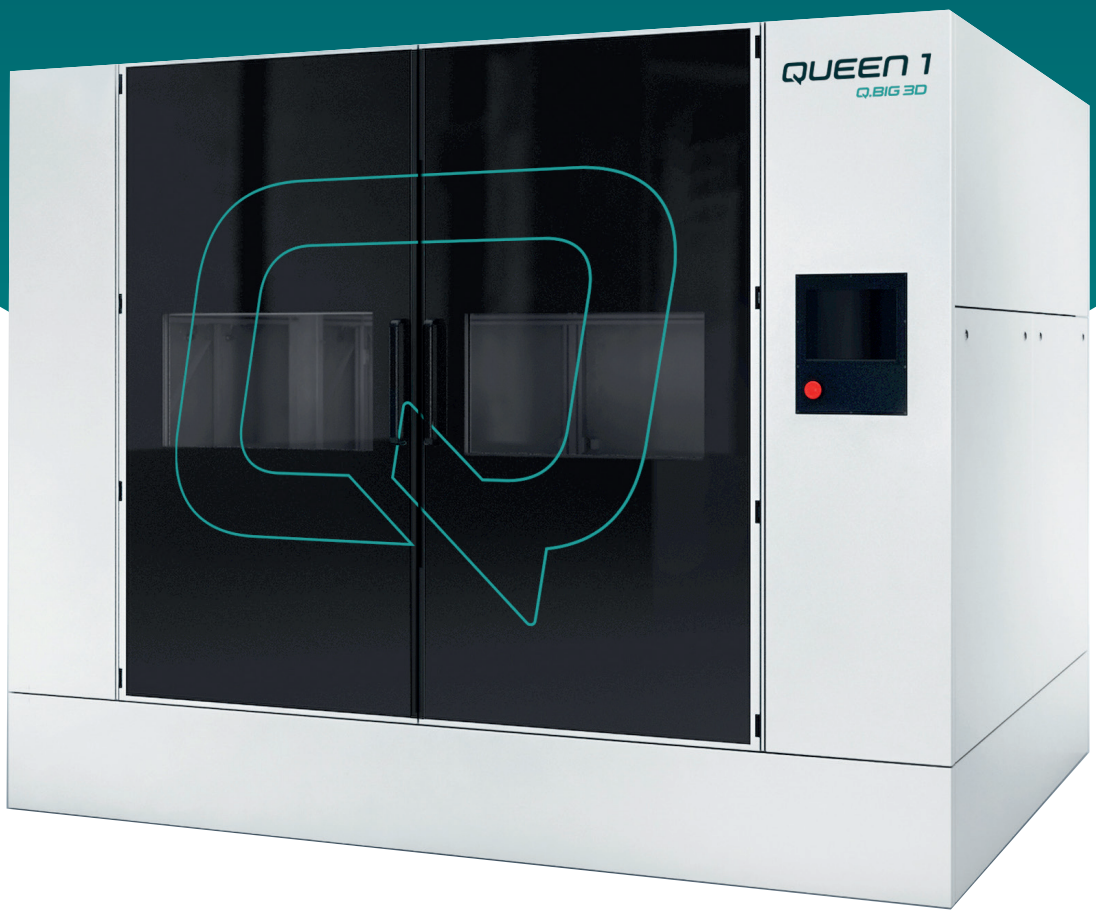
Built for size, throughput and accuracy.

A workhorse for economic 3D printing of XXXL components



Think Big. **Print Bigger.**

Q.BIG 3D

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Print Bigger.

Q.BIG 3D

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Dear Sir/Madam,

When industrial companies invest in 3D printing, there's one thing that's particularly important: it has to be worth it!

With our specially developed 3D printer QUEEN 1, it's worth it. The use of more cost-efficient plastic pellets, savings on expensive tools, immediate availability through 3D printing and high printing speed due to the variability of the nozzle diameter are just a few factors that can have a positive effect on your production.

Together with our team of 3D printing specialists, we have set ourselves the task of making large-format 3D printing economical. We look after our customers from the point of initial enquiry, to installation of the QUEEN 1 in your company, right down to maintenance and other services. A personal, open and professional relationship with our customers is Q.BIG 3D's top priority.

With the QUEEN 1, you can act quickly in your own company and manufacture even large components, such as spare parts, measuring jigs and fixtures, tools or end-use parts, yourself.

Benefit now and invest in the future of your company in the form of large-format 3D printing.

The Q.BIG 3D team

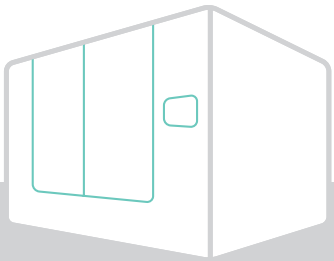
The QUEEN 1 is by far the most economical option for many **industrial applications**

Together, we'll find a solution.

