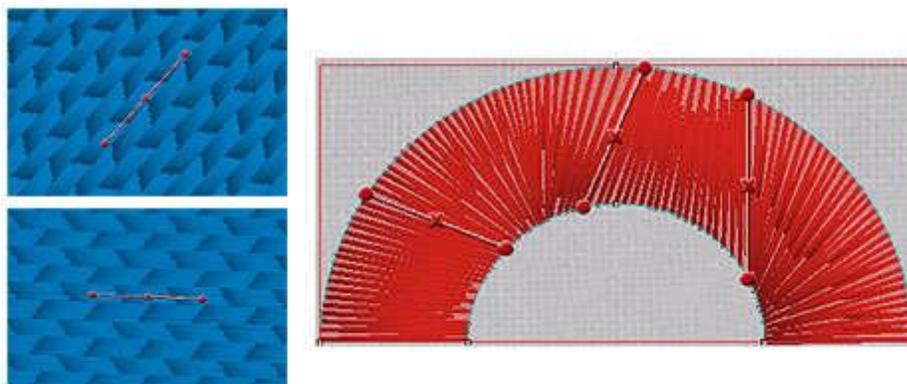
It is very useful also when you want to create Text art designs and embroider the design with a specific way. You can divide the satin characters and define exactly the way you want to be embroidered.



You can activate the divide tool by clicking on the  icon of the **Tools** toolbar or by pressing the **Shift + D** shortcut keys.

Directions

With this tool it is possible to change the direction of **Step**, **Satin** and **Row fill** stitches until you are satisfied with the embroidery results. In order to add a direction first you have to click on  icon or press the 'D' shortcut key from the keyboard. Then click on the object, which direction you wish to change (in order to select it). Click and drag in order to specify the direction of the stitches. To delete the direction you have created, just click on the 'X' icon at the middle of the direction. You can change any existing direction by clicking and dragging the points of the direction.



Step Directions

Satin Directions

By changing Directions in a design you can organize also the embroidery tensions in a way that one object will negate the tensions of the other object and produce a perfect result.

In Satin and Row fill objects you can have more than one stitch directions that can help you produce the embroidery result you prefer. On the other hand in Step objects you can have only one Direction of stitches.

You can activate the directions tool by clicking on the  icon of the **Tools** toolbar or by pressing the 'D' shortcut key.

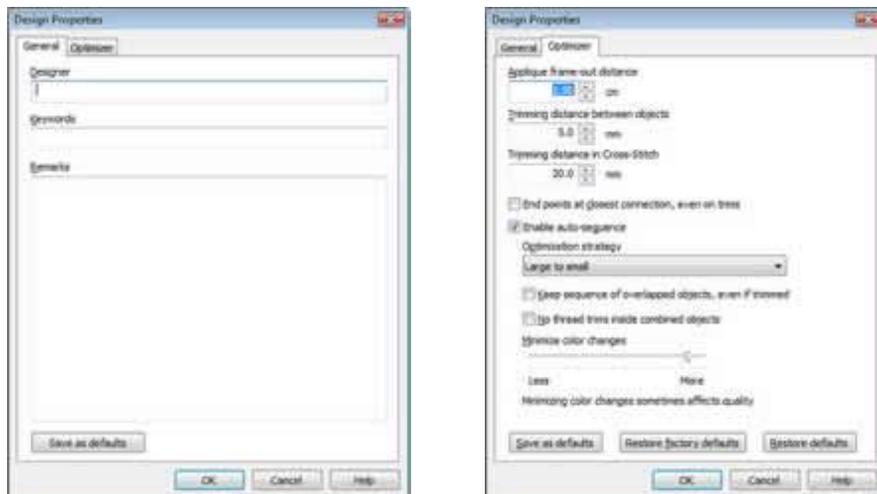
With the combination of **Divide** and **Directions** tools you can create unique designs that can have many sub-objects as brunches and specific direction of stitches for each sub-object.

Design Properties

Apart from the stitch changes that you can make in your embroidery designs, you can also adjust the properties of its design. You can add general information about the design and optimize the way it will be embroidered. You can access **Design properties** from menu **File > Design properties**. In the dialog box that will appear, you can adjust the properties in the **General** and **Optimizer** tab.



Click on each tab, on the above image, to view their properties.



Design properties

General

In the general tab you can add information about the Designer's name, design Keywords, and any Remarks about the design.

- **Designer**

In the Designer text field you can add information about the designer (Name, company, etc.). These fields are useful for record keeping.

Designer

Designer text field

- **Keywords**

In the **Keywords** field you can add words that describe the current design. The keywords can be used only if you save your design in “.NGS” or “.DRAW” format.

Keywords

Keywords text field

The “NGS” file format can be opened from WINGS SYSTEMS Ltd digitizing programs, **eXperience®** and **Wings' modular®**. These include a browser where keywords can be used as a filter in search option. If you are dealing with hundreds of designs it can be a vital function for quickly searching your database. Many people find it easier to write down a fixed list of options or keywords to allow multiple users to enter data in the same style into a common design database.

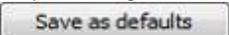
- **Remarks**

In this text area you can add any remarks for your design. Any information about stitch type, color palette, fabric type and number of threads that was used in the design creation are useful for quick

reference for anyone that might use it. Also you can add instructions relating to embroidery production.



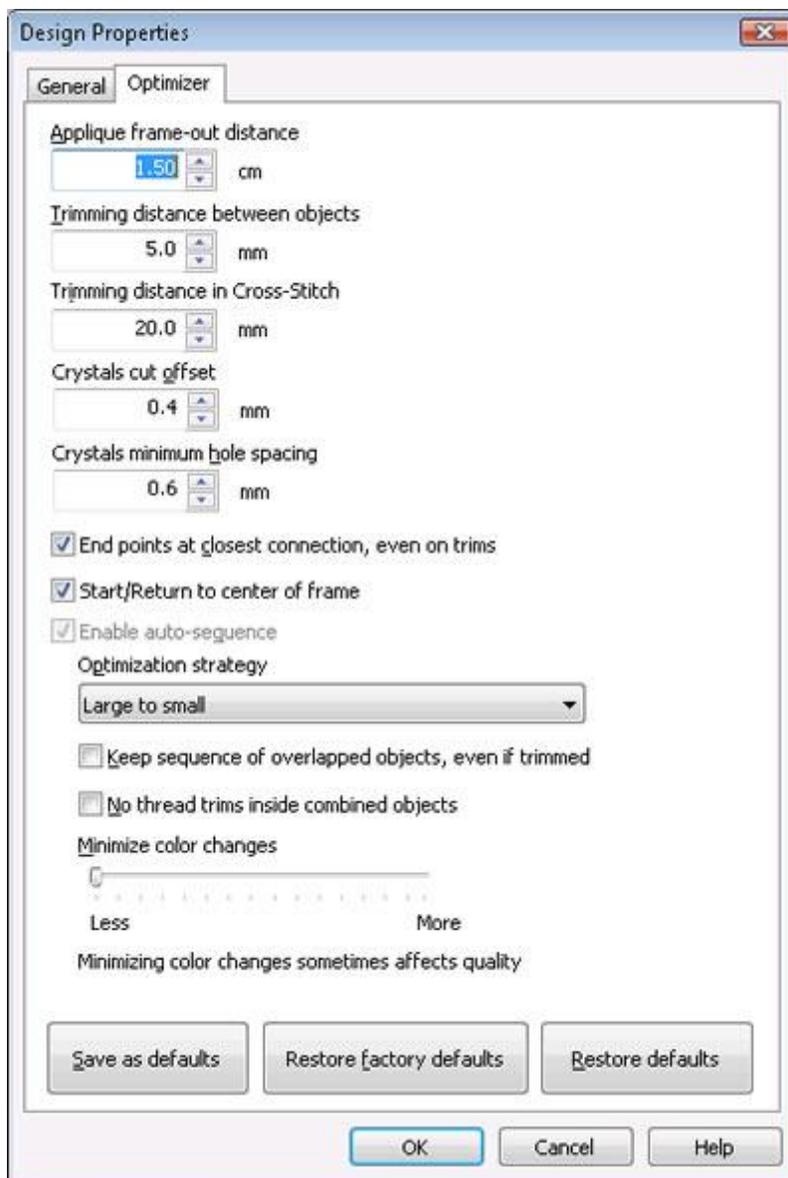
Remarks text area

Any changes in the General tab can be saved as default, by clicking on the Save as default button , which means that every time you create a new design the already saved settings will be displayed.

Optimizer

In this tab you can adjust Appliqué frame out distance, Trimming distance between objects, Trimming distance in Cross-stitch and Minimizing color changes. Also, can select Optimization strategy, and set the options End points at closest connection even on trims, keep sequence of overlapped objects even if trimmed, No thread trims inside combined objects. You have also the ability to disable some optimization automations of the software that have to do with the embroidery sequence and re-sequence the embroidery design manually.

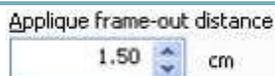
All options that you will find inside the Optimizer, refer to embroidery production process and are important for quality stitch output. The optimizer tab can be accessed, also, from Optimizer options of Tools menu or by pressing Ctrl+Shift+J shortcut keys (Ctrl+Shift+J) together from the keyboard.



Design Properties - Optimizer

The Optimizer options that you can adjust are listed below:

Appliqué frame out distance



Appliqué frame out distance

This setting is important for designs that include appliqué. In production of embroidery designs with appliqué, there is a phase where the machine will stop, bring the frame out and ask you to add the appliqué in the predefined area. In that phase the frame movement the embroidery machine makes is defined as Appliqué frame out distance. By changing the value of this field, you are setting the frame out movement from its current position.

Trimming distance between objects



Trimming distance between objects

This tool is applied only to embroidery objects (the **Embroidery Technique** should be active). With thread trims between the objects of the embroidery design you get high quality of embroidery in longer time because every time the machine cuts a thread, it takes some time to start embroidering again.

On the other hand, without trims between the objects, you get high quality of embroidery in less production time. The jump-stitches are there to connect the object without cutting the thread. You can either cut the jump-stitches manually afterwards or keep them on the design. In cases where the objects are too close, jump-stitches are not a problem for most embroiderers but it is the best way of embroidering. It is also matter of embroidering style.

This setting is important for thread trimming in the embroidery production process. Setting the **Trimming distance between objects** you are setting the distance where the machine will make a thread trim. More specifically, if the objects are **combined** in Create mode , *Creative DRAWings*, in the **stitch button**, will connect those objects with a jump-stitch that will be visible on the 3D preview area. This jump-stitch will become a thread trim when the design is saved in an embroidery machine format and the thread trim distance is shorter than the jump-stitch distance. If the objects are **break apart** and the distance between the objects/shapes are longer than the value that you have set in **Trimming distance between objects** field, then there will be thread trims between the objects.

If the distance is shorter from the **Trimming distance between objects** and the objects are not combined there will be no thread trims in between.

Trimming distance in Cross-stitch

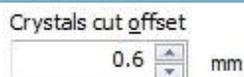


Trimming distance in Cross-stitch

This tool is applied only to embroidery objects (the **Embroidery Technique** should be active).

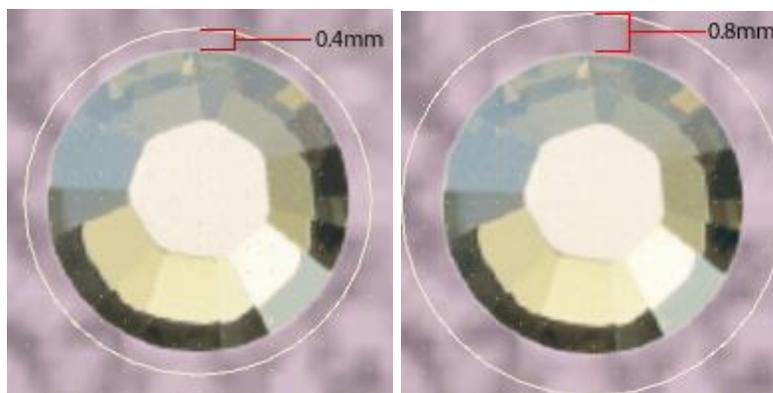
This option handles the trimming distance between cross-stitch objects. In *Creative DRAWings* the cross-stitch designs are treated as one object. In the cross-stitch designs we can treat the thread colors that are filling the design as objects. Cross-stitch designs in most of cases have scattered crosses with the same color that makes the trimming calculations difficult. The **Trimming distance in Cross-Stitch** option gives you the ability to define the distance that you want a thread trim to occur between the color objects of the design. The trimming needs are different in different designs therefore you must be careful with the inserted value in this option.

Crystal cut offset



Crystal cut offset

This option handles the **crystal cut offset**. The crystal cut offset is the distance between the crystal and the cutting edge of the circle that the cutting knife creates. This gap between the two gives us enough place to position our crystals in the holes easily.



Crystal cut offset 0.4mm - 0.8mm

Therefore you can change the **crystal cut offset** based on the size of the crystal that you are using and your actual preference. The default value is 0.6 mm which is considered enough for the standard sized crystals.

The **Crystal cut offset** value is automatically added in the **Spacing** and **V.spacing** values that are shown in the **Object properties** bar, whenever you create a **Crystal fill** object.

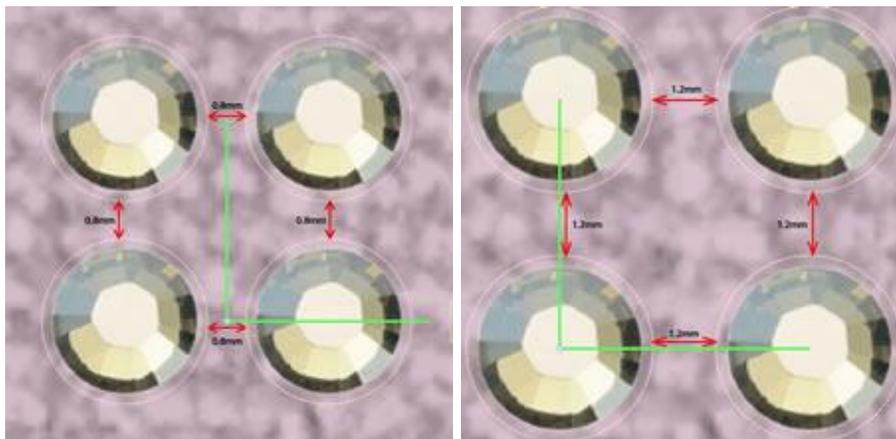
Crystal minimum hole spacing

Crystals minimum hole spacing

0.4 mm

Crystals minimum hole spacing

This option handles the **crystal minimum hole spacing**. The **crystal minimum hole spacing** is the default distance between two crystal after the **crystal cut offset** inside a **Crystal fill/outline fill** object. The **crystal cut offset** is the distance between the crystal and the cutting edge of the circle that the cutting knife creates, and it is not measured in the **crystal minimum hole spacing**.



Crystal cut offset 0.8mm - 1.2 mm

Therefore you can change the **crystal minimum hole spacing** based on the crystal pattern you want to create and your actual preference. The default value is 0.4 mm which is considered adequate for most crystal cutting material.

The **crystal minimum hole spacing** value is automatically added in the **Spacing** and **V.spacing** values that are shown in the **Object properties** bar, whenever you create a **Crystal fill** object.

Important: Some Crystal fill patterns might not keep this distance constant in order to produce the pattern. For example: Shape fit pattern fill

End points at closest connection, even on trims

End points at closest connection, even on trims

Closest point checkbox

This option is important for the way that the design will be embroidered. When the checkbox is checked, *Creative DRAWings* filters the entire design and finds the closest connection points between the objects, even if a trim is made. This option gives better rooting between objects and better flow of the embroidery. In addition, it gives fewer thread trims because the objects of the same color are connected from their closest point.

