



**BARNES**  
HEALTHCARE SERVICES

# NON-INVASIVE VENTILATION THERAPY



**Servicing Location:** \_\_\_\_\_

**Location Phone Number:** \_\_\_\_\_



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# INTRODUCTION

Non-Invasive Ventilation therapy has been prescribed by your doctor to assist with your breathing while you sleep and some during the day. Its purpose is to reduce the effort required for breathing by resting your breathing muscles and expanding your lungs. By wearing the device for a minimum of 6-8 hours each night, the prescribed settings aim to keep your airways open, remove waste gases (like carbon dioxide), and maintain your oxygen levels. As you continue with the therapy, you should gradually experience improvements such as increased energy, higher activity levels, fewer and less severe headaches upon waking, and feeling more alert.

The therapy specifically targets reducing the levels of carbon dioxide in your blood. Elevated carbon dioxide levels can make you feel sluggish or lethargic, and in severe cases, it can even impair your body's natural drive to breathe, which may lead to hospitalization.

Please note that the settings on your device are tailored to your height and gender and should only be adjusted by a doctor's order. The AVAPS-mode is designed to provide comfortable breathing support, with the ventilator continuously monitoring your breathing pattern and delivering the necessary pressures.

At Barnes Healthcare Services, our dedicated team is committed to helping you benefit from Non-Invasive Ventilation therapy by ensuring consistent and successful use of your device. Initially, a Respiratory Therapist will visit your home, followed by two more consecutive monthly visits, and subsequently every four months thereafter. If you require additional assistance, we can adjust the visit schedule to support your success with the therapy.

Thank you for choosing Barnes Healthcare Services as your provider. We look forward to assisting you throughout your therapy journey.

*Please note: The information included in this document is for informational purposes only and is not intended to substitute in any way for medical education, training, treatment, advice, or diagnosis by a healthcare professional. Barnes Healthcare Services makes no warranties related to the information in this document. A qualified healthcare professional should always be consulted before making any healthcare-related decisions.*

*In the event your complaint remains unresolved with Barnes Healthcare Services, you may file a complaint with our accreditor, The Compliance Team, Inc., via their website ([www.thecomplianceteam.org](http://www.thecomplianceteam.org)) or via phone 1-888-291-5353*

