The single source for your critical care ventilation and CPAP needs.

Airon

Airon Corporation is dedicated to the development, manufacture, and distribution of safe and effective medical devices designed for the care of life support dependent patients. Our expertise and focus is on pure pneumatic technology that provides dependable, robust respiratory support of neonates up to the largest adults. We believe in the effectiveness of non-invasive ventilation and make sure that all of our products have superior CPAP systems to maximize clinical utility.

Airon is a global company providing quality products to all regions of the world. We continuously review our products, processes, and customer comments to ensure our products and services meet the highest level of expectations. Our operations and products comply with all local, national, and international regulations. Every device is manufactured in our own ISO 13485/9001 certified facility in Melbourne, Florida USA. These products are all CE marked as well as USA FDA approved. Airon will only ship products that meet our customer's quality requirements.

Airon is a customer-focused company that draws from the clinical experience of our staff and users. Serving the hospital and pre-hospital respiratory/anesthesia markets with life support devices that perform how our customers demand; reliably and safely. As evidence of our commitment to our customers, Airon has received the prestigious ***Florida Companies to Watch*** award by GrowFL, the Florida Economic Gardening Institute at the University of Central Florida and ACG Florida, in association with the Edward Lowe Foundation.

	HOSPITAL	EMS	MRI	VENTILATOR	CPAP
pNeuton™ mini Infant Ventilator with CPAP 	✚	🚑	MR	✓	✓
pNeuton™ model A Ventilator with CPAP 	✚		MR	✓	✓
pNeuton™ model S Ventilator with CPAP 	✚	🚑	MR	✓	✓
MACS™ epic Critical Care CPAP System 	✚				✓
MACS™ Stand-alone CPAP System 	✚	🚑			✓

pNeuton mini

pNeuton mini ventilator with CPAP for infant critical life support, anywhere

The pNeuton mini ventilator is a whole new approach to neonatal, infant and pediatric ventilation.

A purely pneumatic ventilator that can support patients non-invasively using nasal prongs or masks with CPAP, or ventilation + CPAP. The ventilator can also be used with endotracheal tubes for full support.

The mini operates with no electricity – no batteries – just compressed oxygen and air. With a built-in oxygen blender and precise timing and pressure controls, the pNeuton mini ventilator matches the complexity of pressure-limited ventilation in standard infant ventilators, but without the need for electricity or batteries.

For your referring hospital, delivery room, MRI

The mini is ideal for stabilizing and transporting patients both within the hospital and via air (helicopter/fixed wing) or ground ambulance. It is fully MRI compatible with no gauss line separation restrictions.

The pNeuton mini, the newest ventilator to expand care of your most fragile patients, from 400 grams to 25 kilograms. Recognized as one of the Top Twenty New Product Innovations in 2012, by *EMS World Magazine*.

Benefits for the patient

- A wide range of continuous flow settings to provide the right ventilation for the size of your patient with the least amount of expiratory flow resistance
- Adjustable oxygen delivery from 21% to 100% to precisely match patient oxygen requirements
- Switch from CPAP nasal prongs, face mask to invasive ventilation seamlessly and without interruption
- One ventilator with no change in patient circuit wherever patient care and diagnostic procedures are needed

Benefits for the healthcare provider

- Calibrated controls for precise and easy operation
- Night visible manometer to monitor patient pressure and effort
- Patient disconnect and high pressure alarms that work during non-invasive and invasive ventilation
- MRI compatible with no gauss line magnet separation restrictions and an optional remote alarm for the control room
- Pneumatically powered – no batteries
- Rugged and tested to RTCA airworthiness standards

Benefits for your budget

- Switch from invasive ventilatory support to non-invasive with just a simple change of the patient interface
- Lightweight and portable with attachment to any patient care incubator / bed
- Minimal oxygen consumption to maximize transport times
- No batteries or electronics decrease preventative maintenance costs

The pNeuton ventilators are critical care devices designed for use by healthcare professionals under the direction of a physician.

