

## Laser AL with ALT

### The compact and powerful one

The AL series provides the right laser power for every welding job. It is the ideal partner for the ALT laser work table, but it can also be easily integrated into existing machine installations. The movable laser head can be positioned to suit the welding task. The innovative turn- and tilt optics further reduces laser set-up time on the tool or mould.



Technic Data	AL 75	AL120	AL 150	AL 200	AL 300
<b>Laser</b>					
Wavelength	1064 nm	1064 nm	1064 nm	1064 nm	1064 nm
Average power	75 W	120 W	150 W	200 W	300 W
Peak pulse power	5 kW	9 kW	10 kW	9 kW	10 kW
Pulse energy	50 mJ – 50 J	100 mJ – 75 J	100 mJ – 100 J	150 mJ – 90 J	80 J
Pulse duration	0,5 – 20 ms	0,5 – 20 ms	0,5 – 20 ms	0,5 – 20 ms	0,5 – 20 ms
Pulse frequency	single pulse 20/30 Hz		single pulse 20/30 Hz		100 Hz
Welding spot Ø	0,3 – 2,2 mm	0,3 – 2,2 mm	0,3 – 2,2 mm	0,3 – 2,2 mm	0,3 – 2,2 mm
Pulshaping	Adjustable power- shaping within a laser pulse				
Control	User- specific operation with up to 128 parameter sets				
Focussing lens	150 mm	150 mm	150 mm	150 mm	150 mm
<b>Viewing optics</b>					
	Leica Binocular with eyepieces for spectacle wearers				
<b>Power supply</b>					
Dimensions (LxWxH)	820 x 400 x 910 mm	820 x 400 x 910 mm	820 x 400 x 910 mm	820 x 400 x 910 mm	1026 x 700 x 938
Weight	ca. 98 kg	ca. 98 kg	ca. 98 kg	ca. 98 kg	ca. 130 kg
<b>Laser beam source</b>					
<b>With focussing unit</b>					
(length x Ø)	900 x Ø 120 mm	900 x Ø 120 mm	900 x Ø 120 mm	1100 x Ø 120 mm	1100 x Ø 120 mm
Weight	ca. 18 kg	ca. 18 kg	ca. 18 kg	ca. 20 kg	ca. 20 kg
<b>Electrical supply</b>					
	200 – 240 V / 50-60 Hz / 16 A		3 x 400 V / 3 x 16 A / 50 – 60 Hz / N, PE		
<b>Cooling</b>					
	Air cooled with internal cooling water circuit, no additional external cooling necessary				Air cooled with internal cooling water circuit, additional cooling if needed
<b>Options</b>					
	<ul style="list-style-type: none"> <li>- Micro welding</li> <li>- Turn- and- tilt optics</li> <li>- Rotary welding optics: spezial device for circular weld seams</li> <li>- TV system for demonstrating and observing the welding process</li> <li>- Tiltable turntable with chuck for horizontal to vertical rotation</li> <li>- Focussing lenses with various focal lengths</li> </ul>				

Technical Data	ALT 250	ALT 500
Dimensions W x L x H	900x 1200 x 1500 mm	1200 x 1360 x 1260 mm
Working plate W x L	700 x 600 mm	600 x 475 mm
Workpiece weight	Max. 350 kg	Max. 400 kg
Workpiece motion	motorised	motorised
Positioning path	x 250, y 200, z 350 mm Extendable to 500 mm	x, 500, y 400, z 350 mm Extendable to 500 mm
Positioning speed	x,y: max. 25 mm/s; z: max. 5 mm/s	x,y,z: max. 25 mm/s
Electrical supply	200 V – 240 V, 50-60 Hz, 16 A	3 x 400 V, 50-60 Hz, 3 x 16 A
Weight	approx. 350 kg	approx. 600 kg
<b>Options</b>		
	<ul style="list-style-type: none"> <li>&gt; CNC control for automatic operation for manufacturing production serial parts (WIN Laser SW)</li> <li>&gt; Tiltable turntable with chuck for horizontal to vertical rotation</li> <li>&gt; magnetic workpiece clamping, for free positioning of workpieces</li> </ul>	<ul style="list-style-type: none"> <li>&gt; CNC control for automatic operation for manufacturing production serial parts (WIN Laser SW)</li> <li>Positioning accuracy: +/- 0,05 mm</li> <li>Repeatability: +/- 0,01 mm</li> </ul>

### The precision work table

The laser AL series can be combined with the ALT laser work table. This open system enables laser welding without any workspace restrictions, so even large workpieces can be processed easily. Workpieces can be moved under precise control in 3 axes (x, y, z) during welding. An optional rotary axis is available for circular welds. You can work manually using a joystick or in automatic mode for welding volume production parts with WIN Laser NC software.