

## C2000 Cryogenic Valve Series

### 1. Cryogenic Valve Model C2041-M21

.5" Vacuum Jacketed Globe Valve, Manual Operation

- 1/2" IPS Pipe Size Cryogenic Valve
- Manual Operation
- Vacuum Jacketed
- Globe Style Body

低温阀门 C2041-M21

0.5 英寸真空夹套截止阀，手动

#### Features

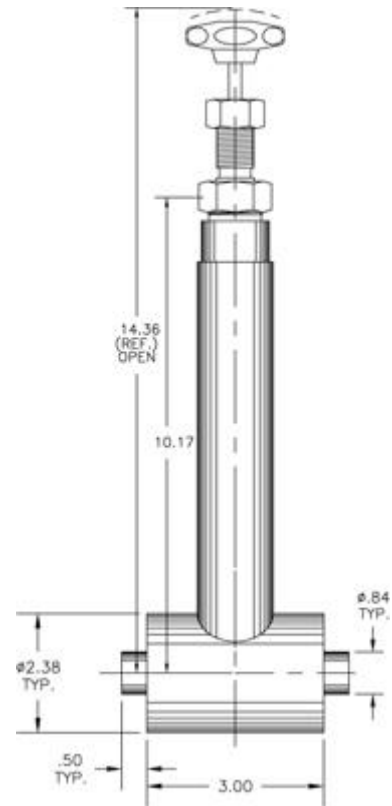
- Low Handle Torque For Bubble Tight Shut-off
- Stainless Steel Body, Stem and Threads
- Redundant Stem Seal
- Cryogenic Stem Packing
- Brass Bonnet
- Redundant Cryogenic Bonnet Seal
- Bonnet Purge Port (Thermal Relief Location)
- Tight Fit Stem
- MLI on Jacketed Valves
- Brass Plug
- Plug To Stem Stabilizer
- KEL-F Seat Seal w/ Locked Thread Insert

#### Technical Data

- 300 PSI MAWP (Maximum Operating Pressure)
- Seat Seal Bubble Tight @ 150 PSIG
- Packing Mass Spec Tested @  $1 \times 10^{-5}$  TORR
- Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC
- Heat Leak: 4.5 BTU/HR To 20° K
- Cooldown Mass: 0.50 Pounds
- Options
  - Cold Box Jacket
  - Pneumatic Actuators
  - Purge Port

#### Applications

- Vacuum Jacketed Piping
- Cold Boxes
- Manifold and Tank Systems
- Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 2.Cryogenic Valve Model C2041-A21

.5" Vacuum Jacketed Globe Valve, Pneumatic Actuated Operation

1/2" IPS Pipe Size Cryogenic Valve

Actuated

Vacuum Jacketed

Globe Style Body

Features

Pneumatic Actuator Air To Open

Stainless Steel Body, Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread Insert

Contoured Flow Plugs Available

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  TORR

Vacuum Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 4.5 BTU/HR To 20° K

Cooldown Mass: 0.50 Pounds

Options:

Cold Box Jacket

Purge Port

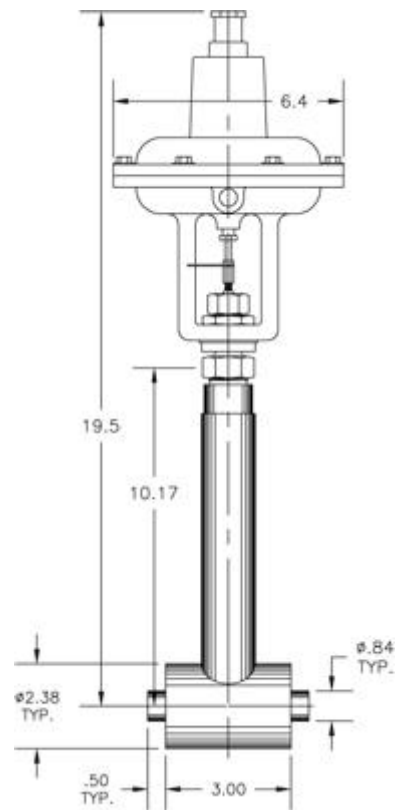
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 3.Cryogenic Valve Model C2042-M21

.5" Vacuum Jacketed Right Angle Valve, Manual Operation

1/2" IPS Pipe Size Cryogenic Valve

Manual Operation

Vacuum Jacketed

Right Angle Style Body

Features

Low Handle Torque For Bubble Tight Shut-off

Stainless Steel Body, Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread Insert

Contoured Flow Plugs Available

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 4.5 BTU/HR To 20° K

Cooldown Mass: 0.65 Pounds

Options:

Cold Box Jacket

Pneumatic Actuators

Purge Port

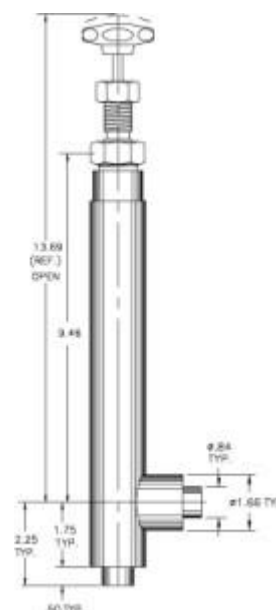
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 4.Cryogenic Valve Model C2042-A21

.5" Vacuum Jacketed Right Angle Valve, Pneumatic Actuated Operation

1/2" IPS Pipe Size Cryogenic Valve

Actuated

Vacuum Jacketed

Right Angle Style Body

Features

Pneumatic Actuator Air To Open

Stainless Steel Body, Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread Insert

Contoured Flow Plugs Available

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Vacuum Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 4.5 BTU/HR To 20° K

Cooldown Mass: 0.65 Pounds

Options:

Cold Box Jacket

Purge Port

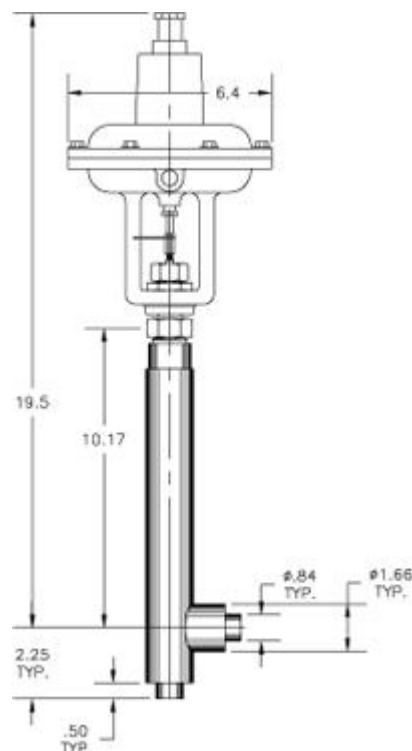
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)





