Foreline Traps, Dry-Ice Cooled

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

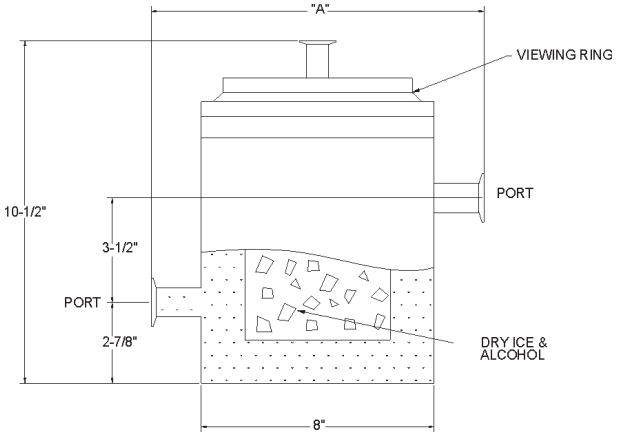
Description:
DIFT Series foreline traps are a tabletop condensation style trap, which use a mixture of Alcohol and Dry-Ice achieving operating temperatures of - 100°F. At this temperature the **DIFT** trap effectively eliminates oil back streaming from mechanical pumps. Most condensable vapors (water/solvents) 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 ½ and ¾ 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 then 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.



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

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

★ = New Product

Foreline Traps

Foreline traps are an essential component that are often overlooked when building a vacuum system and should be incorporated into all well designed vacuum systems.

In a properly designed high vacuum system foreline traps are located between the roughing pump and the work chamber. This method eliminates an oil path to the work chamber and also protects the mechanical pump from condensable vapors. **KEY HIGH VACUUM PRODUCTS, INC.** manufactures a complete selection of high conductance traps which are of a compact design with high trapping abilities. All traps feature 304 stainless steel housings and are available in right angle and inline mounting configurations with four standard port terminations to fit most applications.

Foreline traps fall into two (2) different and distinct categories.

1) KEY Series CFT, SAT and **MT Series TRAPS** are specifically designed to capture oil vapor which backstreams from an oil sealed roughing pump, before it can enter the work chamber. **CFT** and **SAT Series TRAPS** are filled with an OFHC® Copper Wool that is retained by stainless steel screens. The **SAT TRAPS** feature two piece clamped design and have replaceable cartridge trapping elements, while the **CFT Series** traps are factory sealed units. The OFHC® copper elements trap oil vapors but allows water vapor through the element, which is pumped away by the foreline pump. Under normal operating conditions years of service can be expected from both the **SAT & CFT** traps. The **MT Series TRAPS** in addition to capturing oil vapor, possess the additional benefit of being extremely efficient at capturing water vapor. This is accomplished by employing a synthetic zeolite as the trapping media, which is rechargeable through a simple bakeout.

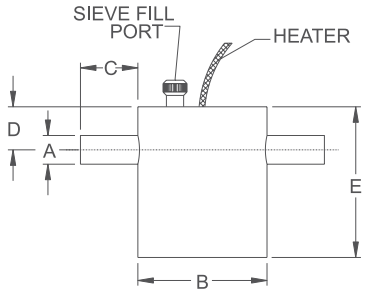
When installing the **CFT, SAT** and **MT Series TRAPS,** the correct or preferred procedure is to install the trap as far away as practicable from an oil sealed mechanical pump. In addition, it should be mounted vertically, if space allows. This technique will greatly lengthen the service, as it minimizes the quantity of oil vapor that can be introduced into the trap during molecular flow. By installing the trap in this fashion also helps prevent premature saturation of the capturing media.

2) KEY LNT and **WCT Series** foreline traps are capture type traps that collect condensable gas vapors such as water, solvents, etc. as they are being pumped from the vacuum chamber, but before they can intrude into the mechanical pump. These traps collect vapors by utilizing a refrigerant such as liquid nitrogen (**LNT Series**) or refrigerated water (**WCT Series**) and should be the foremost choice in high moisture, condensable effluent applications. Without appropriate trapping, condensable vapors can intrude into the mechanical pump, limiting the ultimate base pressure of the pump to unacceptably high levels. These foreline traps extend the life of the pump; the fluid, and minimize maintenance issues. Isolation valves should always be placed between any capture trap and the work chamber. Isolation valves should always be closed to prevent trapped gases from escaping into the work chamber when warming up the trap, during bakeouts, maintenance cycles, etc..

The benefits of putting in service the correct foreline traps are lower ultimate base pressures, cleaner chambers and extended periods of operation. Each trap offers simple reliable operation, along with high efficiency ratings of better than 99% and when correctly employed practically eliminate hydrocarbon backstreaming issues and are valuable additions to any high vacuum system.

Molecular Sieve Foreline Traps

- *All stainless steel construction*
- *Lower foreline pressures*



The use of **KEY** foreline traps offers an effective method of preventing backstreaming of "wet" mechanical pump vapors. The **MT Series** contain a synthetic zeolite, which also traps water vapor and operates at room temperature. The synthetic zeolite is recharged by baking out in place under a vacuum with the gas ballast valve open on the mechanical pump. An isolation valve should be located in front of the **MT** trap on the chamber side and the isolation valve should be closed during the bakeout cycle. Bakeouts can be scheduled during non-production time and regeneration of the synthetic zeolite will be dependent upon the amount of gas and water vapor introduced to the synthetic zeolite. Normal regeneration should be achieved in one to two hours.

