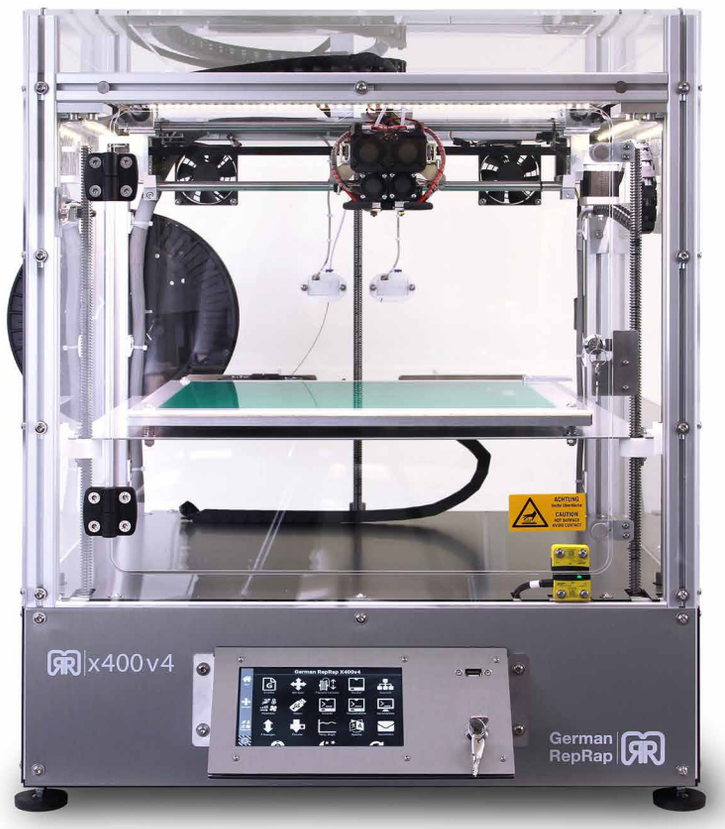
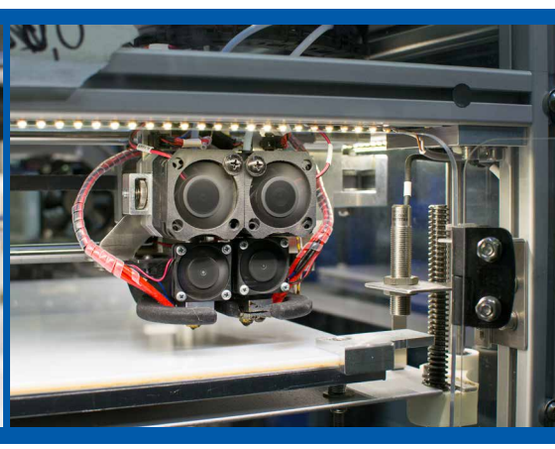
German RepRap

