



THE MPS FAMILY

MODULAR PROCESSING SYSTEM

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Modular Processing System



Superior know-how creates superior solutions

Each MPS system is way more than just a laser workstation and will be tailored according to your specific requirements. This is only possible because ROFIN's engineers have acquired a wealth of application-specific expertise; in classical cutting, welding, structuring and drilling tasks as well as for numerous high precision ultrashort pulsed applications.

- 4 different laser systems with various modules and motion systems offer ideal prerequisites for customized applications
 - From basic configurations to high-end solutions
 - Fixed optics for cutting, welding and drilling as well as 5-axis scanner heads.
 - From standard camera supervision to image processing with automatic position correction
- Ready to integrate a wide range of ROFIN laser sources:
 - Fiber lasers (StarFiber, PowerLine F)
 - Rod lasers (StarPulse, PowerLine)
 - Ultrashort pulsed lasers (StarPico, StarFemto FX)
 - Short pulsed lasers (PowerLine Pico)
 - Diode lasers (Compact Evolution)
 - CO₂ lasers (StarShape, StarLite X)
 - Suitable for a wide range of applications:
 - Welding
 - Cutting
 - Structuring
 - Ablating
 - Welding of polymers
 - Drilling

Applications

Welding

Cutting

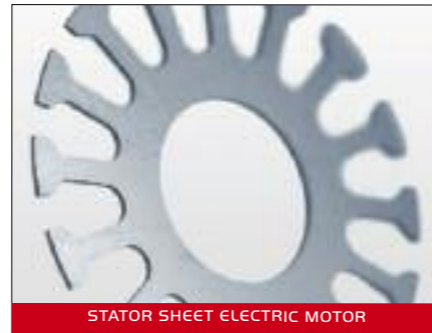
Structuring

Welding of polymers

Drilling



MEDICAL DEVICES



STATOR SHEET ELECTRIC MOTOR



AUTOMOTIVE COMPONENT