Specifications

Description

- Pneumatically powered for use on neonatal, infant and child patients
- Patient range: 400 gram to 25 kilogram
- Modes: CMV, IMV + CPAP or CPAP only – continuous flow pressure limited ventilation
- Pressures displayed on manometer
- MRI conditional: static magnetic field of 3 T or less, maximum spatial gradient magnetic field of 720-gauss/cm or less, no gauss line restriction
- Gas consumption: flow setting + 3 L/min
- Weight: 9 lbs (4 kg)
- Dimensions: 6.0" h x 8.7" w x 7.8" d (15.2 cm x 22.1 cm x 19.8 cm)
- Input gas requirement (oxygen and medical air): 55 psi ± 15 psi (3.8 bar ± 1 bar) each gas
- Meets international standards for transport ventilators:
  - ASTM: F1100 90 - Ventilators Intended for Use in Critical Care
  - ISO: ISO 10651-3: 1997 - Lung Ventilators for Medical Use - Particular requirements for emergency and transport ventilators
  - Airworthiness: RTCA DO-160G - Environmental Conditions and Test Procedures for Airborne Equipment, as applicable

Control Settings

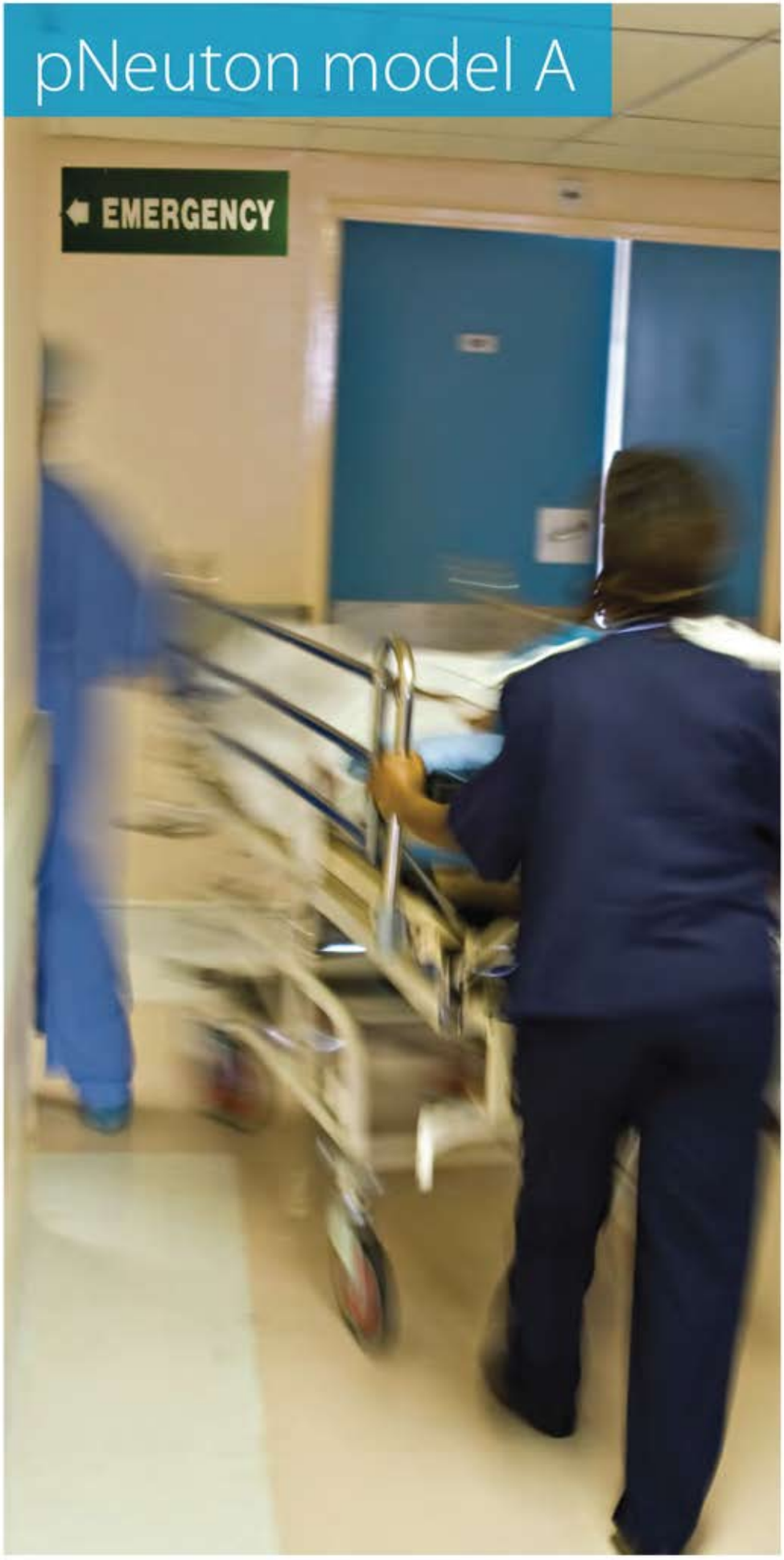
• **Inspiratory time**	0.25 to 2 seconds
• **Expiratory time**	0.25 to 20 seconds
• **Continuous Flow**	6, 8, 10, 15 or 20 L/min
• **Peak pressure**	10 to 60 cm H_2O (mbar)
• **PEEP / CPAP**	0 to 20 cm H_2O (mbar)
• **Oxygen**	21 to 100% ± 3%, requires oxygen and medical air source

