



COLD TRAP

Cold traps are commonly used for capturing and condensing vapors, protecting vacuum systems, and enhancing the efficiency of freeze-drying, vacuum distillation, and other processes. These devices are widely used in laboratories, research facilities, and industrial applications to ensure optimal performance and safeguard sensitive equipment. By efficiently condensing volatile substances, cold traps prevent contamination, reduce vacuum pump wear, and improve overall system reliability.

APPLICATIONS

Applications of Cold Traps

Cold traps are versatile and play a critical role in a variety of fields, including:

1. **Freeze-Drying:** Used in conjunction with freeze dryers to capture sublimated moisture and prevent damage to vacuum pumps.
2. **Vacuum Systems:** Protect vacuum pumps by trapping vapors, oils, and other condensable materials, ensuring system longevity and performance.
3. **Chemical Processing:** Aid in condensing solvents and other volatile chemicals during distillation and reaction processes.
4. **Cryogenic Research:** Capture and isolate gases or vapors for analysis in low-temperature experimental setups.



Torontech's Cold Trap Solutions

Torontech offers a range of high-quality **cold traps** designed to meet the demands of laboratory and industrial environments:

1. **High-Efficiency Cold Traps:** Deliver superior cooling performance for rapid vapor condensation.
2. **Durable and Compact Designs:** Built with robust materials, Torontech's cold traps ensure long-lasting reliability while conserving valuable workspace.
3. **Customizable Configurations:** Tailored solutions to fit specific system requirements, ensuring seamless integration and optimal performance.

Torontech's **cold traps** are engineered with advanced cooling technology, ensuring maximum efficiency and protection for your vacuum systems. Whether you're conducting research, processing chemicals, or managing freeze-drying operations, our cold traps provide reliable performance and peace of mind.

Explore Torontech's range of **cold traps** to enhance the efficiency and safety of your processes.

FEATURES

- Functions as a pre-freezing or low-temperature tank.
- Offers two cooling methods: direct cooling and indirect cooling.
- The 304 stainless steel cold trap is suitable for water and ethanol experiments, while the glass condenser is ideal for acid and organic solvent experiments.
- Displays cold trap temperature, allowing easy monitoring of temperature changes.

THEORY & METHOD

Cold Trap captures water vapor and harmful gases released by vacuum drying ovens or vacuum concentrators. This enhances vacuum pump performance while minimizing the release of harmful gases into the atmosphere. It is also effective in drying systems for capacitors, battery electrodes, and battery cores.

Cold Trap



TT-CT-40x (Direct cooling)



TT-CT-40 (Indirect cooling)

TECHNICAL SPECIFICATIONS

Specification	Details
Model	TT-CT-40x
Capture Method	Direct cooling
No-Load Minimum Temperature	-40°C
Cold Trap Size	φ160 × 250 mm
Cold Trap Capacity	5 L
Cold Trap Material	06Cr19Ni10
Vacuum Nozzle	KF25
Safety Features	Delay, over-current, over-heat, over-pressure
Refrigerant	R404A
Ambient Temperature Range	5°C to 35°C
Dimensions	388 W × 454 D × 781 H mm
Net Weight	48 kg
Power Supply	220-240V~, 50Hz
Protection Grade	IP20

Specification	Details
Model	TT-CT-40
Capture Method	Indirect cooling
No-Load Minimum Temperature	-40°C
Cold Trap Size	φ160 × 250 mm
Cold Trap Capacity	5 L
Cold Trap Material	06Cr19Ni10
Cold Trap Bottle Size	Φ50 × 300 mm
Vacuum Nozzle	φ12 hose connector
Cold Trap Material	3.3 borosilicate glass
Number of Cold Trap Bottles	3
Safety Features	Delay, over-current, over-heat, over-pressure
Refrigerant	R404A
Ambient Temperature Range	5°C to 35°C
Dimensions	350 W × 470 D × 800 H mm
Net Weight	45 kg
Voltage	220-240V~, 50Hz
Protection Grade	IP20



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