

Prehospital ventilator selection checklist



Choosing the right ventilator for field use

1.) Use case and environment

Designed for prehospital or transport environments?
Rugged, durable housing for field conditions?
Water-resistant, dust-proof (IP-rated)?
Lightweight and portable (under 5–7 kg)?
NIV, preoxygenation, CPR ventilation, and CMV needs?
Mounting accessories available?

2.) Power and battery

Minimum 4+ hours battery life?
Compatible with vehicle power (12V DC)?
Quick battery swap or backup option?
Turbine-powered for higher peak flow rates?

3.) Ventilation modes needed

Based on lung-protective ventilation concepts?
Volume-Control Ventilation (VCV)?
Pressure-Control Ventilation (PCV)?
CPAP/BiPAP for non-invasive ventilation?
Spontaneous/Breath-assisted modes?
Pediatric mode or adaptable tidal volume range?
Neonatal and newborn ventilation modes?

4.) Ease of use

Intuitive interface and quick setup?
Preset modes for rapid deployment?
Workflow support for dedicated tasks (CPR, intubation)?
Display with key parameters (RR, TV, FiO₂, PEEP, EtCO₂)?
Visual/audible alarms for disconnects or high pressure?

5.) Monitoring and safety features

Built-in EtCO₂ monitoring or compatible?
Oxygen concentration control (FiO₂ adjustable)?
Alarms: apnea, high pressure, low battery, etc.?
Internal filters and safety valves?

6.) Compatibility and integration

Works with standard circuits (adult/peds)?
Compatible with hospital ventilator interfaces?
Data output or logging capabilities?
Support of ePCR concepts and physiological telemetry?

7.) Training and support

Vendor provides training/certification with online flexibility?
Easy maintenance and decontamination?
24/7 tech support or field service available?

8.) Budget and procurement

Within agency's budget?
Available under existing contracts/emergency procurement?
Cost-effective when factoring durability and lifespan?