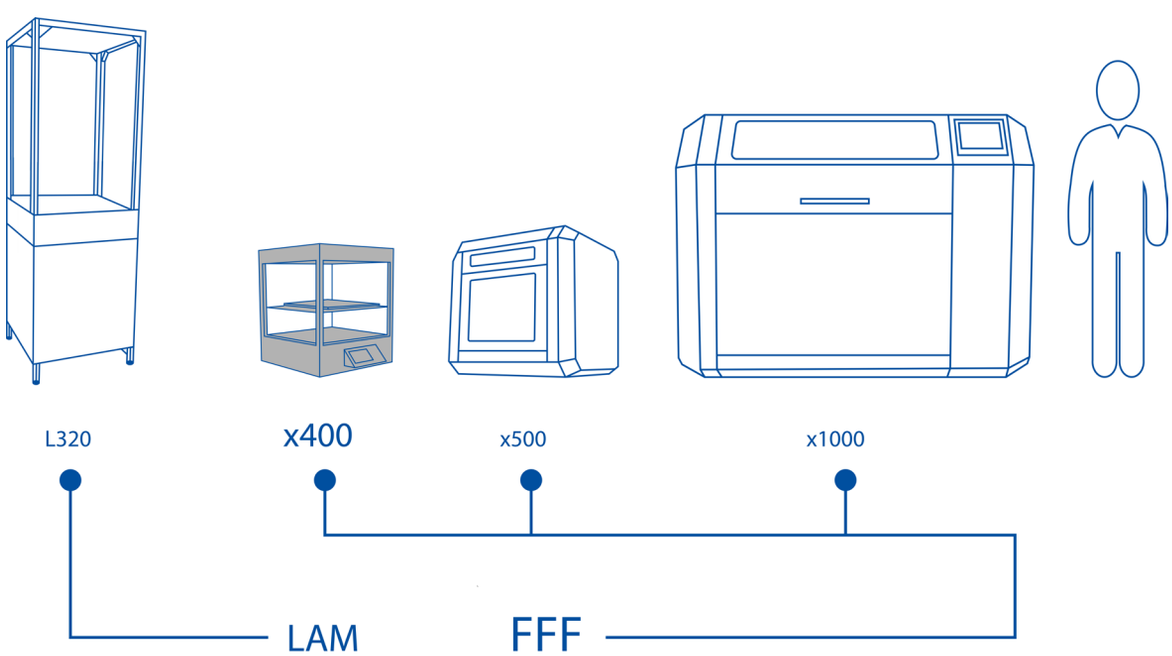




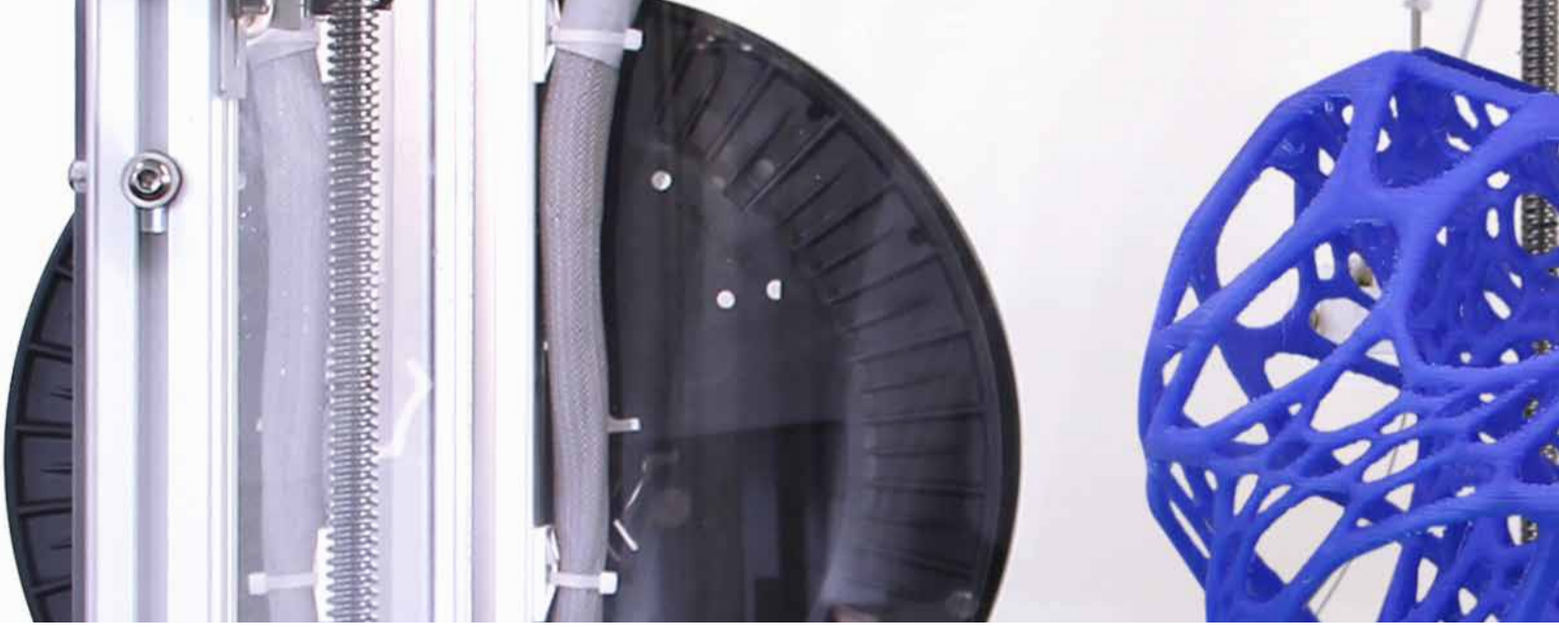
German RepRap
x400 3D printer

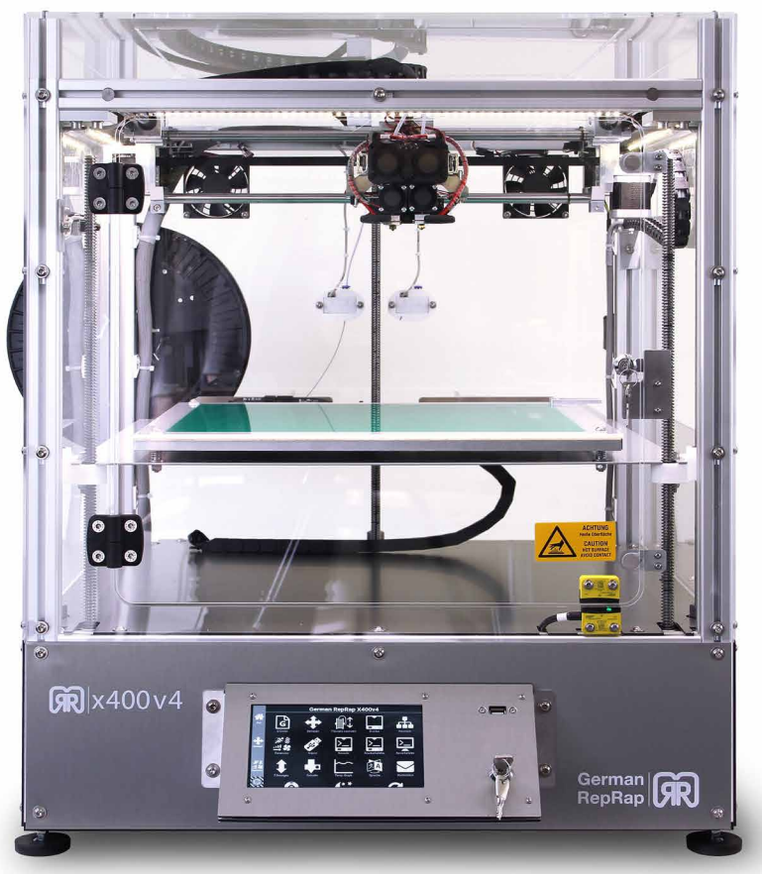
Fused Filament Fabrication (FFF)

