

# Met-Seal Safety Covers

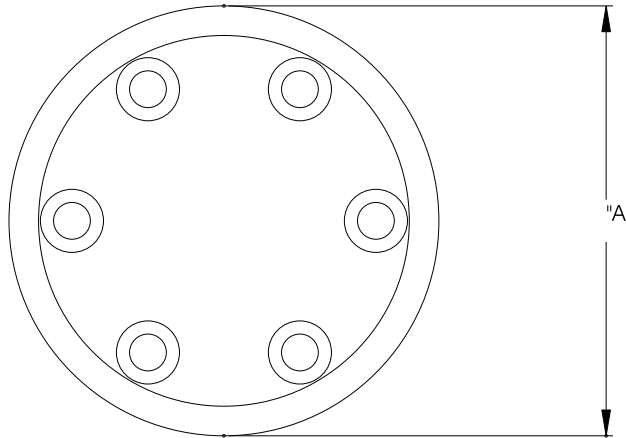
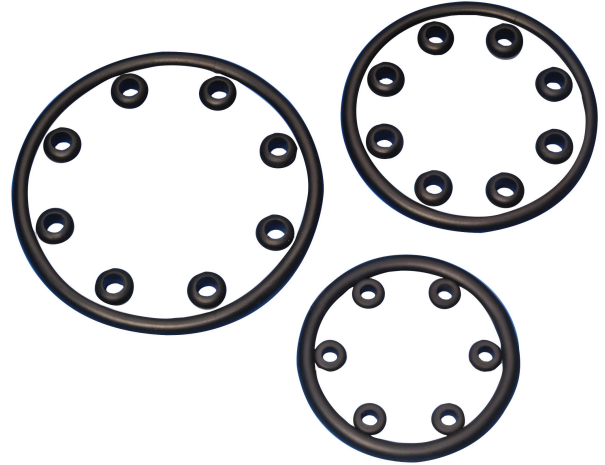
## Innovative Protection for Exposed Viewports

**KEY HIGH VACUUM PRODUCTS, INC.'s** polycarbonate safety covers are an innovative solution for protecting personnel from exposed viewports from their inherent dangers. **MSSC (Met-Seal Safety Covers)** should be used as a continuation of good, safe laboratory practices. All glass used in vacuum work should be securely shielded to restrain flying glass in the event of an implosion.

**MSSC's** covers are secured by gently pushing the rubber gaskets over standard 12 point bolt heads. No tools required.

Installation is simple quick and easy. Simply line up the bolt holes and press the cover on. No need to break vacuum on existing equipment.

Temperature range -40°F to +180°F



Part Number	Use with Flange OD	A
MSSC-275	2-3/4" OD Flange	3-1/4"
MSSC-338	3-3/8" OD Flange	4"
MSSC-450	4-1/2" OD Flange	4-3/4"
MSSC-600	6" OD Flange	6-1/4"
MSSC-800	8" OD Flange	8-1/4"
MSSC-1000	10" OD Flange	10-1/4"

Please call Key High at 631-360-3970 or email us at [info@KeyHigh.com](mailto:info@KeyHigh.com) for the most up-to-date listing of products and for pricing information.



## Safety Relief Valve

**Key High Vacuum Products, Inc.'s Safety Relief Valves** are spring loaded, low pressure, direct acting, permanent safety devices.

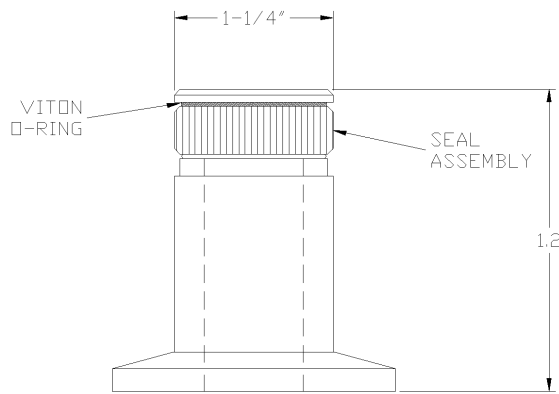
**Key's Safety Relief Valves** will virtually eliminate the possibility of dangerous overpressure situations in unstable systems, or in systems, which can experience overpressure issues during gas backfill cycles.

**SRV Series** are designed as a protection device, which will vent excess (positive) pressure from vacuum systems and chambers. These valves feature highly accurate cracking and reseal pressures.

Construction is from high vacuum grade materials: Stainless steel body, stainless steel spring, with viton seat

Every valve is 100% tested prior to shipment. These relief valves will protect gauges, view ports, etc., in the event of a "reasonable" overpressure situation.

**Key High Vacuum Products, Inc.,** offers the **SRV Series** with two different opening (cracking) pressures to choose from, 0.2 psig or 2.0 psig. **SRV Valves** are mounted on NW25 or NW40 flanges standard.



Part Number	Flange Mount	Cracking Pressure
SRV-25★★	NW25	0.2 PSIG
SRV-40★★	NW40	0.2 PSIG
SRV-25-125★	NW25	2.0 PSIG
SRV-40-125★	NW40	2.0 PSIG

★= New Product

★★=Note: The 0.2 psig "cracking pressure" valves must be installed with the poppet in the vertical position. Other flange mountings are available upon request.



## Stainless Steel Thin Wall "Gas Flex" Hose Connectors

**KEY HIGH VACUUM PRODUCTS, INC.'s "GAS FLEX"** hose assemblies are flexible (corrugated) metal stainless steel hose, which can be used in both vacuum and positive pressure service. **KHVP** offers this hose series in 1/4", 3/8" and 1/2" ID. Hoses are produced from fully annealed type 321 stainless steel sheet stock, which is rolled into a tube, and seam welded.



Braided hoses can be used both in vacuum and positive pressure service. **"SGF"** Series (braided) **"GAS FLEX"** hoses are an ideal solution for gas box delivery applications (positive pressure). Often the delivery lines are not straight, and require some flexibility. **"GAS FLEX"** hoses allow the user to form the hose to their individual requirements; and still allow for "clean arrangements" of the delivery lines.

Standard end connections include 304 stainless steel tube end, NW flanges, and Met-Seal flanges, Swagelok and VCR fittings. **"GAS FLEX"** hoses are offered in standard and custom lengths, available upon request.

All **"GAS FLEX"** hoses are leak tested after assembly assuring they are leak tight, and defect free. As always, all assemblies are thoroughly cleaned at all stages of the manufacturing process, not just at final inspection. Each hose is individually bagged after final leak test.

