

Ventaire™ Endoscopy System

Scope Drying Unit Instruction Guide



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System Overview

Healthcare-associated infections (HAIs) affect one out of every 31 hospital patients at any given time, according to the Department of Health and Human Services' Agency for Healthcare Research and Quality. Over one million HAIs occur every year in the US, leading to loss of life and rising healthcare costs. A drying device that forces air through the interior lumens of the endoscope can reduce the level of moisture inside the scope and, therefore, the chance of contamination and infection.

InnerSpace's Vantage Endoscopy System includes products that assist endoscopy staff in the safe and thorough drying, tracking, and storage of reprocessed scopes, including scope drying and tracking cabinets and scope drying units. Both products provide consistent and continuous delivery of HEPA-filtered, pressurized air into endoscope channels to keep scopes dry.

The scope drying unit offers a flexible solution for thoroughly drying the interior lumens of endoscopes. The compact size of the drying unit contributes to its flexibility – it can be placed on a counter or other surface, including carts, or mounted on a wall, IV pole, or scope pole. Scope drying units are available in two versions: one version has a compressor that supplies air, and the other version connects to a building's air supply. The scope drying unit's compressor is balanced for low-vibration operation.

Once the unit's drying cycle is complete, the endoscope can be placed in a scope drying and tracking cabinet for continued drying and venting or stored in an endoscope cabinet. The drying unit works with all major endoscope brands.

A scope drying unit includes a barcode scanner. Disposable tubes and connector kits are needed to operate the unit and are purchased separately. See Appendix for order information.



- Easy-to-read touchscreen and intuitive interface
- Notifies operator when tubes and filters need replacement
- Barcode scanning streamlines operation
- Can dry two scopes at the same time
- Uses disposable connectors

- Collects scope drying activity, including date and time of operation, the operator, and scope identification. Customizable settings ensure drying process complies with organization's guidelines
- Compatible with InnerSpace Cloud platform for remote management and monitoring
- Lists of users and scopes can be uploaded and downloaded via USB or InnerSpace Cloud

System Specifications

Dimensions (nominal)

- Exterior: 7.5"w x 8"d x 10"h
- Display screen: 5" diagonal length

Unit with compressor

- Air output:
 - Compressor output: 5 PSI (maximum PSI)
- Decibels:
 - 71 dB
- Weight: 14.3 lb
- Electrical requirements: 115 VAC (less than 2 amps)
- Power cord length: 10 feet

Unit without compressor

- Compressor output: Not to exceed 10 PSI
- Weight: 8.1lb
- Electrical requirements: 115 VAC (less than 2 amps)
- Power cord length: 10 feet

Replacement Information

The scope drying unit includes a disposable filter and tubes that will need to be replaced (filter every 6 months, tubes every 24 hours). Connectors are single use. To find the connector kit compatible with your endoscope or to order replacement products, call InnerSpace Customer Service at 888-435-2256 or [innerspacehealthcare.com/Ventaire](https://www.innerspacehealthcare.com/Ventaire)

InnerSpace Barcodes

A drying unit can read one dimensional (1D) barcodes, including most endoscope manufacturers' barcodes. Depending on the administrator's setup of the scope database, a scope can be scanned using the InnerSpace endoscope barcode stickers provided or the endoscope manufacturers' barcode.

A set of InnerSpace barcode sticker sheets for ID badges and endoscopes is included with the scope drying unit. Scanning badges and scopes saves time for both administrators and system operators compared to manually entering information into the system.

InnerSpace Support

For questions about your scope drying unit, call InnerSpace Customer Service at 888-435-2256.

Setup

Administrators have access to the settings menu and can add and remove user and administrator profiles; add, edit, and delete scope inventory; and view system details. Users can connect scopes and manage drying cycles.

Most of the steps that system administrators complete in the initial setup will not need to be repeated, but administrators can continue to add, edit, and delete existing information, such as users, scopes, and scope drying times. Users will see information and interact with the system interface based on the administrator's setup.

After the Ventaire drying unit is powered, the main screen will be displayed.



Settings

Settings allows administrators to set up system defaults, export a report, input a list of users and scopes, connect to network, and reset tubing and filter replacement notifications.

To access the settings menu, select the settings icon at the top right corner of the screen. A screen prompting the administrator to enter a PIN will appear. Enter the default admin PIN of 0001 to access the system and take you to the Settings menu.



