



 **MASS PORTAL®**

D Series

3D Production Systems

D Series

Systems for large parts and production



D600

3D printer with optional dual filament dryers and feed switchover



D1200

Large format 3D printer with a build volume up to 603 litres

Several Hotend options

Wide range of available hotends. Including direct drive hotends and dual nozzle liquid cooled hotends with temperatures up to 475 °C

Controlled Environment

Optional heated print chamber and printbed for improved process stability and compatibility with high-temperature materials.

Efficient Part Cooling

High temperature hotends come with optional air compressors to ensure efficient printed part cooling.

Safety & Air Filtering

Active carbon air filters limit the amount of escaping fumes and small particles making the devices safe for indoor use. An external fume exhaust can be connected to the chamber.

Custom Built Solution

Built for you

External Exhaust

Connect to an external fume exhaust via port located on the back of the printer

Hotend Options

From direct drive for flexible materials to dual switching hotends with liquid cooling for high performance thermoplastics

Filament Drying

Print performance thermoplastics with ease

Integrated Slicing

Make mass customization easy with "single-click" workflows

Heated Chamber

Eliminate part warping and greatly increase process stability with a heated chamber which can reach up to 80 °C

Feed Switchover

Print large parts without worrying that filament might run out with automatic filament feed switchover



Mass Portal 3D printers are built to order and can be customized for specific applications

High Resolution Printing

Layer thickness can be set from 0.05 mm for ultimate resolution and surface quality.

Automation ready

Closely integrated embedded and cloud systems for comprehensive system management, high level of automation and remote control and notifications.

Integrated Dryers

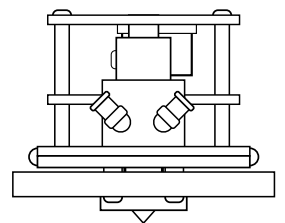
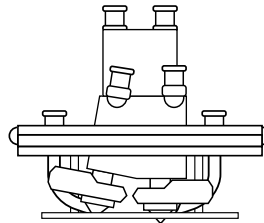
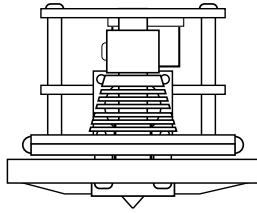
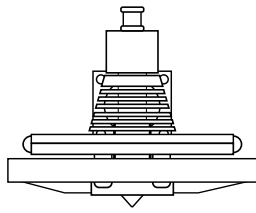
Enable stable printing of moisture sensitive materials and improve printing performance of most thermoplastic materials.

Feed switchover

The D600 with dual filament dryers allows printing of large parts or printing overnight without worrying of filament running out with automatic filament feed switchover.

Hotends

Performance extrusion systems



Pro Bowden

Pro Direct

HT Bowden

HT Direct

Temperature	300°C	300°C	475°C	475°C
Type	Bowden	Direct Drive	Bowden	Direct Drive
Filament Feeds	1	1	2 (Dual Nozzle)	1
Hotend Cooling	Fan	Fan	Liquid	Liquid
Part Cooling	Fan	Fan	Compressed Air (optional)	Compressed Air (optional)
Suitable For	ABS Flexibles PLA	ABS Flexibles Soft PLA	Nylon + Support PC + Support PEEK HIPS ASA	Nylon PC PEEK HIPS ASA



All-Metal Hotends

Durable construction and better heat dissipation.



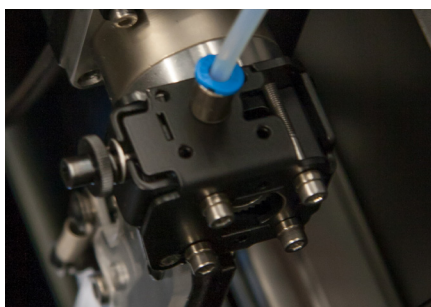
Precision Made

High precision machined parts are used in hotend construction.



Purpose Built

Hotends developed by Purpose Additive Manufacturing Systems.