## Cryocomp Cryogenic Valve

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### 5.Cryogenic Valve Model C2043-M21

.5" Vacuum Jacketed Y-Pattern Valve, Manual Operation

1/2" IPS Pipe Size Cryogenic Valve

Manual Operation

Vacuum Jacketed

Y-Pattern Style Body

Features

Low Handle Torque For Bubble Tight Shut-off

Stainless Steel Body, Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread Insert

Contoured Flow Plugs Available

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 4.5 BTU/HR To 20° K

Cooldown Mass: 0.65 Pounds

Options:

Cold Box Jacket

Pneumatic Actuators

Purge Port

Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)

### 6.Cryogenic Valve Model C2043-A21

.5" Vacuum Jacketed Y-Pattern Valve, Pneumatic Actuated Operation

1/2" IPS Pipe Size Cryogenic Valve

Actuated

Vacuum Jacketed

Y-Pattern Style Body

Features

Pneumatic Actuator Air To Open

Stainless Steel Body, Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread Insert

Contoured Flow Plugs Available

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Vacuum Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 4.5 BTU/HR To 20° K

Cooldown Mass: 0.65 Pounds

Options:

Cold Box Jacket

Purge Port

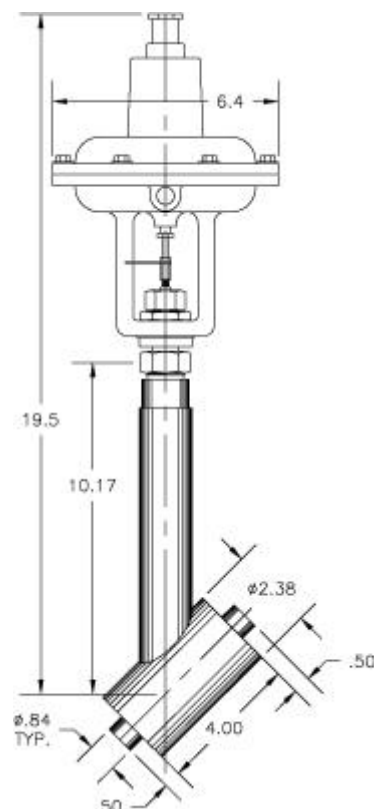
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon, and Oxygen Service (with Proper Cleaning)



### 7. Cryogenic Valve Model C2041-A23

.5" Cold Box Cuff Globe Valve, Pneumatic Actuated Operation

1/2" IPS Pipe Size Cryogenic Valve

Actuated

Cold box Cuff

Globe Style Body

Features

Pneumatic Actuator Air To Open

Stainless Steel Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread Insert

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Vacuum Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 4.5 BTU/HR To 20° K

Cooldown Mass: 0.85 Pounds

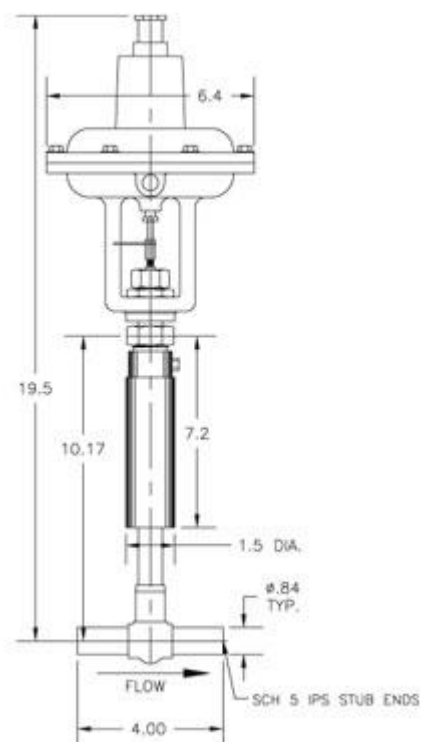
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 8. Cryogenic Valve Model C2042-A23

.5" Cold Box Cuff Right Angle Valve, Pneumatic Actuated Operation

1/2" IPS Pipe Size Cryogenic Valve

Actuated Operation

Cold Box Cuff

Right Angle Style Body

Features

Pneumatic Actuator

Stainless Steel Stem & Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

All Stainless Steel Body & Stem

Tight Fit Stem

MLI On Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal W/ Locked Thread Insert

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 4.5 BTU/HR to 20° K

Cooldown Mass: 0.85 Pounds

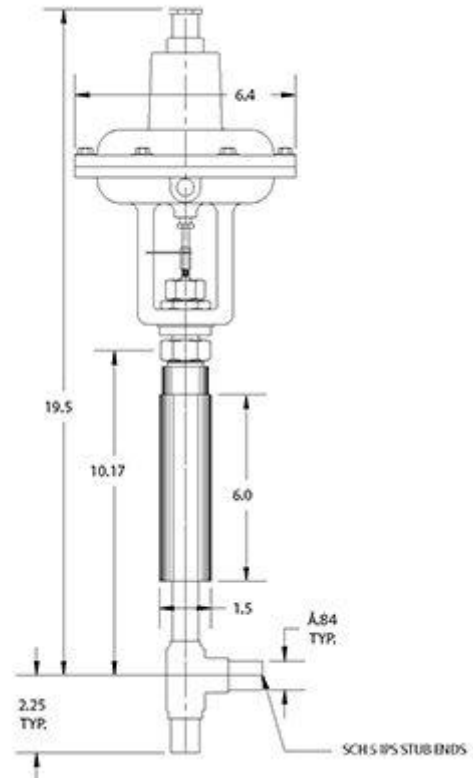
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)





