



# INTENSIVE CARE AND TRANSPORT VENTILATOR SOLUTION RV200



Quality, Management, Environment, Health & Safety Standards



CDSCO Certified



USFDA Listed



European CE



ISO 13485:  
NABCB/IAF



ISO 9001: IAF



7 Electric Safety  
Certifications

## INTRODUCTION

RV200: Best performing and versatile ventilation for hospital applications. A compact turbine-driven ventilator with multi-function, covers non-invasive and invasive ventilation, and is suitable for the treatment of most patient types. RV200 is versatile throughout the hospital and transport. Comprehensive ventilating modes, including APRV, PRVC, and NIV, are available for all your demands and for all types of patients from neonatal to adult. A collapsible high-resolution touch-screen display makes RV200 mounted on a trolley your choice for ICU applications, and a high-performance ventilator throughout the hospital and transport. The innovative expiration valve disassembling concept brings more ease and efficiency to sterilization. As your versatile assistant, RV200 is configured with O<sub>2</sub> therapy, P-V tool, a lung titrating gold standard, etc.

## TECHNICAL SPECIFICATIONS:

PHYSICAL SPECIFICATION	
Dimensions	336 mm × 330 mm × 345 mm
L×W×H	664 mm × 600 mm × 1370 mm (With Trolley)
Weight	Approximately ~9.5 kg (unit only) ,Approximately ~31.0 kg (with trolley)

SCREEN SPECIFICATION	
Display Size	12.1" Color active matrix TFT touch
Display Resolution	1280 (H) × 800 (V) pixels
Brightness	Adjustable

VENTILATION MODES	
Mode	Full Form
VCV	Volume Control Ventilation
PCV	Pressure Control Ventilation
VSIMV	Volume Synchronized Intermittent Mandatory Ventilation
PSIMV	Pressure Synchronized Intermittent Mandatory Ventilation
CPAP/PSV	Continuous Positive Airway Pressure / Pressure Support Ventilation
PRVC	Pressure Regulated Volume Control
SIMV	Synchronized Intermittent Mandatory Ventilation (combined with PRVC)
BPAP	Bilevel Positive Airway Pressure
APRV	Airway Pressure Release Ventilation
Apnea	Apnea Ventilation

VENTILATION SPECIFICATION	
	Adult
	Neonate
	Pediatric

### NON-INVASIVE VENTILATION MODES

Mode	Full Form
PCV	Pressure Control Ventilation
PSIMV	Pressure Synchronized Intermittent Mandatory Ventilation
CPAP/PSV	Continuous Positive Airway Pressure / Pressure Support Ventilation
BPAP	Bilevel Positive Airway Pressure
APRV	Airway Pressure Release Ventilation

### CONTROLLED PARAMETERS

O <sub>2</sub> %	21–100% (increments of 1%)
VT (Tidal Volume)	Adult: 100–2000 mL (increments of 10 mL) Pediatric: 20–300 mL Neonate: 2–300 mL (increments of 1 mL)
f (Ventilation frequency)	Adult: 1–80 bpm Neonate: 1–150 bpm (increments of 1 bpm)
fSIMV	SIMV: 1–80 bpm Neonate: 1–150 bpm (increments of 1 bpm)
I:E Range	4:1 to 1:10 (increments of 0.5)
T <sub>insp</sub> (Inspiratory Time)	0.20–10 s (increments of 0.05 s)
T-slope (Time of Pressure Rising)	0.2–2.0 s (increments of 0.05 s)
Thigh	0.2–30 s (increments of 0.1 s)
T <sub>low</sub>	0.2–30 s (increments of 0.1 s)
T <sub>pause</sub>	5%–60% (increments of 1%)
ΔP <sub>insp</sub>	5–60 cm H <sub>2</sub> O (increments of 1 cm H <sub>2</sub> O)
ΔP <sub>supp</sub>	0–60 cm H <sub>2</sub> O (increments of 1 cm H <sub>2</sub> O)
P <sub>high</sub>	0–60 cm H <sub>2</sub> O (increments of 1 cm H <sub>2</sub> O)
P <sub>low</sub>	0–45 cm H <sub>2</sub> O (increments of 1 cm H <sub>2</sub> O)
PEEP	1–45 cm H <sub>2</sub> O (increments of 1 cm H <sub>2</sub> O), Off
Flow Trigger	0.5–15 L/min (increments of 0.1 L/min)
Pressure Trigger	–10 to –0.5 cm H <sub>2</sub> O (increments of 0.5 cm H <sub>2</sub> O)
Exp% (Expiration termination level)	10–85% (increments of 5%), Auto