Audible and Visual Alarms

- All pneumatic alarm system (no batteries)
- Patient circuit disconnection
  - Automatic reset when alarm condition resolves
  - 10 second response, 20 second silence/reset button
- High pressure - independently adjustable from Peak Pressure
- Low gas source pressure
  - If either source gas drops below 40 psi (2.8 bar)
  - Continues operation as long as oxygen is available

Specifications are subject to change at any time without notice.

pNeuton model A



pNeuton model A ventilator with built-in CPAP for hospital environments

The pNeuton model A transport ventilator with built-in CPAP is designed for pediatric to adult critical care patient support in hospital environments.

With simple-to-use controls – Tidal Volume, Respiratory Rate and Pressure Limit – pNeuton A can provide volume-targeted or pressure-limited ventilation. Ventilation interface options include non-invasive mask or invasive endotracheal tube. The built-in high output demand flow CPAP system ensures spontaneous breath demand is met under all conditions.

Optimized for use in the MRI, the pNeuton A has a patient disconnect alarm system with remote alarm output. While the ventilator does not require a gauss line separation from the magnet, the remote alarm allows you the ability to monitor the ventilator from the MRI control room.

One device for OR, ICU, MRI, disaster preparation and more

Operating without the need of batteries or electrical power, the pNeuton A can help you care for the most difficult patients, from the emergency room to special procedures, MRI to the operating room and intensive care unit, wherever the patient may be located.

MR

Benefits for the patient

- Low patient Work of Breathing (WOB) with peak flow of up to 140 L/min to meet patient needs
- 100% or 65% to match patient oxygen requirements
- Switch from CPAP face mask to invasive ventilation seamlessly and without interruption
- Low-profile, easy-seal mask reduces facial pressure

Benefits for the healthcare provider

- Calibrated CPAP and oxygen controls for easy operation
- MRI compatible up to 3 T
- Built-in CPAP/PEEP system with automatic sensitivity for changing patient needs; no need for external CPAP valves
- Manometer to monitor patient pressure and effort
- Monitor CO_2 with invasive/non-invasive ventilation
- Use the Safe-T-Vent Medication Nebulizer System and fill the nebulizer without losing CPAP
- Built-in patient disconnect alarm with remote output to nurse call systems
- Oxygen powered – no batteries
- Rugged and lightweight (6.5 lbs / 3 kg)

Benefits for your budget

- Two oxygen levels; conserve oxygen with 65% setting, double the tank time
- Demand flow system with minimal wasted oxygen
- Standardized economical patient circuits (with or without mask and head strap) save on operating costs
- Transport ventilator and MRI ventilator in one device
- No batteries or electronics decrease preventative maintenance costs
- Does not have a battery that needs to be kept charged – always ready to use

The pNeuton ventilators are critical care devices designed for use by healthcare professionals under the direction of a physician.