Fused Filament Fabrication (FFF) is a manufacturing process where an object is printed in layers from a fusible plastic. The process involves heating the plastic and extruding it from a nozzle on to the print bed. Through repeated cycles of application and curing, the printed object takes form.
Our open system allows the selection of a wide range of materials to provide an optimized solution for your specific application.



CONTENT




x400v4
German RepRap

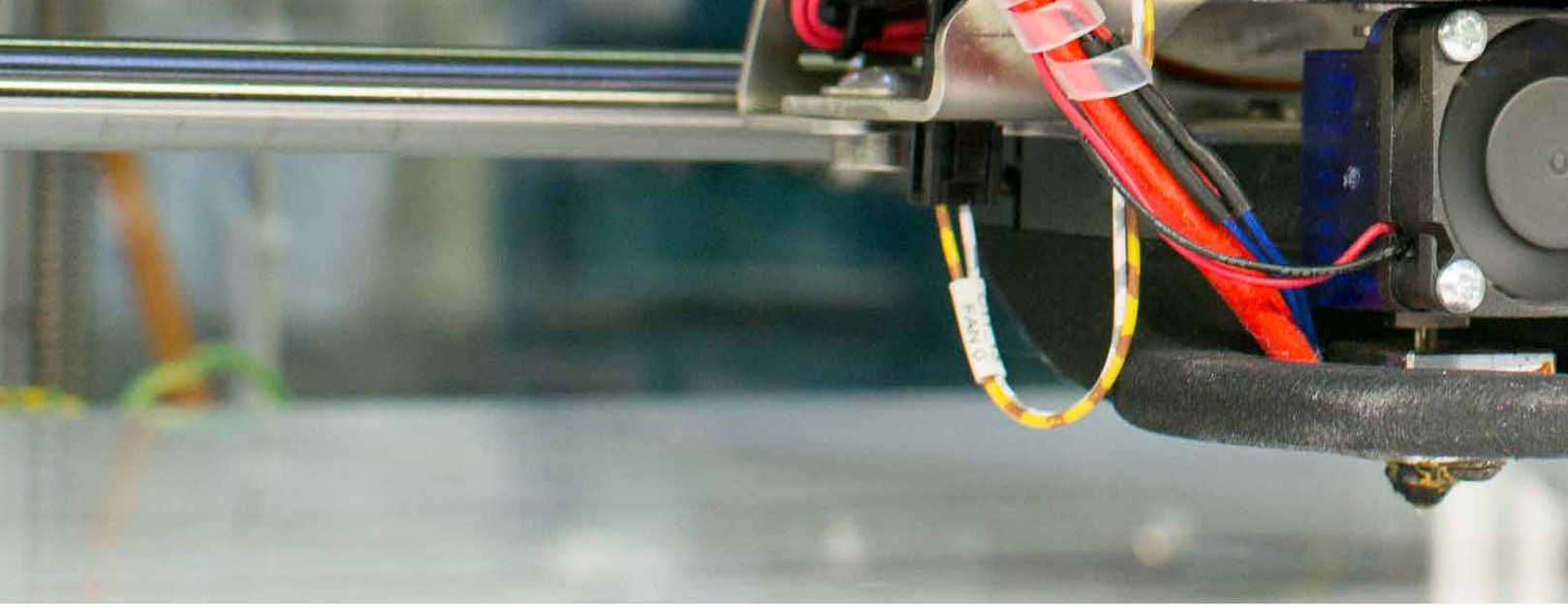
Open Material Platform

Industrial 3D Printing

The x400 v4 impresses with precision, speed and its optimum build platform for additive production of large objects as well as small series with industrial quality. The x400 v4 scores above all due to its high running stability.

