Designing for large bed SLA 3D Printing: A quick guide









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ASSEMBLY STRATEGY

The 800 x 800 x 600mm print bed on the NEO 800 means minimal sectioning is required for larger pieces. If, however, your model has interior detailing, you may want to think about your assembly strategy.

- Splitting models in the CAD: split by seam; or split by component. Remember to factor in print bed orientation
- For parts extending beyond the print bed, use aligners. Split the CAD in areas of least complexity. Joinery methods such as bump and groove, lips, recessed areas for glue and pins are all feasible. Wall thickness will define your assembly connection strategy.



WALL THICKNESS

• Supported walls: for the NEO 800, a thickness of 0.2mm can be achieved. For optimum results. 0.4mm is advised

STEP

• Unsupported walls: these can be achieved at 0.4mm. For optimum results, 0.6mm is advised

DETAILING

The smooth finish and the materials available makes SLA exceptionally good for creating models with interior details.

- Internal detailing: split the model at the seam. The key to outstanding internal detailing is to remember that SLA requires support structures. The more delicate the area, the greater the number of support structures required.
- Embossed detailing: we recommend you don't go less than 0.05mm - 0.1mm
- Engraved detailing: we suggest a width and depth of no less than 0.3 mm from the model surface



SOMOS® EvoLVe 128: this shiny white thermoset plastic is a durable, sightly flexible resin ideal for fine detailing. EvoLVe 128 can be sprayed with colour and bonded to other materials with ease. The finish is exceptional.

SOMOS® WaterShed XC11122: this tough, durable resin produces optically clear parts with a brilliantly smooth finish. Because the resin has been designed for ease of use, and because our NEO 800 has one of the best scanning resolutions of any industrial printer, prints are produced guickly.

WaterShed takes colour well. It can be sprayed or laquered to retain a level of transparency. With a heat deflection temperature of 50°C, it is suitable for models requiring LED underlights.

FINISHING OPTIONS

- Basic and blast: removal of all build support evidence, and an even bead blasted finish
- · Basic and lacquer: removal of all build support evidence and a coat of clear lacquer
- De-layer and blast: removal of all build support and layering evidence and an even bead blasted finish
- De-layer, lacquer and polish: removal of all build support and layering evidence and a coat of clear lacquer and polish
- Model assembly, painting and polishing



What do you want to make today?



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THE WOW FACTOR

Like any thermoplastic, painting your model directly requires a certain amount of preparation. We recommend a good matte primer to help your paints to adhere to the ultra-smooth plastic surface finish.

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The SLA/3D Printing advantage:

• Super smooth, highly detailed, large models

• Large print beds means minimal splitting/section assembly

• Highly cost-efficient - massive price savings

• Quick turnaround - often printing in less than 12 hours, most finishing in less than a day, with next day delivery available