Part Number	Port Style	A	B	C	D	E
MT-75	3/4″ OD tube	3/4″	4-1/2"	2"	1-5/8"	5-1/4"
MT-75-2-K	NW 16	3/4″	4-1/2"	2-3/16"	1-5/8"	5-1/4"
MT-75-2-MS	1-1/3" OD MET-SEAL	3/4″	4-1/2"	2-1/2"	1-5/8"	5-1/4"
MT-100	1" OD tube	1″	4-1/2"	2"	1-5/8"	5-1/4"
MT-100-2-K	NW 25	1″	4-1/2"	2-3/16"	1-5/8"	5-1/4"
MT-100-2-MS	2-1/8" OD MET-SEAL	1″	4-1/2"	2-3/16"	1-5/8"	5-1/4"
MT-150	1-1/2" OD tube	1-1/2″	4-1/2"	2"	2"	7-7/8"
MT-150-2-K	NW 40	1-1/2″	4-1/2"	2-3/16"	2"	7-7/8"
MT-150-2-MS	2-3/4" OD MET-SEAL	1-1/2″	4-1/2"	2-1/4"	2"	7-7/8"
MT-200	2" OD tube	2″	4-1/2"	2"	2"	7-7/8"
MT-200-2-K	NW 50	2″	4-1/2"	2-3/16"	2"	7-7/8"
MT-200-2-MS	3-3/8" OD MET-SEAL	2″	4-1/2"	2-1/4"	2"	7-7/8"
MT-250	2-1/2" OD tube	2-1/2″	4-1/2"	2"	2"	7-7/8"
MT-250-2-K	NW 63	2-1/2″	4-1/2"	2-1/4"	2"	7-7/8"
MT-250-2-MS	4-1/2" OD MET-SEAL	2-1/2″	4-1/2"	2-3/8"	2"	7-7/8"
MT-300	3" OD tube	3″	6"	2-1/2"	3"	10"
MT-300-2-K	NW 80	3″	6"	2-3/4"	3"	10"
MT-300-2-MS	4-5/8" OD MET-SEAL	3″	6"	2-3/4"	3"	10"
MT-400	4" OD tube	4″	8"	1-1/2"	4"	13"
MT-400-2-K	NW 100	4″	8"	1-3/4"	4"	13"
MT-400-2-MS	6" OD MET-SEAL	4″	8"	1-15/16"	4"	13"

Replacement Molecular Sieve Charges

Part Number	Use for
MT-100-MSC	MT-75 / MT-100
MT-150-MSC	MT-150 / MT-200 / MT-250
MT-300-MSC	MT-300
MT-400-MSC	MT-400

Replacement Cartridge Heaters

Part Number	Use for
J5A74	MT-75 / MT-100
J8A111	MT-150 / MT-200 / MT-250
J10A62	MT-300 / MT-400 (2 per)

MT Sizing Chart

Part Number	Use with CFM Pump	Heater 120v watts	Sieve charge
MT-75	2 to 8	75	.7 lbs
MT-100	2 to 8	75	.7 lbs
MT-150	8 to 20	120	1.1 lbs
MT-200	15 to 25	120	1.1 lbs
MT-250	20 to 30	120	1.1 lbs
MT-300	30 to 45	375	3.3 lbs
MT-400	50 to 75	375	4.7 lbs

Inline Assimilation Foreline Traps

Features:

- Rapid removal and installation of media
- Viton® O-ring and quick change clamp
- Eliminates hydrocarbon backstreaming
- Stainless steel type 304 body

Description:

The **SAT Series traps** offer a highly effective method of preventing mechanical pump vapors from backstreaming into the vacuum chamber. **SAT traps** are a two piece design that makes maintenance a quick operation. **SAT traps** use activated bronze wool media, which is held in place by a cartridge stainless steel screen that is recessed to allow maximum conductance while achieving high trapping efficiency. **SAT traps** are shipped complete with an activated bronze cartridge. **SAT traps** require no bakeout and are maintenance free. Stainless steel media can be provided by adding **"-SS"** to the suffix of the part number at no additional cost.

