

A new generation of marking laser with 3D functionality

TruMark 6030

A whole new dimension in marking



Higher performance and marking quality

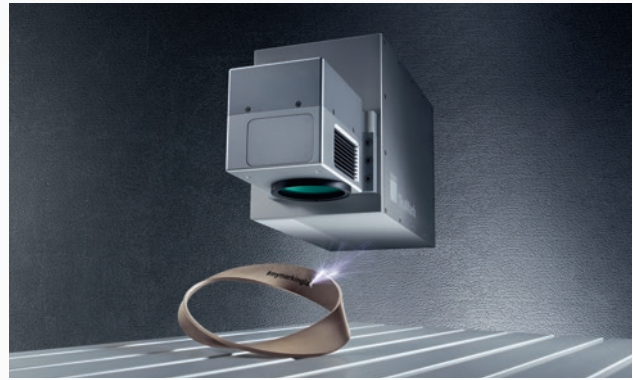
Easy and reliable integration

Best reproducibility

Extremely robust

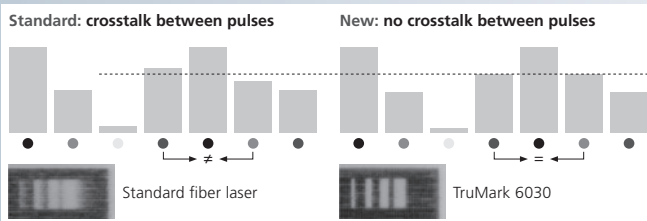
## TruMark Series 6000

All the lasers of the TruMark Series 6000 have one thing in common: their high power and outstanding quality combine to create laser light with unique brilliance. Whether you are engraving, ablating, structuring, marking or annealing – manufacturing without the laser would be unthinkable. The TruMark 6030 impressed the market with its high productivity and new functions such as 3D marking and closed-loop laser power control.



### Higher performance and marking quality

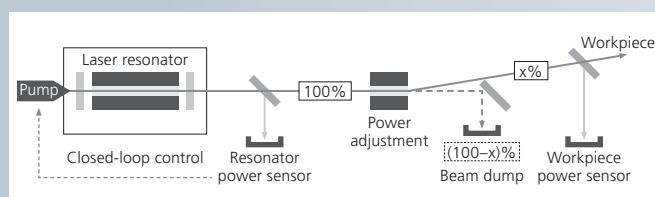
The TruMark 6030 reduces process time by up to 25% through its available high average power and pulse energy at the workpiece. Outstanding beam quality and high power densities ensure clean material removal and high-contrast markings. Thanks to its innovative optical setup, the spot size remains constant throughout the marking volume. By using an external modulator, the laser power can be output linear-scaled – parameters such as pulse duration or pulse stability are not affected. In addition, each individual laser pulse can be adapted exactly, which prevents crosstalk between the pulses. Softening and run-in behavior at the beginning of vectors are avoided. Significantly sharp bitmap labels can be realized thereby.



Increased quality of markings on sensitive materials – as there is no crosstalk of the pulses (example: bitmap marking for plastics).

### Best reproducibility

Different frequency ranges, temperature changes or aging processes are no longer a problem thanks to the internal online laser power measurement and control. The closed-loop control ensures perfect machining results over the entire lifetime. The reproducibility is also unique. When replacing components or when duplicating your system, the same parameters can be used again. The laser power control in combination with the external modulator ensures that one TruMark 6030 is similar to the other.



The innovative laser power control of the TruMark 6030 provides perfect and reproducible marking results.

### Easy and reliable integration

The TruMark 6030 can be integrated quickly and easily into the production system. To accomplish this, features like the 19" plug-in device as supply unit, the removable connecting cable (length till 6 m) and numerous available interfaces all play a role. Its modern software uses wizards to assist in the communication establishment between the laser and the manufacturing environment. With its sensor systems and OPC-UA data interface, the TruMark 6030 makes process and laser data available, providing optimal conditions for Industry 4.0 in the production facility. With performance level e, it meets the highest safety requirements and is thus a reliable component of the process chain. After closing the safety circuit, the laser is available within 50 ms.



### Extremely robust

This new TruMark 6030 is a high-end industrial device. Its state-of-the-art manufacturing technologies and high-performance components make it a remarkably robust and highly compact marking system with safety class IP 64. This guarantees high availability, meaning that it can be used profitably in a wide range of applications. The laser head can work in ambient temperatures of up to 45 °C because the air cooling of the laser head can be replaced by a water cooling plate. The TruMark 6030 can withstand standard processing head accelerations of 5 m/s<sup>2</sup>.