Exporting Data

Allows the administrator to download a report of all available scope data, including dates and times scopes were dried, scope activity, user and scope information, scope drying time, and when tubes and filters were replaced.

To generate a report, select Settings and then Export Data. Insert a USB into the port on the drying unit. After the system registers that a USB has been inserted, select Download Report. When the report is downloaded, remove the USB from the drying unit and insert it into a computer to view the report.



Drying

Allows the administrator to change the steps that users follow to dry a scope and to change scope drying durations.

The system default requires users to scan the InnerSpace barcode on their ID badge, but administrators can edit the steps to include scanning barcodes on both an ID badge and a scope to initiate drying.

To change the steps that users will follow, select or deselect the boxes that apply to your process.



The drying unit is preconfigured with default settings for drying durations, but it is the responsibility of those using the system to determine drying durations based on the organization's guidelines and/or the guidelines provided by the endoscope manufacturer.

The drying default of 10 minutes is based on tests that tracked the amount of moisture in the air within the channels of an endoscope through a 10-minute drying cycle. Humidity probes were attached to an endoscope at the air/water port, the suction port, and the distal tip. After 10 minutes of continuous drying, the moisture level dropped until it reached ambient humidity levels.

To change the drying cycle default, choose the right or left drying port and then tap "+" or "-" until you reach the desired duration.

Sound

Allows the administrator to adjust the sound settings when a barcode is scanned and when a drying cycle is complete.

To change sound settings, select or deselect the sound setting boxes.

Filters and Tubes

Allows the administrator access to the drying unit's air filter and tube settings. It notifies when each should be replaced as well as when they last were replaced. When it is time to replace the tube or air filter, select Replace Tubes or Replace Filter. Replace air filters every 6 months (180 days) and tubes every 24 hours. See page 13 for replacement instructions.



The drying unit will display reminders to replace the tubes and air filter. To change the reminder notification screens, select Filter & Tubes. Administrators can require that users scan the barcode on their ID badge to dismiss a reminder notification and/or set the snooze option for the notification, which allows the user to complete one additional drying cycle.



To snooze a notification, select "Allow snooze reminders." To require users to scan the barcode on their ID badge to dismiss the notification screen, select "User barcode required to dismiss."

Attaching Barcode Stickers

Follow these instructions to attach barcode stickers to ID badges and endoscopes:

ID badge barcode stickers

- Scan barcode to identify a user. Peel and affix sticker firmly to their ID badge

Endoscope barcode stickers

- Scan barcode to identify an endoscope. Peel and affix sticker firmly to the endoscope

After an InnerSpace ID badge or scope barcode sticker is affixed, administrators can scan the barcode to add a user or scope to the drying unit system.

To reorder sticker sheets, contact InnerSpace Customer Service at 1- 888-435-2256 or cs@solairemedical.com

Importing Users

User names are added to the system by importing them using a USB device. To add a user, the user's name, email address, department, and PIN will need to be entered. The PIN needs to match the PIN on the ID badge barcode sticker assigned to that user.

To add a user, download a CSV file to a USB from the settings menu under Import Users. Insert the USB into the side port on the drying unit. Once the system registers a USB has been inserted, Download Template will appear. Select to download to the USB. Remove the USB and insert into a computer to view and add user information.

Add user information to the CSV file, save it, and then reinsert the USB into the port on the drying unit. Select Import Users to upload the user information.



Importing Scopes

Scopes are added to the system by importing them using a USB device. To add a scope, the scope serial number, brand, model number, internal ID, description, and barcode need to be entered. The barcode will need to match the barcode on the InnerSpace endoscope barcode sticker sheet for that scope or match the endoscope manufacturer's barcode.

To add a scope, download a CSV file from the settings menu under Import Scopes. Insert the USB into the side port on drying unit. Once the system registers a USB has been inserted, Download Template will appear. Select to download to the USB. Remove the USB and insert into a computer to view and add scope information.

Add scope information to the CSV file, save it, and then reinsert the USB into the port on the drying unit. Select Import Scopes to upload scope information.



Wi-Fi

Allows the administrator to connect to a wireless network. InnerSpace Support Technicians will provide the service needed to connect a device to Wi-Fi and can be reached at 888-435-2256.

Factory Reset

To reset, select Reset Device. The system will shut down and reboot. All preexisting data will be erased and will need to be uploaded again.

System Operators

A system operator checks scopes in, connects scopes, and manages the drying process.