INSULIN PUMP



SENSORS



HIP JOINT MILLER



MOBILE PHONE HOUSING



BRITTLE MATERIALS



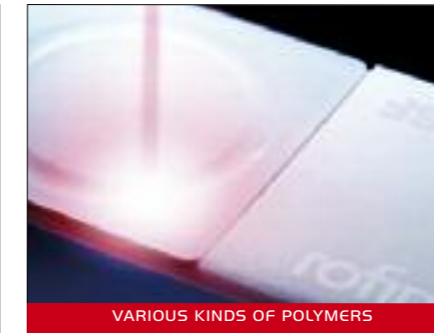
ULTRAFINE ENGRAVING



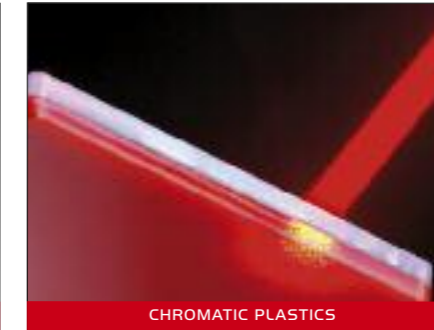
SAPPHIRE ENGRAVING



PRINTING PLATE



VARIOUS KINDS OF POLYMERS



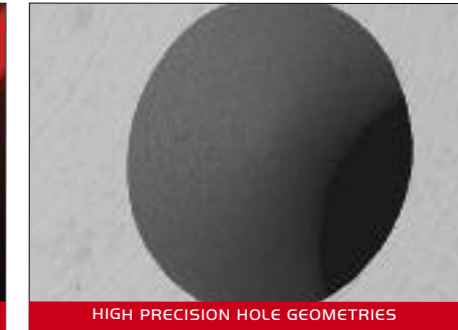
CHROMATIC PLASTICS



AUTOMOTIVE COMPONENTS



FILTER NOZZLE FOR AEROSPACE/RACING



HIGH PRECISION HOLE GEOMETRIES



SURGICAL NEEDLES

MPS Compact

Modules

Specifications

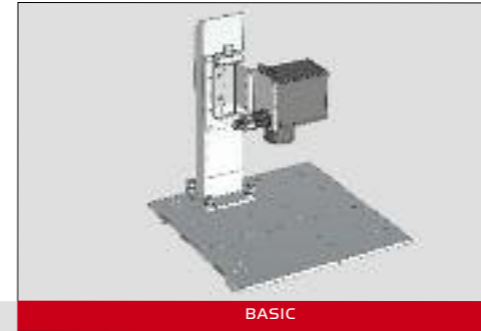


MPS COMPACT

System Features

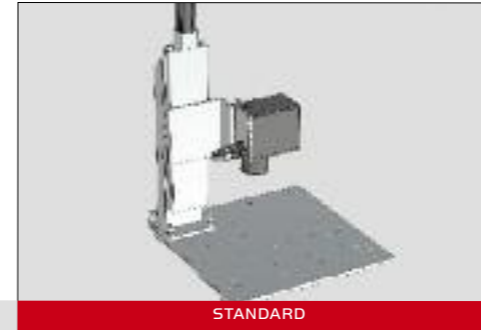
- Small footprint
- System for fiber delivered lasers
- 19" laser source integrable
- ROFIN fiber lasers (StarFiber series, LFS series)
- ROFIN diode lasers (Compact Evolution)
- Pneumatic sliding door
- CNC controller (Beckhoff)
- Available for seated or standing work position

Basic
 Manual adjustment
 Z-axis travel: +/- 50 mm



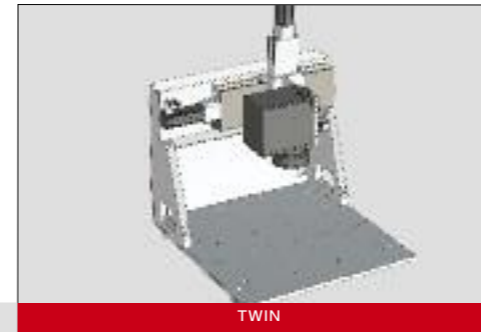
BASIC

Standard
 Z-axis travel: 300 mm
 Drive: servo motor
 Max. speed: 100 mm/s
 Positioning accuracy: ±40 µm
 Repeat accuracy: ±20 µm



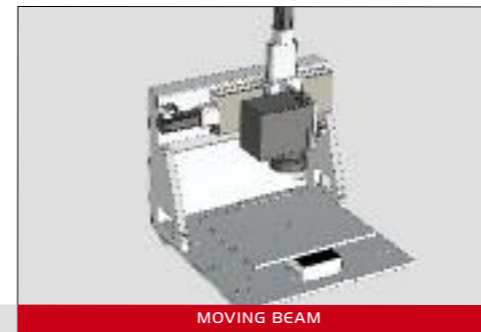
STANDARD

Twin
 X-axis travel: 250 mm
 Z-axis travel: 200 mm
 Drive: servo motor
 Speed: 100 mm/s
 Positioning accuracy: ±40 µm
 Repeat accuracy: ±20 µm



TWIN

Moving Beam
 X-axis travel: 250 mm
 Y-axis travel: 250 mm
 Z-axis travel: 200 mm
 Drive: servo motor
 Speed: 100 mm/s
 Positioning accuracy: ±40 µm
 Repeat accuracy: ±20 µm



