



CERV-UV-int; Internal Installation Guide

Overview

This guide details the installation process for the CERV-UV, **installed internally** to the CERV2.

WARNING: The CERV2 must be unplugged before servicing the unit to prevent risk of electrocution. Once installed, the CERV will produce ultraviolet light – never look directly at the UV lamp, and always turn off the CERV (or if applicable unplug the UV power supply) before changing air filters to avoid UV exposure.

Approximate working time: 1 Hour

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Tools Needed

1/4" Driver



Small Flathead



Phillips Screwdriver



Wire Stripper
& Crimper



Contents of CERV-UV Internal Kit:

UV Mount Access Panel



QTY: 1

UV Panel Reflector



QTY: 1

18W UV-C Lamp



QTY: 1

24VAC Power Supply



QTY: 1

Female Wire Connectors



QTY: 2

Male Wire Connectors



QTY: 2

3AG 1Amp Fuses



QTY: 2

Push-in Wire Grip



QTY: 1

4" Zip Ties



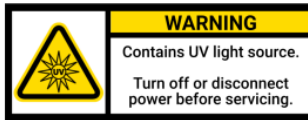
QTY: 6

Sticker - Fuseholder

3AG FUSE
250VAC
1.0 AMP

QTY: 1

Sticker - Warning



QTY: 1

Sticker - CERV-UV

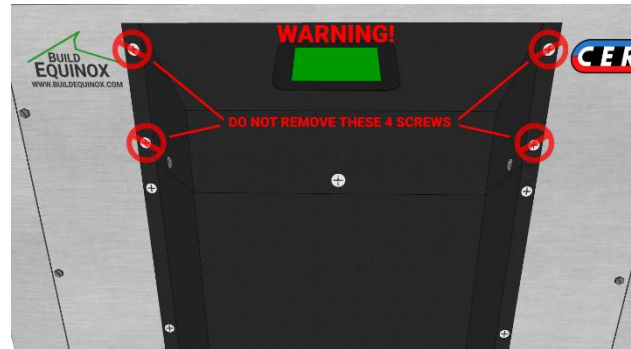
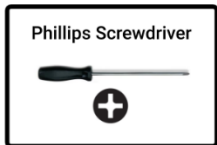


QTY: 1



DANGER: Risk of electric shock. Can cause injury or death: disconnect all remote electric power supplies before servicing. Turn off CERV2 power switch and unplug cord from electrical outlet.

Remove Front Access Panels

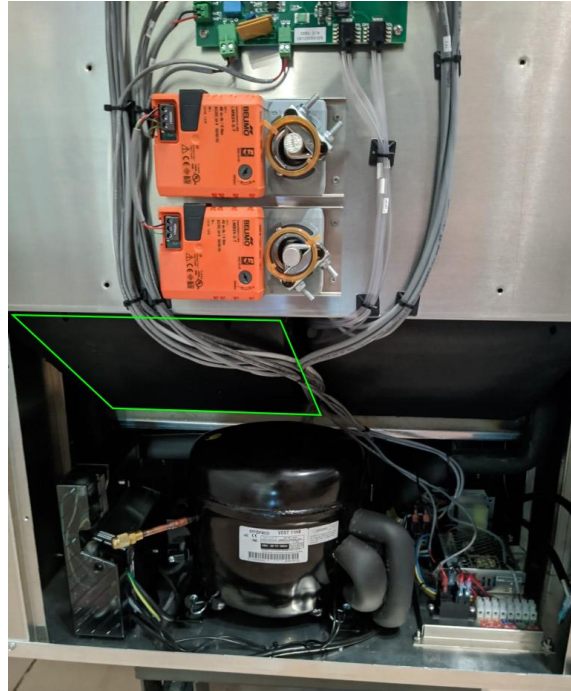


Remove the 13 black phillips head screws highlighted in green above, and set the lower black plastic housing aside.
NOTE: Do not remove the four phillips screws shown in red attaching the touchscreen housing to the CERV2.

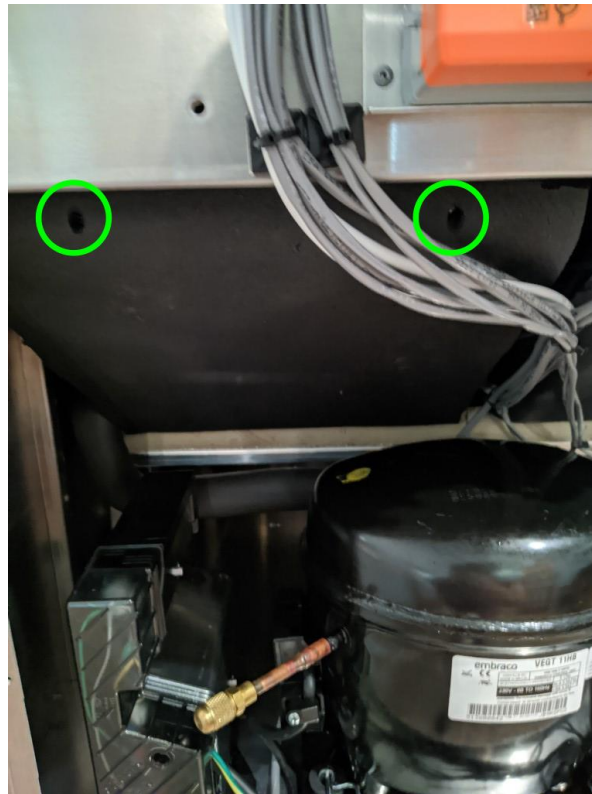


Using the 1/4" driver, remove the four hex-head screws for the lower sheet metal access panel, highlighted in green. Slide out the panel, and set aside. If a CERV2 I/O Expansion board is located on this panel make notes

