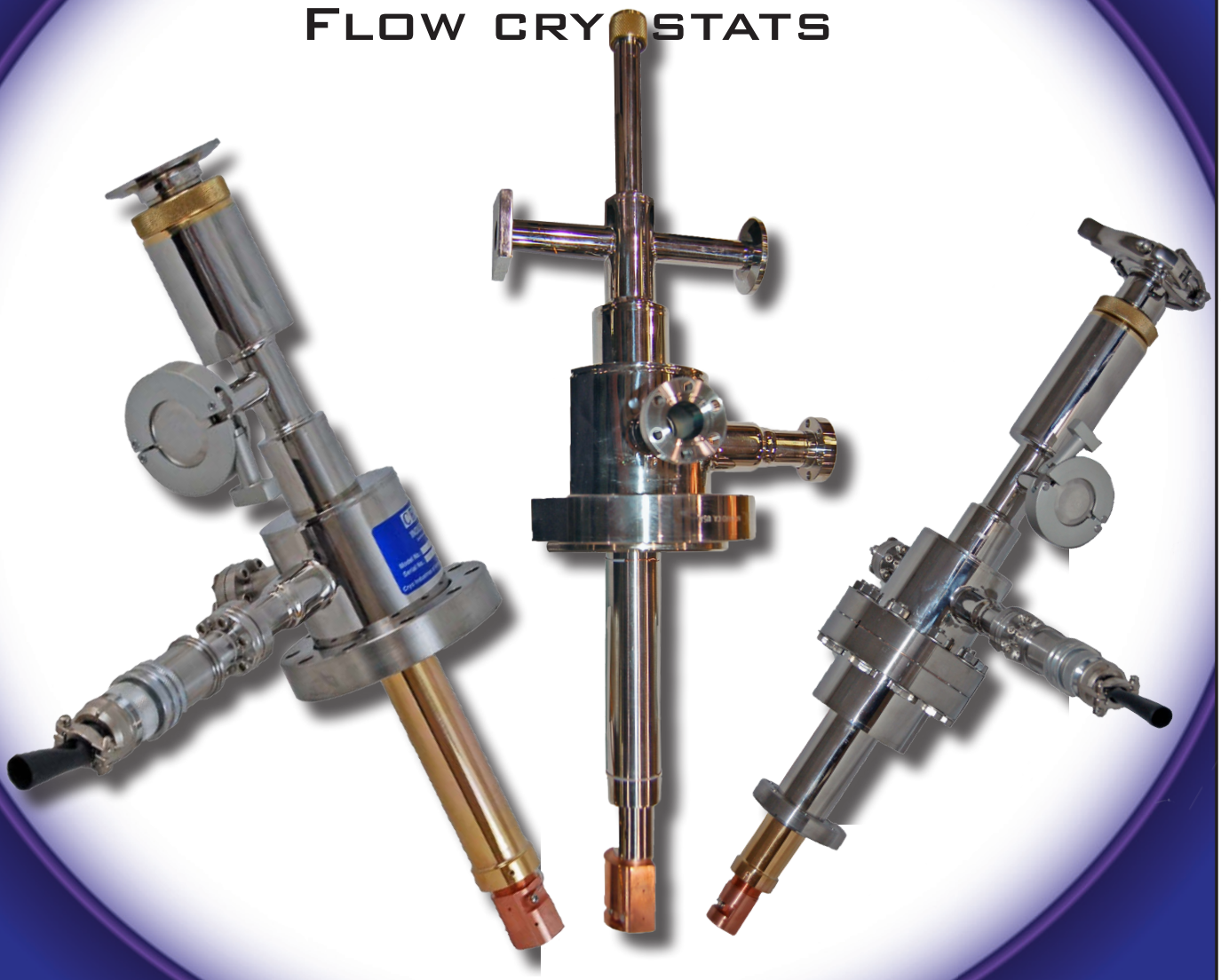
UHV Flow Cryostats

Ultra High Vacuum
Flow cryostats



CRYO
INDUSTRIES

Ultra High Vacuum Flow Cryostats: Models RC-102 and RC-110

Cryo offers Models RC-102 and RC-110 Ultra High Vacuum continous flow cryostats, which feature rotatable 'Conflat' interface flanges, your choice of 2.75, 4.50 or 4.62 etc.. Distance from chamber interface to cold finger can be selected to fit exactly your chamber. Constructions is all welded stainless steel with low vapor pressure silver brazed copper joints.

