ReVel® ventilator specifications

Transport ventilation

Certified Airworthiness Release (AWR) for compliance with military transport aircraft

Breath types

Volume control, pressure control, pressure regulated volume control (PRVC), pressure regulated volume support (PRVS), pressure support (PS), spontaneous

Breath modes

Assist control, synchronized intermittent mandatory ventilation (SIMV), continuous positive airway pressure (CPAP) plus PS, noninvasive positive pressure ventilation (NPPV), apnea backup

Physical dimensions

Size	11.3" (h) x 7.1" (w) x 3.3" (d) (28.7 cm x 18.0 cm x 8.4 cm)
Weight	9.5 lb (4.3 kg)

Maneuver	
Maneuver	Function
Expiratory hold	0–6 sec
Inspiratory hold	0–6 sec

PTM patient and ventilator data	
Waveform PTM display only	
Loop	PTM display only
Trending	24-hr trend of all patient monitors

Maneuver monitor	
Monitor	Range
Auto positive end-expiratory pressure (PEEP)	0–99 cmH ₂ O
Delta pressure (dPaw)	1–99 cmH ₂ O
Expiratory pressure (Pexp)	0–100 cmH ₂ O
Plateau pressure (Pplat)	1–99 cmH ₂ O
Static lung compliance (Cstatic)	1–999 mL/cmH ₂ O



LED display	
Display type	12 5x7 dot matrix
Resolution	49 bicolor manometer
Viewable size	7 segment



Control	Range		
Bias flow	3–10 LPM		
Breath rate	1–80 BPM		
Breath type	Volume Control, Pressure Control, PRVC		
Flow termination	10-40% of peak flow		
High pressure alarm delay	0, 1, 2 breaths		
Inspiratory time	0.3–9.9 sec		
Leak comp	On, Off		
LPP alarm control	All Breaths, Control On	ly	
NPPV	On, Off		
O ₂ %	LPS, 21–100		
PEEP	0–20 cmH ₂ O		
Pressure control	1–99 cmH₂O		
PS	Off, 1–60 cmH ₂ O		
Pressure trigger	1–20 below PEEP		
Pressure control flow termination	On, Off		
Rise time	Rise time setting	Commanded rise time (sec)	
	1	0.100	
	2	0.133	
	3	0.178 0.237	
	-		
	5	0.316	
	5	0.316 0.422	
	5 6 7	0.316 0.422 0.562	
	5	0.316 0.422	
Safety valve delta pressure	5 6 7 8	0.316 0.422 0.562 0.750	
Safety valve delta pressure Flow sensitivity	5 6 7 8 9	0.316 0.422 0.562 0.750	
	5 6 7 8 9 5–30 cmH ₂ O	0.316 0.422 0.562 0.750	
Flow sensitivity	5 6 7 8 9 5–30 cmH ₂ O P, 1–9 LPM	0.316 0.422 0.562 0.750	
Flow sensitivity Tidal volume	5 6 7 8 9 5–30 cmH ₂ O P, 1–9 LPM 50–2,000 mL	0.316 0.422 0.562 0.750 1.000	
Flow sensitivity Tidal volume Time termination	5 6 7 8 9 5–30 cmH ₂ O P, 1–9 LPM 50–2,000 mL 0.3–3 sec	0.316 0.422 0.562 0.750 1.000	

Control setting (continued)	
Control	Range
SBT PS	"" (off), 1–30 cmH ₂ O
SBT time	15–120 min
SBT f/Vt display	"On," "Off"

Roll stand	
Physical dimension	
Height	40.9" (103.9 cm)
Weight	52 lb (23.6 kg)
Wheels	5 casters (2 lockable)
Ground clearance	2.75" (7 cm)

