

CRYOMECH

Helium Reliquefier Specification Sheet

HeRL01-RM with CP103

Reliquefaction rate (Recondensing boil-off from Cryostat)	≥ 2 L/day at 0.50 psig
Cool down time	< 4 hours between start up and liquid helium production
Max operating pressure	5.0 psig (0.34 bar) Pressure relief valve cracking pressure
Cryostat interface	
Standard drain leg diameters:	Ø 3/8 inch (9.5 mm) (Custom sizes available upon request)
Standard drain leg length	12 inch (305 mm) – 35 inch (889 mm) (Custom lengths available upon request)
Vapor return line	Connects to vent port Supplied with 1/4 inch MNPT and KF16 adaptor
System monitoring and control	
Pressure control	Balances boil-off rate with condensing rate
Temperature monitor	Monitors the cold head temperature using a calibrated diode
Reliquefier weight	29 lb (13.2kg)
Cold head	PT404-RM
Helium compressor package	CP103, available as water or air cooled
Water cooled:	
Weight	188 lb (115 kg)
Dimensions	See compressor package outline drawing
Electrical rating	208/230VAC, 1 Ph, 60 Hz 200/220VAC, 1Ph, 50Hz
Power consumption at steady state	4.2 kW, 60 Hz 3.4 kW, 50 Hz
Cooling water flow rate	Minimum flow 1.8 GPM (6.8 LPM) at 80 °F (27 °C) maximum temperature
Air cooled:	
Weight	204 lb (92.7 kg)
Dimensions -	See compressor package outline drawing
Electrical rating	208/230 VAC, 1Ph, 60Hz 200/220VAC, 1Ph, 50Hz
Power consumption at steady state	4.2 kW, 60 Hz 3.6 kW, 50 Hz

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Flexible lines	
Standard length	25 ft (7.6 m)
Weight per pair	23 lb (10.4 kg)
System parameters	
Helium pressure	250 ± 5 psig (17.2 ± .34 bar) at 60 Hz 270 ± 5 psig (18.6 ± .34 bar) at 50 Hz
Ambient temperature range	45 °F to 100 °F (7 °C to 38 °C)
Maximum sound level	
Water cooled	70 dBA at 1 meter
Air cooled	74 dBA at 1 meter
Mounting interface	(6) 10-32 threaded holes on HeRL base See Reliquefier outline drawing