

# Addressing concerns about the use of NIV with the V60/V60 Plus in patients with a contagious disease



## Particle dispersion from mask with exhalation port in the elbow or mask

- Study looked at particle dispersion around several O<sub>2</sub> and NIV masks
- They demonstrated a dispersion radius of up to a meter (3.3 feet) from the mask or circuit exhalation port



Hui DS, Hall SD, Chan MTV, Chow BK, Tsou JY, Joynt GM. Noninvasive positive pressure ventilation. An experimental model to assess air and particle dispersion. Chest 2006; 130:730-740

## **Filtered exhalation port**

The DEP with filtered exhalation port (FEP) is:

- Designed to facilitate filtration of the patient's exhaled gas
- For use on NIV patients with a known or suspected contagious disease, or per hospital protocol
- A solution to minimize concerns by providing the ability to attach a bacterial/viral filter to the exhalation port
- Requires the use of a bacterial/viral filter attached to the port

On the V60 or V60 Plus, use "DEP" for the exhalation port setting when using the FEP

## Things to remember when using the exhalation port filter

- Port filtration will be ineffective if used with a mask that has "built-in" intentional leak (examples: Total face mask, any mask with Leak 2 elbow, ResMed or Fisher-Paykel)
- Elbow to be used is the Leak 1 EE which has **no intentional leak**



Leak 2 entrainment elbow (EE)



Leak 1 entrainment elbow (EE)

#### **Clear leak 1 entrainment elbow** (EE) has an anti-

asphyxia valve for dedicated non-invasive ventilators (use with single-limb circuits) Amber leak 2 entrainment elbow

(EE) has an anti- asphyxia valve for dedicated non-invasive ventilators and intentional leak ports for subacute and homecare systems when intentional leak is needed

## Points to remember when using the exhalation port filter

Consider changing the filter if:

Water build-up is observed in the filter due to humidification condensation

- A fan is blowing on the patient/filter
- Temperature in the room is cool

Medication is delivered via the circuit



## **Filtered Exhalation Port**





## **Philips Filters**

## Philips filters pn 342077 and 1014047

Manufactuered by: King Systems / Ambu

Filter Viral Efficiency Level (VFE) ≥ 99.99% - can be added to any circuit or device with 15/22mm connections



#### Bacterial/viral filters, Inspiratory/expiratory

Single-use filter has 22F inlet and 15F/22M outlet

- Filter, inspiratory/expiratory, single-use, package of 10, PN 342077/989805609521
- Filter, inspiratory/expiratory, single-use, each, PN 1014047/989805618161



## **Patient Circuit with Filtered Exhalation Port**





Patient circuit, single-limb, with proximal pressure line, FEP, with inspiratory and FEP filters, singleuse, 22 mm ID, package of 10 PN 1065830 / 989805621311

## **Filtered Exhalation Port**

There may be some inadvertent leak around the mask





## **High Flow Therapy**

**High-Flow Nasal Cannula (HFNC)**: If oxygen delivered via HFNC, it can be an option for patients with mild hypoxemic respiratory failure:

• Provide surgical masks to be worn over the nasal cannula to reduce the potential for airborne virus transmission



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## Cleaning the V60 / V60 Plus after use

Current recommendations in the user manual are appropriate

#### **Exterior and Touchscreen Cleaning**

#### **Approved cleaning agents**

The following cleaning agents are acceptable for use on the touchscreen and exterior surfaces of the ventilator:

- Clean water
- Soapy water with Medivators Intercept Detergent\*, per manufacturer's recommendation at 1/3 oz (10 mL) per gallon of warm tap water. Or equivalent.

\*(Benzalkonium chloride 4.8%, diethylene glycol monoethyl ether 4.8%, lactic acid 1.4%, alkyl polyglycoside 1.4%)

#### **Cleaning instructions**

1. Apply cleaning agent to a soft lint-free cloth or use a disposable wipe. The cloth or wipe should be saturated but not dripping.

- 2. Wipe cleaning agent over the entire exterior surface and touchscreen of the ventilator.
- 3. Continue wiping until all visible contaminants and soiling are removed.
- 4. Rinse with a clean, water-dampened cloth and allow to dry completely before reuse.

## **Disinfecting the V60 / V60 Plus after use**

## Current recommendations in the user manual are appropriate

#### **Exterior and Touchscreen Disinfecting**

#### Approved disinfecting agents

The following disinfecting agents are acceptable for use on the touchscreen and exterior surfaces of the ventilator:

- Solution of 1 part 5% sodium hypochlorite (bleach) diluted in 9 parts deionized water.
- 70% isopropyl alcohol
- 3% hydrogen peroxide
- PDI Super Sani-Cloth<sup>®</sup> Germicidal Disposable Wipes (n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chlorides (0.25%); n-Alkyl (60% C14, 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chlorides (0.25%); Isopropyl Alcohol (55%))

**Note:** Use only this brand and type. Other brands and types may have both active and inactive ingredients that can damage the ventilator.