Start/Return to center of frame

Start/Return to center of frame

Start/Return to center of frame

This option is important for the way that the design will be embroidered. When the checkbox is checked, *Creative DRAWings* will force the embroidery machine to return to the center of frame after the end of the embroidering process. Also will force the machine to start from the center of frame.

Auto-sequence

Auto-sequence

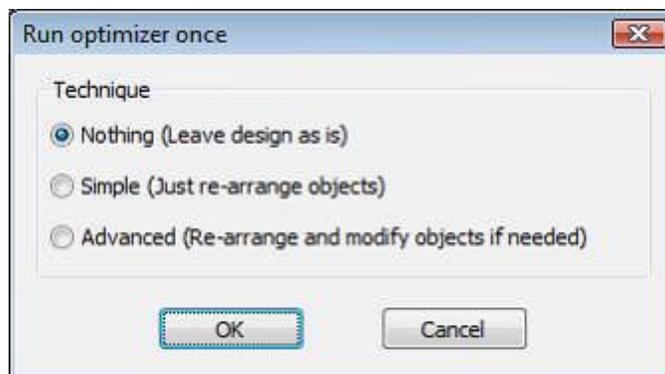
Enable auto-sequence checkbox

With this option (it is applied only to embroidery objects) you can enable or disable the Auto-sequence that is responsible for producing automatically the embroidery sequence of the design that you are creating. It is an intelligent system that takes under consideration many parameters, and tries to produce the best possible embroidery results. It makes everything easier by saving you time and effort.

This **Auto-sequence** option is enabled by default (checked). If you want to **enable** or **disable** the **Auto-sequence** the **Optimizer options** dialog you have to do it outside the **Optimizer options** dialog.

On the **Tools** toolbar that is located in the left side of the software you will find a button with a lamp  on it (the **Embroidery Technique** should be active). When this button is pressed, the Auto-sequence is enabled and the opposite when it is not. Therefore if you want to enable or disable the Auto-sequence you can do it directly from this button. The same option can be also, found under **Tools** menu.

Whenever you disable the **auto-sequence** by clicking on the lamp  icon, the **Run optimizer once dialog** appears, that allows you to run the sequence optimizer only once or if you want not to run it at all and then give you the ability to re-sequence the embroidery design freely through the **Sequence manager**.



Inside the **Run optimizer once** dialog you have three options:

- **Nothing (Leave design as is)**

By selecting this option and clicking **OK** button, the **Optimizer** will not be applied at all and the objects will appear on the **Sequence manager** exactly with the order that they have been designed. The **Optimization strategy** will not be applied and all the re-sequencing must be made from you though the **Sequence manager**.

- **Simple (Just re-arrange objects)**

By selecting this option and clicking **OK** button, the **Optimizer** will be applied once on the design, by making the appropriate changes and then all objects will appear on the **Sequence manager**. The produced embroidery sequence on the **Sequence manager** will depend on the settings you have selected inside the **Tools>Optimizer options** dialog.

- **Advanced (Re-arrange and modify objects if needed)**

By selecting this option and clicking **OK** button, the **Optimizer** will be applied once on the design but it will modify the objects if needed. This means that the **Fills** and **Outlines** will be separated and re-sequenced as different objects based on the selections of the **Optimizer**. More objects will appear on the **Sequence manager** that you will be able to re-sequence freely.

The four options that are becoming available inside the **Optimizer** dialog after enabling the option are the **Optimization strategy**, the **Keep sequence of overlapped objects even if trimmed**, the **No thread trims inside combined objects** and the **Minimize color changes**. All of them affect the way that the embroidery design will be embroidered. For more information on how each option affects the embroidery sequence of the design, read below.

Beside these options the **Auto-sequence** option affects also the way that the **Sequence manager** and the **Sequence** option are working. The **Sequence** option that is located at the bottom of **Object Properties** toolbar is disabled automatically after disabling the **Auto-sequence** option and you cannot use it any more.

Similarly if you disable the **Auto-sequence** option the **Sequence manager** changes completely and removes all the automatic optimizations of the software. The **Sequence manager** changes to manual mode and all re-sequencing must be made from you manually. More information on how the **Sequence manager** works in different modes, refer to the respective section of chapter 7.

Optimization strategy



Optimization Strategy

This tool is available only if the **Auto-sequence** option is enabled (the **Embroidery Technique** should be active).

With this tool you can define the way that the objects of the embroidery design will be embroidered. It is like an automatic embroidering sequence creator. With this tool you can define the way/sequence in which the objects of the embroidery designs will be placed on the fabric. This tool is really important for embroidering hats which need to be embroidered from the center to right and left. Also, it is useful for delicate fabrics that need special care regarding the way that the objects will be placed on them. The embroidering options for defining the sequence of the objects are the following:

- **Top to bottom:** When this option is applied the objects of the design will be embroidered from top to bottom. This means that *Creative DRAWings* will change the embroidering sequence and will begin embroidering the objects/shapes that are at the upper most position in the design and will continue with direction to those that are at the lower position in the design.
- **Bottom to top:** This is the opposite of **Top to bottom** option. Therefore when it is applied on an embroidery design *Creative DRAWings* will change the embroidering sequence and will begin embroidering the objects/shapes from those that are located at the bottom until it reaches the top objects.
- **Left to right:** When this option is applied the objects of the design will be embroidered from left to right. This means that *Creative DRAWings* will change the embroidering sequence and will begin embroidering the objects/shapes that are at the left most position in the design and will continue with direction to those that are at the right most position in the design.
- **Right to Left:** This is the opposite of the **Left to right** option. Therefore when it is applied on an embroidery design *Creative DRAWings* will change the embroidering sequence and will begin embroidering the object/shapes from those that are located at the right most position in the design until it reaches the left objects.
- **Small to large:** When this option is applied *Creative DRAWings* orders the embroidering sequence from the smaller object of the design to the largest ones.
- **Large to small:** This is the opposite option of the **Small to large** option. Therefore when it is applied on a design the objects/shapes of the design will be embroidered from the larger ones to the smaller ones.
- **Inside to outside:** When this option is applied the objects of the design will be embroidered from inside to outside. This means that *Creative DRAWings* will change the embroidering sequence and will begin embroidering the objects/shapes that are at the middle of the design and continue with those that are at the outer positions of the design. This option is often used when embroidering designs on hats.
- **Outside to inside:** This is the opposite option of the **Inside to Outside** option. Therefore, when it is applied on a design the objects/shapes will be embroidered from the outer to the inner ones. *Creative*

DRAWings will check the current sequence of the design and will make recalculation in order to create one you have selected.

Important: Any changes on the **Optimizer options** dialog, affects, also, the **Optimization strategy** option. Therefore, always keep in mind that a combination of **Optimizer's** options will be applied on the embroidery design and not only the selected **Optimization strategy**. With proper combination of options you can get the appropriate embroidery results.

Keep sequence of overlapped objects, even if trimmed

Keep sequence of overlapped objects, even if trimmed

Keep sequence of overlapped objects checkbox

This option is available only if the **Auto-sequence** option is enabled (the **Embroidery Technique** should be active).

This option is important for the embroidering sequence of the design. When this option is checked, all shapes of the vector design will be embroidered by keeping their overlapping order. This means that the order of the embroidery will follow the overlapping order of the vector design. By applying this option it will be possible to manage better the way that the design will be embroidered.

Important: Changes that you make on the overlapping order of the **Vector design** are calculated accordingly by the software. The overlapping order will not be followed as it is because more filters are applied on the design, which affect the embroidering sequence.

No thread trims inside combined objects

No thread trims inside combined objects

No thread trims inside combined objects checkbox

This option is available only if the **Auto-sequence** option is enabled (the **Embroidery Technique** should be active).

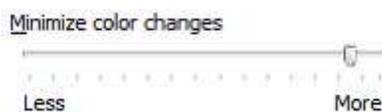
This option, when it is checked, does not allow any thread trimming between combined objects. This option applies only to objects that are **combined** (not grouped) in the **Create** mode  of *Creative DRAWings*.

In order to use this option properly you have to go to Draw mode  of *Creative DRAWings*, select the objects you want to **combine** and apply the **Combine** option from the right click menu. The objects will become combined and react as one object, inheriting all the attributes of the last selected object. If you try to embroider the design in the stitch button , you will view the combined objects (like text art objects) to be connected with a jump-stitch between them. With the **No thread trims inside combined objects** option checked, all combined objects will be embroidered with jump-stitches between them, even if you have set **Trimming distance between objects** option to shortest distance.

If you leave the value of **No thread trims inside combined objects** unchecked, all thread trims will be calculated normally.

Note: *Combined object:* An object created by combining two or more objects and converting them into a single curve object. A combined object takes on the fill and outline attributes of the last selected object.

Minimize color changes

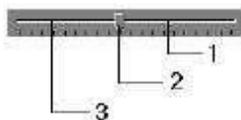


Minimizing color changes

This option is available only if the **Auto-sequence** option is enabled (the **Embroidery Technique** should be active).

This option is important for limiting color changes in the embroidery production process. Color changes have to do with thread changes that the embroidery machine makes in order to embroider each stitch design object. With more color changes the embroidery design sequence is followed more accurately but the production process is longer. On the other hand with fewer color changes, the embroidery design sequence changes to fit the Minimizing color change settings but gives shorter production process. The alteration in the embroidery design sequence might produce inaccurate embroidery results, or might not. This depends on the embroidery design, embroidery machine and the fabric. You can adjust color changes through the use of the track bar.

Track bar



1. Click to increase three scale units.
2. Drag to move to the point you want.
3. Click to decrease three scale units.

Also, you can change the value of the track bar by pressing the Left & Right arrows of the keyboard.

Any adjustments you are making are for your current design. If you want your adjustments to be stored as default, click on the Save as default button in the Optimizer tab.

In case you have changed the default Creative DRAWings settings with your own and you want to restore them, you can click on the Restore factory defaults button .

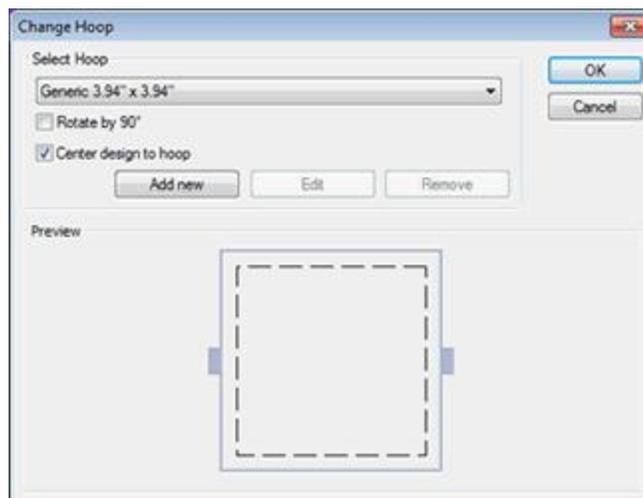
In case you have changed the settings of Optimizer and you want to return to your previous Saved as defaults settings, you have to press the button. This function will restore the last saved setting that you saved by clicking on the Save as defaults button.

Change hoop

The hoop you have selected from the starting dialog can be easily changed from the Change hoop option. You can select a different one from the existing hoops or create a new one with custom dimension that will fit your needs. It is important to select the correct hoop in order to make sure that your design fits in your actual hoop that you will use to embroider it. If you select a larger hoop from the one that you will use your needle carrier might hit the hoop you are using with a minimum result a broken needle. Therefore you must always select the correct hoop and double check if the design fits in the hoop by using the Printout of the design.

If the hoop you have selected is not visible on the working area you have to enable it by selecting the **Hoop** option from the **View** menu. If the **Hoop** option is checked and the hoop is not visible, try to **Zoom out** with any of the available zoom tools or by using the mouse wheel.

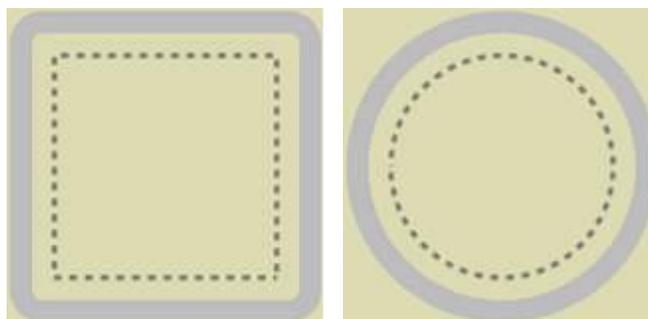
To change the current hoop you have to select the **Change hoop** option from **Tools** menu or press the **Ctrl** and **H** shortcut keys (Ctrl+H) together from the keyboard. The **Change hoop** dialog will appear from where you can select to use a predefined hoop or a custom hoop that you will define.



Change hoop dialog

Select hoop

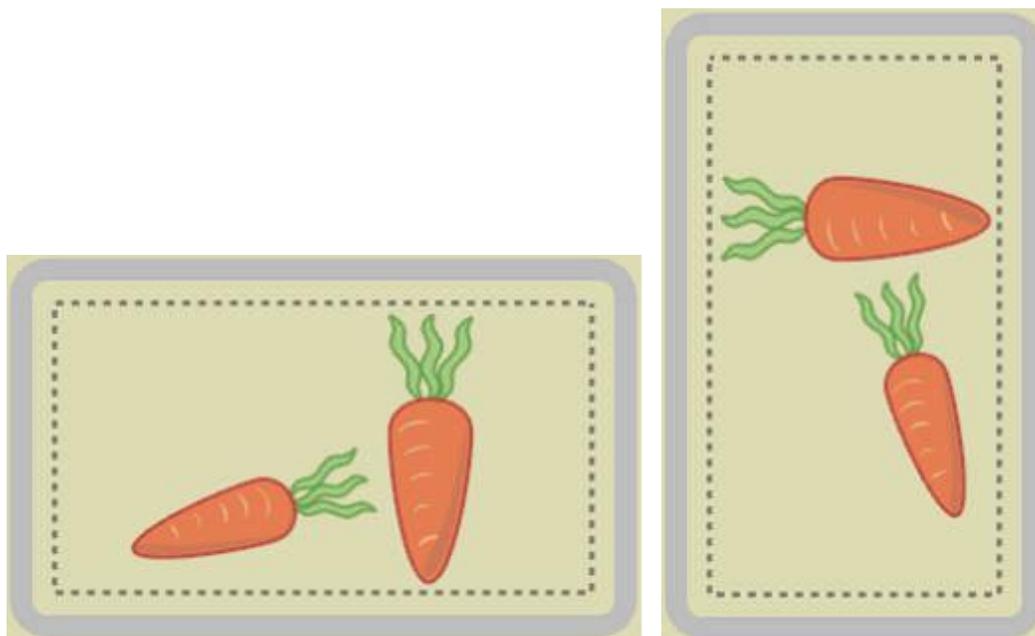
From the **Select hoop** drop-down menu you can select any of the predefined hoops that the software includes or any of the custom hoops you have created and added to the software. To select the hoop you want to use you have to expand the drop down menu and select the hoop you want. You can select either predefined or custom hoops from the list. The selected hoop will be previewed on the **Preview** area of the dialog and will become the current hoop. To apply the hoop on the working area you have to press the **OK** button to confirm your selection and close the dialog. If you do not want to insert Hoop in the working area, you have to select the **None** option from the drop down menu. With the **None** option selected no hoop will be added and any existing one will be removed from the working area.