# VENTILATOR VIDEO LINKS



Part 1 - Introduction to Therapy



Part 2 - Machine Overview



Part 3 - Circuit Assembly



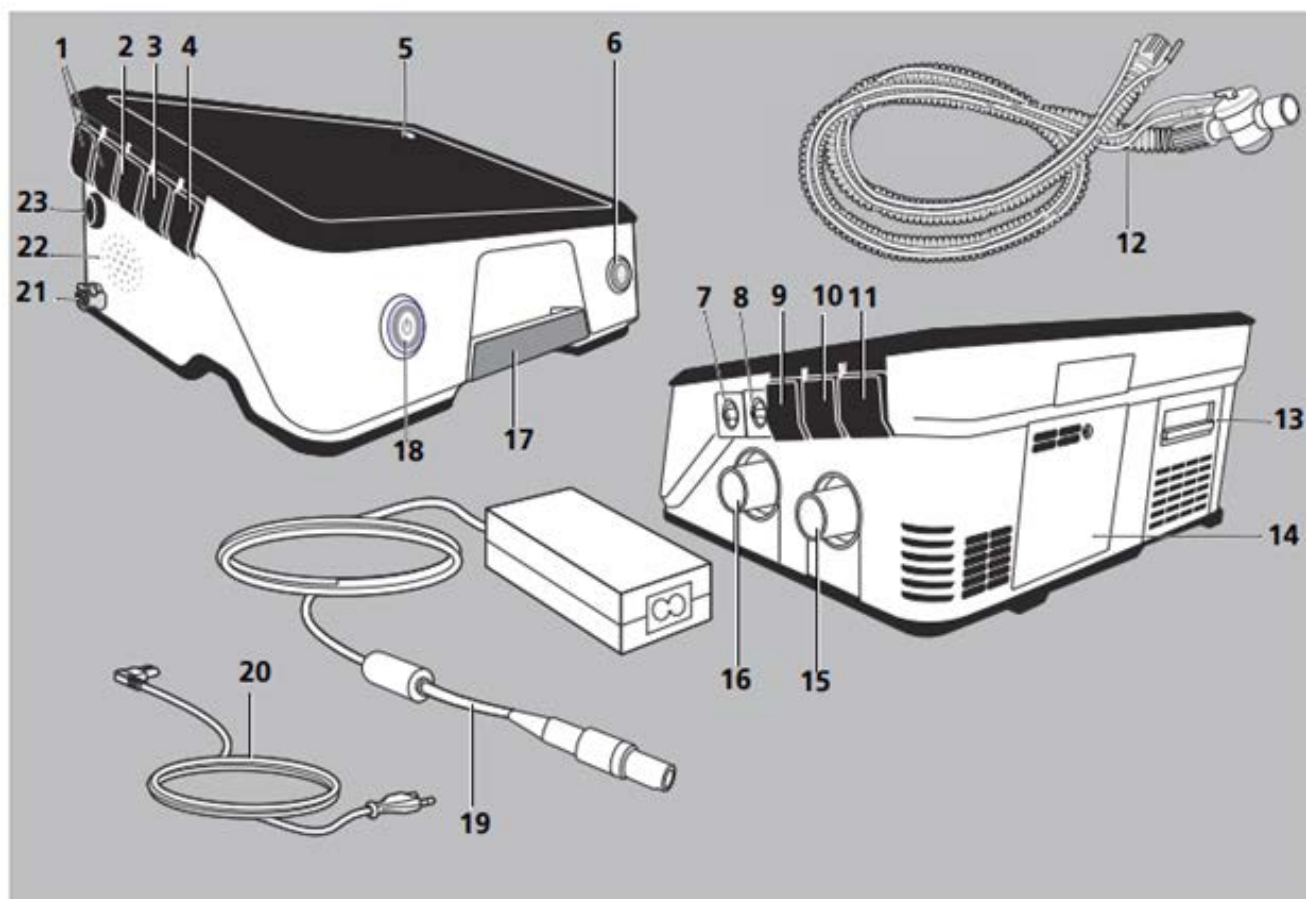
Part 4 - Mask Assembly and Care



Part 5 - Humidifier Setup

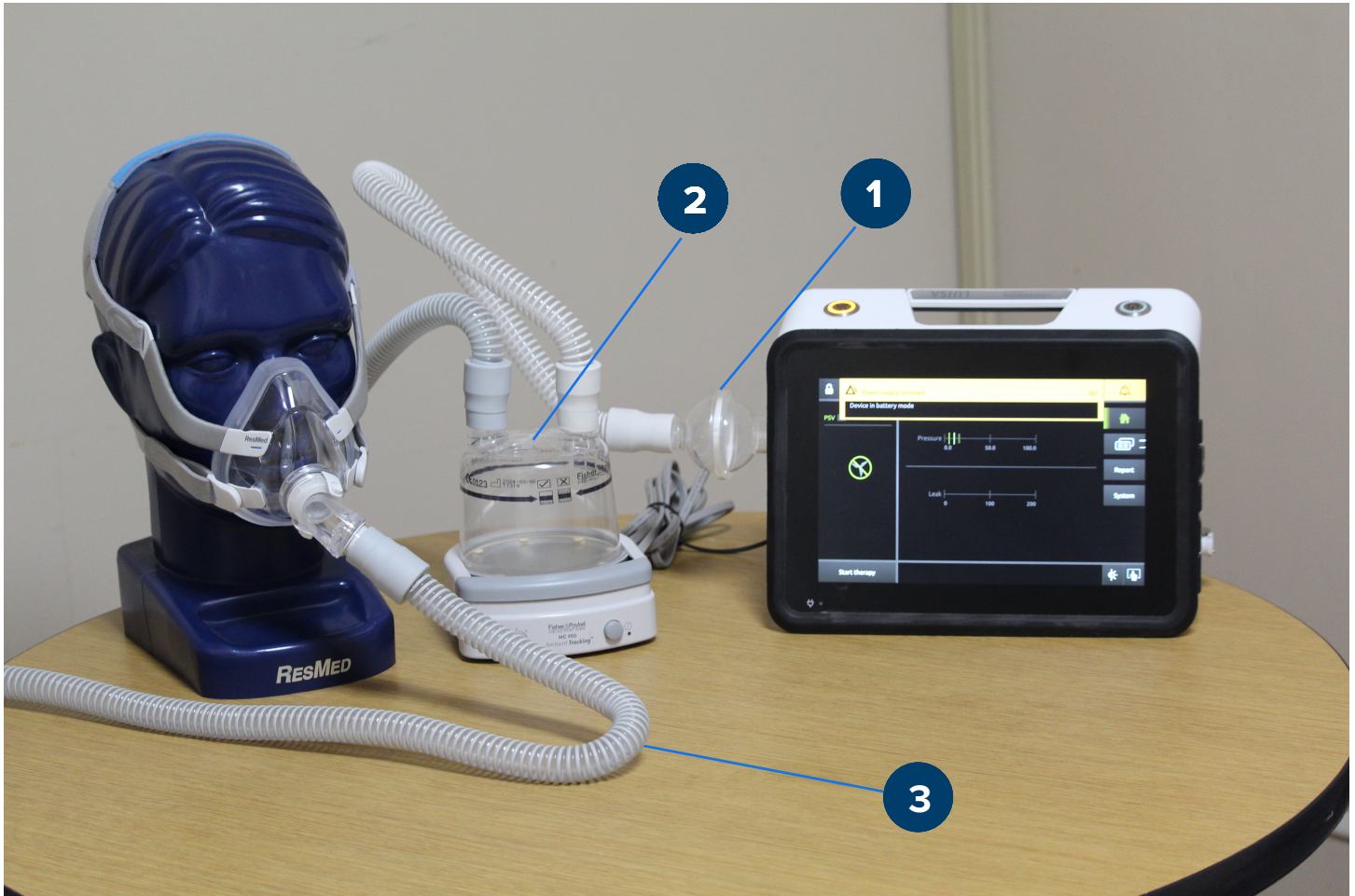


Part 6- Humidifier Circuit Assembly



## Vent Overview:

- |                                      |   |
|--------------------------------------|---|
| 1 External battery connections       | 13 Filter compartment with dust filters |
| 2 Connection for monitor/prisma      | 14 Compartment for internal battery     |
| 3 USB-C connection                   | 15 Exhalation circuit connection        |
| 4 Nurse call system connection       | 16 Device outlet port                   |
| 5 Power supply indicator             | 17 Handle                               |
| 6 Alarm acknowledgment key           | 18 On/off key                           |
| 7 Pressure measuring connection      | 19 Power supply unit                    |
| 8 Valve control tube connection      | 20 Power cable                          |
| 9 SpO2 connection                    | 21 O2 supply connection                 |
| 10 CO2 connection (not in use)       | 22 Loudspeaker                          |
| 11 Nebulizer connection (not in use) | 23 Power supply unit connection         |
| 12 Circuit                           |   |



*Typical setup of Non-invasive ventilation with a heated humidifier.*

## **Non-invasive Ventilation with a Heated Humidifier**

1. Bacteria Filter: Replace with a new one once per month.
2. Humidifier
3. Tubing: Clean once per week by soaking for 15-20 minutes in dishwashing liquid, rinse, and then hang to dry.



## Front Panel Features:

The Front panel contains the control buttons, visual indicators, and display screen.

## Buttons

The following buttons are included on the front panel of the device.

1. **Status line**  
Symbols indicate current device stats (eg. accessories connected, battery capacity).
2. **Alarm Acknowledgment key**  
Press briefly: Acknowledges alarm. If the alarm persist, the alarm is muted for 120 seconds. Press and hold: Mutes all acoustic alarms for 2 minutes  
Press briefly again: Suspends alarm muting.
3. **Home Key**  
Switches the view back to the home screen.