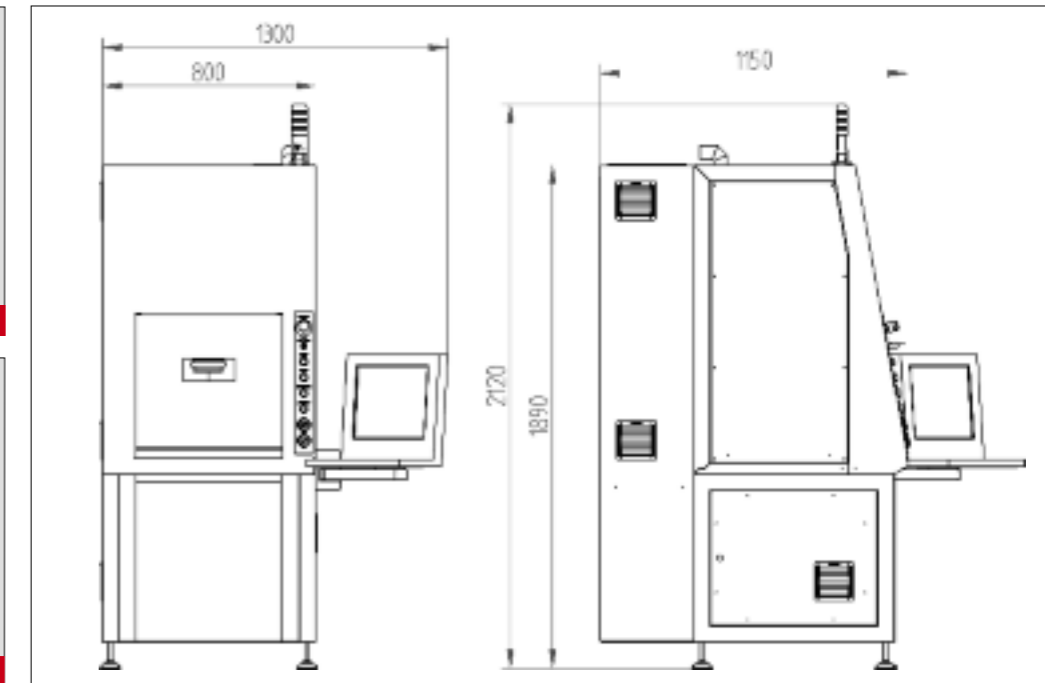
MOVING BEAM

Interface	
Display and operation	17" touch screen + keyboard
Memory interface	USB device

Circuit points	
Electric	400 VAC
	50/60 Hz
	32 A
	3 + N + PE Ph
Power consumption*	effective power 1,0 kW
	standby 0,8 kW
Pneumatic	compressed air 6 bar

Installation conditions		
Weight	Basic	590 kg
	Standard	590 kg
	Twin	670 kg
	Moving Beam	700 kg
Dimensions (WxHxD)		800 mm x 2120 mm x 1150 mm
Ambient temperature max.**		35°

*without laser ** according to equipment



MPS Flexible

Modules

Specifications



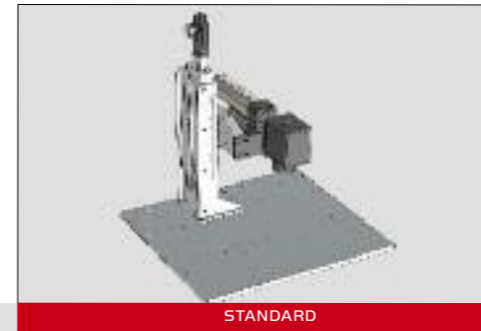
MPS FLEXIBLE

System Features

- Welded steel construction base frame
- Granite base for the motion modules Precision and High Precision
- Modular design
- Laser garage for 19" laser source or laser supply cabinet
- Large working chamber
- Pneumatic sliding door
- CNC controller (Beckhoff)

Standard

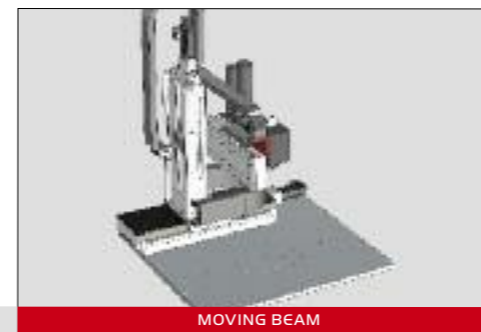
Z-axis travel: 350 mm
 Drive: servo
 Max. speed: 100 mm/s
 Positioning accuracy: $\pm 30 \mu\text{m}$
 Repeat accuracy: $\pm 10 \mu\text{m}$



STANDARD

Moving Beam

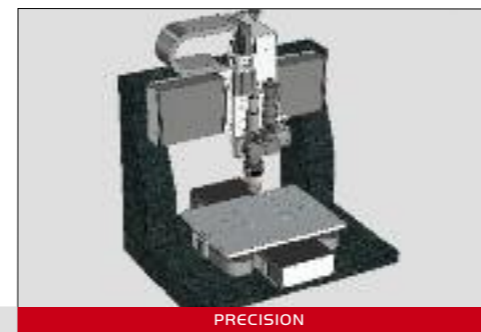
X-axis travel: 400 mm
 Y-axis travel: 400 mm
 Z-axis travel: 350 mm
 Drive: servo
 Max. speed: 100 mm/s
 Positioning accuracy: $\pm 30 \mu\text{m}$
 Repeat accuracy: $\pm 10 \mu\text{m}$