The Model RC-110 offers the most advanced technology , resulting in better temperature stability. This is achieved with the addition of an internal metallized phase seperator which eliminates all temperature fluctuations.

The Model RC-110-UHV has a heater assembly built on the end of the transfer line. This heater is not exposed to vacuum and is instantly accessible. (Note: The phase seperator is not installed in this model). An optional heater that mounts directly to the inside of the sample mount is available for the model RC102; this heater is accessible through a mini 'Conflat' flange.

The standard variable temperature continuous flow ultra high vacuum cryostat Models RC-102 and RC-110 feature the following:

- Operates with either Cryogen-10K Cryogenic Generator or Liquid Helium dewar
- Sample in ultra high vacuum (UHV)
- 4.5 inch rotateable conflat flange
- 1.00 inchy diameter copper sample mount with (6) #4-40 tapped holes on 0.75 diameter BC Vapor cooled radiation shield
- Hi Power (50 Ohm) heater installed on sample mount
- 0.62 inch O.D. helium vent/return port
- (2-4) 1.33 inch mini conflat feedthrough ports (depending on style)
- Evacuation valve with NW25 interface flange
- Safety pressure relief on vacuum space
- Flexible stainless steel transfer line with flow control valve for operation with LHe dewar
- Silicon Diode Temperature Sesnor- bolt on style installed on sample mount

Specifications

Temperature Range:	<1.8 - 300 K (600 K optional)
Cooldown Time:	10 minutes typical from 300 to 4.2 K (helium) 8 minutes typical from 300 to 77 K (nitrogen)
Cooldown Consumption:	0.20 liters liquid helium from 300 to 4.2 K
Cryogen Consumption:	0.55 liters/hour (helium) at 4.2 K for RC-102 0.75 liters/hour (helium) at 4.2 K for RC-110 Lower at higher temperatures 0.075 liters/hour (nitrogen) at 77 K
Refrigeration Capacity:	Over 2 watts at 4.2 K
Temperature Stability:	0.05 K for RC-102 0.005 K for RC-110
Orientation:	Any Position

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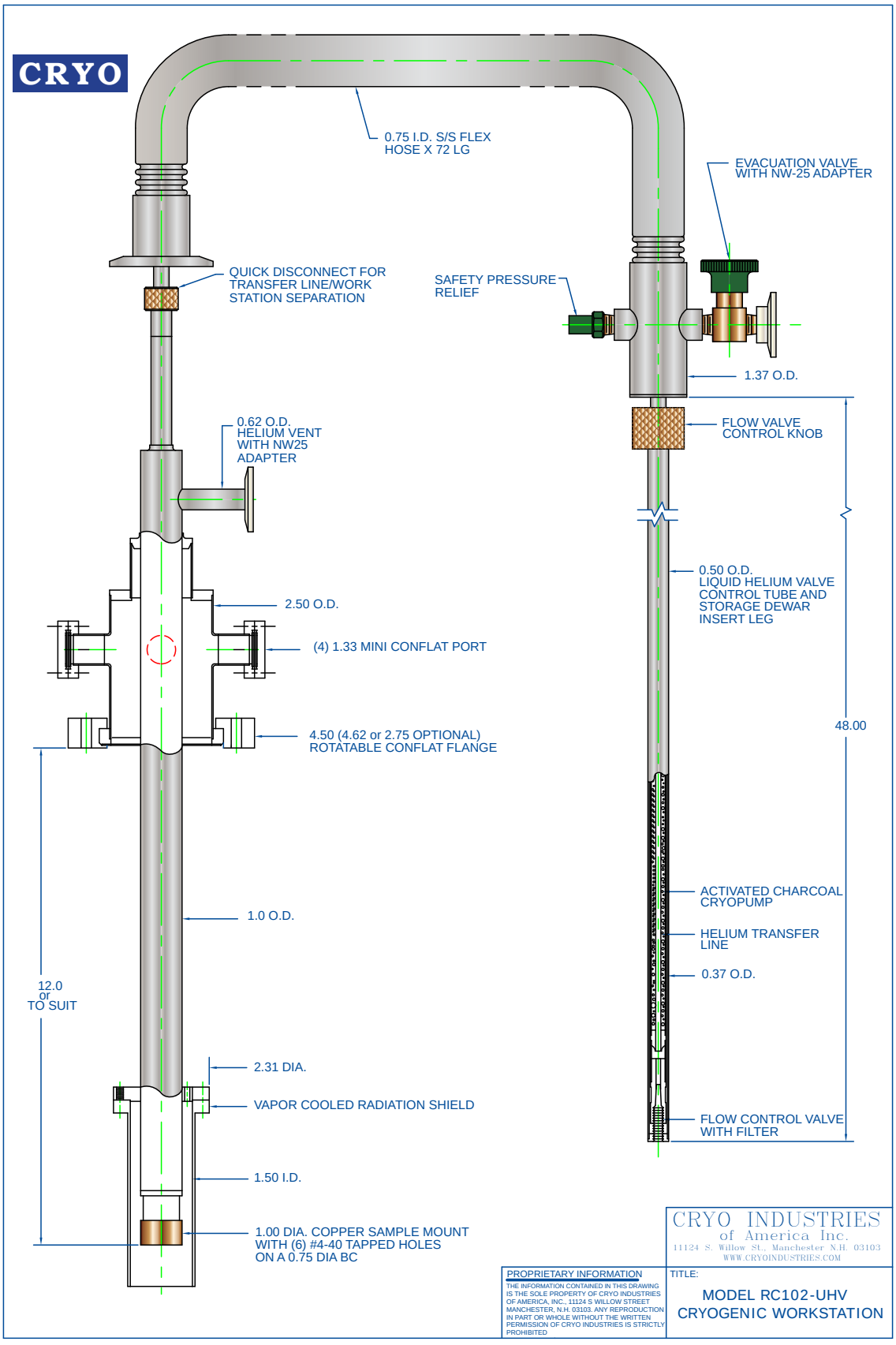
Standard Model RC-102 UHV