Generic Round hoop - Generic Oval hoop

Also you can **Rotate** the hoop you are using by 90 degrees by checking the respective option from the dialog. The hoop will be rotated and appear on the working area after pressing **OK** button. The way that you

will create the design inside the hoop will be the same with the way that will be saved on the embroidery file and embroidered.



Rotated hoop – How it will be saved and embroidered

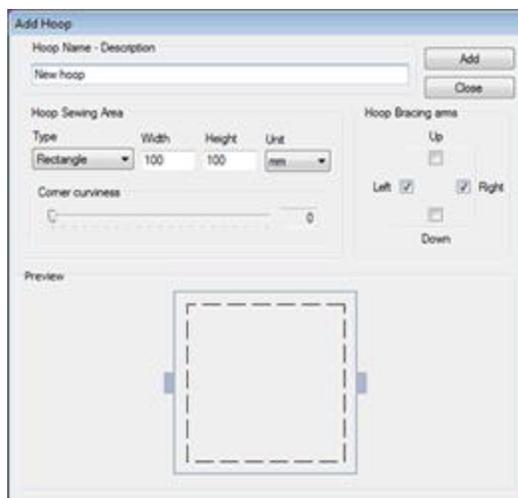
For example, if you rotate an oblong hoop in order the design to fit inside it, the final saved file will have the design rotated instead, in order to fit in the hoop.

If you want you can also remove custom hoops you have created from the **Select hoop** drop down menu by selecting it and clicking the **Remove** button. The hoop will be removed and it will no longer be available for use. The Predefined hoops cannot be removed. To add more custom hoops you have to click on the **Add new** button in the same dialog.

After selecting the hoop that you will use you have the option to centralize the design inside the hoop by checking the **Center design to hoop** checkbox. If you do not check this option, the hoop will be placed at the middle of the working area and the design you have created will remain at the position you have placed it before changing the hoop.

Add New Hoop

By clicking on the **Add New** button the **Add new** dialog will appear where you have the ability to define a new custom hoop with the dimensions you prefer. The hoop that you will create will be saved in the **Select hoop** drop down menu, allowing you to reuse it as many times as you want. The dimensions that you will enter must be the dimensions that the manufacturer of the hoop gives for the specific hoop.



Add hoop dialog

To create a custom hoop you have to set the dimensions you want to have, the type of the hoop, the hoop bracing arms, the curvature of the hoop and then add it to the hoop list by pressing the **Add** button.

o Hoop Name – Description

The first option you have is to type the **Hoop Name – Description** in the respective field. The name-description that you will type in this field will be the name that you will view in the **Select Hoop** drop down menu. If you forget to fill this field, you will be asked from the software to do so. It is good practice also to add always a description of the hoop (Oval, Rounded rectangle etc.) and the dimensions of it in the **Hoop Name – Description** field, in order to be easier for you to decide which one you have to use.

o Type

From the **Type** drop down menu you can select the shape of the hoop you want to add. The options that you have are **Rectangle** and **Oval**. The selected shape is previewed in the **Preview** area allowing you to visualize how the hoop will look like. If you select the **Rectangle** option, the **Corner curviness** option will become editable allowing you to round the corners of the Rectangle hoop shape.

o Corner curviness

The **Corner curviness** becomes editable only if you have selected the **Rectangle** option from the **Type** drop down menu. Many hoops have the shape of a rectangle with rounded corners and for this reason the **Corner curviness** option exists. The Corner curviness consists of a track-bar and a value field. By dragging the track-bar to the right, the corners of the rectangle that it is previewed in the **Preview** area start to become rounded and their roundness increases as long as you continue. The value field shows the percentage of roundness. The 0 value means that the rectangle has normal corners and not rounded and the 90 value means that it has rounded corners to their full extend. By moving the track-bar you can create the rounded hoop you want.

o Width

In the **Width** value field you can insert the width of the hoop you want to use. The default value is 100 mm or the respective value in inches. You can change the value of the **Width** field by deleting the current value and inserting a new one. Any width value change is automatically previewed in the **Preview** area.

Check the manufacturer's dimensions, to be sure that you are entering the correct ones. The **Width** value sets the width of the sewing area that it is shown with a dashed line inside the hoop.

o **Height**

In the **Height** value field you can insert the height of the hoop you want to use. The default value is 100 mm or the respective value in inches. You can change the value of the **Height** field by deleting the current value and inserting a new one. Any Height value change is automatically previewed in the **Preview** area. Check the manufacturer's dimensions, to be sure that you are entering the correct ones. The **Height** value sets the height of the sewing area that it is shown with a dashed line inside the hoop.

o **Unit**

From the **Unit** drop down menu you can select the measure unit you want to use. The options that you have are millimeters (mm) and inches (inch). The selected Unit is automatically applied on the **Width** and **Height** values.

o **Hoop Bracing arms**

At the **Hoop bracing arms** area you can set where the bracing arms are located on the hoop you are adding. To do that you have to check the checkboxes (Left, Right, Up, Down), where the bracing arms are located. For example, if the Hoop has one bracing arm at the Right and one at the Left, the Right and Left checkboxes must be checked. The preview of selected bracing arms is shown on the Preview area helping you to decide the correct ones.

After adjusting the options you can save the hoop by pressing the **Add** button that will add the hoop to the **Select hoop** drop down menu. After pressing the Add button a confirmations dialog will appear that will inform you that your hoop was saved successfully. Click **OK** to continue. To use the hoop you have created you have to expand the **Select hoop** drop down menu and press the **OK** button to apply it. The hoop you have created will become visible on the working area exactly as you designed it. The next time that you will open the **Change hoop** dialog you will find the hoop you have created selected in the dropdown menu with the name you gave to it. Also, it will become accessible from the **hoop** selection drop down menu of the starting dialog.

Edit hoop

With the **Edit** button you can edit the custom hoops that you are inserting. The **Edit** hoop button is by default disabled and becomes enabled only if you select a custom hoop that you have added on the **Select hoop** drop down menu. If the hoop you want to edit is currently used you will not be able to edit it. You have to select a different hoop, apply it on the working area by clicking **OK** button on the **Change hoop** dialog and then open once more the **Change hoop** dialog to **Edit** the hoop you wanted.



Edit hoop dialog

To edit a custom hoop you have to select it on the **Select hoop** drop down menu and then click the **Edit** button. The **Edit hoop** dialog will appear with the attributes of your hoop listed. You can edit the options of the hoop and save it by pressing the **Apply** button. A dialog will appear that confirms the changes you made and then you return back to **Edit hoop** dialog. You can continue editing the custom hoop or press the close dialog to end editing process.

The options you can change in the **Edit hoop** dialog are the following:

- **Hoop Name – Description**

The first option you can edit the **Hoop Name – Description** option. You can change the name-description that the hoop will have by editing the respective field. The edited name will be added in the **Select Hoop** drop down menu. Do not forget to add a description of the hoop (Oval, Rounded rectangle etc.) and the dimensions of it in the **Hoop Name – Description** field, in order to be easier for you to decide which one you have to use.

- **Type**

From the **Type** drop down menu you can change the shape of the hoop you have added. The options that you have are **Rectangle** and **Oval**. The selected shape is previewed in the **Preview** area allowing you to visualize how the hoop will look like. If you select the **Rectangle** option, the **Corner curviness** option will become editable allowing you to round the corners of the Rectangle hoop shape.

- **Corner curviness**

The **Corner curviness** becomes editable only if you have selected the **Rectangle** option from the **Type** drop down menu. Many hoops have the shape of a rectangle with rounded corners and for this reason the **Corner curviness** option exists. The **Corner curviness** consists of a track-bar and a value field. By dragging the track-bar to the right, the corners of the rectangle that it is previewed in the **Preview** area start to become rounded and their roundness increases as long as you continue. The value field shows the percentage of roundness. The 0 value means that the rectangle has normal corners and not rounded and the 90 value means that it has rounded corners to their full extend. By moving the track-bar you can change the roundness of the hoop.

○ Width

In the **Width** value field you can change the width of the hoop. You can change the value of the **Width** field by deleting the current value and inserting a new one. Any width value change is automatically previewed in the **Preview** area. Check the manufacturer's dimensions, to be sure that you are entering the correct ones. The **Width** value sets the width of the sewing area that it is shown with a dashed line inside the hoop.

○ Height

In the **Height** value field you can change the height of the hoop you want to use. You can change the value of the **Height** field by deleting the current value and inserting a new one. Any Height value change is automatically previewed in the **Preview** area. Check the manufacturer's dimensions, to be sure that you are entering the correct ones. The **Height** value sets the height of the sewing area that it is shown with a dashed line inside the hoop.

○ Unit

From the **Unit** drop down menu you can change the measure unit you want to use. The options that you have are millimeters (mm) and inches (inch). The selected Unit is automatically applied on the **Width** and **Height** values.

Preview

In the **Preview** area you can view the hoop you have selected from the Existing hoops and the custom hoops you are creating. The preview helps you visualize the available hoop and decide which one you want to use.

Embroidery sequence

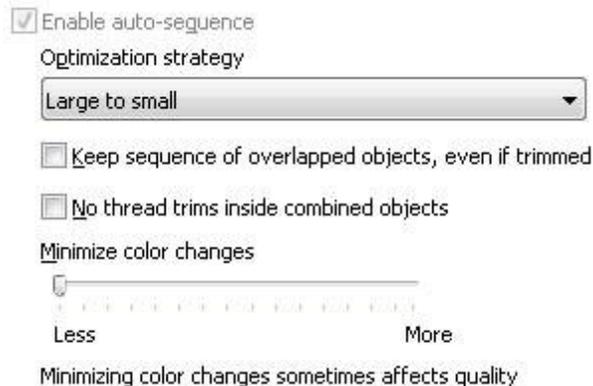
In this chapter we will analyze the tools that the software includes to adjust the embroidery sequence of the designs you are creating. Creative DRAWings software includes automatic and manual tools for producing the embroidery sequence. You can combine the different available tools and produce the embroidery results you prefer.

Automatic Embroidery sequence

Creative DRAWings embroidery software includes an automatic sequencing mechanism that produces great results based on the sequencing options that you have set. There are three tools that are responsible for adjusting the automatic embroidery sequence. These tools are the **Auto-sequence** tool, the **Sequence** tool (**Embroidery Technique** must be **active**) and the **Sequence manager**. With these tools you can adjust the automatic embroidery sequence that is produced from the software.

Enable Auto-sequence

The **Auto sequence** tool  is located at the bottom of the **Tools** toolbar and by default is enabled. This means that any design that you are converting or creating from scratch will have its embroidery sequence automatically produced according your preferences. The **Auto sequence** tool has some options that you can adjust through **Optimizer options** dialog that you will find under **Tools** menu.



The **Auto-sequence** option is checked and all its options can be set to different values. The options that you can adjust are the **Optimization strategy**, the **Keep sequence of overlapped objects, even if trimmed**, the **No thread trims inside combined objects** and the **Minimizing color changes**.

- **Optimization strategy:** With this option you can define the way that the objects will be embroidered. It is an automatic embroidering sequence creator. With this tool you can define how the objects of the embroidery designs will be placed on the fabric. The embroidering options for defining the sequence of the objects are the following: **Large to small**, **Small to large**, **Left to right**, **Right to left**, **Top to bottom**, **Bottom to top**, **Inside to outside**, **Outside to inside**. All these options do exactly what their names specify on the objects of the embroidery design. Therefore based on how you want your embroidery design to be embroidered you have to select the respective **Optimization Strategy**.
- **Keep sequence of overlapped objects even if trimmed:** This option is important for the embroidery sequence of the design. When this option is checked, all shapes of the vector design will be embroidered by keeping their overlapping order. This means that the order of the embroidery will follow the overlapping order of the vector design. This filter has effect, even if you have tiny areas overlapping between objects and even if the software decides to add thread trims between them. If this option is unchecked the software will rearrange the objects to match better the **optimization strategy** and the other optimization options you have selected.
- **No thread trims inside combined objects:** This option, when it is checked, does not allow any thread trimming between combined objects. This option applies only to objects that are **combined** (not grouped) in the Designer mode  of *Creative DRAWings*.

With the **No thread trims inside combined objects** option checked, all combined objects will be embroidered with jump-stitches between them, even if you have set **Trimming distance between objects** option to shortest distance.

If you leave the value of **No thread trims inside combined objects** unchecked, all thread trims will be calculated normally and will re-sequence the objects based on the selected **Optimization strategy** and the other optimization option you have selected (like the **Trimming distance between objects**).

- **Minimize color changes:** This option is important for limiting color changes in the embroidery production process. Color changes have to do with thread color changes that the embroidery machine makes in order to embroider each embroidery object. With more color changes the

embroidery design sequence is followed more accurately but the production process is longer. On the other hand with fewer color changes, the embroidery design sequence changes to fit the Minimizing color change settings but gives shorter production process. This option will do its best to minimize the color changes but it cannot alter the overlapping order of the objects in order to make one color change for each color used. Also, the decisions that this option makes are related with the other optimizing tools such as the **Optimization strategy** option, **trimming distance between objects** option, the **Keep sequence of overlapped objects even if trimmed** option and the **Sequence** option from **Object properties** toolbar.

It is important to keep in mind that all optimizing options are related and the embroidery sequence is calculated based on all optimizing options and not only to a specific one. Whenever you set the optimization settings you have to consider how the change you are making will affect the embroidery sequence by keeping in mind all the other optimizer settings. You can view the results of the changes that you are making through the slow redraw functionality (you will find in the **Tool** toolbar) which is simulating the embroidering process of the design that you are creating.

Sequence tool

The **Sequence** tool has the functionality to order specific objects or set of objects to be embroidered at the beginning or at the end of the embroidering process. The **Sequence** tool appears at the bottom of object properties toolbar whenever you select an object or a set of objects.

The **Sequence** option gives you three possible abilities: **To start**, **To end** and **Auto**. By default the **Auto** option is selected that lets the software decide the embroidering sequence of the design. If you want an object to change order and be embroidered first or last in the embroidering sequence you have to use, respectively, **To start** or **To end** option. In case you have selected multiple objects and set them To start or To end a different procedure will take place. Creative DRAWings will manipulate the objects that, for example, are set To start, move them to the beginning of the embroidering sequence and decide automatically the order of those To start objects. Therefore, the objects you have set to be embroidered To start will be embroidered first but with the order that Creative DRAWings will decide based on the other settings that you have set on the **Optimizer options** dialog. The same will happen if you set multiple objects to be embroidered **To end**. The software will manipulate those objects and move them at the end of the embroidering sequence but the order will be automatically decided. The objects that remained with the default Auto sequence option will be embroidered after the To start objects and before the To end objects with order automatically decided by the software. Therefore, you can re-sequence the objects of the design by creating three groups: Those that will be embroidered first (To start), those in the middle (Auto) and those that will be embroidered at the end of the object. If you do not make any change on the sequence option, Creative DRAWings will automatically create the best possible embroidery sequence for you based on the other settings that you have set on the **Optimizer options** dialog.

Every time you want you can simulate the embroidery sequence of the design through **Slow redraw** tool and decide if you need to make more changes on the embroidery sequence. The **Sequence manager** bar cannot help you with the embroidery sequence when the **Auto sequence**  is enabled.

Sequence manager - Auto

The **Auto-sequence**, affects the way that the items of sequence manger will be viewed. When Auto-sequence is enabled the program automatically decides the sequence of all stitch objects, so you don't have any control of the sequence of the design items via sequence manager in this case. All normal stitch  objects will be shown as one object on the Sequence manager and there will be no separation between its sub-objects. All the other objects will be shown separately. These objects can be re-sequenced normally by

click and dragging them to a new position on the sequence manager. This is allowed because these kind of objects are totally different from normal stitch objects and they need special care when they are embroidered.