### APNEA VENTILATION

V <sub>tapnea</sub> - Adult	100–2000 mL (increments of 10 mL)
Pediatric	20–300 mL
Neonate	2–300 mL (increments of 1 mL)
ΔP <sub>apnea</sub>	5–60 cm H <sub>2</sub> O (increments of 1 cm H <sub>2</sub> O)
f <sub>apnea</sub>	1–80 bpm (increments of 1 bpm)
Apnea T <sub>insp</sub>	0.20–10 s (increments of 0.05 s)

### SIGH FUNCTION

Switch	On, Off
Interval	20s–180 min (increments of 1 s from 20–59 s, 1 min from 1–180 min)
Cycles/Min	1–20 (increments of 1)
$\Delta$ int.PEEP	1–45 cm H <sub>2</sub> O (increments of 1 cm H <sub>2</sub> O), Off

### SYNCHRONIZED TUBE RESISTANCE COMPLIANCE

Tube Types	ET Tube, Trach Tube, Disable STRC Tube
ID Range (Adult)	5.0–12.0 mm (increments of 0.5 mm)
ID Range (Pediatric)	2.5–8.0 mm (increments of 0.5 mm)
Compensate Range	0–100% (increments of 1%)
Expiration Compliance Switch	On, Off

### MONITORED PARAMETERS

Pressure	Paw, Ppeak, Pmean, PEEP, Insp Flow, Exp Flow
Volume	Vte, VTi, VTe/IBW
Time	Tinsp, Tpause, Tlow, Thigh, T-slope
Gas Exchange	Oxygen concentration, MV, MV leak, MV spn, ftotal, fmand, fspn, SpO <sub>2</sub>
Compliance	Cdyn, Cstat
Resistance	Rcexp, Ri
Work of Breathing	WOB, RSBI, NIF, P0.1, PEEPi, PEEP
Other	Continuous Flow (O <sub>2</sub> Therapy), RC

### CONTROL ACCURACY

O <sub>2</sub> %	±(3 vol.% ±1% of setting)
TV	±10 mL ±10% of setting (BTPS)
Tinsp	±0.1 s or ±10% of setting, whichever is greater
I:E	2:1 to 1:4: ±10% of setting; others: ±15%
f	±1 bpm
fSIMV	±1 bpm
T-slope	±(0.2 s ±20%) of setting
PEEP	±(2.0 cm H <sub>2</sub> O ±5%)
$\Delta$ Pinsp, $\Delta$ Psupp, Phigh, Plow	±(2.0 cm H <sub>2</sub> O ±5%)
Thigh, Tlow	±0.2 s or ±10%, whichever is greater
Pressure Trigger	±1.0 cm H <sub>2</sub> O ±10%
Flow Trigger	±(1.0 L/min ±10%)
$\Delta$ int.PEEP	±2.0 cm H <sub>2</sub> O ±5%, ±10%
fapnea	±1 bpm
$\Delta$ Papnea	±2.0 cm H <sub>2</sub> O ±5%
TVapnea	±10 mL ±10% (BTPS)
Tinsp (Apnea)	±0.1 s or ±10%, whichever is greater

### REAL-TIME GRAPHICS

Pressure-time waveforms	Paw–Volume Loop
Flow-time waveforms	Flow–time Loop
Volume-time waveforms	Paw–Flow Loop