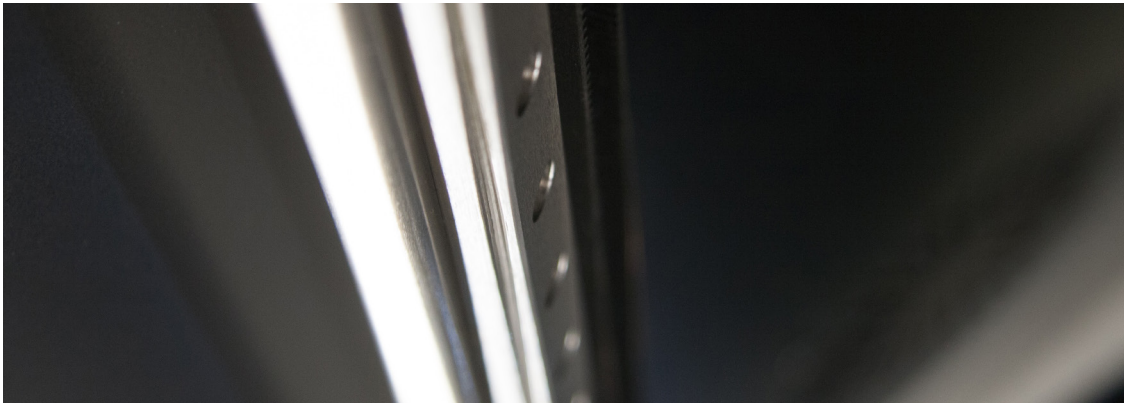


Eliminate Filament Slipping

All-metal feeder virtually eliminates filament slip, delivers precise control and does not overheat during operation.

Hardware

Professional grade hardware. Made in Europe.



D Series are designed with durability and high performance as key factors



24/7 Printing

Automatic feed switching allows printing of large parts without worrying about the material.



High Precision

Precision hardware on all levels allow high resolution printing.



No Print Warping

Heated chamber reduces part warping for ABS, Nylon and other filaments.



Reliability

Ensure a more stable and reliable printing process with moisture-sensitive materials like Nylon, PC or TPU.



Long Service Life

All-metal design and quality components allow focusing on production not maintenance.



Safe to Use

Enclosed chamber features multiple fans and port for external fume extractors.



Control and Monitor from Anywhere

Remotely control and monitor the printing process with the high definition camera and interface accessible from FabControl Cloud.

Open Materials

Widest range of available thermoplastics



Hotend up to 475 °C

Print even the most demanding thermoplastics:

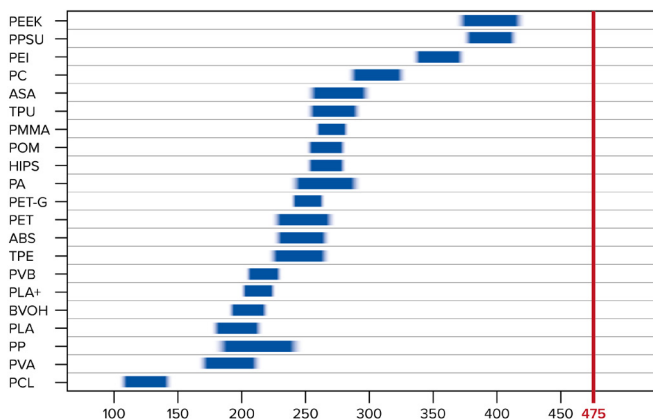
- PEEK
- Nylon
- ASA
- HIPS
- PC
- and more

Professional Dryers

Improve printing quality and reliability of:

- TPU
- Nylon
- PVA
- ABS
- PET
- PC
- and more

Designed to work with most thermoplastic filaments on the market.



