

Dräger Evita® V800

Intensive Care Ventilation

Technical Data

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|---|---|
| Patient type | Adults, pediatrics, neonates |
| Ventilation settings | |
| Ventilation modes | <p>Volume controlled ventilation:</p> <ul style="list-style-type: none"> - VC-CMV - VC-SIMV - VC-AC - VC-MMV <p>Pressure controlled ventilation:</p> <ul style="list-style-type: none"> - PC-CMV - PC-BIPAP/SIMV+ - PC-SIMV - PC-AC - PC-APRV - PC-PSV <p>Support of spontaneous breathing:</p> <ul style="list-style-type: none"> - SPN-CPAP/PS - SPN-CPAP/VS - SPN-CPAP - SPN-PPS |
| Enhancements | <ul style="list-style-type: none"> - AutoFlow®/Volume Guarantee - Variable Pressure Support - Smart Pulmonary View - Automatic Tube Compensation (ATC®) - SmartCare®/PS 2.0 – Automated clinical protocol in SPN-CPAP/PS - Low Flow PV Loop |
| Special procedures | <ul style="list-style-type: none"> - Suction maneuver - Manual inspiration/hold - Medication nebulization - P0.1 - PEEPi - NIF |
| Therapy types | <ul style="list-style-type: none"> - Invasive ventilation (Tube/Tracheostomy) - Non-invasive ventilation (NIV) - O₂ therapy |
| Respiratory rate (RR) | Adult 0.5 to 98/min, pediatrics 0.5 to 150/min, neonates 0.5 to 150/min |
| Inspiratory time (Ti) | Adults 0.11 to 10 sec, pediatrics 0.1 to 10 sec, neonates 0.1 to 10 sec |
| Tidal volume (VT) | Adults 0.1 to 3.0 L, pediatrics 0.02 to 0.3 L, neonates 0.002 to 0.1 L |
| Inspiratory flow (Flow) | Adults 2 to 120 L/min, pediatrics 2 to 30 L/min |
| Maximum flow during non-invasive ventilation of neonates (Flow max) | 0 to 30 L/min |
| Inspiratory pressure (P _{insp}) | 1 to 95 mbar (or hPa or cmH ₂ O) |
| Pressure limitation (P _{max}) | 2 to 100 mbar (or hPa or cmH ₂ O) |
| Positive end-expiratory pressure (PEEP) | 0 to 50 mbar (or hPa or cmH ₂ O) |
| Additional intermittent PEEP for sighs (Δ _{int} PEEP) | 0 to 20 mbar (or hPa or cmH ₂ O) |
| Pressure support (P _{supp}) | 0 to 95 mbar (or hPa or cmH ₂ O) |
| Pressure rise time (Slope) | Adults 0 to 2 sec, pediatrics 0 to 2 sec, neonates 0 to 1.5 sec |
| O ₂ concentration (FiO ₂) | 21 to 100 Vol.% |
| Trigger threshold (Flow trigger) | 0.2 to 5 L/min |
| Automatic Tube Compensation (ATC®) | <p>Inner diameter of the tube Ø:</p> <ul style="list-style-type: none"> - Endotracheal tube ET <ul style="list-style-type: none"> Adults 5 to 12 mm (0.2 to 0.47 inch), pediatrics 2 to 8 mm (0.08 to 0.31 inch), neonates 2 to 5 mm (0.08 to 0.2 inch) - Tracheostomy tube (Trach.) <ul style="list-style-type: none"> Adults 5 to 12 mm (0.2 to 0.47 inch), pediatrics 2.5 to 8 mm (0.1 to 0.31 inch) - Degree of tube compensation 0 to 100% |



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Airway Pressure Release Ventilation (APRV)

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| Inspiratory time (Thigh) | 0.1 to 30 sec |
| Expiratory time (Tlow) | 0.05 to 30 sec |
| Maximum duration of lower pressure level (Tlow max) | 0.05 to 30 sec |
| Upper pressure level (Phigh) | 1 to 95 mbar (or hPa or cmH ₂ O) |
| Lower pressure level (Plow) | 0 to 50 mbar (or hPa or cmH ₂ O) |
| Expiration termination criterion (in relation to the peak expiratory flow) (Exp. term.) | 1 to 80% (PEF) |

Proportional Pressure Support (SPN-PPS)