The program is using intelligent mechanisms that automatically decide the sequence of the stitch objects and it does not give you any kind of control in the order that they will be embroidered through the **Sequence manager**.

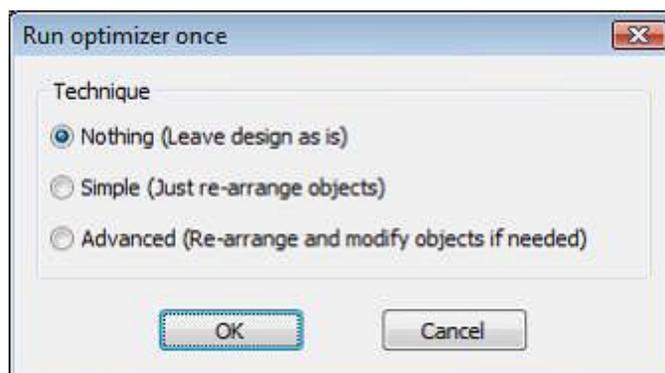
Manual Embroidery sequence

Creative DRAWings embroidery software includes a manual sequencing mechanism that gives you the ability to re-sequence the design freely based on your preferences. The software by default uses the automatic sequencing option that is very useful for inexperienced users and for those who are not familiar with embroidery sequencing. To switch to manual mode you have to turn off the Auto-sequence  tool from **Tools** toolbar and the available options will appear.

Disable Auto-sequence

If you want to disable Auto-sequence and use the manual way of setting the embroidery sequence of the design you are creating you have to click on the lamp  icon or uncheck the **Auto-sequence** option from the **Tools>Optimizer options** dialog.

Whenever you disable the **auto-sequence** by clicking on the lamp  icon, the **Run optimizer once dialog** appears, that allows you to run the sequence optimizer only once or if you want not to run it at all and then give you the ability to re-sequence the embroidery design freely through the **Sequence manager**. Any choice from this dialog affects only the Embroidery objects and not the objects that have other fills or outlines (cut, stencil, paint etc.).



Inside the **Run optimizer once** dialog you have three options:

- **Nothing (Leave design as is)**

By selecting this option and clicking **OK** button, the **Optimizer** will not be applied at all and the objects will appear on the **Sequence manager** exactly with the order that they have been designed. The **Optimization strategy** will not be applied and all the re-sequencing must be made from you though the **Sequence manager** manually. Experienced users will find this very helpful and they will be able to do whatever they like without any automation. Although it is important to know that if you trace a

bitmap image with many different colors you might end up dealing with thousands of objects that are very difficult to manage.

- **Simple (Just re-arrange objects)**

By selecting this option and clicking **OK** button, the **Optimizer** will be applied once on the design, by making the appropriate changes and then all objects will appear on the Sequence manager. The produced embroidery sequence on the **Sequence manager** will depend on the settings you have set in the **Auto-sequence** sub-section that you will find inside the **Tools>Optimizer options** dialog. This is very useful because the software will do the hard work for you by applying the **Optimization strategy** you prefer and leave you only minor sequence changes to make on the final embroidery result.

- **Advanced (Re-arrange and modify objects if needed)**

By selecting this option and clicking **OK** button, the **Optimizer** will be applied once on the design but it will modify the objects if needed. This means that the **Fills** and **Outlines** will be separated and re-sequenced separately based on the selections of the **Optimizer**. More objects will appear on the **Sequence manager** that you will be able to re-sequence freely. The produced embroidery sequence on the **Sequence manager** will depend on the settings you have set in the **Auto-sequence** sub-section that you will find inside the **Tools>Optimizer options** dialog. The only difference with the **Simple** sequence option that is described above is that the **fill** and the **outline** objects are manipulated and rearranged separately for ultimate sequencing results. The only thing that you must keep in mind is that more objects will be produced that will make re-sequencing more difficult, especially on traced bitmap objects.

Important: Despite switching the embroidery sequence to manual, all options inside **Optimizer options** dialog which are not listed under the **Auto-sequence** option, will not be calculated from any of the above manual sequencing options, until you save the design to stitch file(.dst,.pes, etc.) or export the design to Wings' modular or use the slow redraw functionality to simulate the final embroidery result. This means that **Appliqué frame-out distance**, the **Trimming distance between objects**, the **Trimming distance in Cross-stitch** and the **End points at closest connection, even on trims** options will not be calculated while enabling or disabling Auto-sequence functionality.

Sequence manager - Manual

To have full control of the ordering of all stitch objects you can disable Auto-sequence. This can be easily done by pressing **Auto-sequence** icon  on Tools toolbar. The **Run optimizer once** dialog will appear allowing you to select one of the two embroidery optimizing options or not optimizing the design at all. By selecting any of the three options and clicking **OK**, the Auto-sequence will be disabled and all design items will become separate icons on sequence manager. By clicking and dragging any item you can change its order. You have the full control of the embroidery sequence and all the intelligent mechanisms have been disabled.

If the design is coming from a clear vector artwork the objects will be few and you will not have problem re-sequencing the design. On the other hand if the design is coming from a traced bitmap the number of objects will vary from few, up to thousands that will be difficult to manage and handle. Therefore, you must be cautious on how to use the manual sequencing tool and you must always be prepared to manage large numbers of objects. For this purpose Creative DRAWings has many tools that allow you to select objects **by color** (outline, fill, or both) or **by stitch type** and make re-sequencing easier.

To Re-sequence objects from **Sequence** manager bar is very easy. The only thing you have to do is to select the object(s) you want to re-sequence by using any of the numerous selection methods that Creative DRAWings includes and then by clicking and dragging on the sequence manager move the object(s) to its new position. The result of the re-sequence will be visible directly on the working area. If you do not like the results or you think that you made a mistake, you can **Undo** (Ctrl+Z) the last action you made and try to re-sequence the objects once more.

It is important to remember that while re-sequencing, some objects might change as a result of the **Remove overlap** functionality that is applied automatically. The **Remove overlap** option that is located on the **object properties** toolbar removes unneeded parts of the design that are positioned underneath of other objects in order to reduce the embroidery stitch count and thickness. It does not remove them permanently like the **Trim** tool does, but it holds the artwork information until you save the design to stitch file (.dst, .pes, etc.) or export it to **Wings' modular**. Therefore, you might move a large object from the bottom of the design (that looks like a border/outline because of the Remove overlap functionality) and place it on top, but once you do that you find out that it changes to a large fill object that covers all the other objects. To overcome that you have to use the **Trim** tool first from the standard toolbar, in order to trim the bottom object and then re-order it. All these are automatically calculated when you are enabling the **Auto-sequence** functionality.

Chapter XIX

Settings

In this chapter we will analyze all the options that Creative DRAWings have and how you can adjust 3D settings. In addition, you will learn about the Security key and how you can customize your working area.

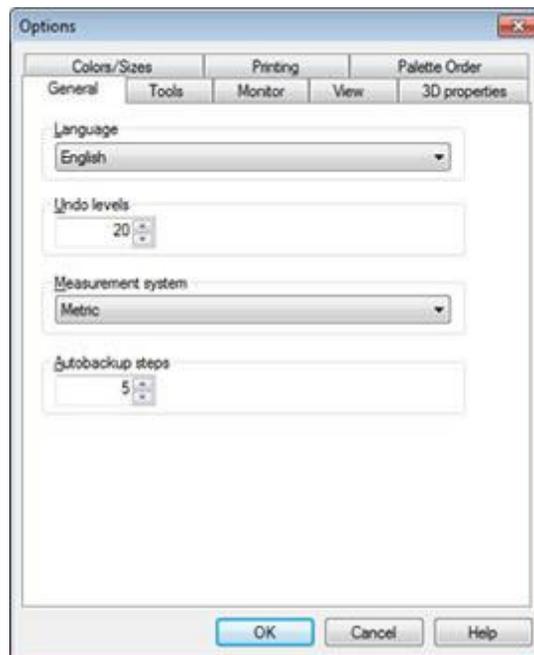
Options

There are several adjustments that can be made in Creative DRAWings. Most of them are in the Options dialog box which can be opened from the menu **Tools > Options** or from the shortcut key Ctrl+T. In the dialog box that appears you can adjust the properties in each menu tab.



Click on each tab, on the above image, to view their options.

General



General options

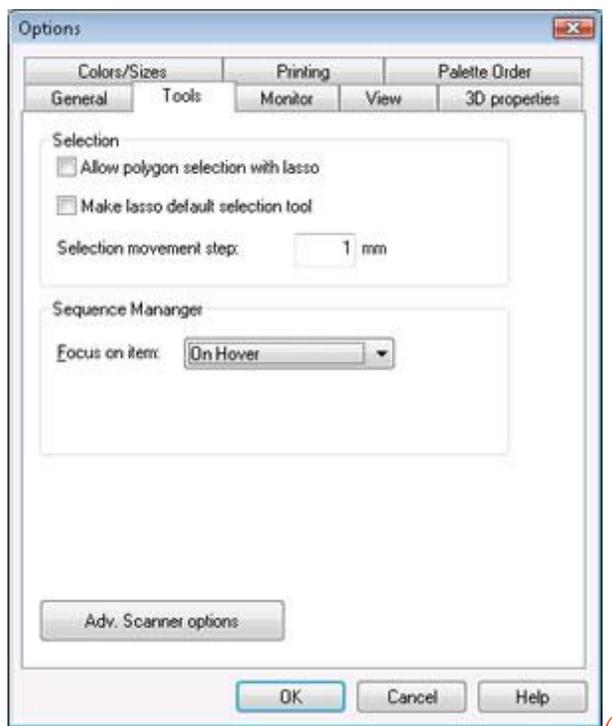
In the General options tab you can adjust the Undo levels the **Measurement system** and select the **Language** you want to Creative DRAWings menus.

You can increase or decrease the programs Undo level according to your needs. Note that high undo levels acquire more systems memory.

In addition you can change the Measurement system of the program from Metric (mm) to U.S. (inches) and vice versa.

With the **Autobackup steps** option you can set after how many of your actions an autobackup will occur. For example, if **Autobackup steps** is set to 5, the software will take a backup every 5 changes you are making to your design.

Tools



Tools options

In the **Tools** tab you can change some options of the lasso selection tool, the movement step of object and the item focus on the sequence manager.

If you check the **Allow polygon selection with lasso** you will activate an extra feature of **lasso tool**. This feature lets you draw straight-edged segments of a selection border. To draw a straight-edged selection border in your design, click with the lasso tool active where segments should begin and end, by trying to draw a polygon. When your last straight-edge of your selection reaches the beginning point then your selection polygon will be created activating all the design objects that surrounds.

If you check the **Make lasso default selection tool** option the lasso tool will become your default selection tool.

In the **Selection movement step** field you can specify the distance you want an object to be moved each time you press the arrow keys from the keyboard. The default step movement is 1mm.

At the **Sequence Manager** area you can set the **Focus on item** option.



Focus on item options

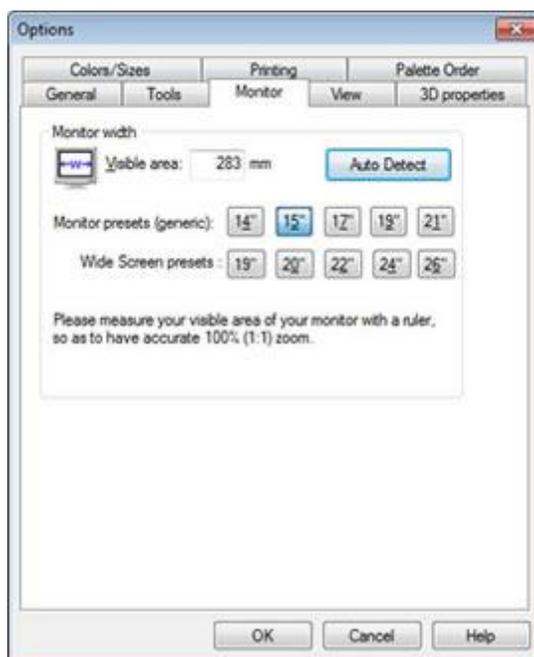
This option allows you to specify when the objects on the working area will become focused when you work with the **Sequence manager**.

- **On Hover:** By selecting this option whenever you hover over an object at the Sequence manager it will become focused (highlighted and centralized in the software's view port) immediately.
- **On Click:** By selecting this option whenever you click over an object at the Sequence manager it will become focused (highlighted and centralized in the software's view port) immediately.
- **Never:** By selecting this option the focus option will be disabled.

To apply this option click **OK** on the dialog and restart the software.

The **Adv.Scanner options** button includes special settings for scanner. Please do not make changes on these options. These options must be edited only in special occasions from experienced personnel.

Monitor

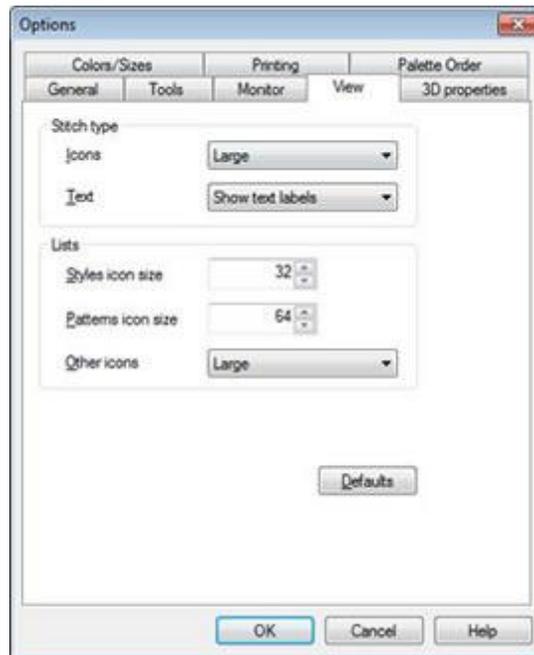


Monitor Options

In the Monitor tab you can define the actual width of your monitor. This is important if you want to view your stitch designs in their actual size when 100% zoom selection is clicked from the standard toolbar. In order to find your monitor's width you can measure the visible area with a ruler. The result of your measurement must be entered in the text field **Visible area** at the right metric format. Another way to define your monitor's width is by knowing the size of your monitor in inches, and simply clicking on the respective **monitor preset** size button. The program will automatically set your monitor's width. Finally using **Auto Detect** option the program will try to detect automatically the size of your monitor. In order to activate your changes you have to click Ok at the **Options** dialog box.

The next time you try to view your stitch design in 100% zoom, the size of your design will be the actual one.

View



View Options

In the **View** tab you can adjust the way that you are viewing toolbars in Creative DRAWings. In the **View** tab you can change the **Stitch type** icons from the object properties toolbar and the **List** icons of styles, patterns and standard toolbar.

Stitch type

- **Icons:** From this drop down menu you can select if you want view the stitch type icons of the object properties toolbar small or large. In order to activate it you have to click on the drop down menu and select one the two options.
- **Text:** From this drop down menu you can select **Show text labels**, **Selective text on right** and **No text labels**. If you select the **Show text labels** option you will view the name of each stitch type under their icons in the object properties toolbar. If you select the **Selective text on right** option you will view the name of each stitch type at the right side of their icons. Finally, if you select the **No text labels** option each stitch type name will be removed. Therefore by making the preferred adjustments you can view the icons and their labels in the way you prefer.

