SpeedMarker 1600

Laser

Laser	Ytterbium pulsed fiber lasers, maintenance free				
Wavelength	1064 nm				
Beam quality	$M^2 < 2$				
Power stability	better ± 5%				
Cooling	air cooled				
Laser type	FL 20	FL 30	FL 50	FL 20 MOPA	FL 100 MOPA
Max. average output power	20 W	30 W	50 W	20 W	100 W
Max. pulse energy	1 mJ	1 mJ	1 mJ	1 mJ	1 mJ
Pulse repetition rate [kHz]	2 - 200	2 - 200	2 - 200	1,6 - 1000	10-1000
Adjustable pulse duration	x	x	x	✓	✓
Pulse duration [ns]	100 ± 20	100 ± 20	100 ± 20	1,5;2,5;4;8;16;30; 50;120;200;350	20, 30, 60, 120
Integrated pilot laser & focus laser	✓	✓	✓	✓	✓

Galvo System

Lens / Focal length	F-100	*Standard:* F-160	F-254	F-330	F-420
Marking area [mm x mm]	70 x 70	120 x 120	190 x 190	240 x 240	310 x 310
Focus Diameter	~ 27 µm	~ 45 µm	~ 68 µm	~ 88 µm	~ 112 µm
Max. marking speed	800 cps – 1 mm single line with F = 160 mm				
Max. positioning speed	12.000 mm/s with F = 160 mm				

Workstation

Maximum part size (W x D)	Depends on shape				
Maximum part height	504 mm *F-100*	427 mm *F-160*	277 mm *F-254*	182 mm *F-330*	76 mm *F-420*
Laser marking field [W x D in mm]	70 x 70	120 x 120	190 x 190	240 x 240	310 x 310
Maximum working area [W x D in mm]	1180 x 420	1230 x 450	1300 x 450	1300 x 450	1300 x 450
Maximum load	50 kg				
Working table	T-slot plate (Isel PT 25): 1300 x 450 mm				
Axis	Software-controlled X- and Z-axis				
Travel distance X-axis	1110 mm				
Travel distance Y-axis	350 mm				
Travel distance Z-axis	530 mm				

Control

Computer	Integrated industrial PC as 19" Rack Unit, 2RU high, Windows® 10
Interfaces	USB, Ethernet, RS232,
Interfaces Laser	Laser-Interlock, Marking-Start (24 VDC), Marking-Stop (24 VDC), E-Stop, Error-Reset, Laser-Busy, optional digital I/O's (24 VDC),
Software	SpeedMark,DirectMark

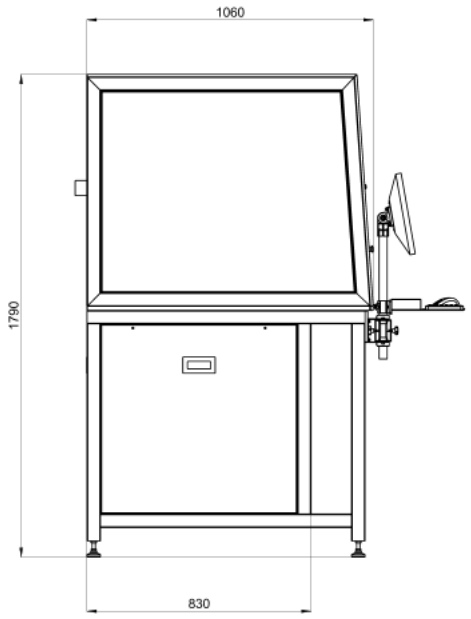
Options / Accessories

Optional lenses and galvo scanners	F-100, F-160, F-254, F-330, F-420
Axis system	• Rotary units with different chucks (4. Axis)
SpeedMark Vision – Smart Adjust	Integrated camera system for positioning support: Camera image is shown in the operator GUI and permits a user friendly and very precise positioning of the marking directly onto the work piece. Different camera lenses with different image sizes and resolutions are available --> please refer to the datasheet "SpeedMark Vision - Smart Adjust".
Extended I/O interface	Additional in- and outputs, 24 VDC
Additional optional accessories	• Counter bearings for rotary unit • Foot switch for efficient and user friendly control of the system • Exhaust systems
Industrial PC – high performance	Optional and more performant version of industrial PC (CPU, HDD, RAM, graphics card) for graphical applications.

