Laser System

ALFlak

SELF-PROPELLED, ROBUST, PROGRAMMABLE

The AL*Flak*'s laser arm projects a great distance to effortlessly reach its welding position, even in deep or complex molds. Welding seams up to 500 mm are possible without relocation. Your advantage: The welding process can be performed without constant repositioning.

The AL*Flak* comes in two versions: with a self-propelled caterpillar track or a model that can be moved manually.

Choose the laser source that fits your requirements: You can choose Nd:YAG 200 W or 300 W laser sources or fiber lasers with output of 300, 450, 600 or 900 W.

If your needs change later, you can equip your AL*Flak* with a 300 W or 450 W fiber source to double the output.

AL*Flak* Fiber

AL*Flak* stationary

AL*Flak* mobile

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Technical Data

	ALFlak 200	ALFlak 300	ALFlak 300 F	ALFlak 450 F	ALFlak 600 F	ALFlak 900 F
LASER						
Laser type/wave length	Nd:YAG, 1064 nm	Nd:YAG, 1064 nm	Fiber laser, 1070 nm	Fiber laser, 1070 nm	Fiber laser, 1070 nm	Fiber laser, 1070 nm
Average power	200 W	300 W	300 W	450 W	600 W	900 W
CW power			300 W	450 W	600 W	900 W
Peak pulse power	9 kW	9 kW	3 kW	4,5 kW	6 kW	9 kW
Pulse energy	90 J	90 J	30 J	45 J	60 J	90 J
Pulse duration	0,2 ms - 20 ms		0,2 ms - CW			
Pulse frequency	Single pulse - 100 Hz		Single pulse - 100 Hz			
Operating modes	Pulsed		Pulsed CW			
Welding spot Ø	0.2 – 2.0 mm / 0.01 – 1.0 mm with micro welding option		0,3 - 3,5 mm			
Focusing objective	150 mm, further according to lens data sheet					
Pulse shaping	Adjustability of power curve within a laser pulse					
Display and operation	Display with membrane keyboard Laser parameters can also be set using a multifunctional footswitch. WINLaserNC software through external PC		Touchscreen Laser parameters can also be set using a multifunctional footswitch, WINLaserNC software can be operated through a touchscreen			
OBSERVATION LENS	Leica microscope attachment with eyepieces for glasses wearers, 10× Optional 16×					
WORK AREA						
Movement speed (X, Y, Z)	0 - 25 mm/s					
Movement range (X, Y, Z)	320 × 330 × 370 mm					
Lowest working point in mm	200		565			
Highest working point in mm	1500		1780			
Arm deflection in mm	1500		ca. 1400			
EXTERNAL DIMENSIONS						
W × D × H (basic part incl. chassis)	1200 × 1200 × 1100		1200 × 1030 × 1150			
Weight	With caterpillar track approx. 850 kg, without caterpillar track 550 kg		With caterpillar track approx. 910 kg, without caterpillar track approx. 610 kg			
EXTERNAL CONNECTIONS						
Electrical connection	3 × 400 V / 50-60 Hz / 3 × 16 A / 16 A					
Electrical connection	Prepared				Lens water cooling integrated	
OPTIONS	Turn and tilt objective Micro welding function Rotary axis module with chuck, tiltable, for horizontal to vertical rotation TV system for demonstrating and observing the welding process Ergo wedge LAfet® programmable laser wire feed system		Turn and tilt objective Rotary axis module with chuck, tiltable for horizontal to vertical rotation TV system for demonstrating and observing the welding process Ergo wedge LAfet® programmable laser wire feed system		Powder nozzle Turn and tilt objective with water cooling	

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