.NEW

TruPrint 3000

Flexible solution for industrial 3D printing

05

Inert, closed powder cycle

Simple part and powder handling in shielding gas for consistent powder and build part quality

01

High process reliability

Consistent part quality with a newly developed gas flux

04

Comprehensive monitoring solutions

Ensuring high quality standards during the build with Melt Pool Monitoring

02

Fullfield Multilaser 2 x 500 W

Simultaneous scanning of the entire build area for improvement in performance

03

Flexible production setup

With different machine and peripheral configurations for part and powder management

TRUMPF

Machine Tools / Power Tools
Laser Technology / Electronics

The new flexible TruPrint 3000 with multilaser option – for your industrial additive manufacturing.

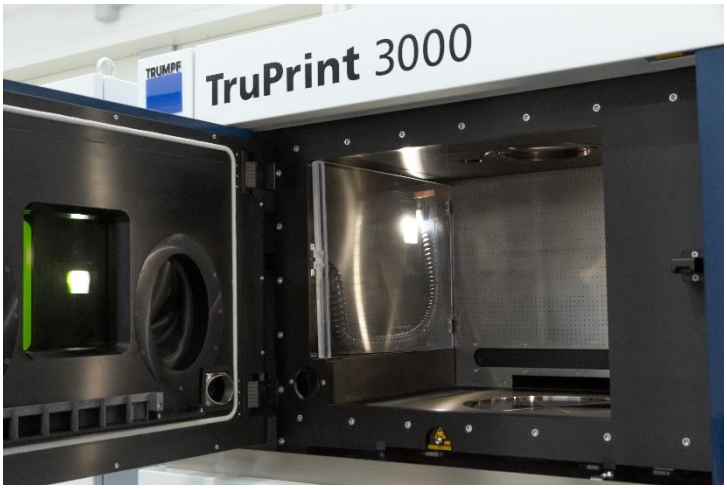
In addition to performance increase with fullfield Multilaser option, the focus of the TruPrint 3000 is on improving process robustness and various operating scenarios. Depending on part size and complexity, your workflow preference and production volumes, the metal 3D printer can be tailored to your needs. Further options such as Melt Pool Monitoring and the closed inert powder circuit round off the range.

01

High process reliability

Consistent part quality with a newly developed gas flux

Achieve even better part quality with our newly developed shielding gas concept. This guarantees a highly robust melting process in which both the process chamber and the optical protection glass remain clean. Optimum shielding gas flow is achieved by the reduced size of the process chamber and by primary and secondary gas flow. Particularly in industrial series production, this ensures a constant, high part quality.



02

Fullfield Multilaser 2 x 500 W

Simultaneous scanning of the entire build area for improvement in performance

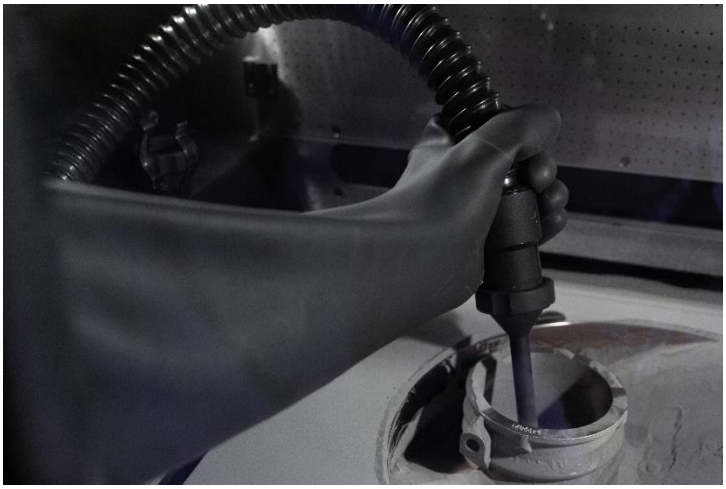
With the fullfield capabilities, all lasers can scan in the entire build area. The result: increased productivity, shorter production times per part and reduced part costs. To achieve higher precision, the laser scan fields are automatically calibrated to each other. This enables you to achieve very high surface quality with no seams. The fullfield multilaser option is available with two powerful lasers that have a beam diameter of 80 µm.

