

AL-ROCK modular

STATIONARY ROBOT SYSTEM FOR LASER HARDENING
AND POWDER DEPOSITION WELDING



The ALPHA LASER system **AL-ROCK modular** is a flexible stationary robot system with **up to 24 synchronized axes** for the surface hardening of metal parts on many different components, or for automated powder deposition welding. Only one control is required to control all axes, which makes operation of the system very easy and quick to learn.

Components of different sizes can be processed sizes: from small to very large.

OUR LASER SYSTEMS ARE
RELIABLE, ROBUST, USER-
ORIENTED AND POWERFUL.

AL-ROCK MODULAR

MODULAR, STATIONARY ROBOT SYSTEM

7 LASER PROCESSES

We can offer you the best combination for your process thanks to good advice and a choice of optics:

DEEP WELDING	WIRE DEPOSITION WELDING
WOBBLE WELDING	HARDENING WITH SCANNER OPTICS
POWDER DEPOSITION WELDING	3D PRINTING
PULSE WELDING	



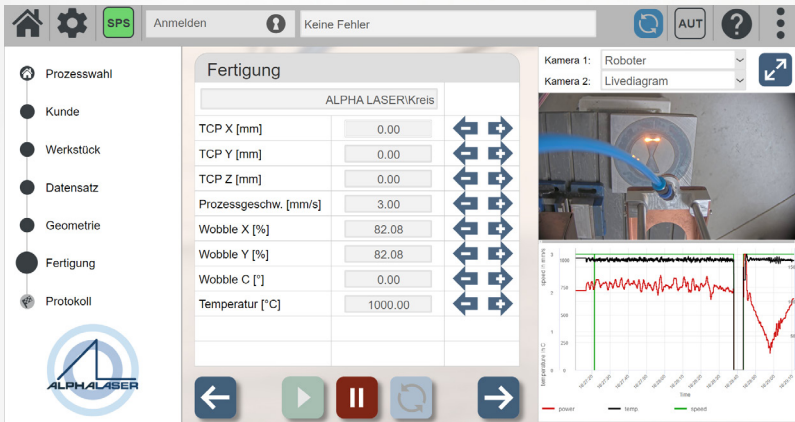
FLEXIBLE
AND
MULTIFUNCTIONAL.

CONTROL UNIT

The ALPHA LASER control concept makes it **easy to operate** the machine, even for less experienced employees. It is **simple to learn** and enables a quick start. Remote maintenance also offers the option of accessing the machine to rectify faults and provide support for complex applications.



Easy-to-operate controls and fast process changeover



Intuitive user interface

YOUR BENEFITS

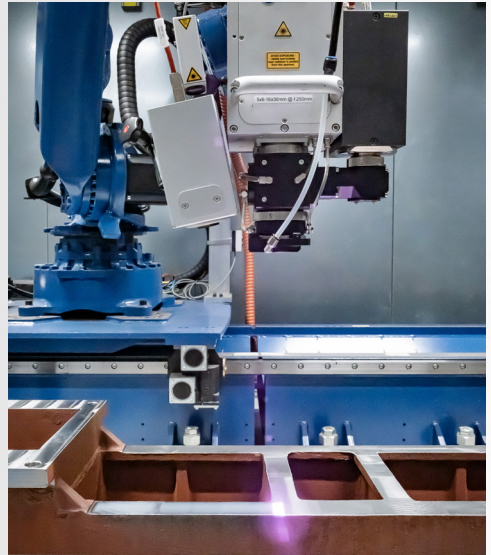
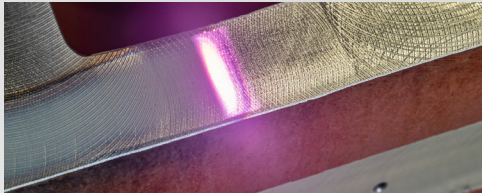
The robot system is put together entirely **according to your requirements**. You have the choice of:

HIGH POWER LASER	2 kW-20 kW (diode lasers, fiber lasers), more on request.
INDUSTRIAL ROBOTS	Freely selectable with long reach and optimum load capacity (e.g. Kuka, Comau, etc.)
VARIOUS OPTICS	Laser wire welding (LWW), laser pulse welding (LPW)
POSITIONING SYSTEMS	With different load capacities up to 60 tons
LINEAR SYSTEMS	For floor or ceiling mounting up to 24 m, more on request
CABIN CONCEPTS	Customized to your needs
OPTIONAL REQUESTS	Can be determined in a personal meeting

LASER SURFACE HARDENING



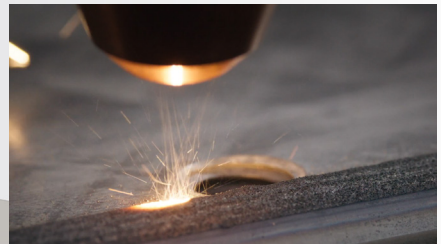
The laser power is precisely and safely **controlled by a temperature regulator**. This prevents the component from melting. The temperature of the workpiece surface is continuously monitored and controlled. The **track width of the laser beam varies between 5 and 120 mm** depending on the focusing optics. Thanks to special optics, the spot size can be flexibly defined and adjusted during the running process.



AUTOMATED POWDER DEPOSITION WELDING

For powder deposition welding, we offer **various powder nozzles** that are adapted to the respective requirements. For direction-independent **3D processing**, for example, we offer a three-beam nozzle that uses individual beams to concentrate the powder in the process zone. For internal processing, we can offer you special internal processing optics.

The optional „weld factory“ software with scanner kit is an intuitive and intelligent system **for scanning, programming and welding complex component geometries**. This makes powder deposition welding child's play.



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