MOVING BEAM

Precision

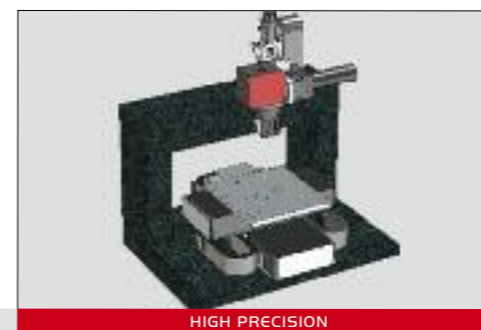
X/Y-axis travel: 400 mm x 400mm
 Drive: linear servo
 Max. acceleration: 1.0 g
 Positioning accuracy*: $\pm 8 \mu\text{m}$ (300 mm)
 Repeat accuracy*: $\pm 4 \mu\text{m}$ (300 mm)
 Z-axis travel: 150 mm
 Drive: servo
 Max. speed: 100 mm/s
 Positioning accuracy: $\pm 30 \mu\text{m}$
 Repeat accuracy: $\pm 10 \mu\text{m}$



PRECISION

High Precision

X/Y-axis travel: 200 mm x 300 mm
 Drive: linear servo
 Max. acceleration: 0.5 g
 Positioning accuracy: $\pm 5 \mu\text{m}$
 Repeat accuracy: $\pm 3 \mu\text{m}$
 Z-axis travel: 150 mm
 Drive: servo
 Max. speed: 100 mm/s
 Positioning accuracy: $\pm 30 \mu\text{m}$
 Repeat accuracy: $\pm 10 \mu\text{m}$



HIGH PRECISION

*Specification for each individual axis

Interface

Display and operation	17" touch screen + keyboard
Memory interface	USB device

Circuit points

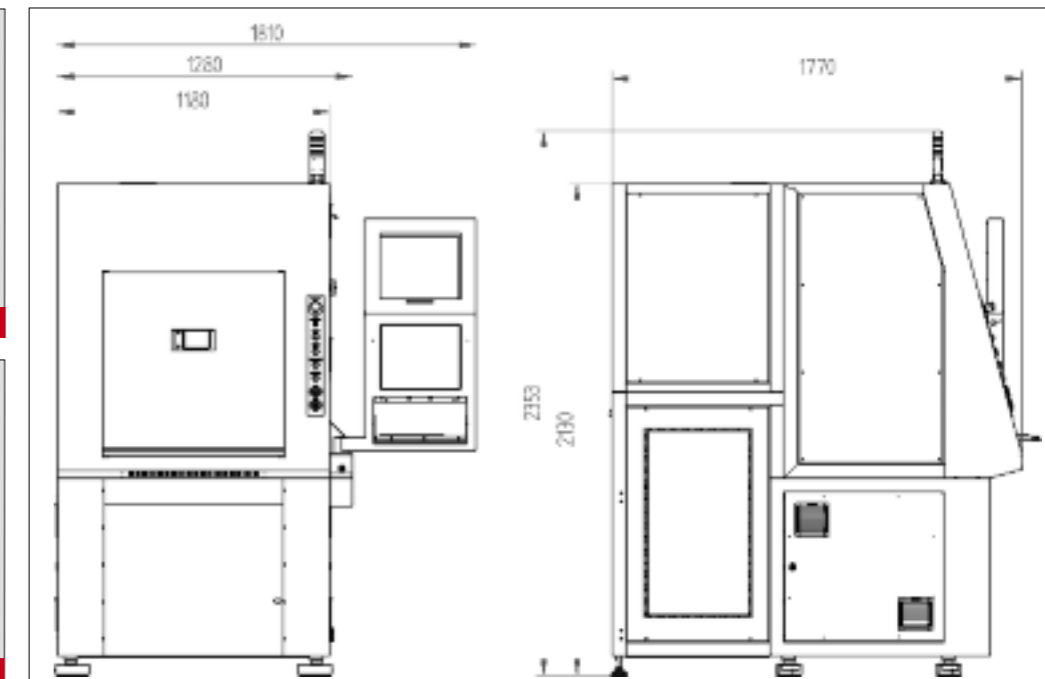
Electric	400 VAC
	50/60 Hz
	32 A
	3 + N + PE Ph
Power consumption*	effective power 1.4 kW
	standby 1.0 kW
Pneumatic	compressed air 6 bar

