

Liquid Nitrogen Research Dewars

Sample in Flowing Vapor



CRYO Industries of America
www.cryoindustries.com

Sample in Flowing Vapor

Model 5NSVT

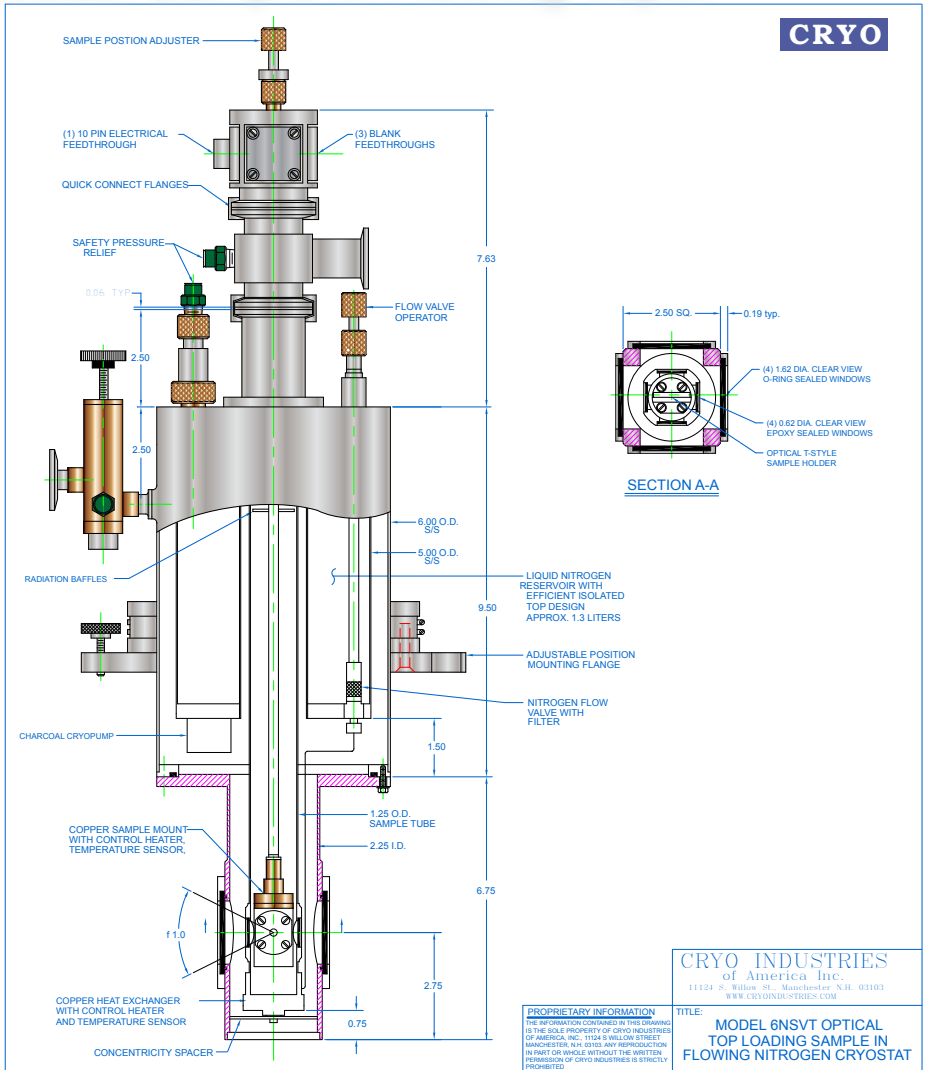
Liquid nitrogen flows from the reservoir through the adjustable flow valve to the vaporizer at the bottom of the sample tube. Applying heat vaporizes the liquid and raises the gas temperature. This gas enters the sample zone to cool the sample to your selected temperature. Load your samples into this flowing nitrogen gas that exits from the vaporizer (also known as the diffuser or heat exchanger). Samples can be quickly changed while operating.

The temperature of the sample can be varied from typically 77 to 325 K by adjusting the electrical current supplied to the heater on heat exchanger. This heater is located inside the sample tube - not in vacuum; this eliminates problems due to the high latent heat of vaporization of liquid nitrogen. Other systems with the heater in vacuum usually fail to vaporize the liquid nitrogen which results in mediocre performance with eventual heater destruction, caused by trying to vaporize the liquid nitrogen that collects (instead of vaporizing).

Cryo Industries has over 25 years experience in designing and manufacturing Liquid Nitrogen Test Dewars. Innovative design has led to the development of an industry unmatched thermal link design for sample in vacuum LN2 dewars.

Cryo is able to custom design a system that will meet all of your experimental needs. You supply us with your experimental specifications and we provide you with a system that is guaranteed to meet those needs!

Variable Temperature Optical Top-Loading Nitrogen Cryostat: Sample in Flowing Vapor



System Features:

- <65 K to 325 K operating temperature range (<50K in N₂ ice)
- Quick Refill with included 0.38 dia. fill funnel assembly
- Sample in flowing nitrogen vapor
- 1.3 liters nominal liquid nitrogen reservoir capacity
- Four way f = 1.0 optical access
- (4) 1.62 inch diameter clear view suprasil quartz outer window ports (O-ring sealed & removable)
- (4) 0.62 inch diameter epoxy sealed suprasil window ports
- 1.25 inch O.D. (1.21 inch/30.73mm I.D.) sample tube
- Top loading sample probe with rotational and linear adjustments for rapid sample changes
- Silicon diodes installed on sample mount and vaporizer
- 50 ohm high temp heater installed on sample mount and vaporizer
- (1) 10-pin electrical feedthrough and (3) blank feedthrough ports for sample region
- Nitrogen fill and vent ports with removable pressure relief and 3/8 inch wilson seal fill adapter
- NW25 Vapor pumpin port on sample region
- Evacuation valve with vacuum safety pressure relief, 10 pin electrical feedthrough and provision for T/C gauge
- Internal charcoal cryopump for vacuum maintenance
- Adjustable mounting flange with leveling knobs
- Gold plated T-style demountable optical sample holder