The system is highly automated and easy to use. This increases output and accelerates your development and production processes in the early phase. The QUEEN 1 also meets customers' requirements for short delivery times for printed parts and flexible material selection at low prices. Our machine algorithm ensures that the right amount of material is available at the right place at the right time, even for complex components.

Set us a challenge!

Send us your use case: **wirtschaftlich@Qbig3D.de**



The Q.BIG 3D service model

Applications

/ Devices

/ Equipment

/ Custom-made products

/ Spare parts

/ Functional samples

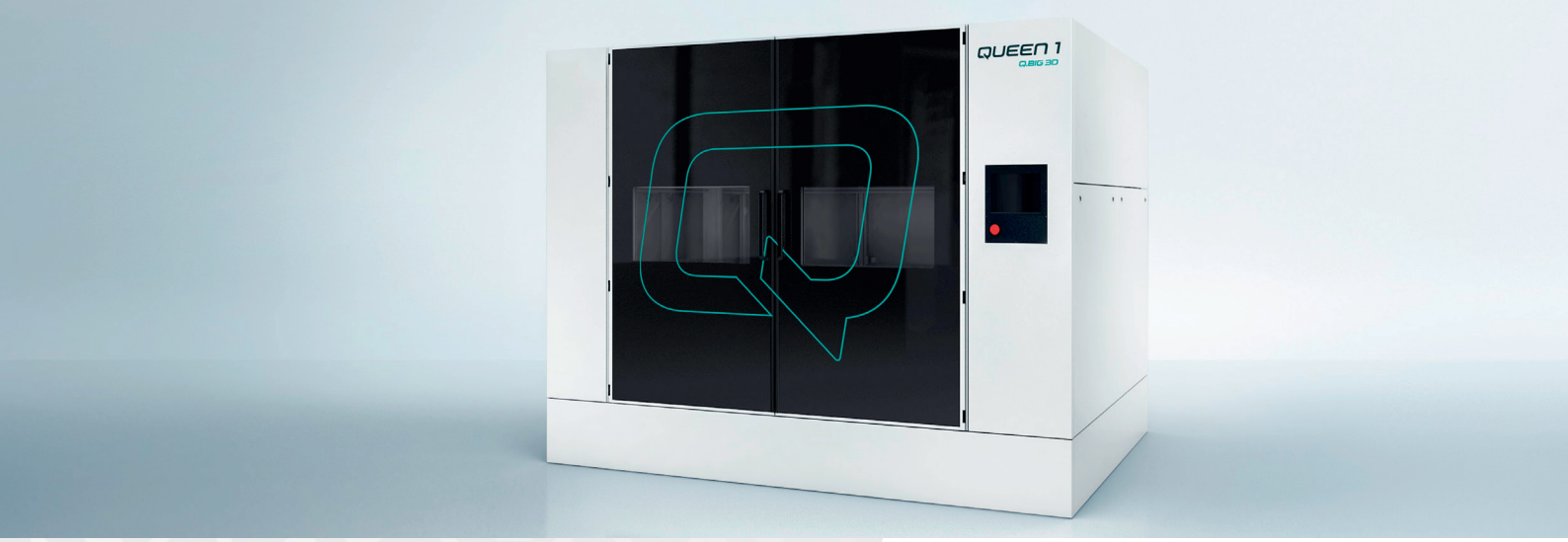
/ Prototypes

Services

/ Spare & wear parts
/ Machine servicing (hotline & on-site)
/ Maintenance & service contracts
/ Material qualification
/ Print job monitoring
/ Application support
/ Checking of print data

Academy

/ Training
  / Design for additives
  / Slicing
  / Machine operation
  / Reworking
  / Maintenance & service
/ Online platform
  / Tips & tricks
  / Training materials
  / Video tutorials



