SpeedMarker 700

Fiber Laser

Laser	Pulsed Yb-fiber laser, low-maintenance				
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	✔	✔	✔	✔	✔

Galvo System

Lens / Focal length	F-100	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 mit F = 160 mm				
Max. positioning speed	12.000 mm/s bei F = 160 mm				

*Not available in combination with rotary table

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 (fiber laser)

Workstation with software-controlled Z-axis

Laser	Fiber laser				
Maximum part height	570 mm F-100	493 mm F-160	343 mm F-254	248 mm F-330	142 mm F-420
Minimum part height	26 mm	--	--	--	--
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]	Corresponding to laser marking field				
Maximum load	50 kg				
Working table	T-slot plate (Isel PT 25): 375 x 400 mm^2 Optional: 700 x 375 mm^2				
Axis system	software-controlled Z-axis				
Travel distance Z-axis	500 mm				

Workstation with software-controlled X-, Y- and Z-axis

Laser	Fiber laser r				
Maximum part height	546 mm F-100	469 mm F-160	319 mm F-254	224 mm F-330	118 mm F-420
Minimum part height	16 mm	--	--	--	--
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]	390 x 350	440 x 400	510 x 435	560 x 460	580 x 495
Maximum load	30 kg				
Working table	T-slot plate (Isel PT 25): 375 x 400 mm				
Axis system	Software-controlled X-, Y- und Z-axis				
Travel distance X- / Y- Z-axis	320 / 280 / 500 mm				

Workstation RT with rotary table

Laser	Fiber laser				
Maximum part height (limited due to partition panel)	195 mm *F-100*	195 mm *F-160*	195 mm *F-254*	195 mm *F-330*	142 mm *F-420*
Information about minimum part height	140 mm	68 mm	--	--	--
Laser marking field [W x D in mm]	*Caution*: With F-100 and F-160 lens it is not possible to focus onto the surface of the rotary table due do collision with the partition panel. This needs to be considered for flat parts (carrier might be needed).				
Maximum load	70 x 70	120 x 120	190 x 190	240 x 240	310 x 310
Working table	20 kg with symmetric loading				
Axis system	Plate with mounting and centering holes Diameter 550 mm Height of partition panel: 200 mm				
Travel distance Z-axis	Software-controlled Z-axis *X-axis upon request*				
Travel distance Z-axis	450 mm				

Optionen / Zubehör

| Optional lenses and galvo Scanners	<u>Fiber laser:</u> F-100, F-160, F-254, F-330, F-420
SpeedMark Vision – Smart Adjust	Integrated camera system for positioning support. 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
Rotary indexing table	Only in combination with fiber laser
Additional optional accessories	• Rotary units with different chucks for fiber laser • 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.
Modified door with lower opening	Door with lower opening

trotec

Dimensions / Installation / Laser Safety

	Workstation with Fiber laser	Workstation RT With rotary table	
Dimensions [W x H x D in mm]	780 x 1802 x 981	780 x 1804 x 1144	
Interior dimensions [W x D in mm]	737 x 894	737 x 794	
Height of base plate [H in mm]	971	956	
Door opening [W x H in mm] (on base plate)	580 x 365	210 x 200 *Partition panel*	
Loadable height of part (with base plate / with Y-axis)	345 / 318	---	
Option seated work position: Overal height [H in mm]	1662	1664	
Option seated work position: Height of base plate [H in mm]	831	816	
Optional door with higher opening: Door opening [W x H in mm] (on base plate)	580 x 504	---	
Optional door with higher opening: Loadable height of part (with base plate / with Y-axis)	484 / 457	---	
Door	Manual and/or automatic; Optional: rotary table		
Weight	ca. 260 kg	ca. 300 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 tested		
Color	RAL 3002, RAL 7016, RAL 7035		

