

ADVANCED AIRWAY MANAGEMENT - PARAPAC VENTILATOR

OVERVIEW:

The Parapac Ventilator provides timed cycle positive pressure ventilations for patients suffering from an absence of spontaneous respiratory effort. The ventilator incorporates an ability to detect spontaneous breathing by an adult patient allowing the device to function in a “demand” mode. If breathing is inadequate the ventilator will interpose ventilations synchronized with any patient efforts (demand). All demand breaths are supplied with 100% oxygen.

INDICATIONS:

- ❑ Patients requiring mechanical ventilation

CONTRAINDICATIONS:

- ❑ Patients under 5 kg

PROCEDURE:

STANDARD OPERATIONS (E.G., DURING CPR):

- ❑ Ventilator should be left with the controls set in these positions to enable it to be put to use with minimal re-adjustment
 - Rate of 10 to 12 bpm
 - Tidal volume of 500 ml (5 to 7 ml/Kg)
 - Air mix set to 100%
 - Relief pressure between 35 and 40 cmH₂O
- ❑ Connect oxygen supply to ventilator and slowly turn on oxygen
- ❑ Set ventilation parameters to suit patient and turn pneumatic switch to “ON”
- ❑ Briefly occlude the patient connection port of the patient valve and ensure peak inflation pressure reading on the manometer is appropriate for the patient, and that the pneumatic audible/visual alarms function.
- ❑ Connect ventilation circuit to patient (via mask or ETT) and ensure adequate ventilation is being delivered – good chest rise/fall; ETCO₂; SpO₂; etc.
- ❑ Make adjustments as necessary
- ❑ To conserve gas supply in clean atmosphere may set air mixture to 50%.

COPD & ASTHMA PATIENTS:

- ❑ A slower respiratory rate (e.g., 6 to 10 bpm) is recommended

POSITIVE END EXPIRATORY PRESSURE (PEEP)

- ❑ The exhaust collector adaptor allows a pop-off type PEEP valve to be attached to the exhalation port of the patient valve. The valve is rotated to the approximate cmH₂O pressure desired.
 - Routine ventilation – 0 to 5 cmH₂O as needed
 - COPD/Asthma – no more than 5 cmH₂O
 - ARDS/Lung Injury/Chest Trauma – 0 to 10 cmH₂O (may increase with OLMC)
 - Avoid PEEP in patients with suspected head injury.
- ❑ The pressure monitor will show the sum of the PEEP and the airway pressure drop as a step change when inspiration begins thus showing the effect of PEEP.

CONSIDERATIONS:

- ❑ Throughout treatment monitor airway, oxygen saturation, ETCO₂ and vital signs
- ❑ Specific ventilator settings will vary depending upon the patient’s clinical situation. Consult OLMC any time questions arise as to specific settings.