

refrigerated vapor trap for vacuum concentration apparatus

Refrigerated vapor trap is a kind of auxiliary condensing equipment supporting the vacuum system, widely used in vacuum drying, decompression evaporation, concentration recovery and other experiments and industrial processes.

Refrigerated Vapor Trap

The refrigerated vapor trap intercepts water vapor and organic solvent vapors released from reaction systems through efficient condensation technology, preventing these gases from entering the vacuum pump. This enhances system stability, operating efficiency, and extends the pump's service life.

Features

1. **High-Efficiency Condensation Design:** Selectable direct or indirect cooling structure for various experimental needs.
2. **Corrosion-Resistant Chamber Materials:** Made of high-quality stainless steel, suitable for aqueous and organic solvent conditions.
3. **Intelligent Temperature Control:** Digital display for real-time tank temperature monitoring and precise condensation control.



4. **Comprehensive Safety Protection:** Built-in delayed start, overcurrent, and overheating protection for safe operation.
5. **Compact and Mobile:** Small footprint with brake-equipped casters for easy movement and fixation.
6. **Easy Maintenance:** Bottom drain valve for convenient liquid discharge and cleaning.
7. **No Consumable Refrigerants Needed:** Mechanical refrigeration system; no need for dry ice or liquid nitrogen, ensuring low cost and simple operation.

Working Principle

The core principle is low temperature condensation. Vapors from the vacuum system are introduced into a cooled chamber, where they condense into liquid at the set temperature and collect at the bottom, protecting the vacuum pump and enabling solvent recovery. This supports environmental protection and energy saving.

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Model	VT10	VT10C	VT20	VT20C
No-load minimum temperature	-40°C		-80°C	
trapping method	Direct cooling	indirect cooling	Direct cooling	indirect cooling

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Model	VT10	VT10C	VT20	VT20C
safety protection	Delay, overcurrent, overheat			
refrigerants	R404A		R404A, R23	
Bath size	diameter 219x325mm	diameter 250x250mm	diameter 219x325mm	diameter 250x250mm
Bath volume	12			
Bath material	SUS304 stainless steel			
Vacuum connection size	line diameter 12mm hose connector			
Operating temperature range	5°C to 35°C			
protection class	IP20			
contamination level	2			

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Model	VT10	VT10C	VT20	VT20C
Power supply	220-240Vac, 50Hz			
External Dimension	573Wx583Dx1053H mm	537Wx579Dx1094H mm	530Wx730Dx1388H mm	约 506Wx730Dx1415H mmm
Weight	85kg		120kg	
Water gas trap bottle bottle size		diameter 50x300 mm		diameter 50x300 mm
Water and gas trap bottle material		3.3 Borosilicate Glass		3.3 Borosilicate Glass
Number of water gas trap bottles		3 pieces		3 pieces