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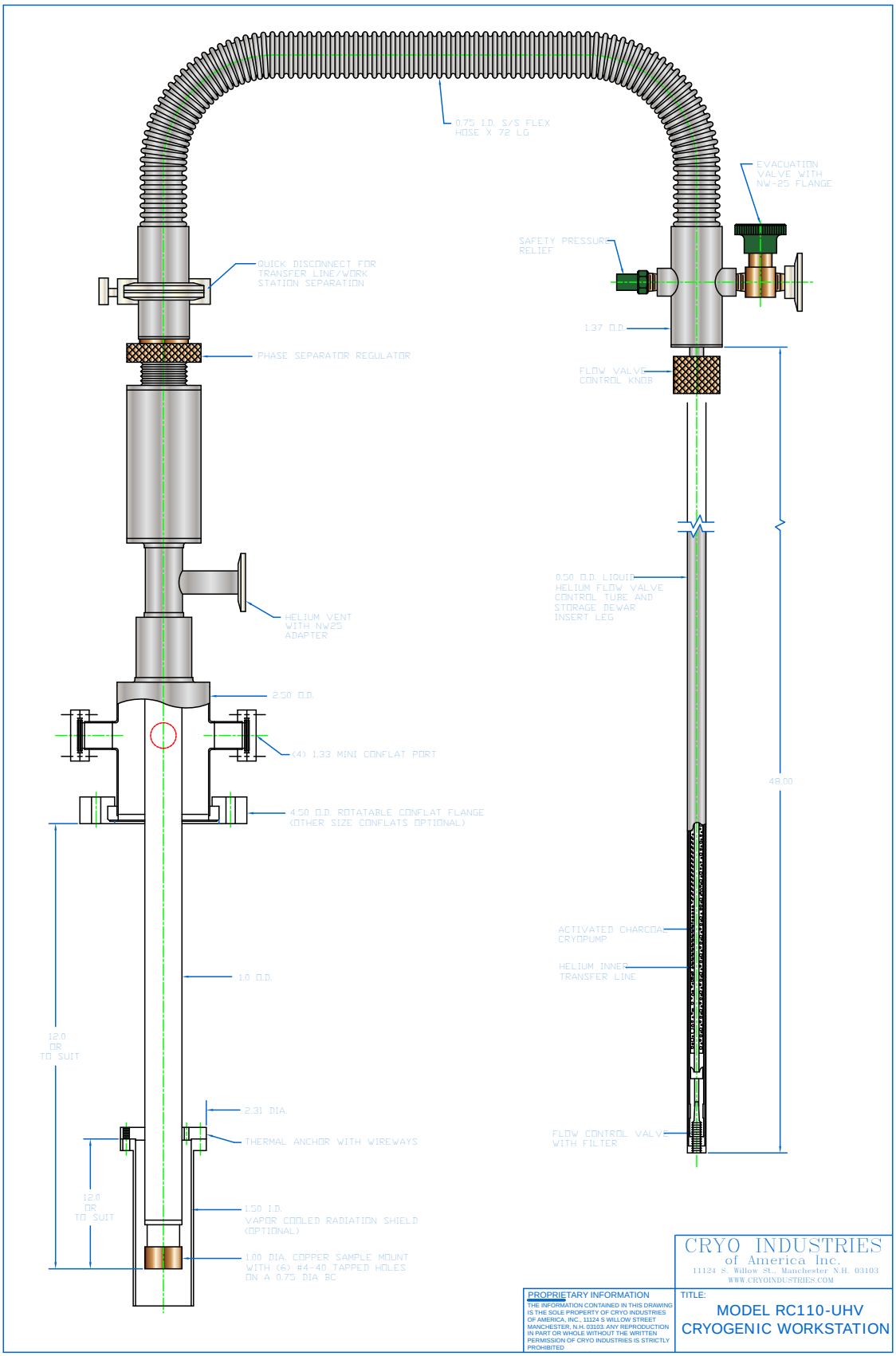
Standard Model RC-110 UHV



