

# innovatiQ

MEMBER OF THE ARBURG FAMILY



## TiQ 5

### **INDUSTRIAL 3D PRINTING - UNLIMITED PROCESS-RELIABLE PRODUCTION OF COMPONENTS MADE OF HIGH-PERFORMANCE THERMOPLASTICS**

The TiQ 5 is the optimal system solution for the additive manufacturing of large functional parts. Unique Smart Functions ensure intuitive and user-friendly use of the complex possibilities offered by additive manufacturing. Equipped with a build area heater and a water-cooled dual-lift print head, the

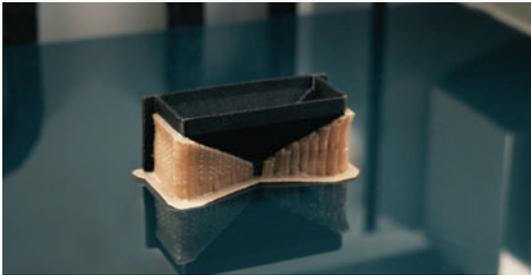
TiQ 5 enables the process-reliable production of components made of a wide range of materials, in particular high-performance thermoplastics. Whether it's a case of one-off production, large prototypes or industrial manufacturing – the TiQ 5 is the perfect choice every time.

## APPLICATIONS IN INDUSTRY AND PRODUCTION



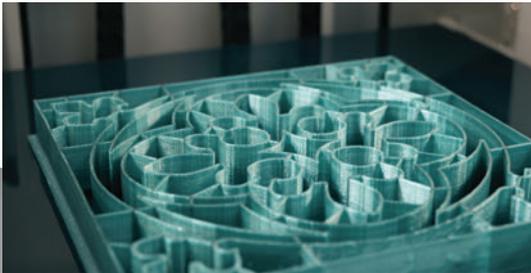
### Components with specific technical properties

Whether you require UV resistance, heat resistance, fibre-reinforced or coloured materials; whether it involves series parts, prototypes or operating and auxiliary materials: Thanks to its open material platform, the TiQ 5 is always the perfect addition to your production line.



### Components with complex geometries

Freedom of form requires a new way of thinking. Create added value for your customers with new designs. The TiQ 5 can master complex geometries with water-soluble support materials. This makes components more cost-effective – even with a batch size of 1.



### Components for large tasks

With its chamber volume of up to 90 litres, the TiQ 5 represents the benchmark in its class. Whether you have one large component or multiple small ones – you can deliver additively manufactured functional parts at the touch of a button and speed up your time to market.

## CHOICE OF POSSIBLE MATERIALS WITH THE TiQ 5

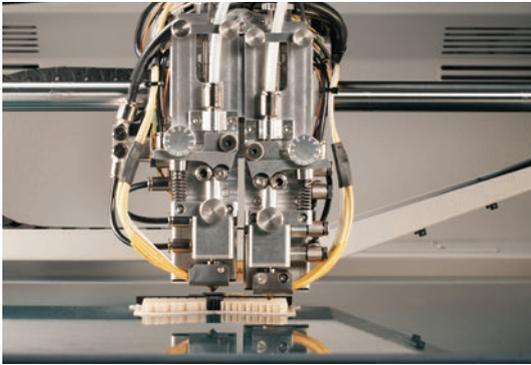
<b>ABS:</b>	Most widely-used 3D filament material due to its versatility and good processability.
<b>PA, PA-CF/GF:</b>	Heat-resistant material in industrial quality, enables the production of components with excellent mechanical, chemical and thermal properties.
<b>PP*:</b>	Food-safe - certified to DIN EN ISO 10993-5 for biological safety.
<b>Support material – water-soluble:</b>	Enables the printing of complex geometries. The support material offers excellent adhesion with the primary material and can be easily dissolved in a warm water bath.
<b>PC*:</b>	High heat-resistance and excellent mechanical properties, enabling printing of high-strength functional parts.
<b>ASA:</b>	Perfect for outdoor use due to its UV and weather resistance.
<b>PET-G/C:</b>	Chemical resistance to water, acids, alkalis and alcohols.
<b>TPU 95 Shore (A):</b>	Provides for flexible components, with some chemical resistance.

