

# babyPAC vent

## Quick setup sheet

- Gas-driven, pressure ventilation
- For neonates and up to infants <10kg (5-10kg could also use suitable volume-mode ventilators e.g. Oxylog 3000)
- **respiratory rate** is set by adjusting inspiratory and expiratory times- see examples on next page and on top of babyPAC ventilator
- Setup for ventilating intubated patient:
  - ensure patient monitoring (separate) and backup equipment (Ayles T-piece and suitable AmbuBag always available)
  - plug into 'oxygen' and 'air' outlets on wall
  - make simple 'circle' setup with ventilator tubing connected to 'gas return' and 'gas outlet' at side of babyPAC, with HME filter at patient end
  - connect test lung at patient end, then:
    - select **CMV+ Active PEEP** mode: ventilator should commence audible gas delivery
    - adjust settings (see next page)
    - check high pressure alarm (set alarm pressure below peak inspiratory pressure to test) and low pressure (disconnect test lung to test), then set appropriate alarm pressure
    - in absence of test lung, the high pressure alarm should be tested by occlusion of the circuit.
  - add capnography to system (ventilator-side of HME filter)
  - babyPAC ventilator now ready for connection to patient, or turned to Mode '0' to standby
- Important **equipment points** to note:
  - **Respiratory rate** per minute=  $60/(i\text{-Time} + \text{expTime})$ 
    - see example ratios printed on the machine
  - The **FiO<sub>2</sub>** will depend on which gas pipes are connected:
    - both O<sub>2</sub> and air connected delivers FiO<sub>2</sub> 0.21-0.7
    - O<sub>2</sub> alone delivers FiO<sub>2</sub> 0.5-1.0
    - Air alone delivers FiO<sub>2</sub> 0.21 (n.b. not recommended)
    - I.e. to deliver FiO<sub>2</sub> above 0.7 the air pipe **must be disconnected**
  - There is no facility to estimate **tidal volume** on the babyPAC

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- **Example settings** for neonate/infant ventilation:

Mode: **CMV + ACTIVE PEEP**

Expiratory time= **1.0s**

Inspiratory time= **1.0s**

Alarm pressure= **30**cmH<sub>2</sub>O



FiO<sub>2</sub>: **titrated** (see prev. page)

PEEP: **5**cmH<sub>2</sub>O (adjust according to display)

Peak inspiratory pressure: **20**cmH<sub>2</sub>O

These settings would deliver pressures of **20/5**cmH<sub>2</sub>O at a rate of **30**/min.

### Clinical tips for neonatal/infant ventilation:

- Review clinical situation and adjust settings if necessary
- Neonatal/infant ventilation has similar principles to adult ventilation:
  - the main differences are smaller tidal volumes and a closer I:E ratio
  - PEEP is usually beneficial and can be increased (5cmH<sub>2</sub>O common)
  - transferring 'standard' safe adult pressures to neonatal patients using pressure control ventilation with the babyPAC should result in a safe tidal volume
- A post-intubation CXR is required prior to transfer to check tube position