Adjustable alarm	
Alarm	Range
Apnea (interval)	10-60 sec
High pres	5–100 cmH ₂ O
High f	1–120 BPM, or "" <i>(off)</i>
High PEEP	3–40 cmH ₂ O, or "" (off)
High pulse	18–299 BPM, or "" (off)
High SpO ₂	80–99%, or "" (off)
Low FiO ₂	"" (off), or 18–95%
Low min vol	"" (off), or 0.1–99 L
Low pk pres	"" (off), or 1–60 cmH ₂ O
Low PEEP	"" (off), or 1–20 cmH ₂ O
Low pulse	""(off), or 19–300 BPM
Low SpO ₂	""(off), or 60–99%
SBT > f	15–80 BPM, or SBT Hi f off
SBT > f/Vt	70–900 BPM/L, or Hi f/Vt off
SBT < f	SBT Lo f off, or 1–40 BPM
SBT < f/Vt	Lo f/Vt off, or 5–90 BPM/L
SBT Hi PEEP	3–40 cmH ₂ O, or "" (off)
SBT Lo PEEP	"" (off), or 1–20 cmH ₂ O

Procedure	
Procedure	Function
O ₂ flush	Delivers a pre-selected increase in O_2 percentage for a pre-selected duration
Nebulization	Provides a flow of 6 LPM \pm 10% O ₂ to drive a nebulizer (optional); configurable as continuous or inspiration only
Spontaneous breathing trial (SBT)	During the SBT procedure, delivers ventilation in CPAP +PS mode with the selected SBT control settings in Extended Features; calculates f/Vt

45-85 dBA

Alarm system

Audible volume

Power		
Input voltage		
11–16 VDC		
Removable battery pack		
Туре	Lithium-ion	
Duration	4-hr internal battery (hot swappable)	
Feature/spec.	Detail	
	Nominal voltage output	10.8 VDC
Electrical	Nominal capacity	5,800 mAH <i>(at 1C rate)</i> , min
	Charge rating	12.3 VDC, 2.0 A max
Chargo timo	Transition battery is fully recharged within 5 hr	
Charge time	Removable battery pack can be recharged within 8 hr	

Environmental		
Storage		
Temperature	-4 to 140 °F (-20–60 °C)	
Humidity	5 to 95% relative, non-condensing	
Operating		
Temperature	32–104 °F (0–40 °C)	
Humidity	5–95% relative, non-condensing	
Altitude		
Storage	50,000' max (11.6 kPa)	
Operating	-2,300 to 10,600' (68–110 kPa)	

Device monitor	
Monitor	Range
Measured Leak	0–30 LPM
O ₂ Source Pressure	2–99.9 psi
Peak Expiratory Flow	0–190 LPM
Removable Battery Capacity Remaining	0–120%
Vent Usage Meter, non resettable	0–500,000 hr
Vent Usage Meter, resettable	0–500,000 hr

Patient monitor	
Monitor	Range
Airway Pressure (Paw)	-6 to +90 cm $\rm H_2O$ measured at the patient wye
Exhaled Minute Volume (VE)	0-99.9 L
Exhaled Tidal Volume (Vte)	0–4,000 mL
Fraction of Inspired Oxygen (FiO ₂)	12-103% O ₂
I:E Ratio, Calculated (IEcalc)	1:99-4.0:1
I:E Ratio, Measured	1:99–45:1
Mean Airway Pressure (MAP)	0–99 cmH ₂ O
Peak Inspiratory Flow	3–190 LPM measured at the patient wye
Peak Inspiratory Flow, Calculated	10–120 LPM
Peak Inspiratory Pressure (PIP)	0–120 cmH₂O, or hPa
PEEP	0–99 cmH₂O, or hPa
Pulse Oximetry signal strength	Green/Amber/Red
Pulse Rate	18–300 BPM
SBT f/Vt	0-999 BPM/L
SBT time remaining	00:00 (mm:ss)-01:59:59 (hh:mm:ss)
SpO ₂	0-100%
Spontaneous Breath Rate (Sp f)	0–120 BPM
Spontaneous Tidal Volume (SpVte)	0–4,000 mL
Total Breath Rate (f)	0–120 BPM



MARNING—U.S. Federal Law restricts this device–sale by or on the order of a physician.

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