Lists

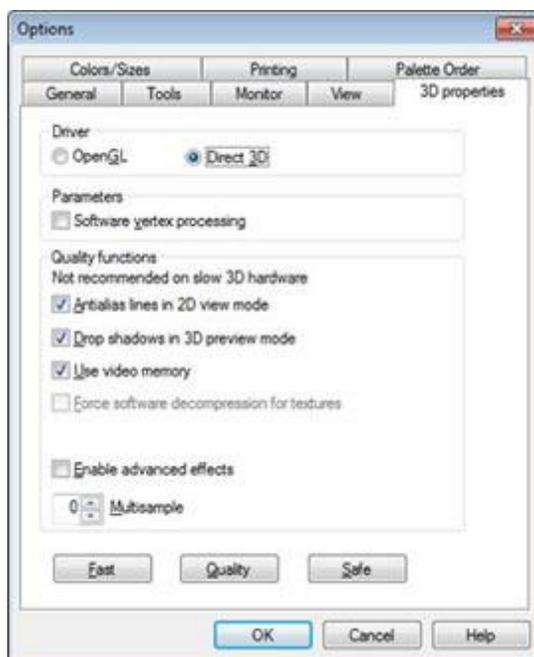
- **Styles icon size:** In this numeric field you can specify the size of the **Styles** icons of the **Object properties** toolbar. The number of this field shows the pixel size of the icons. You can enter the exact size you want or you can adjust size by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel  if there is one. The size of the Styles icon cannot be more than 64 pixels.

- **Patterns icon size:** In this numeric field you can specify the size of the **Pattern** icons of the **Object properties** toolbar. The number of this field shows the pixel size of the icons. You can enter the exact size you want or you can adjust the size by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel  if there is one. The size of the Styles icon cannot be more than 128 pixels.
- **Other icons:** From this drop down menu you can view the other icons of the object properties toolbar **Small** or **Large**. In order to activate it you have to click on the drop down menu and select one of the two options, click **OK** and restart Creative DRAWings.

Finally, there is the **Defaults** button that restores the default values in the **View** tab.

To apply all the adjustments you have made in the **View** in Creative DRAWings workspace, you have to click on the **OK** button of the **Options** dialog and restart Creative DRAWings. The next time that you will start Creative DRAWings all the changes you have made will take effect immediately.

3D properties



3D properties

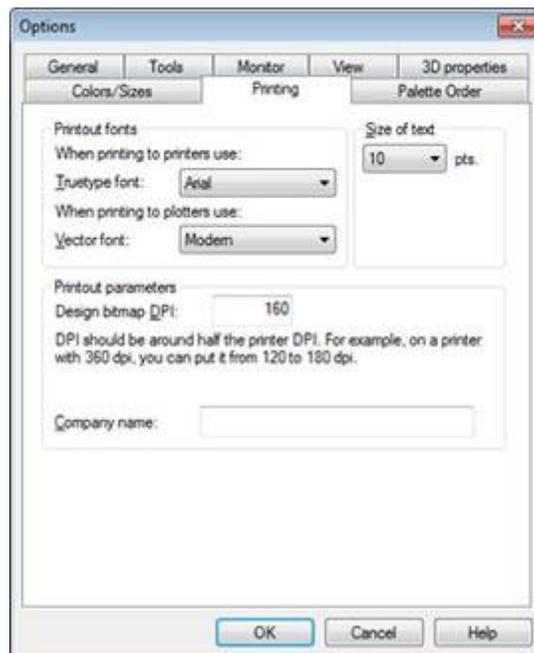
In the 3D properties tab you can adjust the 3D preview of your stitch design. You can define 3D acceleration Driver, 3D graphics parameters and 3D graphics quality. The options of this tab are very technical. The best way to adjust your 3D graphics is from the three preset buttons in the **Quality functions** section. You can choose between three 3D quality options: Fast, Quality and Safe.

- If you click the Fast button, your 3D quality will be set automatically to minimum. This means that you lose 3D quality but gain in program's speed.

- If you click the Quality button, your 3D quality will be set automatically to maximum. This means that you gain in 3D quality but lose in program's speed.
- If you click the Safe button, your 3D quality will be set automatically in the most reliable way. This means that you lose 3D quality but gain in program's speed and reduce compatibility problems with your graphics card.

Make your selection and click **OK** to confirm your changes. The changes will be applied the next time that the program will start.

Printing



Printing Options

In the Printing tab you can adjust the **Printout fonts**, the **Size of text** and **Printout parameters**.

In the Printout fonts option you can define which **True Type font** the printer will use for printing and which **Vector font** the plotter for printing.

Also in the **Size of text** option you can specify the **size** of the fonts in the printout. Click on the drop down menu and select a size.

In the **Printout parameters** you can define the **DPI** (Dots Per Inch) of your design's bitmap and the Company's name. Defining the DPI of the design bitmap is important for the printout's quality. The DPI's value that must be placed in the Design bitmap DPI field should be around half the printers DPI. For example, on a printer with 360 dpi, you can set the value from 120 to 180 dpi.

In the **Company's name** field you can add the name of the company you want to view in the printout.

Palette order

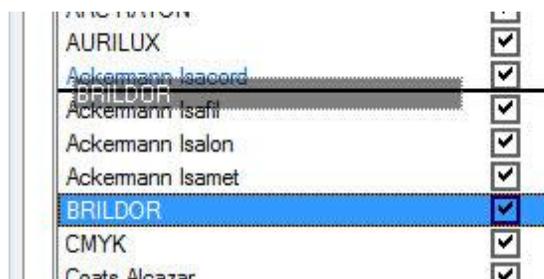


Using this tab of Options dialog we can select which Thread manufacturer palettes will be visible and change the order that they appear in color management dialog.

Use the checkbox that exists next to each of available thread manufacturer palettes in order to select which of them will appear on color management dialog. Only the checked palettes will appear.

Name	Visible
AMANN ISALON 40	<input type="checkbox"/>
ANGELKING	<input checked="" type="checkbox"/>
ANGELKING 5 FEEL SOFT	<input checked="" type="checkbox"/>
ANGELKING 6	<input checked="" type="checkbox"/>
ARC POLY	<input checked="" type="checkbox"/>

Select any of the available palettes
Click and Drag to move any palette into another position.
Just like that we can move the most used palettes in the handiest position.

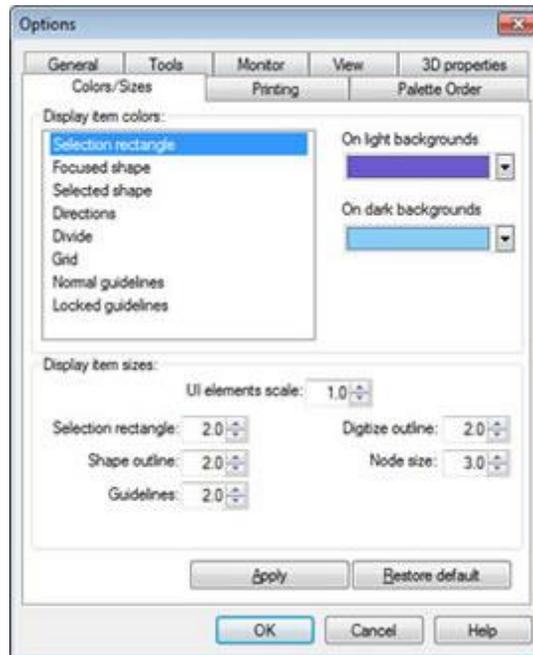


Colors-Sizes

Inside the design area, there are various visual assistance tools, guidelines, grids, highlight rectangles, selections outlines. All these tools use a color to help you recognize the object you want to focus on and make more accurate editing.

These tools exist to help you focus on your task. For many users it is very useful to be able to modify the colors that these marks use, because they can recognize them easier. In order to be able to personalize these visual assistance marks and make them match your personal preferences we have created a color customization window.

Generally you can adjust many options of the application by selecting from the **Tools** menu, **Options** submenu item. From **Options** dialog select **Colors/Sizes** tab. In this tab you can customize the color schemes of editing tools.



At the left side of the tab there is a list **Display item colors**, containing the items that is possible to change their color scheme. By selecting each item on the list you can see on the right side of the dialog the colors that are currently set for the selected tool. As you have noticed there are 2 colors selected. The one is for dark background and the other for light. The software automatically enables, according to the selected background, the color that is selected for the tool based on the luminosity of the background. Let's take a closer look at the tools that can be customized and the available ways to select and customize their color.

Display item colors

1) Selection rectangle:

When selecting an object (Object editor, Node Editor), in order to be easier to recognize the selected object it gets a light blue selection rectangle. When the background is light the rectangle color is dark blue and when the background is dark the color is light blue. You can select another color for the outline of the selected object by selecting from **Display item colors** the **Selection rectangle** option and then use **Color** drop down menu to select a color for dark and light backgrounds. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

2) Focused shape:

When selecting multiple objects (Object editor) the last selected (focused) object it gets a purple border. When the background is light the border color is dark purple and when the background is dark the color is light purple. You can select another color for the border of the selected (focused) object by selecting from **Display item colors** the **Focused shape** option and then use **Color** drop down menu to select a color for dark and light backgrounds. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

3) Selected shape:

When selecting multiple objects (Object editor) all objects except the last selected (focused) object get a green border. When the background is light the border color is dark green and when the background is

dark the color is light green. You can select another color for the border of the selected (focused) object by selecting from **Display item colors** the **Selected shape** option and then use **Color** drop down menu to select a color for dark and light backgrounds. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

4) Directions:

When you are using the Directions tool  the direction lines that you are adding have a red color. When the background color (the object stitches where the direction tool is applied) is light, the direction color will be dark red and when the background color is dark the color will be light red. You can select another color for the direction tool by selecting from **Display item colors** the **Directions** option and then use **Color** drop down menu to select a color for dark and light backgrounds. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

5) Divide:

When you are using the Divide tool  the divide lines that you are adding have a green color. When the background color (the object stitches where the divide tool is applied) is light, the divide color will be dark green and when the background color is dark the color will be light green. You can select another color for the divide tool by selecting from **Display item colors** the **Divide** option and then use **Color** drop down menu to select a color for dark and light backgrounds. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

6) Grid:

When you are using the Grid tool the Grid lines that will appear have blue color. When the background color is light, the Grid color will be dark Blue and when the background color is dark the color will be light blue. You can select another color for the Grid tool by selecting from **Display item colors** the **Grid** option and then use **Color** drop down menu to select a color for dark and light backgrounds. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

7) Normal guidelines:

When you are adding Guidelines inside the software, they will appear with blue color. When the background color is light, the Guideline's color will be dark Blue and when the background color is dark the color will be light blue. You can select another color for the Guidelines by selecting from **Display item colors** the **Normal guidelines** option and then use **Color** drop down menu to select a color for dark and light backgrounds. This option is for the guidelines that are active and not locked. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

8) Locked guidelines:

If you have locked the Guidelines that you have added inside the software, its color will turn to red color. When the background color is light, the Locked guideline's color will be dark red and when the background color is dark the color will be light red. You can select another color for the locked guidelines by selecting from **Display item colors** the **Locked guidelines** option and then use **Color** drop down menu to select a color for dark and light backgrounds. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

Display item Sizes

1) UI elements scale:

By adjusting this value you can change the width of all **Display items** (globally) at once. By increasing the value of **UI elements scale** you will get thicker lines the opposite if you decrease the value. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

2) Selection rectangle:

By changing this value you can change the width of the Selection Rectangle line and handles. By increasing the value of **Selection Rectangle** you will get thicker selection rectangle line/handles and the opposite if you decrease the value. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

3) Shape outline:

By changing this value you can change the width of the Shape's outline like monogram's container rectangles, array object etc. By increasing the value of **Shape outline** you will get thicker shape outlines and the opposite if you decrease the value. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

4) Guidelines:

By changing this value you can change the width of the inserted guidelines. By increasing the value of **Guidelines** you will get thicker shape outlines and the opposite if you decrease the value. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

5) Digitize outline:

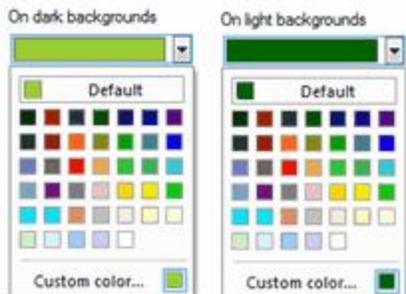
By changing this value you can change the width of the designing tools that the software includes. By increasing the value of **Digitize outline** you will get thicker lines to the designing tools and the opposite if you decrease the value. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

6) Node size:

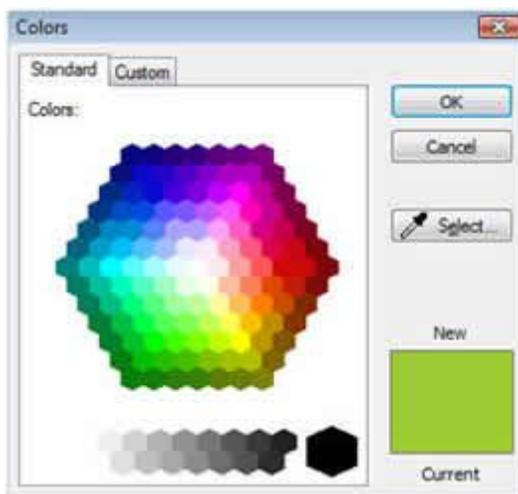
By changing this value you can change the size of the nodes that each shape has. The nodes are visible in Edit nodes  mode. By increasing the value of **Node size** you will increase the node's size and the opposite if you decrease the value. Click **Apply** button if you want to preview the changes on any selected object behind the dialog.

Selecting Colors

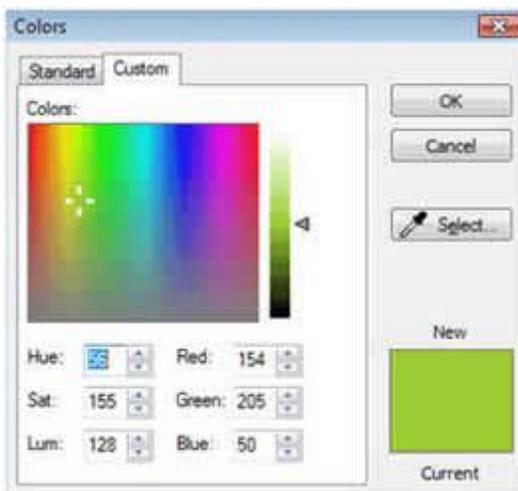
In this section we will present in more detail the usage of color selector tool that is included in **Color** tab of **Tools > Options** and acts as a selector for the colors that the user desires. You can select colors for any item include in display items. Click on the arrow that is next to the already used color. A color selection dialog appears. On the top area of this dialog you can select to have the default color, in case you have already changed it. You can also select one of the colors that are ready to be selected with one click. You can also press Custom color in order to choose or create one color that is not included among these Basic colors.



Custom color selection window consists of 2 tabs. The standard tab contains a wider range of ready made colors. There is also on the left bottom corner a preview area where you can see your old color in comparison with the new. You can also select a color using color picker tool  **Select...** to select any color that is used on any place on your screen.