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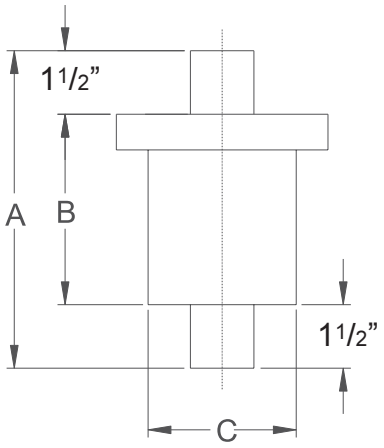
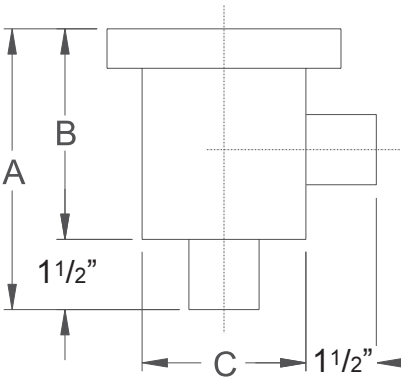
Part Number	Port Style	A	B	C
SAT-75	3/4" OD tube	6-1/2"	4-5/8"	3"
SAT-16	NW 16	6-3/4"	4-5/8"	3"
SAT-75-CF	1-1/3" OD MET-SEAL	7-1/2"	4-5/8"	3"
SAT-100	1" OD tube	6-1/2"	4-5/8"	3"
SAT-25	NW 25	6-3/4"	4-5/8"	3"
SAT-100-CF	2-3/4" OD MET-SEAL	7"	4-5/8"	3"
SAT-150	1-1/2" OD tube	6-7/8"	4-5/8"	4"
SAT-40	NW 40	7-1/8"	4-5/8"	4"
SAT-150-CF	2-3/4" OD MET-SEAL	6-5/16"	4-5/8"	4"
SAT-200	2" OD tube	9-3/4"	6-5/8"	6"
SAT-50	NW 50	10"	6-5/8"	6"
SAT-200-CF	3-3/8" OD MET-SEAL	10-1/2"	6-5/8"	6"
SAT-250	2-1/2" OD tube	13"	6-5/8"	6"
SAT-63	NW 63	13-1/2"	6-5/8"	6"
SAT-250-CF	4-1/2" OD MET-SEAL	13-3/4"	6-5/8"	6"
SAT-300	3" OD tube	13"	6-5/8"	6"
SAT-80	NW 80	13-1/2"	6-5/8"	6"
SAT-300-CF	4-5/8" OD MET-SEAL	13-3/4"	6-5/8"	6"
SAT-400	4" OD tube	13"	6-5/8"	6"
SAT-NW100	NW 100	13-1/2"	6-5/8"	6"
SAT-400-CF	6" OD MET-SEAL	13-3/4"	6-5/8"	6"
SAT-258	2-1/2" OD tube	13"	9-1/2"	8"
SAT-638	NW 80	13-1/2"	9-1/2"	8"
SAT-258-CF	4-1/2" OD MET-SEAL	13-3/4"	9-1/2"	8"
SAT-308	3" OD tube	13"	9-1/2"	8"
SAT-808	NW 80	13-1/2"	9-1/2"	8"
SAT-308-CF	4-5/8" OD MET-SEAL	13-3/4"	9-1/2"	8"
SAT-408	4" OD tube	13"	9-1/2"	8"
SAT-NW108	NW 100	13-1/2"	9-1/2"	8"
SAT-408-CF	6" OD MET-SEAL	13-3/4"	9-1/2"	8"
SAT-608	6" OD tube	13"	9-1/2"	8"
SAT-160	NW 160	13-1/2"	9-1/2"	8"
SAT-600-CF	8" OD MET-SEAL	13-3/4"	9-1/2"	8"





Assimilation Traps Right Angle

Part Number	Port Style	A	B	C
SAT-75-A	3/4" OD tube	5-1/2"	4-5/8"	3"
SAT-16-A	NW 16	5-3/4"	4-5/8"	3"
SAT-75-A-CF	1-1/3" OD MET-SEAL	6-1/8"	4-5/8"	3"
SAT-100-A	1" OD tube	5-1/2"	4-5/8"	3"
SAT-25-A	NW 25	5-3/4"	4-5/8"	3"
SAT-100-A-CF	2-3/4" OD MET-SEAL	5-3/4"	4-5/8"	3"
SAT-150-A	1-1/2" OD tube	5-3/4"	4-5/8"	4"
SAT-40-A	NW 40	6"	4-5/8"	4"
SAT-150-A-CF	2-3/4" OD MET-SEAL	6"	4-5/8"	4"
SAT-200-A	2" OD tube	8-1/8"	6-5/8"	6"
SAT-50-A	NW 50	8-1/2"	6-5/8"	6"
SAT-200-A-CF	3-3/8" OD MET-SEAL	8-1/2"	6-5/8"	6"
SAT-250-A	2-1/2" OD tube	8-1/2"	7"	6"
SAT-63-A	NW 63	8-1/2"	7"	6"
SAT-250-A-CF	4-1/2" OD MET-SEAL	8-1/2"	7"	6"
SAT-300-A	3" OD tube	8-1/2"	7"	6"
SAT-80-A	NW 80	8-1/2"	7"	6"
SAT-300-A-CF	4-5/8" OD MET-SEAL	8-1/2"	7"	6"
SAT-400-A	4" OD tube	8-1/2"	7"	6"
SAT-NW100-A	NW 100	8-1/2"	7"	6"
SAT-400-A-CF	6" OD MET-SEAL	8-1/2"	7"	6"
SAT-258-A	2-1/2" OD tube	11-1/2"	10"	8"
SAT-638-A	NW 80	11-1/2"	10"	8"
SAT-258-A-CF	4-1/2" OD MET-SEAL	11-1/2"	10"	8"
SAT-308-A	3" OD tube	11-1/2"	10"	8"
SAT-808-A	NW 80	11-1/2"	10"	8"
SAT-308-A-CF	4-5/8" OD MET-SEAL	11-1/2"	10"	8"
SAT-408-A	4" OD tube	11-1/2"	10"	8"
SAT-NW108-A	NW 100	11-1/2"	10"	8"
SAT-408-A-CF	6" OD MET-SEAL	11-1/2"	10"	8"
SAT-608-A	6" OD tube	11-1/2"	10"	8"
SAT-160-A	NW 160	11-1/2"	10"	8"
SAT-600-A-CF	8" OD MET-SEAL	11-1/2"	10"	8"

