



DRI-STOR USER GUIDE



SUMMARY

LogiQuip's Dri-Stor HEPA Filter Endoscope Storage Cabinets are designed to:

- Ensure a clean storage location for disinfected Endoscopes.
- Provide a clean supply of HEPA Filtered air ventilating the endoscopes in storage.
- If equipped with the channel purge feature, allow for the drying of the interior channels of endoscopes by introducing HEPA filtered air to purge those channels.
- Protect the endoscopes from damage while in storage.
- Allow operators to easily see what they have in storage when equipped with the Endotrack feature.
- Provide a material, in stainless steel, that withstands frequent cleaning.



WARNING



- Failure to comply with these instructions may result in accidents involving serious personal injury.
- Failing to follow these instructions can result in the product being damaged or being destroyed.
- Safe use of the system is possible only when the operating instructions are read completely and the instructions contained are strictly observed.
- Failure to comply with instructions marked with the "NOTE" symbol may result in serious damage to the system or one of its components.
- It is important for everyone who is to connect, install, or use the systems to have the necessary information and access to this User Manual.
- Follow the instructions for mounting.
- There is risk of injury, if these instructions are not followed.
- The appliance is not intended for use by young children or infirm persons without supervision.
- If there is visible damage on the product it must not be installed.
- Persons who do not have the necessary experience or knowledge of the product/products must not use the product(s).
- People with reduced physical, sensory, or mental abilities must not use the product(s), unless they are under supervision or they have been thoroughly instructed in the use of the apparatus by a person who is responsible for the safety of these persons.



Endoscope Drying Cabinets HEPA Filter

ELECTRICAL SUPPLY

- North America:
 - 120 Vac, 60 Hz, 15 Amp Standard Duplex Receptacle.
- Typical Full Load Amperage:
 - ~1 Amps
- It is recommended to plug any cabinet into a dedicated circuit. For units with Endotrack, the unit should be plugged into an outlet connected to the emergency back-up circuit.
- Disconnect power whenever servicing the cabinet, by unplugging the power cord.

ENVIRONMENTAL CONDITIONS

The cabinets have been designed for use within medical facilities. They are designed to be safe within the following conditions:

- Indoor Use Only.
- Temperature range:
 - 15 – 35°C.
- Maximum Relative Humidity:
 - 80% up to 25°C and decreasing linearly to 50% relative humidity at 35°C.

CLEANING OF CHANNEL PURGE TUBING SETS

At the hospital's discretion, the channel purge tubing sets and connectors, can be cleaned with hospital approved enzymatic detergents, High Level Disinfection or steam sterilized.

The tubing sets should be washed using a hospital approved enzymatic cleaner prior to first use. This is done by flushing, soaking and rinsing, following the enzymatic manufacturer's IFU. After they have been properly rinsed, they can be connected to the quick connect manifold in the cabinet to allow the interior of the tubing to be air purged dry, prior to connecting to an endoscope.

Approved High Level Disinfectants include; Peracetic Acid, Hydrogen Peroxide, Gluteraldehyde and OPA base disinfectants. Follow the respective HLD manufacturer's IFU for proper use. After they have been properly rinsed, they can be connected to the quick connect manifold in the cabinet to allow the interior of the tubing to be air purged dry prior to connecting to an endoscope.

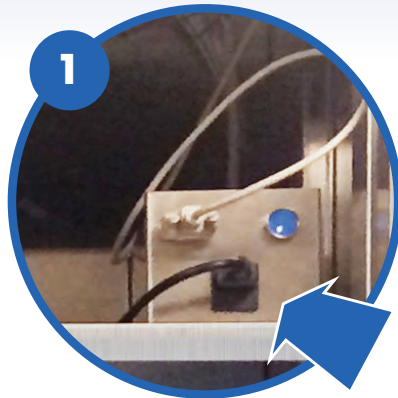
Steam Sterilization: Tubing sets are compatible with steam sterilization at the following parameters: 270°F (132°C), four-minute cycle.

