



Product	Industrial Production SLS Printer	Commercial SLS printer with accessibility through ease of use and low entry price to technology
Applications	Medical, Aerospace, Industrial, Automotive, Ducting, Consumer goods	Prototyping, Jigs & Fixtures, Medical, Consumer Goods
Duty Cycle	Daily production High volume productivity	Weekly production Low to medium volume productivity
<b>PRINTER HARDWARE</b>		
Laser Power Type	100 W CO2 Laser – Industrial grade with Galvo scanners with Z-coil	50 W CO2 Laser – Commercial grade with Galvo scanners with F-theta lens
Volume Build Rate	2.7 l/hr	1.0 l/hr
Build Volume	Max 381 x 330 x 460 mm XYZ PA 11 330 x 280 x 450 mm XYZ default PA 12 dims will vary	Max 300 x 300 x 300 mm XYZ PA 11 250 x 250 x 275 mm XYZ default PA 12 dims will vary
Recoater	Variable speed Counter Rotating Roller	Fixed blade
Powder Management	Transport- Material Quality Control (MQC) Depowdering - at the MQC. Recycling - Mixing is done with the MQC Additional MDM available for quick material change and print	Transport – Internal powder storage from material tube Depowdering - Bulk depowdering in the machine with a vacuum. Final depowdering in Water Jet cabinet with filtered recirculating water Recycling - No-Mixing or material recycling
Powder Recycling	% blend is material dependent and performed by MQC	100% fresh only
Print Bed Thermal Management	Closed loop thermal control with IR camera and 8 heaters with 8 heater zones	4 Pyrometers with 8 heaters and 4 heater zones
Build Turnover Management Based on 50 mm build height data PA 11 material	1 hr – warmup 2 hr – build time 1 hr – cool down time <b>Total 4-hr to remove from printer (Turnover time)</b> <b>New build may start</b>  6hr cool-down at MQC not in printer 10 hr- Part in hand	1 hr – warmup 2 hr – build time 7.5 hr – cool down time in printer <b>Total 10-hr to remove from printer (Turnover time)</b>  10 hr - part in hand
<b>PRINTER SETUP</b>		
Full Solution Footprint	Complete Solution: Printer, MQC, N2 Generator, Vacuum 18.8m <sup>2</sup> / 201 sq ft	Complete Solution: Printer, Water jet, Atmosphere, vacuum 3.7m <sup>2</sup> / ~40sq ft
Infrastructure	Compressed Air, Nitrogen, three phase and big door openings for installation	1-phase power, internet, no house N2 or CDA required, Fit thru a standard door to install
Work Environment Maintenance	Area maintenance and floor cleaning regularly	Minimal powder outside of systems- Very clean work environment
<b>PRINTER OPERATION</b>		
Software	3D Sprint on PC or at Printer UI	Deep Space SW - Fully cloud connected
Operation	Mouse, keyboard, screen and a window for surveillance	Printer Face touchscreen with instructions, buttons and a built in Camera for viewing the progress with overlays on front of printer
Build Monitoring	Performed at the printer or desk PC	Performed remotely via SW, smart phone, and at printer
Part Packing Density	Part Spacing 5mm More Freedom for packing in Z – geometry dependent	Part Spacing 10mm Less freedom for packing in Z – geometry dependent
<b>MATERIALS &amp; CAPABILITY</b>		
Materials	7 materials: PA11, PA12, GF, AF, CF, HST Pure white, black, aluminum metallic, more	2 Materials: PA11, PA12 Natural, Black (PA 11 only)
Accuracy Geometry Dependent	250 um + 100um each 25mm Printer tuning enables enhanced capability	350 um + 100um each 25mm Printer tuning enables enhanced capability
Surface Finish	Industry leading part quality and an advantage for consistent smooth parts without orange peel	Good part quality, and parts show some lines in Z
Mechanical Properties	Part density, Tensile, Flexural, Impact properties similar	