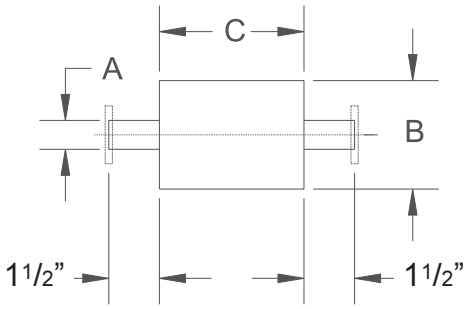
Assimilation Traps Replacement Filter Elements

Part Number	Trap Bodies	Media
RE-SAT-16	3" OD	Copper
RE-SAT-16-SS	3" OD	Stainless Steel
RE-SAT-150	4" OD	Copper
RE-SAT-150-SS	4" OD	Stainless Steel
RE-SAT-200	6" OD	Copper
RE-SAT-200-SS	6" OD	Stainless Steel
RE-SAT-800	8" OD	Copper
RE-SAT-800-SS	8" OD	Stainless Steel

Coaxial Foreline Traps

Features:

- Eliminates hydrocarbon backstreaming
- Stainless steel type 304 body
- Operates in position, no bakeout required
- Activated OFHC® copper media



Description:

The **CFT Series traps** are an effective design, which reduces mechanical pump backstreaming to the vacuum chamber. The activated OFHC® copper media is held in place by stainless steel screens which are recessed to allow maximum conductance while accomplishing high trapping effectiveness. Using **CFT Series traps** will result in a cleaner system that will endure longer operation cycles before service is necessary. **CFT traps** need no bakeouts or cooling and are maintenance free. Stainless steel media can be provided by adding **"-SS"** to the suffix of the part number at no additional cost.

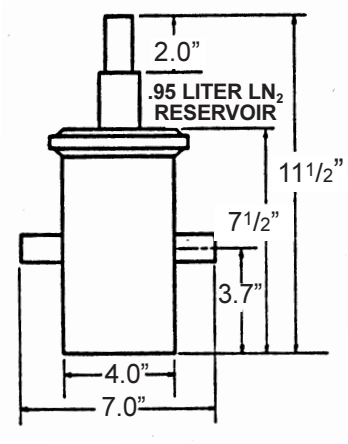
Part Number	Port Style	A	B	C
CFT-75	3/4” OD tube	.75	4.00	4.50
CFT-75-2-K	NW 16	.75	4.00	4.50
CFT-75-2-MS	1-1/3" OD MET-SEAL	.75	4.00	4.50
CFT-100	1" OD tube	1.00	4.00	4.50
CFT-100-2-K	NW 25	1.00	4.00	4.50
CFT-100-2-MS	2-1/8" OD MET-SEAL	1.00	4.00	4.50
CFT-150	1-1/2" OD tube	1.50	4.00	4.50
CFT-150-2-K	NW 40	1.50	4.00	4.50
CFT-150-2-MS	2-3/4" OD MET-SEAL	1.50	4.00	4.50
CFT-200	2" OD tube	2.00	4.00	4.50
CFT-200-2-K	NW 50	2.00	4.00	4.50
CFT-200-2-MS	3-3/8" OD MET-SEAL	2.00	4.00	4.50
CFT-250	2-1/2” OD tube	2.50	4.00	4.50
CFT-250-2-K	NW 63	2.50	4.00	4.50
CFT-250-2-MS	4-1/2" OD MET-SEAL	2.50	4.00	4.50
CFT-300	3" OD tube	3.00	4.00	4.50
CFT-300-2-K	NW 80	3.00	4.00	4.50
CFT-300-2-MS	4-5/8" OD MET-SEAL	3.00	4.00	4.50
CFT-400	4" OD tube	4.00	6.00	4.50
CFT-400-2-K	NW 100	4.00	6.00	4.50
CFT-400-2-MS	6" OD MET-SEAL	4.00	6.00	4.50

Foreline Traps; Liquid Nitrogen

- *Two piece clamped body design*
- *Removable liquid nitrogen reservoir*
- *Traps all condensable vapors*
- *Stainless steel type 304 construction, viton® o-ring*

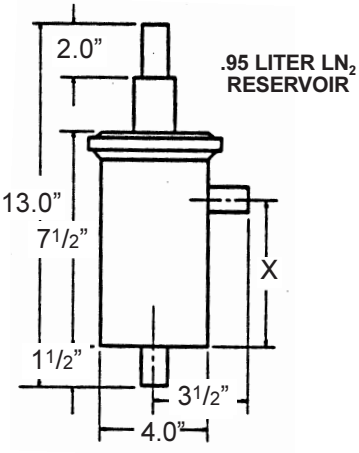
Description:

LNT Series liquid nitrogen refrigerant traps offer an extremely effective method for trapping all condensable vapors, which results in no backstreaming and a removal of corrosive gases before they can enter the mechanical pump. **LNT traps** are extremely effective at water vapor capture. The nitrogen reservoir acts as a pump itself, which results in a quicker pump down of the vacuum vessel. The quick clamp design allows for quick cleaning of the reservoir without removing the trap itself from the vacuum system.