### Technical Data

#### STATIC

Nominal Hose ID	Minimum Bend Radius	Maximum Working Pressure 70°F PSIG	Minimum Bend Radius	Dynamic Max. Working Pressure 70° (PSIG)	Burst Pressure 70° (PSIG)
1/4"	0.35	390	N/A	N/A	N/A
1/4" w/Braid	0.75	4800	5.5	2030	11165
3/8"	0.55	170	N/A	N/A	N/A
3/8" w/Braid	1.14	3700	6	1450	8000
1/2"	0.83	130	N/A	N/A	N/A
1/2" w/Braid	1.34	2900	4.88	1160	6100

**"GAS FLEX" hoses will render maximum service life when properly installed.**

The following precautions should be observed when installing:

- 1) Do not subject any metal hose to gas surges greater than 50% of the rated working pressure (this will shorten the service life of the hose).
- 2) Avoid torque: Torque (twisting) is harmful to hose and substantially reduces service life. Always install a hose so that flexing takes place in one plane.
- 3) Avoid over bending: If metal hose is bent below the minimum recommended bend radius, fatigue occurs, and premature failure can result. This bending typically occurs near the end connections, and should be avoided.



## Stainless Steel Thin Wall "Gas Flex" Hose Connectors



Part Number	Hose ID	Length	Description
GF-025-MS-4★	1/4"	4"	Mini MET-SEAL
GF-025-MS-8★	1/4"	8"	Mini MET-SEAL
GF-025-MS-12★	1/4"	12"	Mini MET-SEAL
GF-025-MS-18★	1/4"	18"	Mini MET-SEAL
GF-025-MS-24★	1/4"	24"	Mini MET-SEAL
GF-025-MS-36★	1/4"	36"	Mini MET-SEAL
GF-037-MS-4★	3/8"	4"	Mini MET-SEAL
GF-037-MS-8★	3/8"	8"	Mini MET-SEAL
GF-037-MS-12★	3/8"	12"	Mini MET-SEAL
GF-037-MS-18★	3/8"	18"	Mini MET-SEAL
GF-037-MS-24★	3/8"	24"	Mini MET-SEAL
GF-037-MS-36★	3/8"	36"	Mini MET-SEAL
GF-050-MS-4★	1/2"	4"	Mini MET-SEAL
GF-050-MS-8★	1/2"	8"	Mini MET-SEAL
GF-050-MS-12★	1/2"	12"	Mini MET-SEAL
GF-050-MS-18★	1/2"	18"	Mini MET-SEAL
GF-050-MS-24★	1/2"	24"	Mini MET-SEAL
GF-050-MS-36★	1/2"	36"	Mini MET-SEAL
GF-025-4★	1/4"	4"	NW 16
GF-025-8★	1/4"	8"	NW 16
GF-025-12★	1/4"	12"	NW 16
GF-025-18★	1/4"	18"	NW 16
GF-025-24★	1/4"	24"	NW 16
GF-025-36★	1/4"	36"	NW 16
GF-037-4★	3/8"	4"	NW 16
GF-037-8★	3/8"	8"	NW 16
GF-037-12★	3/8"	12"	NW 16
GF-037-18★	3/8"	18"	NW 16
GF-037-24★	3/8"	24"	NW 16
GF-037-36★	3/8"	36"	NW 16
GF-050-4★	1/2"	4"	NW 16
GF-050-8★	1/2"	8"	NW 16
GF-050-12★	1/2"	12"	NW 16
GF-050-18★	1/2"	18"	NW 16
GF-050-24★	1/2"	24"	NW 16
GF-050-36★	1/2"	36"	NW 16

★= New Product

Note: When ordering "Gas Flex" hose connectors with braid; Add "S" to prefix of part number (Example **SGF-025-4**).



## Stainless Steel Thin Wall "Gas Flex" Hose Connectors



Part Number	Hose ID	Length	Description
GF-025-MVC-4★	1/4"	4"	Male VCR's
GF-025-MVC-8★	1/4"	8"	Male VCR's
GF-025-MVC-12★	1/4"	12"	Male VCR's
GF-025-MVC-18★	1/4"	18"	Male VCR's
GF-025-MVC-24★	1/4"	24"	Male VCR's
GF-025-MVC-36★	1/4"	36"	Male VCR's
GF-025-FVC-4★	1/4"	4"	Female VCR's
GF-025-FVC-8★	1/4"	8"	Female VCR's
GF-025-FVC-12★	1/4"	12"	Female VCR's
GF-025-FVC-18★	1/4"	18"	Female VCR's
GF-025-FVC-24★	1/4"	24"	Female VCR's
GF-025-FVC-36★	1/4"	36"	Female VCR's
GF-037-MVC-4★	3/8"	4"	Male VCR's
GF-037-MVC-8★	3/8"	8"	Male VCR's
GF-037-MVC-12★	3/8"	12"	Male VCR's
GF-037-MVC-18★	3/8"	18"	Male VCR's
GF-037-MVC-24★	3/8"	24"	Male VCR's
GF-037-MVC-36★	3/8"	36"	Male VCR's
GF-037-FVC-4★	3/8"	4"	Female VCR's
GF-037-FVC-8★	3/8"	8"	Female VCR's
GF-037-FVC-12★	3/8"	12"	Female VCR's
GF-037-FVC-18★	3/8"	18"	Female VCR's
GF-037-FVC-24★	3/8"	24"	Female VCR's
GF-037-FVC-36★	3/8"	36"	Female VCR's
GF-050-MVC-4★	1/2"	4"	Male VCR's
GF-050-MVC-8★	1/2"	8"	Male VCR's
GF-050-MVC-12★	1/2"	12"	Male VCR's
GF-050-MVC-18★	1/2"	18"	Male VCR's
GF-050-MVC-24★	1/2"	24"	Male VCR's
GF-050-MVC-36★	1/2"	36"	Male VCR's
GF-050-FVC-4★	1/2"	4"	Female VCR's
GF-050-FVC-8★	1/2"	8"	Female VCR's
GF-050-FVC-12★	1/2"	12"	Female VCR's
GF-050-FVC-18★	1/2"	18"	Female VCR's
GF-050-FVC-24★	1/2"	24"	Female VCR's
GF-050-FVC-36★	1/2"	36"	Female VCR's

★= New Product

Note: When ordering "Gas Flex" hose connectors with braid; Add "S" to prefix of part number (Example **SGF-025-MVC-4**).



