

# 8kW Helium Compressor (HLC 4500)

## Performance Characteristics

- Variable speed control
- Energy smart
- Long service life
- Remote control
- Real time diagnostics
- Modular architecture

## Application

- Superconducting magnet systems
- LTS electronics and SQUIDs
- Helium liquefiers

## Accessories

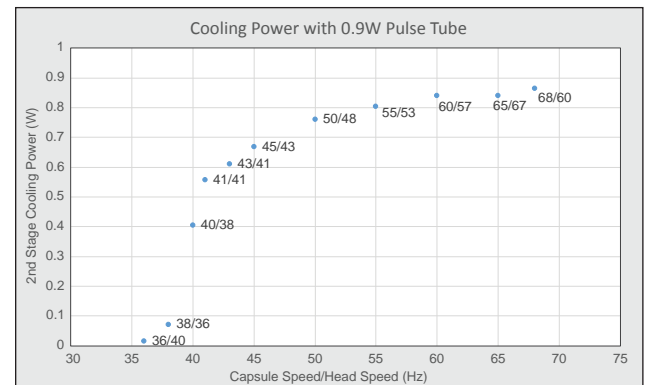
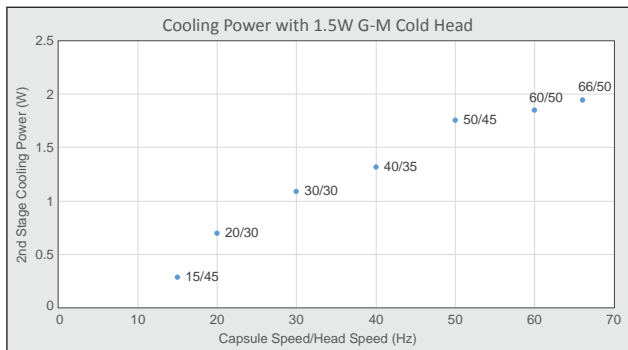
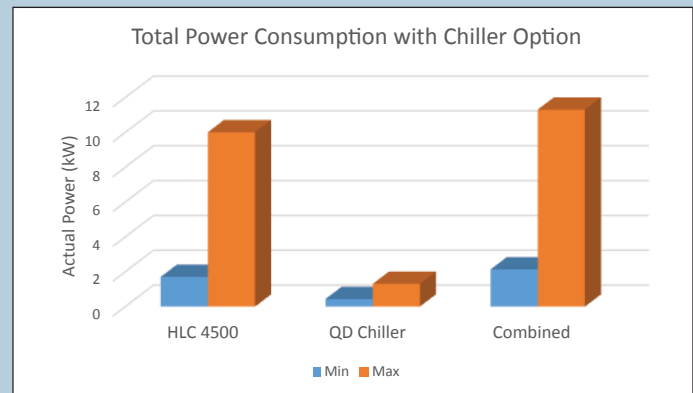
- Input Power Cable – 2.5 meters
- Software Development Kit (SDK)
- Computer Interface via USB
- Compact Chiller (optional)