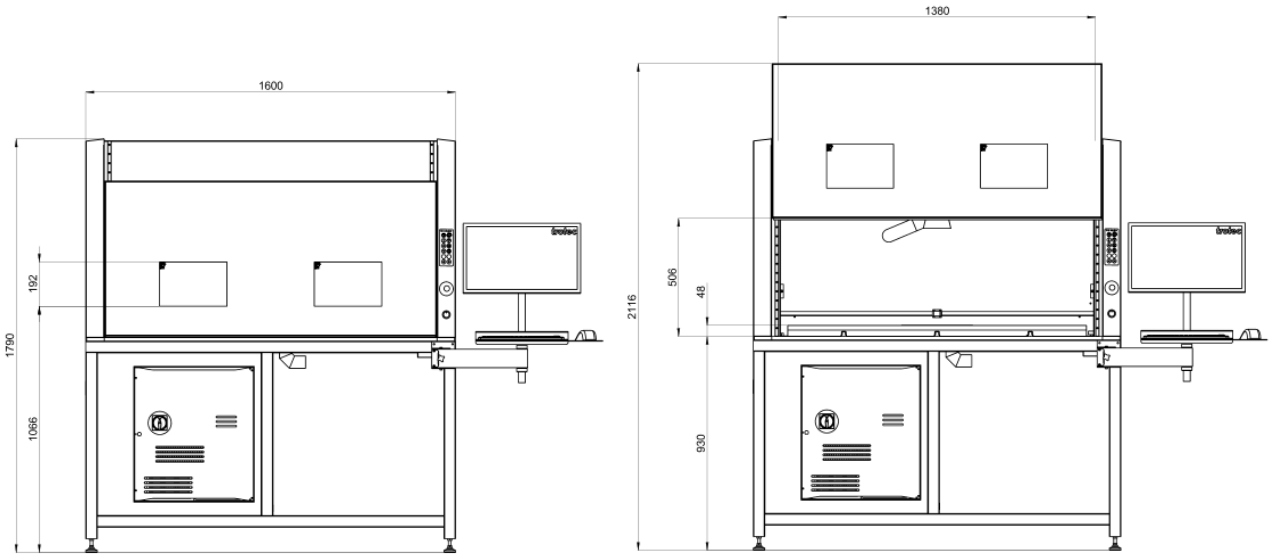
Dimensions / Installation / Laser Safety

Dimensions (W x H x D in mm)	1600 x 1790 x 1030 mm
Interior Dimensions (W x D in mm)	1550 x 1000 mm
Door opening (W x H in mm)	1400 x 506 mm
Loadable height of part in mm	460
Door	Manual and/or automatic
Weight with laser	500 kg
Ambient conditions	Operating temperature range +5 to +35° C. Relative humidity max. 90 %; Non-Condensing
Electrical Requirements	230 VAC, 16 A, 50/60 Hz, 1/N/PE
Power Consumption	< 1400 W
System Protection	Marking Head: sealed against spray water *(IP 54)* Laser Rack Unit: dust protected *(IP20)*
Laser class	CDRH Laser Safety Laser Class 2 CE certified
Color	RAL 3002, RAL 7016, RAL 7035