## Stainless Steel Thin Wall "Gas Flex" Hose Connectors



Part Number	Hose ID	Length	Description
GF-025-MFVC-4★	1/4"	4"	Male to Female VCR
GF-025-MFVC-8★	1/4"	8"	Male to Female VCR
GF-025-MFVC-12★	1/4"	12"	Male to Female VCR
GF-025-MFVC-18★	1/4"	18"	Male to Female VCR
GF-025-MFVC-24★	1/4"	24"	Male to Female VCR
GF-025-MFVC-36★	1/4"	36"	Male to Female VCR
GF-037-MFVC-4★	3/8"	4"	Male to Female VCR
GF-037-MFVC-8★	3/8"	8"	Male to Female VCR
GF-037-MFVC-12★	3/8"	12"	Male to Female VCR
GF-037-MFVC-18★	3/8"	18"	Male to Female VCR
GF-037-MFVC-24★	3/8"	24"	Male to Female VCR
GF-037-MFVC-36★	3/8"	36"	Male to Female VCR
GF-050-MFVC-4★	1/2"	4"	Male to Female VCR
GF-050-MFVC-8★	1/2"	8"	Male to Female VCR
GF-050-MFVC-12★	1/2"	12"	Male to Female VCR
GF-050-MFVC-18★	1/2"	18"	Male to Female VCR
GF-050-MFVC-24★	1/2"	24"	Male to Female VCR
GF-050-MFVC-36★	1/2"	36"	Male to Female VCR
GF-025-SW-4★	1/4"	4"	Swagelok
GF-025-SW-8★	1/4"	8"	Swagelok
GF-025-SW-12★	1/4"	12"	Swagelok
GF-025-SW-18★	1/4"	18"	Swagelok
GF-025-SW-24★	1/4"	24"	Swagelok
GF-025-SW-36★	1/4"	36"	Swagelok
GF-037-SW-4★	3/8"	4"	Swagelok
GF-037-SW-8★	3/8"	8"	Swagelok
GF-037-SW-12★	3/8"	12"	Swagelok
GF-037-SW-18★	3/8"	18"	Swagelok
GF-037-SW-24★	3/8"	24"	Swagelok
GF-037-SW-36★	3/8"	36"	Swagelok
GF-050-SW-4★	1/2"	4"	Swagelok
GF-050-SW-8★	1/2"	8"	Swagelok
GF-050-SW-12★	1/2"	12"	Swagelok
GF-050-SW-18★	1/2"	18"	Swagelok
GF-050-SW-24★	1/2"	24"	Swagelok
GF-050-SW-36★	1/2"	36"	Swagelok

★= New Product

Note: When ordering "Gas Flex" hose connectors with braid; Add "S" to prefix of part number (Example **SGF-025-MVC-4**).



## Stainless Steel Thin Wall "Gas Flex" Hose Connectors

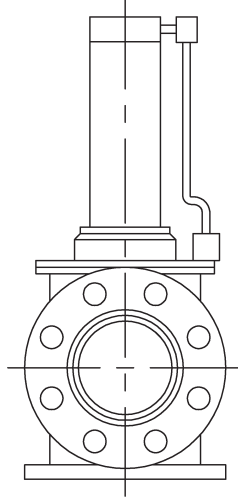
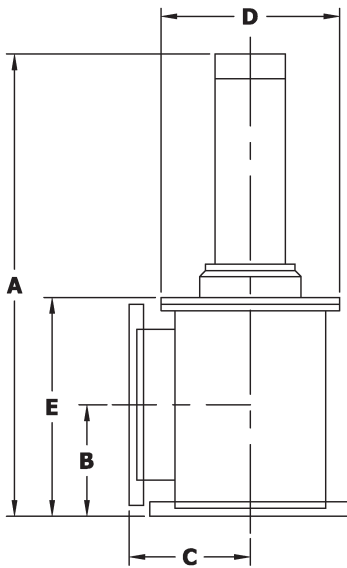
Part Number	Hose ID	Length	Description
<b>BT-025-4★</b>	1/4"	4"	1/4" OD X .035 wall tube end
<b>BT-025-8★</b>	1/4"	8"	1/4" OD X .035 wall tube end
<b>BT-025-12★</b>	1/4"	12"	1/4" OD X .035 wall tube end
<b>BT-025-18★</b>	1/4"	18"	1/4" OD X .035 wall tube end
<b>BT-025-24★</b>	1/4"	24"	1/4" OD X .035 wall tube end
<b>BT-025-36★</b>	1/4"	36"	1/4" OD X .035 wall tube end
<b>BT-037-4★</b>	3/8"	4"	3/8" OD X .035 wall tube end
<b>BT-037-8★</b>	3/8"	8"	3/8" OD X .035 wall tube end
<b>BT-037-12★</b>	3/8"	12"	3/8" OD X .035 wall tube end
<b>BT-037-18★</b>	3/8"	18"	3/8" OD X .035 wall tube end
<b>BT-037-24★</b>	3/8"	24"	3/8" OD X .035 wall tube end
<b>BT-037-36★</b>	3/8"	36"	3/8" OD X .035 wall tube end
<b>BT-050-4★</b>	1/2"	4"	1/2" OD X .035 wall tube end
<b>BT-050-8★</b>	1/2"	8"	1/2" OD X .035 wall tube end
<b>BT-050-12★</b>	1/2"	12"	1/2" OD X .035 wall tube end
<b>BT-050-18★</b>	1/2"	18"	1/2" OD X .035 wall tube end
<b>BT-050-24★</b>	1/2"	24"	1/2" OD X .035 wall tube end
<b>BT-050x-36★</b>	1/2"	36"	1/2" OD X .035 wall tube end

★= New Product

Note: When ordering "Gas Flex" hose connectors with braid; Add "S" to prefix of part number (Example **SBT-025-4**).



