

Emergency Transport and Ventilation



When you get a call and the patient is not breathing, are you and your equipment ready? Can you make the difference?

PneuPac® portable gas powered ventilators (PGPVs) and the Capnocheck® Capnometer are easy to use, dependable resources for emergency situations. PneuPac® ventilators take the guess work out of providing respiratory support and provide you with the feedback you need to make life-saving decisions. The bright and easy to read display of the Capnocheck® Capnometer provides a solution for monitoring ETCO_2 data through each phase of patient care, and can be used in conjunction with any of the PneuPac® ventilators. Smiths Medical – here to help you make the difference when you get the call.

For more information visit smiths-medical.com/pneupac or smiths-medical.com/bci.

PneuPacTM

BCITM

Portable Gas Powered Ventilators

Lightweight, quick to set up, accurate in their administration, and reliable in their operation, PGPVs (Portable Gas Powered Ventilators) are ideal for use in emergency situations requiring basic or advanced life support. With their immediate ability to adapt to changing patient parameters PGPVs provide essential breathing support and overcome many of the problems associated with manual ventilation methods.

Acting as a third hand and eliminating the need for assistance from a second emergency professional, a PGPV controls the breathing patterns and administers repeatable tidal volumes at safe, limited inflation pressures. In addition, monitoring and safety features ensure over inflation is prevented.

Standard Features

Pressure relief with audible alarm

Prevents generation of excessive pressure in the lungs. Fixed on the Pneupac® VR1. Adjustable on the Pneupac® paraPAC and ventiPAC.

Ventilation powered by gas

Eliminates the need for electrical connections or battery supply.

Inflation pressure monitor

Provides visualization of ventilator inflation pressure.

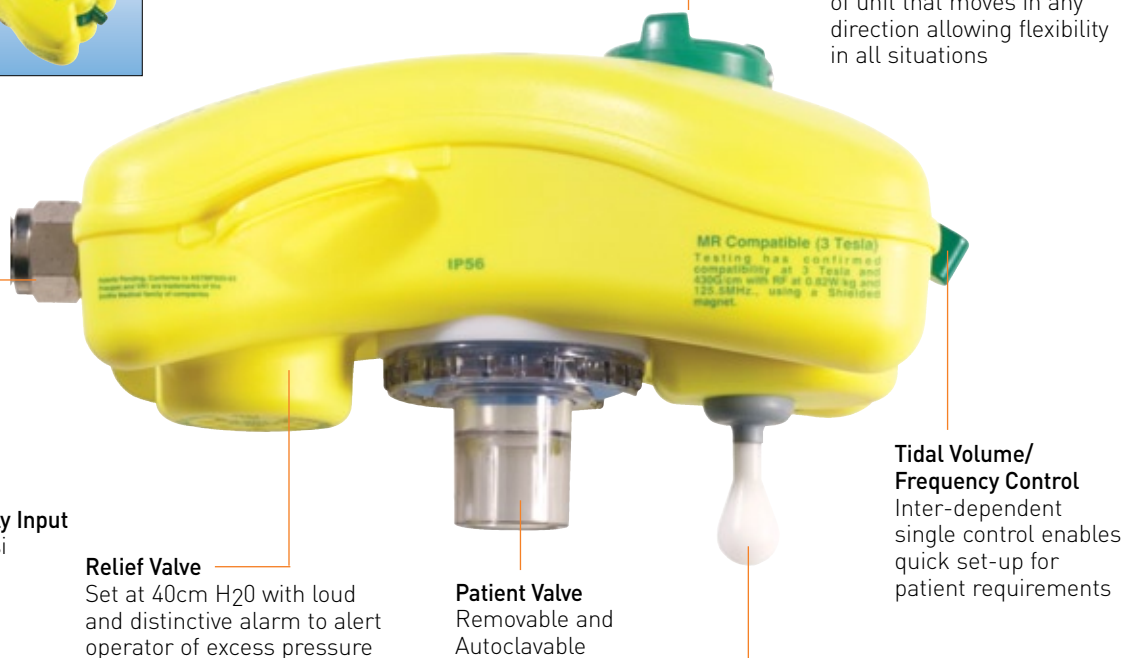
Lightweight & durable for use in the toughest of situations

Drop, vibration and water resistant tested.

