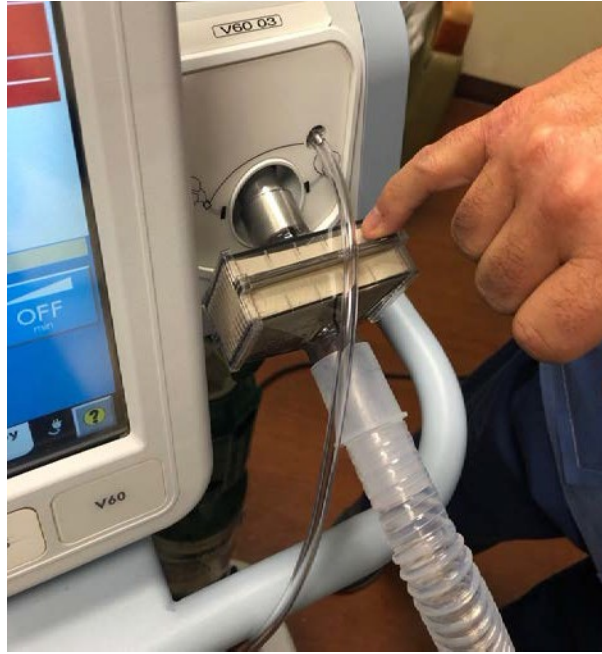Emergency protocol for using Philips Respironics V60 ventilator with pressure control ventilation (PCV) option as a pressure-controlled ventilator using a conventional bipap circuit

Authored by Hugh Cassiere, MD, Stanley John RT, Todd Goldstein, PhD

You may use the conventional exhalation valve and/or circuit sold by Philips Respironics

**In situations where the manufacturer's connection is unavailable, Northwell Health has successfully replicated and tested a 3D printed solution that is autoclavable and reusable. As the 3D printed solution should only be used in an emergency situation, it is recommended that the bacterial or viral filter be placed between the ET tube and the 3D printed adapter. (Photo at end of document.)

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Add **2** HEPA filter, one immediately connected to the V60 main gas port outlet and the second HEPA gets connected to the exhalation valve port closer to the ET/Trach
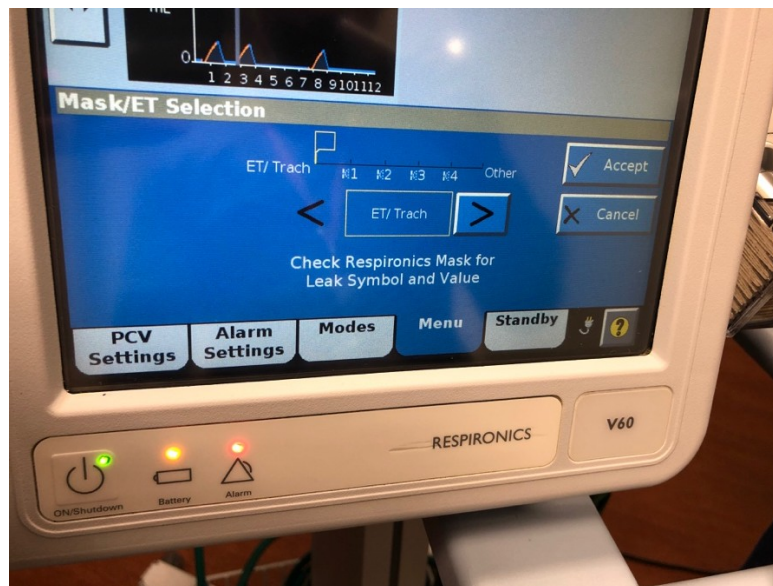

We recommend that the HEPA filter on the exhalation valve port be connected to a blind reservoir

