As a leading player in the design and manufacturing of systems using high-power lasers (≥ 1 kW), Fives provides compact welding modules, easily automated with high flexibility.

- Short cycle time
- Excellent repeatability
- Easy access and maintenance
- Standalone or integrated into a laser welding line
VERSATILE WELDING MODULE

- Welding process adaptation:
  - Rotating parts
  - Fixed parts
- Integration of various laser sources
- Handling numerous types of parts:
  - Gears and dog rings
  - Gears and shells
  - Gear shafts
- Adaptable for Dual Clutch Transmission parts and differentials
- 4-position turntable for additional and customized functions:
  - Pre-heating
  - Marking
  - ...
- Loading/unloading in masked time, thanks to the multi-position turntable
- Quick changeover between production campaigns
- Optimization of the cycle time thanks to the architectural design
- Easy maintenance with front and back doors

Technical features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading / Unloading</td>
<td>Manually (operator) / automatically (gantry / manipulator / robot)</td>
</tr>
<tr>
<td>Laser</td>
<td>CO₂ / fiber (1 to 6 kW) Other sources available on request</td>
</tr>
<tr>
<td>Focus head</td>
<td>2 or 3 axes controlled by NC with manual / automatic positioning from 0° to 95°</td>
</tr>
<tr>
<td>Complementary equipment</td>
<td>Laser chiller, fume extraction, shielding gas</td>
</tr>
</tbody>
</table>

WELDING TEST CAMPAIGNS

Fives offers its customers the possibility of carrying out welding tests, thanks to a permanent laser welding module in its workshop at Saint-Céré (46), along with assistance from our process engineers.

- Part qualification support
- Part demo
- Prototypes and adjustment
- Pre-series

“IN PROCESS” WELDING CONTROL (OPTIONAL)

Fives can install this system into the focus head in its welding module to control the repeatability of the welding process. It analyses the radiations emitted during the welding process according to various welding parameters. It allows an initial check of the welding seam quality compared to a previously validated reference.

The laser welding module can be integrated alongside other autonomous standard modules to create a complete laser welding line adapted to customers’ needs.