### 9. Cryogenic Valve Model C2041-M-TW

.5" Replacement Internal Valve Assembly, Manual

#### Features

Handwheel

Hex Nut

Lockwasher

Packing Follower

Packing Nut

Cryogenic Stem Packing

Bonnet Nut

Redundant Bonnet Seal

Cryogenic Bonnet Seal

Valve Bonnet

Tight Fit Stem Assembly

Plug to Stem Stabilizer

Brass Plug

Locked Thread

KEL-F Seat Seal

Seal Retainer

Seal Retaining Screw

#### Technical Data

See C2041 Manual Valve Model Product Sheet for Technical Data

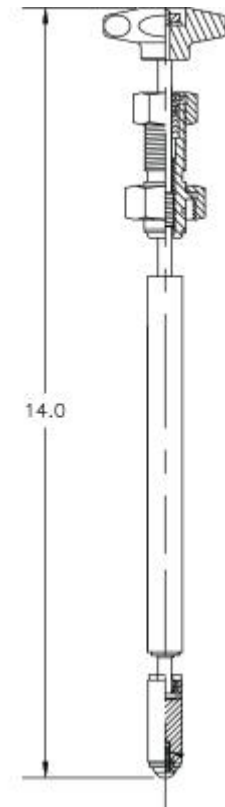
#### Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 10. Cryogenic Valve Model C2041-A-TW

.5" Replacement Internal Valve Assembly, Actuated

Actuator Included With This Assembly

Features

Stem Seals (Nitrile O-Rings with Parker Lube)

Packing Follower

Packing Nut

Lock Nut

Cryogenic Stem Packing (Modified 1 Less Chevron)

Actuator Adapter

Set Screw (2)

Bonnet Nut

Redundant Bonnet Seal

Cryogenic Bonnet Seal

Valve Bonnet

Tight Fit Stem Assembly

Plug to Stem Stabilizer

Brass Plug

Locked Thread

KEL-F Seat Seal

Seal Retainer

Seal Retaining Screw

Technical Data

See C2041 Actuated Valve Model Product Sheet for Technical Data

Applications

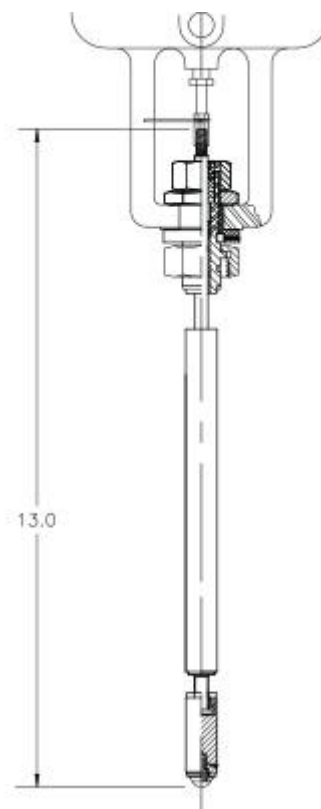
Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and

Oxygen Service (with Proper Cleaning)



### 11. Cryogenic Valve Model C2081-M21

1.0" Vacuum Jacketed Globe Valve, Manual Operation

1" IPS Pipe Size Cryogenic Valve

Manual Operation

Vacuum Jacketed

Globe Style Body

Features

Low Handle Torque For Bubble Tight Shut-off

Stainless Steel Body, Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread Insert

Contoured Flow Plugs Available

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Vacuum Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 10.4 BTU/HR To 20° K

Cooldown Mass: 3.25 Pounds

Options:

Cold Box Jacket

Pneumatic Actuators

Purge Port

Applications

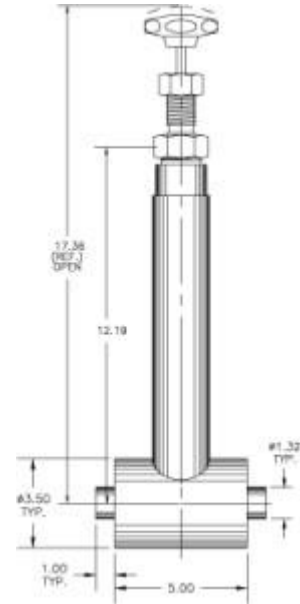
Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen

Service (with Proper Cleaning)



### 12.Cryogenic Valve Model C2081-A21

1.0" Vacuum Jacketed Globe Valve, Pneumatic Actuated Operation

1" IPS Pipe Size Cryogenic Valve

Actuated

Vacuum Jacketed

Globe Style Body

Features

Pneumatic Actuator Air to Open

Stainless Steel Body, Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @1x10<sup>-5</sup> Torr

Leak Rate Below 1x10<sup>-9</sup> CC GHe/SEC.

Heat Leak: 10.4 BTU/HR To 20° K

Cooldown Mass: 3.25 Pounds

Options:

Cold Box Jacket

Manual Operation

Relief Valve

Flow Plugs

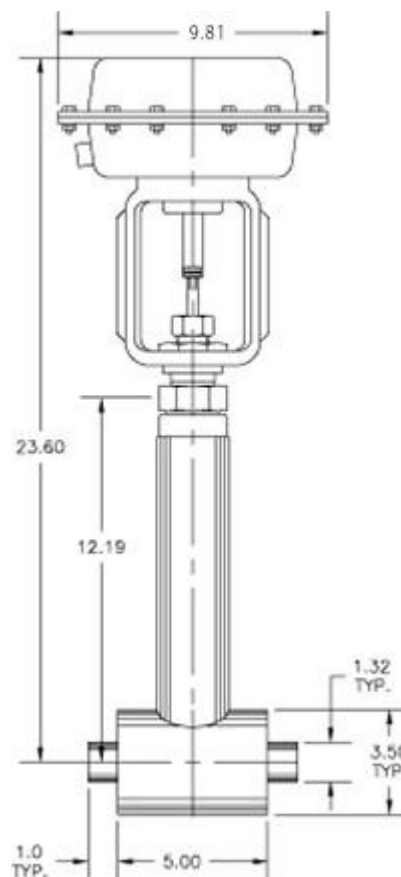
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 13. Cryogenic Valve Model C2081-A23