4. **Menu Keys**  
Provide access to the individual menus.
5. **Dimmer Key**  
Switches to night mode and the display goes dark. Touch the display to reactivate it. Keep key depressed - opens the Display menu.
6. **Ventilation Key**  
Starts or stops ventilation





## Back of Ventilator

1. **Air Inlet Port with Pollen (foam) Filter:** This needs to be rinsed at a minimum once per week, by running under water to eliminate dust. Be sure that it is dry before putting back in the ventilator. This can be replaced once a year.

Place the Ventilator on a hard, non-carpeted level surface, **NOT on the floor.**

Make sure the air inlet port in the back of the device is not blocked.

Air **MUST** be able to flow freely around the unit.



## Ventilator With Heated Humidifier

A humidifier is sometimes added to your therapy to help with dryness from the airflow of the ventilator. If you opt to use a heated humidifier, you will need to make sure you are cleaning the chamber and tubing at a minimum of weekly.

1. Heater unit: the green light indicates the unit is on
2. The dial is used to provide more heat to the water producing more humidity in the air being delivered to you. If you are experiencing dryness in your mouth or nose, then you should gradually increase the heat over several nights. Should you start having water in the tubing or splashing up into the mask, turn the dial down to reduce the amount of humidity. You can also use the humidifier without heat. This will provide a small amount of humidification to your airways.
3. Cleaning: Daily - empty the water chamber. Weekly - Soak the chamber in warm water with dishwashing liquid for 15-20 minutes, rinse well and let dry. The chamber itself can be replaced every six months.
4. Be sure to turn the heated humidifier off when ventilator is not in use.



### Parts of the Full-Face Mask

- 1. Headgear:** This should last 6 months or more. This can be hand washed in warm soapy water and rinsed off as needed.
- 2. Cushion:** This needs to be wiped off with a damp cloth daily. This can be replaced every 2 months, typically when it doesn't hold a seal any longer.
- 3. Frame:** This holds the cushion and headgear in place. It can be replaced with the whole kit (headgear/ cushion) once every six months.

