Stratasys Objet30 Pro Polyjet 3D Printer

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Tool Type: 3D Printer
Location: 3430 Elings Hall (CNSI Microfluidics Lab)

Supervisor	Tool Lead
David Bothman	Balfred Carrillo Martinez
(805) 893-4125	(619) 715-9583
bothman@cnsi.ucsb.edu	bcarrillomartinez@ucsb.edu

Description: Multi-Material 3D Printer
Manufacturer: Stratasys

About

This 3D Printer is a very accurate and versatile tool that can be utilized with different types of printing materials. The printer has two print heads – one prints the structural material for parts, and the other prints a support material. Parts are built on a layer of the support material. Matt finish parts are surrounded in support, and overhanging features are supported with support material during printing. The support material is removed in the water jet station. This is a great tool for accurate and precise models.

Training Documentation

Objet Training SOP

Detailed Specifications

Model Materials	***Rigid Opaque:*** VeroWhitePlus™, VeroBlackPlus™, VeroGray™, VeroBlue™ ***Transparent:*** VeroClear™ Simulated ***Polypropylene:*** Rigur™ and Durus™ High Temperature
Support Material	SUP705 gel-like photopolymer support
Maximum Build Size (XYZ)	294 x 192 x 148.6 mm (11.57 x 7.55 x 5.85 in.)
System Size and Weight	82.6 x 60 x 62 cm (32.5 x 23.6 x 24.4 in.); 106 kg (234 lbs.)
Resolution	***X-axis:*** 600 dpi; ***Y-axis:*** 600 dpi; ***Z-axis:*** 900 dpi
Accuracy	0.1 mm (0.0039 in.) varies depending on part geometry, size, orientation, material and post-processing method
Minimum Layer Thickness	28 microns (0.0011 in.); 16 microns for VeroClear material (.0006 in.)
Build Modes	***High quality:*** 16-micron (.0006 in.) resolution ***High speed:*** 28-micron (.001 in.) resolution
Software	Objet Studio™ intuitive 3D printing software
OS Compatibility	Windows XP/Windows 7/Windows 8
Network Connectivity	Ethernet TCP/IP 10/100 base T
Operating Conditions	Temperature 18-25°C (64-77°F); relative humidity 30-70%
Power Requirements	***Single phase:*** 100-120V; 50-60Hz; 7A or 200-240V; 50-60Hz 3.5A
Regulatory Compliance	CE, FCC/RoHS

Safety Concerns

Printer Operation

- The printer should only be operated by persons trained by David or any Workshop Wizard.
- Gloves should be worn when working with the print resins and when cleaning the print heads
- All personnel operating or maintaining the printer should know the location of first aid and emergency equipment and how to use it.
- Never block access to this equipment!
- Keep fingers and other body parts clear of the printer cover when closing it.
- Never attempt to open the main cover of the printer while it is working!
- Never override the interlock safety switch!
- If the interlock safety switches ever fail, do not use the printer.
- Several parts of the printer remain extremely hot even after it has stopped operating. Avoid touching the UV lamp and the print block.

Reference Documentation

- Cleaning Objet parts with Sodium Hydroxide
- Making 3D printed Molds
- Post Processing
- Users Guide

Print Head Cleaning

	Print Head Cleaning
Build Tray Cleaning 1	Build Tray Cleaning 1
Build Tray Cleaning 2	Build Tray Cleaning 2
Build Tray Cleaning 3	Build Tray Cleaning 3
Head Allignment	Head Allignment
Load Cells Calibration	Load Cells Calibration
Pattern Test	Pattern Test
System Shutdown	systemshutdown.mp4
UV lamp Cleaning	UV lamp Cleaning
Wiper Cleaning Inspection	Wiper Cleaning Inspection