Specifications

Description

- Pneumatically operated for use on pediatric and adult patients > 23 kg
- Demand flow system for spontaneous breathing to 140 L/min
- Modes of Operation: CMV, IMV, CPAP, Pressure Limit
- Pressures displayed on manometer
- Mandatory breath flow rate is fixed at 36 L/min
- MRI conditional: static magnetic field of 3 T or less, maximum spatial gradient magnetic field of 720-gauss/cm or less, no gauss line restriction
- Weight: 6.5 lbs (3 kg)
- Dimensions: 5.0" h x 10.0" w x 7.3" d (12.7 cm x 25.4 cm x 18.5 cm)
- Input gas requirement (oxygen): 55 psi ± 15 psi (3.8 bar ± 1 bar)
- Meets international standards for transport ventilators:
  - ASTM: Ventilators Intended for Use in Critical Care (F 1100-90)
  - ISO: Lung Ventilators for Medical Use, Part 3 (EN 794-3:1999)

Control Settings

Mandatory Breaths	ON or OFF
Respiratory Rate	3 to 50 bpm
Tidal Volume	360 to 1,500 ml
Peak Pressure	15 to 75 cm H_2O (mbar)
PEEP / CPAP	0 to 20 cm H_2O (mbar)
Oxygen	100% or 65%

Audible and Visual Alarms

- All pneumatic alarm system (no batteries)
- Patient circuit disconnection
  - Automatic reset when alarm condition resolves
  - One minute silence / reset button
- Low oxygen inlet pressure (below 30 psi)
- Remote alarm output

Specifications are subject to change at any time without notice.

pNeuton model S

pNeuton model S ventilator with CPAP for pre-hospital and hospital environments

The pNeuton model S ventilator provides mask CPAP plus volume or pressure ventilation for pediatric to adult patients in pre-hospital and hospital environments.

To avoid intubation, early intervention for respiratory distress is warranted – the built-in CPAP system with mask interface allows you to start with CPAP to relieve patient dyspnea and if the patient distress continues, the pNeuton S is ventilation ready.

With simple-to-use controls – Tidal Volume, Respiratory Rate and Pressure Limit – pNeuton S can provide volume-targeted or pressure-limited ventilation. The built-in high output demand flow CPAP system ensures critical care ventilation needs are optimized for spontaneous and mandatory breaths.

Operates with no batteries, no electrical power

Fully pneumatic and MRI compatible, the pNeuton S does not use batteries or electrical power.

The pNeuton S can help you care for the most difficult patients, from trauma site to the emergency room, for inter-facility transport, wherever the patient may be located; including the MRI.

Benefits for the patient

- Low patient Work of Breathing (WOB) with peak flow of up to 140 L/min to meet patient needs
- 100% or 65% to match patient oxygen requirements
- Switch from CPAP face mask to invasive ventilation seamlessly and without interruption
- Low-profile, easy-seal mask reduces facial pressure

Benefits for the healthcare provider

- Calibrated CPAP and oxygen controls for easy operation
- MRI compatible up to 3 T
- Built-in CPAP/PEEP system with automatic sensitivity for changing patient needs; no need for external CPAP valves
- Manometer to monitor patient pressure and effort
- Night visible pressure gauge for patient monitoring
- Monitor CO_2 with invasive/non-invasive ventilation
- Use the Safe-T-Vent Medication Nebulizer System and fill the nebulizer without losing CPAP
- Oxygen powered – no batteries
- Rugged and lightweight (6 lbs / 2.7 kg)

Benefits for your budget

- Two oxygen levels; conserve oxygen with 65% setting, double the tank time
- 45-minute run time on a D cylinder
- Demand flow system with minimal wasted oxygen
- Standardized economical patient circuits (with or without mask and head strap) save on operating costs

The pNeuton ventilators are critical care devices designed for use by healthcare professionals under the direction of a physician.