Remove Original Duct Access Panel



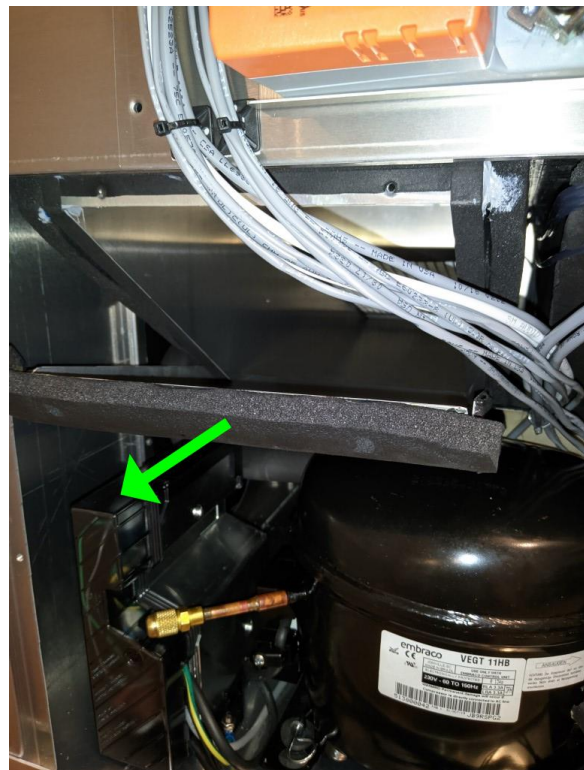
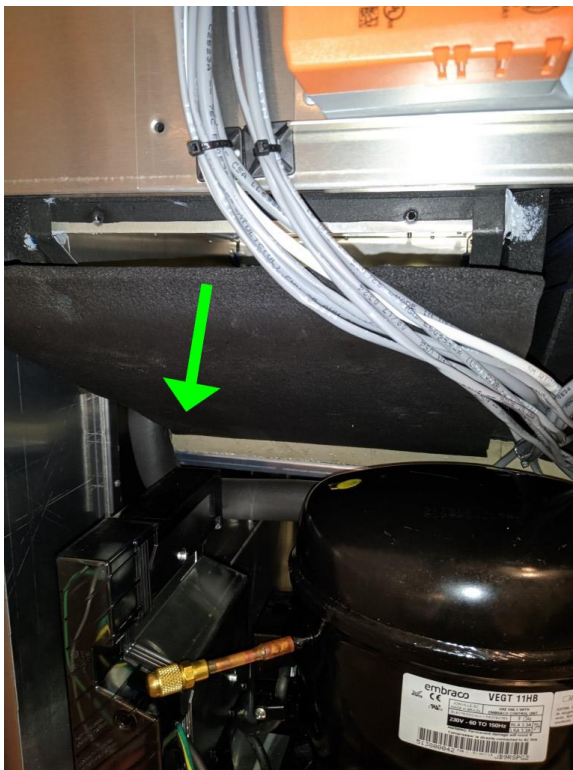
Looking down in the bottom of the CERV2, Locate the duct access panel on the left side. This is the Supply duct for the home, and will receive a new access panel with the UV lamp mount.



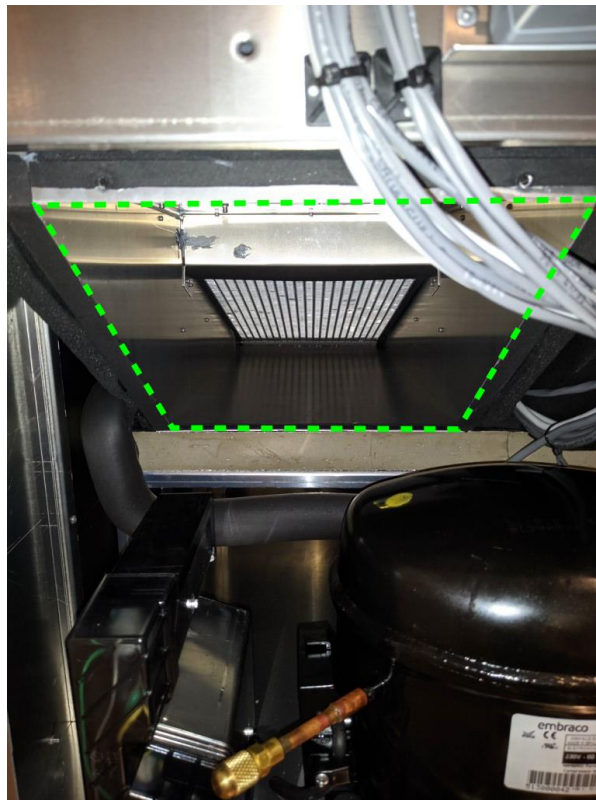
Using the 1/4" Driver, locate the two hex-head screws at the top of the access panel, and unscrew.



If there is not enough slack in the CERV2's wire harnesses, the zip-ties highlighted above may be clipped, allowing them to be moved further out of the way of the access panel when removed. If the zip-ties are removed, use the kit's included zip-ties to secure the harnesses again.