## Ventilator Alarms

**High priority Alarms: 3 beeps followed by 2 beeps – the audio pause button will be flashing red. This alarm indicates a critical issue with breathing or operation of the ventilator.**

***ALWAYS LOOK AT THE PATIENT FIRST*** before attending to the equipment to ensure he/she is being properly ventilated.

The display portion of the screen will show you the alarm situation.

When the alarm situation has been taken care of, press the reset button under the display.

**Medium Priority Alarms: 3 beeps – the audio pause button will be flashing yellow. *These types of alarms require prompt attention.***

The alarm situation will be on the display screen, and when the situation has been taken care of, you press the reset button to clear the alarm.

**Low Priority Alarms: 2 beeps and the audio pause is a solid yellow light. *These types of alarms convey the information you should be aware of.***









**Informational Messages and confirmation alerts: 1 single beep.**




The message will be on the display screen that a condition has occurred that requires attention such as AC Power is disconnected or the detachable battery is not charging.

### **Other alarms you may experience:**

**Low Battery/ Battery Depleted:** Check to make sure the green light on the front is on. If it is not, check the power cable's connection to the machine and ensure that it is plugged into a working (un-switched) outlet. This will start charging the internal and external batteries as indicated by the yellow lightning bolts over the icons.

**Vent Inoperable or Ventilator Service Required:** If you see this alarm, you will need to call Barnes Healthcare Services to have your vent exchanged.

	Battery charging. If the gray area reaches the top, the battery is fully charged.
	Battery capacity high, battery discharging.
	Battery capacity medium, battery discharging.
	Battery capacity low, battery discharging.
	Battery capacity low.
	Battery error
	Filter change function (only if function is activated).
	Service reminder function (only if function is activated).

	Low-priority alarm triggered.
	Medium-priority alarm triggered.
	High-priority alarm triggered.



## Alarm Summary:

### Loss of Power

**High Priority**

Press Start/ Stop button and then press Right button to silence the alarm. If using AC power, try plugging the device into an alternate AC power source. If loss of power continues and the detachable battery is depleted, connect patient to backup vent if available.

### Ventilator Inoperative

**High Priority**

Press Start/ Stop button. If the display is operational, Power Off confirmation screen appears. Select Right button to shut off the device and silence alarm. Remove the patient from the vent and connect to backup vent. Contact Barnes Healthcare Services for service.

### Check Circuit

**High Priority**

Make sure there is no kinked or pinched tubing. Make sure the tubing is properly attached. Make sure all tubing and exhalation devices are clean and free of condensation.

### High Expiratory Pressure

**High Priority**

Make sure the tubing is not kinked or pinched. Check the patient's breath rate. Check the patient to see if patient needs suctioning.

### Low Expiratory Pressure

**High Priority**

Make sure the tubing is not kinked or pinched.

### Circuit Disconnect

**High Priority**

Check breathing circuit and reconnect if it has become disconnected or fix the leak.

### High Inspiratory Pressure

**High / Medium Priority**

Make sure the tubing is not kinked or pinched. Check the patient to see if patient needs suctioning.

### Low Inspiratory Pressure

**High Priority**

Check patient circuit for leaks or disconnects. Check the trach. Is the leak occurring from the trach site, is the pilot balloon properly inflated?

### SD Card Error

**Low Priority**

There is a single audible beep whenever the unit is powered on and message on screen which requires reset. Also, there should be an SD card error message on the home screen. It will look like a square with an "X" over it. If there is no SD card image visible on the home screen, then there is no card present and you should call our office for assistance. All SD Card errors always require a call to the Respiratory Therapist.



## **YEARLY SUPPLIES**

2 MASKS WITH HEADGEAR

4 CUSHIONS/PILLOWS

12 BACTERIA FILTERS

2 TUBING

1 FOAM FILTER

## **SUGGESTED CHANGE SCHEDULE**

CHANGE BACTERIA FILTER ONCE A MONTH

CHANGE CUSHION/PILLOWS ONCE EVERY 2 MONTHS

CHANGE MASK WITH HEADGEAR ONCE EVERY 6 MONTHS

CHANGE TUBING ONCE EVERY 6 MONTHS

CHANGE FOAM FILTER ONCE A YEAR

**\*\*If you need more than the allotment allowed,  
contact your Respiratory Therapist**

# **Equipment Warranty Information**

**Every product sold or rented by our company carries 1-year manufacturer's warranty. Barnes Healthcare Services will notify all Medicare beneficiaries of the warranty coverage, and we will honor all warranties under applicable law.**

**Barnes Healthcare Services will repair or replace, free of charge, Medicare-covered equipment that is under warranty. In addition, an owner's manual with warranty information will be provided to beneficiaries for all durable durable medical equipment where this manual is available.**



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