Exterior dimensions

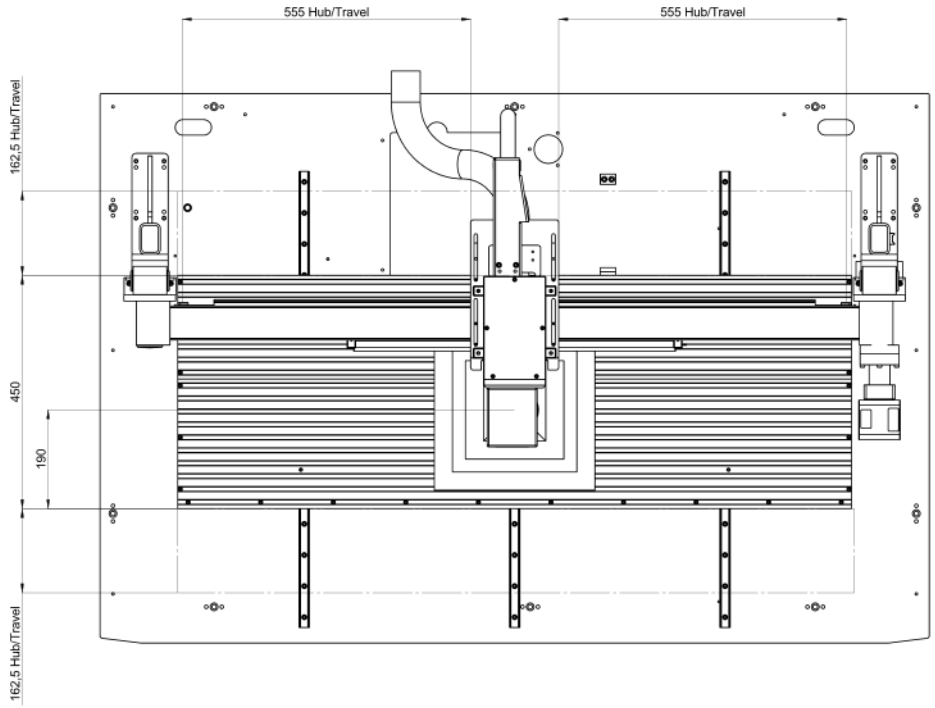


Side view

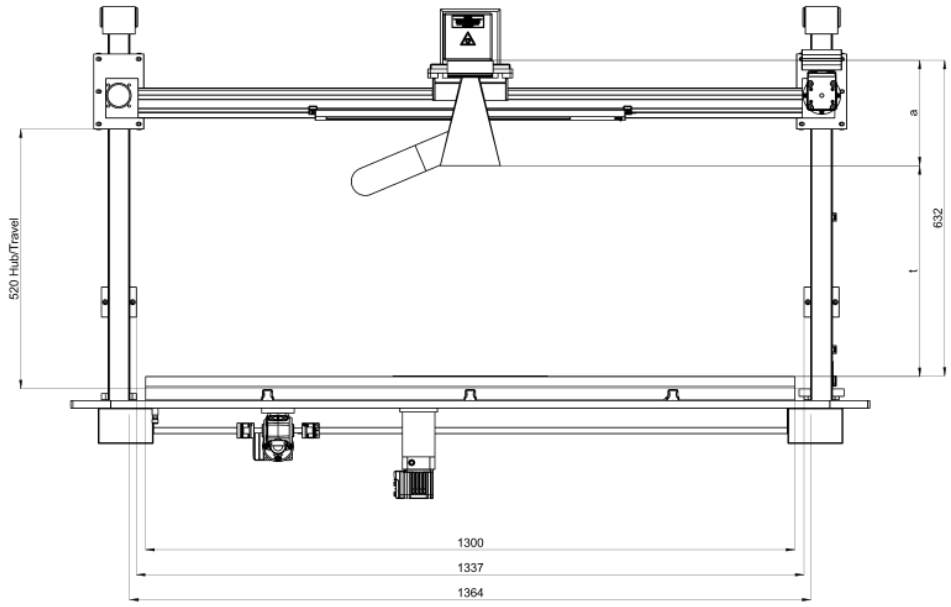


Front view

Interior

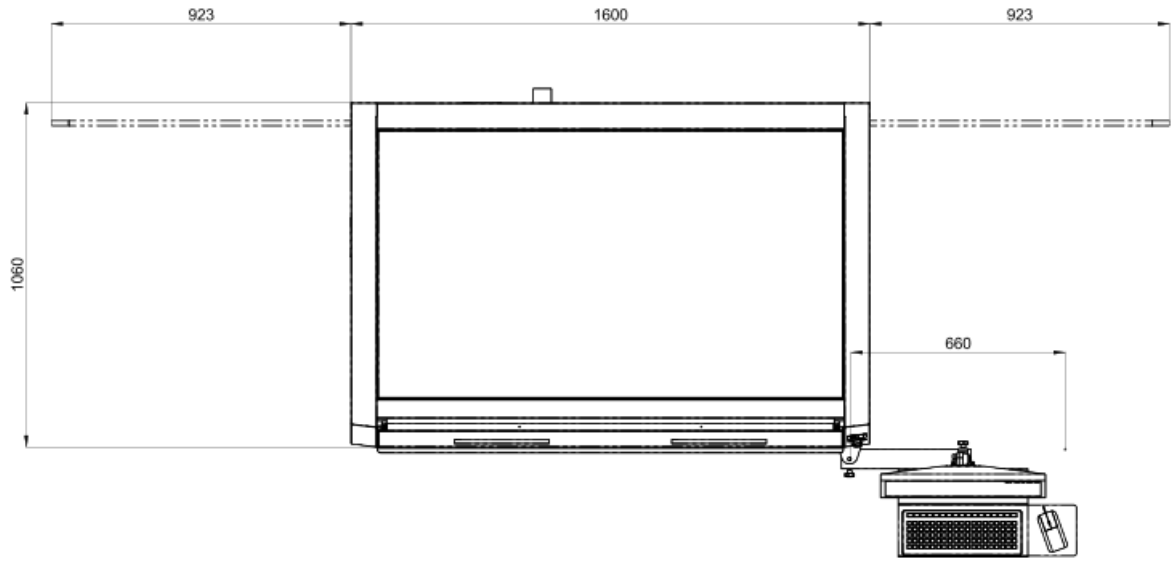


Top view



Front view

Layout



Layout

Tolerances on Dimensions: 1%
Content subject to change without prior notice.
Updated: December 2019