Specifications

Description

- Pneumatically operated for use on pediatric and adult patients > 23 kg
- Demand flow system for spontaneous breathing to 140 L/min
- Modes of Operation: CMV, IMV, CPAP, Pressure Limit
- Pressures displayed on manometer
- Mandatory breath flow rate is fixed at 36 L/min
- MRI conditional: static magnetic field of 3 T or less, maximum spatial gradient magnetic field of 720-gauss/cm or less, no gauss line restriction
- Weight: 6 lbs (2.7 kg)
- Dimensions: 4.0" h x 9.0" w x 6.5" d (10.2 cm x 22.9 cm x 16.5 cm)
- Input gas requirement (oxygen): 55 psi ± 15 psi (3.8 bar ± 1 bar)
- Meets international standards for transport ventilators:
  - ASTM: Ventilators Intended for Use in Critical Care (F 1100-90)
  - ISO: Lung Ventilators for Medical Use, Part 3 (EN 794-3:1999)

Control Settings

Mandatory Breaths	ON or OFF
Respiratory Rate	2 to 50 bpm
Tidal Volume	360 to 1,500 ml
Peak Pressure	10 to 75 cm H_2O (mbar)
PEEP / CPAP	0 to 20 cm H_2O (mbar)
Oxygen	100% or 65%

Audible Alarm

- Low Oxygen Inlet Pressure (below 30 psi)

Specifications are subject to change at any time without notice.

MACS epic

MACS epic CPAP System for hospitals and transport

The MACS epic is designed specifically to address the unique requirements of Continuous Positive Airway Pressure (CPAP) within the hospital, including dynamic breathing patterns, flow demand, and higher oxygen needs.

The MACS epic features comfortable mask application, accurate monitoring, reliable alarms, and a full range of benefits, such as:

- CPAP mode with demand flow for maintaining airway patency and decreasing work of breathing
- Oxygen control which allows 21% - 100% concentration without attaching auxiliary oxygen to the mask
- Pressure regulation at the mask to ensure accurate therapy for the patient

MACS epic is ideal for:

Emergency Department
- Supports acute pulmonary exacerbation
- Advances care for congestive heart failure

Post Anesthesia
- Airway support for sedation anesthesia
- Pressure supported oxygenation for shallow breathing

Intensive Care
- Weaning protocol for respiratory conditions
- Reduces work of breathing post intubation

Continuum of Care
- Provides sub-acute therapy to reduce need for intubation
- Nocturnal CPAP support for respiratory muscle mechanics

Benefits for the patient

- Low patient Work of Breathing (WOB) with peak flow of up to 140 L/min to meet patient needs
- Adjustable oxygen delivery from 21% to 100% to precisely match patient oxygen requirements
- Low-profile, easy-seal mask reduces facial pressure
- Audible alert reminds patient of mask leak / patient disconnect to maintain CPAP therapy
- Early intervention for respiratory support in emergency care or within the general hospital environment

Benefits for the healthcare provider

- Calibrated CPAP control with automatic sensitivity for changing patient needs
- Gas input options to deliver precise F_IO_2 for acute care needs or oxygen only for transport
- Built-in patient disconnect alarm with remote output to nurse calls systems
- Manometer to monitor CPAP delivery pressure and patient effort
- Ease of operation with two controls; CPAP and F_IO_2
- Use the Safe-T-Vent Medication Nebulizer System and fill the nebulizer without losing CPAP
- Night visible pressure gauge for ease of patient monitoring
- Monitor CO_2 with invasive/non-invasive CPAP support for spontaneously breathing patients
- Pneumatically powered – no batteries

Benefits for your budget

- Oxygen delivery options for critical care and transport; no external battery required for CPAP transport
- Standardized economical patient circuits exchanges with the pNeuton Ventilator to save on operating costs
- Minimal oxygen consumption, even at high oxygen levels, to maximize transport times and lower cost
- No batteries or electronics decrease preventative maintenance costs

The MACS epic CPAP System is a critical care devices designed for use by healthcare professionals under the direction of a physician.

Specifications

Description

- All pneumatic design and built tough; no batteries required
- CPAP control allows easy pressure adjustment to match patient requirements
- Demand flow system with automatic flow triggering; peak flow to 140 L/min
- Oxygen flow only as needed to match patient inspiratory effort
- Can operate from only a single oxygen tank and provide 65% for transport
- Pressure displayed on night viewable manometer
- Gas supply – oxygen and medical air – 55 psi ± 15 psi oxygen (3.8 bar ± 1 bar)
- Weight: 6 lbs (2.7 kg)
- Dimensions: 7.5" h x 6.0" w x 8.0" d (19 cm x 15 cm x 20 cm)

Control Settings

- **CPAP** 0 to 20 cm H_2O
- **Oxygen** 21% - 100% (with air and oxygen input) - or - 65% (oxygen input only)

Alarms

- All pneumatic audible and visual alarms
- Patient disconnection with 22 second response, 1 minute silent/reset button
- Unequal gas supply alarm

Specifications are subject to change at any time without notice.