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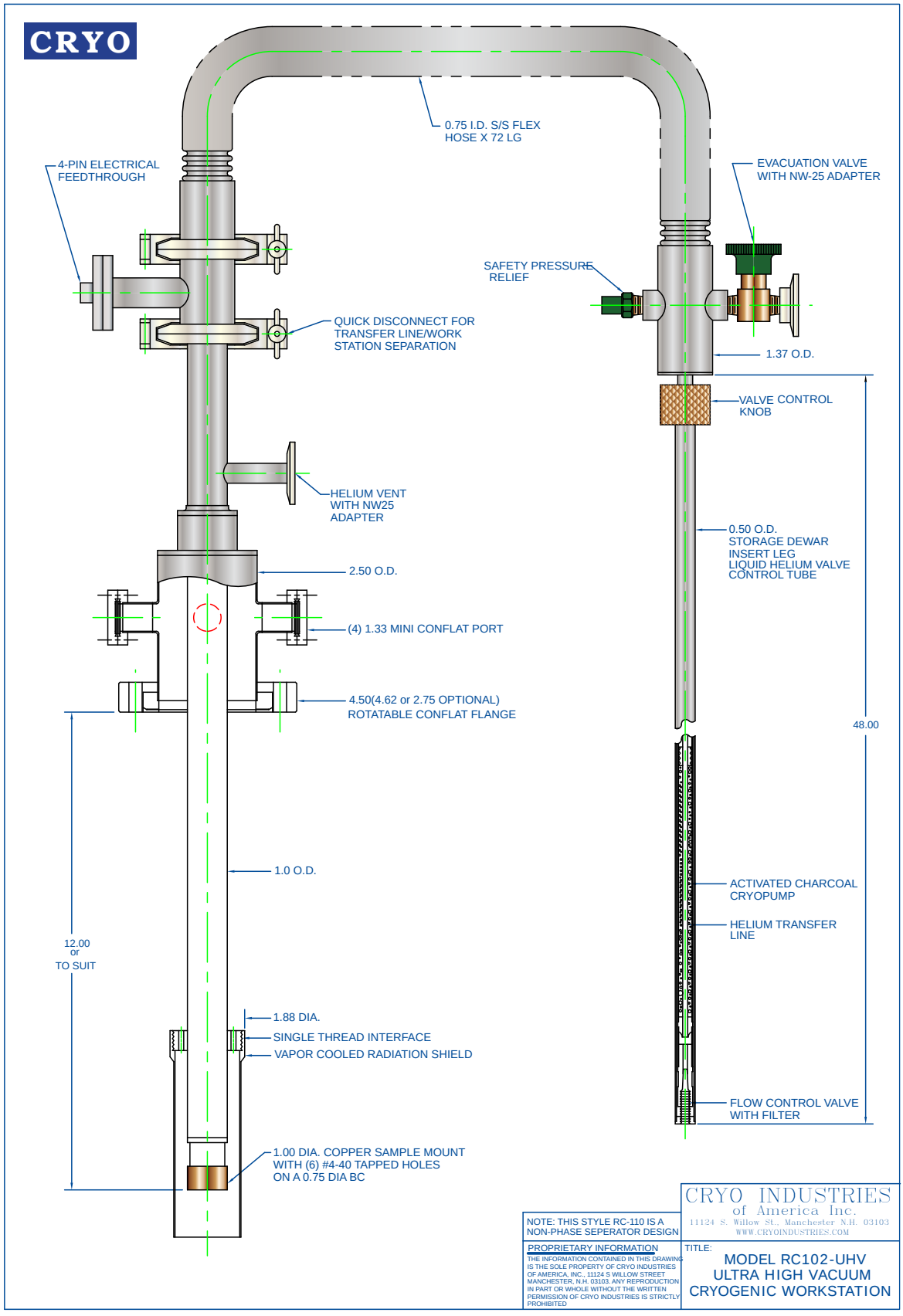
Model RC-102 UHV



