



SP FTS Vapor Trap

Trap Vapors Efficiently Before Reaching Vacuum Pumps
To $-90\text{ }^{\circ}\text{C}$, Without LN_2 Or Dry Ice



Features & Benefits

- Mechanical refrigeration eliminates the cost and potential hazards associated with dry ice and LN_2
- Small footprint saves space
- $-50\text{ }^{\circ}\text{C}$ or $-90\text{ }^{\circ}\text{C}$ trapping temperatures
- Efficient removal of heat
- 2, 4, or 8 liter capacity
- Digital temperature readout with simple, one-touch operation

Applications

- Vacuum pump protection
- Parylene coating
- Chemical vapor deposition
- Vacuum oven and dryer integration

SP FTS Vapor Trap is a mechanically refrigerated cold trap that protects expensive vacuum pumps from harmful vapors which can shorten their life.

Harmful vapors constitute any condensable gases such as water vapor, which, when allowed into the vacuum pump oil, cause it to break down. This results in decreased lubrication and can eventually cause failure of the pump. In addition, Vapor Trap eliminates the expense and potential hazards associated with the refilling and monitoring of LN_2 or dry ice traps.

Vapor Trap consists of a well-insulated stainless steel chamber cooled by direct expansion of refrigerant in refrigeration lines directly bonded to the outside of the chamber walls. This method of refrigeration is a highly efficient and energy-saving means of heat removal. Vapor Trap is available with operating temperatures of $-50\text{ }^{\circ}\text{C}$ or $-90\text{ }^{\circ}\text{C}$.

Vapors enter the chamber through a port in the vacuum top plate. While the vapors circulate in the chamber, they strike the sides and are frozen on the low-temperature of the chamber wall. The system will trap all condensable vapors with freezing points higher than the operating temperature of Vapor Trap. Non-condensable vapors and gases are evacuated through a second port in the lid by the vacuum pump. Traps are rated to accommodate vacuum pump flow rates of up to 250 liters per minute (9 cfm).

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Model Specifications

Description	VT255	VT455	VT490	VT890
Maximum Low Temperature °C	-50	-50	-90	-90
Chamber Volume (liters) ¹	2	4	4	8
Trapping Rate (liters/24 hours)	1	3	3	5
Compressor	1/4 hp	1/3 hp	Two @ 1/4 hp	Two @ 1/4 hp
Indication °C	-	1	1	1
Dimensions (w x d x h) in cm	10.5 x 20.5 x 11 26.7 x 52.1 x 27.9	19 x 24 x 13 48.3 x 61 x 33	19 x 24 x 13 48.3 x 61 x 33	19 x 24 x 13 48.3 x 61 x 33
Weight lbs kg	55 25	55 25	85 39	85 39
Electrical ²	120V/60Hz/4A	120V/60Hz/4A	120V/60Hz/7A	120V/60Hz/7A

¹Vapor Traps do not include tops; lids sold separately.

²220 V/50 Hz also available; decreases heat removal by 17%

Top Plates & Liners

Description	OD Inlet	OD Outlet	Capacity	Plate/Liner
Stainless Steel Vacuum Top Plate	1.90 cm (3/4 in)	1.59 cm (5/8 in)	2L	SSVT2
			4L	SSVT4
			8L	SSVT8
Stainless Steel Vacuum Top Plate, NW25	25.4 cm (1 in)	2.54 cm (1 in)	4L	SSVT4-NW25
			8L	SSVT8-NW25
Glass Vacuum Top Plate (Safety Coated)	1.27 cm (1/2 in)	1.27 cm (1/2 in)	2L	TTGT2
			4L	TTGT4
			8L	TTGT8
Glass Liner With Copper Mesh Heat Transfer Jacket, Titanium Down Tube	1.27 cm (1/2 in)	1.27 cm (1/2 in)	2L	CRC2
			4L	CRC4



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