

Medtronic Covidien Puritan Bennett 980 Ventilator



The **Covidien Puritan Bennett 980** ventilator provides mechanical ventilation from neonatal patients to adults who require respiratory support. The PB 980 can be used for intra-hospital transport to provide continuous ventilatory support with oxygen and compressed medical air from an internal air compressor or external air source. This Medtronic ventilator delivers oxygen concentrations 21% to 100%. The PB980 can administer ventilatory support to patients invasively or non-invasively who require positive pressure ventilation, assist/control, SIMV, or spontaneous modes of ventilation. It can be used in areas such as general care floors, operating rooms, and intensive care units. This Puritan Bennett Ventilator also has a battery backup that provides power in case AC power is lost.

Features

- Simple, easy-to-use, and highly customizable touchscreen user-interface.
- 15" display that rotates 170° about a vertical axis in either direction.
- Display shows ventilator, apnea and alarm settings, patient data, waveforms, and current alarm banners.
- Unique ventilator assurance feature that will continue to deliver ventilatory support as close to the preset setting in the event of certain system failures.



Specifications

Dimensions

Height: 58" (147 cm)
Width: 12.5" (31.75 cm)
Depth: 11.5" (29.21 cm)
Weight: 113 lbs (51.26 kg)

Displays

There are two displays on the PB 980. The primary display and the status display.

Size: 15"

Movements: 170° rotation about a vertical axis in either direction; 45° tilt from a vertical position.

Pneumatic Specifications

Oxygen and air inlet supplies: Pressure: 241 to 600 kPa (35 psi to 87 psi); Flow: Maximum of 200 L/min

Gas mixing system: Up to 80 L/min for pediatric circuit type; Up to 150 L/min for adult patients.; Additional flow is available (peak flow to 200 L/min) for compliance compensation.

Maximum limited pressure (PLIM max): Limits circuit pressure to < 125 cmH₂O (123 hPa) at the patient wye

Maximum working pressure (PW max): PW max is ensured by the high pressure limit when PI is 90 cmH₂O (88.26 hPa).

Measuring Devices

Pressure measurements: Type: Solid-state differential pressure transducer; Sensing position: Inspiratory module, expiratory module

Flow and volume measurements: Type: Hot film anemometer; Sensing position: Inspiratory module, expiratory module; Type: Proximal flow sensor option utilizes differential pressure; Sensing position: Patient wye.

Oxygen measurement: Type: Galvanic cell; Sensing position: Inspiratory module.

Oxygen sensor life: Up to one year; operating life varies depending on oxygen usage and ambient temperature.

Filtration Capabilities

Internal inspiratory filter bacterial/viral filtration efficiency: > 99.999%

Internal inspiratory filter particle filtration efficiency: >99.97% retention of particles 0.3 µm nominal at 100 L/min flow

Exhalation filter resistance (adult/pediatric, disposable): <0.7 cmH₂O at 30 L/min (new); <0.35 cmH₂O at 15 L/min

Expiratory filter bacterial/viral filtration efficiency: > 99.999%

Exhalation filter particle filtration efficiency, pediatric/adult, disposable: Maximum of 0.03% penetration of particles 0.3 µm nominal at 30 L/min flow



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Circuit Compliance Resistance

Circuit compliance: Pediatric: 1.05 mL/cmH₂O to 9 mL/cmH₂O; Adult: 1.05 mL/cmH₂O to 12 mL/cmH₂O

Inspiratory limb circuit resistance: Pediatric: 0.2 cmH₂O/L/s to 7.5 cmH₂O/L/s at 30 L/min; Adult: 0.2 cmH₂O/L/s to 12.5 cmH₂O/L/s at 60 L/min

Expiratory limb circuit resistance: Pediatric: 0.2 cmH₂O to 7.5 cmH₂O at 30 L/min; Adult: 0.2 cmH₂O to 12.5 cmH₂O at 60 L/min

Electrical

Electrical ratings without compressor: 100 V ~, 50–60 Hz, 2.25 A; 120 V ~, 50–60 Hz 1.5 A; 220–240 V ~, 50–60 Hz, 0.75 A

Mains overcurrent release: CB1: 4 A; CB2: 6 A

Earth leakage current: 300 mA

Touch current: 100 mA

Patient leakage current: 100 mA maximum

Electrical ratings with DC compressor: 100 V~, 50–60 Hz, 8.25 A; 120 V~, 50–60 Hz, 6.0 A; 220–240 V~, 50–60 Hz, 3.0 A

Environmental

Temperature: Operation: 10°C to 40°C (50°F to 104°F); Storage: -20°C to 70°C (-68°F to 158°F)

Atmospheric pressure: Operation: 70 kPa to 106 kPa (10.15 psi to 15.37 psi); Storage: 50 kPa to 106 kPa (7.25 psi to 15.37 psi)

Altitude: Operation: -411.5 m to 3048 m (-1,350 ft to 10,000 ft); Storage: 6,096 m max (20,000 ft max)

Relative humidity: Operation: 10% to 95% non-condensing; Storage: 10% to 95% non-condensing

