

.NEW

TruPrint 5000

Highly productive
3D printing for
industrial serial
production

06

Software and monitoring

For industrial processing

01

Multilaser 3 x 500 W

Simultaneous scanning
of the entire
building area for
maximum productivity

02

500 °C preheating

For high build part quality

03

Automation

For an unattended process start

04

Interchangeable cylinder principle

For an high machine utilization rate

05

External part and powder management

For set up and unpacking parallel
to production

Highly productive 3D printing for industrial serial production.

The TruPrint 5000 is a highly productive, semi-automatic Laser Metal Fusion (LMF) machine for the highest of industrial 3D printing requirements.

Combined with external part and powder management and monitoring solutions, it is ideal for industrial additive manufacturing.

01

Fullfield multilaser 3 x 500 Watt

Get maximum productivity with the TRUMPF fullfield multilaser: The three 500 Watt fiber lasers from TRUMPF simultaneously scan the entire build area. In this way you guarantee the highest possible build rates. The components are characterized by an optimal surface quality without any seam marks. All three lasers can also be arranged flexibly in the build chamber.

02

500 °C preheating

A high build part quality is attained through the preheating of the substrate plate going up to 500 °C. This enables a robust build process for a large variety of metals. This is ideal for industries with high build part quality requirements.

03

Automation

After the build cylinders are put into the TruPrint 5000, the machine automatically takes over the start of the building process at the press of a button. This replaces the otherwise manual setup and increases the process reliability.

04

Interchangeable cylinder principle

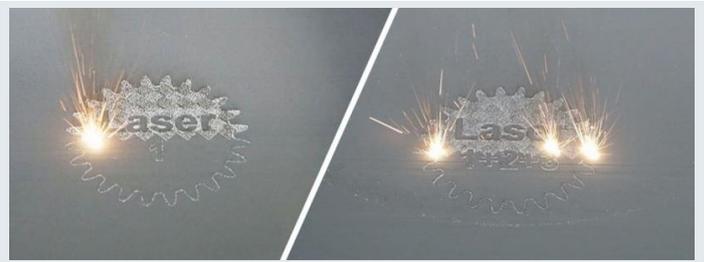
The TruPrint 5000 system has quickly replaceable build and supply cylinders. This enables work done parallel to production and the achieving of high machine availability.

The integrated zero-point clamping system direct on the substrate plate in the build cylinder offers an ideal basis for downstream processes such as sawing, milling or grinding.

05

External part and powder management

The TruPrint 5000 is supplemented with an industrial part and powder management system consisting of a sieving station, unpacking station and powder silo.



TRUMPF fullfield multilaser (100 % overlap)

Regardless of whether you work on a build part in the TruPrint 5000 with one laser or with three in parallel, you always get the same build part quality. It's just up to 3 times faster with the multilaser.

With it, you can work parallel to production, the setup process is optimized, productivity is increased and a high degree of safety is ensured as workers avoid contact with powder. This system can be used simultaneously for several TruPrint machines of the series.

06

Software and monitoring

With TruTops Print and the Siemens NX software package, you receive the comprehensive software solution for the whole CAD/CAM/CAE process chain. Thanks to intelligent monitoring solutions, the building process and machine conditions can be mobil monitored, analyzed and remotely controlled.

TruPrint 5000		
Build volume (cylinder)	mm x mm	Ø 300 x H 400 Ø 290 x H 400 (reduction if preheating is > 200 °C)
Processible materials ^[1]		Weldable metals in powder form, such as: stainless steels, tool steels, aluminum, nickel-based, cobalt-chromium or titanium alloys
Build rate ^[2]	cm ³ /h	5 - 180
Layer thickness ^[3]	µm	30 - 150
Laser source (TRUMPF fiber laser)	W	3 x 500 (max. laser power at the workpiece: 480)
Beam diameter ^[3]	µm	100 - 500
O ₂ concentration	ppm	Up to 100 (0.01%)
Scan speed (powder bed)	m/s	Max. 3
Preheating	°C	500
Shielding gas		Nitrogen, argon
Automation		Automatic process start
Power supply	V / A / Hz	400 / 63 / 50
Dimensions (incl. filter, electrical cabinet)	mm	4586 x 1628 x 2026
Weight (incl. filter, electrical cabinet, powder)	kg	7085
Filter unit		Self-cleaning, long-term, multi-material filter unit

^[1] Current material and parameter availability upon request

^[2] Actual build rate consisting of exposure and recoating. Dependent on system configuration, process parameters, material and degree of filling

^[3] Individually adjustable

Subject to modifications. Please ask your local TRUMPF contact to check local product availability.