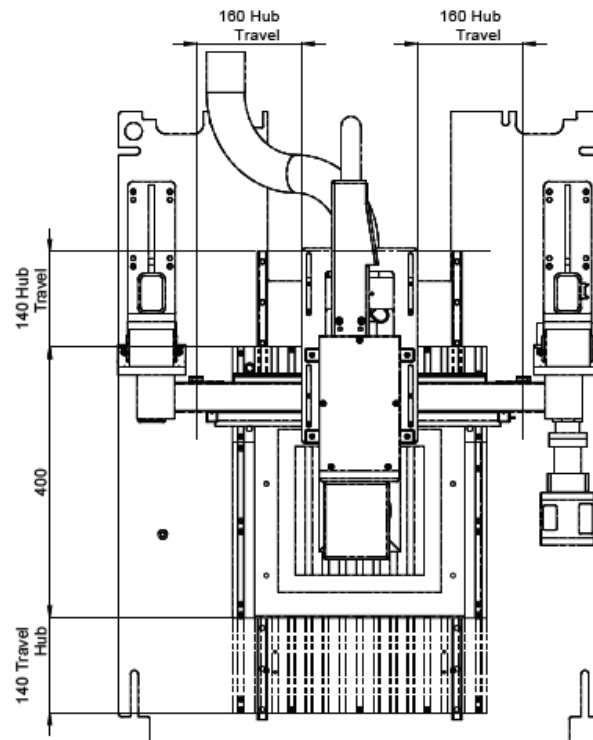# Interior (optional software-controlled Z- and X-axis – ZX0)
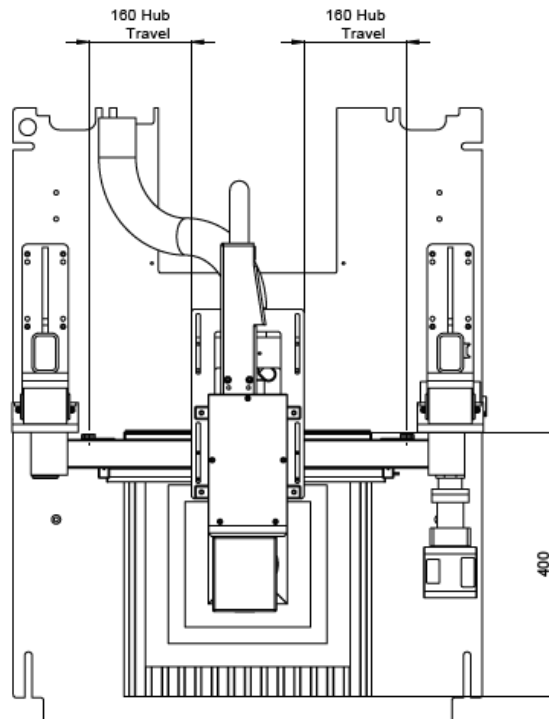
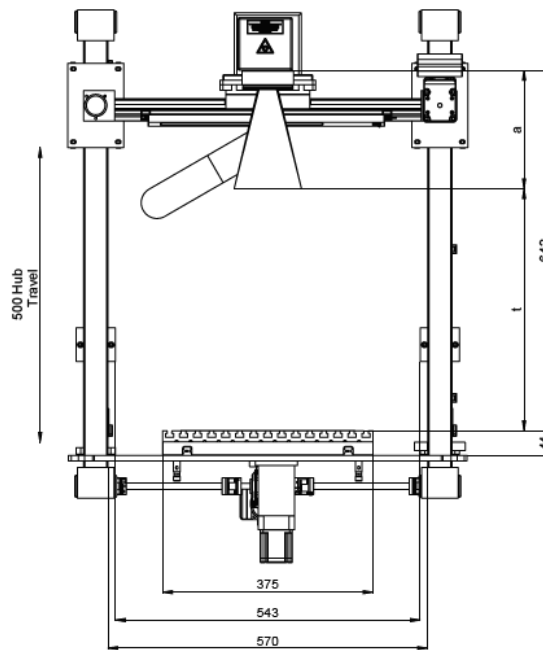Top view with software-controlled Z- and X-axis
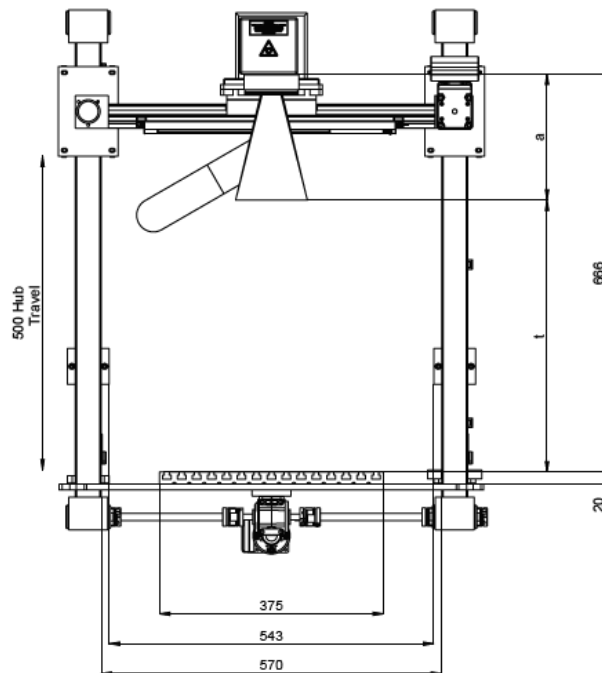
Top view with software-controlled Z- and X-axis

