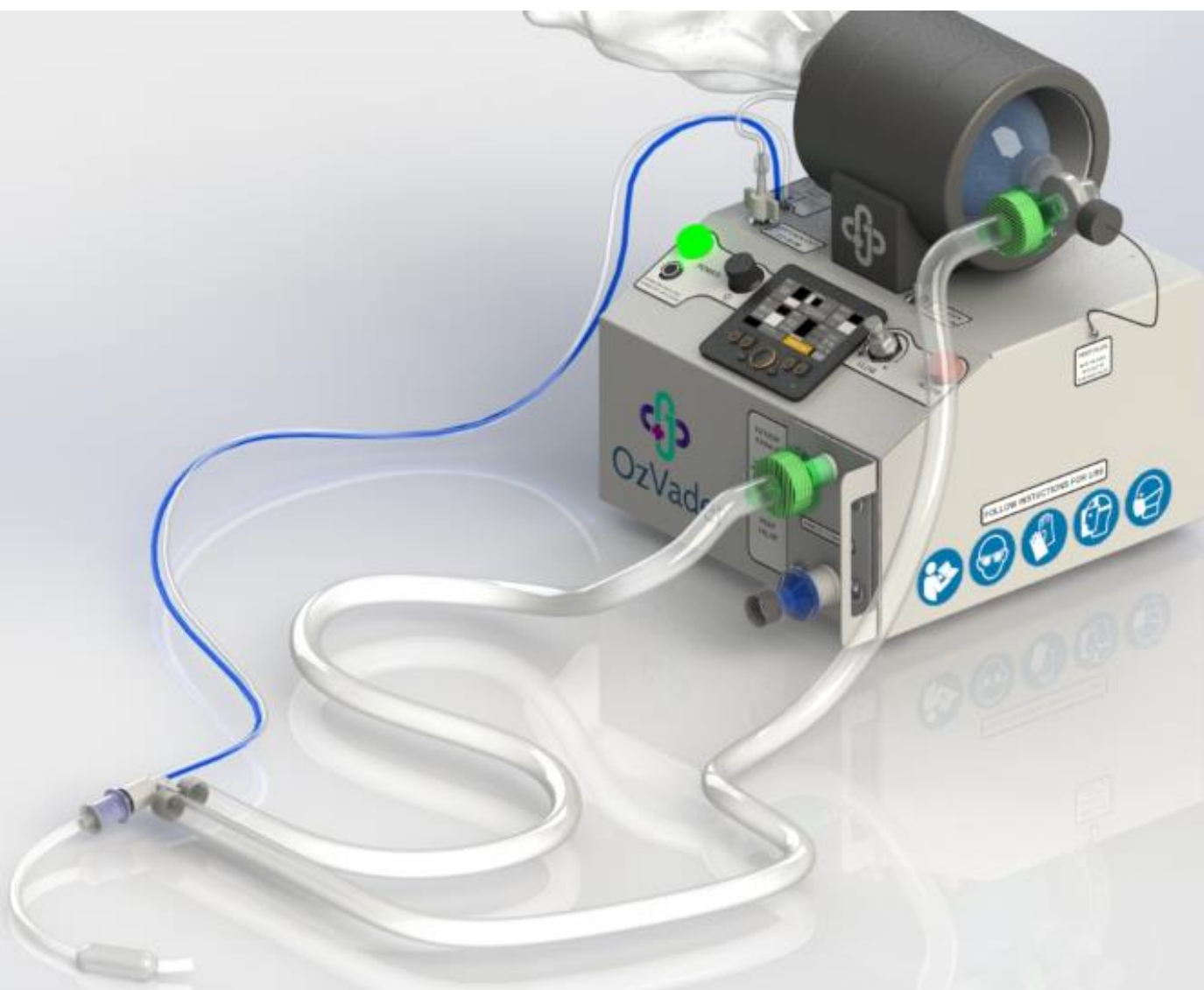


## Emergency Use Ventilator

V1.8

# OzVader

- OzVader V1 is an Australian designed & manufactured intermittent mandatory ventilator (IMV) developed specifically for critical patients.
- OzVader V1 is engineered to function in all usage locations from ICU to remote field settings. Its flexible power systems (110-240V AC, 12V DC, 12V battery backup and air) are combined with an intelligent control system and the globally familiar Bag-Valve-Mask (BVM).





