

- **BODYBUILDER 3D foam** - the perfect solution to create raised embroideries, available in hard, soft and colours. Hard foam creates more prominent contour lines and is popular for baseball caps, soft foam offers more flexibility.
- **Notify your digitiser who MUST accommodate 3D stitching.** Where possible, embroider 3D area at the end of the design to save time. Stitch flat surfaces then insert a stop, lay foam and stitch the 3D area. Shapes and letters with open areas need to be capped off or rounded to perforate the foam.
- **Needles:** Ballpoint **SES** needles perforate the foam better and work on many fabrics but always choose the needle style and size most suitable for the materials. Sharp point **RG** needles are best for tightly woven fabrics. For **Baseball caps** use a size 80 or larger needle or try extra strong titanium **SAN®1** needles.
- **Do not hoop the foam with the fabric.** Pre-cut the foam slightly larger than the 3D area required and lay on top. To prevent movement, fix using temporary adhesive spray or secure with two stitches top and bottom. To increase embroidery height, use two layers of foam, then increase the pull compensation of the design to accommodate the extra thickness.
- With a running stitch, create an outline of the shape to be embroidered. Double the stitch density from 0.4mm to 0.2mm - moving stitches closer together improves the coverage of the foam and assists foam perforation.
- Embroider 3D area of your design in satin stitch for optimum results as other stitch types will flatten the foam. Increase stitch length and loosen thread tension so the foam is not compressed. Seal off the ends of any straight edges with extra stitches to stop the foam showing through.
- **Peel away excess foam.** **BODYBUILDER's** structure allows stitches to create a clean perforation ensuring it will pull away easily. Use hot air to shrink away any visible foam or gently press into the stitches to help it disappear back under the thread.

## Learn more:

**Punch Book** - Digitising for Embroidery design by Bonnie Nielsen

For more information go to [www.madeira.co.uk](http://www.madeira.co.uk)

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