1.0" Cold Box Cuff Globe Valve, Pneumatic Actuated Operation

1" IPS Pipe Size Cryogenic Valve

Actuated

Cold Box Cuff

Globe Style Body

Features

Pneumatic Actuator Fail Closed

Stainless Steel Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  TorrR

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 10.4 BTU/HR To 20° K

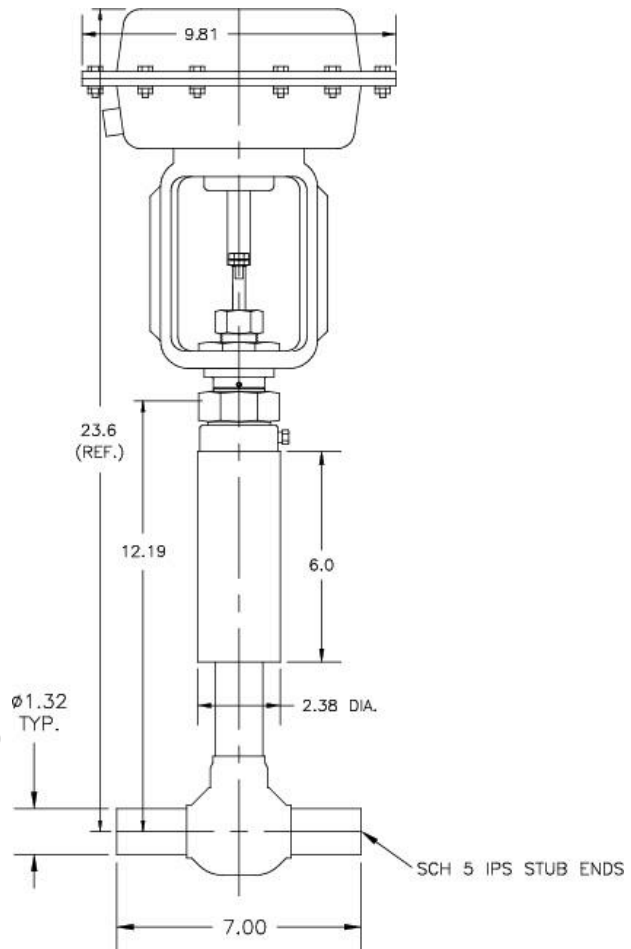
Cooldown Mass: 3.80 Pounds

Applications

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 14. Cryogenic Valve Model C2082-M21

1.0" Vacuum Jacketed Right Angle Valve, Manual Operation

1" IPS Pipe Size Cryogenic Valve

Manual Operation

Vacuum Jacketed

Right Angle Style Body

Features

Low Handle Torque For Bubble Tight Shut-off

Stainless Steel Body, Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread Insert

Contoured Flow Plugs Available

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 10.4 BTU/HR To 20° K

Cooldown Mass: 1.75 Pounds

Options:

Cold Box Jacket

Pneumatic Actuators

Purge Port

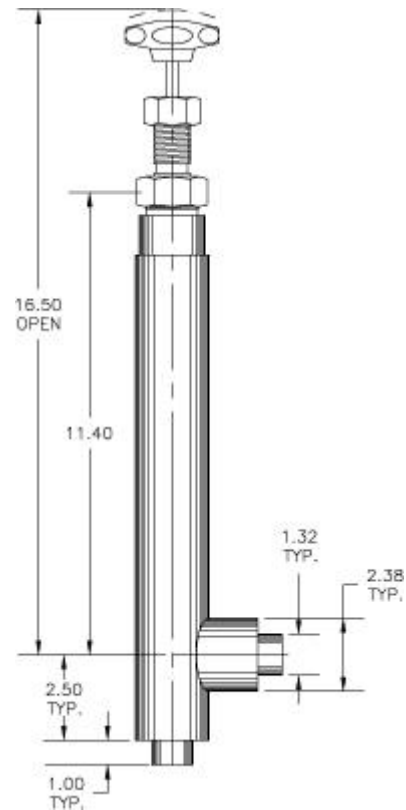
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 15.Cryogenic Valve Model C2082-A21

1.0" Vacuum Jacketed Right Angle Valve, Pneumatic Actuated Operation

1" IPS Pipe Size Cryogenic Valve

Actuated

Vacuum Jacketed

Right Angle Style Body

Features

Pneumatic Actuator Air To Open

Stainless Steel Body, Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @1x10<sup>-5</sup> Torr

Leak Rate Below 1x10<sup>-9</sup> CC GHe/SEC

Heat Leak: 10.4 BTU/HR To 20° K

Cooldown Mass: 1.75 Pounds

Options:

Cold Box Jacket

Manual Operation

Relief Valve

Flow Plugs

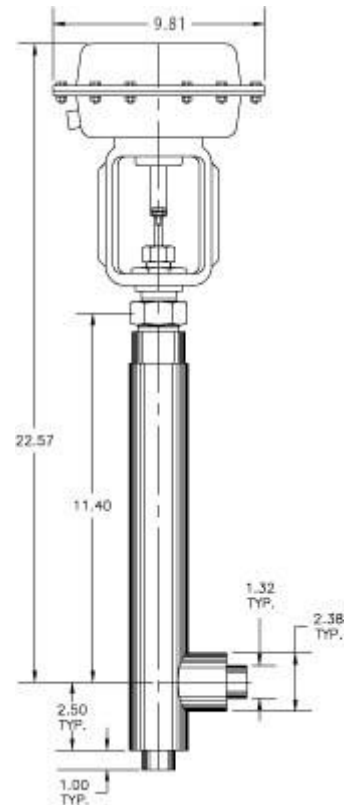
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 16.Cryogenic Valve Model C2082-A23

1" Cold Box Cuff Right Angle Valve, Pneumatic Actuated Operation

1" IPS Pipe Size Cryogenic Valve

Actuated Operation

Cold Box Cuff

Right Angle Style Body

Features

Stainless Steel Stem & Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

All Stainless Steel Body & Stem

Tight Fit Stem

Horizontal Operation OK

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/Locked Thread

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 10.4 BTU/HR TO 20° K

Cooldown Mass: 3.80 Pounds

Options:

Full Vacuum Jacket

Manual Operation

Relief Valve

Contoured Flow Plug

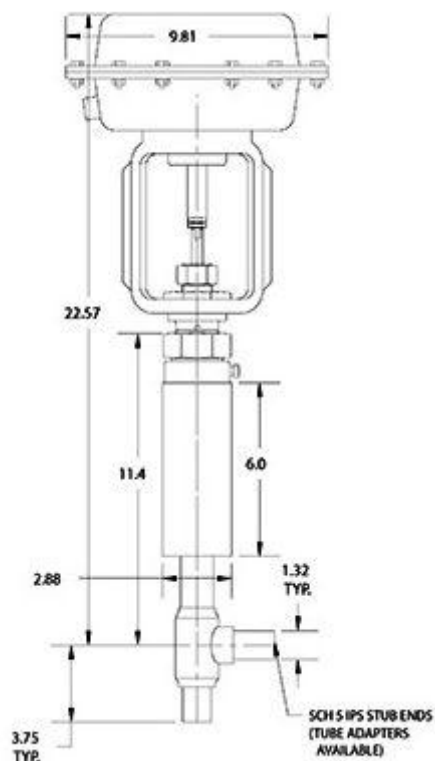
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)





