

## 3D printing Capabilities

### Fortus 450MC Stratasys 3D printer:

The Fortus 450MC 3D printer is one of the best machines within the field of additive manufacturing. Using high performance thermoplastic materials including soluble supports, the Fortus, combined with the Eft 500 Washing and Finishing Tank can manufacture a variety of complex parts and dissolve support efficiently.

Build Size - 406 mm x 355 mm x 406 mm

Layer Thickness - 0.127 mm – 0.330 mm

Accuracy -  $\pm 0.127$  mm or  $\pm 0.0015$  mm/mm dependant on geometry

Tolerances -  $\pm 0.1$  mm

Materials - ASA, ABS, PC, Nylon 12 Carbon Fibre

Software - Stratasys Insight and Control Centre plus compatible with GrabCAD

Time taken or build rate: Dependant on part size and complexity up to 2 day

### Desktop Metal Studio System:

Using bound metal rods, removing the need for lasers and loose powders, the Desktop Metal Printer can produce a wide variety of intricate geometrical metal parts within a matter of hours. Alongside the Desktop Metal Printer, the Studio System Debinder allows the recently produced metal parts to dissolve the primary binder within the bound metal rods creating channels of open pores in preparation for sintering in the Studio System Furnace. The industrial strength sintering process uniformly heats parts removing secondary binder fusing the metal with no residual stresses.

Build Size – 300 mm x 200 mm x 200 mm

Layer Thickness - 0.10 mm – 0.22 mm

Accuracy -  $\pm 0.5$  mm for parts less than 60mm

Print Material – 17-4 PH Stainless Steel, 316L Stainless Steel, H13 Steel, 4140 Steel, Inconel 625, Copper.

Build Media – Bound Metal Rods (metal powder with a wax and polymer binder)

Interface Material – Bound Ceramic

Software: Fabricate

Build rate: 16000 mm<sup>3</sup>/hour

Maximum Build Weight: 6.5 kg