

VACU-SHIELD TRAPS AND FILTERS

DRY ICE COLD TRAP

The Dry Ice Cold Trap mixes dry ice and isopropyl alcohol to produce an extremely cold slurry that traps condensable vapors in low vacuum or during initial evacuation of a vacuum system.



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Product Features

Dry-Ice Traps are extremely effective for applications whose base pressure is 1 milliTorr or higher.

They utilize a process called cryopumping, which is where molecules, in kinetic or transitional flow, come into brief random contact with the trap's cold surface. During each collision, the molecule gives up part of its kinetic energy to the cold wall. Eventually, the molecule becomes stuck to the cold surface.

The trap holds 3 quarts of dry-ice slurry (dry-ice and alcohol). Holding time is approximately 20 hours depending on vacuum throughput.

The stainless steel well is visible during operation and defrost/clean up is easily accomplished.

Trapping Media: Stainless steel well

Pump protection from water and condensable vapor

Trapping system: Mixture of dry-ice and alcohol to trap condensable vapors in low vacuum or during initial evacuation of your vacuum system.

Electropolished body: eases cleaning, deflects heat and reduces iron concentration on trap surfaces; increases corrosion resistance

Clear, loose fitting lid: see through design allows quick checks on condition of cold media. Provides a simple vent for sublimating carbon dioxide and prevents "unsafe" pressure build up

Clear view ring: see through design allows a quick visual check on condition of cold surface. Visually determine cold surface needs to be cleaned due to ice bridges and pump lubricant deposition

Multiple connection options: ISO-QF, hose end, and others upon request

THE ROLE OF TEMPERATURE

The temperature of the dry ice/isopropanol slurry (-77° C) determines the temperature of the cold wall. The temperature of the cold wall determines the ambient temperature and, ultimately, the achievable base pressure. The effective base pressure achievable by a cold trap is determined by the highest vapor pressure of the condensable gases being pumped.

	Liquid Nitrogen	Dry Ice
Temperature	77K (-196° C)	195K (-78°C)
Vapor Pressure of Water at Temperature (Torr)	10 ⁻¹² Torr	10 ⁻³ Torr

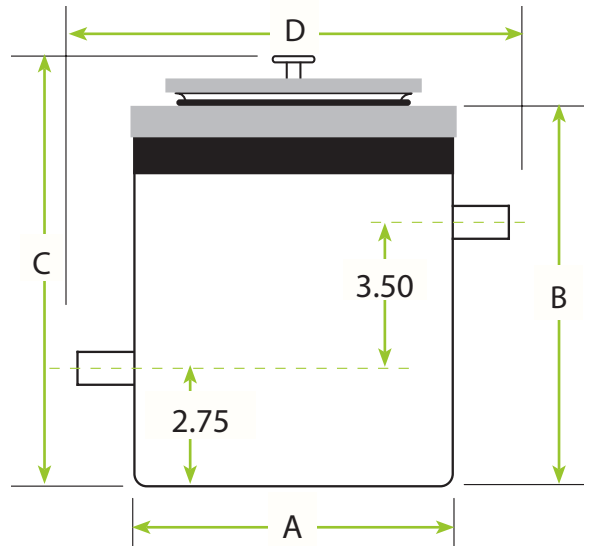
Note: Vapor pressures provided are nominal values only. Exact values can be found in the *Handbook of Chemistry and Physics*.

Connection Options

Dry Ice Cold Traps feature two connection options: Tube Port and ISO-QF Connections.

TUBE END CONNECTIONS

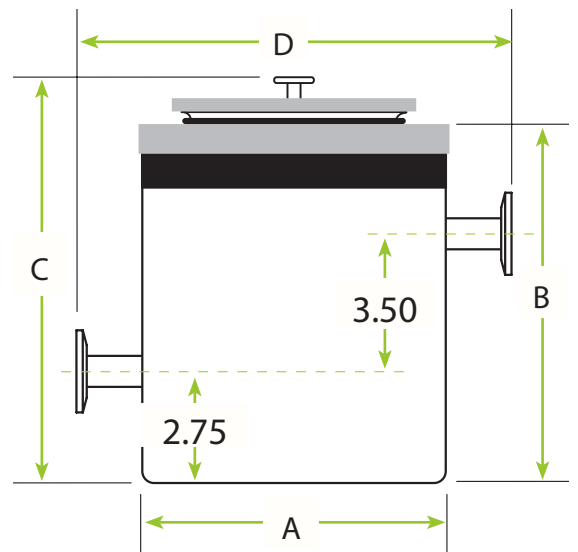
- Port Terminations : Tube End
- Electropolished wetted surfaces: facilitates cleaning and servicing, promotes system cleanliness, and deflects heat to minimize frequency of media change-outs.
- Clear, loose fitting lid: See through design allows a quick check on condition of cold media. Loose fitting lid provides a simple vent for sublimating carbon dioxide and prevents "unsafe" pressure build up.
- Clear view ring: See through design allows a quick visual check on condition of cold surface.
- Media: Use dry ice and isopropanol slurry for maximum cold trapping effect



PART #	REFERENCE ID	TUBE END CONNECTION	TRAPPING MEDIA	HOUSING DIAMETER A	BODY HEIGHT B	OVERALL HEIGHT C	OVERALL WIDTH D
7500420	VSDI-800-050	0.50	Dry Ice	7.88	9.00	10.50	10.70
7500421	VSDI-800-075	0.75	Dry Ice	7.88	9.00	10.50	10.70

ISO-QF CONNECTIONS

- Port Terminations : ISO-QF
- Electropolished wetted surfaces: facilitates cleaning and servicing, promotes system cleanliness, and deflects heat to minimize frequency of media change-outs.
- Clear, loose fitting lid: See through design allows a quick check on condition of cold media. Loose fitting lid provides a simple vent for sublimating carbon dioxide and prevents "unsafe" pressure build up.
- Clear view ring: See through design allows a quick visual check on condition of cold surface.
- Media: Use dry ice and isopropanol slurry for maximum cold trapping effect



PART #	REFERENCE ID	TUBE END CONNECTION	TRAPPING MEDIA	HOUSING DIAMETER A	BODY HEIGHT B	OVERALL HEIGHT C	OVERALL WIDTH D
7500422	VSDI-800-QF16	QF16	Dry Ice	7.88	9.00	10.50	11.00
7500423	VSDI-800-QF25	QF25	Dry Ice	7.88	9.00	10.50	11.00
7500424	VSDI-800-QF40	QF40	Dry Ice	7.88	9.00	10.50	11.00

Replacement Media for Dry Ice Traps

ANCORP offers a wide selection of replacement media including Buna, Viton, and EPDM seal kits, acrylic viewing rings, acrylic lids, DEWAR plug kits, and stainless steel wells.

PART #	REFERENCE ID	DESCRIPTION
7510400	VSDI-800-BSK	Replacement Seal Kit - Buna
7510401	VSDI-800-VSK	Replacement Seal Kit - Viton
8751421	VSDI-800-ESK	Replacement Seal Kit - EPDM
7510410	VSDI-800-VR	Replacement Acrylic Viewing Ring
7510403	VSDI-800-LA	Replacement Acrylic Lid
7510476	VSC-DPK-L	DEWAR Plug Kit for - Size 5.0 Liter
7510415	VSDI-800-W	Replacement Stainless Steel Well



For any further questions regarding LN₂ cold traps, contact an ANCORP representative by email at sales@ancorp.com or by telephone at **1-800-FLANGE1**.