Tubing sets and connectors should be checked regularly for cracks, discoloration, and loss of tubing flexibility. If any such flaws are found, they should be replaced immediately.

WARRANTY

Five Years Parts (except filters) & Labor for the Stainless Steel and Main HEPA Filter Fan.
One Year Parts (except filters) & Labor for all other components.

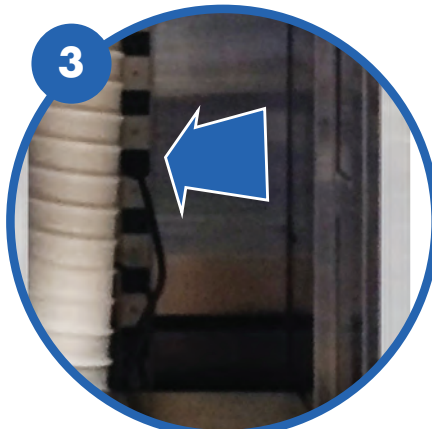
Channel Air Pump
(Supports up to
10 scopes)



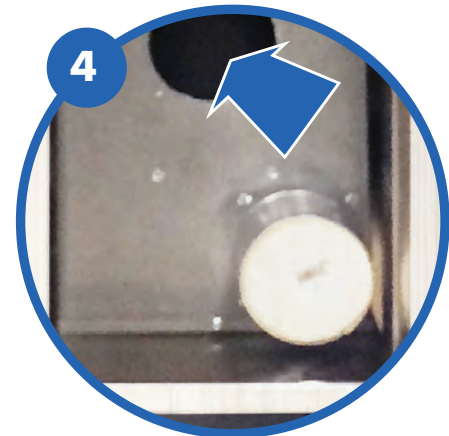
Controller – Air pumps for channel purge are plugged into this. This controls pump interval time.



Channel HEPA Filter



Power Strip



Cabinet HEPA Filter

OPERATION

- For instructions for using Dri-Stor Endotrack, the touchscreen featuring controlled user access and indicator of scope cleanliness life-cycle, please refer that separate dedicated users guide.
- The system consists of an enclosed cabinet that provides a clean source of HEPA filtered air to ensure a maintained environment for the storage of endoscope.
- Once the system is plugged in and power switch turned on, the cabinet will purge HEPA filtered air within the cabinet and any endoscope that has a tubing set connected in the cabinet. The air quality filtered by the HEPA is to 0.3 micron at 99.97% efficiency. The cabin air runs constantly and the channel purge operation is 30 minutes on and 20 minutes off.
- For the Endoscope Channel Purge, a series of Quick Connector ports are located in the cabinet. Each port accepts one tubing set and when connected allows the flow of low pressure HEPA Filtered air into the respective channels of the attached endoscope to facilitate drying of the channels. If there is no tubing set connected to a port, then that port is closed and there is no flow of air through it. The connectors are specific for every make and model of endoscope and cannot be used for anything other than the endoscope they were specified for. Please contact LogiQuip® if you require more tubing and connector sets or if your endoscope inventory changes in any way.
- The light remains on at all times. There is a switch on the light if you wish to turn it off.



BEST PRACTICES

- Take care in hanging and removing a scope to minimize the risk of damage
- Do not store a scope with the end touching the drip tray
- Ensure the drip tray is cleaned on a regular basis.

FILTRATION

The cabinet HEPA Filter consists of three levels of filtration:

1. If equipped with a side mounted component cabinet, a **external filter**, located on the top of the unit, that is washable and will capture any large particle in the ambient air.
2. **HEPA filter and pre-filter.**
3. A **VOC carbon filter** inside the cabin HEPA filter is designed to filter odors.

If the pre-filter is maintained on a regular schedule, it will ensure that the HEPA filter will provide years of service without requiring exchange.

The HEPA Filtration for the endoscope channel air purge is a separate HEPA filter.