## Stainless Steel Valves



### Right Angle Valve O-Ring Shaft Seal

#### Features:

- Electropolished, 304 stainless steel body
- Viton® O-ring seals
- Normally closed, spring loaded (fail safe) air cylinder
- 120/60 solenoid included
- Rugged, simple proved industrial design intended for large differential pressures and/or high partial environments

Part Number	Tube OD	Port Style	A	B	C	D	E
RAV-37-K★	3/8"	NW 10	5.70	1.65	1.65	2.00	3.80
RAV-50-K★	1/2"	NW 16	5.70	1.65	1.65	2.00	3.80
RAV-75-K★	3/4"	NW 16	6.25	2.12	2.12	2.00	4.37
RAV-100-K★	1"	NW 25	6.37	2.25	2.25	2.00	4.95
RAV-150-K★	1-1/2"	NW 40	7.50	2.46	2.46	2.75	4.95
RAV-200-K★	2"	NW 50	10.30	3.50	3.50	3.50	6.93
RAV-400	4"	Tube End	18.00	4.87	4.87	6.0	9.62
RAV-400-ISO	4"	NW 100	18.50	5.12	5.12	6.0	9.87
RAV-400-ASA	4"	ASA 9	18.62	5.25	5.25	6.0	10.00
RAV-600	6"	Tube End	25.12	6.00	6.00	10.0	12.12
RAV-600-ISO	6"	NW 160	25.37	6.250	6.25	10.0	12.50
RAV-600-ASA	6"	ASA 11	25.50	6.375	6.375	10.0	12.62
RAV-800★	8"	Tube End	29.18	8.00	8.00	12.00	15.01
RAV-800-ISO★	8"	NW 200	29.43	8.25	8.25	12.00	15.26
RAV-800-ASA★	8"	ASA 13	29.56	8.37	8.37	12.00	15.39
RAV-1000-ISO★	10"	NW 250	36	10.50	10.50	14.00	18.50
RAV-1000-ASA★	10"	ASA 13	36.50	10.62	10.62	14.00	18.62

★ = New Product, Note:\* Valve shown with optional o-ring groove in mounting flange.

### Options for RAV SERIES valves: Add code to suffix of part number

Description	Option Code	
24 Volt DC solenoid	-24VDC	Add
24 Volt AC solenoid	-24VAC	Add
220 Volt AC solenoid	-220VAC	Add
Reed Switches	-LS	Add
No solenoid	-NS	Deduct

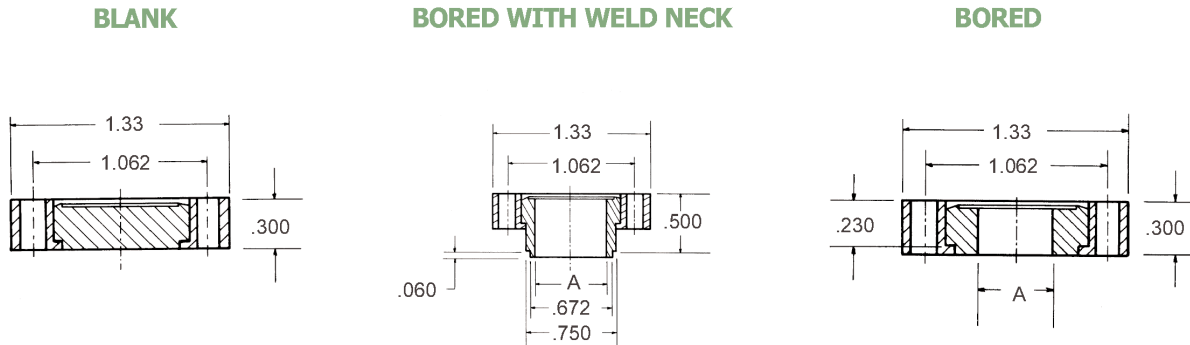
Note: Additional options such as roughing ports, gauge ports, sealing materials, etc. are available. Contact factory direct for price schedules.





# MET-SEAL Ultra High Vacuum Flanges 316

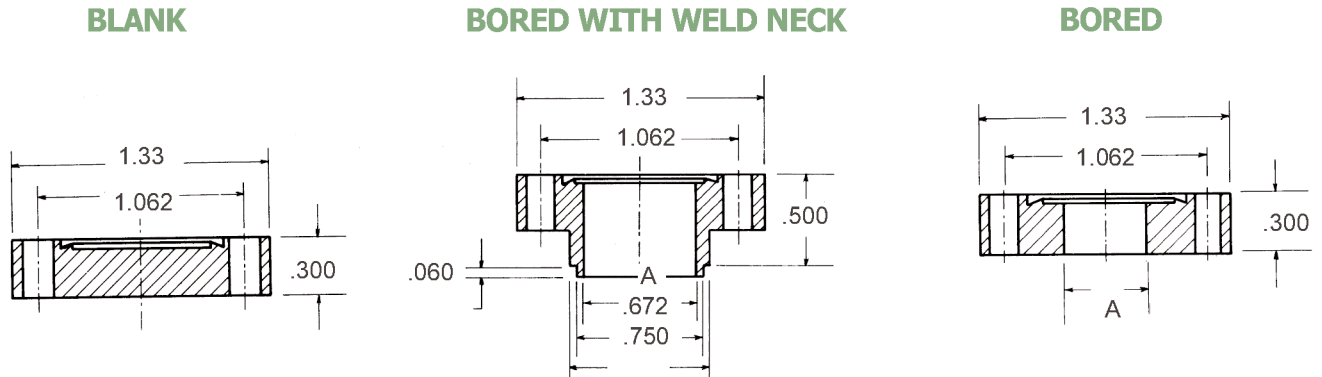
- Higher corrosion resistance
- Reach lower base pressures
- Less susceptible to magnetic fields, virtually ferrite free



## Rotatable Mini Met-Seal Flanges

Part Number	Nominal OD	A (ID)	Bolt Holes	Diameter
MS133-000R316★	1-1/3"	Blank	6	.172
MS133-025RW316★	1-1/3"	.180	6	.172
MS133-050RW316★	1-1/3"	.375	6	.172
MS133-075RW316★	1-1/3"	.625	6	.172

★ = New Product



## Non-Rotatable Mini Met-Seal Flanges

Part Number	Nominal OD	A (ID)	Bolt Holes	Diameter
MS133-000N316★	1-1/3"	Blank	6	.172
MS133-025NW316★	1-1/3"	.180	6	.172
MS133-050NW316★	1-1/3"	.375	6	.172
MS133-075NW316★	1-1/3"	.625	6	.172