HLC 4500 Compressor with Compact Chiller

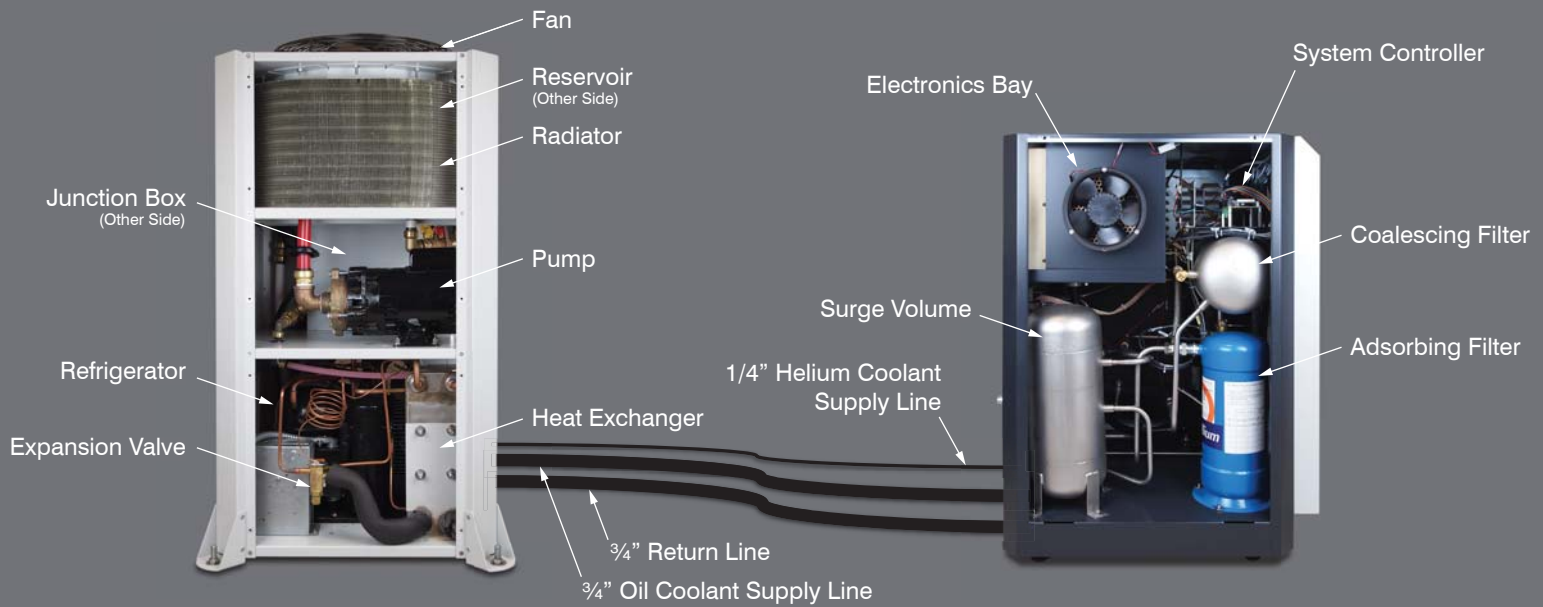
## HLC4500: Power Consumption

- Significant power saving at lower compressor speeds
- Lower speeds reduce wear and extends service life
- Modular design of chiller reduces power consumption and footprint



## HLC4500: Cooling Power

- Dynamic tuning of capsule and head speeds maximizes cooling power when needed
- Lower speeds optimizes energy efficiency when full cooling power is not needed



HLC 4500 Chiller (panel removed)

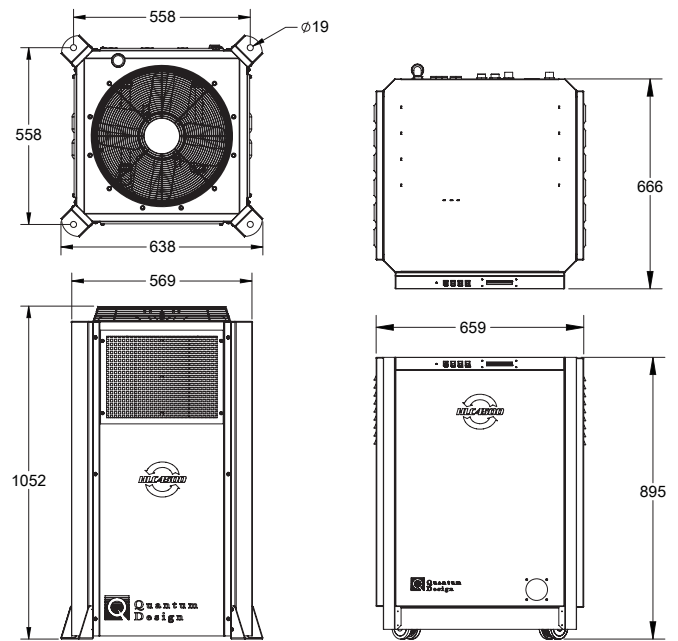
HLC 4500 Compressor (panel removed)

## Specifications

Model	HLC 4500
Static Charge Pressure	1.5 Mpa
Max Supply Pressure	2.5 Mpa
Min Return Pressure	0.10 Mpa
Recommended GM Cold Head Pairing	1.5W @ 4.2K (2nd stage) SHI RDK-415D
Recommended Pulse Tube Pairing	0.9W to 1.0W @ 4.2K (2nd stage) SHI RP-082B2
Power Low Voltage Model	3 Phase 200–240 VAC (50/60Hz)
Power High Voltage Model	3 phase 380–480 VAC (50/60Hz)
Compressor Speed Range	15 to 70 Hz
Head Speed Range	30 to 70 Hz
Power Consumption High Speed (60 Hz)	8.0 KW Max
Power Consumption Normal Speed (40 Hz)	5.5 KW Max
Power Consumption Low Speed (15 Hz)	1.7 kW Max
Water Flow Required	4 to 12 liters/min
Water Temperature	15 to 25 °C
Ambient Operating Temperature	5 to 30 °C
Humidity	0 to 95% non condensing
Installation of Equipment	Indoor Only
Dimensions	659 x 666 x 895 mm
Weight	160 kg
Maintenance Interval	30,000 hours
Standard Flex Line	10, 20, 40 meters

### Chiller Option

Cooling Capacity	3 ton
Discharge Pressure	130 to 210 kPa
Power	1 Phase 200–240 VAC (50/60Hz)
Power Consumption	1.5 KW Max
Ambient Operating Temperature	(-35) to 45 °C
Installation of Equipment	Indoor or Outdoor
Dimensions	569 x 569 x 1052 mm
Weight	135 kg (without water)
Standard Chill Water Line Length	30 meters



HLC 4500 Chiller and HLC 4500 Compressor Dimensions



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Specifications subject to change without notice  
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