

0.25W 4K Cryo-refrigerator (GA)

Performance Characteristics

- Variable speed control
- Energy smart
- Long service life
- Reduced vibration
- Remote control
- Real time diagnostics
- Cooling and warming capability (no heaters)
- "On-demand" cooling power

Application

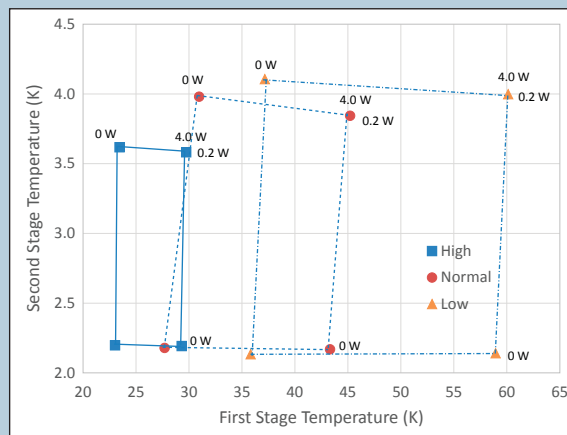
- Superconducting magnet systems
- LTS electronics and SQUIDs
- Optical Cryostats
- LT Microscopes

Accessories

- Input Power Cable – 2.5 meters
- Flexible Gas Lines – 3 meters or 15 meters
- Software Development Kit (SDK)
- Computer Interface via USB



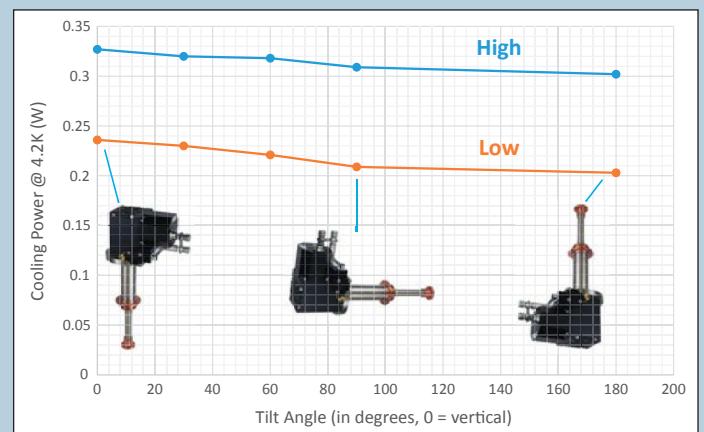
HAC 900S Compressor



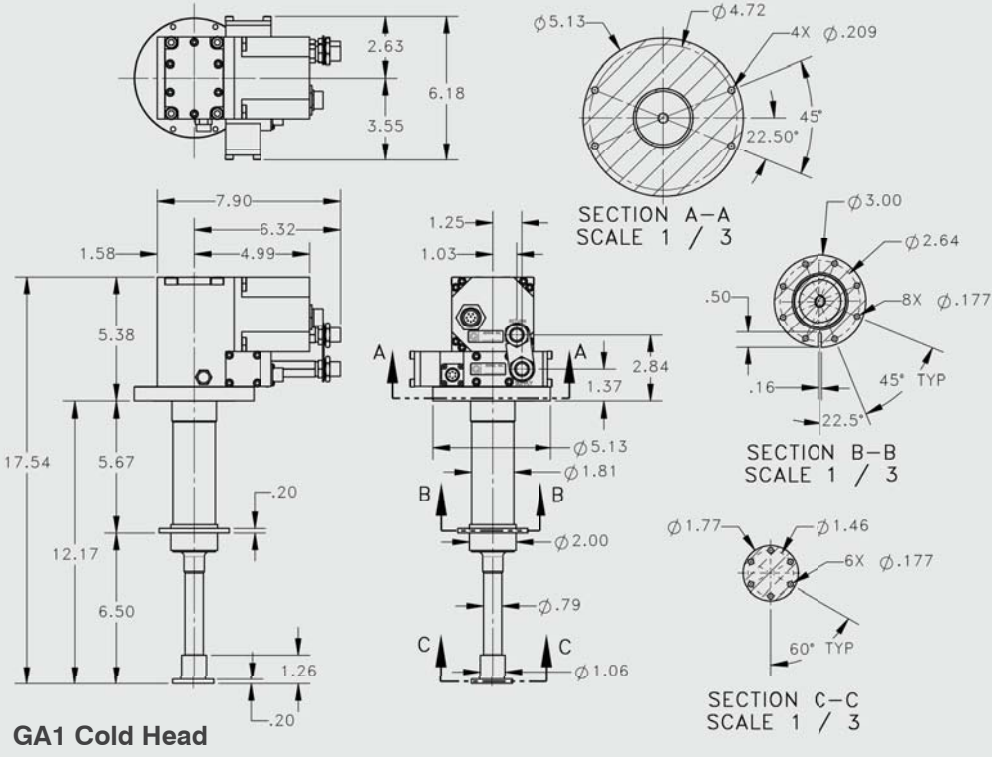
GA: Load Maps

- High speed optimizes first stage cooling power which is important in gas precooling for liquefiers
- Low speed optimizes energy efficiency while preserving second stage cooling power
- Low and Intermediate speeds are particularly important to minimize vibrations

Cooling Power Vs. Tilt Angle with a 4.0 W Load on the 1st Stage



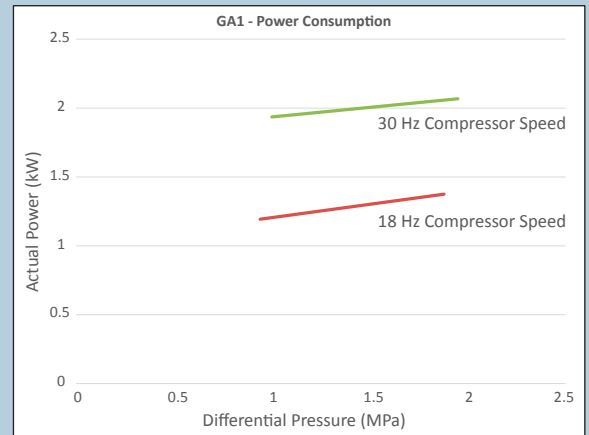
HAC 900S Compressor



Specifications

Cold Head	GA-1
Compressor	HAC900S
Cooling Capacity (1st Stage)	4W @ 40K
Cooling Capacity (2nd Stage)	0.25W @ 4.2K
Lowest Temperature	2.5 K
Cool Down Time	<75 minutes
Power	1 Phase 200-240 VAC (50/60Hz)
Power Consumption High Speed (30 Hz)	2.0 kW Max
Power Consumption Normal Speed (20 Hz)	1.5 kW Max
Power Consumption Low Speed (18 Hz)	1.3 kW Max
Ambient Operating Temperature	5 to 30 °C
Humidity	0 to 95% non condensing
Installation Type	Indoor Only
Dimensions Cold Head	201 x 160 x 446 mm
Dimensions Compressor	366 x 585 x 618 mm
Weight Cold Head	11 kg
Weight Compressor	105 kg
Maintenance Interval	20,000 hours
Standard Flex Line	3 meters or 15 meters

Energy Efficient: Power Study



Power draw from wall measured with Fluke 437 digital meter at 2 capsule speeds and varying head speeds



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Specifications subject to change without notice
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