AL SERIES
FLEXIBLE FITTINGS

AL series lasers are extremely flexible when it comes to power, laser source and equipment. The AL can therefore be individually configured and optimally adapted to changing requirements.

AL series devices work excellently with AL-T workbenches. However, you can also integrate the AL into your existing machine assembly. ND:YAG laser sources are available with 75 to 500 watts of power. Your advantage: The laser power actually gets to the workpiece.

These compact laser welding devices can even perform very fine welding tasks. The cooling system is integrated into the laser on all devices. However, the AL 500 requires additional external cooling.

The AL is now also available with a fiber laser. The fiber source is highly energy efficient. For reproducible welds, output monitoring keeps an eye on the welding process.

The AL-F’s possibilities range from mobile welding with a laser pistol and video goggles to manual welding viewed through a microscope or fully automatic welding processes observed through a camera.

### TECHNICAL DATA

#### LASER

<table>
<thead>
<tr>
<th>Model</th>
<th>Laser Type / Wavelength</th>
<th>Average Power</th>
<th>Peak Pulse Power</th>
<th>Pulse Energy</th>
<th>Pulse Duration</th>
<th>Pulse Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL 75</td>
<td>Nd:YAG, 1064 nm</td>
<td>75 watts</td>
<td>7 kW</td>
<td>60 J</td>
<td>0.5 – 20 ms</td>
<td>-50 Hz</td>
</tr>
<tr>
<td>AL 120</td>
<td>Nd:YAG, 1064 nm</td>
<td>120 watts</td>
<td>9 kW</td>
<td>75 J</td>
<td>0.5 – 20 ms</td>
<td>-100 Hz</td>
</tr>
<tr>
<td>AL 150</td>
<td>Nd:YAG, 1064 nm</td>
<td>150 watts</td>
<td>9 kW</td>
<td>75 J</td>
<td>0.5 – 20 ms</td>
<td>-100 Hz</td>
</tr>
<tr>
<td>AL 200</td>
<td>Nd:YAG, 1064 nm</td>
<td>200 watts</td>
<td>9 kW</td>
<td>90 J</td>
<td>0.5 – 20 ms</td>
<td>-100 Hz</td>
</tr>
<tr>
<td>AL 300</td>
<td>Nd:YAG, 1064 nm</td>
<td>300 watts</td>
<td>9 kW</td>
<td>90 J</td>
<td>0.5 – 20 ms</td>
<td>-100 Hz</td>
</tr>
<tr>
<td>AL 500</td>
<td>Nd:YAG, 1064 nm</td>
<td>500 watts</td>
<td>15 kW</td>
<td>100 J</td>
<td>0.5 – 20 ms</td>
<td>-100 Hz</td>
</tr>
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</table>

#### AL FIBER

<table>
<thead>
<tr>
<th>Model</th>
<th>Laser Type / Wavelength</th>
<th>Average Power</th>
<th>Peak Pulse Power</th>
<th>Pulse Energy</th>
<th>Pulse Duration</th>
<th>Pulse Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL 300F</td>
<td>Fiber laser, 1070 nm</td>
<td>300 watts</td>
<td>3 kW</td>
<td>30 J</td>
<td>0.2 ms – CW</td>
<td>Single pulse – 100 Hz</td>
</tr>
</tbody>
</table>

#### TECHNICAL DATA

#### POWER SUPPLY UNIT

- Dimensions: W × D × H (basic component) in mm: AL 75: 820 x 400 x 910; AL 10: 1060 x 570 x 1000
- Weight: AL 75: 120 kg; AL 10: 180 kg

#### LASER BEAM SOURCE

- With focusing unit (length x Ø): AL 75: 900 x 120 mm; AL 10: 1100 x 120 mm
- Weight: AL 75: approx. 18 kg; AL 10: approx. 20 kg; AL 120: approx. 25 kg

#### EXTERNAL DIMENSIONS

- Dimensions: W × D × H in mm: AL 75: 550 x 600 x 1050
- Weight: AL 75: approx. 100 kg

#### ELECTRICAL CONNECTIONS

- Electrical connection: 200-240 V / 50–60 Hz / 16 A

Options:
- 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

The AL series is available in the AL FIBER model with AL FIBER F.