For questions or help with the scope drying unit, contact InnerSpace Customer Service at 888-435-2256.

Status Indicators

Operate the system from the main screen.

The main screen uses color and a timer to show the drying process.

Green: The right or left port is available and ready for a scope to be connected and dried.

Blue: The right or left port is in use and drying a scope. The timer indicates minutes left in drying cycle. When timer is at 0:00, the right or left drying port has completed the drying cycle, and the scope can be removed.

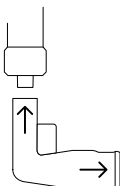


Drying a Scope

Before initiating the drying process, a scope must be attached to a connector and tube. How the connector is connected to the scope depends on the type of connector you are using. Go to innerspacehealthcare.com/Ventaire for connector kit instructions.

To begin a drying cycle:

Select Start for port that tube is attached to. The display prompts the user to connect the tube to a connector and then to the scope.



Depending on your administrator's system setup, you may either be required to scan the barcode on your ID badge or to scan both the barcode on your ID badge and the barcode on the endoscope.

All scanned information will appear on the display.



The user can change the drying cycle duration by selecting “+” or “-” until the desired duration is reached, and then select Start or make an additional scan of either the barcode on an ID badge or scope to initiate drying.

The main screen appears with a blue banner identifying the right or left port, displaying Drying, and a timer showing time left in the drying cycle.

Pausing a Drying Cycle

To pause a drying cycle, select Pause. To resume drying, select Resume.



Removing a Scope

When the drying cycle is complete, the blue banner displays Complete, and the user can remove the scope.

Select Remove Scope, and then disconnect the connector from the scope and tube.

Before discarding connector, inspect it to ensure it is fully intact and that there are no broken pieces remaining in the suction and air water valves. The connectors and all connector kit parts can then be thrown out.



Restarting Unit

You may need to restart the system if it freezes or has another issue that can't be resolved. To turn off unit, flip the switch above the plug on the bottom left side of the scope drying unit. When turned back on the system will reboot. All information previously entered and saved repopulates.



Care and Maintenance

The drying unit's air tubes must be replaced every 24 hours, and the unit's air filter every 6 months (180 days). See page 13 information on tube and air filter replacement.

Follow these recommendations to disinfect, clean, and care for your scope drying unit.

Cleaning materials:

- The best choices for disinfection are compounds that contain quaternary ammonium
- Use a 10%-50% isopropyl alcohol solution as an option when quaternary ammonium compounds aren't available
- Don't use abrasive cleaning pads
- Don't leave cleaning compounds on the surface; wipe surfaces dry after cleaning
- A 10% (or less) mixture of active bleach and water can be used though not recommended

Recommended disinfectant/cleaning products:

- Hepacide Quat® II virucidal disinfectant cleaners
- PDI® Sani-Cloth® cleaner
- CaviWipes™ disinfectant cleaner
- Virox® disinfectant cleaner

Tubing should be cleaned with Sani-Cloth® wipes after every use.

Product Ordering and Replacement Information

To order replacement parts, contact InnerSpace Customer Service at 888-435-2256 or [innerspacehealthcare.com](https://www.innerspacehealthcare.com)

Replace the HEPA air filter (SVDUAF) every 6 months.

Manifold and manifold auxiliary water tubes connect to the scope drying unit to effectively vent HEPA-filtered air through endoscope channels. Manifold tubes are for endoscopes without water jet ports; manifold auxiliary water tubes are for endoscopes with water jet ports.

Replace the tubing every 24 hours:

- Manifold Tube, pack of 1: SVDMT1
- Manifold auxiliary water tube, pack of 1: SVDWAT1

Connector kits should be replaced after every use. All connector kits come in packages of 100. For connector kit product numbers, go to [innerspacehealthcare.com/Ventaire](https://www.innerspacehealthcare.com/Ventaire)

Instructions

Removing and Replacing Tubes

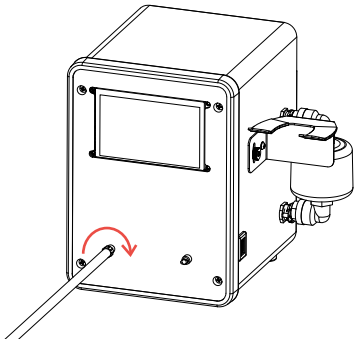
Follow these instructions to remove and replace drying tubes.