4" Inline LN2 Refrigerant Traps

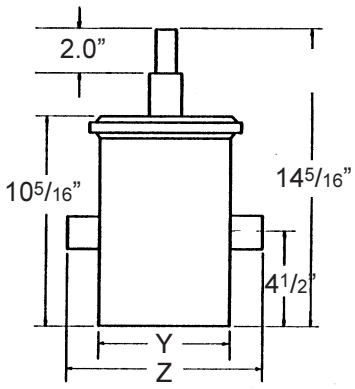
Part Number	Port Style
LNT-4-75	3/4” OD tube
LNT-4-75-K	NW 16
LNT-4-75-CF	1-1/3" OD MET-SEAL
LNT-4-100	1" OD tube
LNT-4-100-K	NW 25
LNT-4-100-CF	2-3/4" OD MET-SEAL
LNT-4-150	1-1/2" OD tube
LNT-4-150-K	NW 40
LNT-4-150-CF	2-3/4" OD MET-SEAL



4" Right Angle LN2 Refrigerant Traps

Part Number	Port Style	X
LNTA-4-75	3/4” OD tube	5.50
LNTA-4-75-K	NW 16	5.50
LNTA-4-75-CF	1-1/3" OD MET-SEAL	5.50
LNTA-4-100	1" OD tube	5.40
LNTA-4-100-K	NW 25	5.40
LNTA-4-100-CF	2-3/4" OD MET-SEAL	5.40
LNTA-4-150	1-1/2" OD tube	5.40
LNTA-4-150-K	NW 40	5.40
LNTA-4-150-CF	2-3/4" OD MET-SEAL	5.40

6" & 8" Inline LN2 Refrigerant Traps



Part Number	Port Style	Y	Z
LNT-6-150	1-1/2" OD tube	6"	9.00
LNT-6-150-K	NW 40	6"	9.50
LNT-6-150-CF	2-3/4" OD MET-SEAL	6"	9.50
LNT-6-200	2" OD tube	6"	9.00
LNT-6-200-K	NW 50	6"	9.50
LNT-6-200-CF	3-3/8" OD MET-SEAL	6"	9.50
LNT-6-200-ASA	5" OD ASA flange	6"	9.50
LNT-6-250	2-1/2" OD tube	6"	9.00
LNT-6-250-ISO	NW 63	6"	9.50
LNT-6-250-CF	4-1/2" OD MET-SEAL	6"	9.75
LNT-6-250-ASA	5" OD ASA flange	6"	9.75
LNT-6-300	3" OD tube	6"	9.00
LNT-6-300-ISO	NW 80	6"	9.50
LNT-6-300-CF	4-5/8" OD MET-SEAL	6"	9.75
LNT-6-300-ASA	6" OD ASA flange	6"	9.75
LNT-8-400	4" OD tube	8"	11.00
LNT-8-400-ISO	NW 100	8"	9.50
LNT-8-400-CF	6" OD MET-SEAL	8"	10.00
LNT-8-400-ASA	7-1/2” OD ASA flange	8"	10.00

LNT-6 Reservoir is 1.51 Liters, LNT-8 Reservoir is 3.31 Liters

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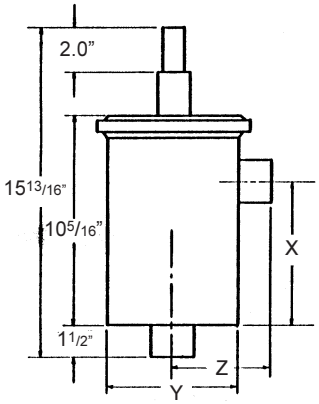
6" & 8" Right Angle LN2 Refrigerant Traps



Part Number	Port Style	X	Y	Z
LNTA-6-150	1-1/2" OD tube	6.75	6.00	4.50
LNTA-6-150-K	NW 40	6.75	6.00	5.00
LNTA-6-150-CF	2-3/4" OD MET-SEAL	6.75	6.00	5.00
LNTA-6-200	2" OD tube	6.50	6.00	4.50
LNTA-6-200-K	NW 50	6.50	6.00	5.00
LNTA-6-200-CF	3-3/8" OD MET-SEAL	6.50	6.00	5.00
LNTA-6-200-ASA	5" OD ASA flange	6.50	6.00	5.00
LNTA-6-250	2-1/2" OD tube	6.25	6.00	4.50
LNTA-6-250-ISO	NW 63	6.25	6.00	5.00
LNTA-6-250-CF	4-1/2" OD MET-SEAL	6.25	6.00	5.25
LNTA-6-250-ASA	5" OD ASA flange	6.25	6.00	5.25
LNTA-6-300	3" OD tube	6.00	6.00	4.50
LNTA-6-300-ISO	NW 80	6.00	6.00	5.00
LNTA-6-300-CF	4-5/8" OD MET-SEAL	6.00	6.00	5.25
LNTA-6-300-ASA	6" OD ASA flange	6.00	6.00	5.25
LNTA-8-400	4" OD tube	6.00	8.00	5.50
LNTA-8-400-ISO	NW 100	6.00	8.00	6.00
LNTA-8-400-CF	6" OD MET-SEAL	6.00	8.00	7.00
LNTA-8-400-ASA	7-1/2” OD ASA flange	6.00	8.00	7.00

