

BLADETM RF

**HIGH PEAK POWER
SEALED-OFF LASERS**



RF-Excited CO₂ LASER
Power from 150W to 300W

High peak power

Radio frequency Excited

Sealed-off technology

Ease of integration

Extreme compactness

Special RF 177G: 150W @9.3 μ m

Naked version in option for optimized custom lay out

BLADE™ RF

SEALED-OFF LASERS

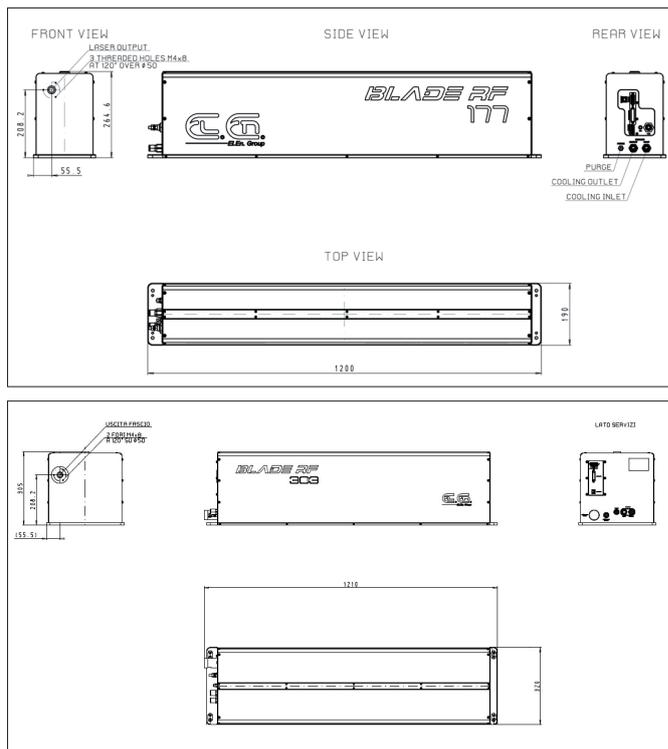
EL.EN. has a three decades experience in the CO₂ laser sources, with more than 2000 industrial installations.

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
- Thin film glass - display - LCD processing



Systems Specifications

Model	RF 177	RF 177 G	RF 303
Rated power (W)	≥150	≥150	>300
Effective peak power ⁽¹⁾ (W)	600	600	1100
Power stability (long term)	± 5%	± 5%	± 5%
Wavelength (μm)	10.6 ± 0.4	9.3 ± 0.4	10.6 ± 0.4
Polarization	linear vertical	linear vertical	linear vertical
Beam diameter (1/e ² at the exit) (mm)	9.5 ± 0.5	9.5 ± 0.5	8.0 ± 0.5
Beam divergence (full angle) (mrad)	3.0 ± 0.3	3.0 ± 0.3	2.0 ± 0.2
Maximum pulsing frequency (Hz)	100	100	100
Pulse width range (μs)	2 ÷ 1000	2 ÷ 1000	2 ÷ 150
Pulse Rise / Fall time (μs)	< 50	< 50	< 50
Mode quality (M ²)	< 1.15	< 1.15	< 1.20
Beam ellipticity	1.15:1	1.15:1	1.20:1
Environmental temperature range (°C)	5° ÷ 35°	5° ÷ 35°	5° ÷ 35°
Maximum humidity	Non condensing at inlet water cooling temperature		

Electrical Power Requirements

Input voltage (V _{DC})	48 ± 1	48 ± 1	48 ± 1
Max current (A)	60	60	115

Coolant

Heat dissipation (W)	3500	3500	5000
Coolant temperature (°C)	20° ± 0,5°	20° ± 0,5°	20° ± 0,5°
Water cooling input pressure (bar)	≤ 4	≤ 4	≤ 4
Water cooling flow rate (l/min)	7	7	10.5

Dimension/Weight

Dimensions (LxWxH) (mm)	1200x190x264.6	1200x190x264.6	1210x320x305
RF Power supply dimensions (LxWxH) (mm)	integrated		
Weight (kg)	37.5	37.5	65

1 - At 10% duty cycle and 1kHz

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



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