To remove:

Turn the tube fitting to the left to loosen and remove the tube from the port on the scope drying unit

To replace:

Connect a new tube to the port by turning the tube fitting to the right until tube is firmly attached

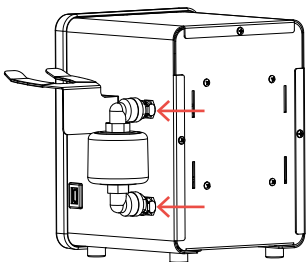


Removing and Replacing Air Filter

Follow these instructions to remove and replace the air filter on the scope drying unit.

To remove:

Press the quick release buttons on the top and bottom of the air filter, and pull out and discard the filter



To replace:

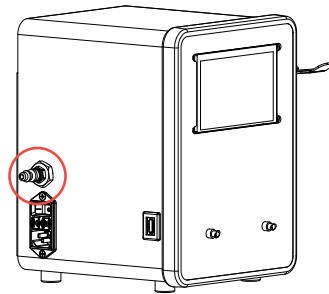
Insert the new air filter. The quick release buttons will reset once the filter is attached

Connecting Scope Drying Unit to Building's Air Supply

Follow these instructions to connect a scope drying unit to a building's air supply.

Make sure the scope drying unit is off

Connect a ¼" quick-disconnect hose to the air valve on the unit



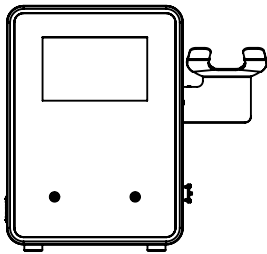
Turn unit on. Air is now ready to flow through unit

Caution: Make sure air is regulated to 10 PSI maximum. Pressure exceeding 10 PSI can damage endoscopes.

Instructions

Mounting Bar Code Scanner Bracket

Follow these instructions to mount the provided bar code scanner bracket to the device.



Included:

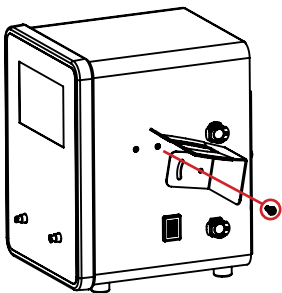
- Drying unit device
- Bar code scanner bracket
- 2 screws

Tools needed:

- #2 phillips head screw driver

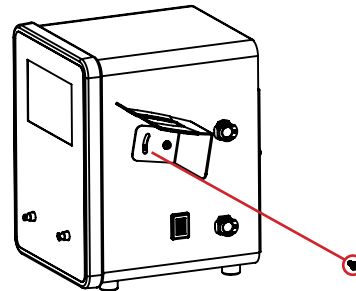
Step 1

Use screwdriver to install screw through hole in bar code scanner bracket into back mounting hole on device until snug; do not tighten fully



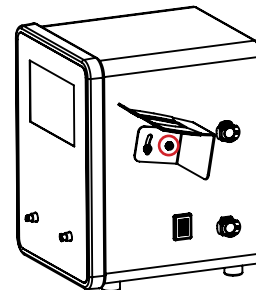
Step 2

Use screwdriver to install second screw through arched slot in bar code scanner bracket into front mounting hole on device. While screw is still loose, adjust angle of bracket to desired position and tighten securely



Step 3

Use screwdriver to tighten rear screw until both screws are tight



Instructions

Pairing Bar Code Scanner to Drying Unit

Follow these instructions to pair bar code scanner to drying unit.

Included:

- Bar code scanner with cable

Step 1

Insert USB plug into right side of drying unit

Step 2

Use switch to power drying unit. The bar code scanner will beep, indicating it is powered

Step 3

Aim bar code scanner at the first of the three bar codes to pair. Pull trigger. The scanner will beep, confirming the scan, and the LED light on the top of the scanner will blink momentarily and then the LED light will turn off

Barcode 1 of 3



Step 4

Follow instructions from Step 3, but scan the second of the three bar codes

Barcode 2 of 3



Step 5

Follow instructions from Step 3, but scan the third of the three bar codes

Barcode 3 of 3

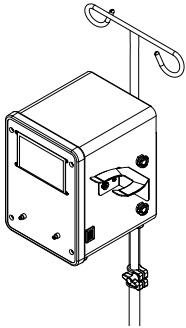


The bar code scanner is now ready for use

Instructions

Mounting a Scope Drying Unit to IV or Scope Pole

Follow these instructions to mount a scope drying unit to an IV or scope pole.