Your advantages at a glance

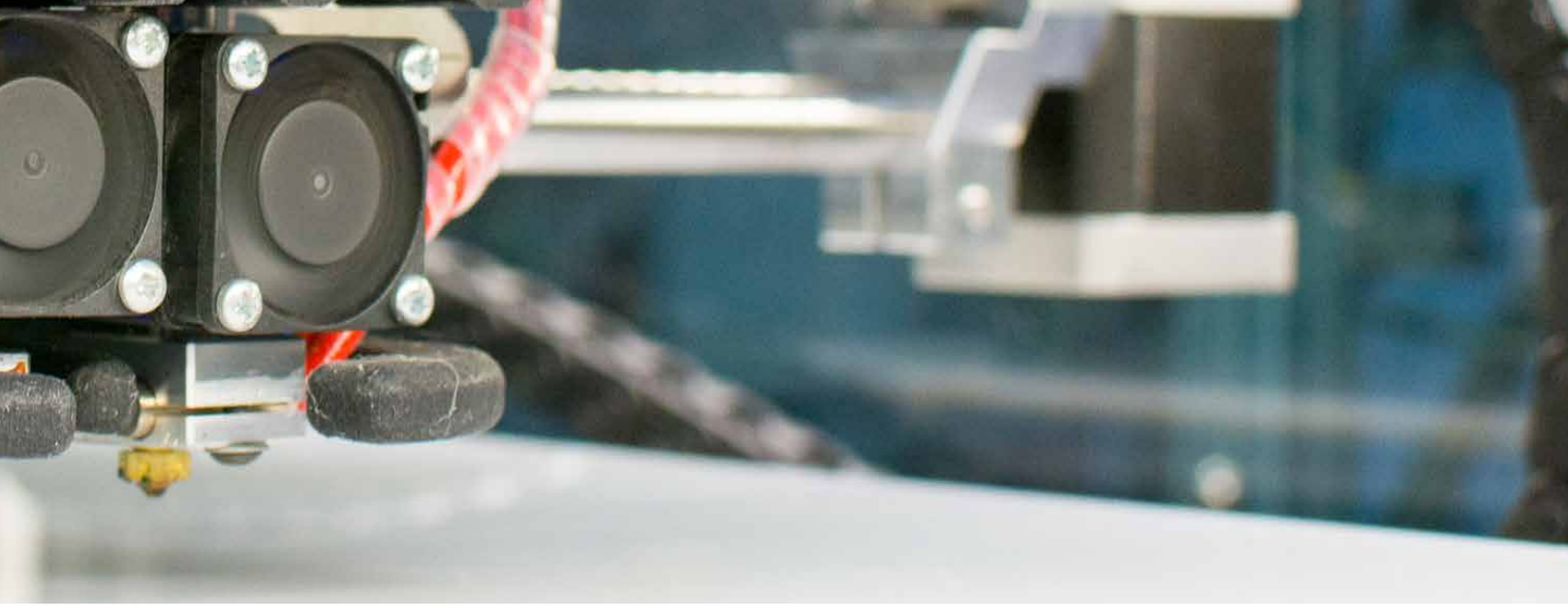
- ✓ High-quality components with milled metal elements ensure high repeatability and deliver a machine with industrial quality
- ✓ Enormous time and cost savings, faster production compared to traditional manufacturing technologies (time-to-market)
- ✓ Customized to the needs of industrial use, we are always at your side for help and advice
- ✓ Very high process stability, even in continous operation and „stand-alone“ production



New possibilities in terms of geometry and shape

The x400 offers a whole new design freedom and enables the production of extremely complex structures

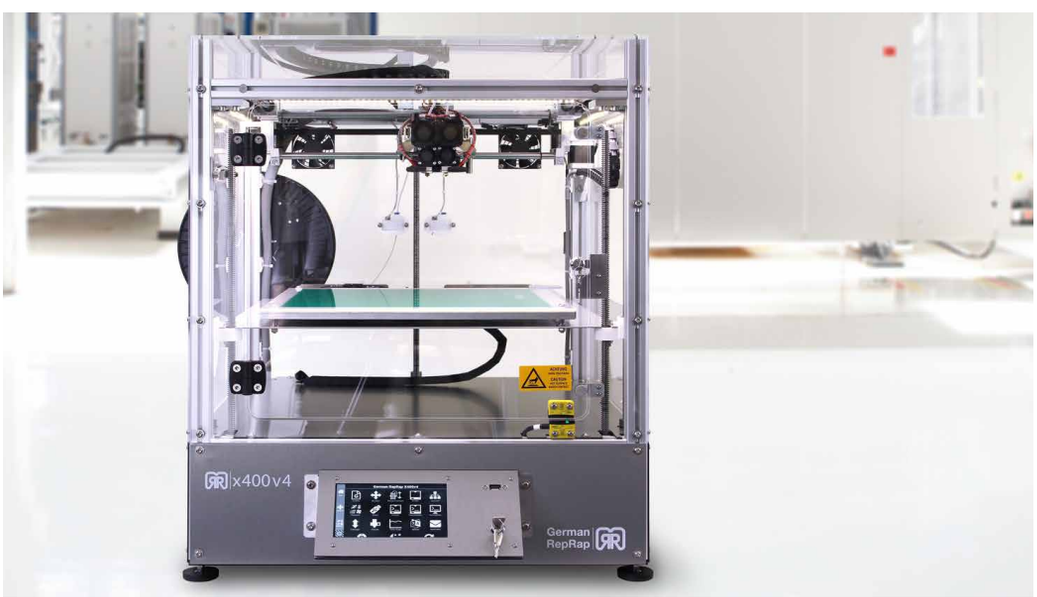
Complex geometries are three-dimensional structures that are often hollow, have spaces or undercuts. For example this can be a bionic or an organic structure. Many complex geometries can't be produced or only at high costs with conventional technologies such as milling, molding or casting. Compared to that, the additive manufacturing guarantees developers and designers maximum geometric design freedom. Cost-relevant mostly is only the size of an object. The complexity, however, hardly plays a role or the production costs. In most cases, cost reduction can even be achieved due to the lower material consumption. In the last few years, there has been a rethink in the minds of developers and designers: the complexity of an object no longer has to be based on the manufacturing process. The construction of an object can now be based on the desired function and the design of the product. In general, the more complex the geometry of an object is, the more it can be worthwhile to use additive manufacturing with a 3D printer of German RepRap.