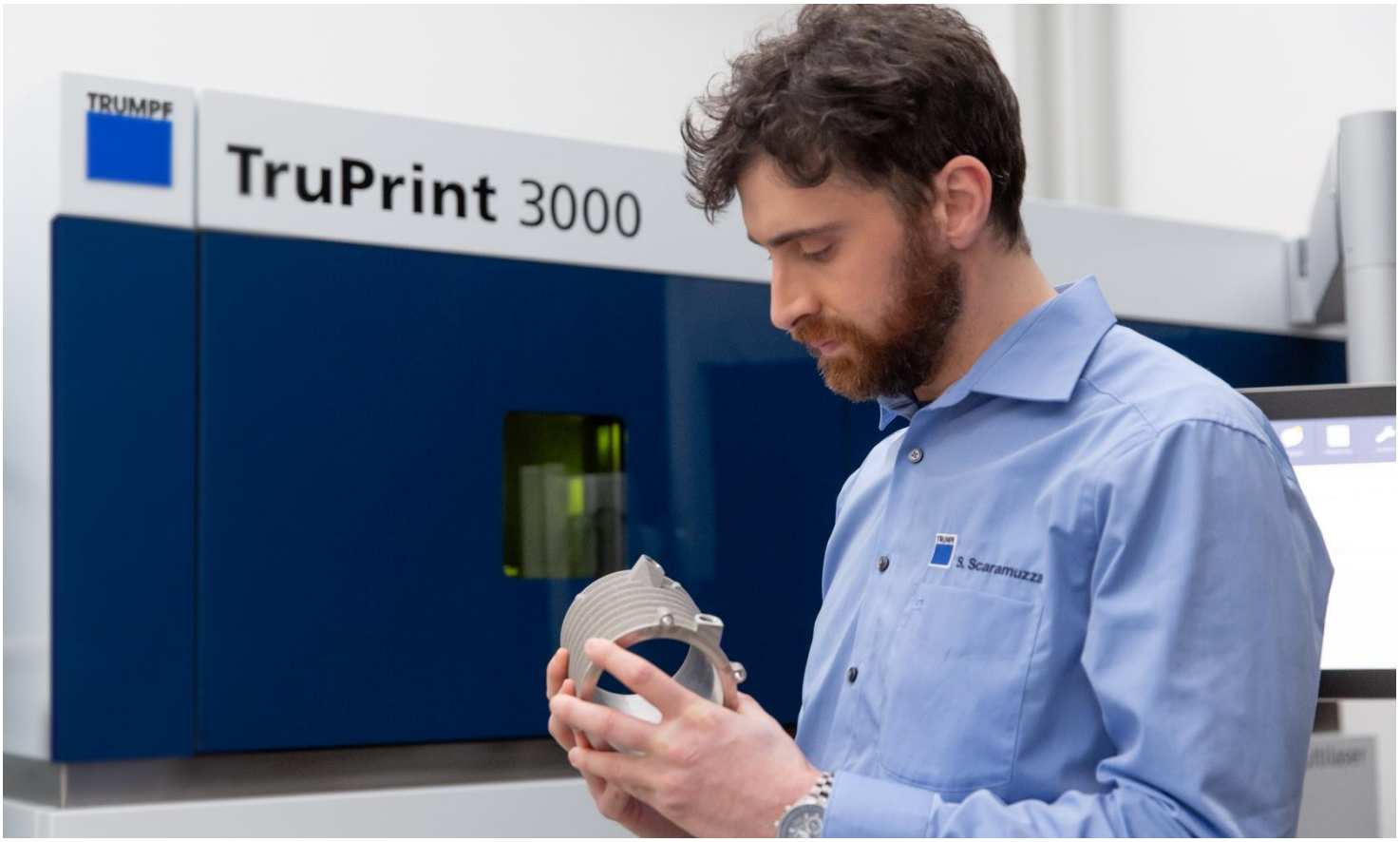
03

Flexible production setup

With different machine and peripheral configurations for part and powder management

As flexible as the TruPrint 3000 is, the production setup can also be variably adapted to your requirements or applications. For example, start with integrated unpacking within the machine in shielding gas.