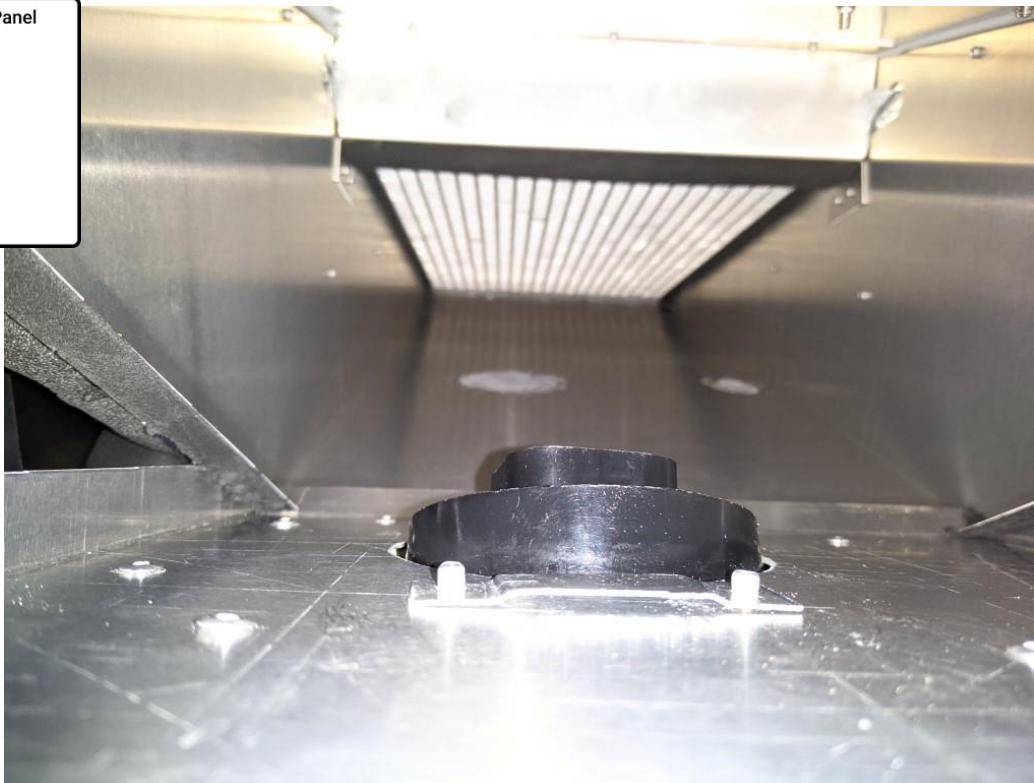


Pull down on the top of the access panel (hinging at the bottom), until the access panel pivots past the wire harnesses. Before removing, take note of how the access panel fits into the metal duct housing, as the new panel will insert the same way. Pull the access panel straight out of the unit, and set aside.



The inside of the metal duct housing is now visible.

Install the new UV Mount Duct Access Panel

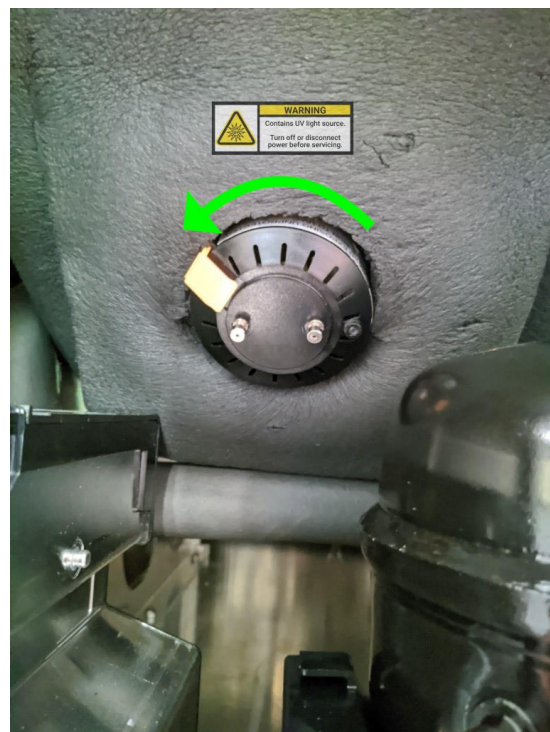




Insert the included UV into the duct opening (using the same method as removing the original panel). NOTE: The UV lamp should NOT be installed yet.

Using the 1/4" driver, screw back in the top two hex-head screws.

Install the UV Lamp



Slightly pull the orange latch for the UV mount, and then rotate the mount counter-clockwise (approximately 30 deg).



The UV mount should now pull out of its plastic base. Take note of the orange latch on the mount, as well as the notches in the plastic base.

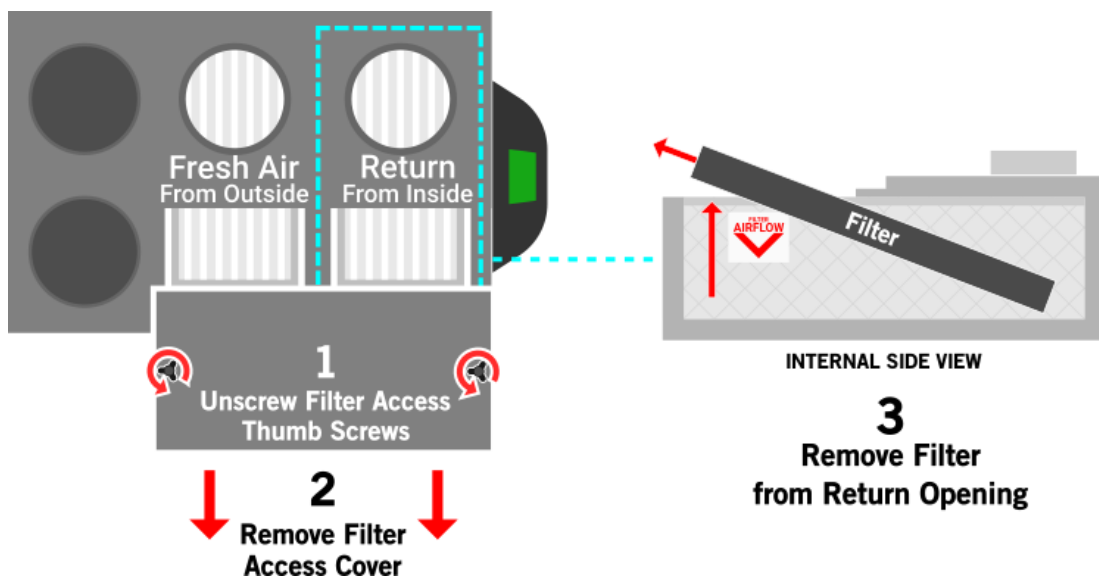


DO NOT TOUCH THE LAMP GLASS WITH YOUR FINGERS. Holding the UV lamp by the plastic base, insert into the UV mount, aligning the four metal pins with the matching holes.