*In order to connect to an ETT tube you need to use the Philips Respironics conventional exhalation valve and/or circuit kit.
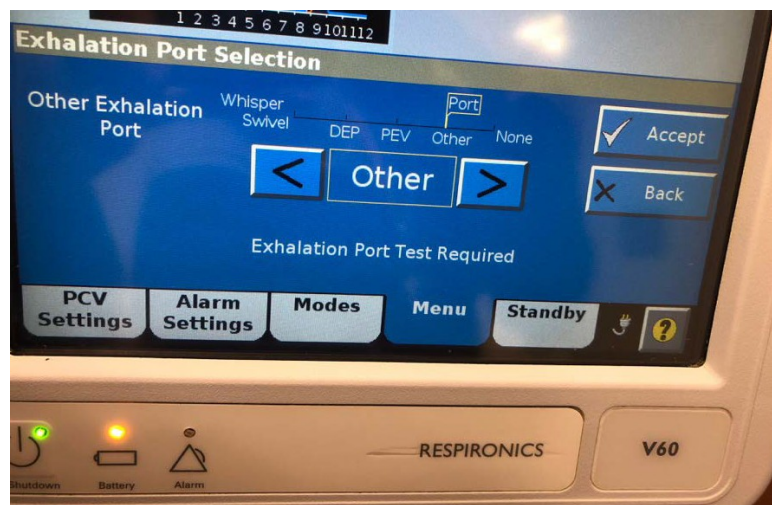
Turn on machine and hit the **menu** tab. Please ensure the patient is not connected to the V60 machine

- Under the menu tab select the option for **Mask/port**
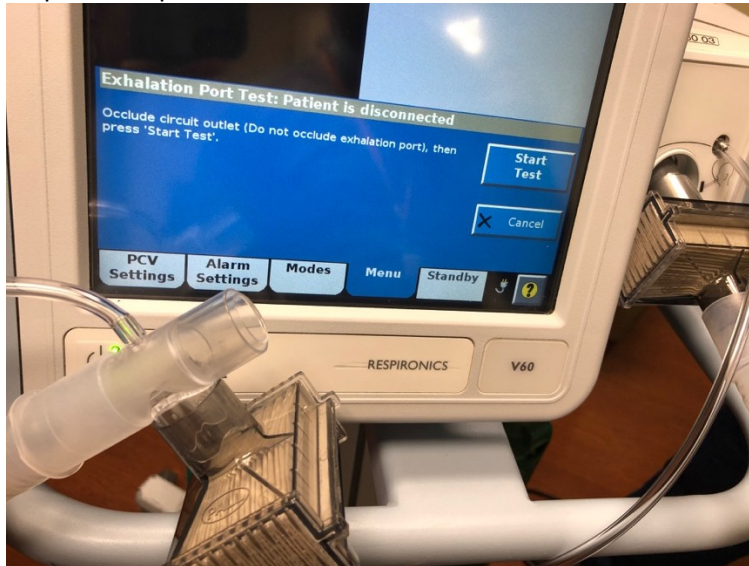- Select →ET**/trach** option (extreme left)
- Hit Accept

