

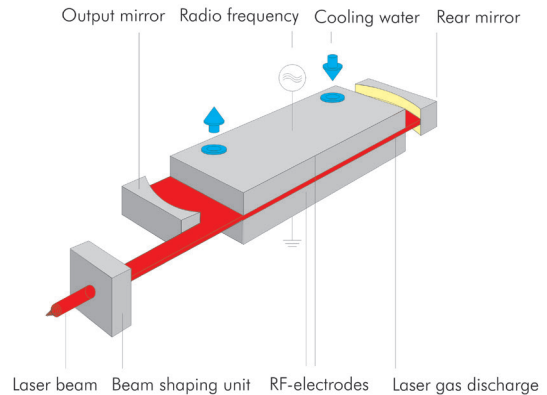
## SEALED CO<sub>2</sub> LASERS

Versatile. Reliable. Powerful.

# SEALED CO<sub>2</sub> LASERS

## THE PRINCIPLE

This sealed CO<sub>2</sub> laser technology is designed around two Slab water-cooled electrodes. Radio frequency power is applied to the electrodes and a gas discharge is established between the electrode gap. The laser optical resonator is formed by the rear and front output mirrors and the electrode geometry, to give a laser output beam via the beam shaping optics. Excess heat generated in the gas discharge is dissipated by diffusion cooling in the water-cooled electrodes. As the laser tube is fully sealed, there is no requirement for an external gas supply or recirculation. This has the added benefit of eliminating contamination experienced by some flowing gas systems and keeping service intervention to a minimum. The relatively lightweight design ensures easy integration onto robot arm systems and other weight sensitive applications.



## PRODUCT DETAILS, APPLICATIONS & MATERIALS

	OEM & SC x Series			SR Series		
	These lasers are designed for integration into industrial processing systems. They include a separate RF power supply which enables the lasers to produce short optical pulses with high peak power or alternatively near quasi CW output.			The SR series has an integrated RF power supply design and these lasers are hermetically sealed to protect against dust and sprayed water ingress (IP66).		
<b>Excitation:</b>	RF			RF		
<b>Power Range:</b>	150 - 650 W			95 - 250 W		
<b>RF Power Supply:</b>	● Separate / ● Integrated			Integrated		
<b>Wavelengths:</b>	<ul style="list-style-type: none"> <li>● SC x20 (200/160/150 W) 10.6 μm; 10.25 μm; 9.3 μm</li> <li>● SC x35 (350/315/260 W) 10.6 μm; 10.25 μm; 9.3 μm</li> <li>● OEM 45 iX (450/405/340 W) 10.6 μm; 10.25 μm; 9.3 μm</li> <li>● OEM 65 iX (650/585 W) 10.6 μm; 10.25 μm</li> </ul>			SR 10i (125/110/95 W) 10.6 μm; 10.25 μm; 9.3 μm	SR 15i (175/155/130 W) 10.6 μm; 10.25 μm; 9.3 μm	
<b>Beam Characteristics:</b>	K > 0.83			K > 0.83		
<b>Operating Parameters:</b>		Pulse width	Pulse Frequency (PP)*		Pulse width	Pulse Frequency (PP)*
	SC x20	2 – 400 μs	0 – 100 kHz	SR 10i	2 – 400 μs	0 – 130 kHz
	SC x35	2 – 400 μs	0 – 130 kHz	SR 15i	2 – 400 μs	0 – 130 kHz
	OEM 45 iX	2 – 400 μs	0 – 130 kHz	SR 25i	2 – 400 μs	0 – 130 kHz
	OEM 65 iX	2 – 400 μs	0 – 130 kHz			
<b>Mounting on robot arms:</b>	✓			✓		
Applications: Cutting, Drilling, Engraving, Marking, Scribing, Perforating, Welding, Kiss Cutting, Surface treatment						
Materials: Paper, Rubber, Plastics, Acrylic, Glass, Textiles, Wood, Ceramics, Thin Sheet Metal, Optical films						

For all lasers a DC Power supply is available as an option  
 \* PP: values for pulsed laser

• Data subject to change without notice