Pneupac® VR1

The VR1 emergency ventilator is a simple, safe, portable ventilator packaged into a lightweight, palm-sized unit. Rapid set-up, ease of use, and key clinical features make the VR1 ideal for managing airway emergencies wherever they occur: in transport situations, industrial or commercial settings, hospitals or remote locations.

- MR compatible
- Optional PEEP capability
- Optional Air Mix feature



paraPAC with Integrated Alarms

Designed specifically for use by trained emergency personnel, the paraPAC enables greater control of breathing parameters. The dual controls allow easy selection of tidal volume and frequency to match your patient's ventilatory requirements. Suitable for ventilation during CPR and emergency transportation of adults and children.

- MR compatibility gives maximum flexibility for transport
- Optional PEEP capability

Integrated Pressure Monitoring/Alarm System

Inflation pressure manometer incorporating visual and audible alarms for high pressure, low pressure/disconnect, and other safety features

Separate Controls for Setting Tidal Volume and Frequency

Ensures easy selection of ventilation breathing parameters

Adjustable Pressure Relief with Audible Alarm

Low Gas Supply Indicator

Eye-ball indicator changes color as gas supply depletes

Air Mix (100% or 50% O₂)

Selection of 50% O₂ triples cylinder life

Unique SMMV/Demand Function

Ventilation ON: Continuously monitors and automatically responds to your patient's inspiratory efforts

Ventilation OFF: Allows administration of 100% oxygen therapy



ventiPAC with Integrated Alarms

In transport ventilation, the patient is usually in a critical but stable condition. The accompanying clinician is tasked to deliver the patient to their destination in the same or better ventilation state. The ventiPAC is portable, compact, lightweight and easy to use in this often difficult situation. It operates reliably and provides alarms and monitoring similar to those found throughout the hospital. The clinician is able to alter the inspiratory and expiratory phases of ventilation to allow for patient comfort, and can also provide essential

ventilatory support options such as positive end expiratory pressure (PEEP).

Covering the widest range of ventilation parameters, the ventiPAC is designed for varied applications and transport ranging from recovery rooms to ICU to inter-and intra-hospital transport.

- MR compatibility gives maximum flexibility for transport
- Optional PEEP capability

Adjustable Pressure Relief with Audible Alarm

Integrated Pressure Monitoring/Alarm System

Inflation pressure manometer incorporating visual and audible alarms for high pressure, low pressure/disconnect, and other safety features

Low Gas Supply Indicator
Eye-ball indicator changes color as gas supply depletes

Air Mix (100% or 50% O₂)
Selection of 50% O₂ triples cylinder life

Separate Controls for Inspiratory Time, Expiratory Time and Flow

Ensures easy selection of ventilation breathing parameters

Unique SMMV/Demand Function

Ventilation ON: Continuously monitors and automatically responds to your patient's inspiratory efforts

