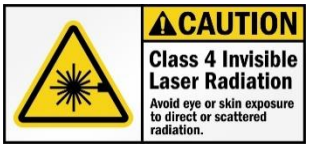
LUXINAR
INGENUITY AMPLIFIED



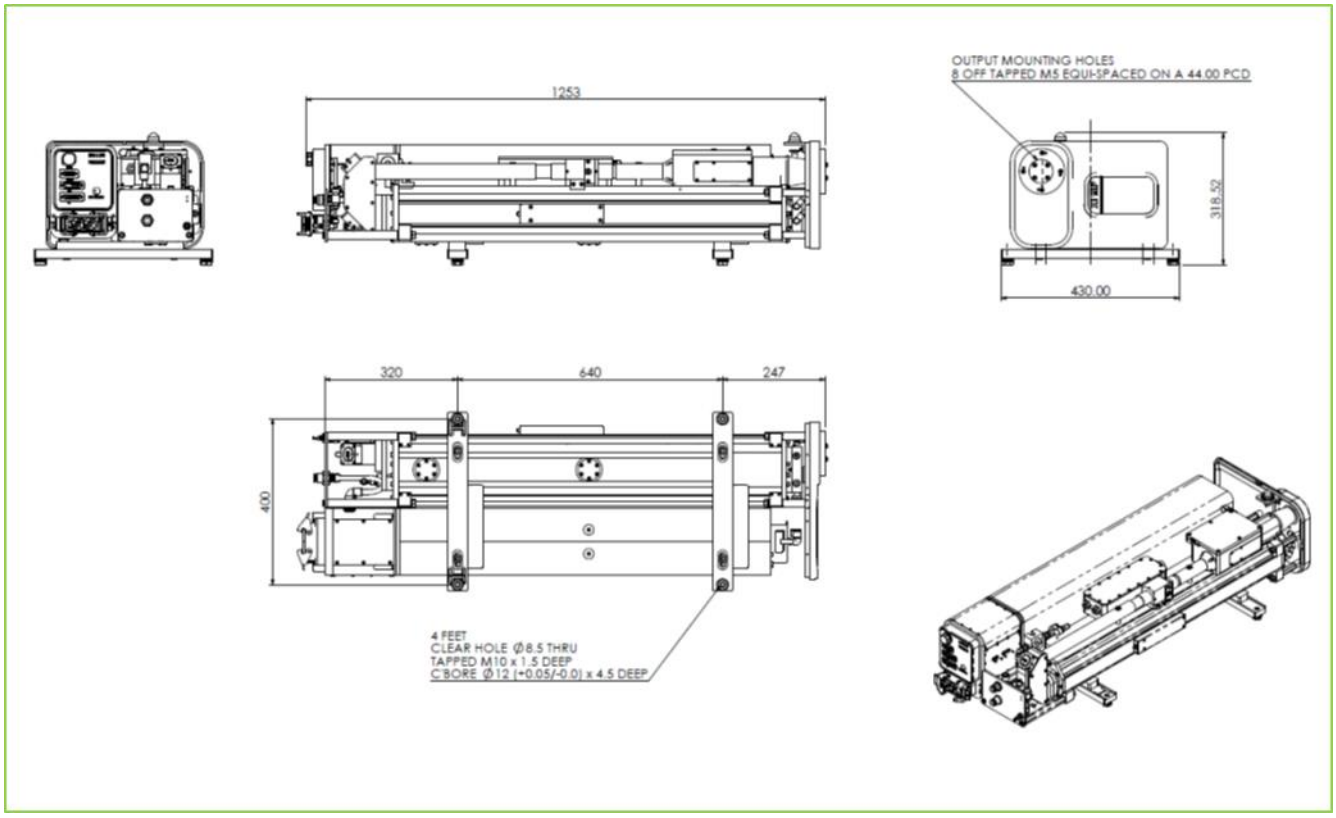
Technical data sealed CO_2 lasers – specification

