

# CRYOMECH

## Helium Reliquefier Specification Sheet

### HeRL25-RM with CPA1114

|                                                              |                                                                                                              |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Reliquefaction rate<br>(Recondensing boil-off from Cryostat) | ≥ 39 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)<br>Ø 3/8 inch (9.5 mm)<br>Ø 12 mm (0.472 inch)<br>(Custom sizes available upon request) |
| Standard drain leg length                                    | 12 inch (305 mm) – 35 inch (889 mm)<br>(Custom lengths available upon request)                               |
| Vapor return line                                            | Connects to vent port<br>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                                           | 98 lb (44.5 kg)                                                                                              |
| Cold head                                                    | PT425-RM                                                                                                     |
| 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<br>380/415VAC, 3 Ph, 50 Hz                                                           |
| Power consumption at steady state                            | 13.0 kW, 60 Hz<br>12.0 kW, 50 Hz                                                                             |
| Cooling water flow rate                                      | Minimum flow 3.6 GPM (13.6 LPM) at 80 °F (27 °C)<br>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                                              | 240 ± 5 psig (16.5 ± .34 bar) at 60 Hz<br>270 ± 5 psig (18.6 ± .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<br>See Reliquefier outline drawing                                  |



## Helium Reliquefier Specification Sheet

### HeRL25-RM with CPA1114

#### 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)