



PILOT Commercial Series

A New Dimension in Stereolithography 3D Printing

- **Cost-effective ownership** throughout entire life cycle.
- Freedom to collaborate and innovate: **open design** for materials and machine access.
- Printed parts demonstrate **excellent sidewall quality** and **fine detail**, contributing to lower post-finishing requirements.

System Features

- Scanning speed can reach 12 m/s.
- Key components from international top brands.
- Automatic control of surface level and processing parameters.
- Granite recoater frame for enhanced recoating stability.
- CE certification.
- Convenient assembly and disassembly of platform.

Versatile Application Range · High Accuracy · Excellent Surface Aesthetics



Technical Data

* Specifications are subject to change;
consult with your sales representative for confirmation of current offering.

	PILOT 250	PILOT 450
Build Envelope Capacity	9.8 x 9.8 x 9.8 in (250 x 250 x 250 mm)	17.7 x 17.7 x 15.7 in (450 x 450 x 400 mm)
Maximum Part Weight	38.6 lb (17.5 kg)	77.2 lb (35 kg)
Accuracy	Part size < 1 in (25.4 mm): ±0.001 in (±0.025 mm) Part size ≥ 1 in (25.4 mm): ±0.1% x L	Part size < 3.9 in (100 mm): ±0.004 in (±0.1 mm) Part size ≥ 3.9 in (100 mm): ±0.1% x L
Beam Size	Standard Beam (0.12 – 0.20 mm) or Small Beam (0.06 – 0.08 mm) ,optional	Nominal 0.003 -0.005 in (0.08 -0.12 mm)
Scanning Speed	12m/s (Maximum); 6 -10m/s (Typical)	12m/s (Maximum); 6-10m/s (Typical)
Layer Thickness	0.002 in (0.05 mm) minimum; 0.01 in (0.25 mm) maximum	0.002 in (0.05 mm) minimum; 0.01 in (0.25 mm) maximum
Weight	1709 lb (775 kg) (with 106 lb (48 kg) initial fill inside)	2392 lb (1085 kg) (with 353 lb (160 kg) initial fill inside)
Machine Size (WxDxH)	43.5 x 41.4 x 77.3 in (1105x1052x1965 mm)	52.4 x 53.9 x 84.3 in (1331x1368x2140 mm)

PILOT 250 / 450

Laser	Solid-state frequency tripled Nd: YVO ₄
Wavelength	355 nm
Controller	UnionTech™ RSCON
Part Preparation	PolyDevs or Materialise Magics
Operating Systems	Windows 7, Windows 10*
Input Data File Format	STL
Network Type and Protocol	Ethernet, IEEE 802.3 using TCP/IP and NFS
Electrical Requirements	200 - 240 VAC, 50/60 Hz, single phase
Laser Warranty	5,000 hours or 15 months (whichever comes first)
Recoater Frame	Granite
Systems Control	Closed-loop
Power (nominal)	Typically 250 ~ 350 mW on the target surface of the material under nominal optical path condition

Operating Environment:

Temperature Range	72–79 °F (22–26 °C)
Maximum Change Rate	1 °C/hour
Relative Humidity	< 40 % non-condensing

Accessories :

Additional Resin Vat	Optional
Processing and Finishing	Post-Curing Unit (optional)
System Warranty	One-year warranty (under UnionTech's Purchase Terms and Conditions)

UnionTech

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