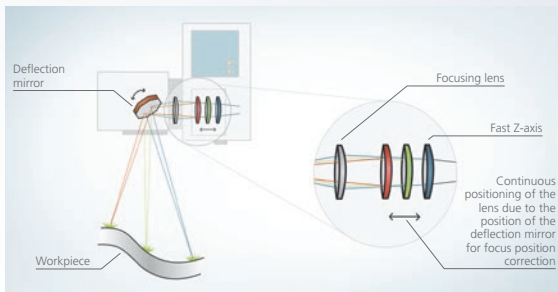


## TruTops Mark 3D software solutions

The marking software convinces by a user-friendly operation and optimal process times. Depending on the application, large volumes of multiple objects can be marked with one single laser system. The marking of three-dimensional surfaces such as slanted planes and uneven surfaces can be performed easily and efficiently.

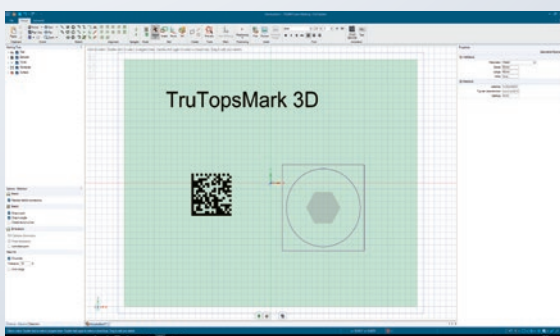
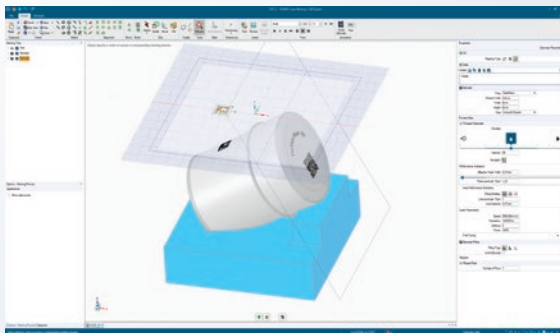
### 3D marking

The new TruTops Mark 3D program enables 3D marking on complex components. Geometries and marking content can be easily created or imported using the intuitively operable 3D CAD marking system. With the new optical setup of the TruMark 6030, extremely large Z travel ranges (up to 100 mm) can be achieved. An additional mechanical axis to move the laser head is often no longer necessary, which saves integration costs.



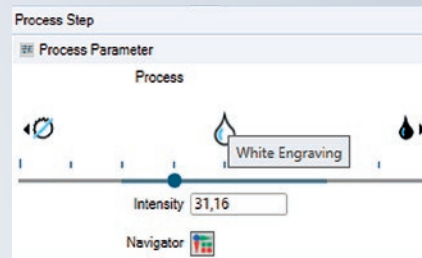
### Integrated 3D CAD software

The program is based on a complete 3D CAD editor with diverse possibilities for drawing and designing. The marking content can be placed directly on the 3D model of the component using drag and drop. As a user of TruTops Mark 2 versions, you can easily make the crossover using the CAD file converter. With TruTops Mark version 2.6 or higher, you can easily convert files.



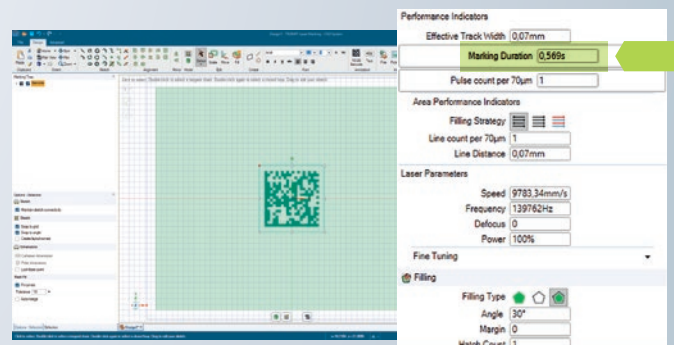
### Easy parameter determination

The parameter database filled in and deposited by our marking experts saves you a lot of time selecting the correct marking parameters. With the Magic 5 option the program knows the physical properties of the laser and the configuration is automatically set. A slider enables the light/dark contrast on metal or plastic without needing to adjust the individual parameters manually.



