

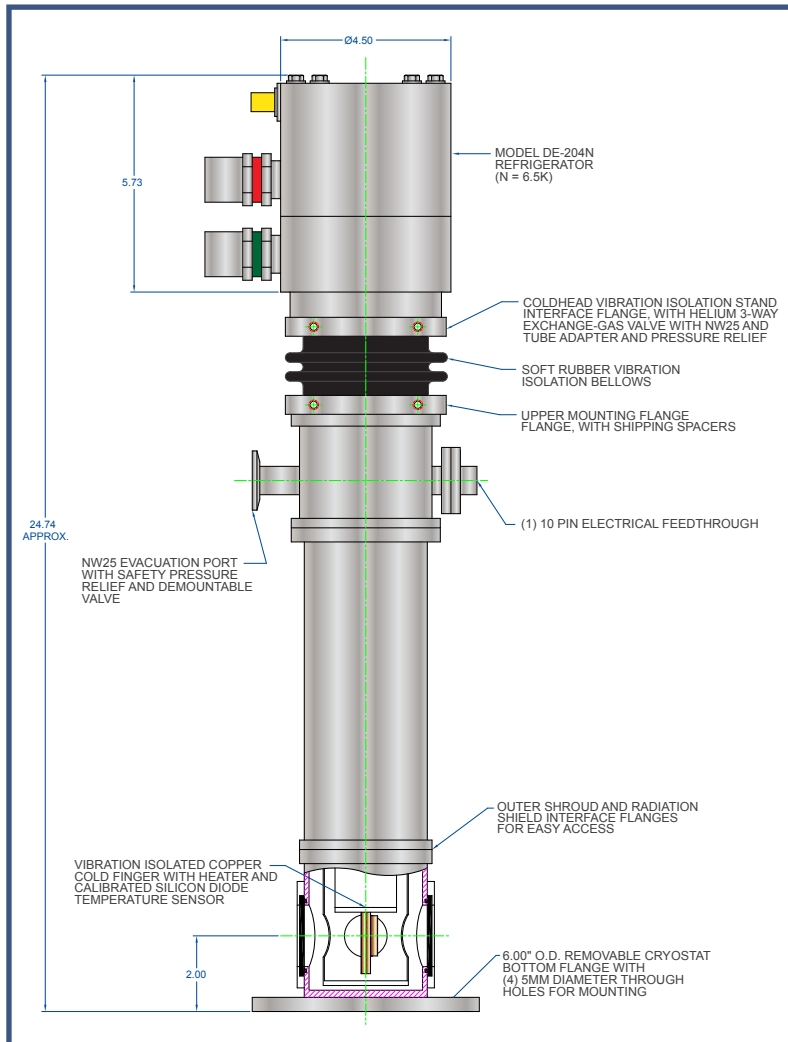
CRYO

Low Vibration Rubber Bellows Closed Cycle Systems



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Low Vibration Rubber Bellows Variable Temperature Closed Cycle Systems



Principle of Operation

This innovative Cryo Industries cryostat places the sample in vacuum, isolated through a low vibration exchange gas design and flexible rubber bellows.

The result is ultra low vibrations at the sample!

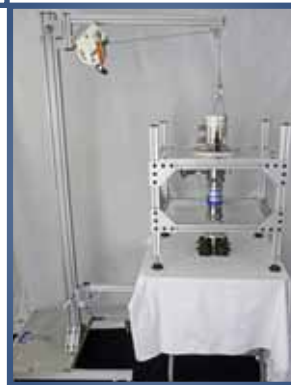
The cooling is provided by a Gifford-McMahn (GM) or pulse tube closed cycle refrigerator for long term cryogenic operation. No liquid cryogenes are needed!

Standard configurations include tubular, optical, Ultra High Vacuum and Narrow Gap cryostats.

Available with operating temperatures down to 3 K.

Systems are available with 10 K, 6.5 K and 4 K cold heads with various cooling powers available.

These ultra low vibration systems are available with a four post stand and/or a mobile stand with adjustable cryostat support and hoist arms. (See photos on right)



10 K System w/4 Post & Mobile Stand



4 K System w/4 Post Stand

Low Vibration Variable Temperature 10 K Optical Closed Cycle Refrigerator System

Applications Include:
Mossbauer Experiments,
Low Vibration Optical Experiments
Quantum Dot- Photoluminescence,
Microspectroscopy, MicroRaman, & more...

System Features Include:

- Low vibration sample in vacuum. Sample is isolated through low vibration exchange-gas design with flexible rubber bellows
- SHI-APD model DE-204N (6.5 K) closed cycle refrigerator coldhead with base temperature <7K and HC-4E-1 water cooled compressor, 1-phase, 220VAC, 50/60Hz
- System operating temperature ~ 8 K - 325 K (low temperature is ~ 2 K higher than refrigerator)
- 3-way exchange gas valve with hose adapter and NW-25 flange
- Outer vacuum shroud with 10-pin electrical feedthrough and evacuation port with NW-25 flange
- Removable bottom mounting flange on outer shroud
- 3.25 inch square window block with (4) 1.63 inch diameter clear view removable O-ring sealed fused quartz windows
- Silicon diode temperature sensor and control heater installed



Low Vibration Variable Temperature 4 K Non-Optical Closed Cycle Refrigerator System



Applications Include:
Mossbauer Experiments,
Low Vibration Optical Experiments
Quantum Dot- Photoluminescence,
Microspectroscopy, MicroRaman, & more...

System Features Include:

Reference Cryo drawing: REF-2554-4KV

- Low vibration sample in vacuum. Sample is isolated through low vibration exchange-gas design with flexible rubber bellows
- ~4.2K to 325K operating temperature range
- Two stage Sumitomo GM coldhead
- Sumitomo Water cooled compressor
- 8.00" Non-Rotatable Conflat interface flange
- Demountable first-stage radiation
- 2.520 inch (64 mm) diameter refrigerator sample mount
- Vibration isolated gold plated OFHC copper sample mount with, provision for temperature sensor and (2) bolt circles for radiation/ black shield mounting and customer sample mounting
- 50 ohm high power heater installed on copper sample mount
- (1) 10-pin UHV electrical feedthrough
- (1) Blank 1.33 conflat port
- Exchange gas region with inlet and outlet valves, control valve and safety pressure relief
- (2) Silicon diode temperature sensors
- Tapped provisions for mounting on Vibration isolation stands
- One year warranty