

# AL Flak

Mobile Laser Welder



**Now Available in  
500 watts!**

**Application:** Deposit welding, welding of molds of any sizes, repair of machine parts, turbine blades. The ALFlak is particularly useful for deposition and contour welding on large machine components, designer parts, die castings and forming tools.

- Available with or without power track.
- With a long axis range, seam of up to 500 mm long can be made without interrupting the laser process.
- Repair wire of 0.8 mm - 1.2 mm are worked quickly.
- 300 watts allows for homogenous welding.
- Patented semi-automatic user coordinated controls allow for easy three dimensional welding sequences.

Technical data	ALFlak 200	ALFlak 300
<b>Laser</b>		
Average power	200 W	300 W
Peak pulse power	9 kW	9 kW
Pulse energy	90 J	90 J
Pulse frequency	Single pulse –100 Hz (in automatic mode and under observation)	
Pulse duration	0.5 ms – 20 ms	
Welding spot diameter	0.2 – 2.0 mm	
Focusing optics	150 mm	
Pulse shaping	Adjustable power-shaping within a laser pulse	
Control	User-specific operation with up to 39 data records	
<b>Viewing system</b>	Leica binoculars with oculars suitable for wearers of glasses	
<b>Working range</b>		
X, Y, Z in mm	1500 x 1000 x 1000	
Scope of Motion (X, Y, Z) in mm	340 x 320 x 420	
Lowest working point in mm	200	
Highest working point in mm	1500	
Arm travel in mm	1500	
<b>Mechanical dimensions</b>		
LxWxH of base unit in mm	approx. 1200 x 1200 x 1100	
Weight	with caterpillar track 850 kg – without caterpillar track 550 kg	
<b>Electrical connection</b>	3 x 400 V / 50–60 Hz / 3 x 16 A	
<b>Options</b>	<ul style="list-style-type: none"> <li>&gt; Micro-welding aperture for welding spot-Ø &lt; 100µm</li> <li>&gt; Turn-and-tilt-optics</li> <li>&gt; Tiltable turntable with chuck for horizontal to vertical rotation</li> <li>&gt; TV system for demonstrating and observing the welding process</li> <li>&gt; LAfet® – programmable laser-filler-wire-feeder</li> </ul>	



Repair welding on roller (Photo: tcms, Gummersbach)



Loading the ALFlak (Photo: tcms, Gummersbach)