

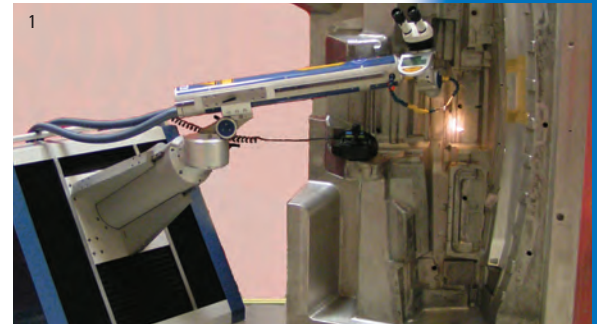
ALFlak

The programmable mobile one

With its latest development ALFlak (flexible laser for deposit and contour welding) Alpha Laser offers even more possibilities in mobile laser and repair welding: The distance range as well as the scope of the motion system have been increased considerably: Even deep and/or poorly accessible spots inside big moulds are reachable. Welding seams of up to 600 mm can be made in one go, without interruption. A unique comfort is provided by the patented, semi-automatic user-coordinate-control, with which three-dimensional movements can easily be realized. The high average power of up to 300 W allows the swift processing of filler wires with diameters in the millimeter range. The system is available with either caterpillar drive or in a manually moveable version.



	ALFlak 200	ALFlak 300
Laser		
Laser crystal	Nd: YAG	Nd: YAG
Wavelength	1064 nm	1064 nm
Average power	200 W	300 W
Peak pulse power	9 kW	10 kW
Pulse energy	150 mJ – 90 J	80 J
Pulse duration	0.5 – 20 ms	0.5 – 20 ms
Pulse frequency	single/continuous -100 Hz (in automatic operation) - 25 Hz (under observation)	25 Hz (under observation)
Welding spot Ø	0.2 – 2.0 mm	0.2 – 2.0 mm
Pulse shaping	adjustable power-shaping within the laser pulse	
Control	user specific operation with up to 39 parameter sets	
Viewing optics		
	Leica Binocular with eyepieces for spectacle wearers	
Working range		
(x, y, z)	approx. 1500 x 1000 x 1000 mm	
Motion range (x, y, z)	approx. 350 x 350 x 350 mm	
Arm travel	1500 mm	
Lowest working position	200 mm	
Highest working position	1500 mm	
Mechanical dimension of the base form		
W x D x H	approx. 1200 x 1200 x 1100 mm	
Total weight	with caterpillar drive approx. 900 kg – stationary approx. 700 kg	
Electrical supply		
	3 x 400 V / 50-60 Hz / 3 x 16A	
Cooling		
	air cooled with internal cooling water circuit, additional external cooling if required (for ALFlak 300)	
Options		
	<ul style="list-style-type: none"> > Turn-and-tilt optics > Tilttable turntable with chuck for horizontal to vertical rotation > TV system for demonstration and observation of the welding process 	



- 1 ALFlak with a big mould (DSI Laser-Service, Maulbronn)
- 2 Forming tool of a car door (PML Lasertechnik, Nohra)
- 3 Laser welding on a design object (Arnold AG, Steinbach-Hallenberg)