GLcompact II

The compactly constructed version GL. compact II offers besides maximum machining precision an attractive design, universal installation options and an automation function for series production. The machine covers the entire spectrum of laser processing from micro-drilling to fine-cutting and removal. It has been designed for the highest accuracy requirements in the smallest installation space. Besides the machine base, the slides of the linear axes are made of granite, which guarantees a reduced material mix and which stabilizes the core temperature during the machining processes. All heat sources in the machine, including the axle drives, are actively cooled with water. This concept offers a very robust behaviour to internal and external temperature influences and thus guarantees a long-term stable machining result.

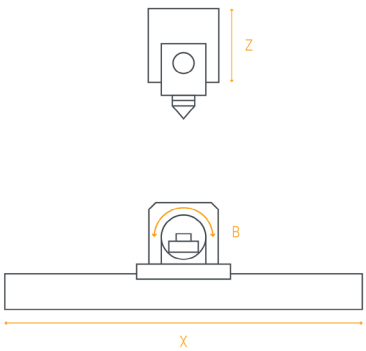
High-precision mechanical guides in combination with linear drives and highly rigid kinematics improve the angular errors of each individual translational and rotational axis. As a result, both nodding and yawing were improved by a factor of 5 compared to the previous model.

Numerous optional, interchangeable modules, which can be used to equip and expand the GL. compact II, round off the machine concept. The established advantages of Hirth-gearing are therefore consistently relied on in order to keep the changeover times as short as possible. A changeover accuracy of <2 µm makes requalification of existing production processes superfluous.

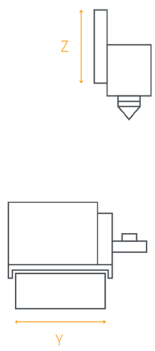
HIGHLIGHTS

- working range 400 x 400 mm²
- small set-up area: < 3,5 sqm
- 5-axis simultaneous machining
- new cooling concept based on water-cooled drives and a temperature-stabilising granite structure
- active water cooling of all linear motors
- high temperature resistance
- optima accessibility
- robot connection via automation cell
- user friendlxy due to ergonomic operating units

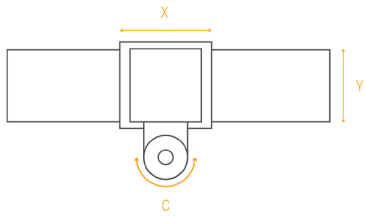
Front view



Side view



Top view



TECNICAL DATA

Axis	**X**	**Y**	**Z**	**B**	**C**
Axis type	linear			rotatory	
Drive type	direct drive			torque drive	
Bearing	profiled rail guide		M&V-guidance	radial thrust bearings	cross roller bearing
Travels [mm]	400	400	360	+/- 110°	endless
Speed	30 m/min			200 U/min	500 U/min
Acceleration	5 m/s²			160 1/s²	220 1/s²
Repeatability	1 µm			2 arcsec	
Accuracy	1,5 µm		2 µm	5 arcsec	
Perm. comp. weight	20 kg			2 kg	
Clamping set-up	clamping system				
Sound pressure level	≤ 70 dB				
Dimensions [mm]	T = 1536 / B = 2036 / H = 2219 - without supply unit				
Total weight	3700 kg without internal control cabinet				