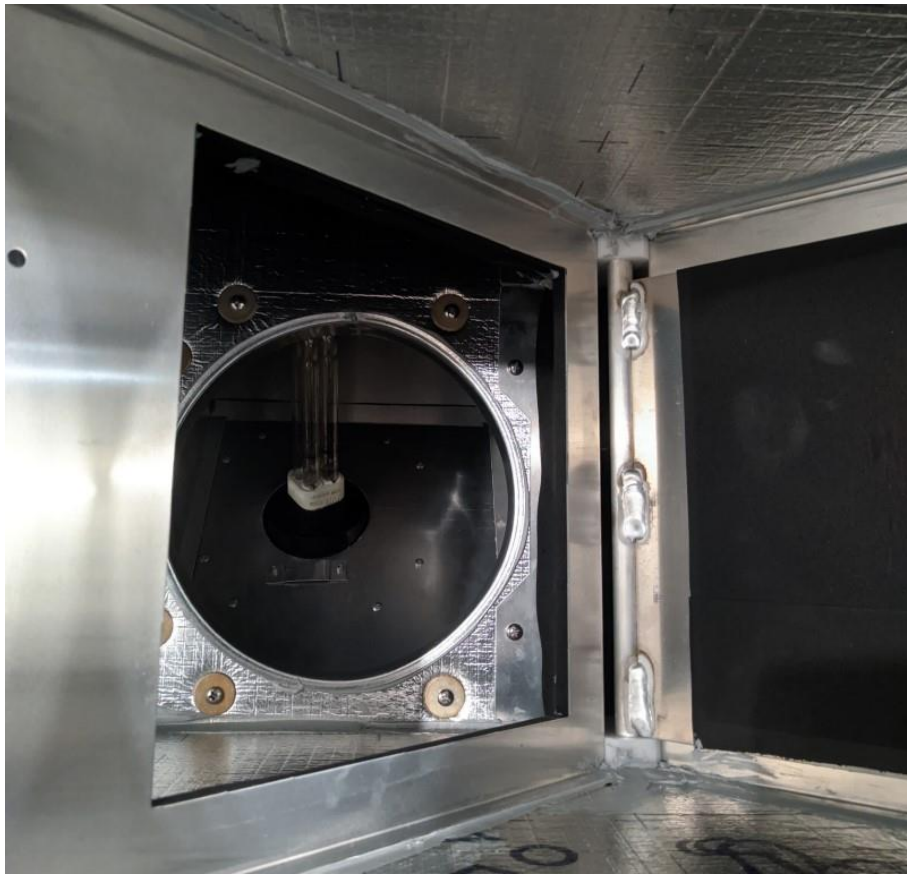


Carefully insert the UV Lamp and Mount into the plastic base (aligning the notches), then rotate approximately 30 degrees clockwise and press in the orange plastic clip. The mount should now be securely held in place.

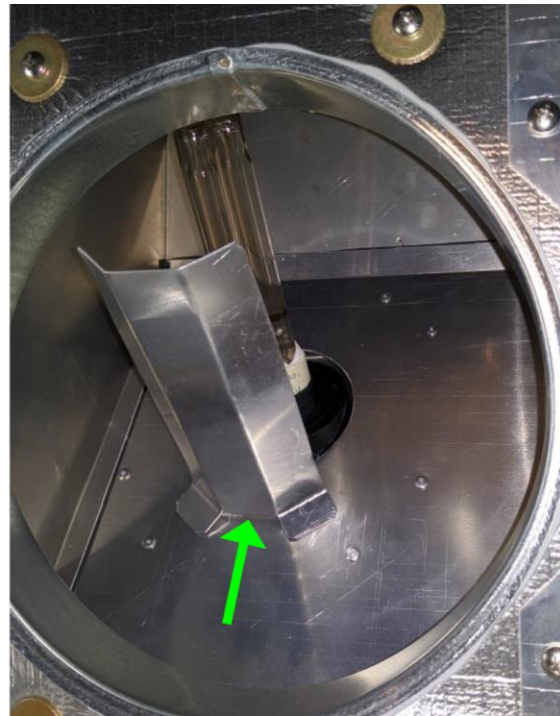
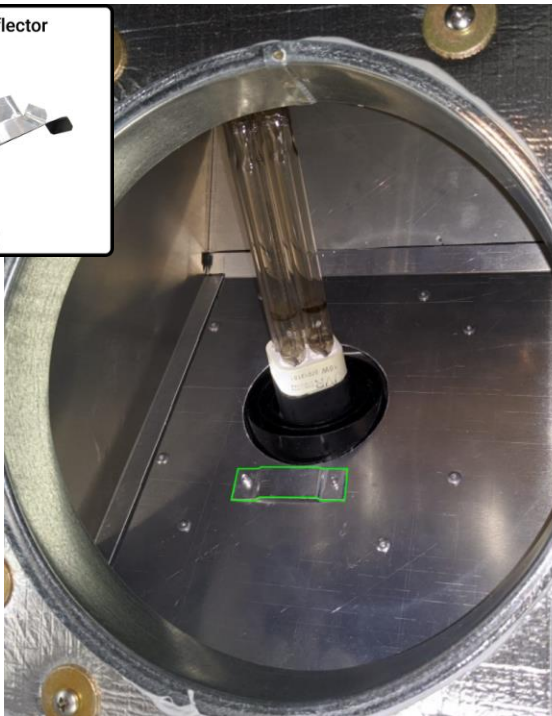
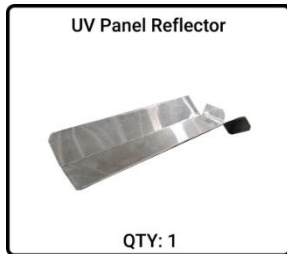
Install the Panel Reflector



To install the panel reflector, you must first remove the CERV's top Filter Access panel, and then remove the filter from the return air opening.



Looking down (from the front of the CERV), the newly installed UV lamp should be visible. If the damper paddle is covering the opening DO NOT FORCE IT BY HAND! To move the damper paddle, turn on power to the CERV, and allow the damper move (this may take up to 90s), then turn power back off.



Slide the UV Panel Reflector into the raised tab above the UV lamp.

Re-insert the return air filter, and tighten filter access cover.