Installation conditions

Weight	Basic	780 kg
	Moving Beam	850 kg
	Precision	1280 kg
	High Precision	1400 kg

Dimensions (WxDxH)	1280 mm x 2430 mm x 1770 mm
Ambient temperature max. **	35°

*without laser ** according to equipment



MPS Rotary

Modules

Specifications



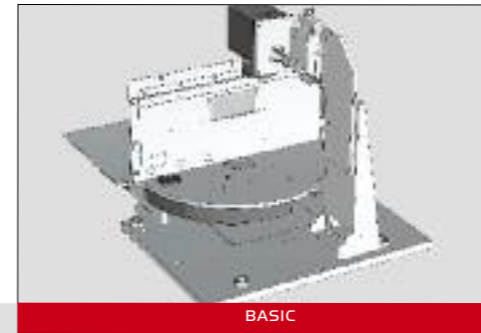
MPS ROTARY

System Features

- Laser workstation based on MPS Flexible
- Rotary indexing table \varnothing 800 mm
- Welded steel construction base frame
- Laser garage for 19" laser source or laser supply cabinet
- Partition heights
 - 150 mm
 - 300 mm
- Safety light barrier
- Prepared for rotary axes
- CNC controller (Beckhoff)

Basic

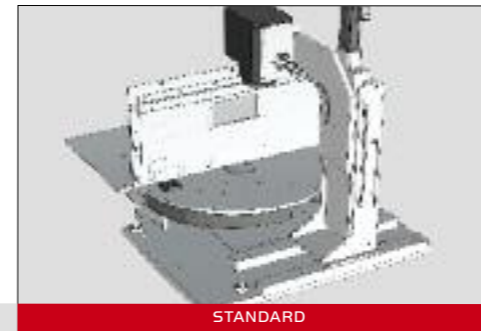
Manual adjustment
Z-axis travel: +/- 50 mm



BASIC

Standard

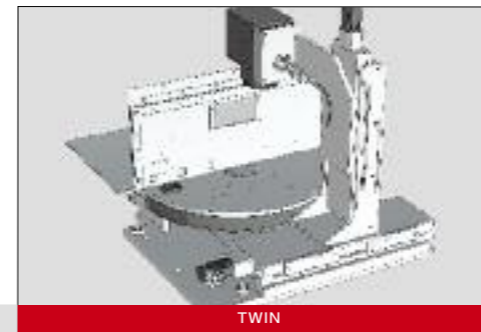
Z-axis travel: 350 mm
Drive: servo motor
Max. speed: 100 mm/s
Positioning accuracy: $\pm 30 \mu\text{m}$
Repeat accuracy: $\pm 10 \mu\text{m}$



STANDARD

Twin

X-axis travel: 300 mm
Z-axis travel: 350 mm
Drive: servo motor
Speed: 100 mm/s
Positioning accuracy: $\pm 30 \mu\text{m}$
Repeat accuracy: $\pm 10 \mu\text{m}$



