UHV Flow Cryostats

Ultra High Vacuum
Flow cryostats
Cryo offers Models RC-102 and RC-110 Ultra High Vacuum continuous 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 separator 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 separator 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 inch 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 Sensor- bolt on style installed on sample mount

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NOTE: Specifications presume vertical orientation
Title: Standard Model RC-102 UHV

CRYO INDUSTRIES of America Inc.
11124 S Willow St. • Manchester, NH 03103

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1.0 O.D.
2.31 DIA.
VAPOR COOLED RADIATION SHIELD

0.50 O.D.
LIQUID HELIUM VALVE CONTROL TUBE AND STORAGE DEWAR INSERT LEG

4.50 (4.62 or 2.75 OPTIONAL) ROTATABLE CONFLAT FLANGE

0.37 O.D.
HELIUM TRANSFER LINE

1.50 I.D.

48.00
FLOW CONTROL VALVE WITH FILTER

0.75 I.D. S/S FLEX HOSE X 72 LG

1.0 O.D.
12.0 TO SUIT
0.62 O.D. HELIUM VENT WITH NW25 ADAPTER

FLOW VALVE CONTROL KNOB

0.50 O.D.
ACTIVATED CHARCOAL CRYOPUMP

(4) 1.33 MINI CONFLAT PORT

1.37 O.D.
EVACUATION VALVE WITH NW25 ADAPTER

4.00

VAPOR COOLED RADIATION SHIELD

1.00 DIA. COPPER SAMPLE MOUNT WITH (6) #4-40 TAPPED HOLES ON A 0.75 DIA BC

2.50 O.D.

1.50 I.D.

CRYOGENIC WORKSTATION

FLOW CONTROL VALVE WITH FILTER

0.75 I.D. S/S FLEX HOSE X 72 LG

SAFETY PRESSURE RELIEF

QUICK DISCONNECT FOR TRANSFER LINE/WORKSTATION SEPARATION

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Model RC-102 UHV

CRYO Industries of America Inc.
11124 S. Willow St., Manchester, NH 03103

**Title:** MODEL RC102-UHV
**Model:** ULTRA HIGH VACUUM CRYOGENIC WORKSTATION

- 4-PIN ELECTRICAL FEEDTHROUGH
- QUICK DISCONNECT FOR TRANSFER LINE/WORK STATION SEPARATION
- SAFETY PRESSURE RELIEF
- VALVE CONTROL KNOB
- ACTIVATED CHARCOAL CRYOPUMP
- HELOM TRANSFER LINE
- LIQUID HELIUM VALVE CONTROL TUBE
- STORAGE DEWAR INSERT LEG
- 0.75 I.D. S/S FLEX HOSE X 72 LG
- 1.00 O.D. COPPER SAMPLE MOUNT WITH (6) #4-40 TAPPED HOLES ON A 0.75 DIA BC
- 1.00 DIA. COPPER SAMPLE MOUNT WITH (6) #4-40 TAPPED HOLES ON A 0.75 DIA BC
- 1.37 O.D.
- 0.50 O.D.
- 1.37 O.D.
- 0.75 I.D. S/S FLEX HOSE X 72 LG
- 0.90 O.D.
- 0.90 O.D.
- 48.00
- 2.50 O.D.
- 4.50(4.62 or 2.75 OPTIONAL) ROTATABLE CONFLAT FLANGE

**NOTE:** THIS STYLE RC-110 IS A NON-PHASE SEPARATOR DESIGN

CRYO Industries of America, Inc. • 11124 S. Willow St. • Manchester, NH 03103
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Model RC-102 UHV

CRYO Industries of America, Inc. • 11124 S. Willow St. • Manchester, NH 03103
Tel: (603) 621-9957 • Fax: (603) 621-9960 • E-mail: cryo@cryoindustries.com
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