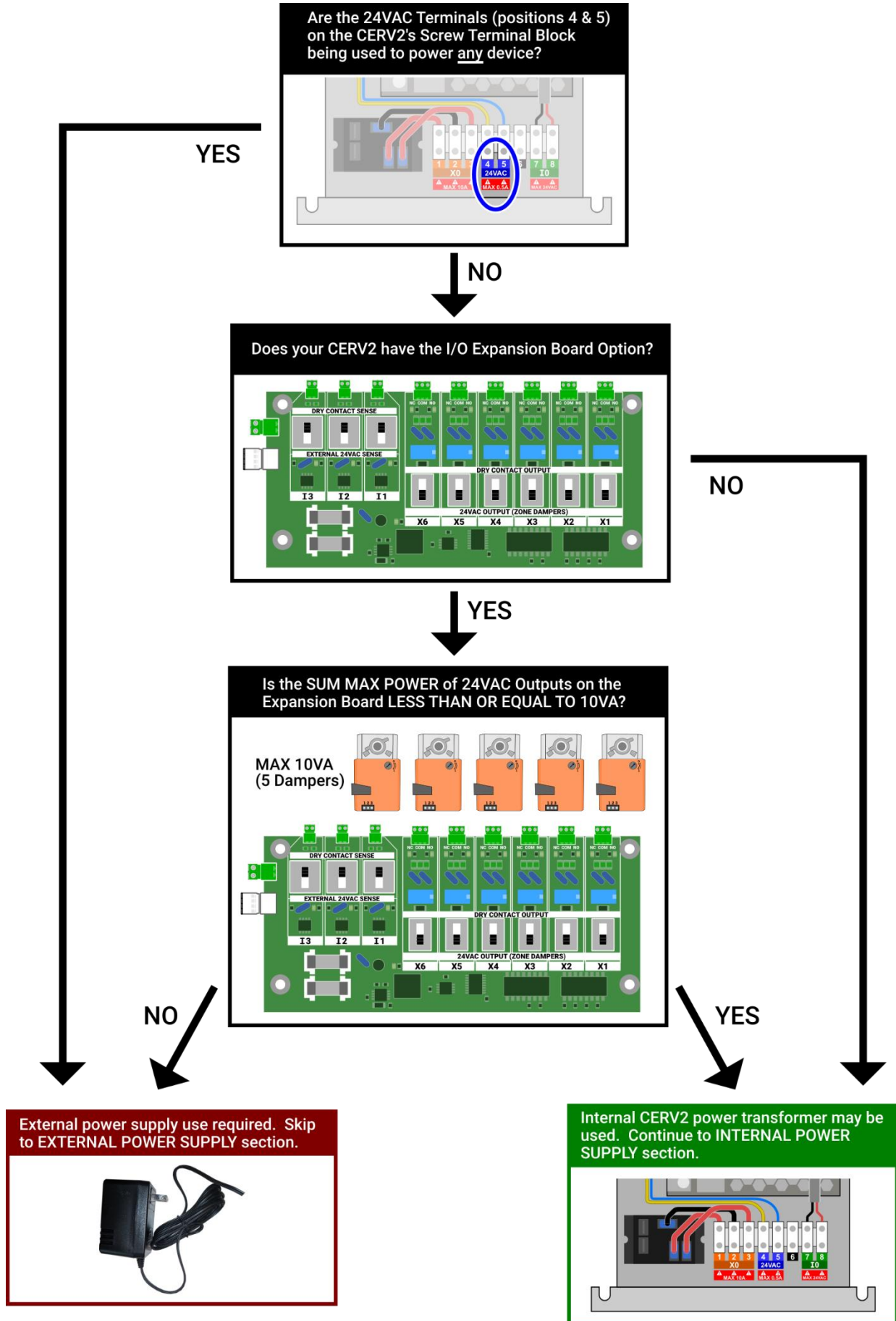
Electrical – Prepare UV Power Harness



The connector side of the 24VAC power supply should be cut at **27 inches from the end**. Pull apart the two wires, and then strip the ends of the wire approximately 1/4".

IMPORTANT:

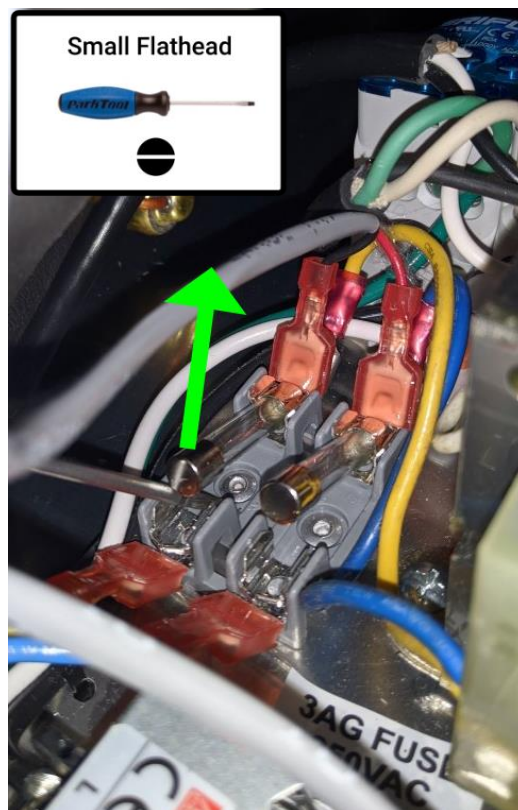
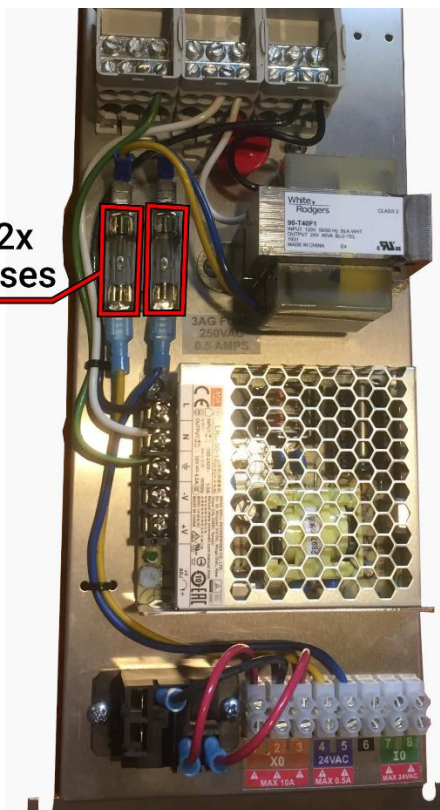
The CERV-UV may be powered internally, through the units built-in 24VAC power supply **ONLY** if the following conditions are met. Follow the flow-chart below to determine the next installation step.



