



3D Production Systems

D Series

Systems for large parts and production



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



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 | | |
| Туре | 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 moisturesensitive 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



Designed to work with most thermoplastic filaments on the market.



No Material Lock-In

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

Processing temperature range of thermoplastics, °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 moisturesensitive 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



"Single-Click" Workflows 3D printing workflows

with embedded slicing for customised production



Precheck

commands

Check g-code file

before printing

for dimensions

and temperature

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.



Override Gcode Override temperature and many other settings during printing

FabControl Cloud

Monitoring and print job tracking

| FabControl workflow - | | | | ٩ | | М КЛ | ss Berzkain | s / Mass Portal 👻 | | | | | | |
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| Order succesfully updated | | | | | | | | | | | | | | |
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Centralized information, notifications, system and job statuses for all connected Mass Portal dryers & printers

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| R1:S2:Machine2:003 015-02:48 | 016-01-11 | | | | | |
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| | | Dashboard / Machines | | | | |

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.

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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.

| Single-Click Printing Hardware + Software Materia | Is Processes - |
|-------------------------------------------------------------|-----------------------------------|
| | New Single-Click Printing Profile |
| General | |
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| 0600 | |

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 seperate last for each iteration. The solution is currently deployed in in more than 20 locations in Germany with instalations 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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