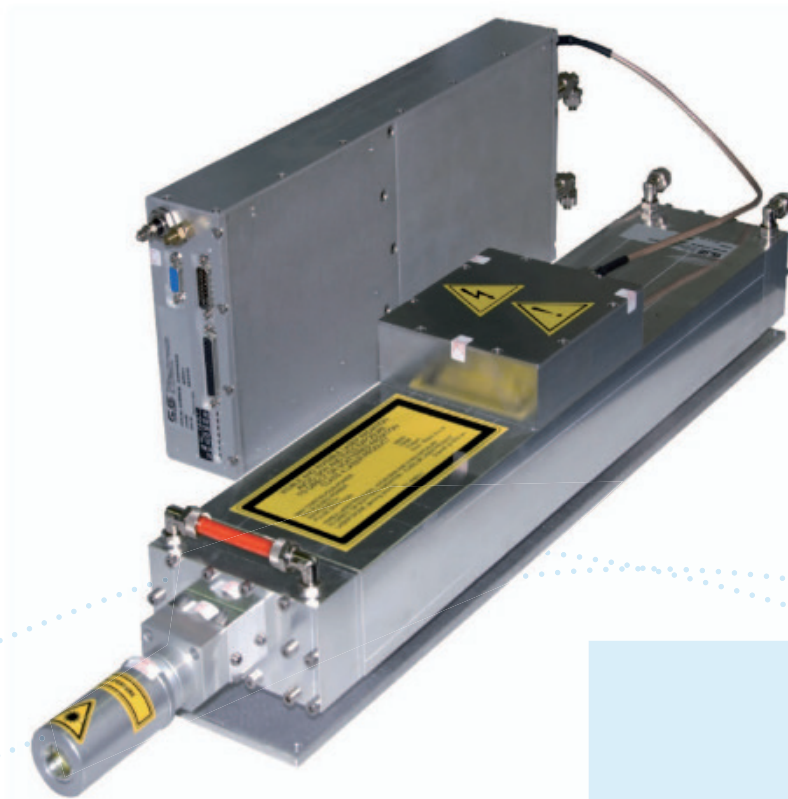


BLADE™ RF

Sealed-off Low Power series



RF Excited CO₂ laser
Power from 30W to 80W

KEY FEATURES

- Radio Frequency excited
- Sealed-off technology
- Extreme compactness
- High beam quality
- Ease of integration
- High reliability

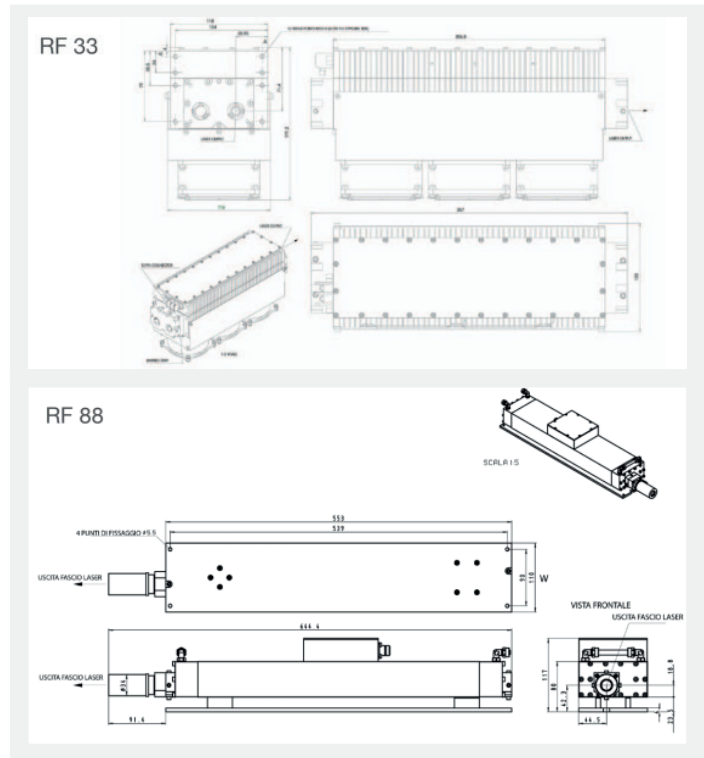


RF 33 // RF 66 // RF 88

EL.EN. has a three decades experience in the CO₂ laser sources, with more than 2000 industrial installations.

The exceptional characteristics of the new SEALED-OFF technology allows to obtain excellent performances in this power range laser applications.

The extreme compactness of the BLADE RF SEALED-OFF sources makes them one of the easiest to integrate CO₂ laser sources.



MAIN APPLICATIONS:

- Galvo scanners applications
- Plastics and leather cutting

Systems Specifications		NEW		
Model	RF 33 ¹	RF 66	RF 88	
Rated power (W)	30	60 ⁽⁵⁾	80	
Effective peak power ⁽²⁾ (W)	50	> 150	200	
Power stability (long term)	±5%	±5%	±5% ⁽⁶⁾	
Wavelength (µm)	10.55 ÷ 10.63	10.6 ± 0.4	10.6 ± 0.4	
Polarization	linear horizontal	linear horizontal	linear horizontal	
Beam diameter (1/e ² at the exit) (mm)	1.8 ± 0.2	9.4 ± 0.5	9.4 ± 0.5	
Beam divergence (full angle) (mrad)	7.5 ± 0.5	3.0 ± 0.3	3.0 ± 0.3	
Maximum pulsing frequency (kHz)	25	100	50	
Pulse width range (µs)	2 to CW	2 ÷ 500	2 ÷ 1000	
Mode quality (M ²)	<1.2	1.2	≤1.2	
Beam ellipticity	1.2:1	1.2:1	1.2:1	
Environmental temperature range (°C)		5° ÷ 35°		
Maximum humidity	Non condensing at inlet water cooling temperature			
Electrical Power Requirements				
Input voltage (V _{DC})		48 ± 1		
Max current (A)	12	20	27	
Coolant				
Heat dissipation (W)	550	1000	1500	
Coolant temperature (°C)	20° ± 0,5°	20° ± 1°	20° ± 0,5°	
Water cooling input pressure (bar)	1.5 ÷ 3 ⁽³⁾	1.5 ÷ 3	2 ÷ 3	
Water cooling flow rate (l/min)	5 ⁽³⁾	4	5	
Dimension/Weight				
Dimensions (LxWxH) (mm)	357x122x171,2 ⁽⁴⁾	563x110x89	661.4x110x117	
RF Power supply dimensions (LxWxH) (mm)	integrated	integrated	429.1x164x57	
Weight (kg)	7.5	10.3	9 (laser head only)	

- 1 - Air or water cooled version
- 2 - At 10% duty cycle and 1kHz
- 3 - For water cooled version

- 4 - For air cooled version
- 5 - Typically at 300µs of pulse-width modulation with a duty cycle of 60%. Diminished by 1% per °C when the temperature of the cooling liquid is above 20°C

- 6 - With constant duty cycle and constant temperature of the cooling liquid (20 ± 0.5°C). Duration: 1h after 10' of warm-up. Its stability is defined as follows: (Pmax-Pmin) / 2Pmin

NOTE: Aiming to product improvement, El.En. SpA reserves the right to change specifications without notice. Purchaser acknowledges that the products must comply with applicable regulations before they can be resold to customers. El.En. lasers are produced under a quality assurance system certified according to ISO 9001.



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