WHAT IS 3-D PRINTING?

3-D printing is an additive process for converting digital 3-D models of objects into physical 3-D objects themselves. In an additive process, a modeled object is created by laying down successive layers of material until the entire physical object is created. Each of these layers is essentially a thinly sliced horizontal cross section of the eventual object.

The SURVICE Engineering Company begins by using our expertise in making precision dimensional measurements of objects to be produced. Then, we use techniques in computer-aided virtual design to convert our measurements into a digital model of the object. Once a digital model of the object is created, it is introduced into the 3-D printing environment, where it is segmented into extremely thin layers and oriented in the print volume such that print time and material consumption are optimized.

3-D PRINTING

RAPID PROTOTYPING & ADDITIVE MANUFACTURING

SURVICE ENGINEERING COMPANY

Corporate Headquarters
4695 Millennium Drive
Belcamp, MD 21017-1505
metrology@survice.com
410-273-7722

SURVICE METROLOGY LOCATIONS

Atlantic Coast Facility
4694 Millennium Drive
Suite 510A
Belcamp, MD 21017
410-297-2378

Gulf Coast Facility
1992 Lewis Turner Boulevard
Fort Walton Beach, FL 32547
850-362-6920

SURVICE METROLOGY
metrology.survice.com

10-2016

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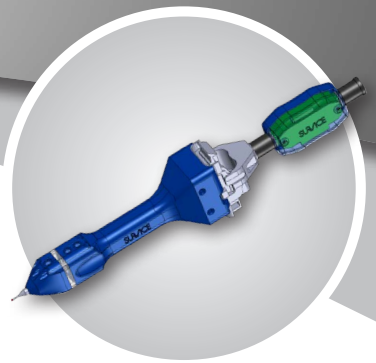
metrology.survice.com

WHY USE 3-D PRINTING?

- Fast and Accurate
- Great for Fit-Checking Parts
- Great for Proofing Prototypes
- Requires Only a Small Footprint (Setup in Office Environment
- Eliminate the Need for Tool Production
- Enables Mass Customization of Complex Products



TECHNICAL SPECIFICATIONS

SURVICE's 3-D printers offer the following features:

- Resolution: 16-μm high resolution
- Size: 260×260×200 mm
- Support material: FullCure 705 non-toxic gel-like photopolymer support
- Layer thickness: Horizontal build layers as fine as 16 mm (0.0006 in.)
- Accuracy: 20–85 mm for features below 50 mm; up to 200 mm for full model size (for rigid materials only, depending on geometry, build parameters, and model orientation)

OBJET ▸
EDEN250

MATERIAL OPTIONS

A variety of printing materials are available including:

- Transparent material (RGD720) for standard plastics simulation requiring dimensional stability and smooth surfaces.
- Transparent material (VeroClear) for fit and form testing of detailed transparent parts and simulation of transparent thermoplastics, such as PMMA.
- Rigid opaque materials (Vero family) in a variety of colors, including white, gray, blue, and black.
- Polypropylene-like material (DurusWhite) for polypropylene-like snap-fit applications.
- Rubber-like materials (Tango family) suitable for a range of applications requiring non-slip or soft surfaces.
- High-temperature material for advanced functional testing, hot air and water flow, static applications and exhibition modeling.

TYPES OF APPLICATIONS

There are many uses for 3-D printing, both for industrial and personal purposes. Manufacturers use 3-D printing to develop rapid prototypes as part of their product design phase. Likewise, 3-D printing has earned a strong presence in the rapid, custom manufacturing of products. And, as the cost of 3-D printing continues to become more affordable, hobbyists and enthusiasts are beginning to use 3-D printing to produce one-off objects for personal use.