O2 e700 Ventilator Protocol

The following guidelines are recommended for the intended use the e700 is a time-cycled, volume-constant and pressure-controlled emergency and transport ventilator designed for use in the pre-hospital, intrahospital, inter-hospital and transport settings. It is intended for use with Adult, child, infant patients with a tidal volume from 50 ml upwards who are in respiratory and/or cardiac arrest or respiratory distress and who require the ventilatory support.

Contraindications:

1. Patients under 5kg
2. Patients tidal volume under 50ml

Procedures:

1. Determine the need for ventilation or assisted ventilation
2. Establish airway
3. Paramedic shall perform endotracheal intubation if sedation is required see RSI protocol
4. Assemble the components of the O2 e700 vent assure proper working order.
    - Select vent mode which are - (Assist Control Ventilation). In this mode the ventilator can deliver volume ventilation.
    - SIMV (Synchronized Intermittent Mandatory Ventilation). In this mode the ventilator will deliver volume ventilation.
    - BiLVL (Biphasic Positive Airway Pressure) BiLVL mode is similar to SIMV but comes with pressure ventilation.
    - CPAP (Continuous Positive Airway Pressure) In CPAP mode, the ventilator will deliver a continuous flow rate to generate airway pressure and use the control valve to maintain CPAP levels.
    - CPR mode The CPR mode consists of timed chest compression audible prompts coupled with automatically delivered breaths for both intubated and mask ventilated patients.
5. Determine the proper tidal volume for the patient. Use following equation for adults and pediatric patients for ideal body weight. Tidal Volume; amount of air delivered in a single breath measured in ml. Average adult Vt is 6-8 ml/kg based on ideal body weight. Ideal Body Weight is based on gender and height. Male: 52 kg + 1.9 kg per inch over 5 feet Female: 49 kg + 1.7 kg per inch over 5 feet.
    - Example for 6’ male 52kg + 22.8 = 74.8 x 8 = 598.4 tidal volume
    - Example for 5’5” female 49kg + 8.5 = 57.5 x 8 = 460 tidal volume
6. Set desired breaths per minute on the ventilator control module
    - Intubated Adults 8-10 per minute
    - Intubated Pediatrics 16-20 minute
7. Attach the O2 e700 circuit to vent and to endotracheal tube.

8. Observe chest rise during ventilation cycles. Continue to monitor chest rise through out the remainder of patient care.
9. Vital signs are to be taken and monitored every 5 minutes
10. Use end tidal co2 for all patients on vent. Monitor co2 (EtCO2) desired level between 35-45mmHg
11. Personnel shall monitor p.s.i. levels in the oxygen cylinder. Note change out portable oxygen bottle at 500 p.s.i. and main oxygen bottle at 300 p.s.i. **Note: Monitor ventilator as cylinders reach these low levels of p.s.i. and change cylinders earlier if required . The ventilator needs to be able to function properly so change cylinder as needed.**
12. Post Use of vent

    Disconnect Device After Use

    - Turn off oxygen supply to the ventilator.
    - Disconnect oxygen supply hose.
    - Disconnect patient circuit from the output connector and discard properly.
    - Charge after each use once vent is cleaned.
    - Clean and disinfect the ventilator housing and supply hose using a damp cloth with a commercially available, legally marketed disinfectant solution which is compatible with the materials of manufacture in accordance with local protocols. Do not use chlorine based cleaning agents. Make sure no liquids enter the ventilator connections or the ventilator.

Note: There is a refrence guide for use of ventilator in the vent bag if needed.
Caution: The paramedic is responsible for all airway management and must frequently reassess endotracheal tube placement. Bilateral breath sounds are checked after each movement of the patient.