

## **Philips Respironics Trilogy 202 during COVID - 19 pandemic; use for invasive ventilation.**

### **Information for medical staff at RAH.**

Version 1.3, update 26/03/2020

Trilogy 202 ventilators are configured to provide both NIV and Invasive Ventilation. Mandatory and Weaning modes available.

Turbine driven - driving gas is filtered room air. No need for piped air.

3 hours battery time. Can be used as intra-hospital transport ventilator. HME filter must be attached to this port during COVID-19 pandemic.

DO NOT use active humidification during COVID-19 pandemic – advice from manufacturer.

Breathing circuit to be changed after 7 days – advice from manufacturer.

Passive exhalation into atmosphere – HME filter must be attached to this port during COVID-19 pandemic.

Tidal Volume is not directly measured but calculated indirectly from analysis of flow and pressure. Reported by manufacturer to be accurate – awaiting data.

### **In RAH**

5 ventilators = in-patient theatre recovery.

Breathing circuits stored adjacent to ventilators.

Ready-to-use = cleaned and configured for SIMV with values in set up guide.

*Any questions – please ask Jenny Edwards. Pauline O’Neil and Dave Alcorn have been shown how to use. Setup guide for use instructions to also be referred to.*

## Ventilation Modes:

### Mandatory Only Modes:

- **Timed (T):** Bi-level pressure, set BPM & inspiratory time for mandatory breath.
- **Control Ventilation (CV):** prescribed tidal volume, set BPM and inspiratory time. Flow can be set as ramp or square. PEEP during exhalation.

### Mandatory with Assist/Supported Modes:

- **Spontaneous / Timed (S/T):** Mandatory and Spontaneous Breath. Bi-level Pressure, set BPM, inspiratory time for mandatory breath.
  - *Mandatory breath delivered if patient does not trigger spontaneously breath within the Breath Rate (BPM) setting. Ensures the patient receives a minimum number of breaths per minute. Duration of spontaneous breath is determined by patient effort.*
- **PC (Pressure Control):** Mandatory and Assist Breaths. Bi-level pressure, set BPM, inspiratory time for mandatory and assist breath.
  - *Mandatory breath delivered if patient does not trigger Assist breath within the Breath Rate (BPM) setting. Ensures the patient receives a minimum number of breaths per minute. Duration of Assist breath is determined by inspiratory time setting.*
- **PC - SIMV:** Mandatory, Assist and Spontaneous Breaths. Bi-level Pressure, set BPM, inspiratory time for Mandatory and Assist breaths.
  - *During time window, patient effort can trigger breath. Type of preceding breath determines whether this is Assist or Spontaneous.*
- **Assist Control (AC):** Mandatory and Assist Breaths. Prescribed tidal volume, set BPM, inspiratory time for Mandatory and Assist breaths. Flow can be set as ramp or square.
  - *Mandatory breath delivered if patient does not trigger Assist breath within the Breath Rate (BPM) setting. Ensures the patient receives a minimum number of breaths per minute. Duration of Assist breath is determined by inspiratory time setting.*
- **SIMV:** Mandatory, Assist and Spontaneous Breaths. Prescribed tidal volume for Mandatory and Assist breaths. Prescribed pressure support above PEEP for spontaneous breaths. Set BPM, inspiratory time for Mandatory and Assist breaths. Flow can be set as ramp or square.
  - *During time window, patient effort can trigger breath. Type of preceding breath determines whether this is Assist or Spontaneous.*

### Spontaneous Only Modes:

**Spontaneous (S):** Provides bi-level pressure support to spontaneous breaths. No back up mandatory breaths if apnoea. **Suggest not to be used during invasive ventilation without consultant team discussion.**