TWIN

Interface

Display and operation	17" touch screen + keyboard
Memory interface	USB device

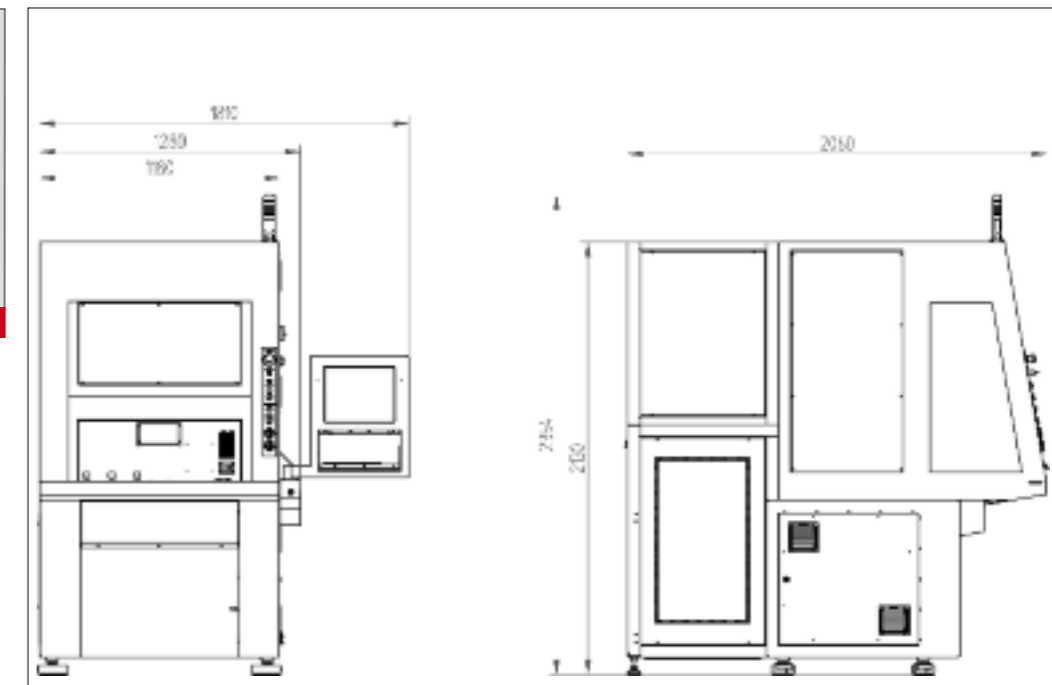
Circuit points

Electric		400 VAC
		50/60 Hz
		32 A
		3 + N + PE Ph
Power consumption*	effective power	1,4 kW
	standby	1,0 kW
Pneumatic	compressed air	6 bar

Installation conditions

Weight	Basic	1020 kg
	Standardc	1020 kg
	Twin	1080 kg
Dimensions (WxHxD)		1280 mm x 2360 mm x 2060 mm
Ambient temperature max. **		35°

*without laser ** according to equipment



MPS Advanced



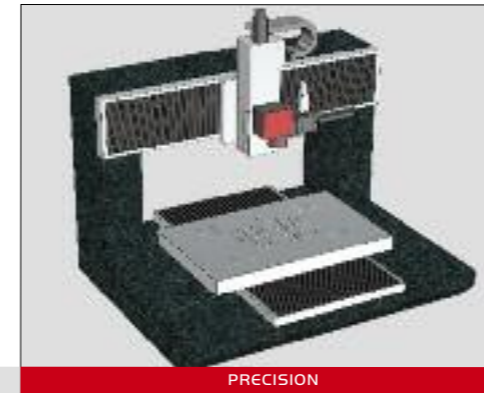
System Features

- Welded steel construction base frame
- Granite based motion modules
- Modular design
- Laser garage for 19" laser source or laser supply cabinet
- Spacious working chamber
- CNC controller (Beckhoff)
- Pneumatic sliding door
 - Option manual sliding door (e.g. for crane loading)

Modules

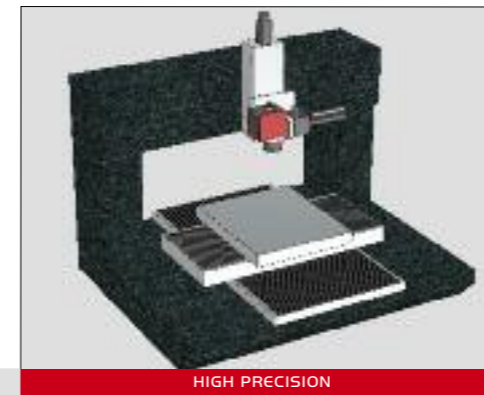
Precision

X/Y-axis travel: 1000 mm x 600 mm
 Drive: linear servo
 Max. acceleration: up to 0.5 g
 Positioning accuracy*: $\pm 8 \mu\text{m}$ (300 mm)
 Repeat accuracy*: $\pm 4 \mu\text{m}$ (300 mm)
 Z-axis travel: 150 mm
 Drive: servo motor
 Max. speed: 100 mm/s
 Positioning accuracy: $\pm 30 \mu\text{m}$
 Repeat accuracy: $\pm 10 \mu\text{m}$