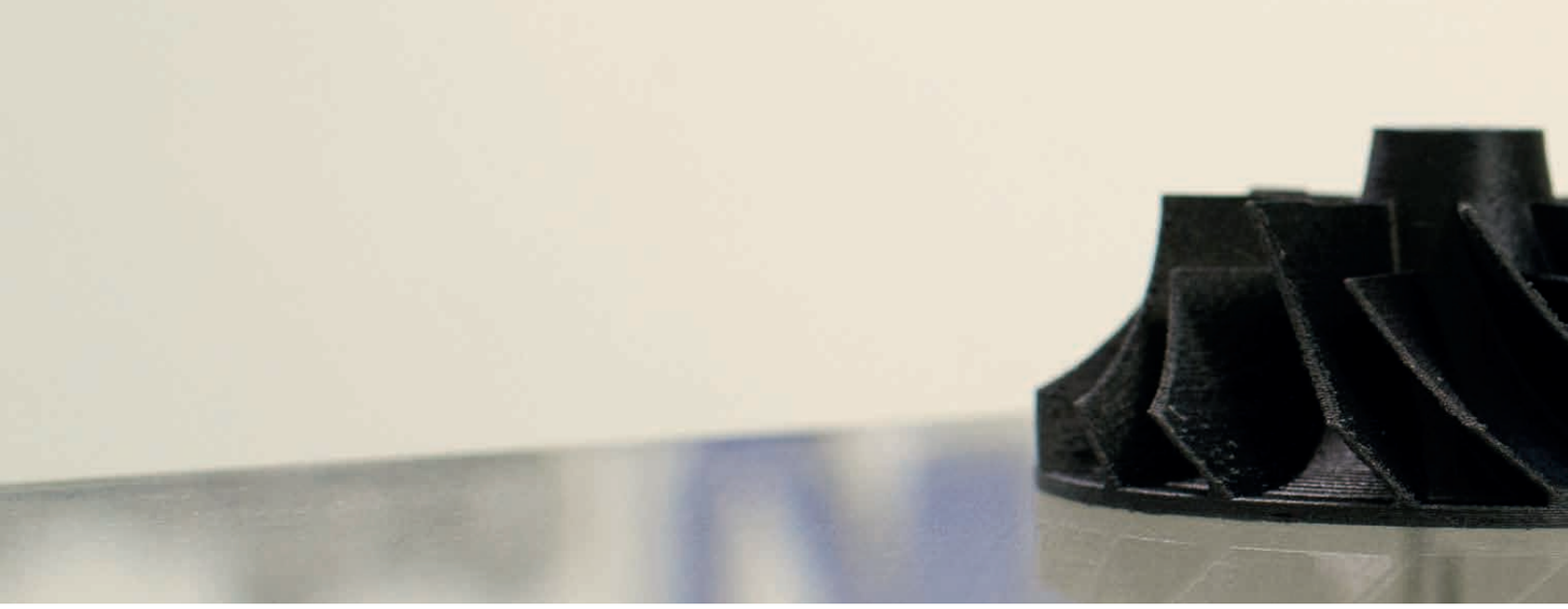


Precision in Continous Operation

Excellent stand-alone printing in continous operation, ideal for industrial use

The basic construction of the x400 is extremely stable thanks to the steel frame. The production takes place in Germany with high-quality industrial components. This makes the x400 a long-lasting device that has been designed from the outset for industrial use.





