



## PILOT Commercial Series

### A New Dimension in Stereolithography 3D Printing

- Lower operation & maintenance costs with excellent stability throughout entire life cycle.
- Tailored for exquisite parts with open design for materials and machine access.
- Printed parts demonstrate excellent sidewall quality and fine detail.

## System Features

- Scanning speed of up to 12 m/s.
- Closed-loop control regulates platform movement, laser power, resin level, resin temperature, and vacuum pressure to ensure accuracy and stability.
- Granite recoater rim for enhanced stability.
- layer thickness as low as 0.002 in (0.05 mm) for excellent surface quality.
- Ethernet connectivity
- Plunger-style leveling.
- Pump-fed auto refill capability.
- Components from top international brands—Optowave/Spectra-Physics , SCANLAB, and Panasonic.
- Full freedom of choice in materials: equipment uses any 355 nm SL material.
- Three levels of access (Operator, Engineer, and Expert) controlled by user.

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	16m/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 <sub>4</sub>
Wavelength	354.7 nm
Controller	UnionTech™ RSCON
Part Preparation	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	18 months
Base Plate/Recoater Rim	Granite
Systems Control	Closed-loop
Power (nominal)	At head 1500 mW (typical 300 mW at material surface 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 for PILOT 250
Platform Change Carts	Manual offload cart optional for PILOT 450
Processing and Finishing	Post-Curing Unit
System Warranty	One-year warranty (under UnionTech's Purchase Terms and Conditions)

## UnionTech

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