★ = New Product

## Solid Nickel Gasket for Mini Met-Seal (Sold Individually)

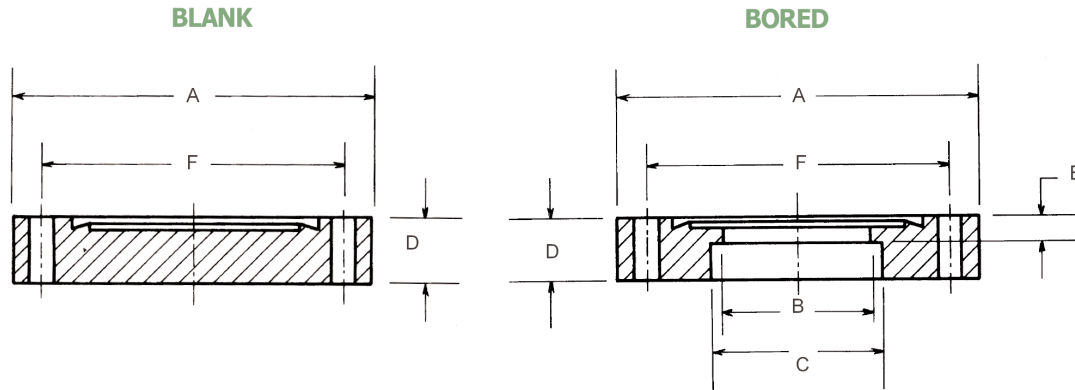
Part Number

G-133-NI★

★ = New Product

# MET-SEAL Ultra High Vacuum Flanges 316

- Higher corrosion resistance
- Reach lower base pressures
- Less susceptible to magnetic fields, virtually ferrite free



## Non-Rotatable Flanges

Part Number	Nominal OD	A OD	B ID	C	D	E	F	Bolt Holes	Hole Dia
MS275-000N316★	2-3/4"	2.74	Blank	-	.500	-	2.312	6	.265
MS275-100N316★	2-3/4"	2.74	.938	1.010	.500	.209	2.312	6	.265
MS275-150N316★	2-3/4"	2.74	1.437	1.510	.500	.209	2.312	6	.265
MS450-000N316★	4-1/2"	4.47	Blank	-	.750	-	3.628	8	.332
MS450-200N316★	4-1/2"	4.47	1.938	2.010	.750	.375	3.628	8	.332
MS450-250N316★	4-1/2"	4.47	2.437	2.510	.750	.375	3.628	8	.332
MS600-000N316★	6"	5.97	Blank	-	.844	-	5.128	16	.332
MS600-400N316★	6"	5.97	3.910	4.010	.844	.437	5.128	16	.332
MS800-000N316★	8"	7.97	Blank	-	.937	-	7.128	20	.332
MS800-600N316★	8"	7.97	5.875	6.020	.937	.500	7.128	20	.332
MS1000-000N316★	10"	9.97	Blank	-	.968	-	9.128	24	.332
MS1000-800N316★	10"	9.97	7.875	8.020	.968	.500	9.128	24	.332

★ = New Product

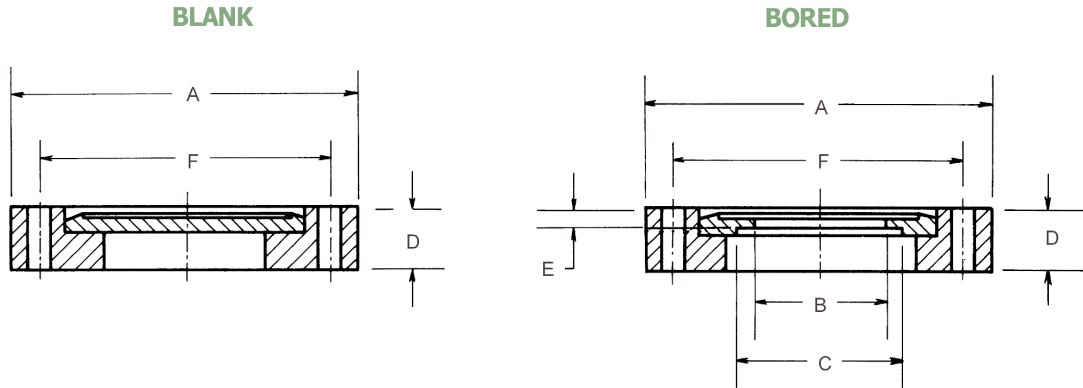
## Solid Nickel Gasket for Mini Met-Seal (Sold Individually)

Part Number	Use with
G-275-NI	2-3/4" OD
G-338-NI	3-3/8" OD
G-450-NI	4-1/2" OD
G-600-NI	6" OD
G-800-NI	8" OD
G-1000-NI	10" OD



# MET-SEAL Ultra High Vacuum Flanges 316

- Higher corrosion resistance
- Reach lower base pressures
- Less susceptible to magnetic fields, virtually ferrite free



## Rotatable Flanges

Part Number	Nominal OD	A OD	B ID	C	D	E	F	Bolt Holes	Hole Dia
MS275-000R316★	2-3/4"	2.74	Blank	-	.500	-	2.312	6	.265
MS275-100R316★	2-3/4"	2.74	.938	1.010	.500	.209	2.312	6	.265
MS275-150R316★	2-3/4"	2.74	1.437	1.510	.500	.209	2.312	6	.265
MS450-000R316★	4-1/2"	4.47	Blank	-	.750	-	3.628	8	.332
MS450-200R316★	4-1/2"	4.47	1.938	2.010	.750	.375	3.628	8	.332
MS450-250R316★	4-1/2"	4.47	2.437	2.510	.750	.375	3.628	8	.332
MS600-000R316★	6"	5.97	Blank	-	.844	-	5.128	16	.332
MS600-400R316★	6"	5.97	3.910	4.010	.844	.437	5.128	16	.332
MS800-000R316★	8"	7.97	Blank	-	.937	-	7.128	20	.332
MS800-600R316★	8"	7.97	5.875	6.020	.937	.500	7.128	20	.332
MS1000-000R316★	10"	9.97	Blank	-	.968	-	9.128	24	.332
MS1000-800R316★	10"	9.97	7.875	8.020	.968	.500	9.128	24	.332

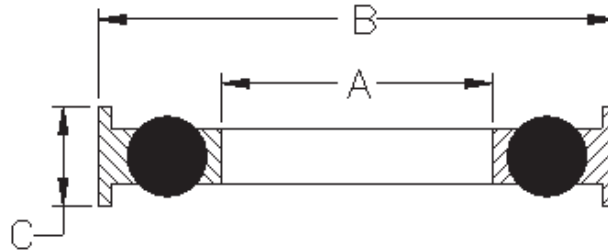
★ = New Product

## Solid Nickel Gasket for Mini Met-Seal (Sold Individually)

Part Number	Use with
G-275-NI	2-3/4" OD
G-338-NI	3-3/8" OD
G-450-NI	4-1/2" OD
G-600-NI	6" OD
G-800-NI	8" OD
G-1000-NI	10" OD



