

# O-Two CAREvent<sup>®</sup> ATV+ and MRI



**o\_two** controlled  
ventilation™

# AUTOMATIC VENTILATION ON THE MOVE

The O-Two CAREvent® ATV+ and MRI are pneumatically powered, time/volume cycled, intermittent positive pressure patient ventilators specifically designed for use by trained personnel in the pre-hospital, hospital, interhospital and air ambulance environments. They do not require batteries or any electrical supply to operate. The various modes of operation of the ventilators support the resuscitation and transportation of a wide range of patients (from infants to adults).

The O-Two CAREvent® ATV+ and MRI feature independent controls for minute volume and frequency that provide a comprehensive range of 12 ventilation frequencies and 12 minute-volume settings. This provides a possible 144 combinations of delivered tidal volume and respiratory rate. The ergonomically designed and colored control groupings facilitate the selection and setting of the breathing parameters while protecting the controls. The color groupings on the controls add to this ease-of-use concept. The design of the micropneumatic circuitry maintains a consistent I:E ratio (set at 1:2) and uses virtually no drive gas.

The synchronized intermittent mandatory ventilation (SIMV) mode demand breathing-feature allows spontaneously breathing patients to breathe on oxygen at their own rate and volume. If the demanded rate is sufficient, the automatic circuit shut-off feature will cause the automatic cycling of the ventilator to cease when the patient takes an adequate spontaneous breath. The automatic cycling will restart automatically should the patient stop breathing or his/her demanded volume or respiratory rate drop below the predetermined minimum.

Compliance with the latest guidelines for resuscitation is provided on the O-Two CAREvent® ATV+ and MRI by the incorporation of a manual override button. This allows for the provision of ventilations and chest compressions during CPR in the patient with an unprotected airway in accordance with these guidelines. The manual flow rate is equivalent to the flow rate of the minute volume setting selected. For the intubated patient simply set the frequency control to 10 breaths per minute.

Unique audible and visual pneumatic alarms for circuit disconnection (Breathing System Integrity), low-gas supply pressure, low airway pressure and the audible high airway-pressure alarm are provided to improve the level of patient safety. These alarms alert the operator to any problems with the patient's breathing parameters. An override control is provided for the BSI alarm to silence the alarm for 15 seconds.

The adjustable continuous positive airway pressure (CPAP)/ positive-end expiratory pressure (PEEP) mode allows for these two functions to be supplied by the ventilator, eliminating the need for an external PEEP valve or CPAP device. To improve ventilator operating-time during transport, or when 100% oxygen is not required, an air-mix mode with replaceable environmental filter is provided allowing for an oxygen concentration of either 100 or 60%.

The O-Two CAREvent® ATV+ and MRI are compatible with air ambulance use, having passed the tests for both fixed and rotary-wing aircraft to the US Military Standard 810E. The O-Two CAREvent® MRI contains no ferrous metals and is suitable for use in a three-Tesla MRI environment.