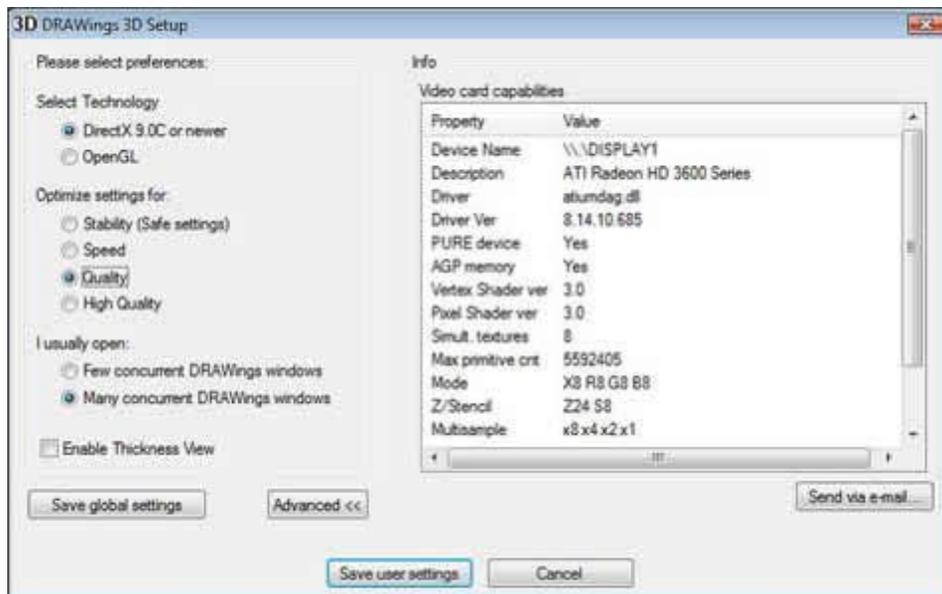
Custom color tab, gives you the ability to select any color from the rainbow color container by a single click. Use the arrow next horizontal line in order to light up the color or make it heavier. You can also type the exact code number of the color you want on the Red – Green – Blue / Hue – Sat – Lum fields and produce the color you want. Color pick tool, also exists in custom color tab. Finally you can view the new color in comparison to the older at the bottom right corner of the window. When you have selected a color just press **Ok** button.



Creative DRAWings 3D setup

Creative DRAWings uses advanced 3D graphics to preview the embroidery designs that is why a good graphics card is a prerequisite for running it. Before you start working with Creative DRAWings you can adjust the 3D properties, to be optimized for your system. Setting the 3D of the software is really important because there might be a case that Creative DRAWings would not start because of the current 3D settings.

Creative DRAWings 3D config can be found under **Start>All programs>Creative DRAWings** startup folder. The following dialog box will appear.



Creative DRAWings 3D setup

From the dialog you can **select the Technology** you want to use, **optimize the 3D settings** and view useful technical information about your graphics card.

- **Select Technology:** From this part of the dialog you can select between the two technologies that Creative DRAWings supports. **DirectX 9.0C or newer** option is the default 3D technology that Creative DRAWings uses and requires DirectX 9.0c or newer to be installed to your PC in order to work properly. In most of the cases this is the option that must be selected in order Creative DRAWings to produce high quality 3D preview.

The other option you have is **OpenGL** that can be used only in graphics cards that supports it. In order to find out you have to select the **OpenGL** option and from the **Info** list that appears when you click on the **Advanced** button, check if the “Supports OpenGL” option from the “Property” list, has the “Value” **Yes**. OpenGL option can be used as alternative way of viewing 3D in Creative DRAWings. It is an option that we suggest to use it in case that your graphics card has problems with Direct3D graphics. In both cases you have to keep always the drivers of your graphics card up to date, by downloading them from the official site of their manufacturer. If you have a laptop computer you have to download the drivers for your graphics card from the official site of the laptop manufacturer.

- **Optimize settings for:** The options that are listed in this area has to do with the quality of the 3D preview of stitches in the **stitch** part of Creative DRAWings. The options are **Stability**, **Speed**,

Quality and **High Quality**. By selecting **Stability**, the 3D preview of the software will be set at the lowest level of quality giving priority to performance. By selecting **Speed** the 3D preview of the software will be set at medium level of quality together with good performance. By selecting **Quality** the 3D preview of the stitch part of Creative DRAWings will be set at good level of quality without affecting its performance. Finally, by selecting **High Quality** the 3D preview will be set to the best possible according to your graphics card.

The 3D settings that Creative DRAWings will select depend on the power of the graphics card you have installed in your computer. All the features of your graphics card are listed in the **Info** area that appears when you click on the **Advanced** button.

- I usually open: In this section of the dialog you can define how many instances of Creative DRAWings you are usually create. The instances of Creative DRAWings that you have open are connected directly with the power of your graphics card. If you have a good graphics card, you can have many instances of Creative DRAWings with **High quality** 3D preview. On the other hand, if you do not have a good graphics card you can open fewer Creative DRAWings instances.

The **Few concurrent Creative DRAWings windows** option will keep the quality of 3D preview high in a way to allow you to open fewer Creative DRAWings instances. In contrast, the **Many concurrent Creative DRAWings windows** option will set an average quality to the 3D preview but will allow you to open many instances of Creative DRAWings. Select the one that fits to your everyday use of the software and let it choose your 3D settings.

When you finish setting 3D you have to click on the **Save User settings** button to confirm the changes you have made. By clicking on the **Save User settings** button, the 3D settings that you have selected will be applied only on the current Windows® user. If you click on the **Save Global Settings** button, the 3D settings that you have selected will be applied to all Windows® users. The next time that Creative DRAWings will start will have the new 3D settings running. If the software does not start you have to reduce the quality of 3D in **Creative DRAWings 3D setup**, save the **settings** and try again.

When you click the **Advanced** button the **Info** will appear where the “Video card capabilities” are listed. Those are technical information about the graphics card that is installed in your computer. The list with all the information can be sent via email by clicking on the **Send via e-mail** button.

If your graphics card has 128 Mb RAM and above with the latest drivers and the DirectX 9.0C or later installed, there will be no problem in working with Creative DRAWings.

Security keys



Security Keys dialog

Creative DRAWings need a USB security key to run for copyright and security reasons. The key contains a serial number that allows the program to run in different levels and be upgraded to newer versions. More details about the level of the program can be found in the Security Keys dialog box. This shows the level of the program, the program's code and includes some functionality, which can be used for changing levels and upgrading to newer versions.

In the **Old code** text field the security key code is displayed and in the **New code** text field a new code can be added, which will upgrade Creative DRAWings to a newer version. More specifically, if you want to upgrade Creative DRAWings, you can purchase an upgrade code, enter it in the field and **Update** your program by clicking on the respective button. The software will be upgraded after restarting the software.

The **Key form** button displays all the information you will need to upgrade your software. If you decide to upgrade your software to a newer version you might be asked to send the Key form to your reseller.

Chapter XX

Appendix

A: Creative DRAWings Tips

In this section of the help file we will give you some tips about DRAWings.

Quality hints

Printing and embroidering

Quality hints

Creative DRAWings is a vector and embroidery designing software. It has many tools and gives you the ability to create the designs you want to embroider. Also, you can import readymade vector designs that were not designed for embroidering purposes but for printing purposes. Those graphic designs might include graphics and visual effects that cannot be converted to stitches and produce various problems during their conversion. Those designs need some editing inside the Create mode, to become proper for embroidering purposes. Creative DRAWings users must always have in mind that the designs they are creating will be embroidered with threads on a fabric.

Take into consideration the following guideline that will help you create high quality embroidery designs using Creative DRAWings.

- ✓ First of all embroidery machines cannot embroider in every position. The minimum distance between two stitches is 1/10 mm horizontal and 1/10 of mm vertical.
- ✓ Small designs that have too many nodes in their border do not help in embroidery. Therefore, try to delete the nodes that do not affect the shape of the design.
- ✓ Too small objects will not be filled with stitches and will be ignored from the software. If you want them to be embroidered try to enlarge them in order the software to be able to place stitches on them.
- ✓ Another thing that you should avoid in your designs is to cross curves in the same objects. Even if we have implemented special algorithms with Artificial Intelligence for these cases, we cannot cover all the possible combinations.
- ✓ Moreover, if there are borders in a design and especially in areas that are covered with stitches from another object, it is possible unneeded overlapping to be created that will decrease the quality of the embroidery. The Remove overlaps tool of Creative DRAWings takes care of such situations, and decides if the object below must be trimmed or not. Sometime decides not to trim object that are

completely over other object because it believes that it will be embroidered better that way. If you do not want that you can force the tool to remove the stitches underneath.

- v Finally, if you want to create borders with satin serial, avoid acute (>150) angles (hard changes of line directions), prefer to have a curve break node on the top of each angle and always check the distance between the nodes near the angle to be greater from the width of the border line. This will help Satin serial to flow better on the border and will increase satin serial quality.

To summarize and add some more, the things you have to do are:

1. Convert unnecessary **Cusp Nodes** to **Smooth nodes**.
2. Delete unnecessary **Smooth nodes**. Do not put nodes very close to the other.
3. Avoid having too small objects
4. Avoid double outlines
5. Avoid crossing curves in the same object.
6. Avoid hard changes of direction for Satin Serial outlines
7. Use **Remove overlaps** function to avoid overlapping and reduce number of stitches.

Those are some hints that will help you to increase even more the embroidery quality that Creative DRAWings produces. The produced quality is based on the quality of the used vector design.

Printing and embroidering

The procedure you have to follow in order to embroider your design correctly by using the information that are included in the printout are the following:

In the following figure we have a printout of a design.

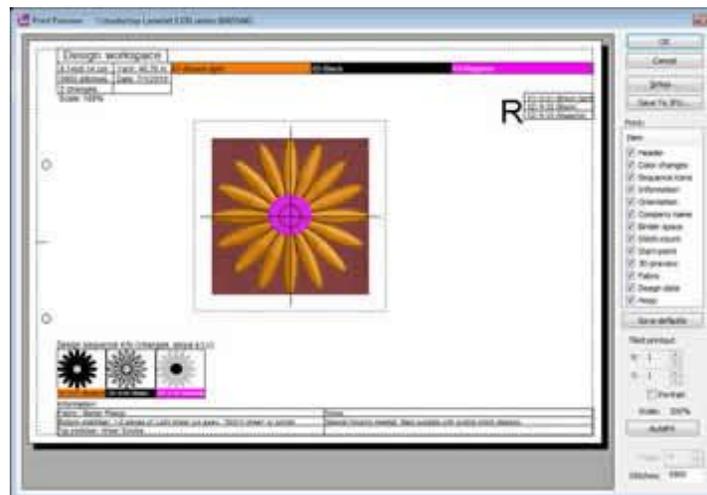


Figure A.1: Printout

In the header of the printout you can view the size, the number of color changes, the number of stitches on the design, the needed yarn for the current design, the colors that the current design is using and in which needle carrier should be.

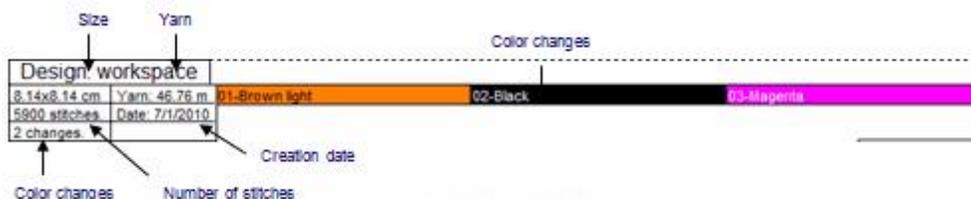


Figure A.2: Header

Figure A.2: Header

If you try to embroider the specific design that has 12 colors, set each color to each needle carrier as they are numbered. For example, in the first needle carrier you will set the yellow color **01- Gunold,502**, in the second the Black and so forth. If you have set thread manufacturer's color palette like Gunold, you can find the colors that you want the design to have from the number next to the color.

If you have an embroidering machine with fewer needle carriers than 12 you can either reduce the colors of the design or while embroidering, you have to change threads on the embroidering machine after stopping it each time a color change occurs, to a color that is not on the next needle carrier.

When you finish setting the threads on the needle carriers you can continue by setting the embroidering sequence on the embroidering machine. This is not needed in all embroidery file formats. There are file formats that adjust color changes automatically to the embroidery machine. Those are: ".dsb", ".dsz", ".tap", ".exp", ".ksm", ".hus", ".vip", ".pec", ".Pes", ".jef", "sew".

On the other hand there are embroidering file formats that do not adjust the color changes automatically. To those (.dst, .sst) you have to insert them manually as the printout shows. The embroidering sequence it is shown from the **color changes** option and the **Sequence icons**.

01) N:01 (Gunold,502)
02) N:07 (Gunold,1128)
03) N:04 (Gunold,1104)
04) N:10 (Gunold,1168)
05) N:06 (Gunold,1259)
06) N:05 (Gunold,1002)
07) N:03 (Gunold,1034)
08) N:11 (Gunold,1172)
09) N:09 (Gunold,1510)
10) N:08 (Gunold,1558)
11) N:12 (Gunold,1503)
12) N:02 (Gunold,538)
13) N:03 (Gunold,1034)
14) N:01 (Gunold,502)
15) N:02 (Gunold,538)

Figure A.3: Color changes

Color changes

The color changes list shows the number of color changes that the machine will make in order to embroider the design and not the number of colors that will be used. To be more specific, the above list shows that the machine will start [("01")] embroidering using the color of the first needle carrier (N:01 (Gunold, 502)); therefore for embroidery files that do not support color changes you have to manually set the embroidering machine to have as first color the one that is in the first needle carrier.

Continuing, from the above list you can see that the first color change ('02') must be set to change the needle carrier from the "N:01" to "N:07". The second color change from "N:07" to "N:04" and so forth.

We continue setting the machine until ready. As we mentioned before, the design has 12 colors but 14 color changes. This means that Creative DRAWings, while producing the embroidery design, decided that in order to embroider some objects with the same color better, it must be embroidered in two or more phases. That is why we have more color changes than colors.

It is more obvious from the **Sequence icons** below.

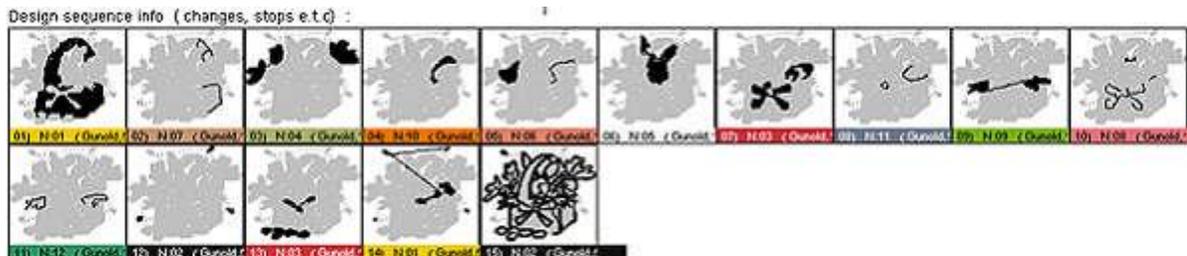


Figure A.4: Sequence icons

Here you can view exactly which object will be embroidered with which color. As you can see the Red objects of the design will be embroidered at the 7th and 13th color change.

In addition, most of the time more color changes produce better embroidery results, but less color changes are preferable for embroidering many copies of the same design. There is a way in Creative DRAWings that you can adjust the color changes in the designs that you are creating.

This option can be accessed from File > Design properties in the Optimizer mode, and is called **Minimizing color changes**.

- **Minimizing color changes:** This option is important for limiting color changes in the embroidery production process. Color changes have to do with thread changes that the embroidery machine makes in order to embroider each stitch design object. With more color changes the embroidery design sequence is followed more accurately but the production process is longer. On the other hand with less color changes the embroidery design sequence changes to fit the Minimizing color changes settings but gives shorter production process. The alterations in the embroidery design's sequence might produce inaccurate embroidery results or might not. This depends on the embroidery design, embroidery machine and the fabric. You can adjust color changes through the use of the track bar.