## KEY SPEEDY ISO-NW Centering Rings

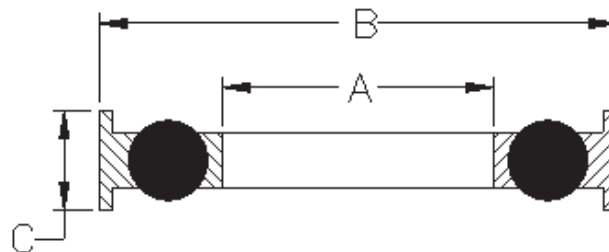


### Seal Centering Ring "Trapped" Overpressure Assembly

- 316 stainless steel centering ring
- Aluminum outer ring
- Replacement Viton® O-ring

Part Number	Tube OD	ISO	A	B	C
KSCR-1816-T-316★	3/4"	NW16	.63	1.28	.31
KSCR-1825-T-316★	1"	NW25	.98	1.67	.31
KSCR-1840-T-316★	1-1/2"	NW40	1.57	2.26	.31
KSCR-1850-T-316★	2"	NW50	1.97	3.051	.31

★ = New Product



### Seal Centering Ring "Trapped" Overpressure Assembly

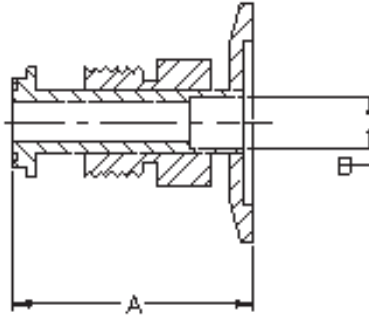
- 304 stainless steel centering ring
- Aluminum outer ring
- Replacement Viton® O-ring

Part Number	Tube OD	ISO	A	B	C
KSCR-1816-T-304★	3/4"	NW16	.63	1.28	.31
KSCR-1825-T-304★	1"	NW25	.98	1.67	.31
KSCR-1840-T-304★	1-1/2"	NW40	1.57	2.26	.31
KSCR-1850-T-304★	2"	NW50	1.97	3.051	.31

★ = New Product



## KEY SPEEDY ISO-NW Adapters

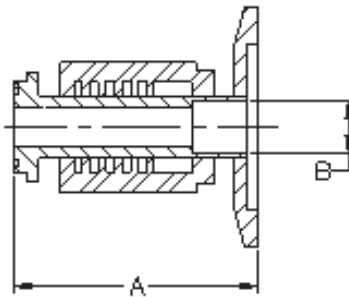


### Adapter ISO-KF to VCO® Male

- 304 Stainless Steel Base Flange, 316 Stainless Steel Gland / Male Nut

Part Number	Flange Size	A	B
KSA-3716-VCO★	NW 16 to 1/4" VCO®	1.59	.18
KSA-3716-1-VCO★	NW 16 to 1/2" VCO®	1.75	.40
KSA-3725-VCO★	NW 25 to 1/4" VCO®	1.59	.18
KSA-3725-1-VCO★	NW 25 to 1/2" VCO®	1.75	.40
KSA-3725-2-VCO★	NW 25 to 3/4" VCO®	1.78	.65
KSA-3740-VCO★	NW 40 to 1/4" VCO®	1.59	.18
KSA-3740-1-VCO★	NW 40 to 1/2" VCO®	1.75	.40
KSA-3740-2-VCO★	NW 40 to 3/4" VCO®	1.78	.65
KSA-3750-VCO★	NW 50 to 1/4" VCO®	1.59	.18
KSA-3750-1-VCO★	NW 50 to 1/2" VCO®	1.75	.40
KSA-3750-2-VCO★	NW 50 to 3/4" VCO®	1.78	.65

★ = New Product



### Adapter ISO-KF to VCO® Male

- 304 Stainless Steel Base Flange, 316 Stainless Steel Gland / Male Nut

Part Number	Flange Size	A	B
KSA-3816-VCO★	NW 16 to 1/4" VCO®	1.31	.18
KSA-3816-1-VCO★	NW 16 to 1/2" VCO®	1.62	.37
KSA-3825-VCO★	NW 25 to 1/4" VCO®	1.31	.18
KSA-3825-1-VCO★	NW 25 to 1/2" VCO®	1.62	.37
KSA-3825-2-VCO★	NW 25 to 3/4" VCO®	1.80	.58
KSA-3840-VCO★	NW 40 to 1/4" VCO®	1.31	.18
KSA-3840-1-VCO★	NW 40 to 1/2" VCO®	1.62	.37
KSA-3840-2-VCO★	NW 40 to 3/4" VCO®	1.80	.58
KSA-3850-VCO★	NW 50 to 1/4" VCO®	1.31	.18
KSA-3850-1-VCO★	NW 50 to 1/2" VCO®	1.62	.37
KSA-3850-2-VCO★	NW 50 to 3/4" VCO®	1.80	.58

★ = New Product



## Oil Mist Eliminators

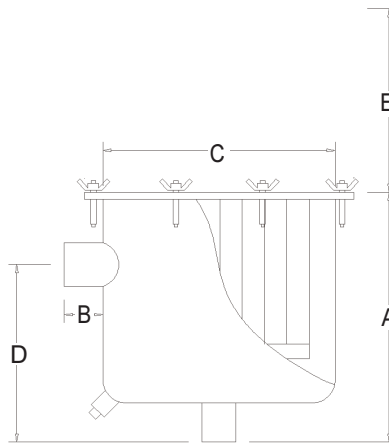
- **Large Holding Capacity**
- **Easy Field Maintained**
- **99% Efficiency**
- **Low Back Pressure Elements**

**Description:** **HDME OIL MIST ELIMINATORS** are a necessary piece component, which should be used on every rotary vane pumps exhaust port. Rotary vane pumps are a major source of air pollution when mist eliminators are not used. A fine oil mist / vapor will be exhausted from the pump into the surrounding air, whenever the pump is operating between atmosphere and 1 millibar; the higher the pressure, the more oil will be expelled. This oil will create a messy, dangerous situation, which will factor in respiratory distress; and generate environmental issues. **KEY HIGH VACUUM PRODUCTS, INC.**'s mist eliminators are designed to specifically trap this plume of exhausted oil. Return the oil to the pump, resulting in a cleaner, healthier, safer, working environment.

**KEY HIGH VACUUM PRODUCTS, INC.**'s oil mist eliminators are a valuable solution for trapping oil mist. The oil is separated from the air through use of a rugged, pleated, and multi-layer fiberglass element, which uses the coalescing principal. The design of the element allows it to have a high efficiency value (greater than 99%), while maintaining a very high flow rate. **KEY HIGH VACUUM PRODUCTS, INC.** offers four different mist eliminators, allowing users a lot of flexibility. Upon request we can provide alternative trapping medias for use with aggressive gases, as well as volatile organic compounds. Contact factory direct.

