Objet30Pro

Stratasys Objet30Pro Polyjet 3D Printer	
Tool Type: 3D Printer	
Location: 3430 Elings Hall (CNSI Microfluidics Lab)	
Supervisor	**Tool Lead**
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Description: Multi-Material 3D Printer	
Manufacturer: Stratasys	

About

This 3D Printer is a very accurate and versitile 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.

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

Operating Procedures

Start of run:

1. Save CAD file in.STL format, bring to the printer on a thumb drive.
2. In ***Objet Studio insert*** the file – you should see the part on the image of the print platform.
3. **Validate** the design
4. Select ***matt or glossy finish*** for each part
5. Run the **estimator** to determine the print materials required and the print time
6. Enter this information in the log book
7. Press **build**
8. Open the remote desktop connection to the printer
9. **In the printer window click on the red circle** – turning it green to start the job. At this point, you should hear the cooling fans on the printer turn on. The print job should start after the heads warm up (~15 minutes if the printer hasn't been running for a while).

After run is complete:

1. Remove parts using a putty knife in the drawer below the printer.
2. Scrape any support material remaining on the bed off with the razor scraper in the drawer beneath the printer. Take care to collect the debris, don't dump it into the gap between the print bed and the printer.
3. Clean the print bed using a paper towel wetted with water.
4. **Run the head cleaning wizard – the print heads cost ~ $5k and will be ruined if not cleaned after the run!**
5. Clean your parts in the water jet cleaner

Documentation

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