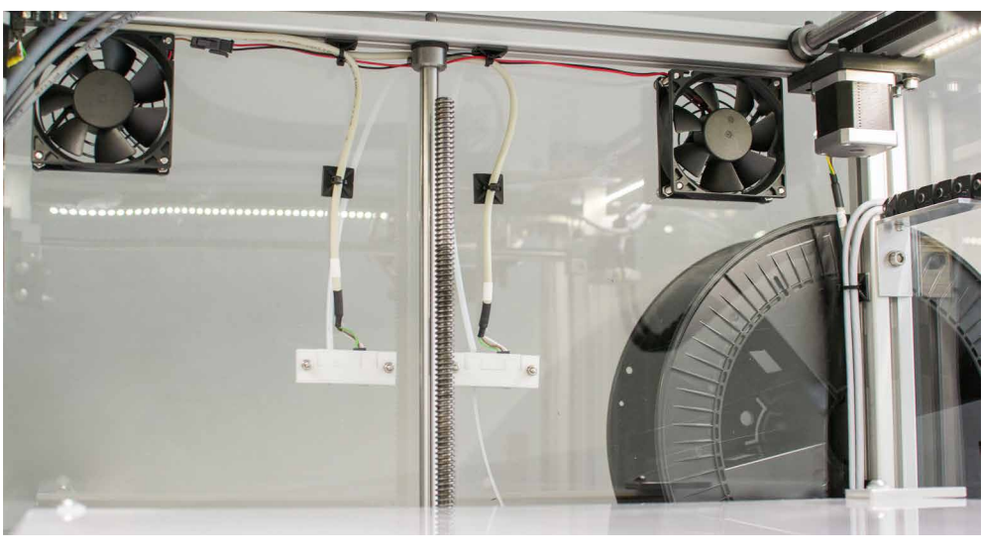
Application & Branches

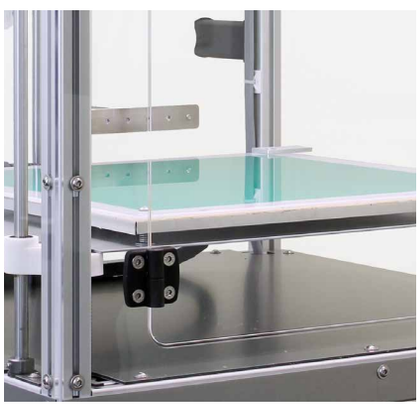
The technology of additive manufacturing has become indispensable for the majority of the industry and continues to gain in importance. Creating new opportunities for our customers, new ideas for production, new innovations, it is impressive that almost every industry now uses 3D printers, from the automotive industry and aerospace to the medical sector.

- Automotive
- Aerospace
- Medicine
- Electronics
- Food Industry
- Prototyping
- Research
- Tool and Mold Making
- Architecture
- Design

Professional Ventilation Concept

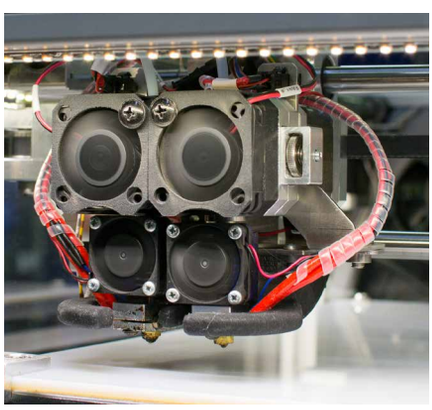
The x400 is equipped with the new German RepRap fan KIT to ensure equal temperature control, which has a positive effect on the process reliability. The extruder ventilation ensures an optimum temperature at the extruder, while the object ventilator and the assembly space ventilation ensure an optimum object and ambient temperature.





Heated Ceramic Print Bed

The heated ceramic print bed optimizes the process quality by improving the adhesion of the object to the print bed, while at the same time, increasing the accuracy of fit in the produced object. The high-quality ceramics are deformation-free up to approx. 400 ° C and can withstand temperatures of up to 800 ° C.