Approximate Liquid Nitrogen Reservoir holding times before refilling; individual results may vary.
LNT / LNTA-4 = 12 hours, LNT / LNTA-6 = 16 hours, LNT / LNTA-8 = 24 hours
LNTA-6 Reservoir is 1.51 Liters, LNTA-8 Reservoir is 3.31 Liters

Water Cooled Foreline Traps

- *Two piece clamped body design*
- *Angle and Inline port configurations*
- *High conductance*
- *Stainless steel type 304 construction*

Description:

WCT Series water-cooled traps offer an extremely effective high capacity method for trapping condensable gas vapors in the foreline using refrigerated water. This method will reduce condensable effluent and increase the process tool uptime.

The **WCT / WCTA Series** traps draw in condensable gas vapors and solidifies them before these gases can backstream, or damage the mechanical pump. **KEY'S** water-cooled traps have a stainless steel sieve material, which is put into contact with the cooling coils for an even higher surface area. This design gives **KEY** traps an approximate 10X greater performance rating.

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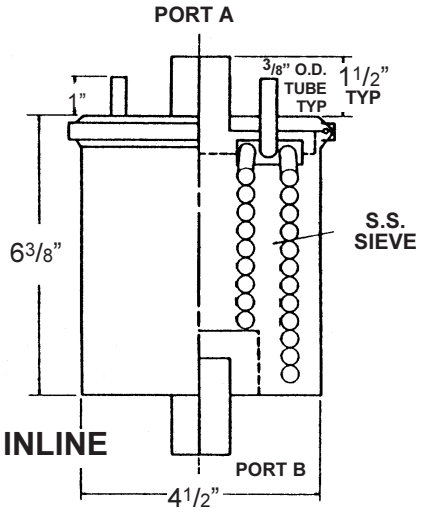
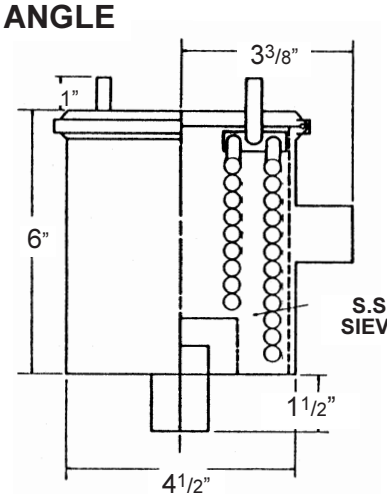


4-1/2" Inline Water-Cooled Traps

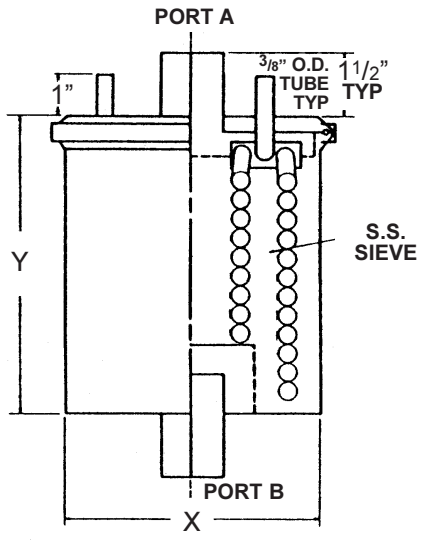
Part Number	Port Style
WCT-4.5-150	1-1/2" OD tube
WCT-4.5-150-K	NW 40
WCT-4.5-150-CF	2-3/4" OD MET-SEAL
WCT-4.5-200	2" OD tube
WCT-4.5-200-K	NW 50
WCT-4.5-200-CF	3-3/8" OD MET-SEAL
WCT-4.5-200-ASA	5" OD ASA flange

ANGLE



4-1/2" Right Angle Water-Cooled Traps

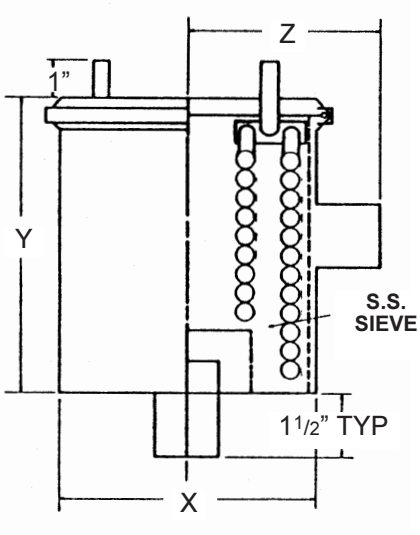
Part Number	Port Style
WCTA-4.5-150	1-1/2" OD tube
WCTA-4.5-150-K	NW 40
WCTA-4.5-150-CF	2-3/4"" OD MET-SEAL
WCTA-4.5-200	2" OD tube
WCTA-4.5-200-K	NW 50
WCTA-4.5-200-CF	3-3/8" OD MET-SEAL
WCTA-4.5-200-ASA	5" OD ASA flange



