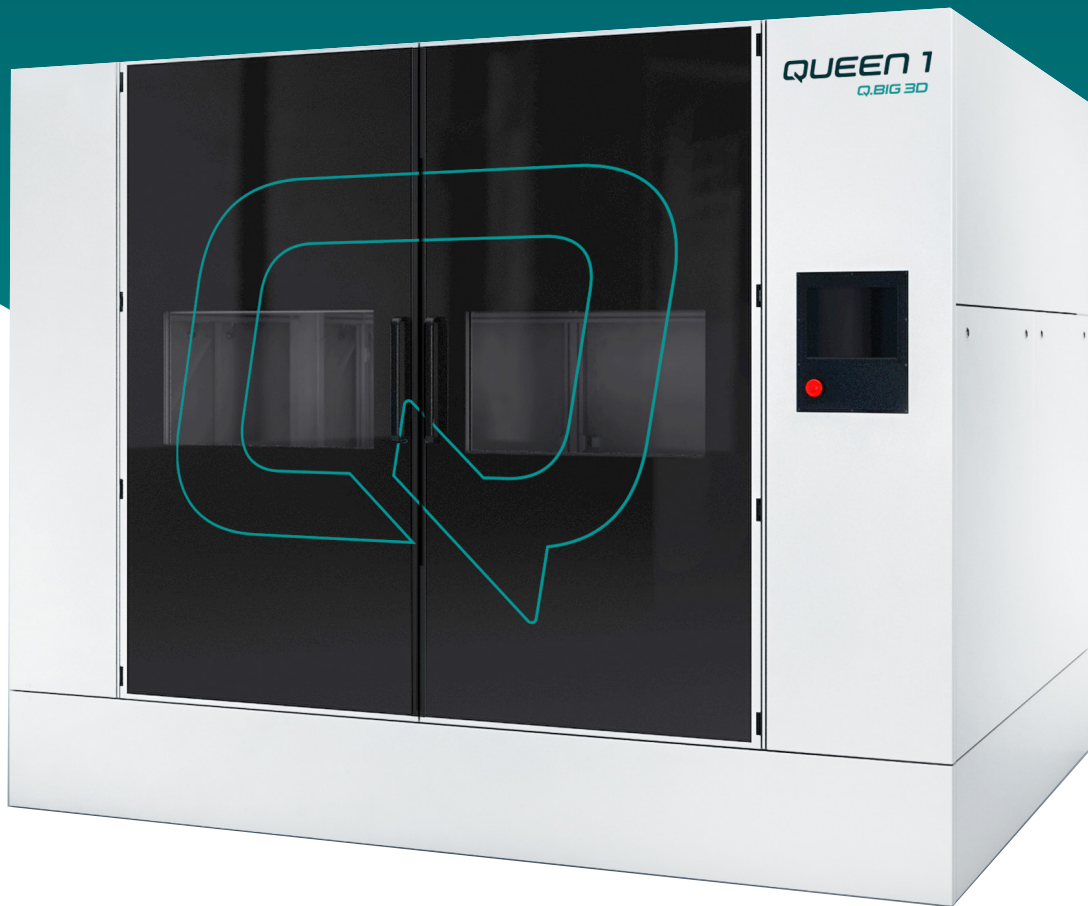


Built for Size, Throughput and Accuracy.