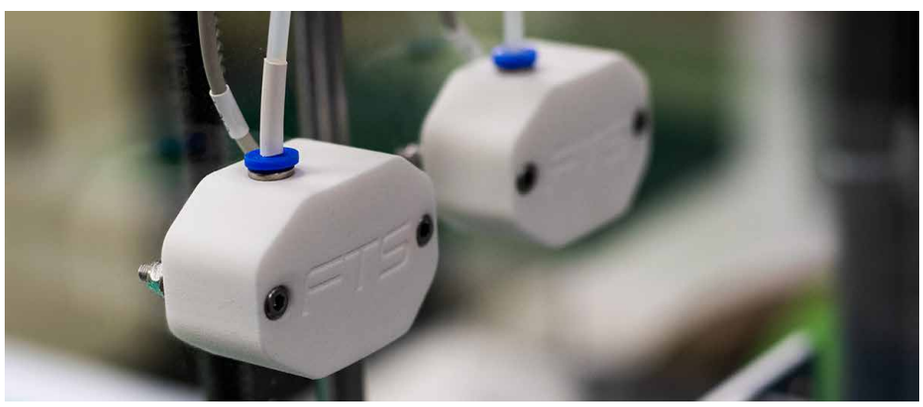


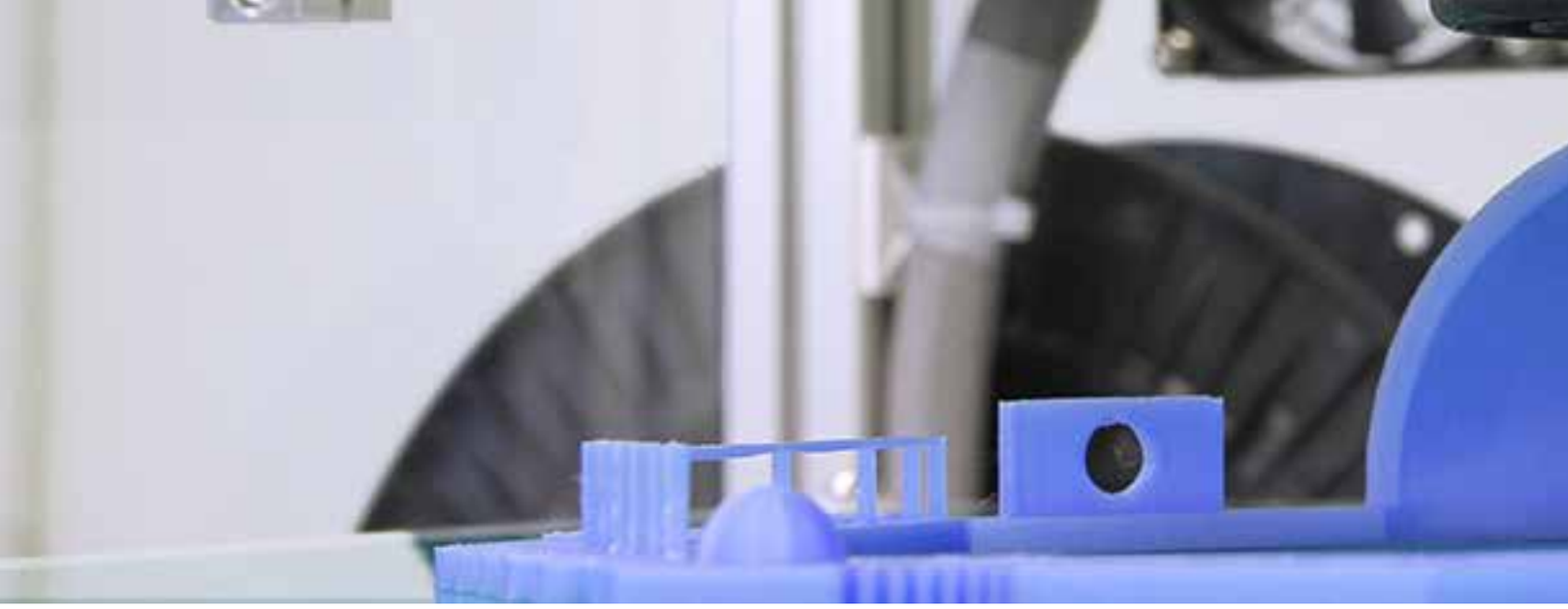
Print Head

The x400 works with the DD3 Dual Extruder technology. The DD3 extruder and full-metal hotend are easy to use. Re-adjustment is not necessary. The extruder can be equipped with different nozzles, depending on the application and the materials to be used. The contact pressure can also be varied, which facilitates the processing of softer materials.

Filament Tracking System

Using the Filament Tracking System, the x400 automatically pauses the current print job when the filament is empty. In addition, the x400 detects a deviation of the extrusion or conveying speed which is not visible to the naked eye and can react to the process reliably and thus actively prevent a print job break.



