

AL-ROCK

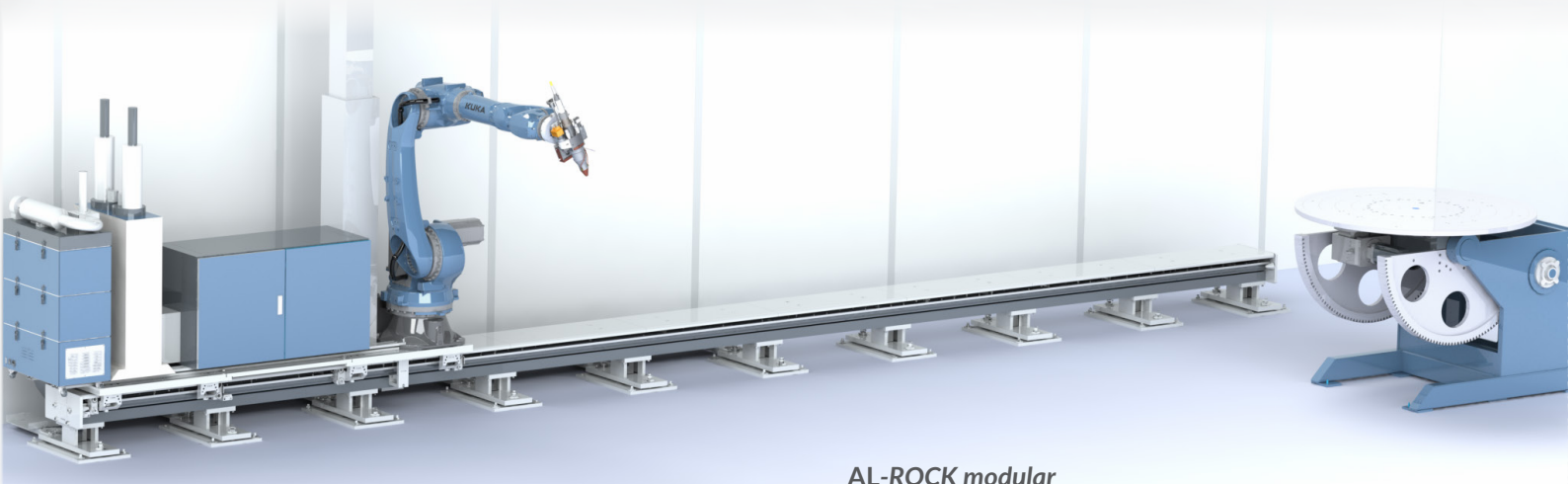
MODULAR, STATIONARY ROBOT SYSTEM FOR LASER HARDENING AND POWDER DEPOSITION WELDING

The ALPHA LASER system AL-ROCK is a flexible stationary robot system with up to 16 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 the operation of the hardening system - also with the option laser cladding - very easy and quick to learn. Components of various sizes can be processed: from small to very long.

The robot system is put together according to your needs. You have the choice

- High-power laser (diode laser, fiber laser or disk laser) between 2 kW and 20 kW. More on request.
- Different optics for laser beam hardening and laser powder deposition welding
- Freely selectable industrial robots with a long range and optimal bearing load
- Positioning systems with different bearing loads
- Linear systems for floor or ceiling mounting
- A cabin concept tailored to your needs
- Automated powder deposition welding
- And much more that we can only determine in a personal conversation.



AL-ROCK modular

The hardening process is controlled safely and precisely by means of a temperature control, because the exposure time of the laser radiation determines the depth of penetration into the component. The surface temperature of the workpiece is permanently monitored and controlled. The track width of the laser beam varies from 5-120 mm, depending on the focusing optics. The spot parameters can be changed with the zoom lens while the process is running. Complex processing tasks are adapted dynamically.



AUTOMATED POWDER DEPOSITION WELDING

For powder deposition welding, we offer a powder nozzle that works with 3 or 6 individual jets and guides the powder very well focused into the laser melt bath and fills it optimally. It is possible to weld in 3D and in any direction, as the powder flow is not influenced by the tilt of the nozzle.

The optional “Weldfactory” 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.

The control concept developed by ALPHA LASER ensures simple, easy-to-learn operation that can also be mastered quickly by less experienced employees. Access to the machines is granted via remote maintenance interfaces in order to rectify errors and/or to advise on difficult applications.

Talk to us: Together we will develop your machine concept.