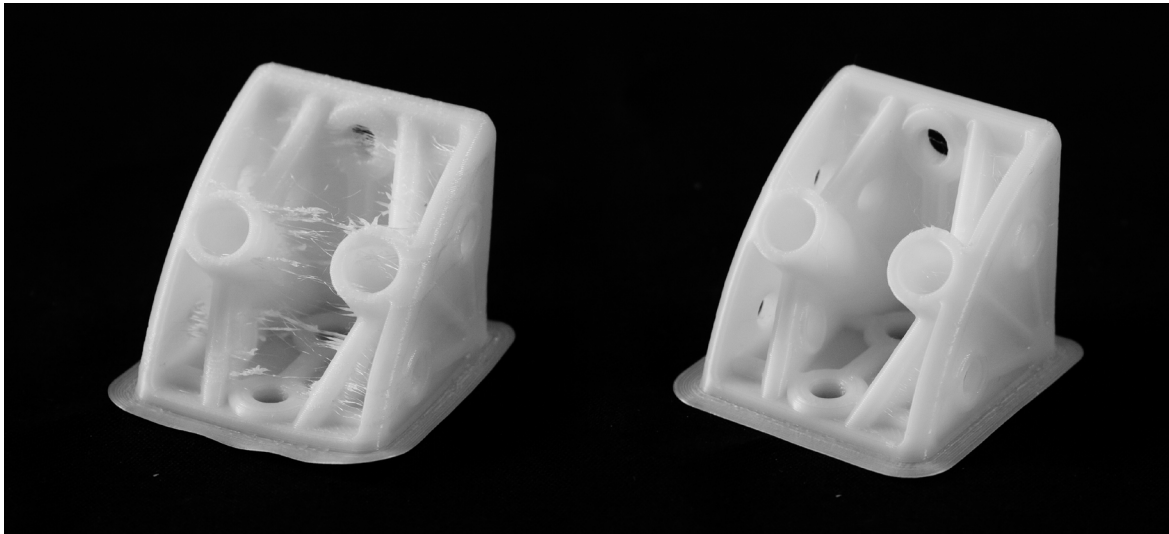
Processing temperature range of thermoplastics, °C

No Material Lock-In

Mass Portal 3D printers and filament dryers are open-materials systems with no material lock-in. This provides the widest range of available thermoplastics with processing temperatures up to 475 °C

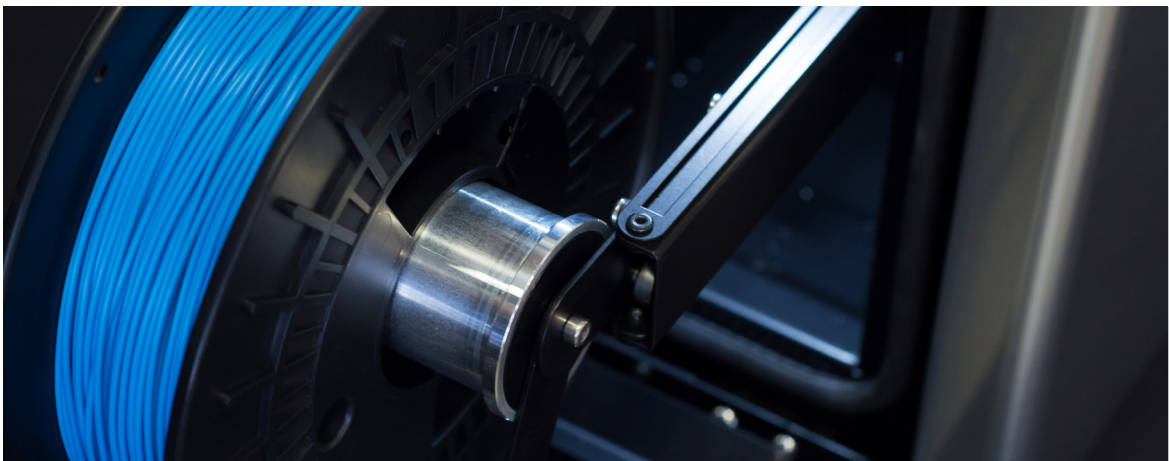
Integrated Filament Dryers

Unlock the full potential of 3D printing materials



Nylon printed with undried and dried filament — same settings, same g-code, same hardware.

**Drying, conditioning and feeding filament
under optimal conditions greatly improves
printed part quality**



Mass Portal D600 features dual integrated filament dryers

Stable Processing

Ensure a more stable and reliable printing process with moisture-sensitive materials like Nylon, PC, PVA or TPU.