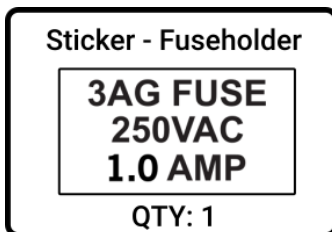
INTERNAL POWER SUPPLY - Replace Original CERV2 Fuses



Replace With 2x
CERV-UV 1A Fuses

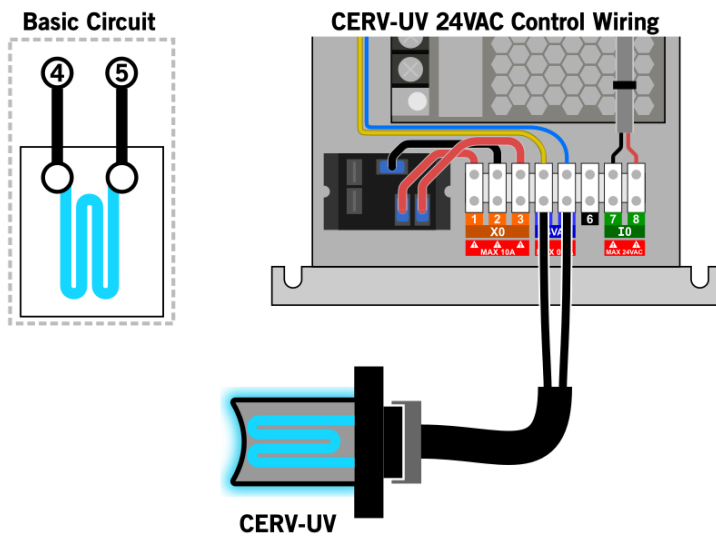


The CERV2 comes factory equipped with 0.5A fuses for the 24VAC external supply. The UV lamp requires 18W of power, therefore the fuses will be replaced with 1A fuses. Using a small flathead screwdriver, carefully pry up the end of the two original 0.5A glass fuses from their fuseholder. The fuses may then be pulled out. Place the two new fuses in the fuseholder, and press down to snap them in place.



Use the included fuseholder sticker to cover the original 0.5 AMP label.

