

Overview of Cutwork Needles



First Impressions

When you purchase your cutwork needles and open up the package you will notice several things. First, that the top of the needles look very familiar – same look and size as your regular sewing machine needles. For multi-needle embroidery machines the tops are round and for domestic machine users they are flat backed. We are also used to seeing color on the upper shaft and those colors will be very useful and important as we progress.

FLAT BACK



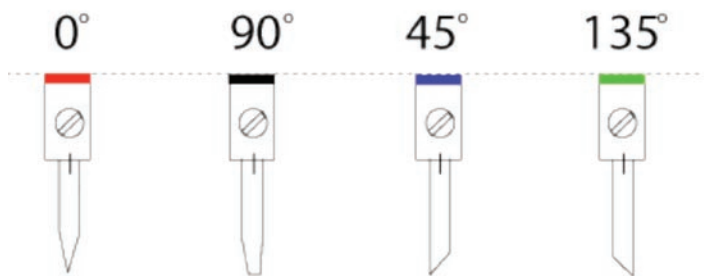
ROUND

The bottom half of the cutwork needles are where the differences start. Instead of an eye at the bottom of these needles, you will notice that the lower shaft is completely solid and the "tip" is not a point but rather a very small flat cutting blade. These blades are very sharp so you should use much care in handling them to avoid cutting your fingers. A special tool (needle threader) is provided to help with insertion. You should always use it when taking needles in and out of your machine.

Needle Design

At first glance the cutwork needles may all look alike until you look closer at the angle of the blades. When the needles are inserted correctly, you will see that the four blades are each turned to cut in four different angles – 0 degrees (vertical), 90 degrees (horizontal), 45 degrees (slanting from upper right to lower left), and 135 degrees

(slanting from upper left to lower right). By using 2 to 4 of these needles, any shape can be cut out of your fabric, paper or even Balsa wood!



How the Needles Cut

The system for using your needles is quite ingenious! The software that creates the cutting design assigns which needle is needed to cut each part of the design. It will then condense every cut command needed for each particular needle into one overall command so you will never have to put in more than 4 needles to complete the cut of any shape.

Since the cutwork needles don't carry any thread with them, the machine will send each needle to "stitch" in every place on the design where that particular angle is needed. This means that the machine may seem like it is jumping all over the place but this is how to make the cutting the most efficient and shouldn't worry you at all.

The software also assigns the proper "stitch length" so that when the needle blades move along the side of a design shape, each cut will slightly overlap the other to create a clean edge. Sometimes the angle of a particular design edge requires that the software to assign more than one pass of a needle blade to finish the cut.

Needle Order

The software will consistently use a particular order for assigning which of the needles will cut. If all four needles will be needed the order will go as follows:

RED – BLUE – BLACK – GREEN

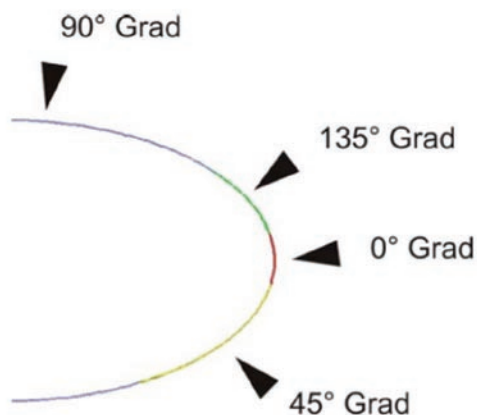
It will help if you keep the needles in this order in your needle case when they are not in use

in the machine. Sometimes the design will only call for 2 or 3 of the needles, but they too will still be assigned within the order written above (i.e. RED, BLACK, GREEN or RED, BLUE, GREEN or RED, BLACK.)

Cuts Using Less Than 4 Needles

How many needles used in your design will be determined by what angles are present in the design being cut. If you have a straight square or rectangle to cut, the software will only need to assign the 0 degree blade and the 90 degree blade to finish the job. The angled blades are not needed.

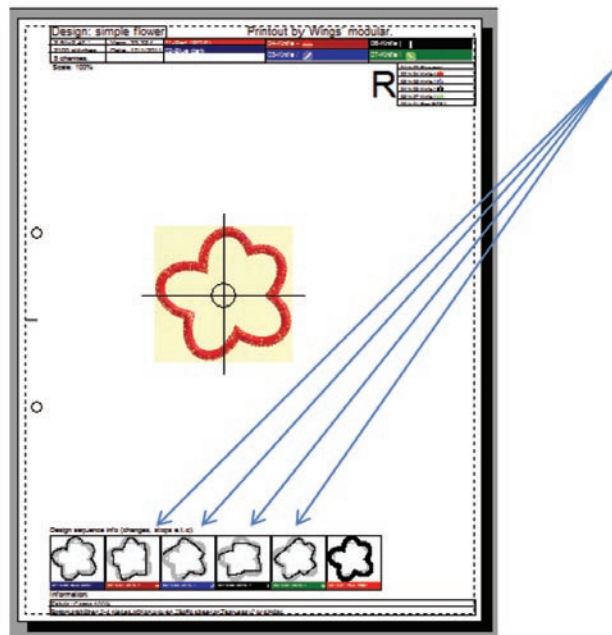
In the case of cutting out the shape of the letter "N", only 3 blades are necessary – 0, 90, and 135 degrees - because there is no 45 degree angle cut needed.



Importance of the Printout

When your machine is stitching out the embroidery cutwork design, it is necessary that you know when to insert the needles and to know what needle needs to be inserted at what time. This makes it vitally important that you print out your stitch design before beginning the embroidery.

The printout will show you a graphic box for each color change in your design and will also show how each cutwork needle is assigned its own color change box. The color assigned will typically correspond to the colors of the needles but since the software will use the thread palette it has been assigned, the colors may be off slightly – a black needle assignment may be represented by a forest green color, or a red needle may be assigned a magenta color. The printout will let you clearly see which color needle the software



is calling for so you can proceed with confidence that you will be making the proper cuts. If you are still not sure, look at the direction of the cuts being shown in the graphic box and make sure the needle you assign is the same angle. Keep the printout close to you as you embroider so you can refer to it as the machine stops for each color/needle change.

Needle Durability

The needles you have purchased have been extensively tested and are designed with high quality steel that will give you hours and hours of use. Should you accidentally break a needle or dull one, needles can be purchased individually from your Artistic Sewing Suite dealer.