B: Standard - Tools toolbar

Standard toolbar	
	Create New design .
	Load an existing design.
	Save an existing design or Save as any unsaved design.
	Print a design
	Copy selected objects.

	Paste copied objects
	Undo , cancels the latest action that was made.
	Redo , cancel the latest undo that was performed.
	Select a fabric for the design.
	Opens the Edit palette dialog box.
	Select a Hoop for the design.
	Clicking on this button in the standard toolbar, you can view the current design in actual size. Also by clicking on the arrow at the right of this icon, you can select one of the zoom presets .
	The Weld tool welds two or more overlapping objects.
	The Trim tool can create wholes inside objects or reshape them by removing parts of their shape.
	The Intersection tool creates an object from the area where the objects overlap.
	Activates the show help on help tool.

Tools toolbar	
	Activates rectangle selection .
	Activates lasso selection.
	Activates Node editor where you can edit the shape of objects.
	Using this tool you can zoom-in your view to a part of a design.
	Zoom out .
	Zoom to actual size.
	This tool Lets you move a design around in the viewable window like you would move a paper around on a desk with your hand.
	The measure tool calculates the distance between any two points in the work area. When you measure from one point to another, a ruler is drawn that shows the exact distance between the two points.
	Add directions .
	Divide satin or Row fill objects.

	Start embroidery simulation .
	With the Freehand tool you can design simple lines or complete shapes.
	With the Bezier designing tool you can create shapes where you can handle better the curvature of each segment easier by adjusting the control handles of each inserted node.
	With the Outline tool you can draw lines and curves by specifying their nodes and altering the curvature of their segments by adjusting their control handles.
	With Magic Wand tool you can create any shape that consists of the intersection of two or more other shapes.
	With the Insert crystal shapes designing tool you can insert crystals anywhere in the design.
	The Create Ellipse tool allows you to design ellipses that will be filled with stitches.
	The Create Pie tool allows you to design ellipses and pie shapes that will be filled with stitches.
	The Create rectangle tool allows you to draw rectangle shapes that will be filled with stitches.
	Create Trapezoid shapes.
	Create polygon shapes.
	Add Star shapes.
	Add Text
	Create monogram design
	Create Rectangular array.
	Create Circular array.
	Create automatic borders around any object.
	Enable - disable automatic sequence.

C: Quick reference card

General		
	New document	Ctrl+N
	Open document	Ctrl+O

	Save document	Ctrl+S
	Save As document	Ctrl+Shift+S
	Print document	Ctrl+P
	Export to image	Ctrl+Shift+E
	Export to SVG	Ctrl+Alt+E
	Help	F1
	Show Help on...	Shift+F1
	To Editor...	Ctrl+E
	To Dropbox	Ctrl+D

Selection		
	Select all	Ctrl+A
	Invert selection	Ctrl+Shift+I
	Default selection tool	Space
	Top object	Ctrl+Home
	Bottom object	Ctrl+End
	Next object	Tab
	Previous object	Shift+Tab

Modifications		
	Undo	Ctrl+Z
	Redo	Ctrl+Shift+Z
	Select fabric	Ctrl+F
	Edit palette	Ctrl+Shift+L
	Options	Ctrl+T
	Change Hoop	Ctrl+H
	Optimizer options	Ctrl+Shift+J
	Divide	Shift+D

	Directions	D
	Repeat last transform	Ctrl+R
	Group	Ctrl+G
	Ungroup	Ctrl+U
	Combine	Ctrl+L
	Break apart	Ctrl+K
	Convert to curves	Ctrl+Q
Order		
	To front one	PgUp
	To back one	PgDn
	To front of design	End
	To back of design	Home

Designing		
	Insert symbol	Ctrl+F11
	Delete objects	Delete
	Edit shape nodes	F10
	Freehand	F5
	Bezier	Shift+F5
	Outline	Ctrl+F5
	Rectangle	F6
	Trapezoid	Shift+F6
	Ellipse	F7
	Pie	Shift+F7
	Polygon	Y
	Star	S
	Text	F8
Align bar		

	Align Left	L
	Align Right	R
	Align Top	T
	Align Bottom	B
	Align centers Horizontally	C
	Align centers Vertically	E
	Same width	Shift+W
	Same height	Shift+H
	Same Size	Shift+S
	Horizontal Spacing	Shift+C
	Vertical Spacing	Shift+E

View		
	Properties	Alt+Enter
	Zoom in	Z
	Zoom previous	F3
	Zoom all	F4
	100% zoom	Shift+1
	Hand tool (pan)	H
	Measure	F9
	Ruler	Ctrl+Shift+R
	Grid	Ctrl+Shift+G
	Overlapping crystals	O
Backdrop		
	Hide	Alt+1
	Below Embroidery	Alt+2

	Washed-out	Alt+3
	After Embroidery	Alt+4

D: Troubleshooting

Installation problems

Sometimes problems appear during installation procedure. If any problem appear you have to try the following.

- ✓ Make sure that you have administrative right on your PC in order to be able to install the software.
- ✓ Disable your antivirus or any other security software ONLY during the installation and turn them back on, once it is finished. Creative DRAWings installation does not include any malicious software.
- ✓ Make sure that you graphics card meets system requirements, because otherwise Creative DRAWings might not work properly.

CBU Failure When Launching DRAWings®

When launching Creative DRAWings after installation or re-insertion of the USB Dongle, a screen displays for a brief moment, followed by this error message:



This error is a result of a loose or improperly connected Dongle:

1. Close the error message.
2. Remove the Dongle, wait 10 seconds, and re-insert it, ensuring that it is securely connected.
3. Load Creative DRAWings once more.

Creative DRAWings Quits and Generates a Visual C++ Runtime Error

If the Dongle is removed when using Creative DRAWings, the application will shut down and the following error message is generated:

“Visual C++ Runtime Error”

Re-insert the Dongle securely and re-start Creative DRAWings.

Unhandled Exception

Creative DRAWings has an extra security feature that handles exceptions that might occur while working with complex designs. This feature allows you to undo your last change in the design that made the system unstable and continue from that point.



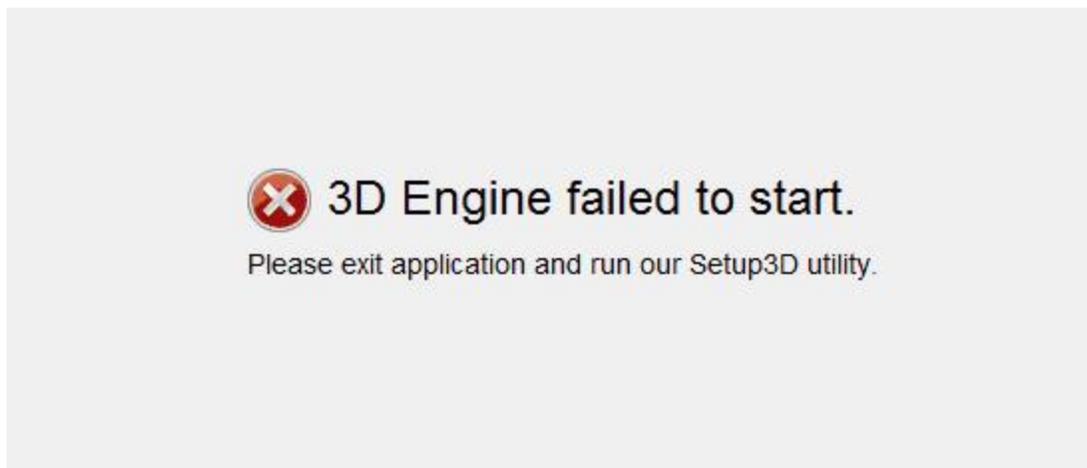
Whenever the above image appears an **Unhandled Exception** was occurred in the system. In order to continue working in Creative DRAWings you have to click on 'Yes' button. The system will become stable again. It is proposed, when an Exception occurs, to save changes in the current design and then continue working with the design.

If you click the 'No' button the System will crash!

Creative DRAWings fails to launch

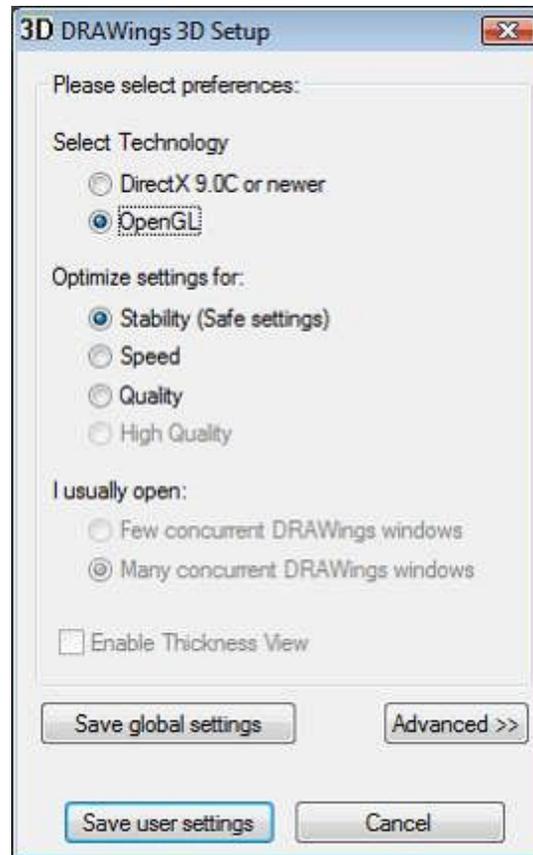
Creative DRAWings is a demanding software in 3D graphics card. If the PC you have installed the software does not meet the Minimum System requirements, the software might not work properly.

If the following error appears when you try to start the software, then the problem is located on the Graphics card of your system or to the 3D settings of the software.

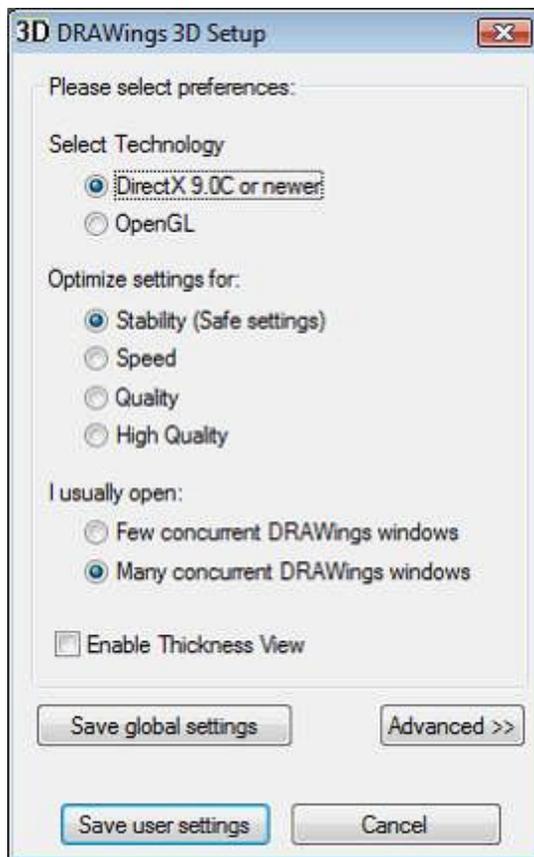


To overcome this issue please try the following:

1. Download and install the latest drivers of the Graphics card and try to start Creative DRAWings.
2. Try to re-install the **DirectX 9.0C** from the **Directx9** folder that you will find inside the installation CD of Creative DRAWings. Run **dxsetup.exe** and follow the installation. Once it is finished try once more to open Creative DRAWings.
3. Open **Setup 3D** from **Start>All Programs>Creative DRAWings**, set the options as they are shown in the screen capture below and select **Save settings** button.



Start Creative DRAWings and check if it is working properly. If this does not work open the **Setup 3D** and set the options as they were initially (as it shown in the screen capture below), and select **Save settings**.



Try to open Creative DRAWings once more.

4. If none of the above worked the problem is located in your Graphics card. It might have less than 64MB of Ram, or have poor 3D capabilities (usually onboard graphics cards). To fix that you will have to change it with any NVIDIA or ATI graphics card is available on the market. The software requires a good graphics card to work properly.

Information on how to proceed with checking the Video memory of the card, updating video drivers or another way to install the latest DirectX, you will find below.

Verifying Video Card Memory

To verify the amount of RAM on the video card, do the following:

1. Right-click on the **Desktop** and select **Properties**.
2. Click the **Settings** tab.
3. Click the **Advanced** button.
4. Click the **Adapter** tab.

Memory Size should read at least 64MB. If it is less than 64MB, you will need to upgrade the video card to meet or exceed the Creative DRAWings system requirements.

Updating the Video Driver

The two most common video chipsets are ATI and NVIDIA. Please visit one of the following web sites and obtain the latest driver for your card.

<http://www.ati.com/>
<http://www.nvidia.com/>

If your video card does not use either of these chipsets, visit the video card manufacturer's web site for the latest driver.

If you have a laptop you need to search for video card drivers from the laptop manufacturer's web site.

Installing DirectX

DirectX can be downloaded from the Windows Update site, or from <http://www.microsoft.com/directx>. After installing DirectX, make sure that acceleration is enabled. To verify this, do the following:

1. Click **Start, Run**.
2. Type **dxdiag** and click OK.
3. Click on the **Display** tab.

All three DirectX Features should indicate **Enabled** beside each feature. If not, click the Enable button beside the ones that are disabled. If the buttons are disabled, there is a problem with DirectX. Consult the Microsoft knowledge base for assistance in troubleshooting DirectX, or click on the More Help tab and click on the Troubleshoot button.

Chapter XXI

Show help on

The **Show help on** function can be activated from menu **Help -> Show help on** or from the shortcut key **Shift+F1** and from the standard toolbar by clicking on the  icon. It is a useful tool any time you need quick help without searching. When it is active a question mark appears next to the mouse pointer. You can click anywhere in Creative DRAWings® window and instantly retrieve help for the object you clicked.

