2.0 SPECIFICATIONS AND INSTALLATION

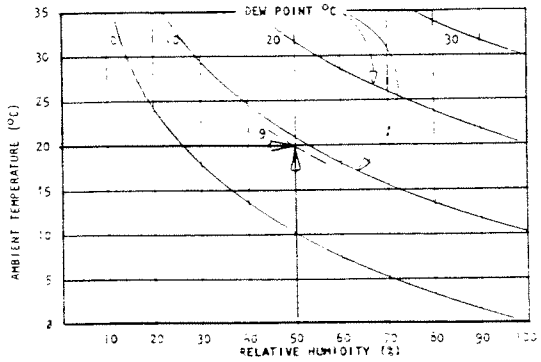
2.1 SPECIFICATIONS

Laser Medium:	CO_2 -N_2 -He
Wavelength:	10.6 microns
Output Power:	
1. Continuous Mode	50 Watts TEM_{oo}
2. Electronically Pulsed Mode	100W Maximum Peak Power 0.1 ms to 10 sec. Pulse Length 1 Hz - 1 KHz Pulse Frequency
Transverse Mode Structure:	TEM_{oo}
Gas Consumption at maximum power:	3.5 cfh (105 ℓph)
Beam Diameter:	6.3 mm ($\frac{1}{e^2}$ power point)
Beam Divergence:	2.2 mr (full angle between $\frac{1}{e^2}$)
Minimum Practical Focused Spot Diameter:	0.1 mm (0.004 inch)
Polarization:	Random
Cavity Length:	1 Meter
Excitation:	Regulated DC
System Activation:	Turn on: Push ON/Push OFF Switch Beam Control: Electrical Signal or contact closure. Beam On: 0 Volts or Contacts Closed Beam Off: -10 Volts or Contacts Open

Vacuum System:	Flowing gas
Cooling System:	Open Loop Water, standard garden hose
Minimum Water Flow Rate:	4 lpm (1 gpm)
Minimum Water Pressure:	1.46 Kg/cm^2 (20 psi)
Inlet Water Temperature:	
Nominal:	10°C (50°F)
Maximum:	21°C (71°F)

Experience has shown that under certain operating conditions condensation will build up on the cooled portion of the laser. This in turn causes arcing between components at different electrical potentials. Condensation on optical elements will lead to accelerated deterioration of the coatings and early failure. Optics damaged due to condensation are not covered under the warranty.

Given the ambient air temperature and relative humidity, the coolant temperature required to avoid the onset of condensation (dew point), can be derived from the following curves.



Input Power:	110/120 VAC, 20A, 60 Hz
Optional:	220 VAC, 20A, 50/60 Hz
Laser Head Dimensions:	145 x 20 x 15 cm (57 in. Long x 8 in. wide x 6 in. high)
Laser Head Weight:	26 Kg (54 lbs)
Power Supply Dimensions:	61 x 61 x 76 cm (24 in.Wide x 24 in. Deep x 30in. High) Power Supply does not include gas bottles
Power Supply Weight:	127 Kg (280 lbs)

Specifications subject to change without notice.