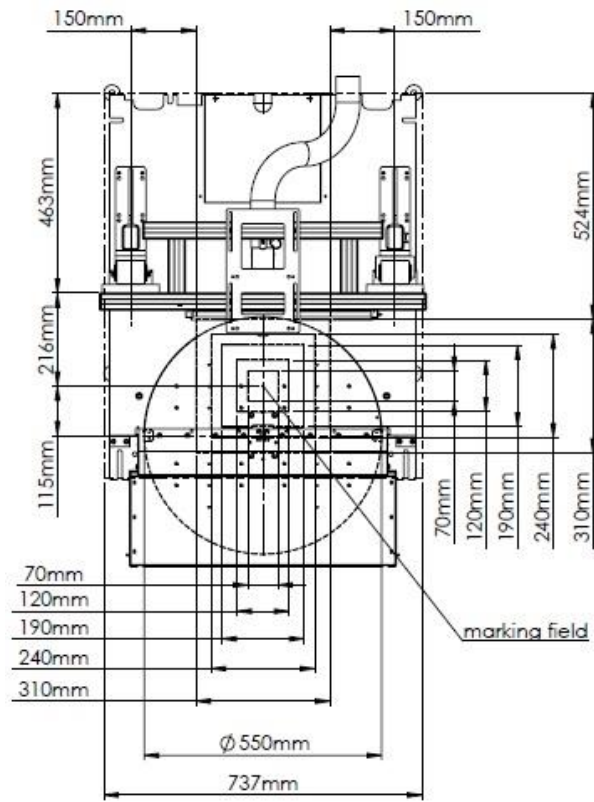# Interior (optional software-controlled Z-, X- and Y-axis – ZXY)
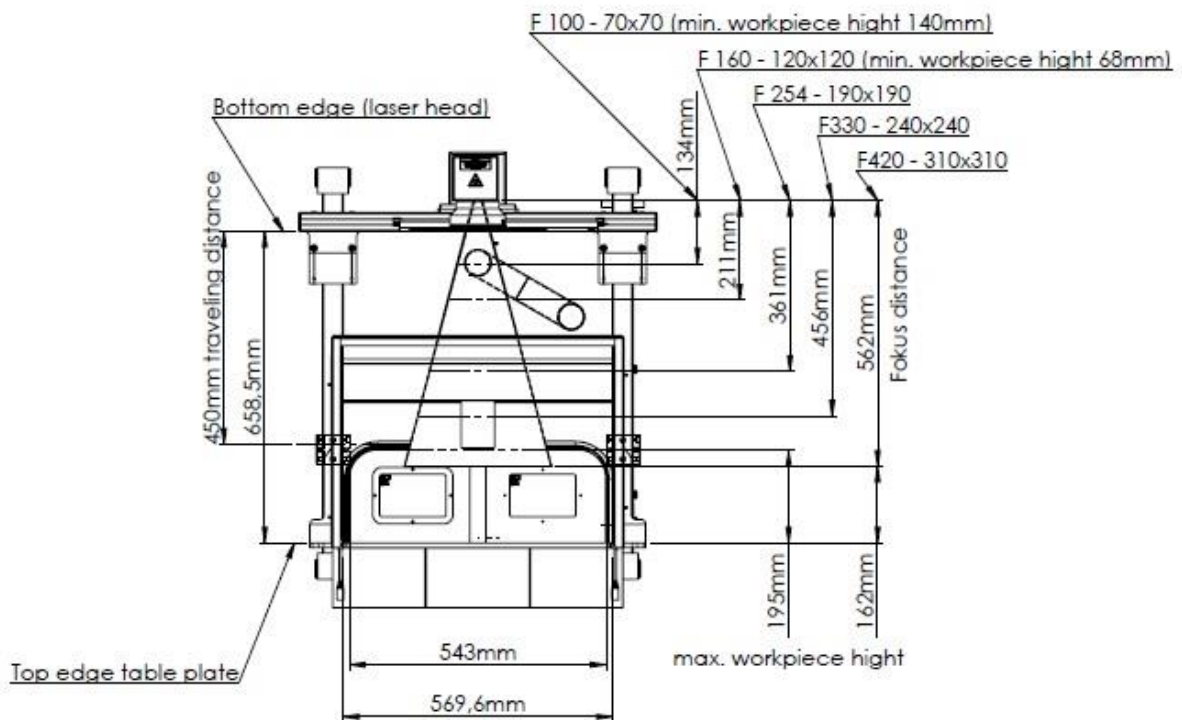