Better Mechanical Properties

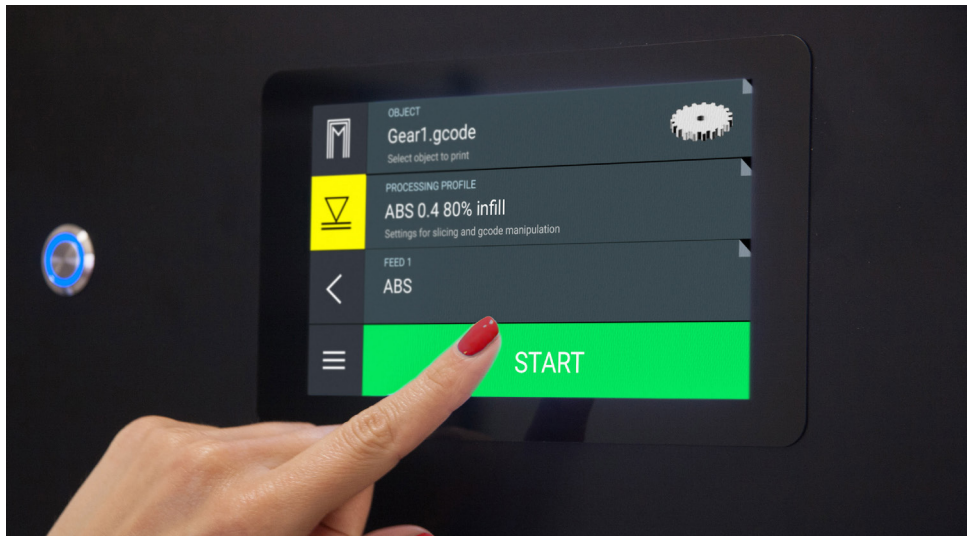
Reduce warping, delamination and even structural failure of 3D printed parts.

Fewer Cosmetic Defects

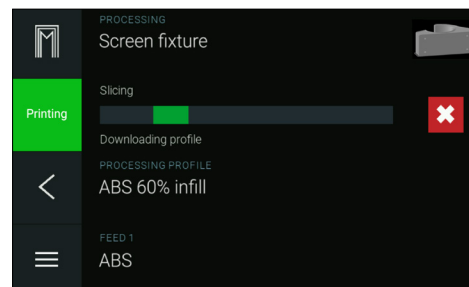
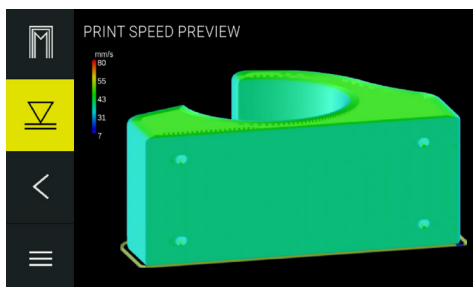
Eliminate a number of visual defects in printed parts caused by excessive moisture in materials.

FabControl OS

Easy touch screen control of printers & dryers



Deep control of system settings is accessible with just a few taps, connection to online database of materials printing & drying settings



Gcode Preview

Renders actual gcode on screen, giving you a visual way to check the file before printing



Job Info

Print file name, date or custom text in front of the printed part on the print platform



File Transfer

Wireless using FTP, SMB, FabControl® or through direct USB connection or memory stick.



