

CRYOMECH

Helium Reliquefier Specification Sheet

HeRL20 with CPA1114

Reliquefaction rate (Recondensing boil-off from Cryostat)	≥ 35 L/day at 0.50 psig
Cool down time	< 2 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 in (305 mm) – 35 in (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	87 lb (39.5 kg)
Cold head	PT420
Helium compressor package	CPA1114, available as water cooled only
Weight	420 lb (191 kg)
Dimensions	See compressor package outline drawing
Electrical rating	440/480VAC, 3 Ph, 60 Hz 380/415VAC, 3 Ph, 50 Hz
Power consumption at steady state	13.0 kW, 60 Hz 11.4 kW, 50 Hz
Cooling water flow rate	Minimum flow 3.6 GPM (13.6 LPM) at 80 °F (27 °C) maximum temperature
Flexible lines	90° elbows at Reliquefier end
Standard length	66 ft (20.1 m)
Weight per pair	120 lb (54.4 kg)
System parameters	
Helium pressure	220 ± 5 psig (15.2 ± .34 bar) at 60 Hz 260 ± 5 psig (17.9 ± .34 bar) at 50 Hz
Ambient temperature range	45 °F to 100 °F (7 °C to 38 °C)
Maximum sound level	76 dBA at 1 meter
Mounting interface	(8) 5/16 -18 threaded holes on HeRL base See Reliquefier outline drawing



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Optional Equipment

Reliquefier Stand

Weight (with empty ballast tank) 125 lb (57 kg)

Dimensions - L x W x H 36 inch x 32 inch x 96 inch (92 cm x 81 cm x 244 cm)
(Custom heights available upon request)

Counterweight (liquid volume) 30 gal (114 L)