MACS critical care CPAP for hospitals, EMS ground and air transport

MACS, a portable Continuous Positive Airway Pressure System, is designed for critical life support. MACS provides a demand flow system which assures stable pressure delivery with little wasted oxygen.

MACS is designed for CPAP application for those patients in respiratory distress – acute clinical needs for congestive heart failure (CHF), asthma or COPD. MACS can be applied for any patient with severe breathing difficulty – acute respiratory failure (ARF), trauma or near drowning. EMS agencies using mask CPAP have reported a substantial decrease in patient intubations with increased emergency room stabilization.

Quality CPAP for the Professional

MACS has calibrated controls and a pressure gauge to ensure pressure delivery and continuous patient monitoring. With two quick steps you are ready to go – one knob sets the CPAP level and a switch selects 65% or 100% oxygen. MACS can easily drop into your CPAP protocol and supports inline medication nebulization. Your per-use cost is less due to lower oxygen costs and affordable patient circuits.

MACS first responder with CPAP for the hospital rapid response team or the always ready professional EMS transport.

Benefits for the patient

- Low patient Work of Breathing (WOB) with peak flow of up to 140 L/min to meet patient needs
- 100% or 65% to match patient oxygen requirements
- Low-profile, easy-seal mask reduces facial pressure

Benefits for the healthcare provider

- Calibrated CPAP and oxygen controls for easy operation
- Manometer to monitor patient pressure and effort
- Night visible pressure gauge for patient monitoring
- Monitor CO_2 with invasive/non-invasive CPAP support for spontaneously breathing patients
- Use the Safe-T-Vent Medication Nebulizer System and fill the nebulizer without losing CPAP
- Oxygen powered – no batteries
- Rugged and lightweight (3 lbs / 1.35 kg)

Benefits for your budget

- Two oxygen levels; conserve oxygen with 65% setting, double the tank time
- 45-minute CPAP run time on a D cylinder
- Demand flow system with minimal wasted oxygen
- Standardized economical patient circuits (with or without mask and head strap) save on operating costs
- No batteries or electronics decrease preventative maintenance costs

The MACS CPAP System is a critical care devices designed for use by healthcare professionals under the direction of a physician.

Specifications

Description

- All pneumatic design and built tough; no batteries required
- CPAP control allows easy pressure adjustment to match patient requirements
- Demand flow system with automatic flow triggering; peak flow to 140 L/min
- Oxygen flow only as needed to match patient inspiratory effort
- Pressure displayed on night viewable manometer
- Gas supply: 55 psi + 15 psi oxygen
- Weight: 3 lbs (1.35 kg)
- Dimensions: 6.7 h" x 3.7" w x 8.2" d (17.0 cm x 9.4 cm x20.8 cm)
- Input gas requirement (oxygen): 55 psi ± 15 psi (3.8 bar ± 1 bar)
- Meets international standards
  - ASTM F 920-85 Minimum Performance and Safety Requirements for Resuscitators Intended for use with Humans
  - ISO 10651-5:2006 Lung ventilators for medical use - Particular requirements for basic safety and essential performance - Part 5: Gas-powered emergency resuscitators
  - IEC 60529:2001 Degrees of protection provided by enclosures, level IPX4

Control Settings

- **CPAP** 0 to 20 cm H_2O
- **Oxygen** 65% or 100%

Specifications are subject to change at any time without notice.