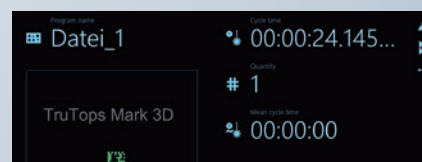
### Marking time simulation and quick times

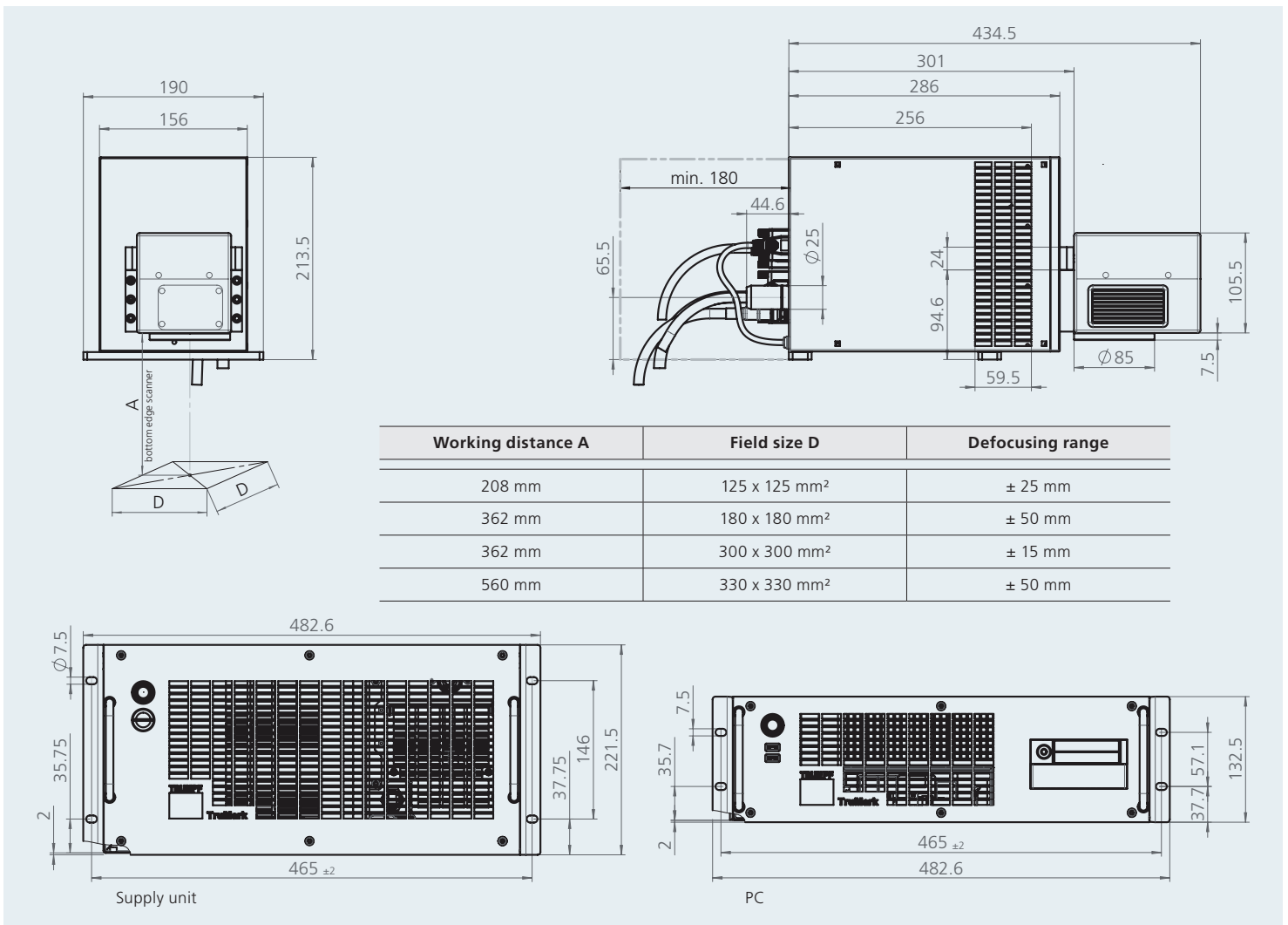
The marking duration is known before the first marking operation thanks to the marking simulation feature. With the entry of a certain marking duration, the respective parameters are automatically set. Processes and cycle times are sped up significantly through the improved processing of variable data.



### Intuitive handling and live viewing

The modern user interface with touch operation offers helpful wizards and tools for the easy setup of marking jobs. With the real-time viewing of the marking process in the Live-View mode the operator always knows which object is currently being marked.





TruMark 6030		
Wavelength	nm	1030
Average power	W	25
Min. focal diameter	µm	50
Marking volume	mm <sup>3</sup>	330 x 330 x 100   300 x 300 x 30   180 x 180 x 100   125 x 125 x 50
Beam quality (M <sup>2</sup> )		< 1.3   TEM <sub>00</sub>
Pulse repetition frequency	kHz	40–200
Electrical connection		90–264 V   47–63 Hz   8 / 15 A
Ambient temperature	°C	15–40 / 45
Relative humidity		90% at 15–45°C (no condensation)
Connecting cable length	m	4   6
Protection class of laser head		IP 64
Weight of laser head	kg	14.5
Weight of supply unit	kg	24
Weight of control PC	kg	8.5
Optional fieldbus interfaces		EtherCAT, Profibus, Ethernet/IP, Profinet

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