MAPTEC
COMPUTER SYSTEMS
MANUFACTURING *TOMORROW*

UnionTech
Create your imagination

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 × 17.7 × 15.7 in (450 × 450 × 400 mm)
Maximum Part Weight	38.6 lb (17.5 kg)	77.2 lb (35 kg)
Accuracy • Accuracy may vary depending on parameters, part geometry and size, pre-processing or post-processing methods, materials and environment.	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 (1105×1052×1965 mm)	52.4 x 53.9 x 84.3 in (1331×1368×2140 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 FileFormat	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)

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U.A.E.Office:
Office 701, Wasl Business Centre
Port Saeed, Deira, Dubai
United Arab Emirates
P.O. Box 98617
Tel:+971 4 251 7734
Fax:+971 4 251 7736
Email: info@maptec.ae

K.S.A. Office:
A. Shifa Area, Al-Mussa Industrial Area Al-Nasser Street, Cross Hayel Road Riyadh, Kingdom of Saudi Arabia
Tel:+966 545 823123
Email: info@maptec.ae