

CRYOMECH

Liquid Nitrogen Plant Specification Sheet LNP60

Liquid nitrogen production rate ≥ 60 liter/day (2.5 liter/hour), 15.9 gal/day (0.66 gal/hour)
*reduced production rate on 50Hz

Dewar assembly

Capacity 210 liters (56 gal)

Weight:

Empty 340 lb (154 kg)

Full 714 lb (324 kg)

Dimensions (OD x H) 30 x 51 in (76 x 130 cm)

Cold head model

AL300, mounted on dewar

Helium compressor model

CP970, available as air or water cooled

Air cooled:

Weight 387 lb (176 kg)

Dimensions (L x W x H) 23 x 21 x 46 in (58 x 53 x 117 cm)

Electrical rating 220/230; 460VAC, 3Ph, 60Hz // 200/220; 380/420VAC, 3Ph, 50Hz

Power consumption 8 kW // 7.4 kW

Water cooled:

Weight 262 lb (119 kg)

Dimensions (L x W x H) 23 x 21 x 26 in (58 x 53 x 66 cm)

Electrical rating 220/230; 460VAC, 3Ph, 60Hz // 200/220; 380/420VAC, 3Ph, 50Hz

Power consumption 7.5 kW // 6.9 kW

Cooling water flow rate Minimum flow 2 GPM (7.6 LPM) @ 80°F (27°C) maximum temperature

Helium flexible lines

Standard length 10 ft (3 m)

Weight per pair 9.2 lb (4.2 kg)

Nitrogen generator assembly

Nitrogen purity 98%

Weight 68 lb (31 kg)

Dimensions (L x W x H) 42 x 7 x 29 in (107 x 18 x 74 cm)

System parameters

Helium pressure 200 ± 5 PSIG ($13.8 \pm .34$ bar) @ 60 Hz

220 ± 5 PSIG ($15.2 \pm .34$ bar) @ 50 Hz

Ambient temperature range: 45°F to 100°F (7°C to 38°C)

Maximum altitude (standard LNP) 10,000 ft (3000 m)

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<u>Compressed air requirement</u>	7.9 ACFM at 85 PSIG (224 ALPM at 6 bar) FAD FAD (free air delivery) measures the compressor's output while operating at a specific pressure. The result, expressed in actual cubic feet per minute (ACFM), rates the outlet flow based on the inlet conditions.
<u>Maximum sound level</u>	
Air cooled	74 dBA at 1 meter
Water cooled	70 dBA at 1 meter
<u>Minimum footprint requirement</u>	
Air cooled helium compressor	6.5 x 6 ft (2 m x 1.8 m)
Water cooled helium compressor	4.5 x 3.5 ft (1.4 m x 1.1 m)
<u>Shipping weight and dimensions</u>	The standard LNP is packaged in two wooden crates
Crate 1:	
Weight	520 lb (236 kg)
Dimensions (L x W x H)	39 x 39 x 64 in (99 x 99 x 163 cm)
Crate 2:	
Weight	445 lb (202 kg)
Dimensions (L x W x H)	48 x 40 x 59 in (122 x 102 x 150 cm)
<u>Optional Equipment</u>	
<u>Air compressor</u>	
Flow rate	17.4 ACFM at 175 PSIG (493 ALPM at 12.1 bar) FAD
Weight	575 lb (261 kg)
Dimensions (L x W x H)	54 x 30 x 52 in (137 x 76 x 132 cm)
Duty cycle	1/3
Horsepower	5
Electrical rating	208/230; 460VAC, 3Ph, 60Hz // 220; 380VAC, 3Ph, 50Hz
Sound level	74 dBA @ 1 meter
<u>Refrigerated air dryer</u>	
Nominal capacity	15 SCFM (425 SLPM)
Weight	44 lb (20 kg)
Dimensions (L x W x H)	18 x 8 x 18 in (46 x 20 x 46 cm)
Power consumption	0.23 kW
Electrical rating	208/230VAC, 1Ph, 60Hz // 200VAC, 1Ph, 50Hz