ROFIN DC SERIES

CO$_2$-Slab-Laser
Cutting and welding without break
The secret for this technology are the two water-cooled electrodes (slabs). High frequency between these electrodes leads to stimulation of the laser gas. The optical resonator is formed by the front and rear mirrors and the two electrodes. The heat generated in the gas is dissipated by the water-cooled electrodes (diffusion cooling). Thus, the conventional gas circulation systems involving roots blowers or turbines are not required. The crucial advantage of this laser principle is that the laser gas neither needs to be circulated nor to be renewed permanently. That means that turbines and blowers susceptible to deterioration and service are eliminated. Thus, optics integrated into the resonator that are contaminated by flowing laser gas (especially the outcoupling windows) are a thing of the past.

The diffusion-cooled CO₂ Slab lasers are extremely service-friendly. The laser operates with only a few extremely durable components and does not need conventional gas recirculation – leading to a considerable reduction of lifetime costs. Furthermore, the energy saving standby operation leads to minimal energy consumption.

With output powers from 1,000 W to 8,000 W and a wavelength of 10.6 µm in the far infrared range, the CO₂ lasers are perfectly suitable not only for the processing of metals, but also of wood, (fiber-reinforced) plastics, glass, textiles or paper.

The entire DC Series is provided with the “ROFIN Control Unit” (RCU) like all other lasers of the ROFIN Macro group. This control enables extended monitoring and control functions, resulting in improved pulse-to-pulse stability, manifold control and log functions including E-Service.

The product

1,000 W to 8,000 W output power and excellent beam quality
M² = 1.05 (K = 0.95)
Low service requirements thanks to the robust, low-maintenance design
Minimal gas consumption due to diffusion cooling
Energy-saving standby operation with minimal energy consumption
Configurations: compact version, integration package or head/cabinet combination
Highest electrical and optical safety levels according to EN/ISO 13849-1/2
ROFIN Control Unit (RCU) compatible for all MACRO lasers with improved pulsing capabilities, manifold control and log functions including E-Service
Wall-mountable control cabinet with a small footprint

WE THINK LASER

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