

ALM

The unique mobile one



The ALM welding laser unit opens up new application areas for joining and repair welding. Whether on site at the customer's plant or in-house, this unit allows unprecedented mobility. It is especially suitable for working on large moulds, dies, housings and machine parts of all sizes. The laser arm can be positioned flexibly with millimetre accuracy. A turn-and-tilt processing head enables working on any point of the workpiece, even in deep cavities. During welding, the arm can be moved with a joystick, semi-automatically, or under remote control. The optional swivelling optics support alignment of the laser beam on the workpiece, thus assuring an ergonomically favourable working position even with complex cavity shapes.



| Technical Data | ALM 150 mobil | ALM 200 mobil |
|------------------------------|---|-------------------------|
| Laser | | |
| Wavelength | 1064 nm | 1064 nm |
| Average power | 150 W | 200 W |
| Peak pulse power | 10 kW | 9 kW |
| Pulse energy | 100 mJ – 100 J | 100 mJ – 100 J |
| Pulse duration | 0.5–20 ms | 0.5–20 ms |
| Pulse frequency | Single pulse - 20/30 Hz | Single pulse - 20 /30Hz |
| Welding spot Ø | 0.2–2 mm | 0.2–2 mm |
| Focussing lens | 150 mm | 150 mm |
| Pulse shaping | adjustable power-shaping within a laser pulse | |
| Control | user-specific operation with up to 128 parameter sets | |
| Viewing optics | | |
| | Leica binocular with eyepieces for spectacle wearers, tiltable and rotatable | |
| Working range | | |
| | open system motorised motion system Movement of the arm/processing head can be carried out manually or motor driven under joystick control x, y: 120 x 120 mm, z: 1200 mm | |
| Lowest working position | 450 mm | |
| Highest working position | 1500 mm | |
| Arm travel | 1300 mm | |
| Mechanical dimensions | | |
| L x W x H | 1400 x 730 x 1505 mm | 1400 x 730 x 1505 mm |
| Weight | approx. 290 kg | approx. 290 kg |
| Electrical supply | | |
| | 3 x 400 V / 50–60 Hz / 3 x 16 A / 8 kW | |
| Cooling | | |
| | air cooled with internal cooling water circuit | |
| Options | | |
| | <ul style="list-style-type: none"> > Turn-and-tilt optics > Tilttable turntable with chuck for horizontal to vertical rotation > Remote control > TV system for demonstrating and observing the welding process | |

- 1 Mobile repair welding in the machinery of an injection mould
(photo: Jutz Lasertechnik)
- 2 Mould of material 1.2343 for injection moulding parts for the automobile industry
- 3 Repair of a turbine rotor