



Cascade
Sciences

Supplemental Installation & Operation Manual

THE COLDWELL Stainless Steel Cold Trap

For use with Labconco CentriVap cold traps

KF25 Connections



INTRODUCTION

Locations and Applications Range

This cold trap is intended for professional, industrial, and educational applications. They are not intended for use at hazardous or household locations.

This is a supplemental manual that is designed to be read in conjunction with mechanical operation manual provided with base unit. This addendum will cover the installation, maintenance, and cleaning of the ColdWell unit – the stainless-steel reservoir inside the refrigerated unit.

Before use, read this manual in its entirety to understand how to install, operate, and maintain the unit in a safe manner. Keep this manual available for use by all operators. Ensure all operators are given appropriate training before the unit begins service.

General Safety Considerations

Failure to follow the guidelines and instructions in this manual may create a protection impairment by disabling or interfering with unit safety features. This can result in damage to the unit and injury, death, or negative effects.

- Follow all national laws, regulations, and local ordinances in your area regarding the use of this unit type and the applications you are using it for. If you have any questions about national and local requirements, please contact the appropriate agencies.
- Because of the range of potential applications this unit can be used for, the operator or their supervisors must draw up a site-specific standard operating procedure (SOP) covering each application and associated safety guidelines. This SOP must be written and available to all operators in a language they understand.
- Use only approved accessories. Do not modify system components. Any alterations or modifications to your oven can be dangerous and void your warranty.

Engineering Improvements

Cascade Sciences continually improves all of its products. As a result, engineering changes and improvements are made from time to time. Therefore, some changes, modifications, and improvements may not be covered in this manual. If your unit's operating characteristics or appearance differs from those described in this manual, please contact your oven dealer or customer service representative for assistance.

CONTACTING ASSISTANCE

If you need technical assistance, please contact Cascade Sciences Technical Support.

Please have the following information ready when calling or emailing Technical Support:

The **model number** and the **serial number**

503-847-9047

info@cascaDESCIENCES.COM

Cascade Sciences

6725 NE Evergreen Pkwy #106

Hillsboro OR, 97124

RECORDING DATA PLATE INFORMATION

Locate the data plate on the back of the oven next to the power inlet. The data plate contains the oven model number and serial number. Enter this information below for future reference.

Data Plate Information

Model Number	
Serial Number	

RECEIVING YOUR MAXTRAP

INSPECT THE SHIPMENT!

This merchandise was carefully packed and thoroughly inspected before leaving our factory.

As soon as items are received from carrier please inspected for any damage caused by shipping (both visible and concealed) as you only have 10 days to fill a claim against carrier.

Please Inspected order check packing list against items upon for any missing parts.

Beginning from the date of delivery, you will have 10 calendar days to open and inspect all crates/boxes. Any missing pieces must be reported during this time period, otherwise Cascade Sciences will not be held responsible.

Take photos of any shipping damage. Refuse delivery or make note on the bill of lading.

1. If anything is missing, please call us at 503-847-9047.
2. Save the shipping carton until you are certain that the unit and its accessories function properly.
3. Carefully check all packaging for loose accessory items before discarding.

Parts List

- Base Refrigeration Unit
- Coldwell Stainless Steel Reservoir
- Lid assembly (p/n 7100002)
- 6" sanitary gasket – viton (p/n 7100004)
- 6" sanitary clamp (p/n 7100005)
- Fitted 3mm Neoprene insulator cap
- 4' KF25 terminated vacuum hose
- 2 - kf25 clamps
- 2 - kf25 centering rings

Optional:

- Mobile Trap Stand (accommodates vacuum pump and MAXTRAP)

NOT INCLUDED BUT NECESSARY:

- Thermal Transfer Fluid. Make sure you have at least 800 ml of a heat transfer fluid such as ethanol, glycol or a cryocool inside the reservoir.



RECEIVING MAXTRAP

VACUUM PUMP



The MAXTRAP requires a vacuum supply source, which must be purchased separately from the MAXTRAP. It is strongly recommended that the vacuum pumps' GAS BALLAST be in the open position to best tolerate ethanol and other gas loads.

In some cases, the vacuum pump can be powered from the Cascade oven or will require its own power outlet based on the pump's electrical specifications.

Please see www.cascadesciences.com or call 503-847-9047 for pumps and vacuum system accessories suitable for your application.

Oil rotary vane pump precautions – have a valve between trap and pump.

