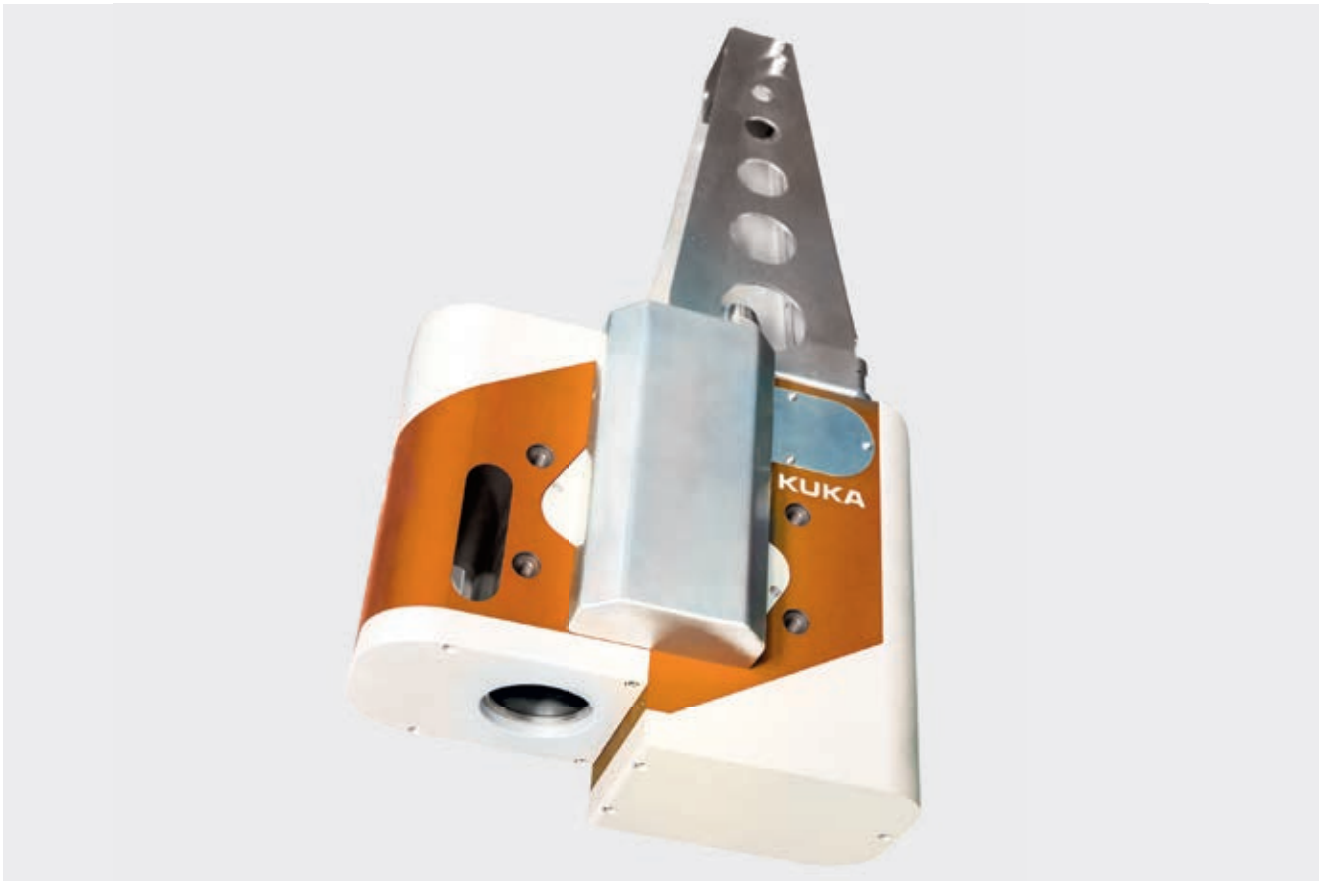


Technology_Mirror optics for laser welding

Without thermal lens effects ideal for high laser capacities



The beam quality and output power of laser sources for material processing has very much increased in recent years.

This allows welding of thicker materials in shorter cycles. With high laser power and beam qualities, thermal lens effects become more and more evident. The consequence is displacement of the focus position and deterioration of the imaging quality during the machining process.

The mirror optics of KUKA Industries addresses this point. The optics operates without lenses, both for collimation and for focusing, but with water-cooled mirrors that are heat-resistant in their optical performance. Thus, with modern, highly brilliant beam sources it allows a fast and stable process without focus shift.

Advantages

- No transmissive elements
- No impairment due to focus shift requires higher weld seam quality
- Integrated crossjet
- Optimized inert gas guiding
- Additional crossjet possible near the process
- Monitored protective glass drawer
- Integrated camera with crosshair generator
- Suitable for fiber, disk, and diode laser
- Tested up to 14 kW
- Application-specific adaptations possible
- Also possible as hybrid welding optics
- Compatible with different handling systems (robots, gantry kinematics etc.)

KUKA

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Technical data

Weight: ~25 kg
Dimension: ~700 mm × 350 mm × 200 mm
Free aperture: 60 mm
Collimation focal depth: 200 mm
Focal length: 400 mm
For QBH, LLK-D, LLK-B fiber connector



For further information, please contact us at
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