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| Flow-based assistance (Flow Assist) | Adults 0 to 30 mbar/L/s (or hPa/L/s or cmH ₂ O/L/s) Pediatrics 0 to 100 mbar/L/s (or hPa/L/s or cmH ₂ O/L/s) Neonates 0 to 300 mbar/L/s (or hPa/L/s or cmH ₂ O/L/s) |
| Volume-based assistance (Vol. Assist) | Adults 0 to 100 mbar/L (or hPa/L or cmH ₂ O/L) |
| Corresponds to compliance compensation | 10000 to 10 mL/mbar (or mL/hPa or mL/cmH ₂ O) Pediatrics 0 to 1000 mbar/L (or hPa/L or cmH ₂ O/L) |
| Corresponds to compliance compensation | 10000 to 1 mL/mbar (or mL/hPa or mL/cmH ₂ O) Neonates 0 to 4000 mbar/L (or hPa/L or cmH ₂ O/L) |
| Corresponds to compliance compensation | 1000 to 0.3 mL/mbar (or mL/hPa or mL/cmH ₂ O) |

O₂ therapy

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| Continuous flow | 2-80 L/min (adults), 2-30 L/min (pediatrics), 2-15 L/min (neonates) |
| Pmax | 2-55 mbar (or hPa or cmH ₂ O) |
| O ₂ concentration, FiO ₂ | 21 to 100 Vol% |

Displayed measured values

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| Airway pressure measurement | <ul style="list-style-type: none"> - Plateau pressure (Pplat) - Positive end-expiratory pressure (PEEP) - Peak Inspiratory Pressure (PIP) - Mean airway pressure (Pmean) - Minimum airway pressure (Pmin) - Range -60 to 120 mbar (or hPa or cmH₂O) |
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Flow measurement

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| Minute volume measurement | <ul style="list-style-type: none"> - Expiratory minute volume, overall, not leakage-corrected (MVe) - Inspiratory minute volume, overall, not leakage-corrected (MVi) - Minute volume, leakage-corrected (MV) - Mandatory expiratory minute volume, overall, not leakage-corrected (MVemand) - Spontaneous expiratory minute volume, overall, not leakage-corrected (MVespon) - Range 0 to 99 L/min BTPS |
| Tidal volume measurement | <ul style="list-style-type: none"> - Tidal Volume, leakage-corrected (VT) - Mandatory inspiratory tidal volume, not leakage-corrected (VTimand) - Mandatory expiratory tidal volume, not leakage-corrected (VTemand) - Spontaneous inspiratory tidal volume, not leakage-corrected (VTispon) - Range 0 to 5500 mL BTPS |
| Respiratory rate measurement | <ul style="list-style-type: none"> - Respiratory rate (RR) - Mandatory respiratory rate (RRmand) - Spontaneous respiratory rate (RRspon) - Range 0/min to 300/min |
| O ₂ measurement (inspiratory side) | Inspiratory O ₂ concentration (FiO ₂), Range 18 to 100 Vol% |
| CO ₂ measurement in main flow (adults and pediatrics only) | End-tidal CO ₂ concentration (etCO ₂), Range 0 to 120 mmHg |

Displayed calculated values

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| Dynamic compliance (Cdyn) | Range 0 to 650 mL/mbar (or mL/hPa or mL/cmH ₂ O) |
| Resistance (R) | Range 0 to 1000 mbar/L/s (or hPa/L/s or cmH ₂ O/L/s) |
| Leakage minute volume (MVleak) | Range 0 to 99 L/min, BTPS |
| Rapid shallow breathing index (RSBI) | Adults 0 to 9999 (/min/L), pediatrics 0 to 9999 (/min/L), neonates 0 to 300 (/min/L) |
| Negative Inspiratory Force (NIF) | Range -80 mbar to 0 mbar (or hPa or cmH ₂ O) |
| Occlusion pressure P0.1 | Range 0 to -25 mbar (or hPa or cmH ₂ O) |