Laser beam data	OEM 45iX
Wavelength	10.6µm(1)
Excitation	RF
Output power	
Power range(rated)	25W-450W
Typical stability (long term)	± 1% with feedback enabled < ± 3% open loop(2)
Peak power	> 1135 W
Typical shipment power(3)	600W(4)
Laser beam quality	
Diameter @ (1/e²) at laser o/p optic(5)	11.5 ± 1mm
Beam quality factor M^2 (K)	M^2 < 1.2 (K > 0.83)
Divergence (full angle far field)	< 2mrad
Pointing stability (half angle)	< 0.25mrad
Polarisation	Linear (parallel to base), purity > 100:1
Ellipticity	< 1.2:1
Pulsed mode	
Frequency	0kHz – 100kHz
Width	2µs-400µs
Energy	20mJ-390mJ
Optical pulse rise/fall	< 60µs
Duty cycle (max)	55%
Dimensions and weights	
Laser head/RF (without cover)	(LxWxH)1250mmx430mmx321mm 78kg
Laser head/RF (including cover)	(LxWxH)1250mmx430mmx321mm 92kg
DC PSU (Optional)	(LxWxH)633mmx483mmx132.50mm 30kg
External control facilities	
Laser head	Commands from external controller Status signal to external controller
DC Electrical ratings	
Input voltage range	400VAC ± 10%, 3 phase 50/60Hz
Output voltage range	50V
Maximum output current	200A
Maximum output power	10kW
External fusing requirement	3 x 25A
Earth leakage current	< 30mA
Cooling	
Flow rate	≥ 420L/hr
Refrigeration capacity	> 11kW
Temperature	19°C/66°F to 25°C/77°F ± 1°C (above dew point)

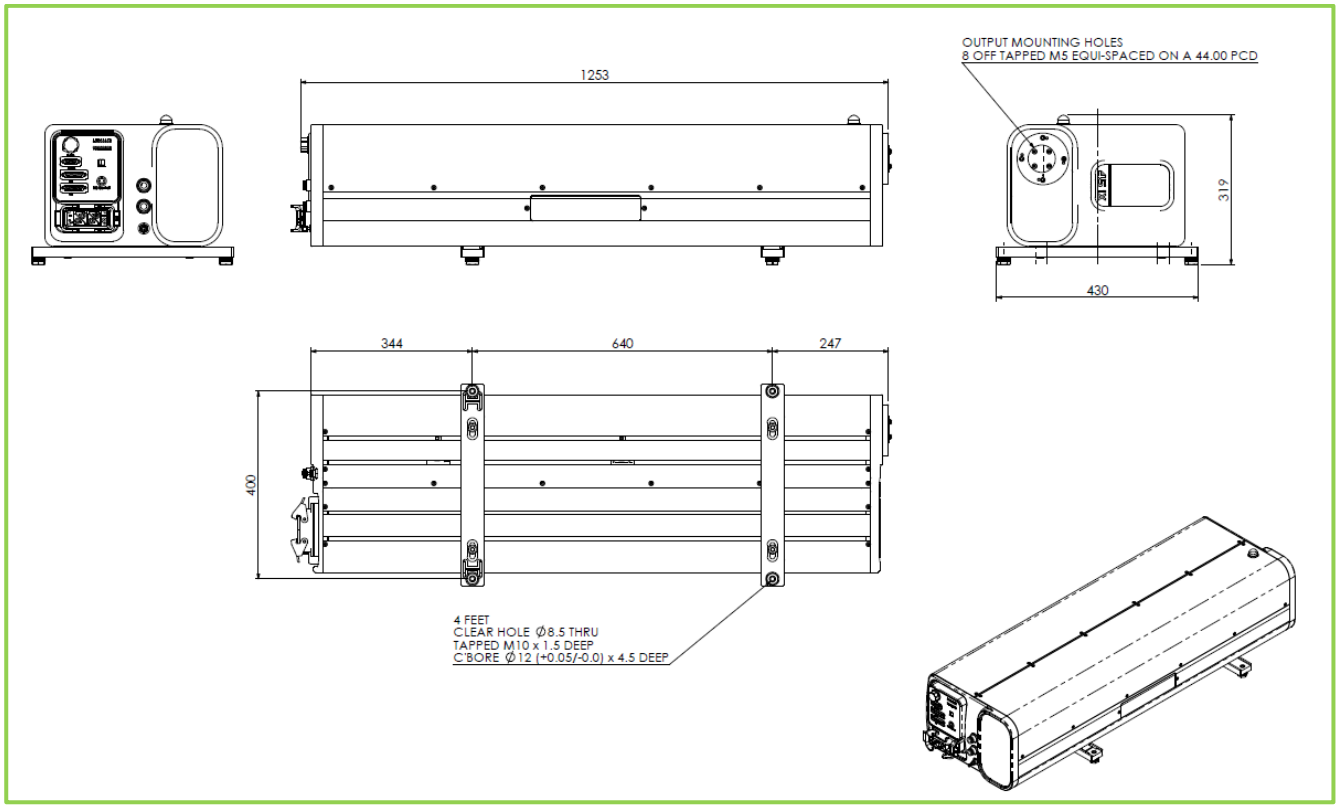
Notes:

1. 10.6µm is the predominant wavelength. This can typically vary in the range 10.45µm–10.7µm
2. The guaranteed stability is ± 2% with power feedback enabled and ± 5% without power feedback enabled at a pulse width of 50µs and a duty of 55%. Power feedback turn on response is typically 300-500 milliseconds
3. Mean average power at maximum duty cycle
4. The guaranteed minimum shipment power is 540W at 50µs pulse width and 55% duty
5. A beam waist diameter of typically 10.5 ± 1mm is located approximately 2m to 4m from the laser output

Please note that while every effort has been made to ensure that the data given in this document is accurate, the information, figures, illustrations, tables, specification and schematics contained herein are subject to change without notice



OEM 45iX without cover



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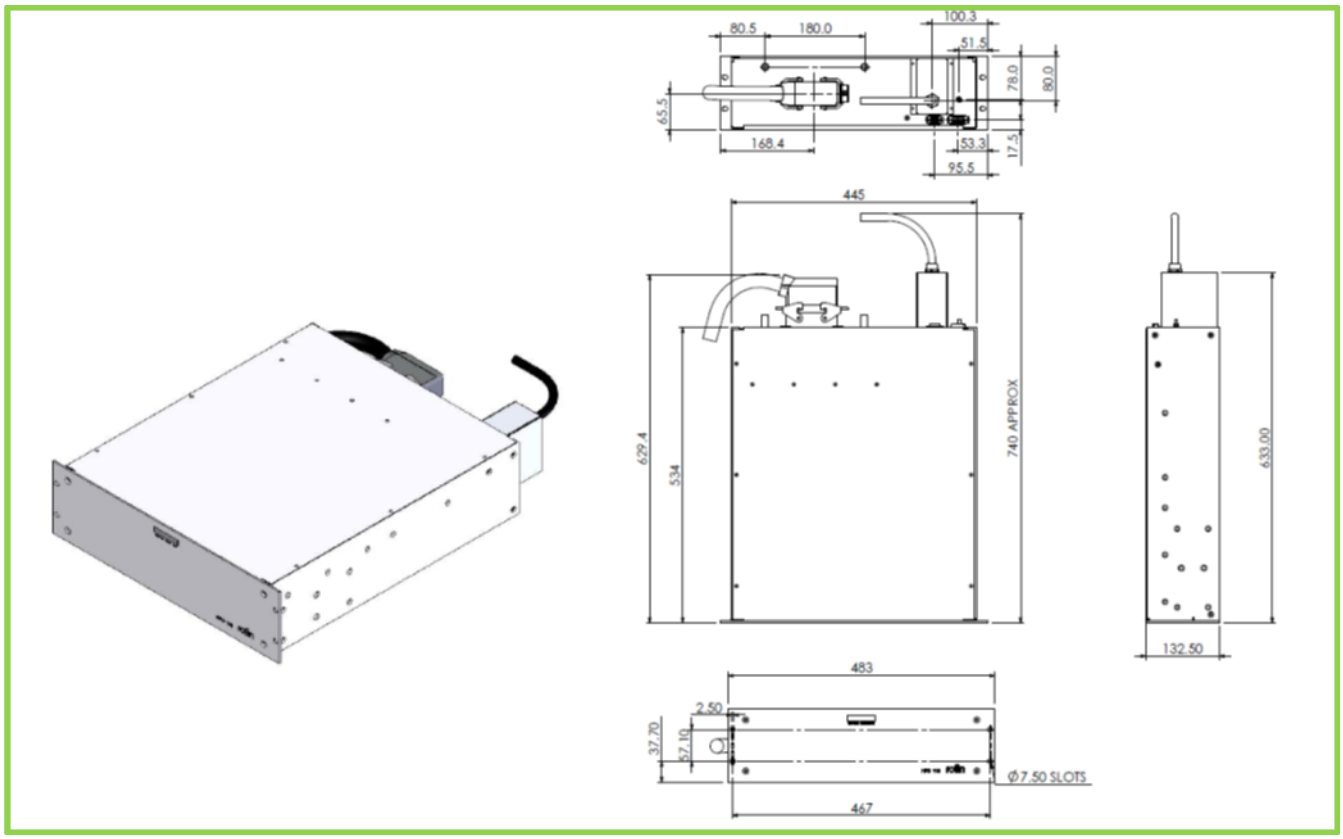

DC power supply 400V version – water cooled – optional