Then chose type of exhalation port

- Select →**Other**
- Hit accept
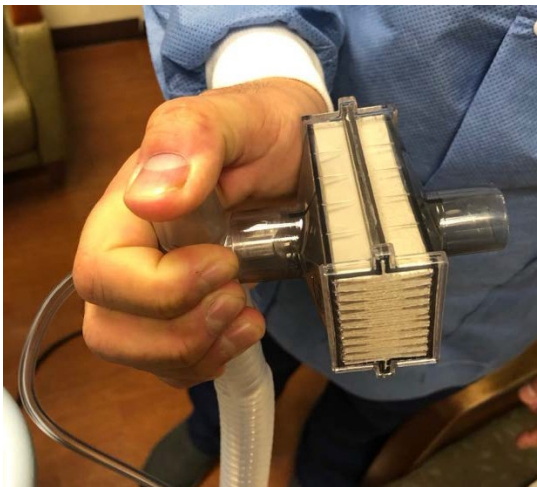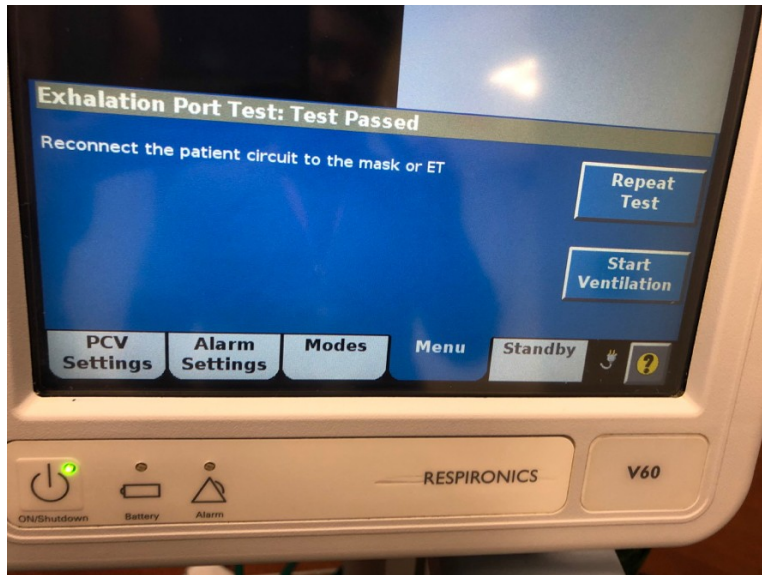
Perform exhalation port test

- Keep circuit open

- The machine will detect the open circuit and ask you to occlude the outlet port that connects to the patient end of the circuit

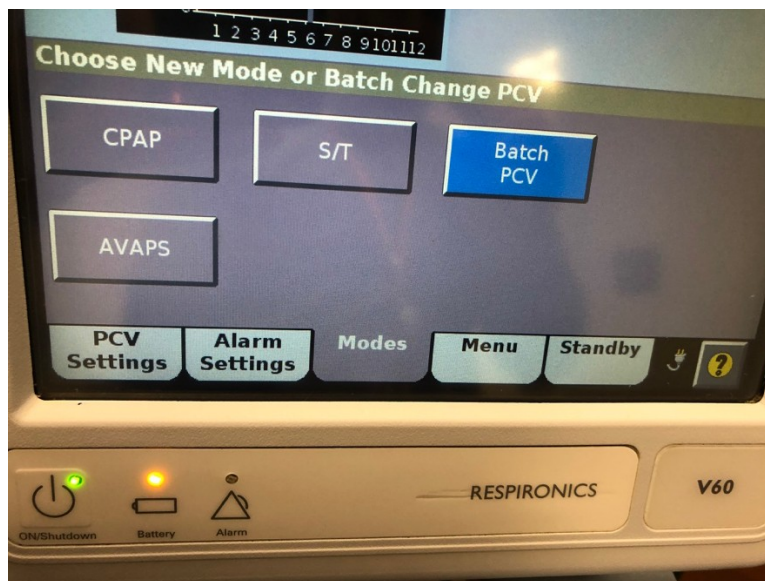Now occlude the outlet keeping the exhalation valve port open

