

NEW



ALFLAK mobile

Flexible Laser for deposit- and contour welding



With the welding laser *ALFLAK mobile* deposit welding and welding of contours can be accomplished safely and efficiently on **big machine components, design parts** and **injection- and forming dies**. The new semi-automatic „**User-Coordinate-Controller**“ makes **three-dimensional** motions very easy.

Up to 300 Watts average power permits the use of filler metals with bigger diameters and offers a continuously homogeneous fusion with the base material.

The digital control allows finest positioning of the processing head over the work piece in 4-axis x, y, z and r (rotary axis is optional) either in manual operation (by joystick) or semi automatically with preselected speed of the motion axes or in automatic mode with the unique WIN-Laser “UCC”-software which adapts the motion system to the work piece geometry.



From the vertical working position the processing head with binocular can be pivoted sideways up to **120°** to the left and right allowing the laser beam to be deflected in nearly every position.

By using the **turn and tilt optics** the beam deflection can be increased by up to **45°** from the vertical position. At the same time this beam optic can be turned continuously **360°** in any desired position. The integrated **LED-ring illumination** provides best visibility in the working area.

Repair welding in mould and tool production

ALFLAK mobile



Technical Data

Supply Unit (W x D x H)	approx. 1200 x 1200 x 1100 mm
Weight	approx. 800 kg
Electrical supply	3 x 400 V, 50/60 Hz, 3 x 16 A

Laser AL 200 / AL 300

Laser crystal	Nd:YAG
Wavelength	1064 nm
Average power	200 W 300 W
Peak pulse power	9 kW 10 kW
Pulse energy	150 mJ – 90 J 80 J
Pulse frequency	single -/continuous pulse -100 Hz (automatic operation) - 25 Hz (under observation)
Pulse duration	0,5 ms – 20 ms
Welding spot Ø	0,2 mm – 2,0 mm
Pulse shaping	adjustable power-shaping within the laser pulse
Protection class	laser class 4
Cooling	air cooled external cooling if required

Weldable materials:

- Highly alloyed cold and hot work steels
- Bronzes, copper alloys
- High grade steels
- Steel- and grey cast iron alloys
- High tensile aluminium alloys
- Titanium alloys
- Nickel
- Precious metals such as platinum, gold

Repairs and changes on:

- Plastics injection die-cast tools
- Aluminium die-casting moulds
- Pressing, cutting and stamping tools
- Large size mechanical parts
- Laminator moulds and flasks for casting
- Sculptures and design objects

Motion system, motorized

Machine axes	3 or 4
Working area (x, y, z)	approx. 1500 x 1000 x 1000 mm
Travel (x, y, z)	approx. 350 x 350 x 350 mm
Arm movement/distance	1500 mm
Lowest working point	200 mm
Highest working point	1500 mm

The system consists of (standard equipment):

- Travel unit
- Laser AL with processing head and binocular Leica
- UV-Protection
- Multifunctional foot control
- WIN-Laser "UCC" Software
- Illumination
- Remote control

Options:

- Ergo wedge
- Turn- and tilt optics
- Tilttable turntable
- Camera system



This laser product complies with the standard EN 60825-1 03/97 (IEC 825-1) and with FDA Performance Radiation Standards 21CFR chapter 1, part 1040.10



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