Top view with software-controlled Z-, X- and Y-axis
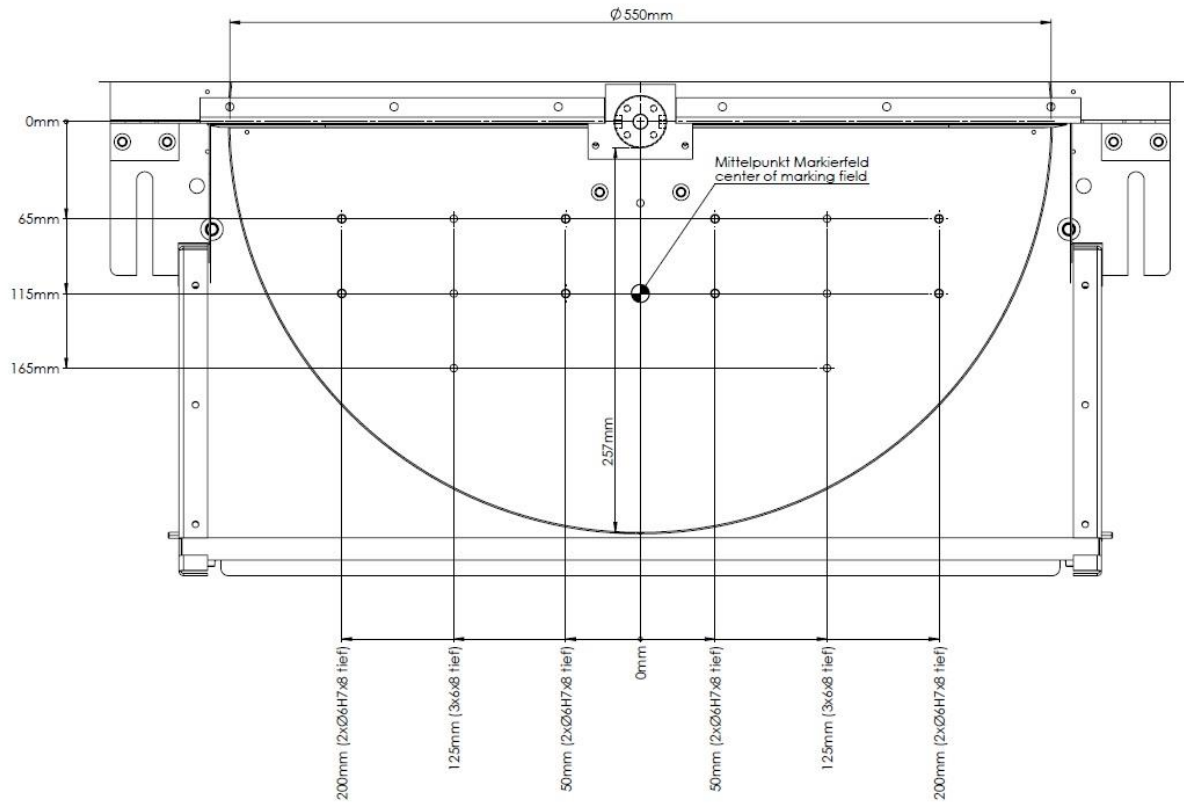