INLINE

6" & 8" Inline Water-Cooled Traps

Part Number	Port Style	X	Y
WCT-6-150	1-1/2" OD tube	6"	7.00
WCT-6-150-K	NW 40	6"	7.00
WCT-6-150-CF	2-3/4" OD MET-SEAL	6"	7.00
WCT-6-200	2" OD tube	6"	7.00
WCT-6-200-K	NW 50	6"	7.00
WCT-6-200-CF	3-3/8" OD MET-SEAL	6"	7.00
WCT-6-200-ASA	5" OD ASA flange	6"	7.00
WCT-6-250	2-1/2" OD tube	6"	7.00
WCT-6-250-ISO	NW 63	6"	7.00
WCT-6-250-CF	4-1/2" OD MET-SEAL	6"	7.00
WCT-6-250-ASA	5" OD ASA flange	6"	7.00
WCT-6-300	3" OD tube	6"	7.00
WCT-6-300-ISO	NW 80	6"	7.00
WCT-6-300-CF	4-5/8" OD MET-SEAL	6"	7.00
WCT-6-300-ASA	6" OD ASA flange	6"	7.00
WCT-8-400	4" OD tube	8"	10.00
WCT-8-400-ISO	NW 100	8"	10.00
WCT-8-400-CF	6" OD MET-SEAL	8"	10.00
WCT-8-400-ASA	7-1/2" OD ASA flange	8"	10.00



ANGLE

6" & 8" Right Angle Water-Cooled Traps

Part Number	Port Style	X	Y	Z
WCTA-6-150	1-1/2" OD tube	6.00	7.00	4.50
WCTA-6-150-K	NW 40	6.00	7.00	4.50
WCTA-6-150-CF	2-3/4" OD MET-SEAL	6.00	7.00	4.50
WCTA-6-200	2" OD tube	6.00	7.00	4.50
WCTA-6-200-K	NW 50	6.00	7.00	4.50
WCTA-6-200-CF	3-3/8" OD MET-SEAL	6.00	7.00	4.50
WCTA-6-200-ASA	5" OD ASA flange	6.00	7.00	4.50
WCTA-6-250	2-1/2" OD tube	6.00	7.00	4.50
WCTA-6-250-ISO	NW 63	6.00	7.00	4.50
WCTA-6-250-CF	4-1/2" OD MET-SEAL	6.00	7.00	4.50
WCTA-6-250-ASA	5" OD ASA flange	6.00	7.00	4.50
WCTA-6-300	3" OD tube	6.00	7.00	4.50
WCTA-6-300-ISO	NW 80	6.00	7.00	4.50
WCTA-6-300-CF	4-5/8" OD MET-SEAL	6.00	7.00	4.50
WCTA-6-300-ASA	6" OD ASA flange	6.00	7.00	4.50
WCTA-8-400	4" OD tube	8.00	10.00	6.50
WCTA-8-400-ISO	NW 100	8.00	10.00	6.50
WCTA-8-400-CF	6" OD MET-SEAL	8.00	10.00	6.50
WCTA-8-400-ASA	7-1/2" OD ASA flange	8.00	10.00	6.50

Replacement Foreline Trap Clamps and Seals

3" OD trap body hardware

Part Number	Description
540-4	Body Clamp
VOR150	Viton O-ring

4" OD trap body hardware

Part Number	Description
13MHHM-4	Body Clamp
VOR244	Viton O-ring

4-1/2" OD trap body hardware

Part Number	Description
89510K	Body Clamp
VOR245	Viton O-ring

6" OD trap body hardware

Part Number	Description
13MHHM-6	Body Clamp
VOR163	Viton O-ring

8" OD trap body hardware

Part Number	Description
540-8	Body Clamp
VOR266	Viton O-ring

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Note:

All foreline traps manufactured by **KEY HIGH VACUUM PRODUCTS, INC.** are available with the option of a 1/8" female NPT port. Typically the port is located on the bottom of the trap and is used to install thermocouple gauges, drain cocks, etc.. Add **-1/8FNPT** to suffix of trap part number and fax or e-mail a sketch showing the required location. There is a nominal $ 65.00 charge for each requested port and all ports are "plugged" with a stainless steel male NPT plug before shipment.