### 17. Cryogenic Valve Model C2083-M21

1.0" Vacuum Jacketed Y-Pattern Valve, Manual Operation

1" IPS Pipe Size Cryogenic Valve

Manual Operation

Vacuum Jacketed

Y-Pattern Style Body

Features

Low Handle Torque For Bubble Tight Shut-off

Stainless Steel Body, Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread Insert

Contoured Flow Plugs Available

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 10.4 BTU/HR To 20° K

Cooldown Mass: 1.75 Pounds

Options:

Cold Box Jacket

Pneumatic Actuators

Purge Ports

Applications

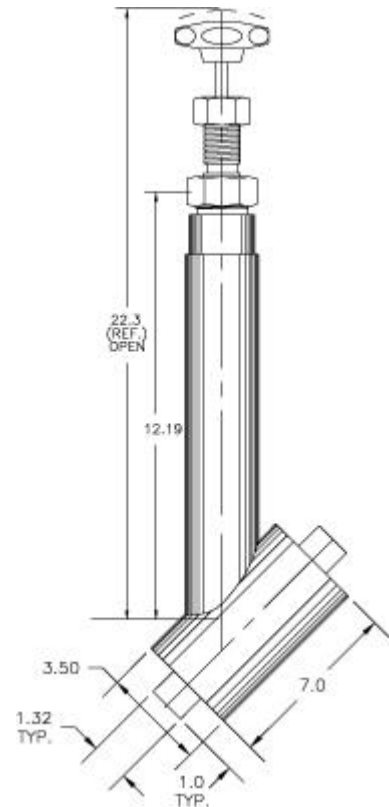
Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen

Service (with Proper Cleaning)



### 18.Cryogenic Valve Model C2083-A21

1.0" Vacuum Jacketed Y-Pattern Valve, Pneumatic Actuated Operation

1" IPS Pipe Size Cryogenic Valve

Actuated

Vacuum Jacketed

Y-Pattern Style Body

Features

Pneumatic Actuator Air to Open

Stainless Steel Body, Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread Insert

Contoured Flow Plugs Available

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Vacuum Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 10.4 BTU/HR To 20° K

Cooldown Mass: 1.75 Pounds

Options:

Cold Box Jacket

Purge Port

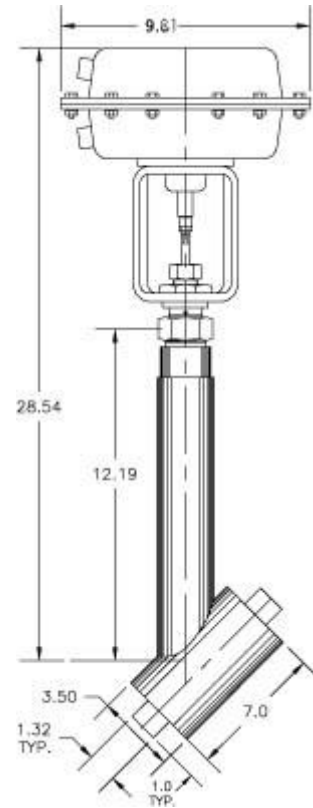
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 19. Cryogenic Valve Model C2081-M-TW

1.0" Replacement Internal Valve Assembly, Manual Operation

#### Features

Low Handle Torque For Bubble Tight Shutoff

Stainless Steel Stem & Threads

Stem Seal (Nitrile O-Ring With Parker Lube)

Cryogenic Stem Packing

Brass Bonnet

Cryogenic Bonnet Seal

All Stainless Steel Body & Stem

Plug To Stem Stabilizer

Brass Plug

Kel-F Seat Seal W/ Locked Thread

#### Technical Data

See C2081 Manual Valve Product Sheet for Technical Data

#### Applications

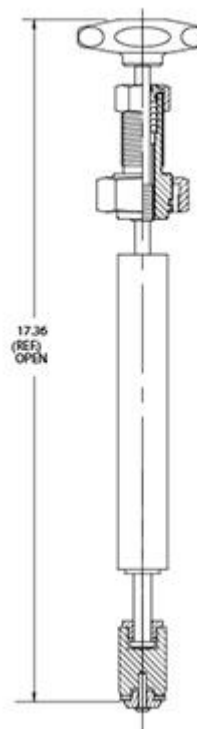
Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and

Oxygen Service (with Proper Cleaning)



### 20.Cryogenic Valve Model C2081-A-TW

1.0" Replacement Internal Valve Assembly, Pneumatic Actuated Operation

#### Features

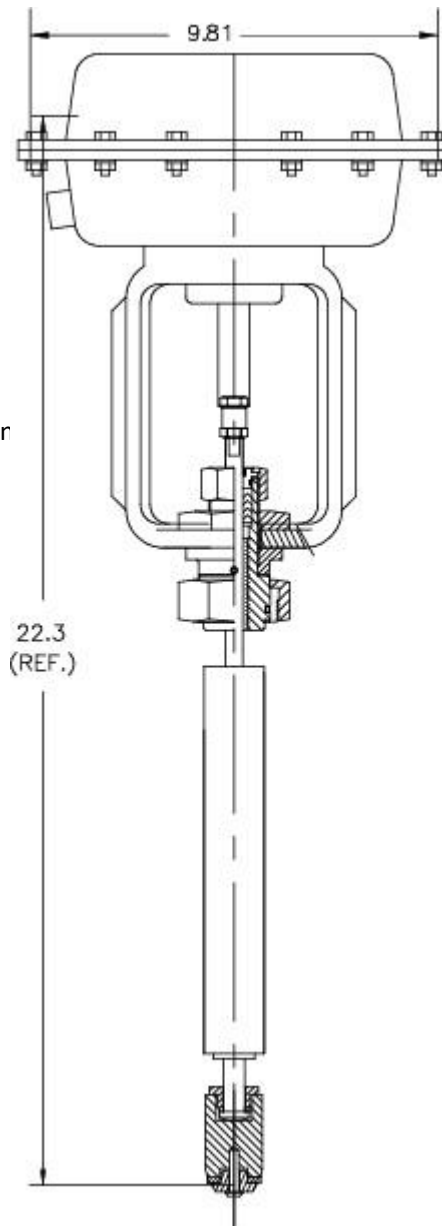
Pneumatic Actuator Air to Open  
Stem Seal (Nitrile O-Ring with Parker Lube)  
Cryogenic Stem Packing  
Brass Bonnet  
Cryogenic Bonnet Seal  
Plug to Stem Stabilizer  
Brass Plug  
KEL-F Seat Seal w/ Locked Thread