Top view with software-controlled Z-, X and Y-axis

Interior (version with rotary table)
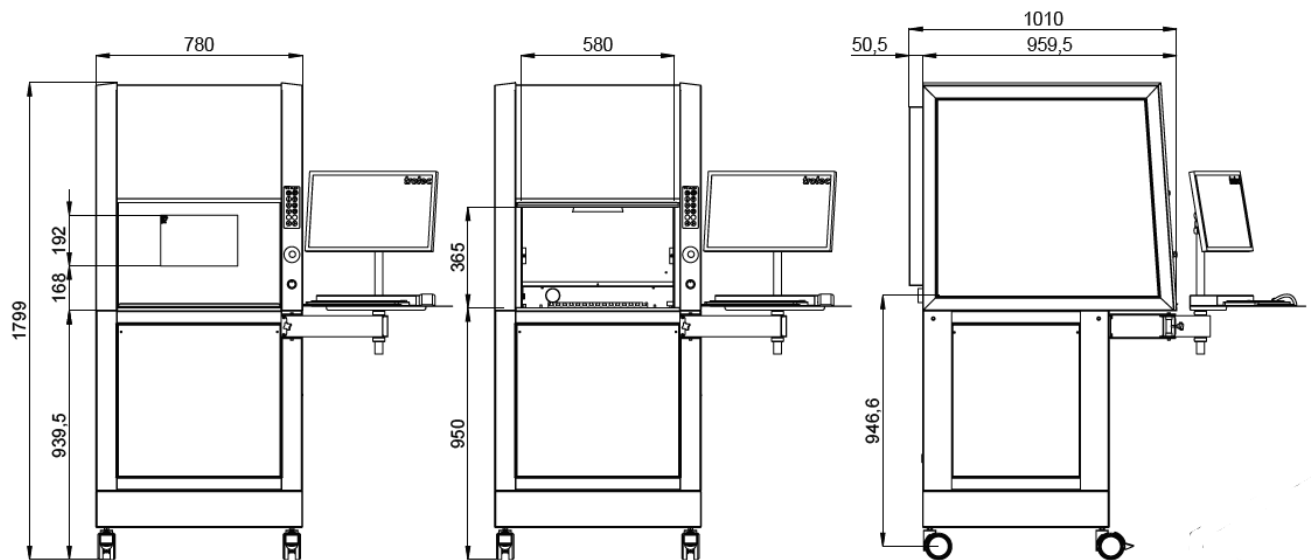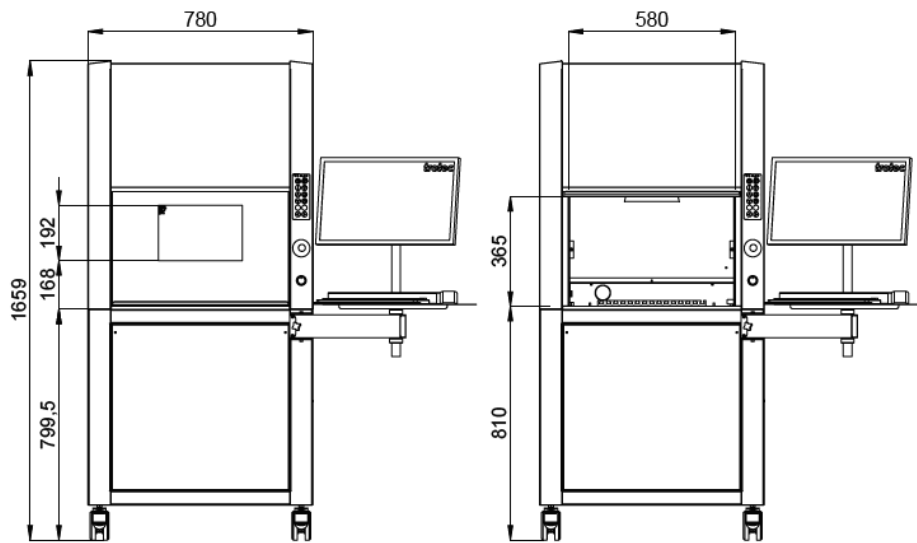