## COVID-19 Emergency Ventilator

### OzVader V1 Technical Specifications

#### Ventilator modes

Invasive ventilator  
Intermittent mandatory ventilation (IMV)  
Volume controlled ventilation (VCV)

#### Operational summary

Pneumatically actuated mechanical ventilator  
Pneumatic air pump actuated by the OzVader pressure chamber ensures compatibility with all adult sized bag-valve-mask (BVM) types; supplier agnostic.

Maintains precise control over key ventilation variables:

- ❖ Tidal volume ( $V_t$ )
- ❖ Respiratory rate
- ❖ Flow
- ❖ IE ratio
- ❖ PEEP
- ❖ Peak inspiratory pressure (PIP)

Backup 12V internal air pump when hospital compressed air is unavailable

Controller: on-board micro-processor based controller with system health monitoring

User Interface: simple design with ICU clinicians in mind for functionality & usability

Sensors: flow and pressure sensors monitor ventilator and patient variables with integrated alarms

Valves: electronic valves provide accurate control of air pressure and flow.

#### Contamination control

Removable patient exhalation module suitable for standard low temperature sterilization processes  
Viral filter on exhalation circuit  
Invasive intubation

<b>Reliability &amp; flexibility</b>	<p>Designed for reliability, durability and flexibility with minimal moving parts and inbuilt redundancy of power systems</p> <p>Minimum of 14 days continuous run-time on a single BVM air pump</p> <p>110-240V, 12V, DC battery, backup air pump</p>
<b>Oxygen &amp; FiO2</b>	<p>Recommended oxygen flow rate displayed based on measured air flow via the electronic user interface. Allows user to set the external wall/bottle mounted O2 flow control between 0% and 100%</p> <p>Monitored O2 flow and FiO2% with integrated oxygen sensor connected to visual and audible alarms</p>
<b>Tidal volume</b>	Range 200ml to 800ml - adjustable
<b>Respiratory rate</b>	5 to 30 breaths per minute – adjustable
<b>Flow</b>	<p>5L/min to 100L/min – adjustable</p> <p>Up to 100L/min achievable when connected to external compressed air supply</p>
<b>Inspiratory rate</b>	0.5 to 2sec inspiratory time - adjustable
<b>Inspiratory to expiratory time ratio (I:E)</b>	1:1 to 1:3 ratio – adjustable
<b>Peak inspiratory pressure (PIP)</b>	<p>Direct measurement of peak inhalation pressure up to 80cm H2O - adjustable</p> <p>Mechanical fail-safe valve at 80cm H2O pressure</p> <p>Target plateau pressures &lt; 30cmH2O</p> <p>Driving pressure &lt; 15cmH2O</p>
<b>Positive end expiratory pressure (PEEP)</b>	<p>Adjustable PEEP between 2-25cmH2O – adjustable</p> <p>Compatible with standard disposable &amp; re-usable PEEP valves</p>
<b>Ventilation circuit</b>	<p>Twin tube ventilation circuit - Separate inspiratory and expiratory limbs</p> <p>Compatible with all standard 22 mm diameter (OD) 'male' standard connectors</p>
<b>ICU clinician functionality</b>	<p>Clinical override function of 35cm H2O PIP cut-off while performing procedures such as bronchoscopy etc.</p> <p>Inspiratory pause function/manoeuvre allowing setting of safe tidal volumes and PEEP (plateau pressure measurement) – 10sec</p>

**Alarms**

- Power-off alarm
- External power supply failure alarm
- Back-up battery alarm
- Patient disconnect alarm / patient circuit leak alarm
- Low FiO<sub>2</sub> alarm
- Maximum PIP alarm exceedance
- Tidal volume not met and/or exceeded
- PEEP alarm high/low

**Power modes**

110V-240V AC (plug type provided to suit delivery destination)

Internal 12V DC battery backup

External compressed air (hospital air)

External compressed air (industrial compressed air)

2 hours backup operation achieved via external compressed air tanks or connection with external power source



## OzVader V1 Ventilator





## Contact Details

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