INSTALLATION

Pre-Installation

Check that the ambient condition, ventilation, and spacing requirements for the refrigerated unit are met. Allow at least 12" on the slotted side of the unit for ventilation and air to draw thru the slotted side.

HOSE CONNECTIONS ON THE COLDWELL

The Taller KF-25 stub ALWAYS connects to the VACUUM OVEN



The Shorter KF-25 stub ALWAYS connects to the VACUUM Pump



FILLING THE RESERVOIR

Depending on the unit size, make sure you have 800 ml of a heat transfer fluid such as ethanol, glycol or a cryocool inside the reservoir. This fluid is sold separately.

- Remove the stainless Coldwell. Pour the heat transfer fluid into the mechanical reservoir that the Coldwell sits in.
- Set the Coldwell back inside the reservoir.
- Monitor this fluid level during extended periods of use.

Do not pour warm fluid into unit at any time as it may cause a refrigerant over pressure situation, rupture potential and will void warranty or repair.

OPERATION OVERVIEW

Start Up

Remove the COLWELL Stainless jar. Make sure you have at least 800 ml of a heat transfer fluid such as ethanol, glycol or a cryocool inside the thermo reservoir.

Do not pour warm fluid into unit at any time as it may cause a refrigerant over pressure situation, rupture potential and will void warranty or repair

Power the Labconco unit / MAXTRAP "ON" -

Feel the right side to make sure air is drawing in thru the side vent. If connected to a vacuum oven, it does not have to be under vacuum to operate.



Allow at least 30 minutes for the MAXTRAP fluid to reach operating temperature.

From The Vacuum Oven:

- Vacuum valve is closed.
- Vent Valve is closed.
- Product is loaded inside oven.
- Energize the Vacuum Pump
- Open vacuum valve

As vapors off-gas inside the oven they will pass thru the trap and collect inside the COLDWELL.

Shut Down

- Vacuum valve closed at oven.
- Vacuum pump off.
- Allow unit to naturally thaw to ambient prior to opening/collection of volatiles.
- To remove lid on Coldwell, loosen/remove clamp and pull lid upwards being careful not to bump the baffling attached to lid unit or snag on viton gasket.
- **Oil rotary vane pump precaution. If you are planning to collect, reclaim, re-use the condensates in the trap strongly consider a FORELINE TRAP between an oil rotary vane pump and the MAXTRAP50. Contact Cascade Sciences to purchase a foreline trap.**

PRECAUTIONS

OPERATING PRECAUTIONS

Warning: This is not an explosion-proof unit!

Avertissement: Ce sont des fours pas résistants aux explosions.



1. Outgassed byproducts may be hazardous to or noxious for operating personnel. Vacuum pump exhaust should be vented to a location outside the workspace in a safe manner in accordance with all applicable laws, ordinances, and regulations.
2. Do not operate in an environment with noxious fumes.
3. Do not move until it has finished cooling.
4. **SAFETY TIP** At very cold temperatures, solvents and even oxygen can re-condense back into liquid. This is potentially explosive. Especially if the cold trap has been used to trap solvent. Liquid oxygen is a light blue color and can condense into a cold trap if a pump has sucked air through the trap when the trap is very cold.

USER MAINTENANCE

Warning: Prior to any maintenance or cleaning of this unit, disconnect the power cord from the power supply.

Avertissement: Avant d'effectuer toute maintenance ou entretien de cet appareil, débrancher le cordon secteur de la source d'alimentation.



CLEANING AND DISINFECTING

If a hazardous material or substance have spilled, immediately initiate your site's Hazardous Material Spill Containment protocol. Contact your local Site Safety Officer and follow instructions per the site policy and procedures.

- Do not use cleaners or disinfectants that contain solvents capable of harming paint coatings or stainless steel surfaces. **Do not use chlorine-based bleaches or abrasives; these will damage the Coldwell liner.**

USER MAINTENANCE

VACUUM PUMP MAINTENANCE

Vacuum pumps are high wear equipment and require replacement of seals and diaphragms **at least** once per year. Poor vacuum performance or bubbling or strained noises from the pump may indicate that the pump is need of maintenance.

- **Chemical duty diaphragm pumps** commonly require diaphragm and seal replacement every 6 – 8 months.
- **Dry scroll pumps** typically require replacement of the tip seals every 9000 hours of use or at least once per year.

Pump Manuals

Refer to the operation manual supplied with your vacuum pump for recommended maintenance routines such as oil levels, replacement of sorbent charge, and exhaust filter change outs. **Contact your vacuum pump supplier if you do not have an operation manual.**