PREVENTATIVE MAINTENANCE SCHEDULE

- **Cabinet positive pressure filter replacement kit, 40000HEPAKIT:**
 - Filters replaced every 6 months. Kit contains two of each: pre-filter, post-filter, external filter and O-rings for HEPA filter.
- **Cabinet HEPA Filter 40000MFF:**
 - As Required.
 - If the HEPA pre-filters are maintained on a regular schedule the HEPA Filter should last for a maximum of five years.
- **Channel Air Purge HEPA Filter replacement kits:**
 - For cabinets with 10 scope holders or fewer: Filters replaced every 6 months. Kit contains two of each: pre-filter, post-filter, external filter, O-rings for cabinet HEPA filter and channel purge HEPA filters. 40000CPKIT-1
 - For cabinets with 11 or more scope holders: Filters replaced every 6 months. Kit contains same as above but four channel purge HEPA filters. 40000CPKIT-2
- **Tubes should be wiped clean between scope exchange, and disinfected weekly.**
See information above.



CLEANING THE CABINET

Glass cleaner can be used on the glass portion of the doors.

The stainless steel is easily cleaned by many different methods. While some contaminants may be easily removed others may require specific cleaners for effective removal. It may be necessary to identify the contaminant or experiment with various cleaners.

Frequently, warm water with or without a gentle detergent is enough. Next are mild, non-scratching abrasive powders, such as typical household cleaners. These can be used with warm water, soft bristle brushes, sponges or clean cloths. Ordinary carbon steel brushes or steel wool should be avoided as they may leave particles embedded in the surface, which can lead to rusting. For more aggressive cleaning, a small amount of vinegar can be added to the cleaning powder. Handle stainless steel with clean gloves or cloths to guard against stains or finger marks.

Follow the facility's strategy for the frequency of cleaning the cabinet. The drip pan can be cleaned in that schedule or as needed.

NOTES

- Avoid the use of oily rags or greasy cloths when wiping the surface.
- Where possible, after cleaning, rinse thoroughly with water.
- When in doubt about the compatibility of a product with stainless, contact the manufacturer of the cleaner to confirm that it is safe for stainless steel.
- Cleaning with chloride-containing detergents **MUST BE AVOIDED**.

Fingerprints and Stains

Fingerprints and mild stains can be removed with a glass cleaner. Cleaning should always be followed by rinsing with a soft cloth and clean warm water. When water contains mineral solids, which leave water spots, it is advisable to wipe the surface completely with dry towels.

Clean Water and Wipe

Soft cloth and clean warm water should always be the first choice for mild stains, and loose dirt and soil. Rinsing with clean water and a dry wipe will eliminate the possibility of water stains.

Disinfectants

If a disinfectant is used, it should be a non-chloride or non-abrasive type, such as alcohol, ammonia or hydrogen peroxide.

Solvent Cleaning

Organic solvents can be used to remove materials that have not had time to oxidize or decompose. Solvents should not contain chloride, such as acetone, methyl alcohol, and mineral spirits. There are many compounded or blended organic cleaners that are commercially available. Users are advised to contact suppliers of solvents for information on their applications on stainless steel.