### HDME Series:

**Construction:** KHV's heavy duty oil mist eliminators feature right angle mounting configuration, and are constructed from steel which has a baked enamel finish. **HDME Oil Mist Eliminators** have female NPT inlet / outlet ports (standard) and come with a 1/4" drain plug.



Part Number	FNPT	A	B	C	D	E	CFM
HDME-1★	1"	6-3/4"	1/2"	7-5/16"	4-5/8"	5-1/4"	40
HDME-2★	1-1/2"	6-3/4"	1/2"	7-5/16"	4-5/8"	5-1/4"	50

★ = New Product

Part Number	Use With
RF-HDME-1★	HDME-1/HDME-2

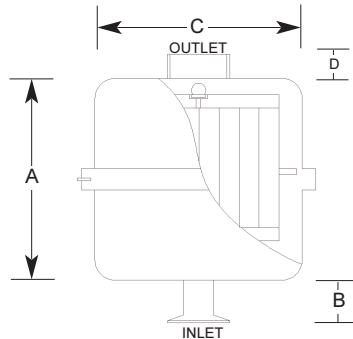
★ = New Product



# Oil Mist Eliminators

## ILME Series:

**Construction:** **ILME Series Oil Mist Eliminators** feature inline mounting, standard NW mounting flanges, constructed from steel that has a baked enamel finish. **ILME Oil Mist Eliminators** have a built in safety valve, which in the event of an over pressure situation (1/2 bar or more) the safety valve releases, protecting the pump. All **ILME Series** are two-piece designs and have 1/8" female NPT drain plugs.



Part Number	Port Style	A	B	C	D	CFM
<b>ILME-16★</b>	NW 16	4-5/15"	7/8"	3-1/4"	7/8"	10
<b>ILME-25★</b>	NW 25	7-3/8"	7/8"	5-1/4"	7/8"	20

★ = New Product

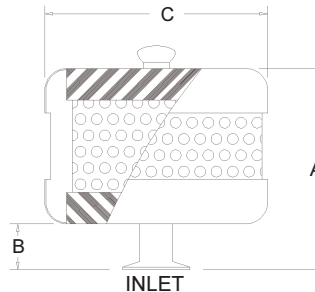
### Replacement Fiberglass Cartridges for ILME

Part Number	Use With
<b>RF-ILME-16★</b>	ILME-16
<b>RF-ILME-25★</b>	ILME-25

★ = New Product

## SAME Series:

**Construction:** **SAME Series Oil Mist Eliminators** are a standoff type mount that is intended for inert gas applications where no volatile organic compounds are used. **SAME Series** filters feature NW style or Welch style mounts, minimizing hardware usage and stand off heights. Units are constructed from steel that has been nickel-plated. Filter replacement is a simple thumbscrew arrangement.



Part Number	Port Style	A	B	C	CFM
<b>SAME-1★</b>	3/4"-20 thread	3-1/4"	1"	2-1/2"	4
<b>SAME-2★</b>	1"-20 thread	5"	7/8"	2-1/2"	7
<b>SAME-3★</b>	1-3/4"-20 thread	8-7/8"	1-3/4"	5-1/8"	24
<b>SAME-NW16★</b>	NW 16	4-1/2"	7/8"	2-1/2"	4.5
<b>SAME-NW25★</b>	NW 25	9-1/4"	2-1/8"	5-1/8"	24
<b>SAME-NW40★</b>	NW 40	9-1/4"	2-1/8"	10-1/4"	55

★ = New Product

### Replacement Fiberglass Cartridges for SAME

Part Number	Use With
<b>RF-SAME-1★</b>	SAME-1
<b>RF-SAME-2★</b>	SAME-2
<b>RF-SAME-3★</b>	SAME-3
<b>RF-SAME-NW16★</b>	SAME-NW16
<b>RF-SAME-NW25★</b>	SAME-NW25
<b>RF-SAME-NW40★</b>	SAME-NW40

★ = New Product



## Foreline (Inlet) Filters

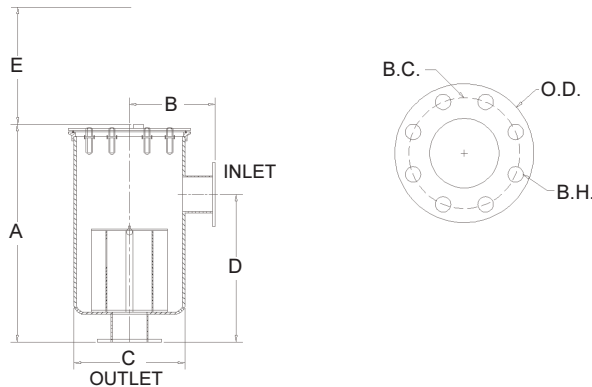
- **High Flow Design**
- **Low Pressure Drop**
- **Large Dirt Holding Capacity**
- **ASA Flanged Inlet / Outlet**

### Description:

**LPTA Series Inlet Traps** are large-scale particle traps that are rugged, and intended for use in industrial environments. **LPTA Traps** will extend the service intervals of vacuum pumps, by preventing contaminants from being ingested by the pump. Common applications for **LPTA Traps** are processes that produce significant amounts of dusts, powders, resins, etc. The polyester filter cartridge has an efficiency rating greater than 99%, and the filter cartridge is moisture resistant.

### Construction:

**LPTA Inlet Traps** feature right angle mounting arrangement, with ASA flanges for straightforward mounting, using ordinary hardware. Units are of steel construction, with a baked enamel finish, and are capable of withstanding hot air and oil mists. The filter itself incorporates a foam polyurethane "pre-filter" prior to the actual pleated, five (5) micron, polyester cartridge. This arrangement allows higher dirt carrying capacity (50%), thereby extending service intervals, as well as increasing uptime. Heavy duty "T" bolts allowing quick access for maintenance cycles, and ¼" female NPT ports are located on the inlet / outlet ports, allowing the use of gauges should the need arise.



