CRYO

Closed Cycle Pulse Tube Refrigerator Systems

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Closed Cycle Pulse Tube Refrigerator Systems

Closed Cycle Pulse Tube refrigerators represent the latest technology for cooling power. They are an excellent choice for experiments that require low-vibration. The cold head motor and valve unit are separate from the cold finger, resulting in low vibration.

Pulse Tube Refrigerator Systems come in either single or two stage systems.

Cryo's Pulse Tube systems are available with either the sample in vacuum (coldfinger) or the sample in exchange gas (top loading). The cold cycle refrigeration systems are available in numerous configurations, that may include:

- Optical or Non-Optical
- Standard, Compact and Sub-Compact sizes
- High or Low Temperature stage
- Low vibration version for IR arrays or other vibration sensitive experiments

Cryo is able to integrate either a Pulse Tube refrigerator or the Gifford-McMann refrigerator into any Closed Cycle System design. Custom systems are no problem! We can create a system that meets or exceeds your experimental needs.

Cryo Industries pairs innovative design with leading edge technology, by integrating cryocoolers that offer the most reliable and longest track records on the market into the Closed Cycle Refrigerator Systems. Cryo is able to incorporate any of the following Cryocoolers into our designs. You simply select the cooling power you need! Cryo offers cryocoolers from both Sumitomo (SHI) and CryoMech.

Sumitomo (SHI) Pulse Tube Cooling Power Specification Chart

Model	1st Stage @ 50 Hz	2nd Stage @ 50 Hz	1st Stage at 60 Hz	2nd Stage at 60 Hz
SRP-082B	40W @ 45 K	1.0W @ 4.2 k	40W @ 45 K	1.0W @ 4.2 K
SRP-062B	30W @ 65 K	0.5W @ 4.2 K	30W @ 65 K	0.5 W @ 4.2 K

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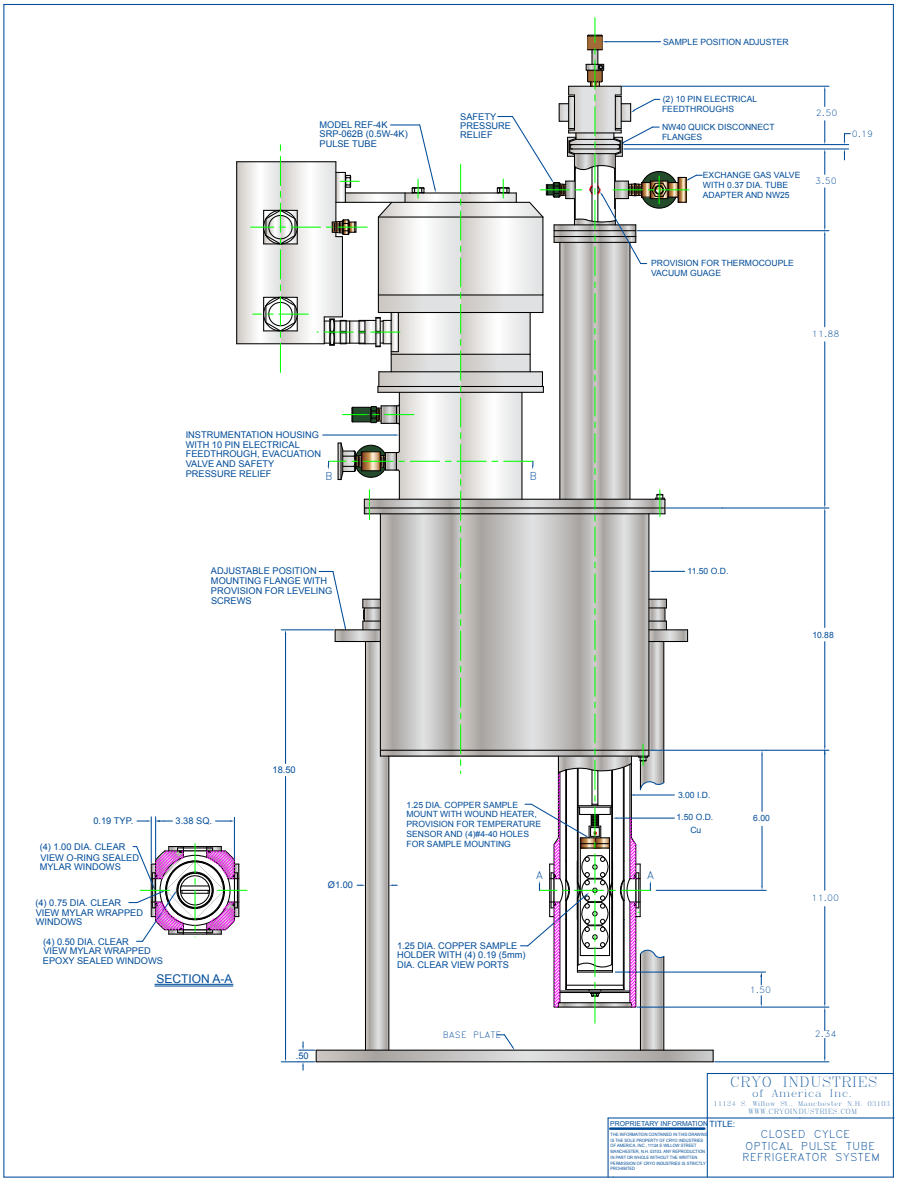
Sample in Exchange Gas Optical 4.2 K Closed Cycle Optical PulseTube Refrigerator System with 'Top Loading Samples'



System Features

- 4.2K to 325K operating temperature range
- Pulse tube refrigerator cooling power
  - -0.5 watts at 4.2K (50/60Hz) second stage
  - -30 watts at 65K (50/60Hz) first stage
- 20 meter long interconnecting hoses and cable
- Top loading sample probe with rotational and linear adjustable positioning of sample
- Copper sample holder T style sample mount
- (4) 1.00 inch diameter clear view o-ring sealed (removable) Mylar windows
- (4) 0.75 inch diameter clear view Mylar wrapped windows on radiation shield
- (4) 0.50 inch diameter clear view Mylar wrapped epoxy sealed windows on sample tube
- Heaters installed on coldhead and sample holder
- (2)Silicon diode temperature sensors installed (Refrigerator 2nd stage & Sample mount)
- (3) 10-Pin hermetic electrical feedthroughs
- Three way Sample exchange gas valve assembly
- Mounting flange - adjustable (up/down & rotation)
- Non magnetic, stainless steel, copper, aluminum, etc…,construction
- One year warranty
- Operational manuals and maintenance tool kit

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