- Hit start test

- Test takes 4-5 seconds when you see the green bar the test was completed successfully or that you passed the test
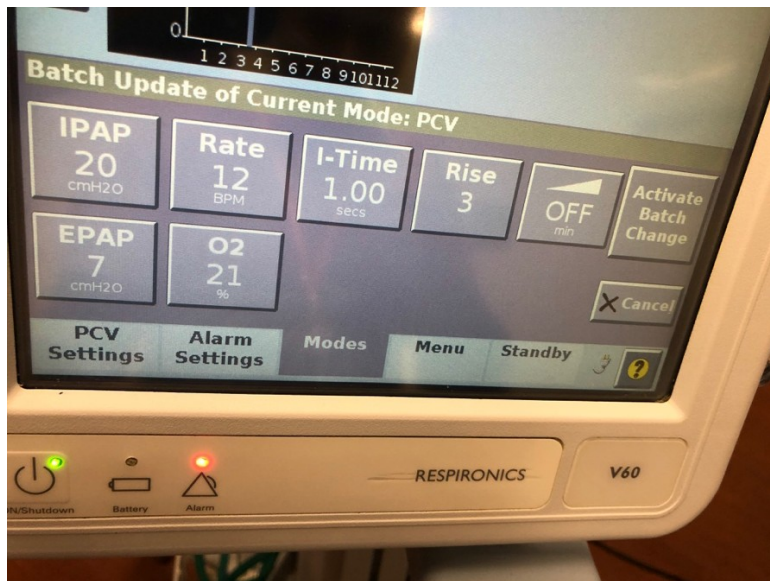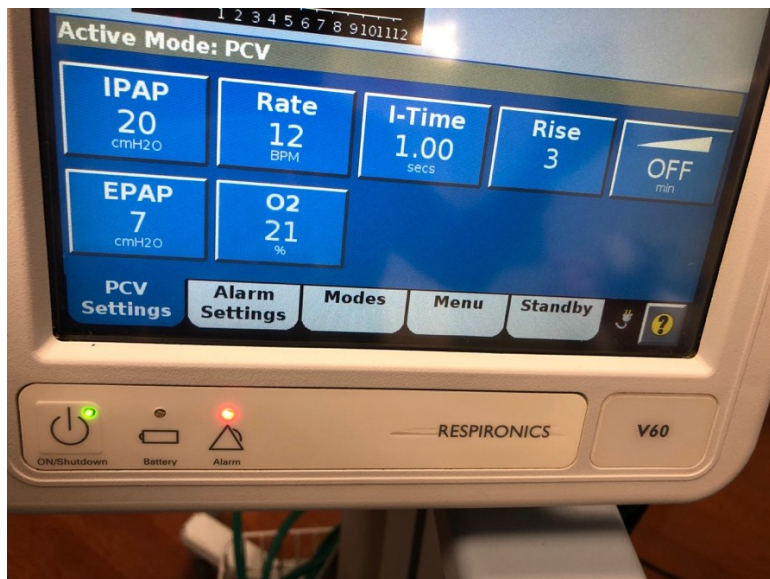
Select mode- **Batch PCV**

Place patient on the appropriate pressure settings parameters prior to activating mode as follows

- The EPAP will be the same as the PEEP
- For IPAP use the plateau pressure measured on the conventional ventilator as a baseline
- The Fi02 would be the same
- **The ramp should be turned off**
- The rise time can be adjusted based on patients demand. We recommend a rise time of 3
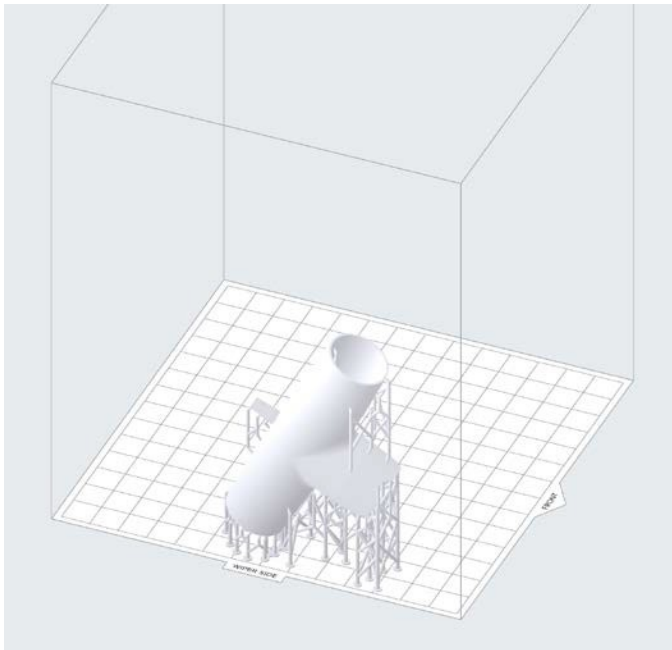
- Now activate the batch change by hitting select (Active Batch Change)

3D printing protocol

There are many different types of 3D printing modalities that can be used for this adapter.

Please ensure that the STL is printed with a biocompatible material.

*Hepa Filter placed after the adapter.

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