Part Number	ASA Port	A	B	C	D	E	SCFM Rating
<b>LPTA-4★</b>	9" OD	27-1/8"	9"	14"	18-1/2"	15"	520
<b>LPTA-6★</b>	11" OD	29-1/8"	12"	18-2"	20-1/2"	15"	1100
<b>LPTA-8★</b>	13-1/2" OD	38"	14"	22-1/2"	25-1/2"	20"	1800

★ = New Product

### Replacement Polyester Cartridges

Part Number	Use With
<b>RF-4★</b>	LPTA-4
<b>RF-6★</b>	LPTA-6
<b>RF-8★</b>	LPTA-8

★ = New Product





## Foreline (Inlet) Filters

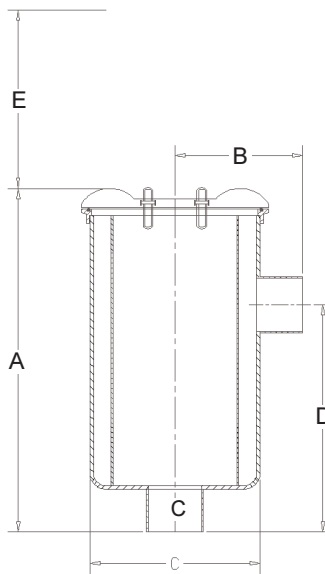
- **High Flow Design**
- **Low Pressure Drop**
- **Large Dirt Holding Capacity**
- **ASA Flanged Inlet / Outlet**

### Description:

**SPTA Series Foreline Traps** are compact industrial style inlet filters. **SPTA Traps** are designed to extend the life of vacuum pumps by preventing solid contaminants from being ingested by the pump. Common applications for the **SPTA Traps** are processes that generate dusts, powders, resins, etc. The high efficiency polyester cartridge has an efficiency rating greater than 99% and cartridges are moisture resistant.

### Construction:

**SPTA Inlet Filter Traps** feature right angle mounting configuration, with female NPT Inlet / Outlet ports for easy mounting. Units are of steel construction, with a baked enamel finish. The filter itself is a heavy duty, pleated, five (5) micron, polyester cartridge. Polyester filters have a high dirty carrying capacity, is washable with warm water and mild detergents, thereby extending service life of the cartridge. Additionally, the cartridge incorporates a foam polyurethane "pre-filter" which allows a much higher dirt carrying capacity (typically 50%). Stainless steel torsion clips hold the bonnet assembly firmly in place and allow quick access for maintenance cycles. All **SPTA Series Inlet Filters** feature 1/4" female NPT ports which are located on the inlet and outlet ports allowing the use of gauges, should the need arise.



Part Number	ASA Port	A	B	C	D	E	SCFM Rating
<b>SPTA-1-FNPT★</b>	1/2" FNPT	4-3/8"	2-1/4"	5-7/8"	1-7/8"	3"	18
<b>SPTA-2-FNPT★</b>	3/4" FNPT	3-3/4"	2-1/4"	5-7/8"	2-1/2"	3-1/4"	25
<b>SPTA-3-FNPT★</b>	1" FNPT	6-3/4"	4-1/8"	7-5/16"	4-1/2"	5-1/4"	40
<b>SPTA-4-FNPT★</b>	1-1/2" FNPT	6-3/4"	4-1/8"	7-5/16"	4-1/2"	5-1/4"	80

★ = New Product

### Replacement Polyester Cartridges

Part Number	Use With
<b>RF-SPTA-1/2★</b>	SPTA-1-FNPT
<b>RF-SPTA-1/2★</b>	SPTA-2-FNPT
<b>RF-SPTA-3/4★</b>	SPTA-3-FNPT
<b>RF-SPTA-3/4★</b>	SPTA-4-FNPT

★ = New Product



## Foreline Traps, Dry-Ice Cooled

- **304 ss construction / Viton® Bonnet**
- **Easily removable, 3 quart cold bucket**
- **Visible trapping surface, refrigerant level**



### Description:

**DIFT Series** foreline traps are a tabletop condensation style trap, which use a mixture of Alcohol and Dry-Ice achieving operating temperatures of - 100°F. At this temperature the **DIFT** trap effectively eliminates oil back streaming from mechanical pumps. Most condensable vapors (water/solvents) are removed before they can be ingested into the vacuum pump. The benefits being; the mechanical pump is protected and lower operating pressures are reached within the vacuum system.

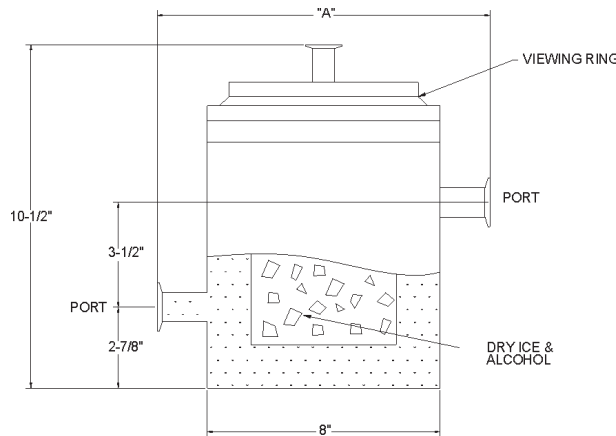
### Construction:

The **DIFT** trap ports are offset, in an inline configuration. This port arrangement exposes the incoming gas stream to the largest amount of refrigerated surface area possible.

The Polycarbonate "Bucket" cover allows viewing of the alcohol/dry ice level. The cold bucket itself holds three quarts of alcohol/dry ice mix, and should be between 1/2 and 3/4 full for satisfactory trapping efficiency. The Polycarbonate "Bonnet" flange allows viewing of the trapped (frozen) gas on the cold bucket itself. "Typical" holding times are (about) 12 hours. The cold bucket and the body of the **DIFT** trap itself, are 304 stainless steel, which is electro polished. The electro polishing process, decreases the surface area, and enhances the corrosion resistance of the stainless steel itself. Additionally the electro polished surfaces are very easy to clean.

As with any refrigerated trap, safety issues must be addressed.

- 1) Prolonged contact with skin can and will cause freezer burn/frost bite.
- 2) Dry ice will admit carbon dioxide, which is colorless, heavier than air and can cause suffocation. Use only in well ventilated area's.
- 3) Never clamp polycarbonate (bucket) cover. As the dry ice evaporates, it expands significantly.
- 4) Alcohol is flammable. Keep away from sparks, heat sources, and flames.
- 5) Do not use acetone as it will damage the polycarbonate components.



Part Number	Port Style	A
<b>DIFT-050★</b>	1/2" OD tube	10-3/4"
<b>DIFT-075★</b>	3/4" OD tube	10-3/4"
<b>DIFT-16★</b>	NW 16	11-1/16"
<b>DIFT-25★</b>	NW 25	11-1/16"
<b>DIFT-40★</b>	NW 40	11-1/16"

★ = New Product