“Single-Click” Workflows

3D printing workflows with embedded slicing for customised production



Precheck

Check g-code file before printing for dimensions and temperature commands

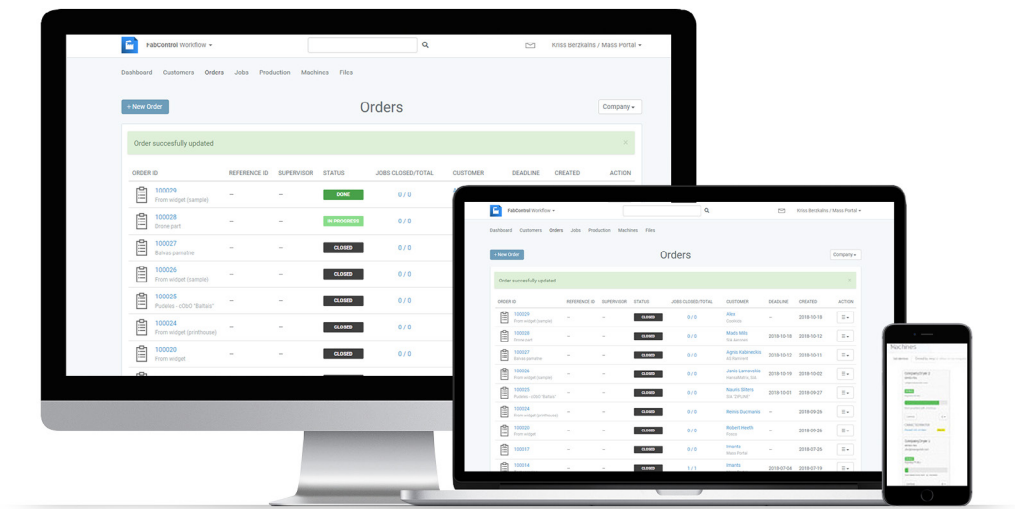


Override Gcode

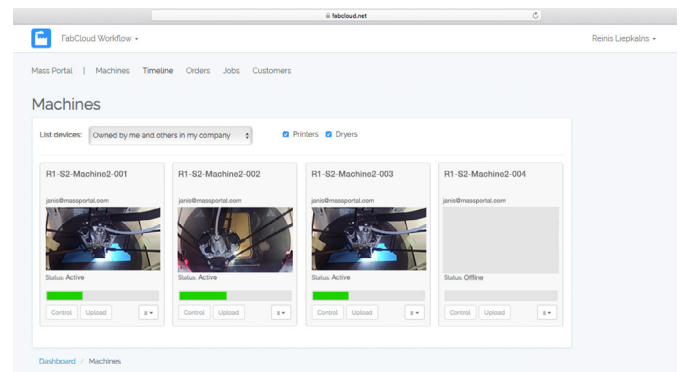
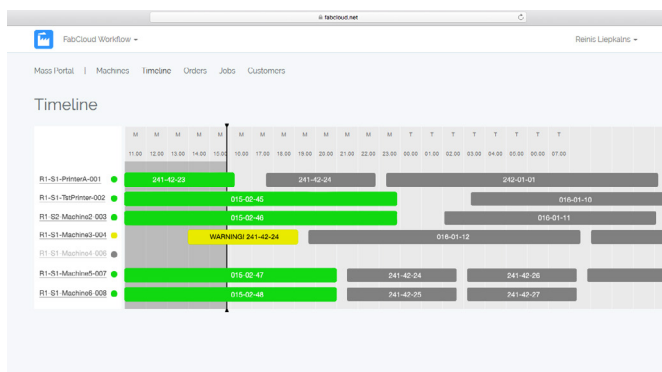
Override temperature and many other settings during printing

FabControl Cloud

Monitoring and print job tracking



Centralized information, notifications, system and job statuses for all connected Mass Portal dryers & printers



Job Progress & Schedule

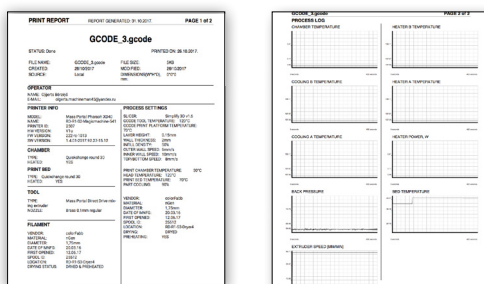
Add and schedule print jobs using FabControl® Cloud. Completed jobs are archived and logged automatically.

Monitor Printers & Dryers

View machine status, built-in camera feeds from printers, and remotely control the systems when needed.

Notifications

Receive notifications from all your devices to your e-mail — status change and operator attendance request.