#### Technical Data

See C2081 Actuated Valve Model Product Sheet for Techr

#### Applications

Vacuum Jacketed Piping  
Cold Boxes  
Manifold and Tank Systems  
Liquid Nitrogen, Argon and  
Oxygen Service (with Proper Cleaning)



### 21. Cryogenic Valve Model C2121-M21

1.5" Vacuum Jacketed Globe Valve, Manual Operation

1-1/2" IPS Pipe Size Cryogenic Valve

Manual Operation

Vacuum Jacketed

Globe Style Body

Features

Pneumatic Actuator Air To Open

Stainless Steel Body, Stem and Jacket

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread Insert

Contoured Flow Plugs Available

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Vacuum Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 27.1 BTU/HR To 20° K

Cooldown Mass: 13.5 Pounds

Options:

Cold Box Jacket

Pneumatic Actuators

Purge Ports

Flow Plugs

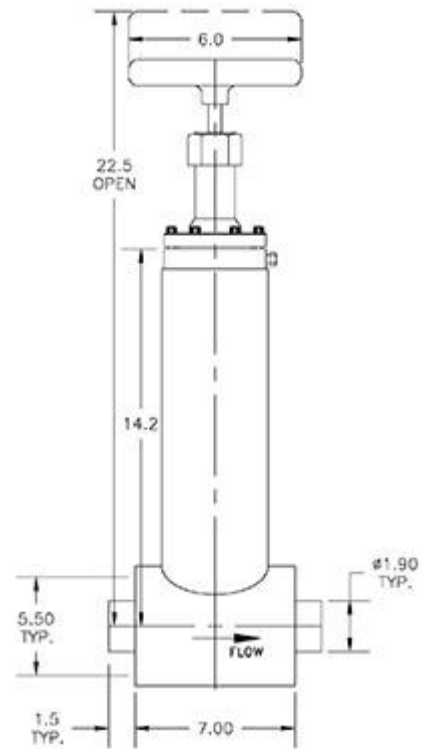
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 22.Cryogenic Valve Model C2121-A21

1.5" Vacuum Jacketed Globe Valve, Pneumatic Actuated Operation

1 1/2" IPS Pipe Size Cryogenic Valve

Actuated

Vacuum Jacketed

Globe Style Body

Features

Pneumatic Actuator Air To Open

Stainless Steel Body, Stem and Jacket

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @1x10<sup>-5</sup> TORR

Leak Rate Below 1x10<sup>-9</sup> CC GHe/SEC

Heat Leak: 27.1 BTU/HR To 20° K

Cooldown Mass: 13.5 Pounds

Options:

Cold Box Jacket

Manual Operation

Relief Valve

Flow Plugs

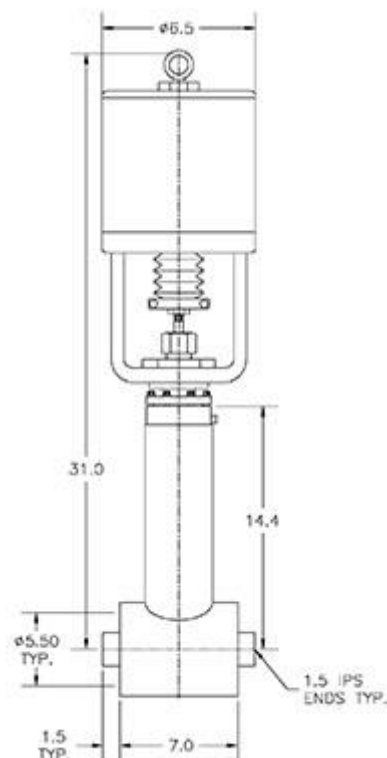
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 23. Cryogenic Valve Model C2122-M21

1.5" Vacuum Jacketed Right Angle Valve, Manual Operation

#### Features

Low Handle Torque for Bubble Tight Shutoff

Stainless Steel Stem & Threads

Redundant Stem Seals

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seals

Bonnet Purge Port (Thermal Relief Location)

All Stainless Steel Body

Close Tolerance Horizontal Operation OK

MLI on Jacketed Valves

Brass Plug

Plug to Stem Stabilizer

KEL-F Seat Seal

Contoured Flow Plugs Available

#### Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 27.3 BTU/HR to 20° K

Cooldown Mass: 10.2 Pounds

#### Options

Cold Box Jacket

Pneumatic Actuators

Purge Port

#### APPLICATIONS

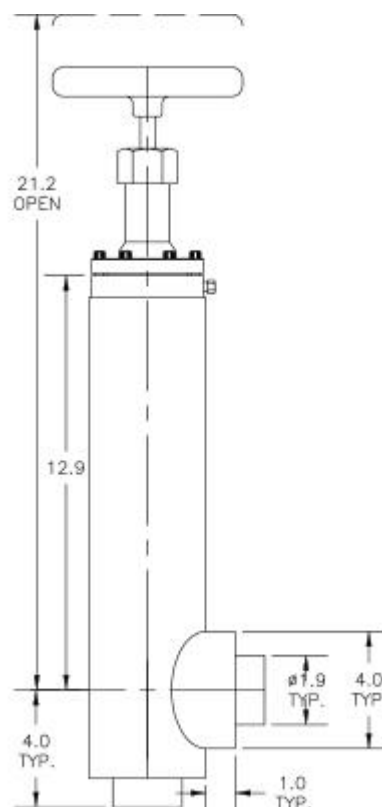
Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and

Oxygen Service (with Proper Cleaning)



### 24.Cryogenic Valve Model C2123-M21

1.5" Vacuum Jacketed Y-Pattern Valve, Manual Operation

#### Features

Low Handle Torque for Bubble Tight Shutoff

Stainless Steel Stem & Threads

Redundant Stem Seals

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seals

Bonnet Purge Port (Thermal Relief Location)