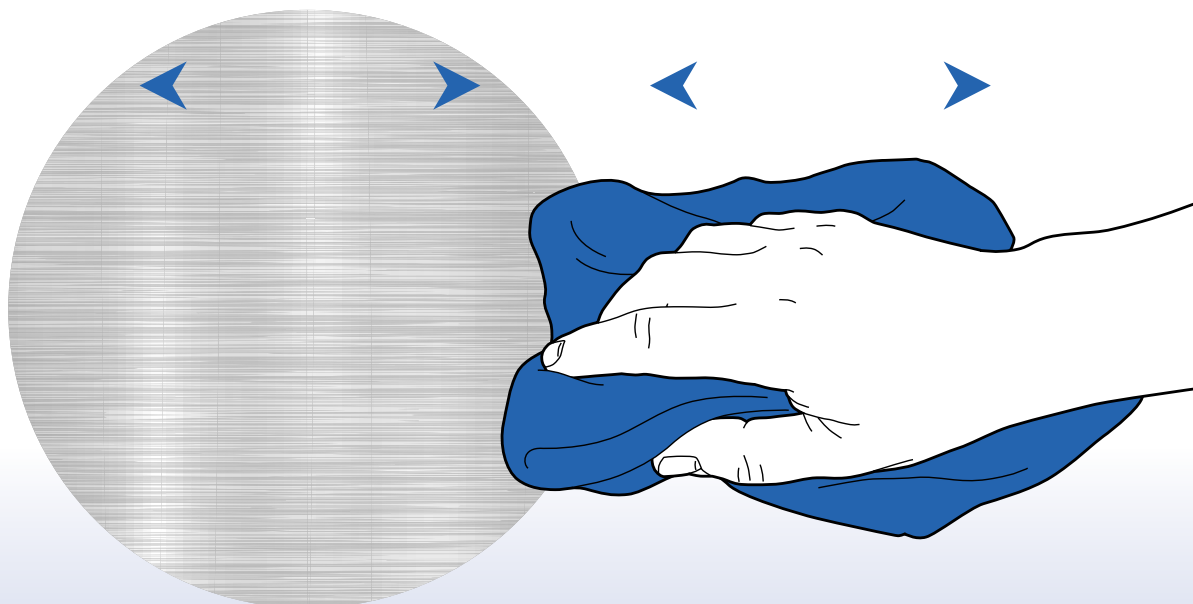
Household Cleaners

Household cleaners fall into two categories: detergent (non-abrasive) and abrasive cleaners. Both are effective for many mild dirt, stain, and soil deposits, as well as light oils, such as fingerprints. The abrasive cleaners are more effective but introduce the possibility of scratching the surface; however, the degree of abrasiveness will vary greatly with the product, and some brands will produce noticeable scratching on only the most highly-polished surfaces. All these cleaners vary widely with respect to their acidity and the amount of chloride they contain. A neutral cleaner which is low in chloride is preferred, unless the user is assured that the surface can be thoroughly rinsed after cleaning. The fact that the label states for stainless steel is no guarantee that the product is not abrasive, not acidic, or low in chloride. The cleaning method generally employed with these cleaners is to apply them to the stainless surface and follow directions closely.

Even the finest cleaning powders can scratch or burnish a finish. On polished finishes, rubbing or wiping should be done in the direction of the polish lines, **NOT** across them.

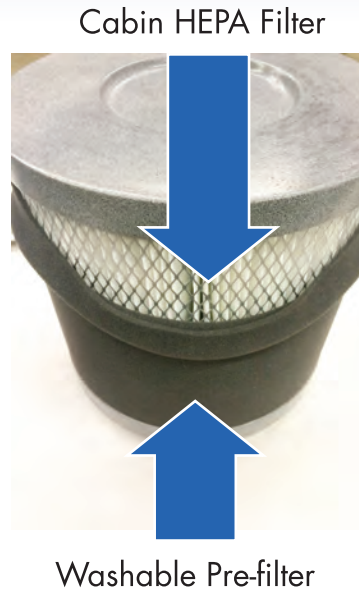
GRAIN DIRECTION

BEST PRACTICES WIPE WITH GRAIN





Cabin HEPA Filter Box with Top Removed
Twist cap to access HEPA Filter



Washable Pre-filter



VOC Carbon Filter

CHANGING THE CABINET FILTER

1. Shut-off the cabinet power.
2. If equipped with a side component cabinet, remove mechanical compartment front panel. For cabinets with components mounted in the top, remove the access panel or top (depending on model).
3. Turn off the switch for the HEPA fan and unplug the power cord.
4. Slide the HEPA housing completely out of the cabinet and remove the lid by undoing two latches and a screw.
5. Twist the filter assembly to unlock old filter.
6. If replacing the HEPA filter along with its pre and post filters, go to step 7.
 - 6A. Remove the pre-filter sleeve by sliding it off the HEPA filter and replace with new one.
 - 6B. Remove the post filter from the opening on the bottom of the HEPA filter. To insert the new filter, roll it up and slide it back into the HEPA filter.
 - 6C. Replace the "O" ring on the HEPA filter.
 - 6D. Place filters to be discarded in a bag and remove to a non-biohazard area.
7. Insert the new HEPA assembly into the housing, and with downward pressure, twist filter assembly to relock and seal the filter into place.
8. Replace the lid to the HEPA housing and slide it into the cabinet
9. Plug in fan and turn the power switch to On.
10. If using Endotrack, go to the Service screen to reset the HEPA replacement timer. Refer to the Endotrack User Guide.
11. Replace the mechanical compartment front panel, top panel or shroud. Store the Allen wrench in the hole on the top of side cabinet.
12. Turn on the power.



