

# CRYOMECH

## Liquid Nitrogen Plant Specification Sheet

### LNP120

Liquid nitrogen production rate\*  $\geq$  120 liter/day (5 liter/hour); 31.7 gal/day (1.3 gal/hour)  
\*reduced production rate on 50Hz

#### Dewar assembly

Capacity 300 liters (79 gal)  
Weight:  
Empty 465 lb (211 kg)  
Full 1000 lb (453 kg)  
Dimensions (OD x H) 32 x 51 in (81 x 130 cm)

Cold head model AL600, mounted on Dewar

#### Helium compressor model

CP1114, available as water cooled only  
Weight 470 lb (213 kg)  
Dimensions (L x W x H) 24 x 24 x 31 in (61 x 61 x 79 cm)  
Electrical rating 440/480VAC, 3Ph, 60Hz // or 380/415VAC, 3Ph, 50Hz  
Power consumption 12.5 kW // 11.5 kW  
Cooling water flow rate Minimum flow 3 GPM (11.4 LPM) @ 80°F (27°C) maximum temperature

#### Helium flexible lines

Standard length 15 ft (4.6 m)  
Weight per pair 25 lb (11.3 kg)

#### Nitrogen generator assembly

Nitrogen purity 98%  
Weight 115 lb (52 kg)  
Dimensions (L x W x H) 18 x 42 x 39 in (46 x 107 x 99 cm)  
Nitrogen Gas Flow Rate 2.29 SCFM at 7 PSIG (64.7 LPM at 0.5 bar)

#### System parameters

Helium pressure 230  $\pm$  5 PSIG (15.9  $\pm$  .34 bar) @ 60 Hz  
250  $\pm$  5 PSIG (17.2  $\pm$  .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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#### Compressed air requirement

Dew point

35°F (2°C)

Flow rate

15.6 ACFM at 85 PSIG (442 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.

#### Maximum sound level

Water cooled helium compressor

76 dBA @ 1 meter

#### Minimum footprint requirement

Water cooled helium compressor

7 x 7 ft (2.1 m x 2.1 m)

#### **Optional Equipment**

##### Rotary Screw Air compressor

Included components

80 gal (303 L) tank, refrigerated air dryer with pre-filter

Flow rate

17 ACFM at 125 PSIG (481 ALPM at 8.6 bar) FAD

Weight

810 lb (367 kg)

Dimensions (L x W x H)

71 x 28 x 52.5 in (180 x 71 x 133 cm)

Horsepower

5.0

Electrical rating Air Compressor

208/230; 460VAC, 3Ph, 60Hz // 220; 380VAC, 3Ph, 50Hz

Electrical rating Air Dryer

115 VAC, 1Ph, 60Hz // 230 VAC, 1Ph, 50Hz

Sound level

68 dBA