Top view with rotary table

Top view with rotary table

Ø 550mm

0mm
65mm
115mm
165mm

257mm

Mittelpunkt Markierfeld
center of marking field

200mm (2xØ6H7x8 tief)
125mm (3x6x8 tief)
50mm (2xØ6H7x8 tief)
0mm
50mm (2xØ6H7x8 tief)
125mm (3x6x8 tief)
200mm (2xØ6H7x8 tief)

Rotary table

Exterior dimensions

780
580
1010
959,5
50,5

1799
192
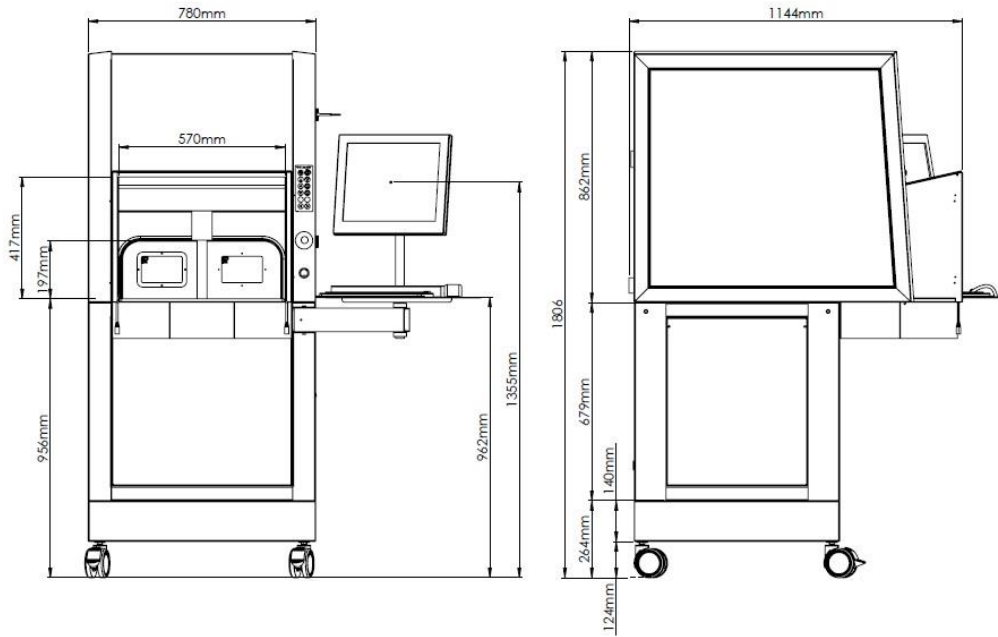168
365
950
939,5
946,6

Exterior dimensions

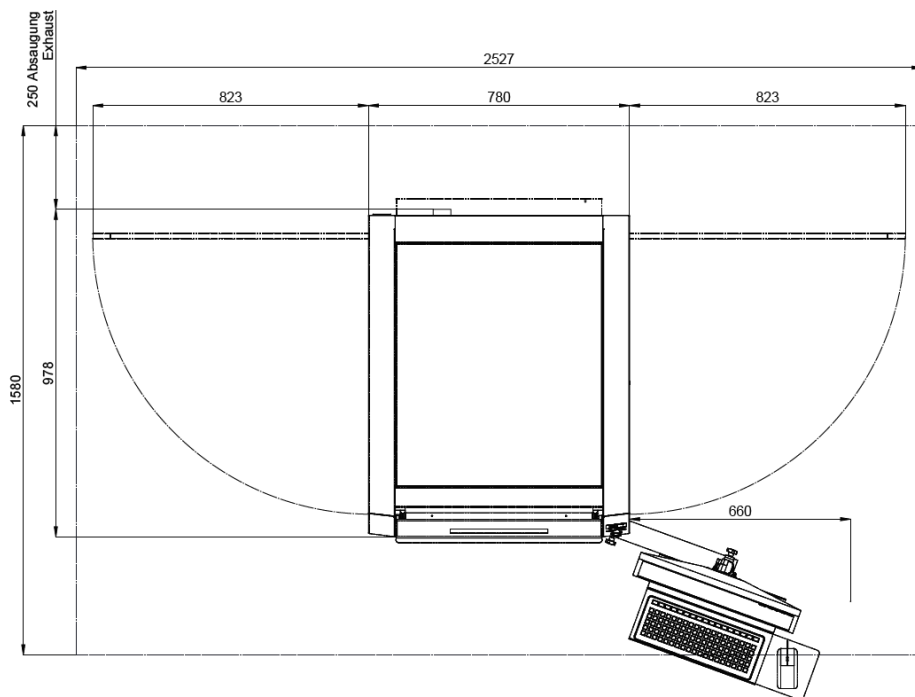Exterior dimensions sedentary workstation – option low door
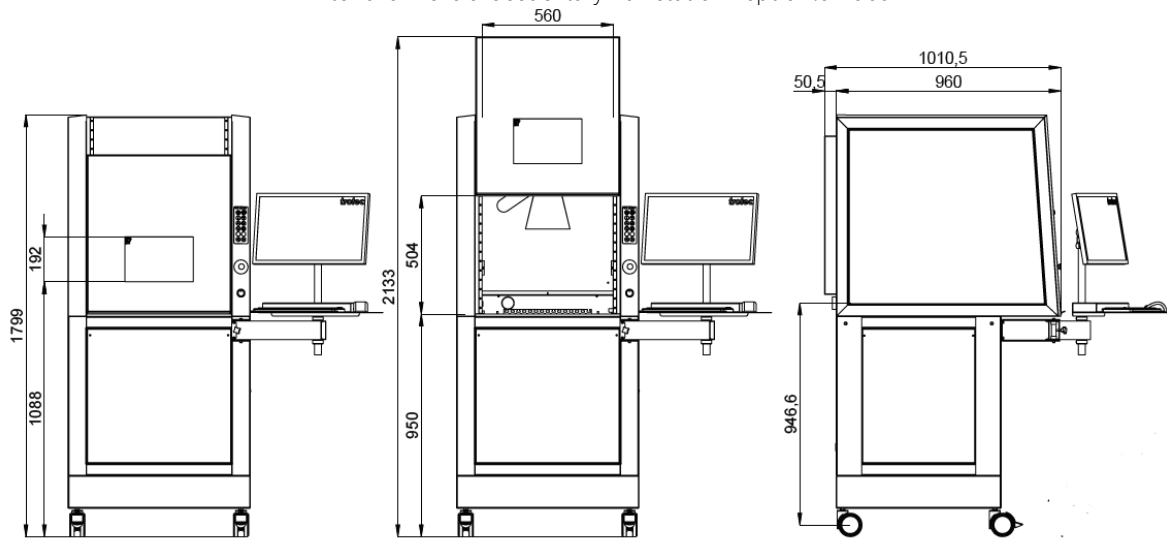
High door

Exterior dimensions with rotary table

Setup

Setup

T-Nuten Platte

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