

TECHNICAL BULLETIN

EMBROIDERY STITCH MATRIX

There are several different stitch types to suite your design and the choice always come with the hassle to choose the best option. This technical bulletin discusses the basic stitch types and when you should use these on the unit. Embroidery stitches are classified into two major categories: **Lock Stitch** and **Chain Stitch**. These are further classified into sub-types.

A. LOCK STITCH

1. BEAN STITCH

Bean Stitch is made when three stitches are made back and forth between two points. Bean Stitches are more definite than running stitches

Use: Bean Stitches are usually used for outlining work as it eliminates the need of repeated digitizing as that in single ply running stitch and also provide bolder appearance than satin stitch.



Triple running line (Bean Stitch) = 37 per inch



2. FILL STITCH

Fill Stitch also known as Tatami or Geflect Stitch, is made by a series of running stitches used to cover a large area without visible stitching on top.

Use: Variety of stitch patterns can be made by repeating sequence of stitch, altering angle or varying the stitch length



- ✓ **1 square inch of Fill Stitch** with a stitch of **6 mm** can give **1000 stitches** at normal density.
- ✓ **1 square inch of Fill Stitch** with a stitch of **4 mm** can give **1500 stitches** at normal density.

3. RUNNING STITCH

Running Stitch is made when a single stitch is made between two points. It is also termed as the foundation for most 'underlay' and 'fill' stitches.

Use: Running Stitch can give a great appearance for fine detailing, outlining and underlaying.



- ✓ Areas that are **1 mm or shorter** are usually filled with running stitches.

4. SATIN STITCH

Satin Stitch also known as Column, Stein, Swiss, or Blatt Stitch, is made when closely arranged stitches are laid down at an angle and at varying lengths.

Use: Primarily used for texts and lettering, Satin Stitches provide a shiny look which is perfect for all the designs. Here the stitch moves back and forth over a small area.



- ✓ **1 mm of Satin Stitch = 100 stitches per running inch and 115 with underlay.**

5. UNDERLAY STITCH

Underlay Stitch consists of light density fill stitches placed in opposite direction to the final design. Underlay stitch is calculated based on running stitch and satin stitch calculation.

Use: Underlay is used as the foundation for the later on final design. It provides stability to light/stretch fabrics and also aids to popping details in the final design.



B. CHAIN STITCH

Chain Stitch is formed by a series of loops formed in a chain like pattern. Here every stitch forms a loop through the forward end of the next. Usually used to produce flowing lines.

Uses: While lock stitches seldom manage to provide a detailed appearance to design, chain stitches are used to give the design depth and dimension.