As machine utilization increases, scale up production by unpacking externally. For a very high degree of cleanliness, depowder your component with the depowdering station (optionally in shielding gas). The vibration support also removes powder from complex part geometries. Alternatively, you can unpack the part externally in the unpacking station without powder contact. Choose your configuration to suit part complexity, workflow preference and production volumes. Use the industrial part and powder management components for multiple 3D printers to reduce your part costs.

04

Comprehensive monitoring solutions

Ensuring high quality standards during the build with Melt Pool Monitoring

Thanks to Melt Pool Monitoring on the TruPrint 3000, you can ensure the highest quality standards for 3D printed parts. Sensors detect deviations in the laser melting process at an early stage – both for single and multilaser processes. Quality assurance is supplemented by Powder Bed Monitoring. Each powder layer is visually monitored, and conspicuous powder layers can be automatically recoated. Further options are available for the verification of certified processes: Laser power calibration, focus position measurement and scan field calibration enable you to measure, recalibrate if necessary and document your measurement results.

05

Inert, closed powder cycle

Simple part and powder handling in shielding gas for consistent powder and build part quality

A closed powder cycle means that you always work in a clean and safe production environment. An inert powder handling system also fulfills increased quality requirements and meets verification obligations. The integrated powder conveyor in the TruPrint 3000 allows you to remove the powder directly under inert conditions while operating the machine via the glovebox. This way, the powder remains constant over time and retains its properties. Thus, the absorption of oxygen and humidity is prevented over various build jobs. The inert powder cycle is completed by the other components of the industrial part and powder management: such as the sieving station, powder silo and the depowdering station. Both the internal and external powder removal process steps can be carried out in shielding gas.

Your partner for 3D printing

Additive manufacturing enables functional integration, offers endless degrees of design freedom and optimizes costs over the whole value stream. The individual needs of our customers require a high degree of flexibility in production. Therefore, the TruPrint 3000 offers a wide range of options that enable a flexible production setup.
We have used our expertise as machine tool builders and laser specialists to make the TruPrint 3000 what it is: the benchmark in 3D metal printing. If you are looking for a partner to drive your business forward, TRUMPF is the choice.
Whether it is about technology entry, suitable components or optimizing manufacturing - talk to our AM Consulting. Our experts will assist you in preparing your equipment for a certified production environment, such as installation and commissioning. We will also support you in the operation and maintenance of certifications by providing appropriate maintenance.

Experience the TruPrint 3000 in the AM Showroom - live or online!
www.trumpf.info/am-showroom

TruPrint 3000		
Build volume (cylinder)	mm x mm	Ø 300 x H 400
Processable materials[1]		Weldable metals in powder form, such as: Stainless steels, tool steels, aluminum, nickel-based, or titanium alloys
Layer thickness[2]	µm	20 - 150
Max. laser power at the workpiece (TRUMPF fiber laser)	W	500 Optional Multilaser: 2 x 500
Beam diameter	µm	80
Scan speed (powder bed)[3]	m/s	Max. 3
Preheating	°C	Up to 200
Shielding gas		Nitrogen, argon
Power supply	V / A / Hz	400/460 – 32 – 50/60
Dimensions	mm	3385 x 1750 x 2070
Weight (incl. Filter, powder)	kg	4300

[1] Current material and parameter availability upon request
[2] Individually adjustable
[3] 3 m/s is the max. exposure speed in the powder bed which can be set by the customer. Up to this value the scanhead parameters are optimized.
Subject to modifications. Only specifications in our offer and order confirmation are binding.

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TLD207st 11/2021