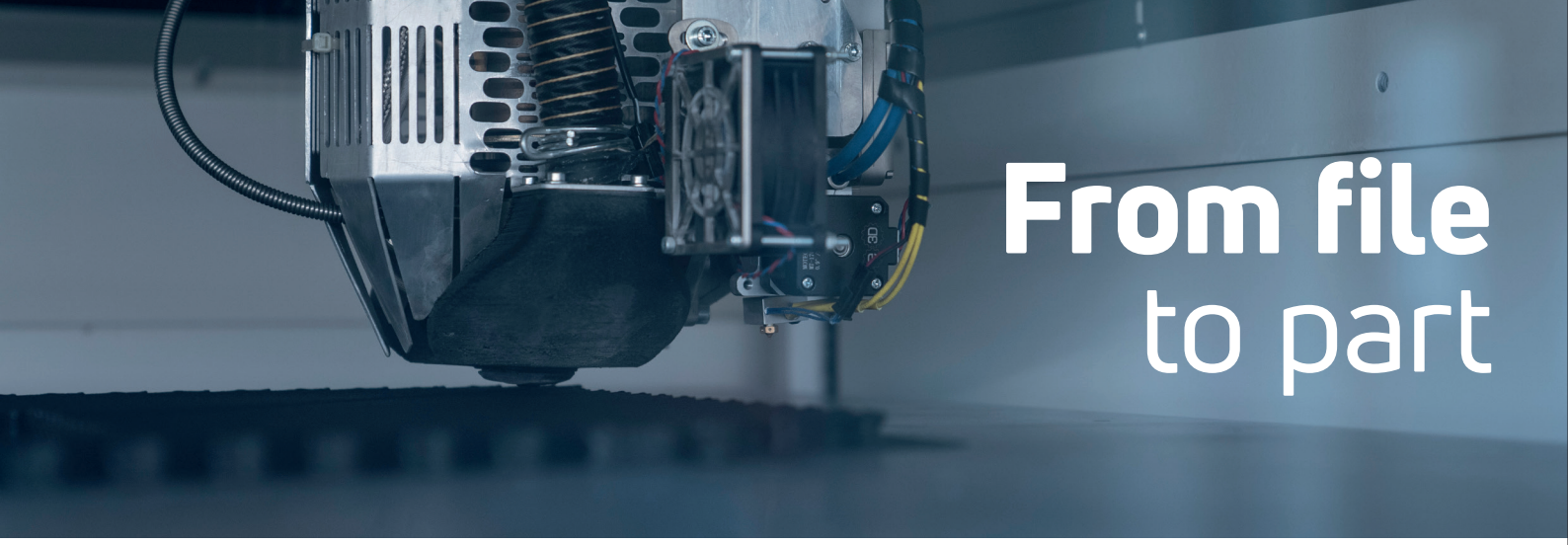
Printer specifications

Installation space size	1700 x 1050 x 1050 mm (67 x 41 x 41 in) (XYZ)
Motion system	Servo-driven precision recirculating ball axles
Temperature of print bed	Max. 120°C (248°F)
Temperature of build chamber	Max. 80°C (176°F), active heating and cooling with homogeneous air distrubution
Thermomanagement	The outer housing chamber of the machine is thermally stabilized to ensure high repeatability and dimensional accuracy even with changing ambient temperatures.
Movement accuracy	X/Y/Z: +/– 0.05 mm/m
Process speed	Print: 200 mm/s (8 in/s) Travel: 500 mm/s (20 in/s)
Extrusion unit	Abrasion-resistant screw and print head, VFGF (variable fused granulate fabrication), temperature-stabilised liquid-cooled hopper
Variable nozzle diameter	Detail 1.5 mm (0.06 in), Turbo 3 mm (0.12 in) (different combinations possible)
Dynamic throughput	0.15 - 2.0 kg/h (0.3 - 4.4 lbs/h), depending on the type of material
Layer height resolution	Detail: Standard 0.4 mm (0.016 in) (min. – max. 0.3 – 0.9 mm) (0.012 in - 0.035 in) Turbo: Standard 1.2 mm (0.048 in) (min. – max. 0.4 – 2 mm) (0.016 in - 0.08 in)
Nozzle temperature	Max. 350°C (660°F)

Material selection

Pellets	3–5 mm (0.12 in - 0.2 in) standard pellet shapes
Material selection	Ask us for our continuously expanding material portfolio. QUEEN 1 is an open system with a melting temperature up to 350°C (660°F). Standard portfolio materials and the corresponding machine parameters are supplied by Q.BIG 3D
Material portfolio	Qualified standard materials on request. Q.BIG 3D will qualify all processable materials at the customer's request.
Material delivery	Automatic conveying from an industrial pellet dryer, continuous printing without refill breaks.

A Q.BIG 3D printer is the manufacturing tool that is tailored to your professional requirements without compromise.
The QUEEN 1 stands for extra-large and functional parts in high resolution and short printing times.



From file to part

Innovation for XXXL components

At Q.BIG 3D, we offer our customers a unique service that allows them to get from the idea to the final part with a reliable partner. Our experts carefully advise our customers and plan things together with them to accurately understand their ideas and requirements.

Our qualified staff inspect every component and carry out post-processing if necessary. This allows us to ensure that the result meets our customers' requirements in terms of quality, precision and functionality.

Design for additive

Design things with the printing process in mind to save time, money, material and weight.

Slicer training

Learn how to optimally position the component in the working space, where to use Detail and Turbo mode, and how to use as little supporting structure as possible.