Index

- 3 -

- 3D preview 211
- 3D setup
 - I usually open 623
 - Optimize settings for 623
 - Select Technology 623

- A -

- Abbreviations 348
 - Create abbreviations 349
 - Edit abbreviations 349
- Actual size Zoom 210
- Add a node 336
- Add Guidelines 221
- Add new color 322, 516
- Add New Hoop 601
- Add new objects as clones 313
- Add object to a Group 306
- add text 346
- Align bar 183, 186
- Align Bottom 284
- Align Centers Horizontally 284
- Align Centers Vertically 284
- Align Left 284
- Align Right 284
- Align Top 284
- Aligning 283
- Aligning objects 284
- Applique 557
 - Sequence 557
- Appliqué frame out distance 591
- Array 373
 - Circular 255
 - Cloned objects (Fill) 398
 - Cloned objects (Outline) 399
 - Clones 265
 - Edit outline 392
 - Nested array 401
 - On object fill 373
 - On object outline 393
 - Rectangular 255
- Array and clones 398
- Array circular 266

- Array fill 569
 - Circular 574
 - Contour 576
 - Line fit 580
 - Rectangle 571
 - Shape fit 578
 - single line 577
- array fill edit 377
- Array fill pattern 379
 - Circular 384
 - Contour 387
 - Line fit 391
 - Rectangle 380
 - Shape fit 390
 - single line 389
- Artistic edge 146
- Artwork sources 105
- Auto remove overlaps 341
- Auto-backup 180
- Auto-backup mechanism 180
- Autoborder 277
- Automatic embroidery sequence 605
- Automatic outlines 277
- auto-sizing 283
- Auto-sizing objects 286
- available colors 319, 512

- B -

- Backdrop 161
- Backdrop properties 161
- Background 564
- backup 180
- Basic customizations 271
- Bezier 231
- Bitmap 101, 105, 161
- Bold 347
- Break apart 307
- brush 86

- C -

- camera 37
- Capture from camera 158
- capture from camera and cut 459
- CBU failure 635
- Cell size 564
- Center design to hoop 600

- change brush width 518
- Change colors 320, 514
- Change hoop 599
- change view 370
- Circular 266
- Circular Array
 - Clones 276
 - Mirror copies 275
 - Rotate copies 275
 - using circular array 269
- Clear path 355
- clear transform 305
- clear transformations 305
- Clipart library 367
 - add to library 371
 - change view 370
 - filter clipart 368
 - Insert clipart 367
- Clipart names and Tags 370
- Clones 313
- Close outline 338
- Color / Sizes
 - Selecting colors 621
- color changes 628
- Color management 317, 511
- Color reduction area 329
- color selection 324, 517
- colors 319, 512
- Combine 307
- Contents 14
- control handles 335
- Convert outline to Object 312, 536
- Convert to curves 171
- Convert to Vector design 172
- Copy 297
- Create a monogram design 54
- Create automatic shapes 235
- Create crystal design 76
- create cut design 60, 445
- create cut design from scratch 468
- create designs with crystals 409
- Create Ellipses 237
- Create from scratch 94
- Create monogram 54
- Create monogram design 112
- Create paint design 86
- Create Parallelograms 241
- Create Pies 239

Create Polygons 248
 Create Rectangles 251
 Create Stars 244
 Create stencil design 65
 Create Trapeziums 241
 create your first cut design 445
 Create your first paint design 502
 Creating designs 102
 Cross 564
 Cross-stitch 166, 564
 Background 564
 Cell size 564
 Cross 564
 Cross-stitch design colors 324
 Cross-stitch stitch type 538
 Crystal
 Edit outline 440
 Fill patterns 420
 Crystal design 76
 crystal designs 409
 crystal fill 406
 parameters 416
 crystal fill edit 414
 crystal fill parameters 416
 Crystal fill patterns
 circular 426
 Contour 431
 Line fit 439
 rectangle 421
 Shape fit 435
 Single line 434
 Crystal outline/pen fill 442
 crystal outline fill 442
 crystal pen fill 442
 crystals 404
 Insert Crystal shapes 404
 item rotation 419
 Select color / shape 417
 Select offset 419
 Select palette 416
 Select size 418
 Separate to crystals 420
 crystals overlapping 415
 currently used colors 319, 512
 Curve objects 333
 Cusp nodes 333
 Customize workspace 189
 Cut 60, 297, 445
 Break apart 476
 Cutting offset 476

Discard part 476
 Netfill 476
 Outline 476
 Running 476
 Running before 476
 Satin serial 476
 cut design 60, 445
 cut design from scratch 468
 cut properties 476
 Cutting mat 217

- D -

default color palette 322, 516
 Default Fill color 320, 514
 Default Outline color 320, 514
 Delete a node 336
 Delete and object form a Group 307
 Delete color 322, 516
 Delete object 298
 Deleting 296
 Design modes
 Create mode 20
 DRAW mode 20
 Stitch mode 20
 Design properties 589
 Design properties optimizer 591
 general 590
 Design tabs 102
 Designing tools 227
 Diagonal Guideline 222
 Digitizing tool 233
 Directions tool 529, 588
 disable auto sequence 608
 Display as icon 297
 distributing 283
 Distributing objects 287
 Divide tool 529, 588
 Double pass 581
 Drawing tools 228
 DRAWings Tips 626
 DrawStitch bar 186
 Dropbox 123
 Duplicate design 298
 Duplicating 296
 DXF 132, 138

- E -

Edit an object form a Group 307
 Edit array fill
 array fill 377
 edit caption 356
 Edit color 322, 516
 edit crystal fill 414
 Edit existing color 322, 516
 Edit hoop 603
 Edit Hoop Bracing arms 603
 Edit Hoop Corner curviness 603
 Edit Hoop Height 603
 Edit Hoop Name 603
 Edit Hoop Type 603
 Edit Hoop Unit 603
 Edit Hoop Width 603
 edit monogram template 358
 Edit nodes 334
 Edit Palette 324
 Edit shape nodes 332, 333
 Edit Text shape 351
 Ellipses 237
 embroider it 20
 Embroidery artwork 108
 Embroidery Heavy 543
 Embroidery Light 543
 Embroidery Normal 543
 Embroidery Normal Light 543
 Embroidery sequence 605
 Embroidery smooth 543
 Embroidery to vector 172
 Embroidery transformations 538
 Embroidery Ultra Light 543
 Enable auto sequence 605
 End points at closest connection, even on trims 591
 Equal horizontal spacing 287
 Equal Vertical spacing 287
 Export
 to Dropbox 123
 to Happy lan machine 133
 to Janome MC12000/MC15000 134
 Export crystals
 to DXF 138
 to HPGL 138
 to SVG 138
 Export design 123

Export design 123
 crystals/ cutters 136
 Embroidery image 129
 Quilt 132
 To editor 123
 Vector file 131
 Export embroidery image 129
 Export to crystal - cutter 136
 Export to cutter 139
 Export to Cutters
 Artistic Edge 146
 Export to Dropbox 123
 Export to dxf 132
 Export to editor 14, 123
 Export to Happy lan machine 133
 Export to Janome
 MC12000/MC15000 134
 Export to quilt 132
 Export to vector file 131

- F -

Fabric selection 543
 Failure Recovery 180
 File formats 119
 file manager 121
 Fill 320, 514, 520, 546
 first embroidery 20
 Font name 347
 Font size 347
 Freehand 229
 From camera 111, 158
 From embroidery 108
 From scanner 109

- G -

General 589
 general - Design properties 590
 Get image from camera 37, 111
 Graphic objects color 320, 514
 Grid 216
 Group objects 306
 Grouping objects 306
 Guideline Diagonal 222
 Guideline editor 223
 Guideline Horizontal 221
 Guideline options 222
 Guideline Vertical 222

guidelines 221, 224

- H -

Hand tool 211
 Happy lan machine 133
 Height 254
 help 640
 Hoop 216
 Hoop Bracing arms 601
 Hoop Corner curviness 601
 Hoop Height 601
 Hoop Name 601
 Hoop Preview 605
 Hoop Type 601
 Hoop Unit 601
 Hoop Width 601
 Horizontal Guideline 221
 horizontal spacing 287
 HPGL 138

- I -

Image from camera 111
 image to cut 450
 Import bitmap
 Convert to outlines 164
 Open as Cross-stitch 166
 Open as Photo paint 169
 Open as Photo stitch 167
 Trace 164
 Import bitmap artwork 105
 Import bitmap from scanner 109
 Import embroidery files 171
 Import from camera 37
 import from camera and cut 459
 Import from scanner and cut 450
 Import ngs 174
 Import stitch file 46
 Import vector artwork 105
 Importing bitmaps 161
 Index 14
 Insert crystals 236
 Insert shapes 237
 Insert symbol 365
 installation problems 635
 Intersection 308
 Intersection Preview 308
 Invert selection 198

Italic 347

- J -

Jamome 121
 Janome file manager 121
 Join nodes 338

- K -

Keep sequence of overlapped
 objects, even if trimmed 591
 Key 624

- L -

Lasso selection 197
 Length 581
 Light source 215
 Load design 115

- M -

Magic Wand shapes 235
 Main menu 183
 Make same height 286
 Make same size 286
 Make same width 286
 Manual embroidery sequence
 608
 Measure tool 211
 Minimizing color changes 591
 Mirror Height 303
 Mirror Width 303
 mirroring 301
 Mirroring objects 303
 Monogram 54, 112
 Monogramming 355
 edit caption 356
 edit monogram template 358
 Overlapping areas 363
 Transform monogram area
 361
 Move 342
 Move a shape while drawing 282
 Move an object 281
 Move node 334
 Move on X and Y 283
 Move rectangular array 260

Move with arrow keys 282

- N -

Netfill 567
 new color 322, 516
 New design from scratch 115
 New monogram 112
 New objects as clones 313
 ngs 174
 No thread trims inside combined objects 591
 Node editor 332
 None 199
 None color 319, 512
 None Fill 546
 Number of rays Star 244
 Number of sides Polygon 248

- O -

Object properties 183, 546
 Applique 557
 Cross 564
 Fill 520, 546
 Fill none 546
 Outline 525, 580
 Outline none 581
 Row fill 554
 Running 581
 Satin 547
 Satin serial 583
 Step 550
 Online resources 13
 Open as backdrop 161
 Open as Cross-stitch 166
 Open as Photo paint 169
 Open as Photo stitch 167
 Open as Photostitch 531
 Open design 115
 Open DRAW file 115
 Open existing design 117
 Optimization strategy 591
 Bottom to top 591
 Inside to outside 591
 Large to small 591
 Left to right 591
 Outside to inside 591
 Right to Left 591

Small to large 591
 Top to bottom 591
 Optimizer 589
 Optimizer Options 591
 Options 611
 3d properties 616
 Color / Sizes 618
 General 611
 Monitor 614
 Palette order 618
 printing 617
 Tools 612
 View 615
 Outline 233, 320, 514, 525, 580
 Satin serial 583
 Outline array 396
 Outline array options 396
 Outline design 212
 Outline none 581
 Outline properties
 Array 586
 Outline thickness 254
 outline to Object 312, 536
 Overlapping areas in monograms 363
 Overlapping crystals 214, 415

- P -

Paint 502
 paint design 86, 502
 Paint transformations 519
 painting designs 502
 pan 211
 Parallelograms 241
 parameters crystal fill 416
 Paste 297
 Paste link 297
 Paste special 297
 Pen 86, 320, 514
 Photo paint 169
 Photo stitch 167, 566
 photo to cut 459
 Photostich 531
 Pies 239
 Polygons 248
 Positioning 281
 print and cut 479
 Print artwork 179

Print cut 150
 Print cut templates 150
 Print design 174
 Printer Setup 174
 Printing and embroidering 627

- Q -

Quality hints 626
 Quick reference card 631
 Quick start 17
 Quilt 132

- R -

Ray size Star 244
 Realistic Paint 531
 Recent files 180
 Rectangle selection 196
 Rectangles 251
 Rectangular array 258
 mirror copies 263
 Move 260
 number of copies 263
 rotate copies 263
 Redo 313
 Remove overlaps 310
 Remove text from path 355
 Re-order objects 288
 Repeat last transform 305
 Repeat transformation 305
 Repeats 564
 Reset palette 322, 516
 Resize 344
 Result 297
 RGB 322, 516
 Rotate 343
 Rotate hoop 600
 Rotating 301
 Rotating objects 302
 Roundness 251
 Row fill
 Density 554
 Length 554
 Patterns 554
 Remove overlaps 554
 Sequence 554
 Styles 554
 Row fill stitch type 538

Rulers 216
 Running
 Single pass 581
 Styles 581
 Thickness 581
 Triple pass 581
 Running stitch type 538

- S -

same height 286
 same size 286
 same width 286
 Sample files 15
 Satin
 Compensation 547
 Density 547
 Patterns 547
 Remove overlaps 547
 Sequence 547
 Styles 547
 Underlay 547
 Satin serial
 Compensation 583
 Density 583
 Patterns 583
 Underlay 583
 Satin Serial stitch type 538
 Satin stitch type 538
 Save 119
 Save As 119, 120
 Saving design 119
 Scan 154
 Scan a design 27
 scan and cut 450
 Scanning images 154
 Search 14
 Security keys 624
 Select all 198
 Select all nodes 337
 Select by Any color 324, 517
 Select by color 324, 517
 Select by crystal 202
 Select by Fill color 324, 517
 Select by overlapping order 200
 Select by Pen color 324, 517
 Select by stitch type 199
 Select Fabric 543
 Select hoop 600

Select Node 334
 Select none 199
 Select Polyline nodes 337
 Select Text 347
 Select with mouse (click) 196
 Selection by color 201
 Selection in sequence manager 201
 Selections 196
 Send design 180
 Sequence manager 183, 290, 607
 Resequence items 295
 sequence manager manual 609
 Sequence tool 607
 Set default color 320, 514
 Set fill color 320, 514
 set light source 215
 Set pen color 320, 514
 Settings 611
 Shapes 237
 Show help on 14, 640
 Size objects 298
 Sizing 298
 Skew objects 301
 skewing 298
 Slant selection 345
 Slant Trapezium 241
 Slow redraw 219
 Smooth nodes 333
 smoothness 229
 Source 297
 Space bar 196
 split outline 339
 Standard toolbar 186, 629
 Stars 244
 Start angle Pie 239
 Start angle Polygon 248
 Start angle Star 244
 Start up wizard 17
 Stencil 65, 485
 how it works 485
 stencil design 486
 stencil bridge 339
 stencil design 65
 Stencil parameters 497
 Step
 Compensation 550
 Density 550
 Length 550

Patterns 550
 Remove overlaps 550
 Sequence 550
 Styles 550
 Underlay 550
 Step stitch type 538
 Stitch editing 14
 Stitch file 46
 Stitch points 213
 stitch type 199
 Stitch types 538
 Stitches 212
 Stitches to Vector 172
 Stop angle Pie 239
 SVG 131, 138
 symbol 365

- T -

Tags 370
 Techniques 193
 Text 346
 Text objects color 320, 514
 Text on path 351
 Thickness view 213
 Thread palette 319, 512
 Tips 626
 Title bar 183
 To back of the design 288
 To back one 288
 To curve 337
 To front of the design 288
 To front one 288
 To line 336
 tool Bezier 231
 tool Freehand 229
 Tool options 254
 Toolbar
 Hand tool (pan) 211
 Lasso selection 197
 Measure 211
 Print 174
 Rectangle selection 196
 Zoom 100% 210
 Zoom all 210
 Zoom in 209
 Zoom previous 210
 Toolbars 629
 Tools 183

Tools toolbar 186, 227, 629
 Trace 161
 Transform in node editor 341
 Move 342
 Resize 344
 Rotate 343
 Transform monogram area 361
 Transformations 281
 Trapeziums 241
 Trim 311
 Trim Preview 311
 Trimming distance between objects 591
 Trimming distance in Cross-stitch 591
 Troubleshooting
 C++ Runtime Error 635
 CBU failure 635
 Creative DRAWings fails to launch 636
 installation problems 635
 Installing DirectX 639
 Unhandled Exception 635
 Update video drivers 639
 Verify video card Memory 638

- U -

Undo 313
 Ungroup objects 307
 using abbreviations 348
 Using array 257
 Using control handles of nodes 335

- V -

Vector 101, 105
 vector overlapping order 200
 Vertical Guideline 222
 Vertical spacing 287
 View active designs 218
 View by overlapping order 200
 view cutting mat 217
 View Grid 216
 View Hoop 216
 View stitches 212
 view Thickness 213
 View tools 209

- W -

Welcome 13
 Weld 308
 Weld Preview 308
 What is a node 332
 Width 254
 Wing's modular 14
 Working Space 182
 Working with files 101
 working with guidelines 224
 Workspace components 183

- X -

X axis 254

- Y -

Y axis 254

- Z -

Zoom 100% 210
 Zoom all 210
 Zoom in 209
 Zoom out 210
 Zoom previous 210