

# Going from Concept to Production

## 3D Systems Digital Light Printing (DLP) technology, FabPro™ 1000

Setting a new standard in affordability, quality and speed in the professional 3D printer desktop category, the FabPro 1000 is able to perform several applications that are extremely useful in the manufacturing world, supporting designers and engineers throughout product development.

### Versatility on your desktop

From initial concept models to engineering, validation, and finally production, the industrial-grade FabPro 1000 desktop 3D printer enables rapid manufacturing of parts to meet your product design and development needs. Ideal for engineering and jewelry applications, the FabPro 1000 excels at low-volume, small-part prototyping and direct 3D production across a range of materials, producing high-quality parts with lightning speed, remarkably low operating costs and unsurpassed ease of use.

Select the durable FabPro Tough BLK plastic material for producing black parts for functional prototyping and production parts; opt for the fast, general purpose opaque grey FabPro Proto GRY plastic for high-quality prototypes and models; or produce custom jewelry or other investment castings that capture fine detail and smooth surface finish from master patterns in FabPro JewelCast GRN material. Do it all with the same printer: replacing print trays and switching materials is a snap!

With 3D printing, the cost and lead-time to produce molds is not necessary. There is no need for tooling and setup. The same equipment can be used to produce a variety of different parts, even ones using complex or custom designs. Printing with the FabPro eliminates the high costs and lead-time associated with outsourcing.



*From tough engineering plastics to castable materials, the FabPro 1000 materials are designed for accuracy and quality.*



## Early design validation with fast printed concept models

When designing parts, it can often be a laborious process of trial-and-error to get the right fit. Identifying and fixing design flaws can help companies avoid costly design revisions and tooling changes, saving time and effort.

FabPro 1000 can build proof-of-concept models and prototypes to prove out design ideas. This helps product designers validate ideas and assumptions and test a product's viability. Physical models also provide a specimen to look at and touch when presenting ideas to stakeholders. This can then aid in driving acceptance or realizing rejection using low-risk, low-cost parts.

FabPro 1000's usefulness in this step is the speed at which it can print. Compared to competing systems, the FabPro 1000 features up to four times faster high throughput print speeds for higher-quality parts. This is key to successful concept modeling. Designers often generate a wealth of ideas and being able to print models in hours can validate or disprove the concept quickly. Being able to do this with a FabPro 1000 desktop printer saves not only time, but it also eliminates the need to have a dedicated space for large printers, keeping the validation process in the office or workshop environment.

## Creating high quality functional prototypes

FabPro 1000 will help shepherd the manufacturing process as ideas are validated and brought to production. FabPro 1000 assists engineers in creating accurate, functional prototypes that look and perform like final products. This makes it easier to verify the design, fit, function, and manufacturability before investing in expensive tooling and moving into production, when the time and cost to make change becomes burdensome. FabPro 1000 will quickly deliver functional prototypes for real-life testing to assess how a part will function when subjected to its expected usage.



*This desktop powerhouse packs industrial durability and reliability into a rugged yet compact platform.*

Using DLP technology, the FabPro 1000 uses a projector to image each layer, from 30 to 50 microns, for easy and precise printing. Delivering superior edge detail, accuracy and surface finish, FabPro 1000 production also allows tolerances of parts to be tested to the expectations of the completed, manufactured part before moving into mass production.

***"The FabPro 1000's speed allowed me to build parts and finish them in the same day, and the surface quality rivals what I've seen on more expensive technologies. Changing materials was also easy compared to other systems - there is no need to purge print heads as it is building from the tray and I can just add more material to the tray."***

***- Scott, Beta User***

## Preparing for manufacturing with production-grade parts

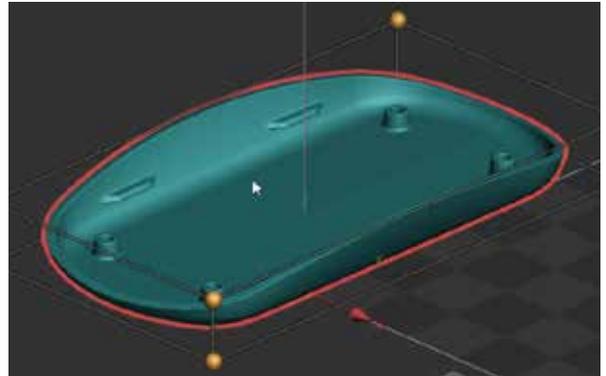
Where FabPro 1000 has perhaps its greatest value is in validating a design for repeatability. Before going to mass production, each part has to be scalable and affordable. The FabPro 1000 facilitates the manufacturing process to reduce the manufacturing costs and keep the cost per part manageable by allowing engineers to create short runs, one-off custom solutions, and sub-assemblies for destructive and non-destructive testing, packaging tests and more. This engineering and design validation step is invaluable to take the next step for full production.

The FabPro 1000 can also print parts that support production by creating tools, jigs and fixtures for the production line. The accuracy that FabPro delivers allows designers and engineers to continuously improve products and respond quickly and effectively to issues on the line with jigs and fixtures that enhance assembly and other manufacturing processes.

The FabPro 1000 is engineered for material efficiency and consistent, repeatable runtimes, making desktop 3D prototyping and production more accessible and affordable than ever before. The combination of fast print speeds and optimized printing all leads to lower part costs and lower Total Cost of Operations (TCO).

Learn more at <https://www.3dsystems.com/fabpro>

## Sp 3D Sprint™



*Preparing part files for printing, design validation and mass production is easy with 3D Sprint™ software and the FabPro 1000.*