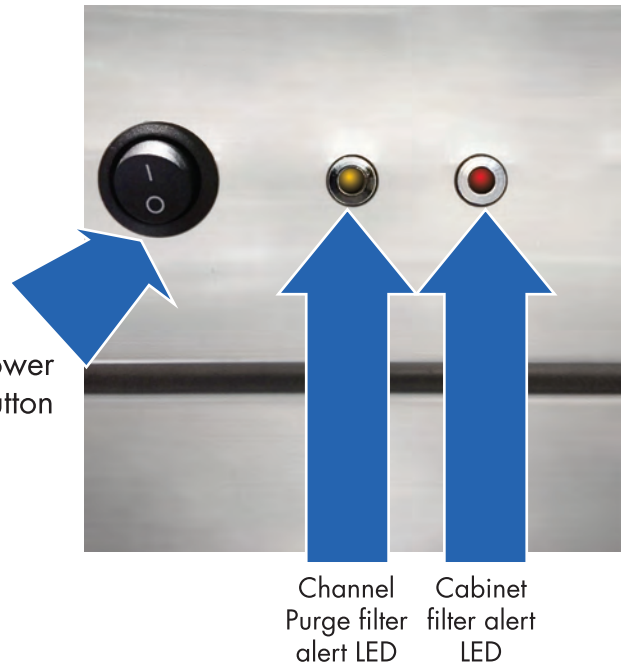
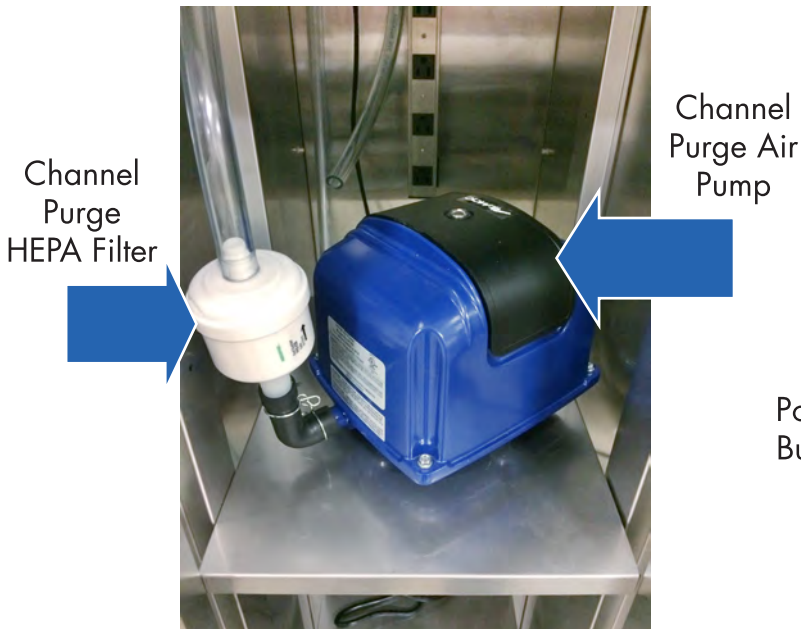
External Filter (side mount cabinet)



Filter Reset Button – Resets timer for Channel Purge filter replacement



Side Cabinet Removal



CHANGING THE CHANNEL PURGE FILTER

Note that if the cabinet holds more than 10 scopes, there are two air pumps, each with its own HEPA filter.