Technical Data

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| Waveform displays | <ul style="list-style-type: none"> - Airway pressure P_{aw} (t) -30 to 100 mbar (or hPa or cmH₂O) - Flow (t) -180 to 180 L/min - Volume V (t) 2 to 3,000 mL - CO₂ (t) 0 to 120 mmHg |
| Alarms/Monitoring | |
| Expiratory minute volume (MVe) | High/Low |
| Airway pressure (P _{aw}) | High |
| Inspiratory O ₂ concentration (FiO ₂) | High/Low |
| End-tidal CO ₂ concentration (etCO ₂) | High/Low |
| Respiratory rate (RR) | High |
| Volume monitoring (VT) | High/Low |
| Apnea alarm time (Tapn) | 5 to 60 seconds, Off |
| Disconnection alarm time (Tdiscon) | 0 to 60 seconds |
| Performance data | |
| Control principle | Time-cycled, volume-constant, pressure-controlled |
| Length of intermittent PEEP | 1 to 20 expiratory cycles |
| Medication nebulization | Treatment duration: 5, 10, 15, 30 minutes, continuously (∞) |
| Inspiratory flow | Max. 180 L/min, BTPS |
| Base flow | Adults 2 L/min, pediatrics 3 L/min, neonates 6 L/min |
| Inspiratory valve | Valve remains open if medical compressed air supply fails (supply gas flow is not sufficient to provide the inspiratory flow required), enables spontaneous breathing with ambient air. |
| Endotracheal suction | |
| Disconnection detected | Automatic |
| Reconnection detected | Automatic |
| Preoxygenation | Max. 3 minutes |
| Active suction phase | Max. 2 minutes |
| Post-suction oxygenation | Max. 2 minutes |
| Factor for pediatrics and neonates | 1 to 2 |
| Supply system for spontaneous breathing and P _{supp} | Adaptive CPAP system with high initial flow |
| Operating data | |
| Mains power supply | |
| Electric power inlet | 100 V to 240 V, 50/60 Hz |
| Current consumption | |
| At 230 V | Max. 1.3 A |
| At 100 V | Max. 3.0 A |
| Inrush current | Approx. 8 to 24 A peak, approx. 6 to 17 A quasi-RMS |
| Power consumption | |
| Maximum | 300 W |
| During ventilation, without charging the battery | Approx. 100 W ventilation unit with display unit, approx. 180 W with GS500 |
| Gas supply | |
| O ₂ operating pressure | 2.7 to 6.0 bar (or 270 to 600 kPa or 39 to 87 psi) |
| Air operating pressure | 2.7 to 6.0 bar (or 270 to 600 kPa or 39 to 87 psi) |
| Battery details | |
| Internal battery of ventilation unit (without PS500) | Type NiMH battery, sealed, exchange interval 2 years |
| Battery runtime | Without GS500 30 minutes, with GS500 15 minutes |
| Batteries in the PS500 power supply unit | Type LFP batteries, exchange interval 4 years |
| Battery runtime | Without GS500 240 minutes, with GS500 120 minutes |
| Automatic switch over from internal to external battery | |
| Battery test available | |
| The battery runtime applies when the batteries are fully charged and new and ventilation is typical. | |

Technical Data

Screen values

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| Evita V800 diagonal screen size | 18.3 inches |
| Input/Output ports | <ul style="list-style-type: none"> – 3 external RS232 (9-pin) connectors – 4 USB ports for data collection – 1 LAN port |
| Touchscreen technology | Capacitive touchscreen with glass front |
| Aspect ratio | 16:9 |
| Resolution | 1366 x 768 pixels |
| Digital machine output | Digital output and input via an RS232 C interface Dräger MEDIBUS® and MEDIBUS®X |

BTPS – Body Temperature Pressure Saturated. Measured values relating to the conditions of the patient lung 37° C (98.6° F), steam-saturated gas, ambient pressure.
1 mbar = 100 Pa

Some functionalities are available as an option.

Physical Specifications

The image contains two technical drawings of the Evita V800 ventilator. The left drawing is a front view showing a screen at the top with a width of 466 mm (18.3 in). Below the screen is the main ventilator unit, which is 291 mm (11.4 in) wide. The entire unit sits on a trolley that is 581 mm (22.8 in) wide. The right drawing is a side view showing the total height of the unit as 1413 mm (55.6 in). The screen is 639 mm (25.1 in) high. The main ventilator unit is 343 mm (13.5 in) wide. Below the main unit are two drawers, each 193 mm (7.6 in) high. The trolley base is 776 mm (30.5 in) wide. A small detail shows a 102 mm (4 in) height for a specific component.

| Designation | Weight |
|---|--------------------------|
| Ventilation unit | approx. 16 kg (34.9 lbs) |
| Display unit | 7 kg (15.4 lbs) |
| Ventilation unit and display unit | approx. 23 kg (50.7 lbs) |
| Trolley | approx. 33 kg (72.8 lbs) |
| PS500 (LFP battery) | approx. 16 kg (35.2 lbs) |
| GS500 | approx. 10.5 kg (23 lbs) |
| Nominal weight (weight of the ventilation unit and display unit on trolley) | 58 kg (128 lbs) |
| Maximum weight (permitted maximum total weight) | 133 kg (293 lbs) |

Dimensions and weights of the Evita V800

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