

## AL-TW F

### THE WORK BENCH WITH AN INTEGRATED FIBER LASER

The AL-TW F laser system can be equipped with 300, 450, 600 or 900 W laser sources. The laser source is integrated into the work bench. With the modular device concept, you can also use a wide range of objectives and focal distances, optimally adapted to your special welding jobs.

The open AL-TW F system allows welding of the largest and smallest workpieces, without limitation.

Whether deposition welding, repairs, series production, medical technology components or sensors, we offer you the right laser performance and plenty of accessories. If your needs change later, you can upgrade the 300 and 450 Watt models to double the performance.

The laser and movement system are easily operated from a side console with an intuitive touch screen. You can choose to weld manually with the quick-reacting joystick, semiautomatically or automatically with WINLaserNC software.



AL-TW 300 F



Height of the resonator motorized adjustable via W-axis

## Technical data

	AL-TW 300 F	AL-TW 450 F	AL-TW 600 F	AL-TW 900 F
<b>LASER</b>				
Laser type/wave length	Fiber laser, 1,070 nm	Fiber laser, 1,070 nm	Fiber laser, 1,070 nm	Fiber laser, 1,070 nm
Average power	300 W	450 W	600 W	900 W
CW power	300 W	450 W	600 W	900 W
Peak pulse power	3 kW	4.5 kW	6 kW	9 kW
Pulse energy	30 J	45 J	60 J	90 J
Pulse duration	0.2 - 50 ms/CW			
Pulse frequency	Single pulse - 100 Hz			
Beam parameter product at 50 µm fiber	2 - 3 mm * mrad			2 x (2 - 3 mm) * mrad
Operating modes	Pulsed/CW			
Welding spot Ø	0.2 - 3.0 mm, optional 0.1 - 4.0 mm			0.3 - 3.0 mm, optional 1.1 - 4.0 mm
Focusing objective	150 mm, further according to lens data sheet			
Pulse shaping	Adjustability of power curve within a laser pulse			
Display and operation	Touchscreen. Laser parameters can also be set using a multifunctional footswitch, WINLaserNC software can be operated through a touchscreen			
<b>OBSERVATION LENS</b>	Leica microscope attachment with eyepieces for glasses wearers 10 x, optional 16 x.			
<b>WORK AREA</b>				
Machine axis	X, Y, Z rotating axis optional. Workpiece movement motorized with joystick			
Movement speed (X, Y, Z)	0.05 - 25 mm/s			
Movement range (X, Y, Z, W)	620 x 400 x 350 mm, W-axis 200 mm			
<b>EXTERNAL DIMENSIONS</b>				
W x D x H (basic component)	1,200 x 1,438 x 1,461 mm (1,647 mm with max. W-axis)			
Side console (W x D x H)	726 x 500 x max. 2,025 mm			
Weight	approx. 800 kg (+ approx. 60 kg side console)			
<b>EXTERNAL CONNECTIONS</b>				
Electrical connection	3 x 400 V / 50 - 60 Hz / 3 x 16 A			
External cooling				Lens water cooling integrated
Smoke exhaustion	Integrated (optional)	Integrated (optional)	Connectible externally	Connectible externally
<b>OPTIONS</b>				
Turn and tilt objective				
Rotary axis module with chuck, tiltable, for horizontal to vertical rotation				
Camera system for demonstrating and observing the welding process				
Ergo wedge				
AL-DV - programmable laser wire feed system				