rofin
LASER MACRO

ROFIN FL SERIES

**High Brightness Fiber Lasers –
Precise, Fast and Reliable.**

THE POWER OF LIGHT

ROFIN FL SERIES

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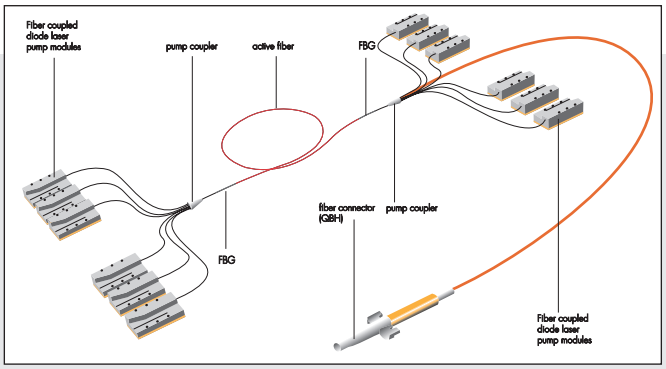
THE PRODUCT

Fiber lasers of the ROFIN FL Series are extremely efficient. With their modular and robust design the lasers have been set-up for optimum reliability. They are suitable for cutting, welding, and surface treatment, as well as for a wide variety of scanner-based applications. The emitted wavelength of 1 µm achieves high absorption in many materials and is especially suitable for processing highly reflective materials.

The lasers are equipped with the ROFIN Control Unit (RCU), which offers, besides numerous monitoring tasks, e-service capability as well as simple implementation of scanner-based applications.

The Compact version of the ROFIN fiber laser series has been specially developed for direct integration into existing machine concepts.

THE PRINCIPLE



Fiber lasers use so-called "large mode area double clad" fibers as active medium. These consist of an active single-mode core and a cladding with large diameter, in which the pump beam is conducted. The pump light from plug-gable pump modules is fed to the cladding from both sides by means of pump couplers. The resonator mirrors are formed by inscribed Fiber Bragg Gratings (FBG). This "all glass" construction combines simple cooling across the large mantle surface of the fibers with excellent beam quality from a stable construction. High-power lasers with single-mode beam quality and highest efficiency can be implemented this way. ROFIN achieves an output power of 1,500 W from a single fiber laser module. The laser light is guided to the work piece by means of process fibers and can then be focused for the processing.

THE BENEFIT

- Standard version with up to 6,000 W output power and up to 4 outputs for 100 to 1,000 µm fibers for energy or time sharing
- Compact version:
  Up to 1,500 W (single-mode) with 20 µm fiber
  500-4,000 W (multi-mode) with 50 µm and 100 µm fiber
  6,000 W with 100 µm fiber (50 µm optional)
- By using different diameters of the process fiber, the beam quality can be ideally adapted to the specific application task
- Maximum efficiency at the lowest costs: high efficiency and service-friendly, modular pumping units significantly reduce operating and maintenance costs

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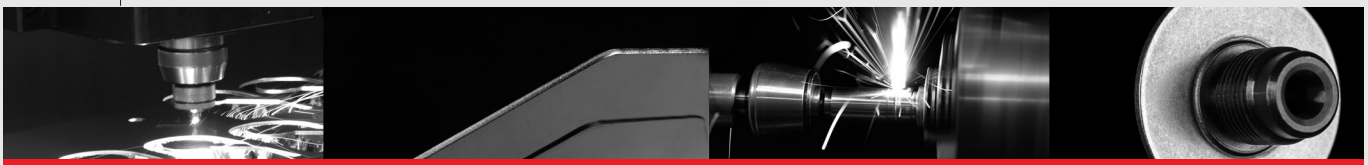

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