# SPECIFICATIONS

MINUTE VOLUME RANGE		2 - 14 L/min	
FREQUENCY RANGE		8 - 40 BPM	
I:E RATIO		1:2	
INPUT PRESSURE		45 - 87 PSI (3 - 6 Bar)	
AUTOMATIC FLOWRATE		6 - 42 L/min	
MANUAL FLOWRATE		6 - 42 L/min	
MANUAL OVERRIDE DELAY TIME		17 - 23 sec	
DEMAND BREATHING FLOWRATE		>100 L/min @ -6 cmH <sub>2</sub> O (hPa)	
DEMAND BREATHING TRIGGERING PRESSURE		-2 cmH <sub>2</sub> O max.	
AUTO SHUT OFF DELAY TIME		5 - 8 sec	
CPAP/PEEP		0 - 20 cmH <sub>2</sub> O	
OXYGEN CONCENTRATION		60 OR 100 %	
INSPIRATORY/EXPIRATORY RESISTANCE		< 6cmH <sub>2</sub> O (hPa) @ 60 L/min	
OPERATING TEMPERATURE		-18°C to + 50°C 0°F to +122°F	
STORAGE TEMPERATURE		- 40°C to + 60°C - 40°F to + 140°F	
GAS SUPPLY STATUS INDICATOR		Provides a visual indication of Gas Supply Status	
PRESSURE RELIEF RANGE		20 - 60 cmH <sub>2</sub> O 19.6 TO 58.8 mBar	
LOW INPUT PRESSURE ALARM		Audible pulsed alarm to indicate input pressure is dropping below the minimum requirement. Cannot be switched off	
AIRWAY PRESSURE ALARM		Audible alarm to indicate that the selected peak airway pressure has been reached	
BSI ALARM		Audible high frequency pulsed alarm indicating that the patient circuit is disconnected or insufficient ventilation pressure (<10 Cmh <sub>2</sub> o) has been attained	
PRESSURE GAUGE ACCURACY		± 2% Full Scale	
INPUT CONNECTION		9/16" DISS	
PATIENT CONNECTION		15 / 22 mm	
DIMENSIONS		9.27 x 7.6 x 4.4 inches 236 x 194 x 112 mm	
WEIGHT		2.84 Kg Approx for ATV+ 3.0 Kg Approx for MRI	
PATIENT VALVE DEAD SPACE		8 ml	
CYLINDER DURATION (ALUMINUM "D" SIZE CYLINDER CONTAINING 415 LITRES OF OXYGEN.)	ON 100% SETTING	(a) 2 LITRE Mv	207 minutes
		(b) 14 LITRE Mv	30 minutes
	ON 60% SETTING	(a) 2 LITRE Mv	345 minutes
		(b) 14 LITRE Mv	50 minutes

(All specifications are subject to a tolerance of +/- 10% except the I:E Ratio which is subject to a tolerance of +/- 20% and Maximum Airway Pressure +0/-15%)

# ORDERING INFORMATION

01CV7000	CAREvent® MRI Conditional Transport Ventilator c/w Adjustable 20 - 60 cm H2O Pressure Relief System, Low Pressure Visual and Audible Alarm, Air Mix, Adjustable CPAP/PEEP, Breathing System Integrity (BSI) Alarm, 6' Supply Hose*, Deluxe Disposable Ventilation Circuit, Calibrated Test Lung & Universal Mask	Each
01CV6000	CAREvent® ATV+ Automatic Transport Ventilator c/w Adjustable 20 - 60 cm H2O Pressure Relief System, Low Pressure Visual and Audible Alarms, Air Mix, Adjustable CPAP/PEEP, Breathing System Integrity (BSI) Alarm, 6' Supply Hose*, Deluxe Disposable Ventilation Circuit, Calibrated Test Lung and Universal Resuscitation Mask	Each
01CV8015-CS	O-Two Deluxe Disposable Ventilation Circuit with PEEP Port (for use with ALS, ALS+, ATV+, MRI Compatible Ventilators)	Case/10
01CV8016-CS	O-Two CAREvent® MRI Ventilation Circuit with PEEP Port and 10 Foot Hose	Case/10
01CV8010-CS	O-Two Disposable Ventilation Circuit without PEEP Port (for use with EMT)	Case/10
10-55330-CS	Disposable PEEP Valve 5 - 20 cmH2O	Case/10
17MP8690-CS	Air Intake Filter and Cover for CAREvent® ATV, ATV+, MRI Compatible Ventilators	Case/10
01CV8025	O-Two CAREvent® Reusable valve with PEEP Port for ATV, ATV+ and MRI	Each
01CV7030	CAREvent® ATV+ / MRI Ambulance Mounting Bracket	Each
01TA1851	Replacement Calibrated Test Lung c/w Compliance Band and Airway restrictor	Each

THIS PRODUCT HAS A TWO YEAR WARRANTY AGAINST MANUFACTURERS DEFECTS.

## ENHANCED SPECIFICATION FOR THE O-TWO CAREVENT® MRI:

Tested in an MRI environment to maximum static magnetic field strength of 3.0 Tesla