

ROFIN DC SERIES

**Diffusion-Cooled CO₂ Lasers –
Cutting and Welding without a Break.**



ROFIN DC SERIES

THE PRODUCT

Highest Reliability – Lowest Maintenance Effort

Cutting, welding or surface treatment – the diffusion-cooled CO₂ Slab laser from ROFIN is the perfect tool for a wide variety of applications. The trend-setting principle of the Slab laser provides highest reliability. The laser operates with only a few extremely durable components and does not need conventional gas recirculation – leading to a considerable reduction of maintenance and service. Also gas consumption is minimized: the integrated gas bottle eliminates the need for an external gas supply. In addition, the excellent beam quality of $K = 0.95$ makes the fastest cuts and deepest weld seams. With its excellent attributes and high efficiency, the ROFIN Slab laser has become a mainstream tool in countless production lines around the world.



ROFIN DC 050 (Compact)

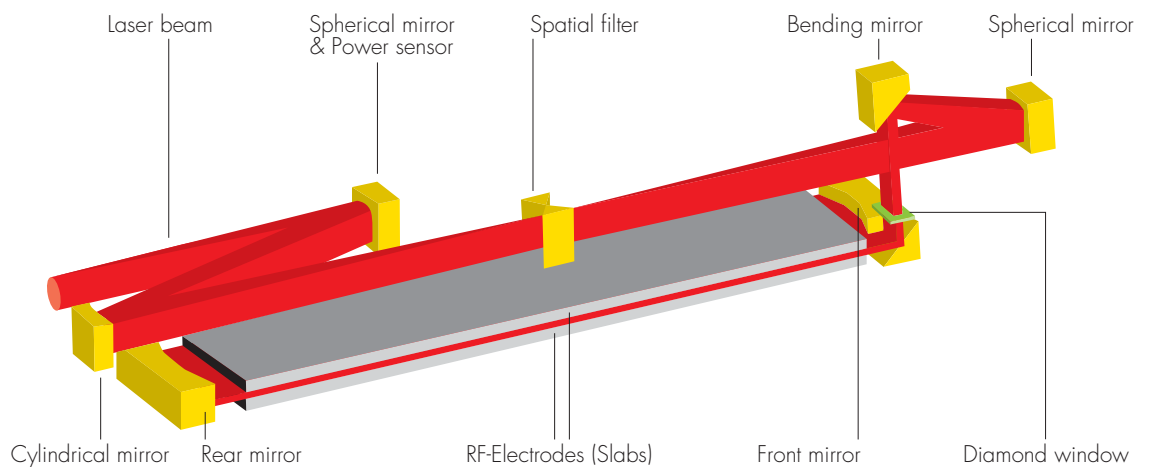
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THE PRINCIPLE

Revolutionary Simple

A CO₂ laser without gas recirculation – how does this work in detail? The secret for this decisive 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.

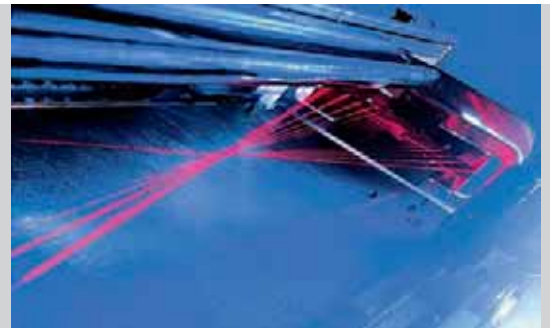
The crucial advantage of this laser principle is that the laser gas neither needs to be circulated nor to be renewed permanently. That means that turbines and blowers susceptible to deterioration and service are eliminated. Thus, optics integrated into the resonator that are contaminated by flowing laser gas (especially the outcoupling windows) are a thing of the past.



THE BENEFIT

Reliable, Fast and Low Maintenance

- Approved principle with highest industrial reliability
- High beam quality of $K = 0.95$ for best application results: precise cutting and welding, increased process speeds for higher productivity
- Low service requirements thanks to the robust, low-maintenance design
- High availability by abolition of moving parts and low maintenance
- Minimal gas consumption due to diffusion cooling – external gas supply is not required
- Energy-saving standby operation with minimal energy consumption
- Space-saving construction due to compact design



Interior view laser resonator



Laser head with integrated gas bottle



ROFIN DC 025 (Standard)





Perfect tool for cutting and welding – our reliable and low-maintenance CO₂ Slab lasers.

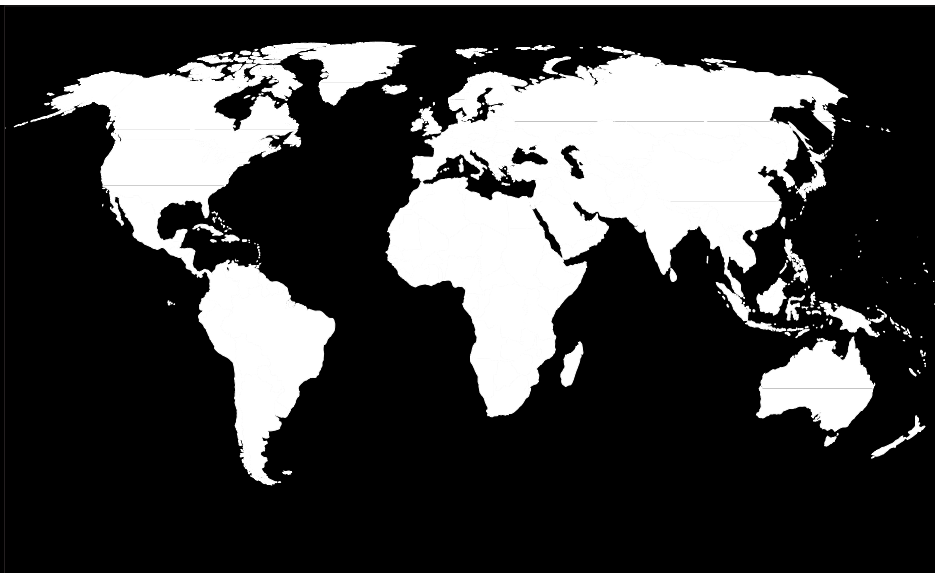


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ROFIN has sales and service teams in 40 countries around the world. From planning through implementation, to fast and reliable service - our staff members are available in every phase of your project.

To learn more about the various locations of ROFIN, visit us at

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