

# Introduction of Pilot SD

- Benefit from bran-new industrial design, Pilot SD has excellent human computer interaction experience. With the help of international top brands, like Panasonic of Japan, Advanced Optowave of America, Scanlab of Germany, Its surface quality, precision and reliability reaches a unparalleled level.
- Closed-loop control strategy is applied in platform moving , laser power controlling, resin level controlling, resin temperature controlling and negative pressure controlling to ensure accuracy and stability. Z axis resolution reached  $1\mu\text{m}$ , guaranteeing layer thickness of the part.
- The Pilot SD's resin consumption keeps at a minimum value due to its reasonable scanning strategy and simplified support. Its running cost is much lower than other print technologies. Stereolithography (SL) is one of the most efficient and effective prototyping technologies available. There is nearly no noise during printing.

## System Feature

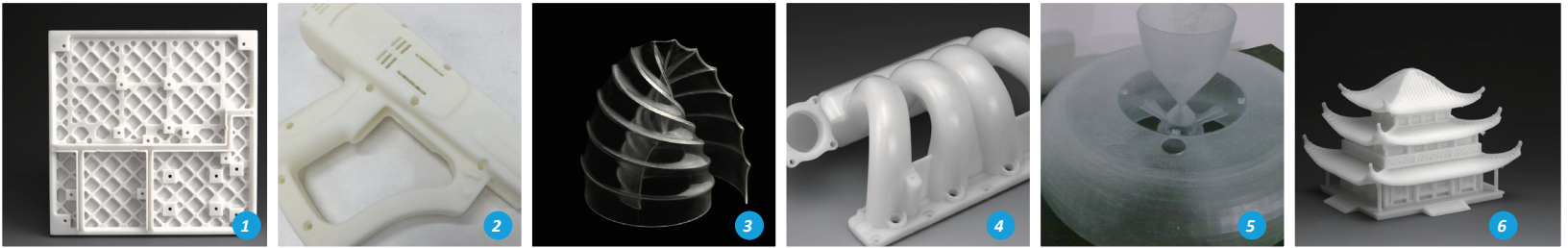
- Scanning speed is 6~12m/s.
- Automatically controlled the surface level and processing parameters.
- Marble recoating substrate can realize 0.05mm layer thickness stably to get excellent surface quality.
- CE certification.
- Convenient to assembly and disassembly platform.
- Telecontrol system can realize remote controlling and order-processing.
- Replaceable resin tank optional. High end version has replaceable resin tank, but Low end version does not.
- Automatic infusion for the resin tank.
- Automatic odor removal, office environment.

**UnionTech**<sup>TM</sup>  
Create your imagination



# Materials for Pilot SD Printer

Pilot SD's Materials have earned a global reputation for providing the stereolithography community with groundbreaking, high-performance materials to fit just about every application.



## 1. PerFORM:

- Excellent detail resolution
- Faster, easier processing & finishing
- Superior high heat tolerance
- Expanded applications

## 2. NeXt:

- Superior strength and durability
- Exceptionally versatile
- Thermoplastic-like performance

## 3. WaterClear Ultra 10122:

- easy to use and fast to build
- exhibit excellent water and temperature resistance
- produces colorless, functional and accurate parts that simulate an acrylic appearance

## 4. Gpplus 14122:

- low-viscosity liquid photopolymer
- has a white, opaque appearance
- with performance that mirrors production plastics like ABS and PBT

## 5. WaterShed XC 11122:

- mimic traditional engineering plastic, such as ABS and PBT
- superior clarity and water-resistance
- durability for functional testing

## 6. ProtoGen 18420:

- high-heat and humidity resistant
- creates accurate, easy-to-clean white parts, ABS-like
- ideal for automotive and medical applications
- ideal for electric and aerospace applications



## Technical Data

Build Envelope Capacity	250X250X250mm
Maximum Part Weight	17.5Kg
Accuracy	±0.025mm(L≤25.4mm)/ ±0.1%×L(L>25.4mm) Accuracy may vary depending on parameters, part geometry and size, pre-processing or post-processing methods, materials and environment.
Z axis Positioning accuracy	≤±8μm
Liquid level positioning accuracy	≤±0.03mm
Laser	Solid-state frequency tripled Nd:YVO4
WaveLength	354.7nm
Beam Size	Small Beam ( 0.06 – 0.08 mm ) or Large Beam (0.12 – 0.20 mm) optional
Scanning Speed	6~12m/s
Controller	RSCON of Union-Tech
Part Preparation	Magics of Materialise
Operating System	Windows 7
Input Data File Format	STL
Network Type and Protocol	Ethernet, IEEE 802.3 using TCP/IP and NFS
Layer Thickness	0.05mm(min);0.25mm(max)
Electrical Requirements	200-240 VAC 50/60Hz, single-phase, 20amps
Laser Warranty	10000 hours or 18 months(whichever comes first)
Base plate	Marble
Pressure Adjustment	Closed-Loop
Weight	1050Kg(with 50Kg initial fill inside)
Power(nominal)	300mW
Rated Power	3.8KVA

## Operating Environment

Temperature Range	22-26°C
Maximum Change Rate	1°C / hour
Relative Humidity	< 40% non-condensing
Space Requirements Size(WxDxH)	1105x1118x1965mm

## Accessories

Resin Tank	Manual changing, optional
Processing and Finishing	Post-Curing Unit
System Warranty	One-year warranty, under Union-Tech's Purchase Terms and Conditions