

## **Noninvasive Positive Pressure Ventilation (NIV) with Flight 60 Mechanical ventilators**

Modern positive pressure lung ventilators are designed to perform NIV through face masks in addition to invasive ventilation through tracheal tubes. Invasive ventilation is not always the best choice, comparing to mask ventilation.

The FLIGHT 60 is able to provide NIV (Non Invasive Ventilation).

In order to perform NIV, F60 ventilators support the maintenance of pressure during the inspiratory as well as the expiratory phases, when the patient is ventilated through a face mask. In other words, both PCV/PSV and PEEP preset values are maintained as long as the leak around the face mask at an acceptable rate (leak is compensated in order to maintain a desired pressure).

The adaptive peak inspiratory pressure ensures a stable pressure at leak compensation up to 30 L/min in the Manifold version and up to 60 L/min in the Turbine version according to the ventilation mode and PEEP value.

### **➔ To set the NIV mode:**

1. On the ventilator front panel, press the **Extended** button.

The Extended parameters are displayed on the ventilator screen.

2. Tap the **NIV** control button.

The control button turns orange, and a pop-up list displays the available options: **ON** or **OFF**.

3. To activate tap the button **ON**; to deactivate tap the button **OFF**.

**In order to perform a successful NIV follow the instructions:**

- Attach circuit and flow sensor line – ensure that the flow sensor is pushed all the way in. Connect all other appropriate connections.
- Use passive humidification (HME)
- Perform the **Circuit Check** with the exact circuit, filters and humidifier set up or HME that you are using on the patient.
- Mask:
  - Use a non-vented mask (no holes or valves). Make sure the mask and elbow are **NOT VENTED!** No whisper swivels or exhalation valves. The patient will exhale through the exhalation valve
  - Reposition the mask or try a different sized mask. Smaller is sometimes better.
- Minimize dead space between patient circuit and mask.
- Make sure PCV (Pressure Control Ventilation) and NIV (Noninvasive Ventilation) is turned ON
- Make sure you have adjusted Sensitivity Trigger setting appropriately - You will be able to adjust once the patient is ventilating
- Start with low PEEP ~3 and slowly increase as needed.
- Monitor the measured exhaled tidal volume and exhaled minute volume to detect the presence of leaks.
- Ensure that you have set appropriate Pressure Limits and alarms.

**NOTE:**

- Operators may use Vte/MVe as indicators for the minimum volume of exhaled gas (some of the gas exhaled from patient's lungs may not go through the flow sensor orifice).
- To avoid false alarms "Low MV" alarm (exhaled minute volume) is disabled while NIV is ON.
- Leak compensation using Bias flow:
  - Manifold: When adding PEEP, you will have **~7.5 lpm** of bias flow through the circuit to help compensate for leaks. When NIV is ON, the bias flow increases up to **30 lpm** to help compensate for leaks in the mask.
  - Turbine: When adding PEEP, you will have **~15 lpm** of bias flow through the circuit to help compensate for leaks , regardless NIV button state.

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