### ALARM SETTINGS

Alarm Parameter	Setting
Tidal Volume	High / Low
Minute Volume	High / Low
Airway Pressure	High / Low
Frequency	High / Low
Inspired Oxygen (FiO <sub>2</sub> )	High / Low
etCO <sub>2</sub>	High / Low
Apnea Alarm Time	5–60 s

### MONITORING ACCURACY

Airway Pressure (Ppeak, Pplat, Pmean, PEEP, PAP, EPAP)	±2 cm H <sub>2</sub> O + 4% of the actual reading
Tidal Volume (Vti, Vte, TVe/IBW, TVe spn) – 0 ml to 100 ml	±10 ml + 3% of the actual reading (BTPS)
Tidal Volume – 100 ml to 4000 ml	±3 ml + 10% of the actual reading (BTPS)
Minute Volume (MV, MVspn, MVleak)	±0.3 L/min or ±8% of the actual reading, whichever is greater (BTPS)
Frequency (ftotal, fmand, fspn)	±5% of reading or ±1 bpm, whichever is greater
Inspired Oxygen (FiO <sub>2</sub> )	±2.5 vol.% ± 2.5% of the actual reading
Resistance	0 to 50 ±10 cm H <sub>2</sub> O/L/s
Compliance	25% of actual reading or ±10 ml/cm H <sub>2</sub> O, whichever is greater
RSBI	0 to 999 1/(minL): ±3 (1/minL) ±15% of the actual reading
WOB	-
NIF	±2 cm H <sub>2</sub> O + 4% of the actual reading
P0.1	±2 cm H <sub>2</sub> O + 4% of the actual reading
PEEPi	-
Reexp	-

### TREND

Type	Tabular, Graphic
Length	72 hours
Content	Monitor Parameters, Setting Parameters (Ventilation mode and Parameters)

### CONTROLLED PARAMETERS & ACCURACY

<b>O<sub>2</sub>% Range</b>	21–100% (increments of 1%)
<b>Flow Range</b>	4–60 L/min
<b>O<sub>2</sub>% Accuracy</b>	±(3 vol.% ±1% of setting)
<b>Flow Accuracy</b>	±(2 L/min ±10% of setting) (BTPS)

### ENVIRONMENTAL SPECIFICATIONS

<b>Temperature (Operating)</b>	5–40°C
<b>Temperature (Storage/Transport)</b>	–20 to 60°C (O <sub>2</sub> sensor: –20 to 50°C)
<b>Relative Humidity</b>	10–95% (operating, storage, and transport)
<b>Barometric Pressure</b>	62–106 kPa (operating) 50–106 kPa (storage/transport)

### POWER & BATTERY BACKUP

<b>External Power Supply</b>	AC
<b>Input Voltage</b>	100–240 V
<b>Input Frequency</b>	50/60 Hz
<b>Input Current</b>	2.5 A Max
<b>Fuse</b>	T2.5 AH / 250 V
<b>Internal Battery</b>	Yes
<b>Battery Count</b>	One or Two (Optional)
<b>Battery Type</b>	Built-in Lithium-ion, 11.25 VDC, 6400 mAh
<b>Battery Run Time</b>	3 hours (1 battery) 6 hours (2 batteries)

### OTHER FEATURES

<b>Communication Interfaces</b>	RS-232, Ethernet, USB port, CO <sub>2</sub> analyzer connector
<b>Gas Supply Type</b>	O <sub>2</sub>
<b>Oxygen Connector</b>	NIST (HPO) DISS (optional)
<b>Gas Supply Pressure</b>	280–600 kPa

# CERTIFICATIONS

Quality, Management, Environment, Health & Safety Standards



**50 Products  
CDSCO Certified**



**USFDA Listed**



**8 products tested by a  
WHO-accredited laboratory**



**European CE**



**NABCB: ISO 13485**



**ISO 9001: IAF**



**ISO 14001: IAF**



**ISO 45001: IAF**



**7 Electric Safety  
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**WHO GMP**



**BIFMA Certified,  
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**ASTM- Corrosion  
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**ISO 2409**

**EN 13523-26,  
ISO 13849-1,  
IP 69, IP 65**

**& many other...**



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