

CRYOMECH

Liquid Helium Plant Specification Sheet

LHeP40

<u>Liquid helium production rate</u>	≥ 40 liter/day (1.67 liter/hour)
<u>Initial system cool down</u>	48 hours from initial start up to full production rate
<u>Control System</u>	
Remote Monitoring	Ethernet connection
System status display	Integrated touch screen panel
Liquid Level Status	Fully automatic level monitor & pressure controller
<u>Cold head</u>	(2) PT415 cold heads mounted on dewar
<u>Helium compressor packages</u>	(2) CP1110 (water cooled only)
Weight	420 lbs (191 kg) <u>each</u> compressor
Dimensions - L x W x H	24 x 24 x 31 in (61 x 61 x 79 cm) <u>each</u> compressor
Electrical rating	200/230 or 440/480VAC, 3Ph, 60Hz // 200 or 380/415VAC, 3Ph, 50Hz
Power consumption @ steady state	10.7 kW // 9.2 kW for <u>each</u> compressor
Total power consumption	21.4 kW // 18.4 kW (for full production of 40 liters/day)
Cooling water flow rate	Minimum flow 3 GPM (11.5 LPM) @ 80°F (27°C) maximum temperature for <u>each</u> compressor (2 total)
<u>Helium flexible lines</u>	
Standard length	66 ft. (20.1 m)
Weight per pair	90 lbs. (41 kg) (2 pairs total)
<u>System Parameters</u>	
Helium pressure charge	230 ± 5 PSIG (15.9 ± .34 bar) @ 60 Hz 260 ± 5 PSIG (17.9 ± .34 bar) @ 50 Hz
Ambient temperature range	45°F to 100°F (7 to 38°C)

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Gaseous helium requirement

Flow rate	19.4 SLPM (.69 SCFM)
Minimum purity	99.99%
Maximum inlet pressure	150 PSIG (10.3 bar)
Maximum sound level	76 dBA @ 1 meter

Liquid helium dewar

Capacity	350 liters (93 gal)
Operating pressure:	
Standard	3 PSIG (0.2 bar)
Maximum	10 PSIG (0.7 bar)
Weight	660 lbs. (300 kg) (with cold heads installed)
Dimensions - L x W x H	45 x 36 x 83 in (115 x 92 x 211 cm)

Minimum footprint requirements

CP1110 helium compressors	48 x 48 in. (122 x 122 cm) each compressor (2 total)
Liquid Helium Dewar	66 x 48 x 86 in. (168 x 122 x 218 cm)

Shipping crates

	3 Wood boxes
Weight	2 boxes @ 670 lb (304 kg) each (helium compressors & flex lines)
Dimensions - L x W x H	48 x 40 x 59 in (122 x 102 x 150 cm) each
Weight	1 box @ 1,400 lb (635 kg) (dewar/ with cold heads mounted)
Dimensions - L x W x H	51 x 58 x 90 in (130 x 147 x 229 cm)