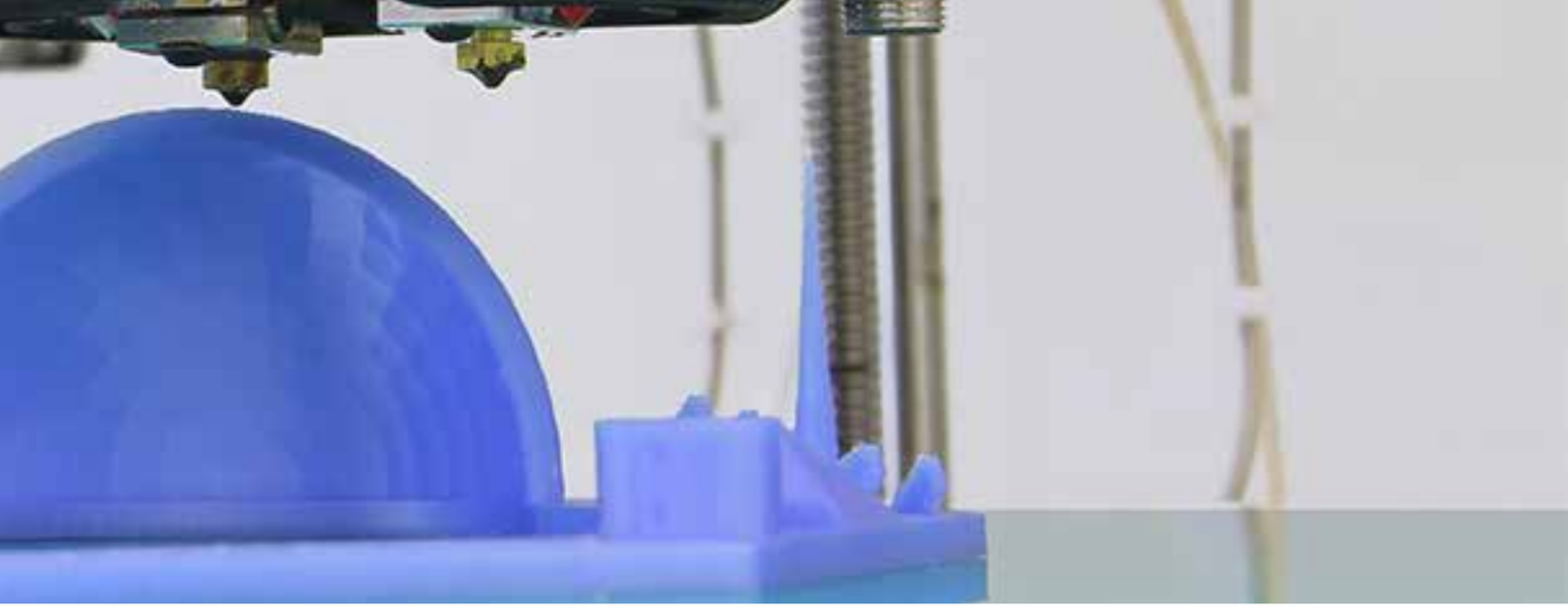


Electronics for Demanding Users

The x400 is equipped with an industrial computer and can be operated via a touch-screen as well as via a USB interface (stand-alone printing).
The network connection is made via Ethernet with browser-based control.

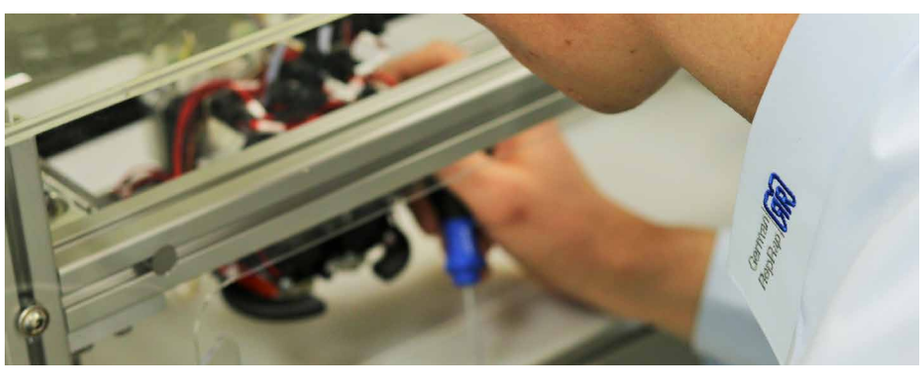
Auto Bed Leveling

The print bed is adjustable in height by the Auto Bed Leveling function and has to be calibrated only once. Time-consuming adjustment of the print bed before each print job is no longer necessary.



Maintenance and Service

The x400 series has proven its reliability in continuous operation. Tailored to the needs of industrial use, the customer is optionally offered a maintenance contract as well as professional on-site service by a trained technician. The worldwide German RepRap partner network ensures a reliable service through a personal contact person.



Specifications

Build platform* (XxYxZ)	350 x 400 x 310 mm (15.4 x 15.7 x 12.2 in)
Print speed	10 - 200 mm/s
Travel speed	10 - 300 mm/s
Repeat accuracy* (X/Y)	+/- 0,1 mm
Layer heigh (min.)	0,05 mm
Filament / Nozzle diameter (standard)	1,75 mm / 0,4 mm
Material	Material information you can get of your German RepRap contact
Extruder type	DD3 Dual
Extruder temperature (max.)	290° C / 554° F
Print bed technology	heatable
File transfer	Stand-Alone Printing with Touch Display, USB, Ethernet
Software	Simplify3D Software
Power consumption (max.)	600 W
Operating voltage	115 - 230 V (adjustable via voltage switch)
Ambient temperature	15-26° C / 59 – 78.8°F
Dimensions approx. (WxDxH)	735 x 730 x 777 mm
Weight approx.	50 kg / 110.23 lbs
Standard	DIN 10218-2
Options	Base Cabinet
Nozzles available	0,25 / 0,3 / 0,35 / 0,5 / 0,6 / 0,8
Nozzle material	brass, hardened steel

* Variances are possible depending on options/materials/processes

What makes us different?

- ✓ Largest German manufacturer of FFF 3D printers with enclosed print area
- ✓ Global leader in new 3D printing technologies, including LAM technology
- ✓ Variety of services, including training and sample printing
- ✓ Further development tailored to customer requirements, cooperative product development
- ✓ Open material platform, no closed system
- ✓ Wide variety of materials and products

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