

The MCV100 Portable Ventilator

- Can be operated on DC power or AC power, offering a greater level of preparedness.
- Efficient internal battery can power this unit independent of wall electricity or compressed gas for 7 hours on ambient air, or 21 hours if supplied with a compressed oxygen source.
- Simple control interface allows for just-in-time training and use by a wide range of responders.
- Assist-Control, external PEEP, and independent ventilation controls accommodate enhanced treatment options.
- Low maintenance and weatherproof design ensure a low cost of ownership in stockpile or in everyday use.

The MCV100 portable ventilator enables a rapid and effective response to any mass casualty event. This electronic ventilator features an internal battery and compressors that provide the flexibility of operation from AC power or extended operation on DC power using either ambient air, high-pressure oxygen, or an oxygen/air mix. Intuitive ventilation controls and an array of adjustable alarms enhance patient safety, making the MCV100 ideal for use across a wide range of responder skill levels. These unique operation capabilities combined with a rugged, weatherproof, and low maintenance design make the MCV100 an ideal ventilator for mass casualty response in the hospital or for field deployment.



Specifications - MCV100, MCV100-B

Setting Parameters

Ventilation Mode: Assist-Control
Assist-Control: Triggers at less than -2 cm H₂O
Flow Rate: 12-36 LPM
Breathing Rate: Adjustable. 0, 8-20 breaths per minute
Tidal Volume: Adjustable. 200-1200 ml
Inspiratory Time: Auto-Adjust. 1 second to 2 seconds
(Auto-Adjust based on tidal volume setting)
PEEP: External. 0-20 cm H₂O (with PEEP adapter)
FiO₂: Selectable. 21%, 60%, 100%
Manometer Readout: Digital. 0-60 cm H₂O
Airway Pressure Limit: Adjustable. 5-60 cm H₂O

Alarms

High Airway Pressure: Adjustable. 15-60 cm H₂O
Low Airway Pressure/Disconnect: Adjustable. 0-30 cm H₂O
Low Source Gas: Fixed. Activates at about 40 psi (275 kPa)
Low Battery: Activates when approx. 1½ hours of run time remain
Alarm Volume: Approx. 60 dB at 1 meter
Alarm Silence: Yes. 110 Seconds

Power Characteristics

Power Source: 110V-240V 50-60 Hz AC, internal battery, external 12V DC battery
O₂ Supply Pressure: 40-87 psi
Operating Time on Battery:
Based on average adult settings of 10 BPM, 600 ml tidal volume
Air Mode (using internal compressors): Approx. 7 hours
100% O₂ or 60% O₂ Mode: Approx. 21 hours
Internal Battery: 12 Volt 5 Ah Rechargeable. Sealed lead acid type
Battery Recharge Time: 5 hours (less than 24 hours when in use)
Battery Shelf Life: 3 years

Physical Characteristics

Dimensions: 3.5" x 10.3" x 11.5" (88.9 mm x 261.1 mm x 292.1 mm)
Weight: 14 lbs. (6.3 kg)
Temperature Ranges:
Operating: -15 to 122°F (-9 to 50°C)
Storage: -40 to 140°F (-40 to 60°C)
Enclosure: ABS plastic with seals to prevent water ingress
Shock Resistance: 30" drop
Vibration Resistance: 100 G
Water Resistance: Spill and rain resistant