Accessories

Patient Circuits & Masks

for **pNEUTON A | pNEUTON S | MACS | MACS epic**

Adult/Pediatric Disposable Single Use Circuits

P/N 58001 Box of 15, 6 ft/1.8 m
P/N 58006 Box of 15, 6 ft/1.8 m, with expiratory filter
P/N 58011 Box of 10, 6 ft/1.8 m, with large mask and head strap
P/N 58021 Box of 10, 6 ft/1.8 m, with large mask, head strap, and expiratory filter
P/N 58051 Box of 15, 8 ft/2.4 m

Adult/Pediatric Reusable Circuits International Only

P/N 58301 6 ft/1.8 m, autoclavable, each
P/N 58207 Patient expiratory valve only, autoclavable, each

CPAP Masks Adult/Pediatric, Non-vented Full Face Mask

P/N 58208 Disposable, single use, box of 20, SMALL
P/N 58202 Disposable, single use, box of 20, MEDIUM
P/N 58211 Disposable, single use, box of 20, LARGE

for **pNEUTON mini**

Disposable Single Use Circuits

P/N 58031 Neonatal/Infant, 10 mm ID, 6 ft/1.8 m, box of 15
P/N 58035 Child/Pediatric, 15 mm ID, 6 ft/1.8 m, box of 15

miniFlow Start-up Kits

These kits provide the parts necessary to convert the neonatal/infant patient circuit (*P/N 58031*) for nasal CPAP (nCPAP) and/or non-invasive ventilation (NIV) patient application. Each kit include: miniFlow patient interfaces, different size nasal prongs, nasal masks, bonnets (head caps), and detailed instructions. These kits can be used when it is unknown what size prongs, masks, and bonnets are required for the patient. They are ideal when starting clinical use of the pNeuton mini for nCPAP or NIV.

P/N 58235 miniFlow Start-up Kit **small size**, disposable, single patient use; includes 5 miniFlow interfaces, 3 small size nasal prongs, 2 masks, and 3 bonnets

P/N 58236 miniFlow Start-up Kit **large size**, disposable, single patient use; includes 5 miniFlow interfaces, 3 large size nasal prongs 2 masks, and 3 bonnets

Available Separately

The following accessories for the pNeuton mini are available separately, individually packaged in boxes of 10 and 20:

- miniFlow patient interface
- nasal prongs, 7 sizes (micro, small, medium, medium-wide, large, large-wide, x-large)
- nasal masks, 4 sizes (small, medium, large, x-large)
- bonnets, 7 sizes (x-small, small, medium, large, x-large, xx-large, xxx-large)
- attachment strips

SAFETY NOTE: Patient circuits and CPAP masks are used to connect patients to an Airon ventilator/CPAP system. **ONLY** Airon manufactured patient breathing circuits are approved for use with pNeuton ventilators and MACS CPAP Systems.

Mounting Solutions

	pNeuton mini	pNeuton A	pNeuton S	MACS epic	MACS
Mobile Stand	X	X	X	X	
Bed Rail Mount	X	X	X	X	
Pole Bracket					X
Bed Rail Bracket					X
Travel Bag			X		X

Mobile Stand with pNeuton A

Bed Rail Mount with pNeuton A and pNeuton S

Travel Bag with pNeuton S

Bed Rail Bracket with MACS

Device Accessories for Clinical Needs

Safe-T-Vent Nebulizer
Designed to nebulize medications in conjunction with the pNeuton Ventilator/MACS CPAP System; this unique nebulizer includes a spring-loaded seal built into the Safe-T-Vent. The seal allows the nebulizer to be removed while maintaining positive pressure. The nebulizer can also be used as a stand-alone medication nebulizer.
P/N 58250 Disposable, single patient use, box of 10

Remote Alarm **pNeuton A | pNeuton mini | MACS epic**
Transfers any ventilator/CPAP system alarm condition to provide a remote visual and audible alarm to alert caregivers and maintain patient safety. The remote alarm can be positioned in the control room of MRI suite or a nurse call system. This alarm is **not** MRI compatible.
P/N 21031 Remote alarm

Remote Alarm Cable
This cable connects the pNeuton A/pNeuton mini/MACS epic to a remote alarm. It feature BNC male - female connections. These cables **are** MRI compatible.
P/N 21035 50 feet
P/N 21036 100 feet

Test Lungs
A rigid wall Test Lung is ideal to test and demonstrate the performance of all Airon products. Spontaneous breaths can only be properly simulated using a rigid wall test lung.
P/N 21002 Rigid wall, 1 liter
P/N 21003 Rigid wall, infant dual lung, 50 ml

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