Foreline (Inlet) Filters

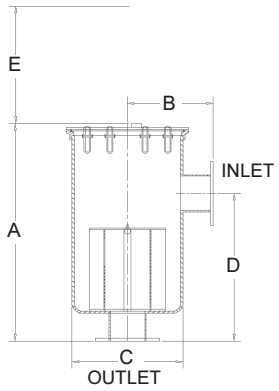
- *High Flow Design*
- *Low Pressure Drop*
- *Large Dirt Holding Capacity*
- *ASA Flanged Inlet / Outlet*

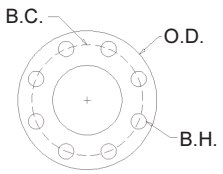
Description:

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 contaminates 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 then 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
LPTA-4★	9" OD	27-1/8"	9"	14"	18-1/2"	15"	520
LPTA-6★	11" OD	29-1/8"	12"	18-/2"	20-1/2"	15"	1100
LPTA-8★	13-1/2" OD	38"	14"	22-1/2"	25-1/2"	20"	1800

★ = New Product

Replacement Polyester Cartridges

Part Number	Use With
RF-4★	LPTA-4
RF-6★	LPTA-6
RF-8★	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 contaminates 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 then 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 ¼" female NPT ports which are located on the inlet and outlet ports allowing the use of gauges, should the need arise.

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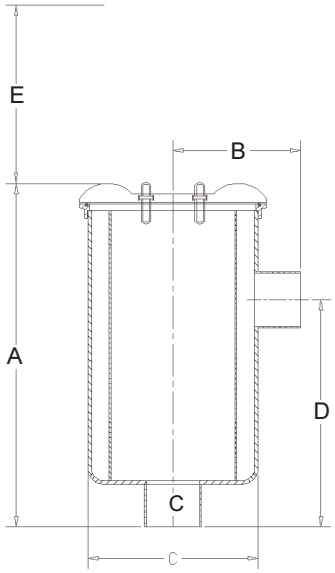


Part Number	ASA Port	A	B	C	D	E	SCFM Rating
SPTA-1-FNPT★	1/2" FNPT	4-3/8"	2-1/4"	5-7/8"	1-7/8"	3"	18
SPTA-2-FNPT★	3/4" FNPT	3-3/4"	2-1/4"	5-7/8"	2-1/2"	3-1/4"	25
SPTA-3-FNPT★	1" FNPT	6-3/4"	4-1/8"	7-5/16"	4-1/2"	5-1/4"	40
SPTA-4-FNPT★	1-1/2" FNPT	6-3/4"	4-1/8"	7-5/16"	4-1/2"	5-1/4"	80

★ = New Product

Replacement Polyester Cartridges

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

★ = New Product

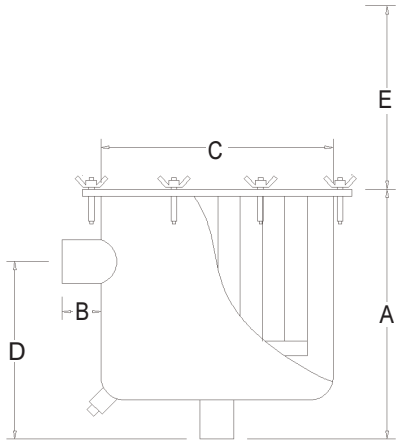
- *Large Holding Capacity*
- *Easy Field Maintained*
- *99% Efficiency*
- *Low Back Pressure Elements*

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 then 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 ¼" 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

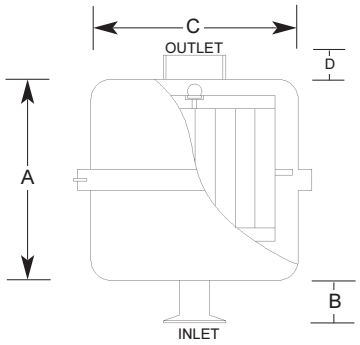
★ = New Product

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

★ = New Product

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 (½ 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
ILME-16★	NW 16	4-5/15"	7/8"	3-1/4"	7/8"	10
ILME-25★	NW 25	7-3/8"	7/8"	5-1/4"	7/8"	20

★ = New Product

5

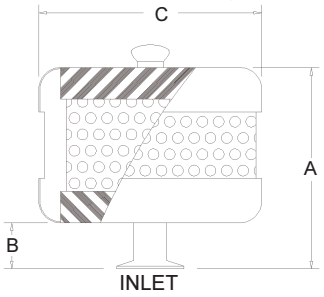
Replacement Fiberglass Cartridges for ILME

Part Number	Use With
RF-ILME-16★	ILME-16
RF-ILME-25★	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
SAME-1★	¾"-20 thread	3-1/4"	1"	2-1/2	4
SAME-2★	1"-20 thread	5"	7/8"	2-1/2"	7
SAME-3★	1-3/4"-20 thread	8-7/8"	1-3/4"	5-1/8"	24
SAME-NW16★	NW 16	4-1/2"	7/8"	2-1/2"	4.5
SAME-NW25★	NW 25	9-1/4"	2-1/8"	5-1/8"	24
SAME-NW40★	NW 40	9-1/4"	2-1/8"	10-1/4"	55

★ = New Product

Replacement Fiberglass Cartridges for SAME

Part Number	Use With
RF-SAME-1★	SAME-1
RF-SAME-2★	SAME-2
RF-SAME-3★	SAME-3
RF-SAME-NW16★	SAME-NW16
RF-SAME-NW25★	SAME-NW25
RF-SAME-NW40★	SAME-NW40

★ = New Product