

# CCV

## Comprehensive Care Ventilator

The Gradian CCV is built to ventilate critically-ill patients wherever they present, with battery and portability features to enable ease of use throughout the continuum of critical care.



### **PORTABILITY FEATURES**

Sturdy rolling cart for bedside use, plus bed hooks, handle, and shoulder strap intra-hospital transfers.

### **USER-FRIENDLY INTERFACE**

Tactile, straightforward interface with programmable ventilation profiles for specific disease states.

### **GAS SOURCE FLEXIBILITY**

Integrated compressor and gas mixer, plus hoses and adapters for most oxygen and air sources.

### **OXYGEN RESERVOIR**

External oxygen reservoir that allows for use with an oxygen concentrator or flowmeter, if high-pressure oxygen sources are not available.

### **EXTENDED BATTERY BACKUP**

Internal battery that enables 7 hours of operation without mains power, plus optional additional 14-hour external battery.

### **RECOGNIZED SOLUTION**

The CCV fulfills or exceeds most of the essential specifications recommended by the WHO for ICU, transport, and sub-acute ventilators for COVID-19 care.

# CCV Product Specifications

## PATIENT RANGE

Infant/Pediatric ( $\geq 5$  kg) - Adult

## MODES

Ventilation modes	V-AC, V-SIMV, P-AC, P-SIMV, CPAP/BiPAP
Quick Start Modes	Adult and Child
Custom modes	3 programmable profiles available for quick recall

## CONTROL SETTINGS

Tidal volume	40 - 2000 mL
Respiratory rate	0 or 5 - 60 bpm
Insp. time	0.5 - 2.0 sec
PEEP/CPAP	0 - 25 cmH <sub>2</sub> O
Pressure support	0 - 25 cmH <sub>2</sub> O*
Flow	5 - 60 L/min ( $\geq 80$ L/min in some modes)
Target pressure	15 - 55 cmH <sub>2</sub> O
Trigger	Pressure, -5 - -1 cmH <sub>2</sub> O
Pressure relief	$\leq 85$ cmH <sub>2</sub> O
Set %O <sub>2</sub>	21% - 100%
Settings lock	On/Off

## MONITORED PARAMETERS

Measured	Airway Pressure, Delivered Tidal Volume, Spontaneous Breath Rate
Calculated	I:E Ratio, Flow, %O <sub>2</sub>

## ACCESSORIES

Breathing circuits	Single limb, reusable (adult and pediatric)
Humidification	Active humidifier with reusable accessories, HMEF-compatible
Portability	Rolling stand, handle, bed hooks, shoulder strap
Additional	Pulse oximeter, gas source adapters, HMEF starter kit

## ELECTRICAL AND GAS SUPPLIES

Oxygen input	High pressure port (0 - 80 psi) Low pressure barb (< 10 psi) Reservoir for low-flow sources
Air input	Room air (internal compressor)
Battery	Internal, 7 hr backup External, 14 hr backup (optional)
Input voltage	110 - 240 VAC, 50/60 Hz, <1A

## PHYSICAL DIMENSIONS

Dimensions	340 × 130 × 350 mm
Weight	8.5 kg (18.8 lb)

## ENVIRONMENTAL

Shock	100 G-Force
Vibration	IEC 60068-2-6
Operating	-18°C - 50°C, 5 - 95% RH
Storage	-40°C - 60°C
Ingress	IP22

## Guaranteed with Every Purchase

### COMPREHENSIVE WARRANTY

- Annual preventive maintenance checks
- Timely corrective maintenance with on-demand access to technical experts
- Local storage of spare parts for fast and easy access

### HIGH-QUALITY TRAINING

- In-person and online formats, covering real-world clinical scenarios like obstetric emergencies with high-fidelity simulation
- Taught by leading physicians, and is accredited in several countries