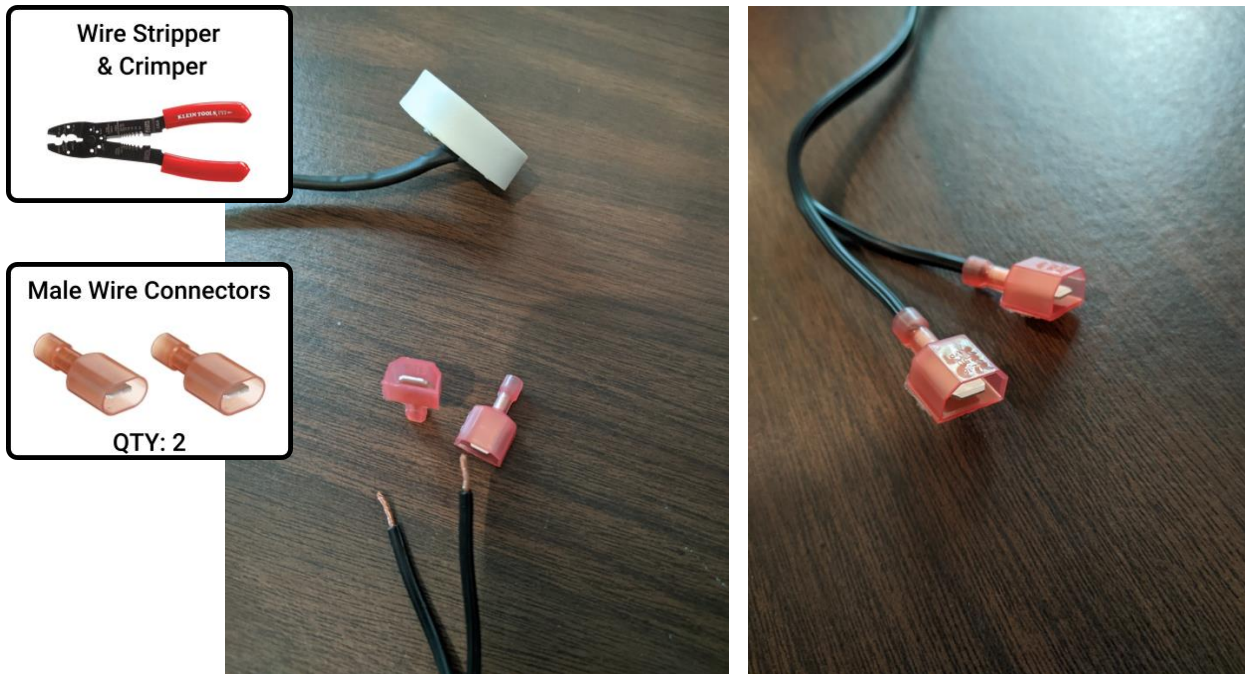
INTERNAL POWER SUPPLY - Connect Wires



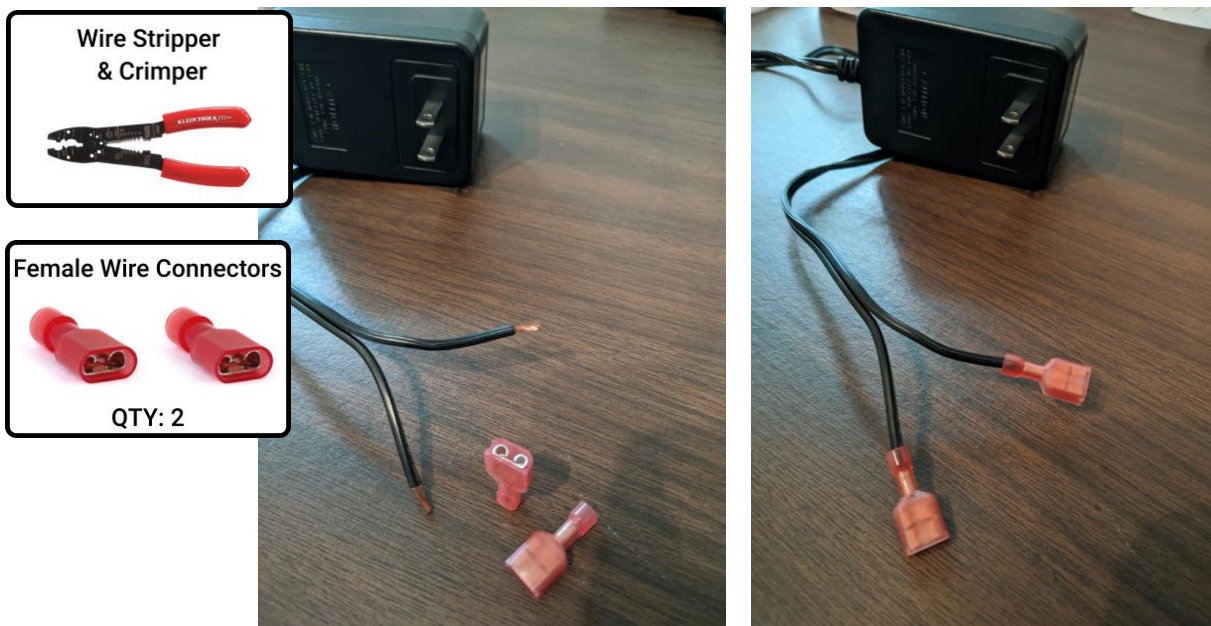
Insert the stripped ends of the CERV-UV wire connector into positions 4 and 5 of the screw terminal block (polarity does not matter). Tighten the screws with a small flat-head screwdriver.

Once complete with this section, skip the EXTERNAL POWER SUPPLY section, and go to the Attach Connector section.

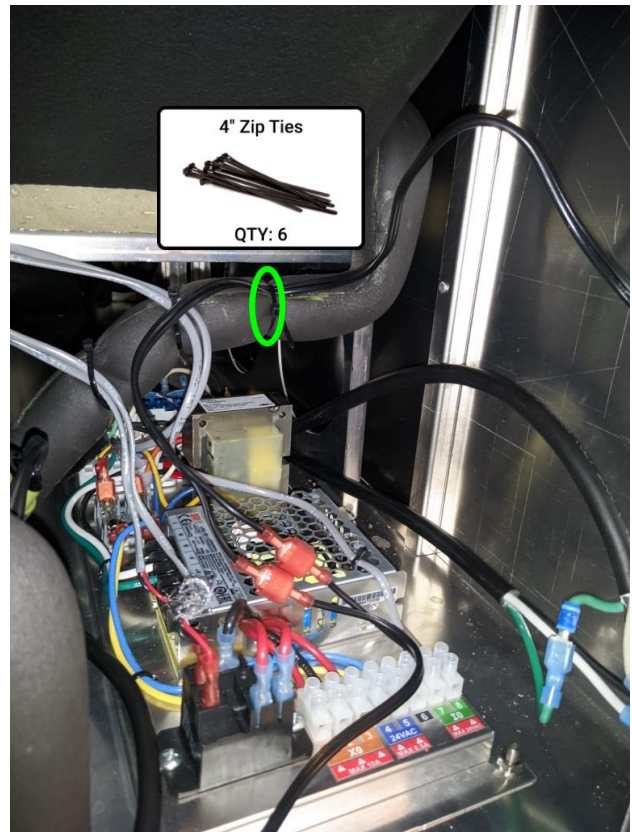
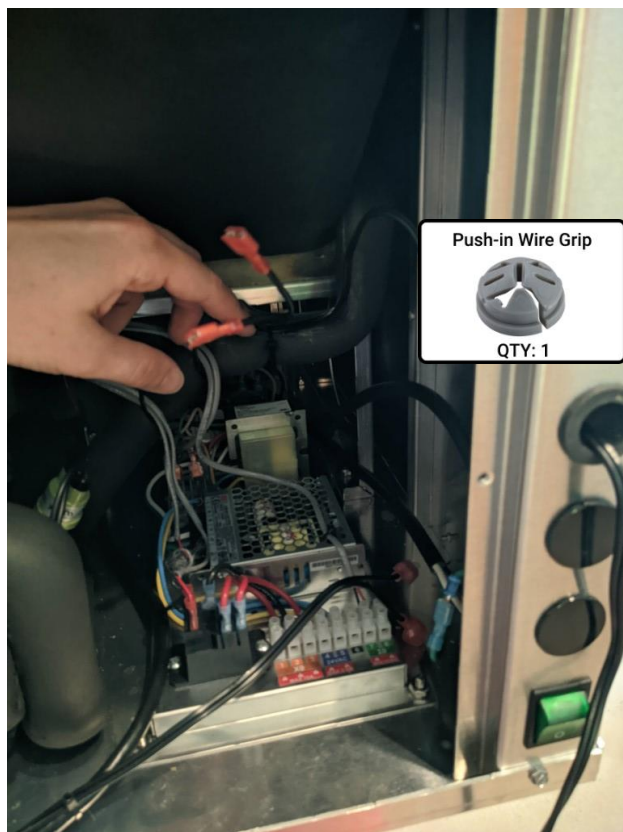
EXTERNAL POWER SUPPLY - Prepare Power Supply



On the previously cut and stripped UV connector, crimp the two included male wire connectors to the bare wires.



On the power supply end of the harness, pull apart the end of the wires, then strip 1/4" from the end. Crimp the two included female wire connectors to the bare wires.



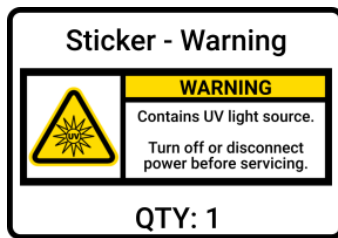
Feed the power supply harness (with the female connectors) through one of the CERV's 3/4" conduit holes, with approximately 1 foot of wire inside the CERV. Insert the push-in wire grip into the conduit hole, and tie the wire in a loose knot on the back side. Zip-tie the wire to the black insulated piping (picture on right). Connect the male ends of the UV connector harness to the female ends of the power supply harness.

