

Programmable
focusing optics PFO:

Dynamic and
powerful.



Machine tools/Power tools
Laser technology/Electronics
Medical technology

TRUMPF

Dynamic and powerful.

State-of-the-art electronic components enable more dynamic drive control which makes the latest generation of programmable focusing optics (PFO) faster and more powerful. For example, it is possible to program wobble movements which opens up additional applications. And, effective immediately, direct diode lasers from the TruDiode family can also be used with the PFO.

Highly precise and reliable.

The innovative functions of the new plug-and-play generation PFO's further improve the quality of your finished parts. The precalibrated programmable focusing optics PFO is quickly ready for operation after a change. The CalibrationLine option measures and calibrates, not only the precise position of the laser spot, but the power of the laser beam on the workpiece as well. This results in considerably better repeatability and further increases processing reliability. Even applications with the highest accuracy demands can be run with the highest reliability.

Benefits at a glance.

- 1 Dynamic and powerful.
- 2 Highly precise and reliable.
- 3 Processing on the fly.

Processing on the fly.

Laser processing operations such as welding within a single plane or space without the focusing optics or workpiece being moved are also possible with the new programmable focusing optics PFO. If the PFO's scanner movement is synchronized with the movement of a robot, even large workpieces can be welded on the fly in just a few seconds. In addition, the user is supported by intelligent software: The SimpleCoordination PFO (SCP) option enables user-friendly programming of welding and cutting contours. The software synchronizes scanner and robot movements completely automatically.

	 PFO 3D	 PFO 33	 PFO 20	 PFO 14
Available lasers	TruDisk	TruDisk, TruPulse, TruFiber, TruMicro	TruDisk, TruDiode, TruPulse, TruFiber, TruMicro	TruDisk, TruDiode, TruFiber, TruMicro
Max. laser power	8 kW	8 kW	2 kW	2 kW
Max. processing speed	22 m/s	22 m/s	50 m/s	78 m/s
Positioning time	20 ms	20 ms	12 ms	5.5 ms
Program memory	999	999	999	999
Max. scan field (ellipse)	780 x 530 mm ² ; z = 0 f = 1200 mm z = ±475 mm	320 x 190 mm ² f = 450 mm	286 x 230 mm ² f = 420 mm	286 x 230 mm ² f = 420 mm
2D / 3D processing	3D	2D	2D	2D
On the fly processing	Yes	Yes	Yes	Yes
Dimensions (W x H x D)	392 x 236 x 224 mm	230 x 185 x 185 mm	205 x 185 x 185 mm	205 x 185 x 185 mm
Weight	35 kg	25 kg	15 kg	15 kg
Applications	Welding, cutting	Welding, cutting, microprocessing	Welding, cutting, microprocessing	Welding, cutting, microprocessing