

New generation TruDisk

Meet the sharpest tool in the box



01

Intelligent

Optimized for Industry 4.0

02

Ultracompact

Footprint reduced by 50%

03

Flexible cooling concept

Supply temperature of up to 38°C
with an integrated chiller

04

Improved energy efficiency

Innovative pulse function

**The ultracompact
disk laser generation**

New generation with patented disk laser technology

The TruDisk is a high-powered solid-state laser for welding, cutting and surface treatment of metals. The laser is especially impressive wherever a combination of high laser power and excellent beam quality is required.



01

Intelligent

Optimized for Industry 4.0

Industrial production is undergoing a revolution: machines and components are communicating via sensors and codes. Software solutions bundle the information obtained, analyze it, and control the manufacturing process. The new generation of TruDisk lasers features synchronized data recording of all sensors, offering high-quality data for virtual analyses. Via the OPC UA interface, data from the laser can be read without physical access to the device. The lasers therefore provide optimal hardware requirements for services like condition monitoring and predictive maintenance.

02

Ultracompact

Footprint reduced by 50%

The new TruDisk boasts a space-saving design with a footprint of under 1 m². This modular design of the TruDisk maximizes accessibility and ease of service work. Individual components can be replaced quickly and easily.

03

Flexible cooling concept

Supply temperature of up to 38°C with an integrated chiller

The new TruDisk laser comes with an intelligent cooling concept. Depending on the temperature of your tap water, you can choose between the standard variant with an integrated heat exchanger (up to 28° C in supply flow) and the optional integrated compressor chiller (up to 38° C in supply flow). The footprint of the laser will remain unchanged by your choice. Whenever tap water for cooling is available, you can operate without an external chiller. The compressor chiller is connected to the laser control and is always reliably and simultaneously monitored.

04

Improved energy efficiency

Innovative pulse function

The latest-generation TruDisk has an energy-efficient pulse function. For the first time, even during very brief breaks in processing, the diode current can be reduced to 0 A. For longer processing intervals, the smart energy management of the TruDisk laser is available. As a result, the laser is energy-efficient in operation both during laser-on and laser-off times.

Welding



Cutting



Brazing



Hardening

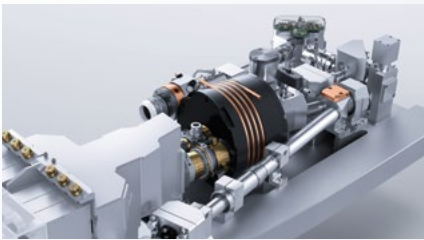


The proven features of the TruDisk

Highest beam quality

Thanks to the disk geometry

The use of the disk as a laser medium provides brilliant beam quality – on TruDisk lasers, up to $2 \text{ mm} \cdot \text{mrad}$. Delivering between 1 and 16 kW of power, TruDisk lasers produce optimum results for processes as diverse as laser welding and laser cutting, deposition welding, hardening, and additive manufacturing.



100% constant power

From the first millisecond

The laser power can be regulated in real time instead of being controlled manually. So you get the best power stability on the market for the entire service life of your TruDisk laser. And that means perfectly reproducible results around the clock.



For highly productive cutting and welding, look no further than the TruDisk all-in-one laser. Brazing and deposition welding are two of its key strengths, and it can even handle highly reflective non-ferrous metals.

Robust against back reflection

Thanks to our patented resonator design

Your TruDisk laser can comfortably handle highly reflective materials. At the same time, it works reliably, without any wear parts and has proven itself even in the most extreme of ambient conditions.



Integrated beam guidance

For maximum laser utilization

With up to 4 outputs, the new generation of TruDisk lasers can be optimally adapted to your system design. The beam guidance is integrated in the compact laser housing. The use of multiple laser outputs enables you to increase the utilization of your laser, reduce part costs, and increase system availability.





TruDisk 1 kW to 8 kW
 Number of outputs: Up to 2
 Cooling: Integrated heat exchanger

TruDisk 3 kW to 6 kW
 Number of outputs: Up to 2
 Cooling: Integrated compressor chiller

TruDisk 1 kW to 8 kW
 Number of outputs: Up to 4
 Cooling: Integrated heat exchanger

Technical data

		TruDisk 1000	TruDisk 2000 2002	TruDisk 3000 3001 3002 3006	TruDisk 4000 4001 4002 4006	TruDisk 5000 5001 5002 5006	TruDisk 6001 6002 6006	TruDisk 8001 8002
Laser power (at the workpiece)	W	1000	2000	3000	4000	5000	6000	8000
Long-term power stability	%	± 1 with laser power control						
Adjustable power range	%	2 (3) to 100						
Beam quality at the input coupling into the fiber (typical values)	mm · mrad	2	2 8	2 4 8 25	2 4 8 25	2 4 8 25	4 8 25	4 8
Numerical aperture behind the fiber		0.1						
Wavelength	nm	1030						
Maximum number of outputs		4						
Ø laser light cable	µm	50	50 200	50 100 200 600	50 100 200 600	50 100 200 600	100 200 600	100 200
Footprint	m ²	0.85						
Accessories		Integrated heat exchanger						
Weight	kg	500						
Cooling options		Integrated heat exchanger (standard) or integrated compressor chiller (option for power range 3–6 kW)						
Cooling water temperature ranges	°C	Integrated heat exchanger: 5 to 28 Integrated compressor chiller: 5 to 38						
Ambient temperature in operation	°C	10 to 50						
Efficiency	%	Up to 34 (depending on laser type)						
Electrical connection		380 V (–10%) to 460 V (+10%), 50 Hz (–3 Hz) to 60 Hz (+3 Hz)						
Options		BrightLine Weld, active laser power control and live power display, integrated compressor chiller, Remote Services, Quality Data Store, cooling of processing optics via the laser, TRUMPF LaserNetwork, CutAssist						

Subject to alteration. Only specifications in our offer and order confirmation are binding.