3D SYSTEMS
Additive Manufacturing Solutions

Keypoint Intelligence - Buyers Lab

SUMMARY OF TEST FINDINGS

3D Systems FabPro™ 1000

INTRODUCTION

3D Systems commissioned Keypoint Intelligence - Buyers Lab to conduct a test of the 3D Systems FabPro 1000 alongside four other resin-based 3D printers in its class. Each device was tested and evaluated in the following categories: Ease of Setup; Operational Evaluation; Product Features and Specifications; Output Speed; and Output Quality. Each category evaluated had specific test files and evaluation criteria.

SUMMARY OF FINDINGS

In over 600 hours of testing and 22 different resin types among the five printers, Buyers Lab found the FabPro 1000 to be competitive or superior in many of the areas tested. It was easy to set up, with no need for complex calibrations before use. Loading resin was particularly simple with the QR code automatically making most of the necessary slicer settings. Maintenance was straightforward, and internal examination of the printer identified the very high quality build components and engineering that went into the FabPro 1000.

The 3D Sprint® software was found to be the best of the five vendors' offerings. It is intuitive to use, and is upward compatible with higher-end 3D Systems' plastic printers providing a scalability that only one other printer also offered. 3D Sprint has many advanced features and a CAD/Modeling interface that provides the user with considerable control over the print process.

" The FabPro 1000 is a competitive system and a good value for the price."

- Keypoint Intelligence - Buyers Lab

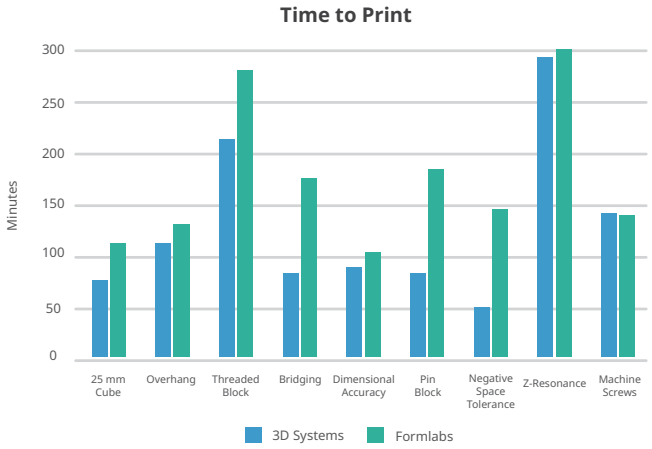
KEYPOINT INTELLIGENCE Buyers Lab

The FabPro 1000 did very well in speed tests, it was the fastest printer overall in most of the tests conducted. Buyers Lab was also impressed with the 3D Systems' print accuracy. The surface finish on the printed models was very good, with well-formed text characters and no observable layering.

Overall, Buyers Lab feels that the FabPro 1000 is a competitive system and a good value for the price. And it has instant credibility as 3D Systems was the inventor of stereolithography.

SPEED

In speed tests conducted by Buyers Lab, the FabPro 1000 did very well. In fact, it was the fastest printer overall in most of the tests conducted. Compared to the Formlabs Form 2, the FabPro was the fastest in every test of various geometries and sizes, and was 3 times as fast in a test of 3 parts on a platform (the FabPro is a projection-based imaging system that images the entire layer each time vs. a laser-based imaging system like the Form 2 which draws each layer each time).



		3D SYSTEMS	FORMLABS
25 mm Cube (x3 on build platform)	Quality	Print Mode-50 Micron (0.05mm)	Layer Thickness 0.1 mm
	Material	FabPro Proto GRY	Resin-Grey RS-F2-GPGR-04
	Total Print Time	**1 hr 18min**	**3 hr 12 min**

3D SPRINT

3D Sprint software is upwardly compatible with higher-end 3D Systems' plastic printers; this provides scalability that other 3D printers in this class do not offer if the user decides to add or upgrade to another 3D Systems printer.

Software setup is straightforward, automated, and requires little user intervention. Downloading setup software and driver assures having the latest version. An Accuracy Wizard creates a custom calibration profile to assure the most accurate output.

Highlights:

- Advanced CAD-like features for generating supports, object manipulation, and editing
- Built-in quality Check function checks validity of object prior to printing and makes repairs
- Pre-programmed optimum settings for materials
- Firmware updated to device directly from slicer
- Automatically check to see if printer firmware is up to date and prompt user to update if necessary
- Can change units of measurement between mm and inches
- Export job logs to text files
- Supports engraving of file name onto base of object

EASE OF USE

Set Up

Unpacking and physical setup was fast and simple, requiring removal of the packing materials, physical placement of the unit on a table, attachment to the network via Ethernet, and installation of the 3D Sprint slicing software.

Machine leveling is not required for correct operation. There were no issues with objects adhering to the build platform. Elevator and tilt motor diagnostics tests were performed according to the manufacturer's instructions and no distortion was experienced in the prints produced. Test Projector checks and ensures correct operation of LED.

Material Handling and Build Chamber

QR code on the resin bottle automatically sets slicer material parameters. An operator is automatically reminded to scan the QR code on the resin bottle and to add additional resin into the tank to ensure it never runs low.

Semi-rigid resin catch tray located below the glass print base is easily removed, cleaned, and replaced.

Control Panel Operation

Supports auto configuration of optimum resin parameters; a user simply needs to scan the QR code on each bottle of material for the machine to set the ideal parameters for that type of resin.

Supports the ability to print and cancel jobs from the control panel, versus having to always use the slicer at the workstation. Supports the ability to repeat the previous job run at the control panel.

FILE TYPE SUPPORTED

The FabPro 1000 supported the most file types of any printers tested:

	3D Systems FabPro 1000
.STL	✓
.SLC	
.CTL	✓
.OBJ	✓
.PLY	✓
.ZPR	✓
.AMF	✓
.WRL	✓
.3DS	✓
.FBX	✓
.IGES	✓
.IGS	✓
.STEP	✓
.X_T	✓

Find out more about the FabPro 1000 entry-level industrial 3D printer:

https://www.3dsystems.com/fabpro-1000

ABOUT KEYPOINT INTELLIGENCE - BUYERS LAB

Keypoint Intelligence is a one-stop shop for the digital imaging industry. With our unparalleled tools and unmatched depth of knowledge, we cut through the noise of data to offer clients the unbiased insights and responsive tools they need in those mission-critical moments that define their products and empower their sales.

For over 50 years, Buyers Lab has been the global document imaging industry's resource for unbiased and reliable information, test data, and competitive selling tools. What started out as a consumer-based publication about office equipment has become an all-encompassing industry resource. Buyers Lab evolves in tandem with the ever-changing landscape of document imaging solutions, constantly updating our methods, expanding our offerings, and tracking cutting-edge developments.

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