## TiQ 5 – SIMPLE, RELIABLE, ADDITIVE



### GestiQ Pro, the new HMI from innovatiQ

The TiQ 5 is equipped with the new industrial controller GestiQ Pro, which is operated via a large touch screen display. GestiQ Pro supports the operator with built-in shortcut keys. Everyday usage of the TiQ 5 becomes child's play, with the operator having sight of all relevant parameters – even remotely.



### SmartFunctions - smarter with the TiQ 5

The SmartSpeed anti-slip controller and the SmartTrack intelligent filament tracking system ensure maximum process reliability in additive manufacturing.

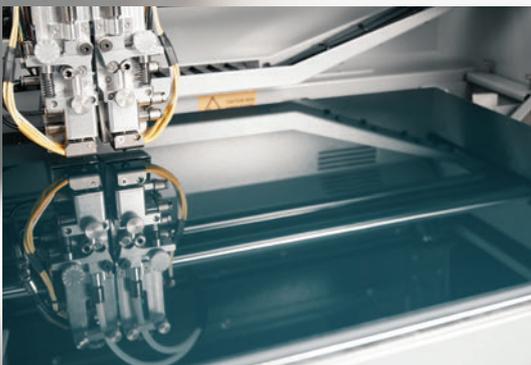
The TiQ 5 uses these systems to adjust its print speed to the capacity limit in an intelligent and dynamic way. You are guaranteed reliable achievement of your goals every time, at maximum conveying and printing speed.



### Ergonomics and accessibility – the operator's choice

With perfect ergonomic access and operating noise levels of less than 70 dB(A), the TiQ 5 is easy to use on a daily basis.

The maintenance-friendly operating concept allows quick access to all technical components, thus reducing operating costs.



### Laser levelling – minimal set-up time

The laser-assisted system levelling of the 6 mm thick glass-ceramic build plate is carried out automatically via the servomotors below. Time-consuming adjustments are now a thing of the past. Faster start-up, reliable achievement of your goals – all resulting in increased efficiency.

# TECHNICAL DATA FOR TiQ 5

<b>Build volume (X/Y/Z):</b>	500 x 400 x 450 mm	<b>Network connection:</b>	Yes, stand-alone operation possible
<b>Temperature of process chamber:</b>	80 °C	<b>Software:</b>	Simplify3D
<b>Temperature of printing plate:</b>	160 °C	<b>Power consumption:</b>	(max.) 2.3 kW, 20-30 % in continuous operation
<b>HMI:</b>	GestiQ Pro V1.05 with touch screen display, network-ready	<b>Connected load:</b>	230 V, 16 A
<b>Print speed**:</b>	10 – 150 mm/s	<b>Display:</b>	7-inch touch screen
<b>Traverse rate**:</b>	10 – 300 mm/s	<b>External dimensions (W/D/H) without dryer:</b>	1246 x 974 x 1152 mm
<b>Positioning accuracy**(X/Y):</b>	+/- 0.1 mm	<b>External dimensions (W/D/H) with dryer:</b>	1246 x 974 x 1861 mm
<b>Layer thickness** (min.):</b>	0.02 mm	<b>Weight:</b>	approx. 185 kg (without material drying unit)
<b>Filament/nozzle diam.:</b>	1.75 mm / 0.40 mm	<b>Technology:</b>	FFF (Fused Filament Fabrication) build-volume-filling print only with primary extruder on the left
<b>Nozzle options**:</b>	0.25   0.30   0.50   0.60   0.80 mm	<b>Mesh bed levelling:</b>	Laser-based, 25 measuring points
<b>Extruder:</b>	DD4 Dual lifting and lowering head (water-cooled) (operating weight 4 kg) up to 400 °C (+/- 2 %)	<b>Volume in operating mode:</b>	approx. 70 dB
<b>Position monitoring:</b>	Automatic, closed loop		

\* Restrictions in the case of large-scale geometries

\*\* Deviations depending on equipment/material/process

In addition to our advanced technologies, we also offer **services and training**.

Through our worldwide network of partners, we are more than happy to offer you on-site support and provide you with our expertise.



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