Included:

- Mounting bracket
- 2 U-bolts
- 4 nuts

Tools needed:

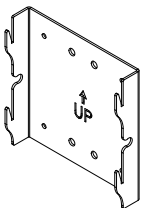
- Flat-head screwdriver
- Wrench

Step 1

Position bracket so the arrow faces up

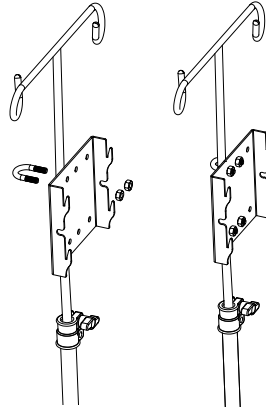
Step 2

Place bracket against the pole at desired height. Typical height of unit is approximately 4' 9" (57") from the floor to the center of the unit's screen



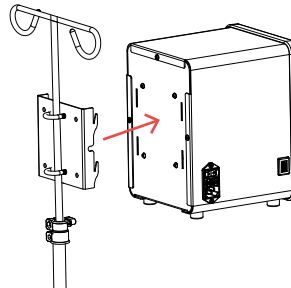
Step 3

Place U-bolts over the pole and through the center holes in the back of the bracket. Insert and turn the 4 nuts clockwise with wrench until firm and the U-bolts are tightly in place



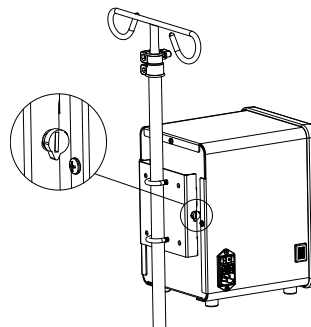
Step 4

Line up the 4 tabs on the bracket with the 4 channels on the back of the unit. Push down gently on the scope drying unit until firmly in place



Step 5

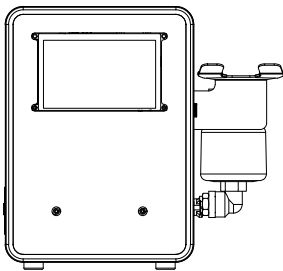
Use the flathead screwdriver to tighten the cam lock on each side of the mounting bracket, making sure the arrow on the cam lock is pointed up or down when the lock is tight



Instructions

Mounting a Scope Drying Unit to a Wall

Follow these instructions to mount a scope drying unit to a wall.



Included:

- Mounting bracket
- 4 wall anchors
- 4 screws
- Mounting template

Note: Use wall anchors when mounting unit to a hollow wall. If mounting to wall studs, you will not need the wall anchors.

Tools needed:

- #2 Phillips head screwdriver
- Drill with 5/16" drill bit

Step 1

Place template at desired location on wall. Typical height of unit is approximately 4' 9" (57") from the floor to the center of the unit's screen

Step 2

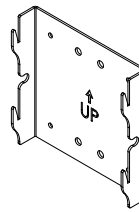
Drill 5/16" diameter hole into the 4 locations. Discard template

Step 3

Fold anchor in the middle. Insert anchor in hole and tap until it is flush with wall. Only 3/4" clearance is needed behind wall

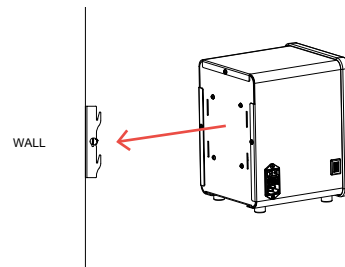
Step 4

Position bracket so the arrow faces up and place it over the anchors. Insert screws and tighten with screwdriver until screws are flush with bracket face. Do not overtighten screws



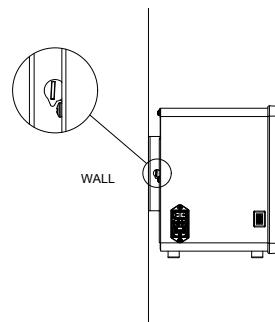
Step 5

Line up the 4 tabs on the bracket with the 4 channels on the back of the unit. Push down gently on the scope drying unit until firmly in place



Step 6

Use the flathead screwdriver to tighten the cam lock on each side of the mounting bracket, making sure the arrow on the cam lock is pointed up or down when the lock is tight



Template for Mounting a Scope Drying Unit to a Wall

Drill 5/16" diameter hole into the 4 locations. Discard template