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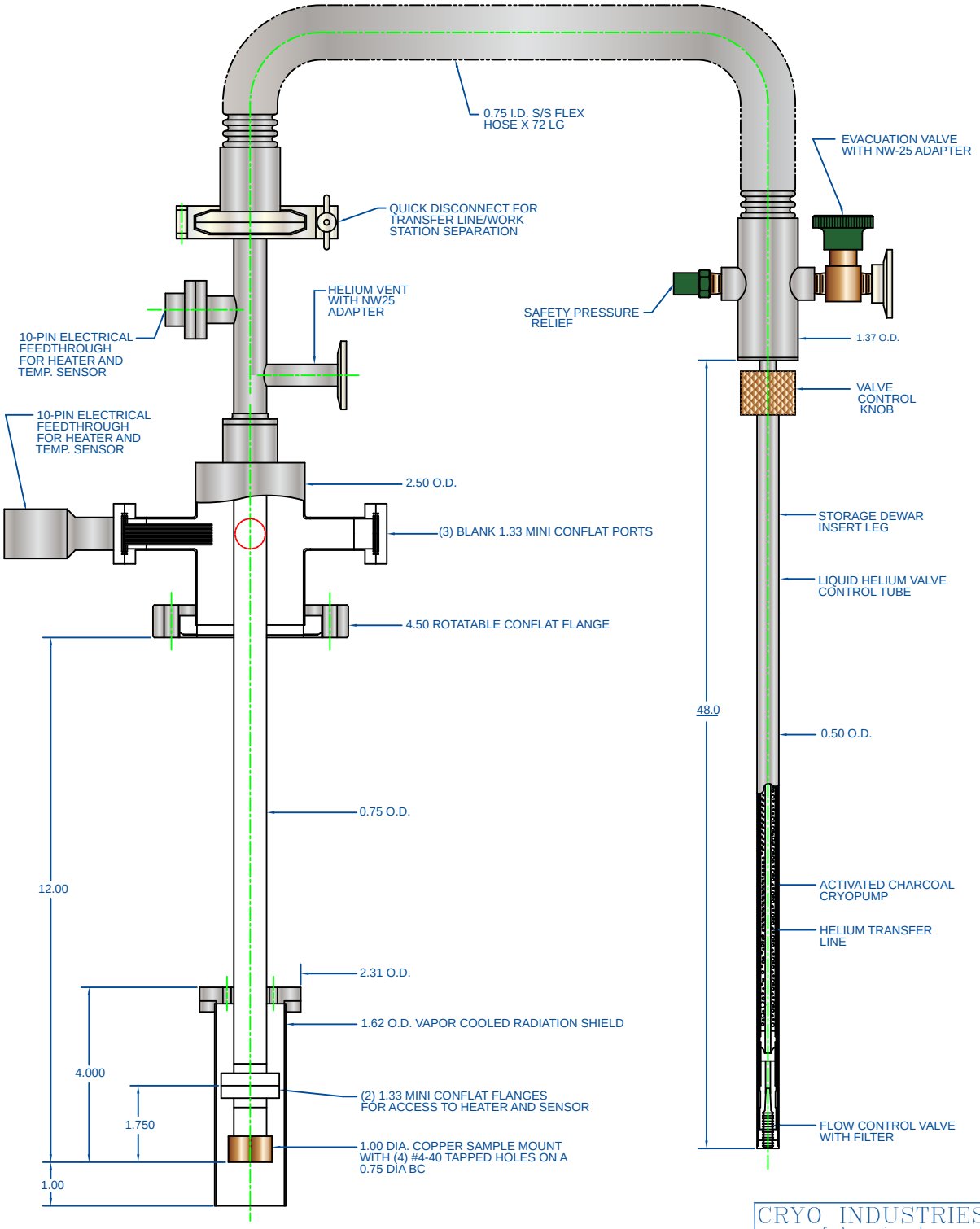
Model RC-102 UHV



