

bigrep **PRO**



AN **INDUSTRIAL** MACHINE
FOR **PROFESSIONAL** PRODUCTION





bigrep **PRO**

NEXT-LEVEL **INDUSTRIAL** **3D PRINTING**

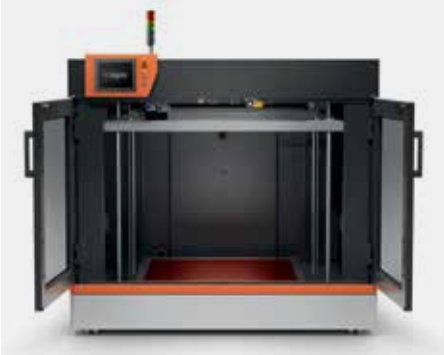
The BigRep PRO is a German-engineered, large-format additive manufacturing system for industrial applications. Harnessing the all-new proprietary Metering Extruder Technology (MXT®) for speed and precision, the PRO is an industrial machine utilizing unique technology to surpass the competition.

The PRO is designed and manufactured to print with engineering-grade materials for repeatable prints to ensure users can tackle their applications they in large scale. The PRO is an industrial 3D printer that responds to market demand, finally enabling repeatable parts and effective end-use batch production. IoT connection for productivity in a lights-out environment.

Whether it's functional prototypes, composite tooling or end-use products, the BigRep PRO delivers. With a range of next-level features, including a state-of-the-art Bosch Rexroth® CNC control system, Metering Extruder Technology (MXT®), a fully enclosed build envelope, and modularly temperature-controlled filament cabinets.

The PRO continuing BigRep's tradition of excellence and innovation, having previously won an array of awards, including the German Brand Award 2018, the German Innovation Award 2018 and the German Design Award 2016, for its industrial additive systems.

LARGE-SCALE & GERMAN ENGINEERED THE **BIGREP PRO**



Large-Format Prints

The Massive Build Volume

The PRO continues BigRep's innovation in large-format part production. With a build volume of one cubic meter, it's built to print industrial-sized parts. The PRO is an effective and accessible solution for a variety of demanding applications that other printers simply can't match.



Speed & Precision

The Revolutionary MXT Extruder

BigRep's proprietary Metering Extruder Technology (MXT®), with unprecedented speed and precision in thermoplastic extrusion technology, is the PRO's defining feature. This one-of-a-kind extruder allows for ultimate control of material deposition, enabling users to achieve the highest quality parts in every application.



Bosch Rexroth CNC Control System

The Highly Responsive Coordination

An advanced Bosch Rexroth CNC motion-control system elevates the PRO's responsiveness to attain unquestionably reliable speed, precision, and repeatability. Offering local data collection for real-time monitoring of all sensors, and IoT connectivity, BigRep's Bosch system ensures unrivaled quality for industrial applications.



The BigRep PRO has been expertly designed and built with German-engineering to equip companies with advanced additive solutions and engineering-grade materials for industrial applications.



Fully Enclosed Environment

The Secure Build Envelope



The PRO's welded metal frame is fully enclosed to ensure consistent print temperatures. Its glass doors offer easy visual monitoring throughout the print process and ensure safety with a BOSCH Safe Logic 2-channel failsafe system, making it the perfect additive system for industrial environments.

Sealed Filament Chamber

The Dry Material Storage



The PRO's environmentally sealed filament chamber with a four-spool capacity ensures that all materials, including engineering-grade and water-soluble, are well stocked and remain consistently dry in ideal operating condition for reliable, best-in-class production quality.

Superior Adhesion & Semi-Automatic Leveling

The Fast-Heating Print Bed

Preparation time is significantly reduced for all print projects by the fast-heating print bed. Capable of quickly reaching 99°C for optimal print bed adhesion with a variety of high-quality materials. An inductive sensor enables semi-automatic print bed levelling to ensure optimal calibration and maximum control.



ADVANCED METERING EXTRUDER TECHNOLOGY (MXT®)

“This is the single most important advance in 3D printer extrusion technology I’ve yet seen.”

- Kerry Stevenson, Fabbaloo



BigRep’s proprietary Metering Extruder Technology (MXT®) is a reinvented thermoplastic extruder with unmatched speed and precision. This first-of-its-kind extruder separates filament melting and deposition to improve speed, geometric accuracy, and repeatability. It enables ultimate control on large-format prints with engineering-grade materials, like Polyamide, to achieve the highest quality in every application.

The all-new, patent-pending Metering Extruder Technology uses a highly accurate metering pump to enable unprecedented speed and precision in the printing process.

MXT extruders are exceptionally responsive in starting, stopping, and turning corners by eliminating the limitations of FFF printing. BigRep’s Metering Extruder ensures consistent precision and high print quality. Built for speed, the agile extruder reliably delivers fast, detailed results; accelerating material throughput to achieve speeds three to five times faster than traditional extrusion technologies.

TECHNICAL SPECIFICATIONS

The BigRep PRO has been German-engineered for large-format industrial printing, making it the ideal machine for manufacturing environments.

Build Volume	x 1020 y 970 z 980 (mm)	
Compatible BigRep Materials	PA6/66, HI-TEMP, PLX, PRO HT, PETG, PET-CF BVOH (Water Soluble), 3rd Party Compatible	
	MXT	ACE
Technology	Metering Extruder Technology, separate Filament melting and desposition	Advanced Capabilities Extruder, direct drive Extruder
Max. Extruder Throughput with 1 mm Nozzle	320 g/h	130 g/h
Max Nozzle Temperature	300 °C	280 °C
Nozzle Diameters	1.0 mm	0.6 mm 1.0 mm 2.0 mm
Dual Extrusion	MXT + ACE (default)	
Layer Height	0.3 - 0.6 (mm)	
Material Storage	Sealed Filament Chamber (up to 8 kg spools)	
Print Bed Temperature	Max. 99 °C	
Printer Weight	Approx. 1550 kg	
Size	x 1950 y 2403 z 1790 (mm) (Without towerlight)	
Power	3 X AC 400 V, 50/60 Hz, 6100 W	
Safety Certifications	CE, and EC Machinery Directive 2006/42/EC Compliant	

Specially designed to print with engineering-grade materials, the BigRep PRO brings serious designs to life in all industrial environments. BigRep has developed its own engineering-grade filaments in these categories that have been optimized for high-level performance on the PRO. BigRep undertakes a rigorous testing and certification process, which ensures the quality of material research and development – quality machines deserve only the highest quality materials.

REDEFINING **ADDITIVE**

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