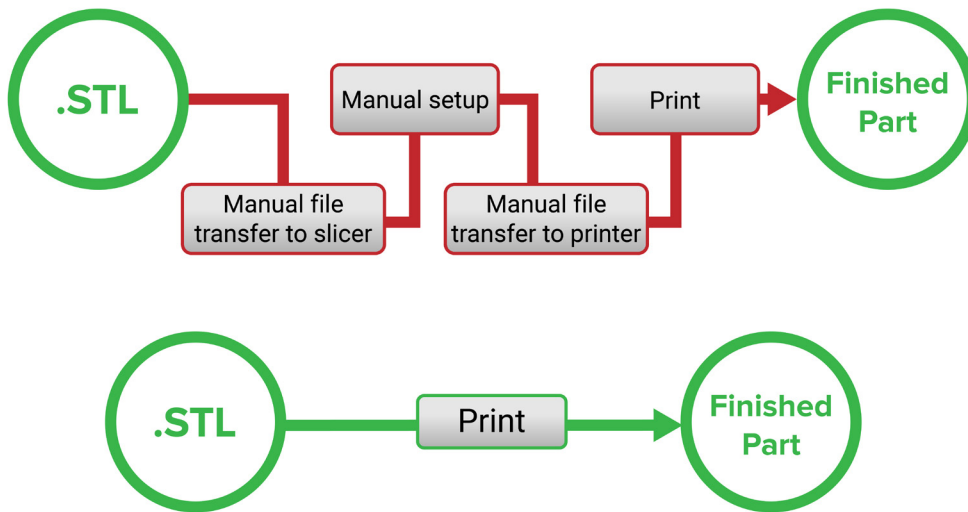


Print Archiving & Reports

Print data can be automatically uploaded to the FabControl® Cloud system.

Single-Click Printing

From STL to printed part in single click



Integrate "Single-Click" workflows into your CAD application and print .STL files directly with on-board slicing.

**Increase production efficiency and save time
by skipping recurring manual steps**



Save Time

Skip recurring manual steps such as file transfer and slicing.



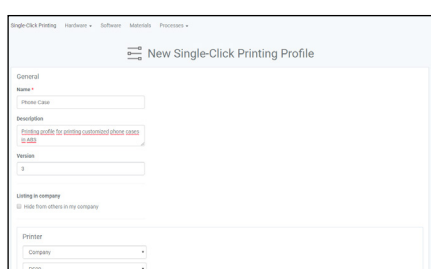
Fully Integrated

FabControl is seamlessly integrated into Mass Portal 3D printers



Minimum Training

Ensure operator independent operation.



Integrated Slicing

Generate .gcodes right before printing with pre-configured settings. Save time on slicing similar geometry and mass customized products

Case Studies

Helping industry growth



Shoemaking Industry

3D printed shoe lasts allow digital process from scanning to printing. Test shoes for fitting can be printed directly without the need of a separate last for each iteration.

The solution is currently deployed in more than 20 locations in Germany with installations in Belgium, Japan and Austria.



Back Orthosis

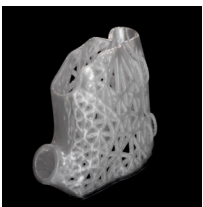
In collaboration between scoliosis specialist Dr. Gundars Rusovs and WiDE - Latvian company producing 3D printed orthotics and prosthetics. Scoliosis brace is device with which patient has to live day and night through teen years. Conventionally bulky looking brace recreated with Large volume Mass Portal D1200 3D printer with webbing pattern to make device more lightweight and significantly better appealing for the wearer in day-to-day use.



Mouthguards

3D printed custom-made sports mouthguards to protect teeth and mouth injuries in any type of active or extreme sports.

“By scanning the upper jaw and digitally capturing all curves and shapes of mouth, digitizes the process of producing customized mouthguards and prints them instantly.”



Wrist Orthosis

3D printing can be used to produce custom-made brace, splint, or other artificial external devices serving to support the limbs or spine.



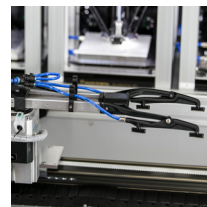
High-Resolution

The parts shown were printed using Polymaker Polyplus™ with a 0.01 mm nozzle in 1:1 scale to regular watch parts.



Loudspeakers

Designed by Audiolens with an aim to reduce interference anomalies. The open-cell internal baffle structure provides reduced weight, while the non-parallel walls lessen the booming resonances.



Robot Gripper

Engineering-grade Innofil3D's ABS Fusion+ material allowed quick design iterations and evaluation of robot vacuum gripper performance.

Production 3D Printing



Mass Portal systems —
next generation plastic part production

3D Printers

High performance
thermoplastic printing

Filament dryers

Improved printing
stability and part quality

Automated Printfarms

Low volume plastic
part production



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