



## Stitch density guide

Due to the different thread types and thicknesses, the stitch density needs to be adjusted when digitising. In some cases, different embroidery needles are also recommended.

The chart below shows the stitch density and the appropriate needle sizes that are suitable for each embroidery thread. Having the right combination of stitch density and needle size is important and will lead to a much more satisfactory embroidery result.

| THREAD TYPE       | STITCH DENSITY<br>based on<br>1/10mm | STITCH DENSITY<br>based on<br>1mm | RECOMMENDED<br>NEEDLE SIZE |
|-------------------|--------------------------------------|-----------------------------------|----------------------------|
| CLASSIC 60        | 3.5                                  | 0.35                              | 60/8 - 65/9                |
| CLASSIC 40        | 4.0                                  | 0.40                              | 65/9 - 75/11               |
| CLASSIC 30        | 5.0                                  | 0.50                              | 75/11                      |
| CLASSIC 12        | 8.0                                  | 0.80                              | 100/16                     |
| SENSA green       | 3.7                                  | 0.37                              | 65/9 - 75/11               |
| POLYNEON 75       | 2.0                                  | 0.20                              | 60/8                       |
| POLYNEON 60       | 3.5                                  | 0.35                              | 60/8 - 65/9                |
| POLYNEON 40       | 4.0                                  | 0.40                              | 60/8 - 75/11               |
| POLYNEON FR       | 4.0                                  | 0.40                              | 60/8 - 75/11               |
| POLYNEON green    | 4.0                                  | 0.4                               | 60/8 - 75/11               |
| CR 20             | 7.0 - 8.0                            | 0.70 - 0.80                       | 90/14, SAN®8 FFG 80/12     |
| CR 40             | 3.5 - 4.0                            | 0.35 - 0.40                       | 65/9, 70/10, 75/11         |
| FS 50             | 3.5                                  | 0.35                              | 65/9 - 75/11               |
| FS 40             | 4.0                                  | 0.40                              | 65/9 - 75/11               |
| FS 30             | 5.0                                  | 0.50                              | 80/12 - 90/14              |
| FS 20             | 8.0                                  | 0.80                              | 100/16                     |
| SUPERTWIST 30     | 6.0                                  | 0.60                              | 80/12 - 90/14              |
| BURMILANA 12 / CO | 9.0                                  | 0.90                              | 100/16                     |
| FROSTED MATT 40   | 3.0 or 4.0                           | 0.30 or 0.40                      | 60/8 - 70/10               |
| FROSTED MATT 30   | 5.0 or 6.0                           | 0.50 or 0.60                      | 70/10 - 80/12              |
| LUNA              | 4.0 or 5.0                           | 0.40 or 0.50                      | 75/11 - 80/12              |
| FIRE FIGHTER      | 4.0                                  | 0.40                              | 75/11 - 80/12              |
| MONOLON           | 3.5                                  | 0.35                              | 65/9                       |

All tips are only to be considered as rough guidelines and may vary depending on the fabric used.

**Guidelines for underthread use:** For standard length stitches, the general requirement for underthread is approximately 3m per 1000 stitches.

**Top thread:** You can expect approximately 5m per 1000 stitches.

**Correct thread tension:** Perfectly tensioned embroidery with standard length stitches should have 1/3 bobbin to 2/3 top thread visible underneath.