

# ROFIN SC SERIES

Basic. Strong. Precise.



THE POWER OF LIGHT

# ROFIN SC SERIES

## THE PRODUCT

### **Precision and Power**

The revolutionary Slab-principle of the SC Series, with output powers from 100 up to 600 watts, rounds down the powerful spectrum of the CO<sub>2</sub> laser range available from ROFIN. The SC lasers are completely sealed off so there is no need for gas recirculation equipment such as vacuum pumps or pressure control systems. As gas exchange is unnecessary before 16,000 operational hours, the running, maintenance and service costs are minimal. The complete range of SC lasers use a single resonator design producing laser light with a linear polarization. This linearly polarized beam enables protection against back reflection and makes the use in cutting machines particularly easy.

Power and precision are defining characteristics of the SC Series and their application is widespread and include: processing of paper, glass, wood, thin sheet metal and plastics. The lasers are light weight and extremely robust, making integration with mechanical handling equipment straight forward. Their light weight makes these lasers ideal candidates for robotic applications.



ROFIN SC x60

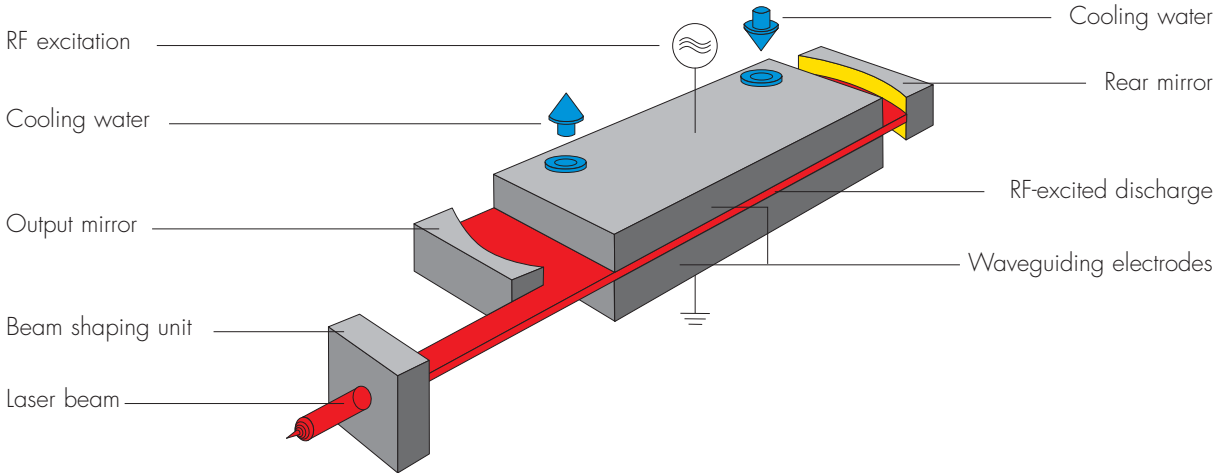
# ROFIN SC SERIES

## THE PRINCIPLE

### Revolutionary

A CO<sub>2</sub> laser without gas recirculation – how does this work in detail? The secret for this technology is in 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 no longer needs to be circulated and it does not need to be renewed. This means that turbines and blowers, which are susceptible to deterioration and service, are eliminated. Thus, optics integrated into the resonator, which are contaminated by flowing laser gas (especially the out-coupling windows), are a thing of the past.



## THE BENEFIT

### Compact, Reliable and Maintenance Friendly

- Very low gas consumption due to its diffusion-cooled design
- Light weight, for uncomplicated integration into processing systems or for mounting on robot arms
- Less service requirements thanks to the robust and maintenance friendly construction, no moving parts
- Highest reliability – ideal for industrial applications
- High quality application processing as a result of the system's high beam quality ( $K > 0.8$ ) – this results in precise cuts, the highest possible processing speeds and an increased productivity
- No external gas installation
- Minimal running costs
- Very low energy consumption in the power saving standby mode



Easy integration of the OEM version



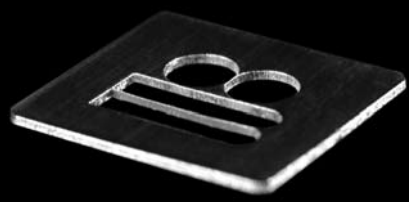
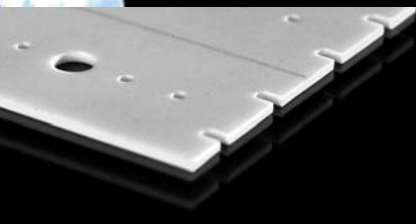
Small and compact: ROFIN SC x10 and SC x20



High flexible cutting of polymers



For industrial use – excellent and precise cutting qualities.

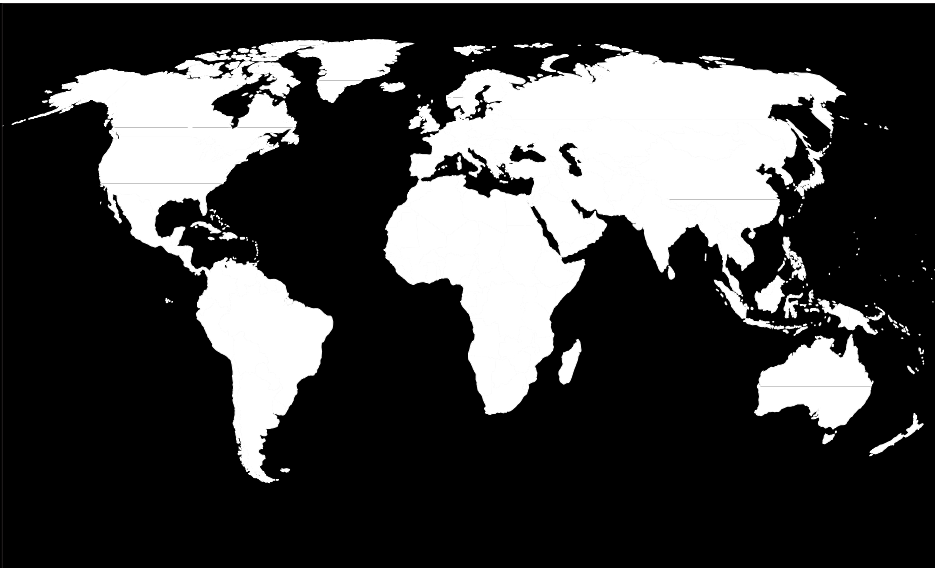


## We are where you are!

ROFIN has sales and service teams in about 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

[www.rofin.com/worldwide](http://www.rofin.com/worldwide)



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