



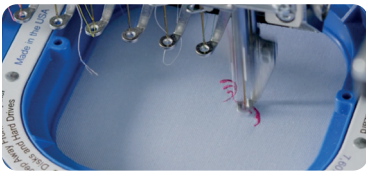
Avoiding puckering is one of the most demanding jobs in embroidery. This tutorial gives you an introduction to which screws to turn to improve your embroidery results.

Pucker-free embroidery designs

There are eight important factors to check: adjust to the fabric used, use the right thread tension, select an appropriate needle size, adjust the stitch density and machine speed, vary the thread weight, use the right backing, hoop correctly and adjust until it works.

Step-by-step guide on how to get rid of puckering in embroidery

1



Correct punching and stitch density

In the preparation phase, run a first test with the design and fabric and let the puncher adjust the stitch density, the number of filling and underlay stitches, and the stitch direction, if necessary.

2



Thread tension

The most important factor is to get the thread tension right. The lower the tension, the better. As a rule of thumb, embroider a test design and check that the ratio on the reverse side of the embroidery is 1/3 bobbin and 2/3 top thread.

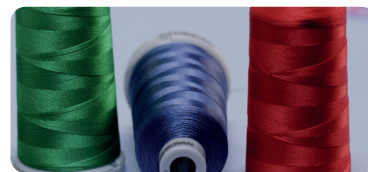
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Use a tension gauge

If the thread tension is incorrect, use a tension gauge to first adjust the bobbin thread to 25 gf or cN, then the top thread accordingly to obtain 1/3 - 2/3 without distortion. Test until the result is right, before proceeding.

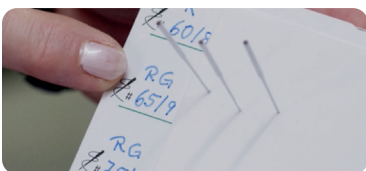
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Low yarn weight

The finer the yarn, the less the fabric is distorted, so we recommend 60 or 75 weight yarns or any thread with a dtex lower than 200 for delicate or stretchy textiles.

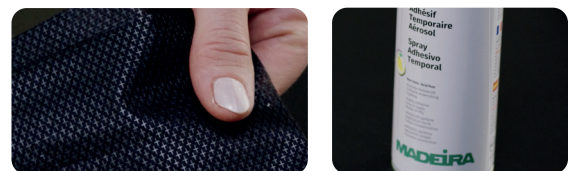
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Small needles

Use the smallest needle possible for the thread. Especially for finer fabrics, 60/8 or 65/9 needles provide good results.

6



Good stabilisation

Good stabilisation without tension on the fabric is necessary. Using a fusible backing, adhesive spray and/or an additional topping can improve the results.



7



Correct hooping

Smooth the textile and carefully hoop it without folds, making sure not to stretch it with the selected backing and/or topping.

8



Try and adjust again

Any one, or all eight factors together, might be responsible for puckering. To get the perfect result, test and adjust until you achieve the required result.

Important information for use:

Minimise underlay stitches.
Embroider from the inside to the outside of the design.
Also try to reduce the stitch density.
200 dtex = 180 den