Ventilation OFF: Allows administration of 100% oxygen therapy

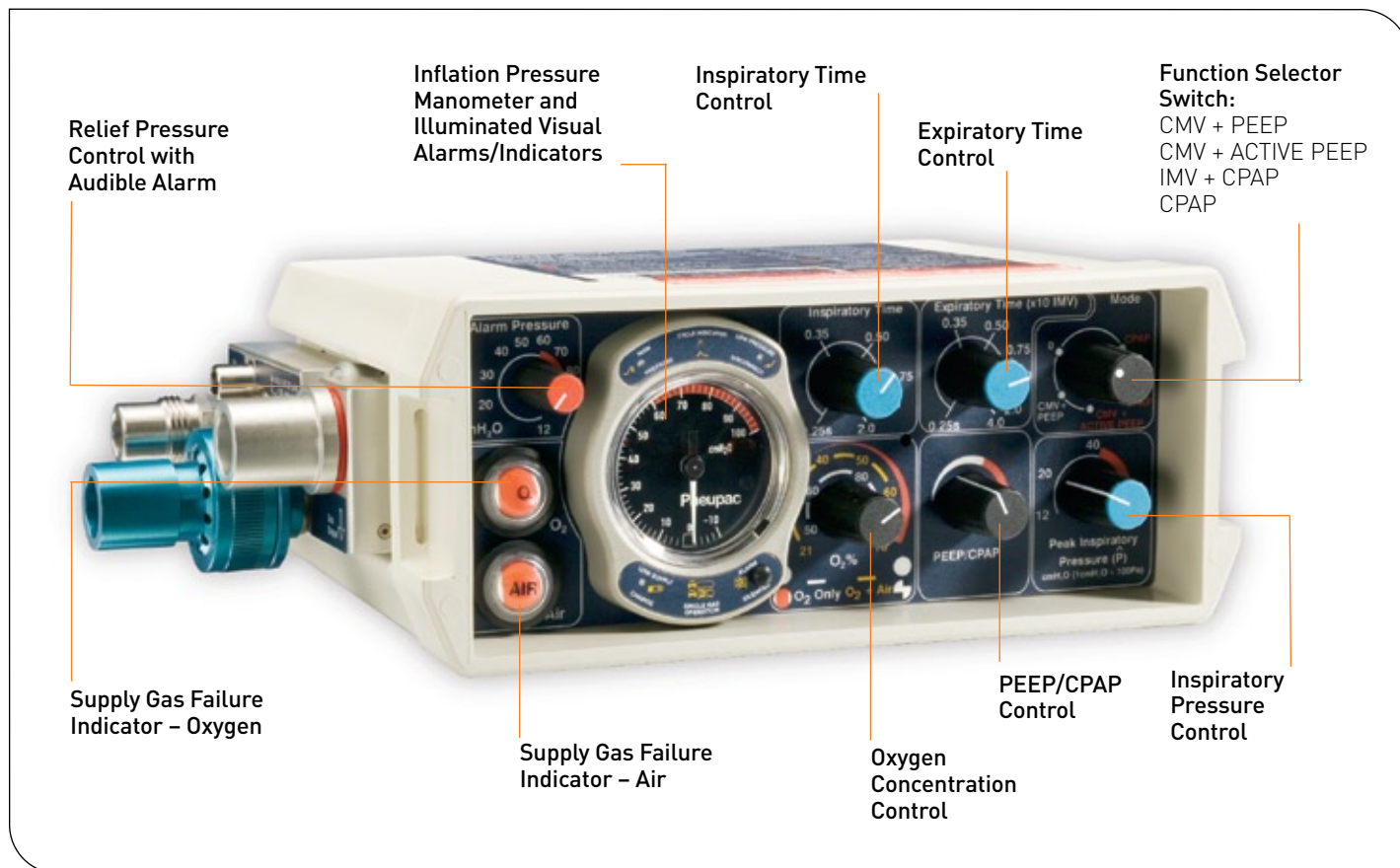


babyPAC™ with Integrated Alarms

Ventilation for neonates and infants requires a special approach. The ventilator used must be suitable for small, sensitive lungs and should generate a limited pressure to avoid over-inflation and potential harm. This ventilator has a sophisticated range of ventilation controls including CPAP, variable I:E ratio and variable oxygen concentration. The latter is particularly important in the transport of neonates since high oxygen concentrations over a prolonged period can be harmful.

The special design of the babyPAC™ makes it ideal for delivering ventilation to fragile lungs with precision and confidence, whether in routine care, or in the difficult circumstances of transport ventilation.

- MR compatibility gives maximum flexibility for transport within the hospital



Smiths Medical also provides a solution for monitoring ETCO₂ data through each phase of patient care

Capnostream® Capnometer

- Small, portable quantitative capnometer that monitors carbon dioxide concentrations and respiratory rate.
- Fully quantitative mainstream technology accommodates intubated and non-intubated pediatric to adult patients.
- No calibration or warm-up time required and is available with or without alarms.
- Used in conjunction with a Pneupac® ventilator.