High Precision

X/Y-axis travel: 500 mm x 600 mm
 Drive: linear motor
 Max. acceleration: up to 0.5 g
 Positioning accuracy: $\pm 5 \mu\text{m}$ (300 mm)
 Repeat accuracy: $\pm 3 \mu\text{m}$ (300 mm)
 Z-axis travel: 150 mm
 Drive: servo motor
 Max. speed: 100 mm/s
 Positioning accuracy: $\pm 30 \mu\text{m}$
 Repeat accuracy: $\pm 10 \mu\text{m}$



*Specification for each individual axis

Specifications

Interface

Display and operation	17" touch screen + keyboard
Memory interface	USB device

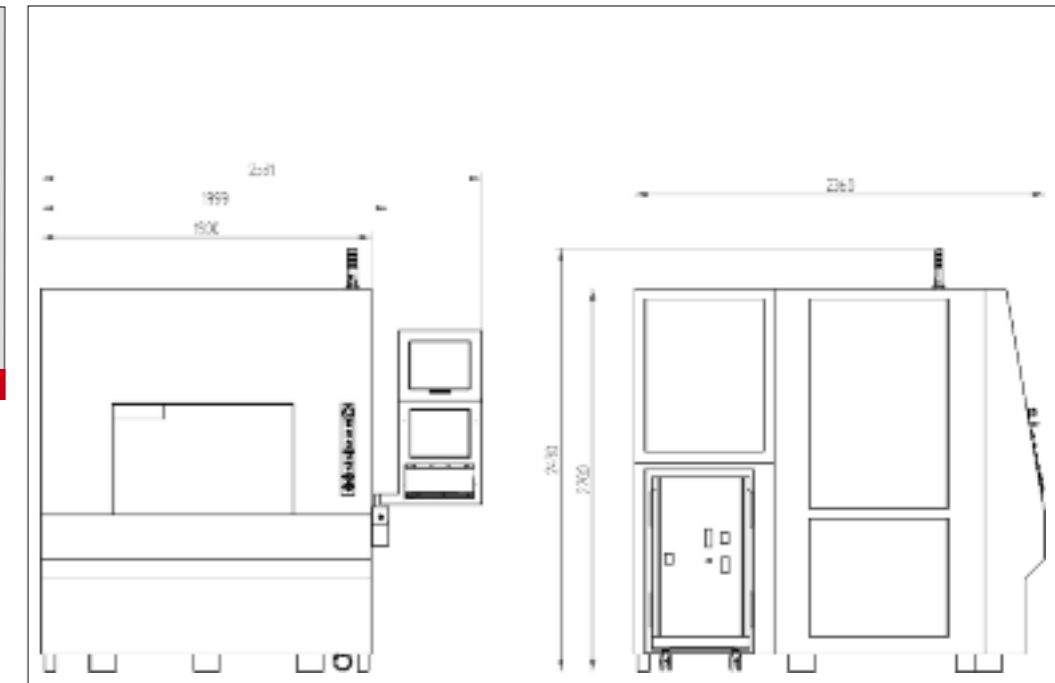
Circuit points

Electric	400 VAC	
	50/60 Hz	
	32 A	
	3 + N + PE Ph	
Power consumption*	effective power	1.8 kW
	standby	1.2 kW
Pneumatic	compressed air	6 bar




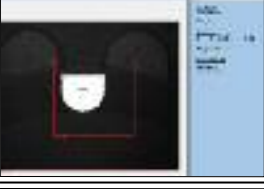



Installation conditions






Weight	Precision	3980 kg
	High Precision	3980 kg
Dimensions (WxDxH)	2531 mm x 2430 mm x 2360 mm	
Ambient temperature max.**	35°	

*without laser ** according to equipmen



Options

	MPS Compact	MPS Flexible	MPS Rotary	MPS Advanced
 Rotary axis	X	X	X	X
 Storage table for rotary axis		X		X
 Monitor fixture	X	X	X	X
 Vision system	X	X	X	X
 Foot switch	X	X	X	X
 Cutting box small		X		X
 Cutting box large		X		X

	MPS Compact	MPS Flexible	MPS Rotary	MPS Advanced
 Automatic flow meter	X	X	X	X
 Exhaust	X	X	X	X
 Bellows kit		X		X
 Override		X		X
 Swivelling axis		X		X
 3 D Cutting		X		X