Attach Connector

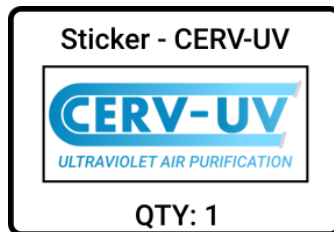


Align the pins of the UV Mount to the UV connector, press on, then turn clockwise to secure the connection. Use two zip ties to secure the wire harness to the existing wiring at the front of the unit.

Place Stickers

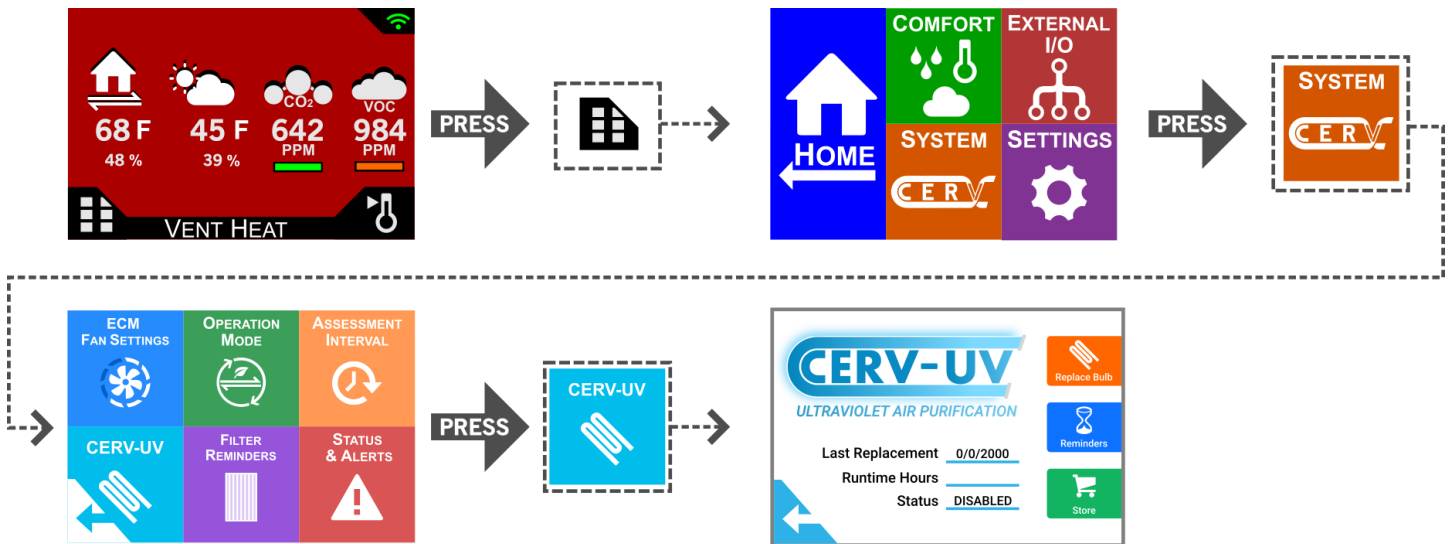


Place the included Warning sticker on the filter access cover as seen above.

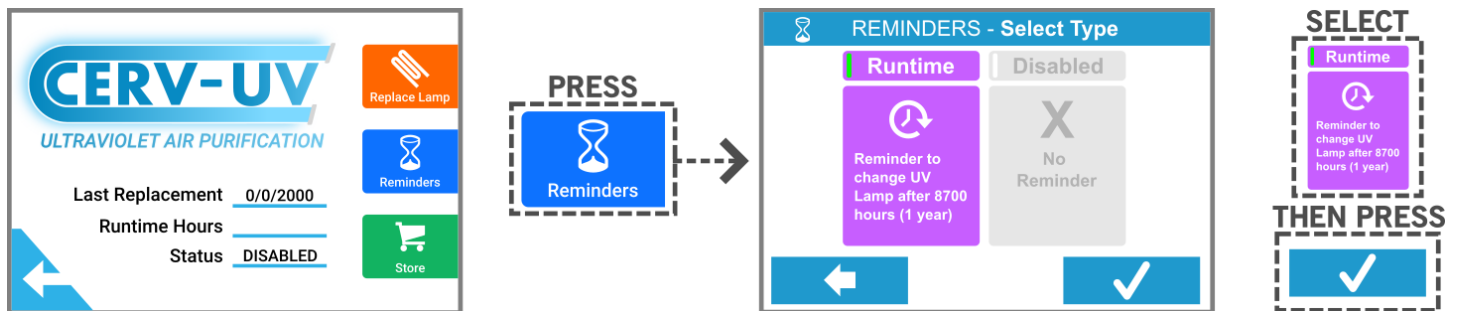


Place the included CERV-UV sticker on the front of the unit, below the CERV2 sticker.

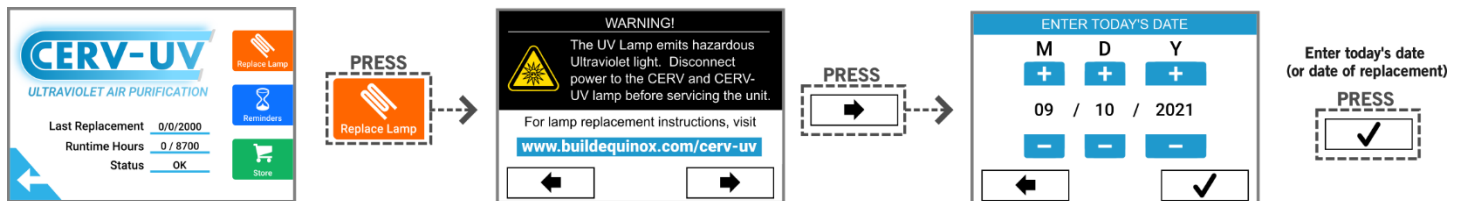
Setting CERV-UV Lamp Replacement Reminders



Follow the touchscreen controller path below to reach the CERV-UV overview screen.



Once the CERV-UV overview screen has been reached, press the Reminders Button, select Runtime, and press the check box. The CERV-UV lamp is rated for 8700 hours (1 year), so the CERV will monitor the operation time of the lamp and display a notification when it is time to replace.



Lastly, now that the lamp has been installed, you will set the current date. Press the Replace Lamp button and enter the date.