Innovation for XXXL 3D Parts



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Q.BIG 3D GmbH

Manfred-von-Ardenne-Allee 32

71522 Backnang

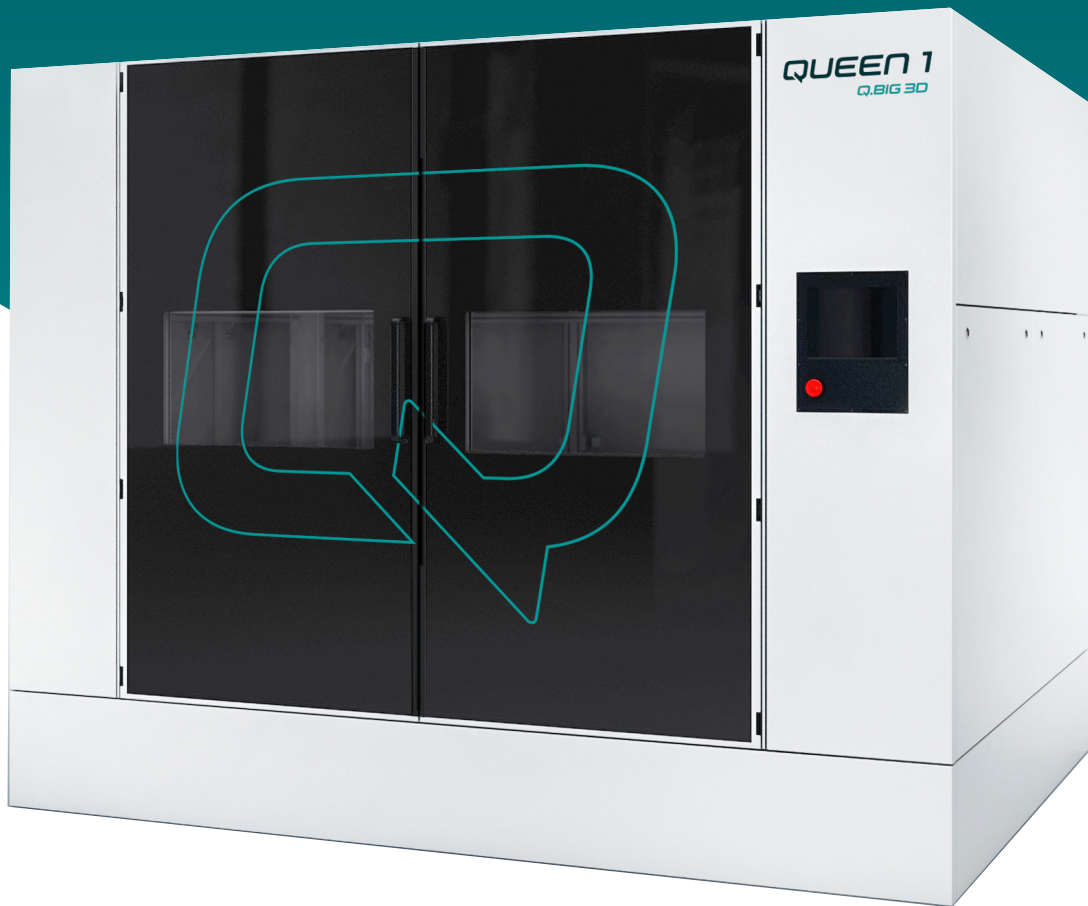
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QUEEN 1

Innovation for XXXL 3D Parts

Q.BIG 3D printers are the manufacturing tool tailored to your professional needs for extra-large and functional parts without trade-offs in resolution or print duration.

The QUEEN 1 is particularly designed to accelerate development and early-stage manufacturing of large parts. Therefore, the system is easy to use and highly automated to increase your output. The QUEEN 1 was developed specifically to meet our customers demand for even shorter lead-times and choice of material. The system's predictive flow algorithms allow the printing of complex parts to ensure that the right amount of material is at the right place at the right time.

PRINTER SPECIFICATIONS

System Size	3 x 2.25 x 2.35 m (width, depth, height), additional door space required
Installation Space	Min. 4.0 x 4.1 x 3.0 m / Recommended 5.0 x 5.4 x 3.3 m
Weight	Approx. 3 000 kg
Build Volume	1700 x 1050 x 1050 mm (XYZ)
Motion Speed	Max. 400 mm/s
Motion System	Servo-driven precision ball screw axes
Print Bed Temperature	Max. 120°C
Build Chamber Temperature	Max. 80°C, active heating and cooling with air circulation (upgrade)
Motion Accuracy	X/Y/Z: +/- 0.05 mm

Note: Accuracy of print objects is geometry and material dependent

EXTRUSION UNIT SPECIFICATION

Extrusion Unit	Abrasion resistant screw and print head, VFGF (Variable Fused Granulate Fabrication), temperature stabilized liquid-cooled hopper
Variable Nozzle Diameters	Detail 1.5 mm, Turbo 3 mm (different combinations possible)
Dynamic Throughput	0.15 – 2.0 kg/h, depending on the material type
Layer Height Resolution	Detail: default 0.4 mm (min. – max. 0.3 – 0.9 mm) Turbo: default 1.2 mm (min. – max. 0.4 – 1.5 mm)
Nozzle Temperature	Max. 350 °C

MATERIAL SELECTION

Granulate	3–5 mm standard granulate shapes
Material Choice	QUEEN 1 is an open system so any material of your choice below the max. melt temperature can be processed. Standard materials of the portfolio and the corresponding machine parameters are supplied by Q.BIG 3D.
Material Portfolio	Qualified standard materials: PLA, PA6GF
Beta-Testing	PPGF, PC-ABS FR, PA6GF FR, TPE FR, (FR: flame retardance confirmed according to UL94)
Material Delivery	Automatic conveying from industrial granulate dryer, infinite printing without refill pauses.

OTHER SPECIFICATIONS

Power Requirements	400 V, 32 A (3-phase CEE female plug) 50/60 Hz
Power Consumption	2.2 kW, typical 2 kW, max. 15 kW
Pressurized Air	Continuous Clean Dry Air, >6 bar, Peak 1.500 U/min Avg. 900 U/min (Cooling Booster activated) (NW7,2 Male Connector Plug on Machine Side)
Software	Open-Source slicer engine, Prusa Slicer recommended
Network Connectivity	Wireless: IEEE 802.11n, g, or b; Authentication: WPA2-PSK, 802.1x EAP Wired, optionally: TCP/IP protocol at 100 Mbps minimum 100 base T, Ethernet protocol, RJ45 connector
Operating Environment	Operating: Temperature: 15 – 30°C, Humidity: 30 – 70% RH Storage: Temperature: 0 – 35°C, Humidity: 20 – 90% RH
Regulatory Compliance	CE, RoHS

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