Specifications/Technical Data

	Pneupac® VR1	paraPAC	ventiPAC	babyPAC™
Principle of Operation	Oxygen powered, hand-held control unit with patient valve including automatic and manual modes with demand breathing	Time/Volume Cycled	Time/Volume Cycled	Time Cycled Pressure Generator
User Type	Patients above 10kg with and without spontaneous breathing	Adults, children & infants greater than 11 lbs (5 kg)	Adults, children & infants greater than 11 lbs (5 kg)	Neonates & infants up to 44 lbs (20 kg)
Ventilation Mode	Demand – Auto/Manual	Demand – SMMV/Demand	Demand – SMMV/Demand	CMV+PEEP; CMV+ACTIVE PEEP; IMV+CPAP, CPAP
Tidal Volume	1050 - 150 ml	1300 - 70 ml	1500 - 50 ml	330 - 0 ml
Inspiratory Time	-	-	0.5 - 2.0 secs	0.25 - 2.0 secs
Expiratory Time	-	-	0.6 - 6.0 secs	0.25 - 4.0 secs; IMV 2.5 - 40 secs
Frequency	10 - 25 b/min (12 b/min at click stop)	8 - 40 b/min (12 b/min at click stop)	7 - 60 b/min	10 - 80 b/min (I:E 1:2); 12 - 96 b/min (I:E 1:1.5); 15 - 120 b/min (I:E 1:1)
Flow Range	11 - 32 L/min	6 - 60 L/min	6 - 60 L/min	Preset at 10 L/min
I:E Ratio	1:2	1:3 at 8 b/min to 1:1.3 at 40 b/min	variable over a wide range	variable over a wide range
Air Mix	No	100 or 50% O ₂	100 or 50% O ₂	45 - 100% O ₂ oxygen only as supply 21 - 70% O ₂ oxygen and air supply
Pressure Relief with Pneumatic Audible Alarm	40 cm H ₂ O standard 60 cm H ₂ O optional when purchased	20 - 80 cm H ₂ O (20 - 80 x 100 Pa)	20 - 80 cm H ₂ O (20 - 80 x 100 Pa)	12 - 80 cm H ₂ O (12 - 80 x 100 Pa)
Electronic Pressure Monitoring/Alarm System	N/A	Optional	Optional	Optional
Inflation Pressure Monitor	N/A	-10 to +100 cm H ₂ O (-10 to +100 (x100) Pa)	-10 to +100 cm H ₂ O (-10 to +100 (x100) Pa)	-10 to +100 cm H ₂ O (-10 to +100 (x100) Pa)
PEEP Capability	Optional 0 - 20 cm H ₂ O (0 - 20 x 100 Pa)	Optional 0 - 20 cm H ₂ O (0 - 20 x 100 Pa)	Optional 0 - 20 cm H ₂ O (0 - 20 x 100 Pa)	0 - 20 cm H ₂ O (0 - 20 x 100 Pa) with click action warning above 10 cm H ₂ O
MR Compatible	3 Tesla actively shielded magnet with a max gradient of 430 G/cm and RF of 0.82 W/kg at 125.5 Mhz	3 Tesla actively shielded magnet with a max gradient of 430 G/cm and RF of 0.82 W/kg at 125.5 Mhz	3 Tesla actively shielded magnet with a max gradient of 430 G/cm and RF of 0.82 W/kg at 125.5 Mhz	3 Tesla actively shielded magnet with a max gradient of 430 G/cm and RF of 0.82 W/kg at 125.5 Mhz
Dimensions	3.9H x 3.7W x 6.6D in (100H x 95W x 170D mm)	3.7H x 8.7W x 6.4D in (92H x 220W x 162D mm)	3.7H x 8.7W x 6.4D in (92H x 220W x 162D mm)	3.7H x 8.7W x 6.4D in (92H x 220W x 162D mm)
Weight	14.82 ounces 420 grams	6.6 lbs (3.0 kg) without integrated alarms 6.8 lbs (3.1 kg) with integrated alarms	6.6 lbs (3.0 kg) without integrated alarms 6.8 lbs (3.1 kg) with integrated alarms	8.3 lbs (3.75 kg)
Standards	EN60601-1, EN794-3: 1999	EN60601-1, EN794-3: 1999	EN60601-1, EN794-3: 1999	EN60601-1, EN794-3: 1999