Machine operation

Correct operation of the machine has a major impact on the component quality. Let our experts show you how it's done. Let our experts show you the best prati-ce tips that they collected over the years.

Reworking

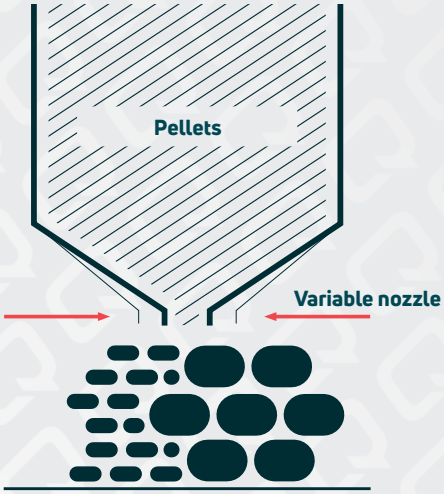
Learn about the easiest way to remove support structures, joining techniques, sealing techniques and how to achieve even high gloss surface quality.

Quality assurance

What's important and how the quality is checked. Things to consider when aiming for high precision, high repeatability parts. Gain Insights into print job statistics. Confirm a job was printed within a precise temperature range. What tools to use for measurements.

Fine, bold *& fast*

VFGF process – incl. software algorithms for user-adapted process automation



It's all about the nozzle

With the VFGF process, high-resolution printing is only carried out where it is necessary – for example, on the surface. Inner volumes are filled quickly using ... thicker strands.

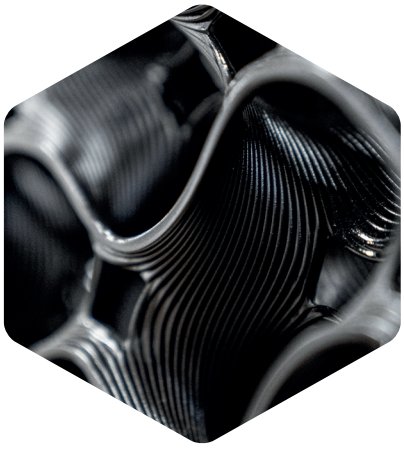
A so-called Predictive Flow Algorithm, adapted to the VFGF process ensureS, that the right amount of material is always extruded at the right time, in the right place. This makes it possible to print even complex features at the scale of the nozzle dimension with steep overhangs and bridges.

This precise control system enables individual customer geometries at marketable prices alongside maximum quality with additively manufactured components.

Large components

Large components represent a particular challenge in 3D printing. For one thing, you usually need a larger printer and a larger printing plate in order to even be able to print the components at all. On top of this, problems such as warping or distortion can also arise when printing large components, since the printing process takes place over a longer period of time.

With the know-how of our experts and our QUEEN 1, you will be ideally equipped for large-format 3D printing!



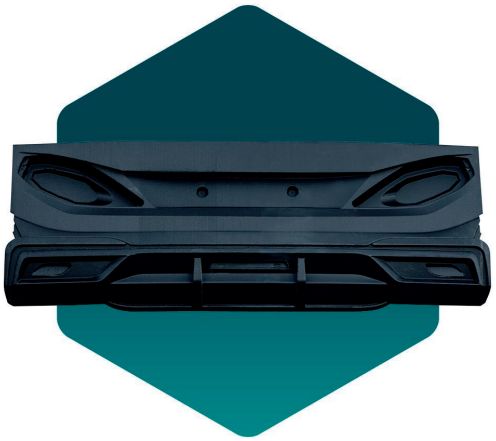
Complex & thin-walled

Material	Precision polyamide GF25
Printing duration	128 h
Weight	31 kg incl. support
Surface	0.4 mm

- √ **Accurate with fine surface**
- √ **Flame-retardant**
- √ **Shortest possible lead time**
- √ **No tools required**
- √ **Material properties close to series production**

Functional sample/prototype applications

Transportation/caravans



Accurate & precise

Material	PLA + colour pigments
Printing duration	24 h
Weight	4.5 kg
Surface	0.4 mm

- √ **5 weeks less lead time: 2 weeks vs. 7 weeks**
- √ **Accurate with a position tolerance <0.2 mm**
- √ **Sustainable thanks to 97% CO2 savings, compared to aluminum part**
- √ **Reduced stockpiles**
- √ **Automated workflow through generative Design**

Mounting & measuring device applications

Quality control fixture for automotive part

Voluminous & functional

Material	PLA
Printing duration	340 h
Weight	205 kg
Surface	0.4 und 1.2 mm

- √ **Available at short notice: Lead time of 4 weeks vs. 16 weeks**
- √ **Replaces aluminum casted part**
- √ **Shortened development cycles**
- √ **50% cost savings**

Custom-made product applications

Pipe elbows for hydropower applications