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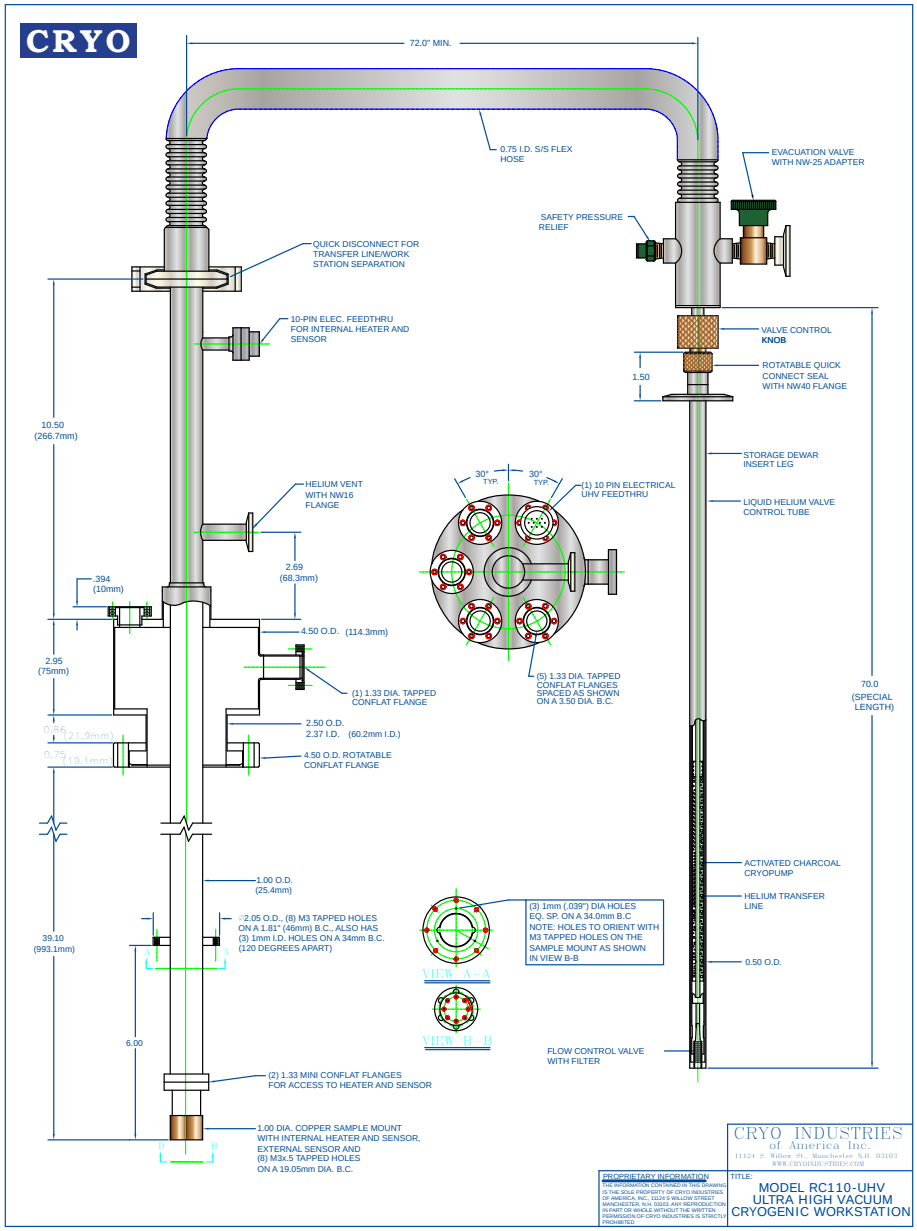
Example of Custom RC-110 UHV with 72 inch Leg



System Features Include:

- <2 K to 325 K operating temperature range
- Operates with liquid helium or liquid nitrogen
- Operates in Push or Pull modes
- Heater installed inside sample mount (Not in UHV)
- Total of (6) UHV (16 CF) tapped conflat ports
- Customized number of UHV feedthrough ports with mate
- Customized addition of gas inlet port
- Copper radiation shield interface flange
- Bakeable to 200 C
- Vacuum insulated LHe transfer line with activated charcoal cryopump, ice filter and flow control valve
- Size of rotatable conflat interface flange is customized
- Distance from conflat flange to sample mounting surface is customized
- Constructed of non-magnetic stainless steel
- SD Silicon Diode temperature sensor installed on sample mount (on UHV side)
- Fully integrated and liquid helium tested

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