

## Pediatric through adult ventilation.

### Features

- 10.4" TFT color screen.
- Intuitive control via navigator wheel knob and touch keys.
- Wide choice of ventilation modes, including CPAP, APRV, and BIPAP (option).
- PEEP, P-V loop, and V-F loop.
- Flow and pressure trigger.
- Static compliance and resistance monitor.
- Three-level visual and audible alarms, with concise descriptions of care issues.
- Advanced built-in electronic air-oxygen mixing device.
- Durable and accurate built-in flow sensor.
- Integrated expiration valve.
- Backup apnea ventilation.
- Auto-nebulizer.
- Built-in battery.
- CE-certified.

### Great Visibility

- The Verdana is equipped with a large TFT 10.4" full-color display. The high-resolution display provides flexible graphics menus that combine respiratory curves, loops and numerical data of physiological parameters.

### Assistant Functions

- Inspiratory Hold: Convenience for taking X-ray pictures of the patient during ventilation, availability for clinician to assess patient's static pulmonary mechanics.
- Expiratory Hold: Accessibility for measuring intrinsic PEEP.
- 100% FiO<sub>2</sub>: More effective support for suction.
- Manifold parameter selections are operated by means of a single ComWheel.
- Manual Insp.: Availability for clinician to make prompt response to the patient's inspiration need.

### Expiratory Valve

- With a heating function, the expiratory valve protects the device from condensed water and provides accuracy of the flow sensor.

### Humidifier

- Features protection function and nine steps for controlling temperature.

### Compressor

- High quality medical compressor with low noise, compatible for most medical devices.



## Technical Specifications

### Ventilator Setting

Ventilation Modes	VCV, PCV, PSV, SIMV-V, SIMV-P, SPONT, CPAP, backup apnea ventilation, APRV, BIPAP (option)
Tidal Volume	50 ~ 1,500mL
Breath Rate	1 ~ 100bpm
SIMV Breath Rate	1 ~ 40bpm
Inspiratory Time	0.1 ~ 12s
Pause Time	0 ~ 4.8s
Pressure Trigger Sensitivity	(PEEP-20cmH2O) ~ PEEPcmH2O
Flow Trigger Sensitivity	1 ~ 20LPM
PSV	0 ~ 70cmH2O
High Pressure	1 ~ 80cmH2O
Low Pressure	0 ~ 79cmH2O
Waveforms Displayed	P-T, F-T, V-T, P-V loop, V-F loop
PEEP/CPAP	0 ~ 50cmH2O
FiO2	21 ~ 100%
P-supp	0 ~ 70cmH2O
P-insp	5 ~ 70cmH2O
T-high	0.1 ~ 30s
T-low	0.5 ~ 30s
P-high	5 ~ 70cmH2O
P-low	0 ~ 50cmH2O
Alarm Silence	≤120s
Parameters Monitored	Vti, Vte, MV, MVspn, f, fspn, FiO2, Ppeak, Pmean, Pplat, PEEP, Pmin, Compliance, Resistance Interface RS232, VGA

### Assist Functions

Freeze	Freeze current screen and suspend real-time data
Insp. Hold	15s max
Exp. Hold	15s max
O2 Suction	100% O2 for 2 minutes
Manual Insp	

### VCV Mode

In VCV mode, the ventilator delivers mandatory breaths by setting tidal volume. When the ventilator detects the patient's inspiratory effort, it delivers a patient-initiated mandatory (PIM) breath. If the ventilator does not detect inspiratory effort, it delivers a ventilator-initiated mandatory (VIM) breath at an interval based on the set respiratory rate. Breaths can be pressure-triggered or flow-triggered in VCV mode.

### SIMV Mode

SIMV is a mixed ventilator mode that allows both mandatory and spontaneous breaths. The mandatory breaths can be volume-based (SIMV-V) or pressure-based (SIMV-P), and the spontaneous breaths can be pressure-assisted. The clinician can select pressure-triggering or flow-triggering in SIMV.

*Specifications subject to change without notice.*

### Alarms

MV-upper Limit	0 ~ 99L
MV-lower Limit	0 ~ 99L
Paw-upper Limit	0.1 ~ 8kPa
Paw-lower Limit	0 ~ 7.9kPa
Vte-upper Limit	0.05 ~ 2.00L, OFF
Rate-upper Limit	1 ~ 100bpm
Rate-lower Limit	0 ~ 99bpm
T apnea	15 ~ 60s
FiO2-lower Limit	21 ~ 99%
FiO2-upper Limit	22 ~ 100%
Mains failure, battery low, battery discharged, Air/O2 supply down, circuit occlusion	

### Power and Environmental

Power AC	110 ~ 240V, 50 ~ 60Hz DC 12V, 4.4 AH
Power Consumption	65VA
Driven Mode	Pneumatically driven, electronically controlled
Air/O2 Supply	Pressure 0.28 ~ 0.6Mpa >50L/min
Temperature	Operation 10 ~ 40° C Storage -20 ~ 55° C
Relative Humidity	Operation ≤80%, non-condensing Storage ≤93%, non-condensing
Atmospheric Pressure	Operation 70 ~ 106kPa Storage 50 ~ 106kPa

### Components

Option	Compressor
Accessories	Power cord, Gas pipeline, Patient circuit, Face mask, Humidifier, Support arm

### Main Unit Weight and Dimension

Weight	≤16KG
Dimension	400mm (H) x 303mm (W) x 250mm (D)

### PSV Mode

In PSV mode, inspiration is usually initiated by patient effort. Breaths are initiated via pressure or flow triggering. The clinician can also initiate a manual inspiration during PSV. PSV breaths are:

- » Controlled by pressure (preset PSV level + PEEP).
- » Limited by pressure (preset PSV level + PEEP + margin)
- » Cycled by time (PSV Tmax) or flow (PSV Cycle)

### APRV Mode

APRV is a time-cycled pressure mode. In this mode, the patient is allowed to breathe spontaneously at two preset pressure levels. These are set using the P-high and P-low controls. The maximum duration at each pressure during time cycling is set with the T-high and T-low controls. Additionally, CPAP can be added to improve comfort of the patient during spontaneous breathing.