All Stainless Steel Body

Close Tolerance Stem

MLI on Jacketed Valves

Brass Plug

Plug to Stem Stabilizer

KEL-F Seat Seal

Contoured Flow Plugs Available

#### Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 21.8 BTU/HR to 20° K

Cooldown Mass 10.5 Pounds

#### Applications

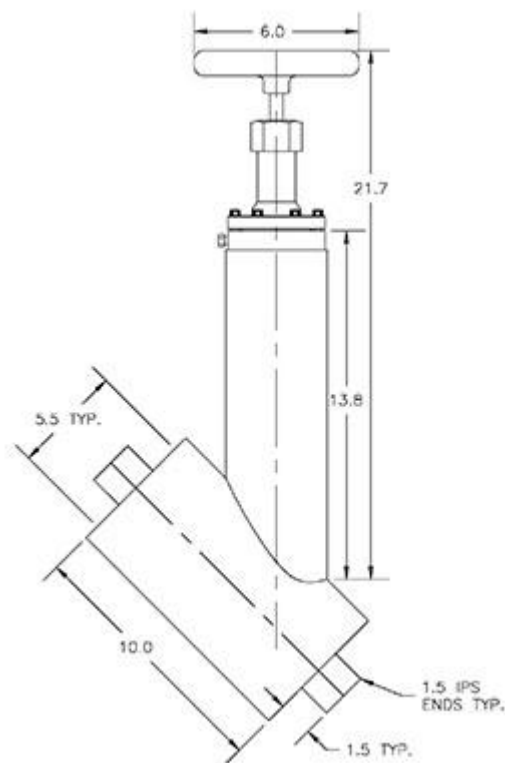
Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and

Oxygen Service (with Proper Cleaning)





### 25.Cryogenic Valve Model C2123-A21

1.5" Vacuum Jacketed Y-Pattern Valve, Pneumatic Actuated Operation

#### Features

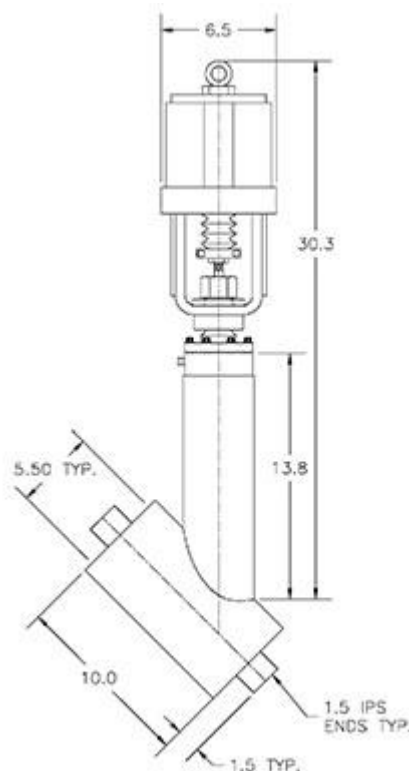
- Pneumatic Actuator Air to Open
- Stainless Steel Stem & Threads
- Redundant Stem Seal
- Cryogenic Stem Packing
- Brass Bonnet
- Redundant Cryogenic Bonnet Seal
- Bonnet Purge Port (Thermal Relief Location)
- All Stainless Steel Body & Stem
- Tight Fit Stem
- MLI on Jacketed Valves
- Brass Plug
- Plug to Stem Stabilizer
- KEL-F Seat Seal w/ Locked Thread

#### Technical Data

- 300 PSI MAWP (Maximum Operating Pressure)
- Seat Seal Bubble Tight @ 150 PSIG
- Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr
- Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC
- Heat Leak: 21.8 BTU/HR to 20° K
- Cooldown Mass: 10.5 Pounds

#### Applications

- Vacuum Jacketed Piping
- Cold Boxes
- Manifold and Tank Systems
- Liquid Nitrogen, Argon and
- Oxygen Service (with Proper Cleaning)



### 26.Cryogenic Valve Model C2161-M21

2.0" Vacuum Jacketed Globe Valve, Manual Operation

2" IPS Pipe Size Cryogenic Valve

Manual Operation

Vacuum Jacketed

Globe Style Body

Features

Low Handle Torque For Bubble Tight Shut-off

Stainless Steel Body, Stem and Threads

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread Insert

Contoured Flow Plugs Available

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  TORR

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 27.1 BTU/HR to 20°K

Cooldown Mass: 13.5 Pounds

Options:

Cold box jacket

Pneumatic actuators

Purge port

Flow plugs

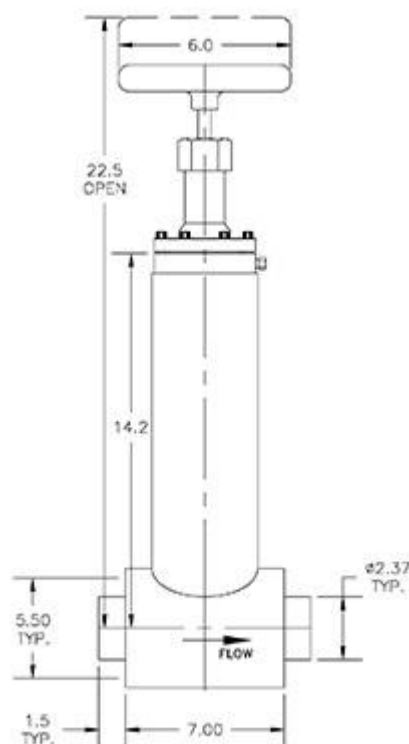
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 27.Cryogenic Valve Model C2161-A21

2.0" Vacuum Jacketed Globe Valve, Pneumatic Actuated Operation

2" IPS Pipe Size Cryogenic Valve

Actuated

Vacuum Jacketed

Globe Style Body

Features

Pneumatic Actuator Air to Open

Stainless Steel Body, Stem and Jacket

Redundant Stem Seal

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seal

Bonnet Purge Port (Thermal Relief Location)

Tight Fit Stem

MLI on Jacketed Valves

Brass Plug

Plug To Stem Stabilizer

KEL-F Seat Seal w/ Locked Thread

Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  TORR

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 27.1 BTU/HR to 20°K

Cooldown Mass: 13.5 Pounds

Options:

Cold Box Jacket

Manual Operation

Relief Valve

Flow Plugs

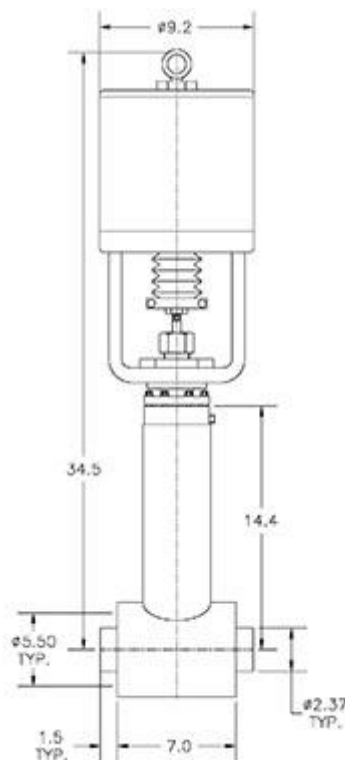
Applications

Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and Oxygen Service (with Proper Cleaning)



### 28.Cryogenic Valve Model C2162-M21

2.0" Vacuum Jacketed Right Angle Valve, Manual Operation

#### Features

Low Handle Torque for Bubble Tight Shutoff

Stainless Steel Stem & Threads

Redundant Stem Seals

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seals

Bonnet Purge Port (Thermal Relief Location)

All Stainless Steel Body

Close Tolerance Horizontal Operation OK

MLI on Jacketed Valves

Brass Plug

Plug to Stem Stabilizer

KEL-F Seat Seal

Contoured Flow Plugs Available

#### Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 27.3 BTU/HR to 20°k

Cooldown Mass: 10.2 Pounds

#### Options:

Cold Box Jacket

Pneumatic Actuators

Purge Port

#### Applications

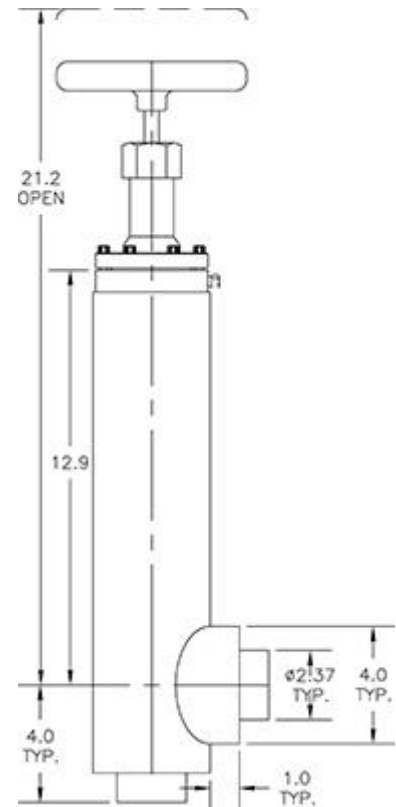
Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and

Oxygen Service (with Proper Cleaning)



### 29.Cryogenic Valve Model C2163-M21

2.0" Vacuum Jacketed Y-Pattern Valve, Manual Operation

#### Features

Low Handle Torque for Bubble Tight Shutoff

Stainless Steel Stem & Threads

Redundant Stem Seals

Cryogenic Stem Packing

Brass Bonnet

Redundant Cryogenic Bonnet Seals

Bonnet Purge Port (Thermal Relief Location)

All Stainless Steel Body

Close Tolerance Stem

MLI on Jacketed Valves

Brass Plug

Plug to Stem Stabilizer

KEL-F Seat Seal

Contoured Flow Plugs Available

#### Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 27.3 BTU/HR to 20° K

Cooldown Mass: 10.5 Pounds

#### Applications

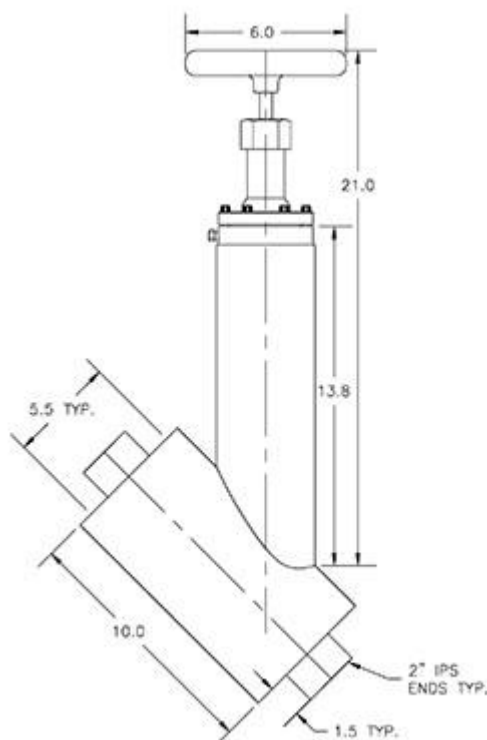
Vacuum Jacketed Piping

Cold Boxes

Manifold and Tank Systems

Liquid Nitrogen, Argon and

Oxygen Service (with Proper Cleaning)



### 30.Cryogenic Valve Model C2163-A21

2.0" Vacuum Jacketed Y-Pattern Valve, Pneumatic Actuated Operation

#### Features

- Pneumatic Actuator Air to Open
- Stainless Steel Stem & Threads
- Redundant Stem Seal
- Cryogenic Stem Packing
- Brass Bonnet
- Redundant Cryogenic Bonnet Seal
- Bonnet Purge Port (Thermal Relief Location)
- All Stainless Steel Body & Stem
- Tight Fit Stem
- MLI on Jacketed Valves
- Brass Plug
- Plug to Stem Stabilizer
- KEL-F Seat Seal w/ Locked Thread

#### Technical Data

300 PSI MAWP (Maximum Operating Pressure)

Seat Seal Bubble Tight @ 150 PSIG

Packing Mass Spec Tested @  $1 \times 10^{-5}$  Torr

Leak Rate Below  $1 \times 10^{-9}$  CC GHe/SEC

Heat Leak: 27.3 BTU/HR to 20°K

Cooldown Mass: 10.5 Pounds

#### APPLICATIONS

- Vacuum Jacketed Piping
- Cold Boxes
- Manifold and Tank Systems
- Liquid Nitrogen, Argon and
- Oxygen Service (with Proper Cleaning)

