

CRYOMECH

Helium Reliquefier Specification Sheet

HeRL02-RM with CPA2850

Reliquefaction rate (Recondensing boil-off from Cryostat)	≥ 7.5 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 1/2 inch (12.7 mm) Ø 3/8 inch (9.5 mm) Ø 12 mm (0.472 inch) (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	65 lb (29.5 kg)
Cold head	PT405-RM
Helium compressor package	CPA2850, available as water or air cooled
Water cooled:	
Weight	243 lb (110 kg)
Dimensions	See compressor package outline drawing
Electrical rating	200/230VAC, 3 Ph, 60 Hz 440/480VAC, 3Ph, 60Hz 200VAC, 3Ph, 50Hz 380/415VAC, 3Ph, 50Hz
Power consumption at steady state	5.4 kW, 60 Hz 4.9 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	384 lb (174 kg)
Dimensions -	See compressor package outline drawing
Electrical rating	200/230 VAC, 3Ph, 60Hz 440/480VAC, 3Ph, 60Hz 200VAC, 3Ph, 50Hz 380/415VAC, 3Ph, 50Hz
Power consumption at steady state	6.0 kW, 60 Hz 5.5 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	220 ± 5 psig (15.2 ± .34 bar) at 60 Hz 250 ± 5 psig (17.2 ± .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 1meter
Mounting interface	(8) 5/16 -18 threaded holes on HeRL base See Reliquefier outline drawing