1. Turn off power to the cabinet.
2. Using the provided Allen wrench, remove mechanical compartment front panel, if the unit has a side component cabinet. For cabinets with components mounted in the top, remove the access panel or top (depending on model).
3. Take tube off top barb of filter and unscrew base from tubing.
4. Replace filter, by screwing onto tubing and putting tubing on top barb of the filter. **CAUTION:** make sure the filter and threaded fitting are exactly aligned. DO NOT OVER TIGHTEN.
5. Press the reset button on the filter cabinet control box. If using Endotrack, go to the Service screen to reset the HEPA replacement timer. Refer to the Endotrack User Guide.
6. Replace mechanical compartment front panel, if side component cabinet, or cover plate if filters are mounted in the top.

TROUBLE SHOOTING

SYMPTOM

LED light does not illuminate the cabinet

PROBLEM

Main cabinet LED light is out

SOLUTION

OPTION 1.

LED light power cable unplugged. Plug into power bar in component cabinet or check the plug into the LED Light is not loose.

OPTION 2.

Power bar in component cabinet switched OFF. Switch ON.

OPTION 3.

LED light failure. Replace LED light.

SYMPTOM

No air flow through purge ports

PROBLEM

Channel Purge pump failure

SOLUTION

OPTION 1.

Pump unplugged. Plug in pump.

OPTION 2.

Control box/Control Manifold unplugged. Plug into power bar in component cabinet.

OPTION 3.

3A fuse in control box is blown. Replace fuse.

OPTION 4.

Control box failure. Replace control box.

SYMPTOM

No air flowing through grill duct inside the cabinet

PROBLEM

No airflow to cabinet

SOLUTION

OPTION 1.

Power switch for HEPA fan is OFF. Switch ON.

OPTION 2.

Power cable for HEPA fan unplugged. Plug into power bar in component cabinet.

OPTION 3.

10A fuse is blown. Replace fuse.

OPTION 4.

Wiring/connection failure. Repair wiring.

OPTION 5.

Ensure duct is connected at both ends

OPTION 6.

HEPA fan failure. Replace HEPA fan.

SYMPTOM

Door does not lock

PROBLEM

Door e-Lock failed to engage

SOLUTION

OPTION 1.

Scanned badge is not set up on Cabinet. Refer to User Manual.

OPTION 2.

E-Lock solenoid failed. Replace e-Lock.

OPTION 3.

8-channel relay board failure. Replace relay board.

OPTION 4.

Wiring/connection failure. Repair wiring.

OPTION 5.

Barcode/RFID scanner failure. Replace scanner.

OPTION 6.

Control board (GPIO) failure. Replace control board.

OPTION 7.

CPU failure. Replace CPU.

OPTION 8.

Lock pin and door catch not aligned. Adjust e-lock to line-up with door catch.

SYMPTOM

Door does not open

PROBLEM

Door e-Lock failed to open

SOLUTION

OPTION 1.

Scanned badge is not set up on Cabinet. Refer to User Manual.

OPTION 2.

E-Lock solenoid failed. Replace e-Lock.

OPTION 3.

8-channel relay board failure. Replace relay board.

OPTION 4.

Wiring/connection failure. Repair wiring.

OPTION 5.

Barcode/RFID scanner failure. Replace scanner.

OPTION 6.

Control board (GPIO) failure. Replace control board.

OPTION 7.

Control board (GPIO) failure. Replace control board.

OPTION 8.

CPU failure. Replace CPU.



Note: for items you can not resolve, contact your local LogiQuip® representative or Customer Support person. Please have the serial number of the unit available. It can be found on a label on the inside near the top, or on top of the unit.

LogiQuip® has been providing healthcare storage solutions to hospitals across North America Since 1992. Building on their combined 90 years of experience, our founders built a knowledgeable and experienced team who understand that each hospital's inventory, supply, and storage requirements are similar in theory, yet diverse in practice and application. Our sole focus is hospital storage and distribution systems and our mission is to provide our customers with products and ROI justified solutions tailored to meet their specific needs. Whether the prescribed solution is a single cart or a complete high-density storage solution, LogiQuip's® expertise and extensive product line complement any supply chain solution.



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