Configurable, modular 3DP

RANGE Production Printer

Designed for the factory floor: whether a build contains a single large piece or hundreds of small pieces, this technology platform enables next level throughput and Total Cost of Ownership (TCO). The base Range production configuration utilizes 6 powerful light engines calibrated to produce high quality, accurate parts at mass manufacturing production rates. Patented Modular Digital Light Processing (mDLP) technology achieves industry-leading scalability and speed vs legacy SLA solutions.
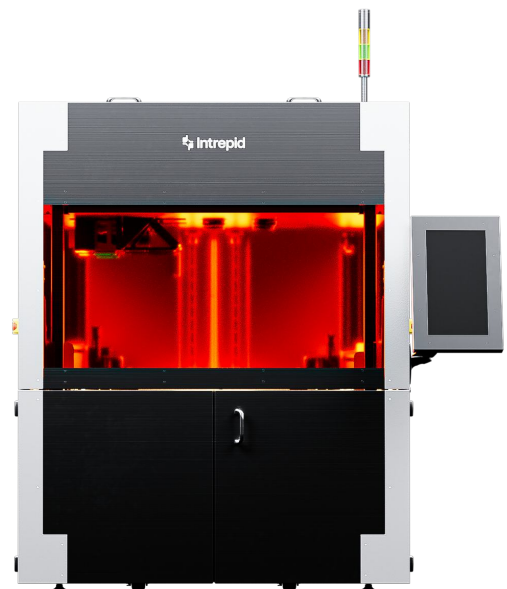
Benefits

→ Proprietary software enabling seamless stitching of images for improved accuracy

→ Modular design, Automation ready

→ Integrates easily into legacy SLA operations while producing builds 3-10x times faster

→ Compatible with a variety of qualified resins

Applications

→ Large build volume for many small parts or a single run of large parts

→ Complex or un-moldable geometries

→ Low to medium volume production

→ High throughput and/or agile production

Intrepid

Large format, automation-ready printer module (Product data sheet)

RANGE Production Printer

Build Volume	760mm x 660mm x 560mm	29.92in x 25.98in x 22.05in
Resolution	XY = 104um	Z = Variable from 50um to 150um
General Accuracy*	<66mm +/-0.1mm >66mm +/- 0.15% of feature size	
Production Repeatability*	Up to +/- 200um	
Vertical print rate & Volume Rate*	Up to 45mm per hour Up to 1.77inch per hour	Up to 26M mm3 per hour Up to 1,377 inch3 per hour
Post Processing	External Accessories: Resin removal spinner and final UV cure chamber	
Automation*	Modular design; Automation ready. As applications scale, individual units can be connected to create a continuous, lights out production cell. Removable build platforms and interchangeable vats to enable fast change over, higher machine utilization	
Software	Compatibility: Variety CAD/mesh formats; Default Materialise Magics System: Continuous closed-loop to enable optimal printing performance Process & Operations: Print preparation, printer/fleet management, design file management, job management/optimized print planner, remote print monitoring and management, materials library, production history, print analytics; Automation: Customizable digital workflows to reduce errors and maximize labor	
Security	Enterprise level security encryption	
Support	Technical Account Managers are assigned to each client for onboarding, education, support, and engineering and design assistance. Production monitoring and remote technical support is available under support plan (certain features subject to SaaS pricing)	
Materials	Thermoforming (including Dental aligners), Investment Casting; Proprietary and third party resin formulations available for qualification. Custom formulation development available. Rigid, Flexible, Engineering, and Industry aligned solutions.	
Unit Size	1,700mm x 1,750mm x 2,040mm	66.9in x 68.9in x 80.3 in
Unit Weight	650kg (~1250kg with full resin vat)	1,430 lbs (~2276 lbs with full resin vat)
Facility Requirements	• Electrical: 208VAC, 3-phase, 50 ~ 60 Hz, 24A print cell; 120VAC, 50 ~ 60 Hz, 5A VAT in standalone mode • Networking: 1 Gbit Connection at the RJ45 port • Compressed Air: Clean dry air at 80-125 PSI • Ventilation: 6" duct connection to exhaust to outside • Vibration: Isolated from significant sources of vibration – continuous and discrete • Nitrogen: 125L/min available for curing	
Operating Conditions	• Temperature: 21-28C (70-82F) • Humidity: 30-70%; best results at steady state or consistent conditioning	