

RDE-418D4 4K CRYOCOOLER SERIES



The RDE-418D4 is SHI's highest-capacity, two-stage Gifford-McMahon (GM) 4K Cryocooler. It is available as a complete system, along with the F-50 or F-70 indoor, water-cooled helium compressor and all related gas lines and power cables.

Features

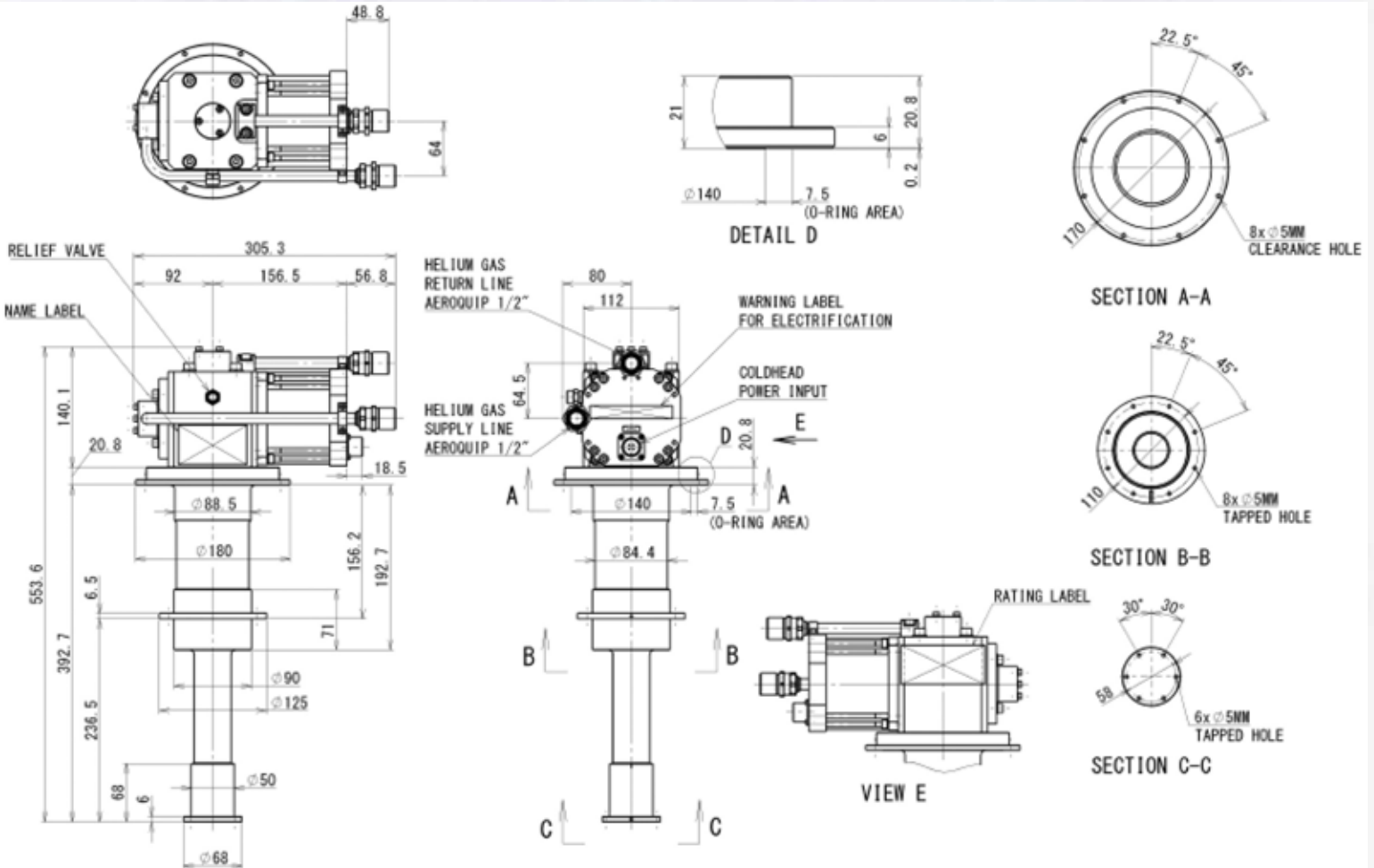
- Optimized design increases cooling performance by 20% over the RDK-415D 1.5 W 4K Cryocooler, without increasing its physical size or the compressor's input power
- Same interface design as the RDK-415D Cryocooler, easing the ability to swap the new cryocooler into existing cryostat designs
- Provides a stable low-temperature solution for a variety of research purposes, including helium liquefaction, superconducting magnets, UHV cryostats and detector cooling.

Cryocooler Specifications

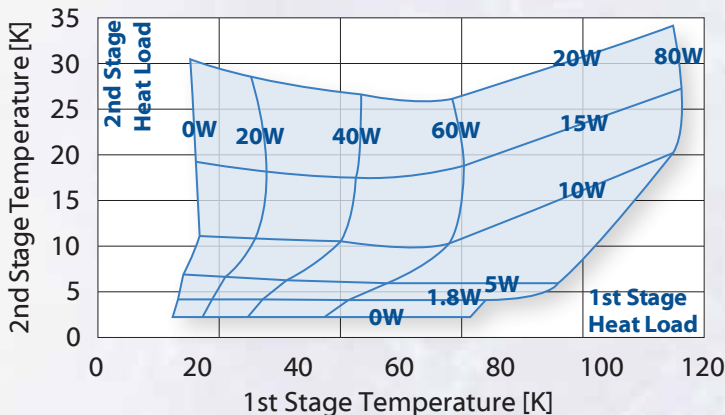
Power Supply	50 Hz	60 Hz
2nd Stage Capacity	1.8 W @ 4.2 K	2.0 W @ 4.2 K
1st Stage Capacity	42 W @ 50 K	50 W @ 50 K
Minimum Temperature	<3.5 K	
Cooldown Time to 30 K	60 Minutes	
Weight	20.0 kg (44.1 lbs.)	
Dimensions (HxWxL)	554 x 180 x 306 mm (21.8 x 7.1 x 12.0 in.)	
Maintenance	10,000 Hours	

Compressor Specifications

	F-50L	F-50H	F-70L	F-70H
Cooling	Water Cooled			
Electrical Supply	3 Phase 200 V, 50/60 Hz	3 Phase 380, 400, 415 V, 50 Hz 460, 480 V, 60 Hz	3 Phase 200 V, 50/60 Hz	3 Phase 380-415 V, 50 Hz 480 V, 60 Hz
Power Consumption	6.5-7.2 kW at 50 Hz 7.5-8.3 kW at 60 Hz		6.6-6.9 kW at 50 Hz 7.5-7.8 kW at 60 Hz	
Ambient Temperature	5-35 °C (41-95 °F)		4-40 °C (39-104 °F)	
Cooling Water (Inlet)	7-10 L/min. (1.8-2.6 gal./min.) 28 °C (82 °F)		6-9 L/min. (1.6-2.4 gal./min.) 5-25 °C (41-77 °F)	
Dimensions (HxWxD)	591 x 450 x 485 mm (23.3 x 17.7 x 19.1 in.)		532 x 443 x 493 mm (20.9 x 17.4 x 19.4 in.)	
Weight	120 kg (264 lbs.)		100 kg (225 lbs.)	
Maintenance	30,000 Hours			



RDE-418D4 Cold Head Capacity Map (50 Hz)
With F-50 Compressor and 20 m (66 ft.) Helium Gas Lines



RDE-418D4 Cold Head Capacity Map (60 Hz)
With F-50 Compressor and 20 m (66 ft.) Helium Gas Lines

