



Diora Smart Anaesthesia



Operational Characteristics

Weight	103 kg, basic equipment
Dimensions (HxWxD)	144 (56.7") x 65 (25.6") x 72 (28.4") cm
Display Type	Monochrome LCD display
Diagonal size	15 cm (6")
Writing shelf (WxD)	25 cm (9.8") x 30 cm 11.8" *
Number of drawers	2 *
Mains power	100 - 240V, AC 50/60 Hz
Battery time	≥240 minutes, typically 360 minutes (new, fully charged battery)

Environment

Temperature	10 - 40°C (50 - 104°F)
Atmospheric pressure	570-1060hPa(427-795mmHg)
Humidity	10 - 95% (non-condensing)

Fresh gas delivery

Fresh gas flow	0.1 - 37 l/min
Delivery type	Non-decoupled
O2 flush	Approx. 35 l/min
Backup O2, flow	0 -15 l/min
ORC	≥25% O2 in N2O
Aux. O2 flow meter	0 - 15 l/min (option)

Common Gas Outlet(CGO)

Connection fresh gas outlet	22 mm OD, 15 mm ID
-----------------------------	--------------------

Ventilator

Ventilation modes	MAN, SPONT, VCV, ACMV, PCV,APCV
Flow pattern in VC	Decelerating flow
Patient type	Neonate, Paediatric, Adult
Tidal volume	10 -1600 ml
Minute volume	0.5 - 20 l/min
Peak pressure	6 - 70 cmH2O/ mbar/ hPa
Lower pressure limitation	2 - 66 cmH2O/ mbar/ hPa
PEEP	Off, 1 - 14 cmH2O/ mbar/hPa
Respiratory rate	4 - 80/min
Backup rate in PS	Off, 2 - 60/min
Backup pressure in PS	4 - 70 cmH2O / mbar / hPa
I:E ratio	4:1 - 1:6
Inspiratory pause in VC	0 - 50 %
Trigger	Off, -2 to - 14 cmH2O

External connection

Serial ports	1x 9 pole D-sub connector (RS232)
--------------	-----------------------------------

* : Optional



Preventative maintenance

DIORA is a pneumatically driven ventilator, meaning it doesn't contain any electromotor or turbine. This drastically reduces the overall maintenance cost per unit. DIORA requires preventative maintenance every twelve months. Predefined service sets are available to allow for efficient preventative maintenance. This allows the service engineer to perform the annual preventive maintenance in a time-efficient way. DIORA offers optimal performance in return for a minimum of service.

Intelligent simplicity

The 6-inch (15 cm) monochrome display shows the pressure waveform and the selected parameters. The surrounding LED displays show the measured parameters, the oxygen concentration and the pressure barograph per breath. Easy access to the keyboard controls and rotary knob makes for a straightforward anaesthesia ventilator. Ventilation parameters can be preselected in the setup menu to adapt DIORA to your individual approach. To easily monitor the remaining volume of backup oxygen and/or nitrous oxide, two pressure gauges are ergonomically located directly above the ventilator controls.



Ventilation modes

DIORA is the most compact anaesthesia ventilator, but at the same time it is completely equipped to handle even the most demanding anaesthetic procedures, it offers a wide range of ventilation modes: MAN, SPONT, VCV, ACMV, PCV, APCV. Thanks to its balanced bag-in-bottle ventilator DIORA can provide a decelerating flow pattern in volume-controlled ventilation to approach a more natural way of lung ventilation.

Ergonomic design

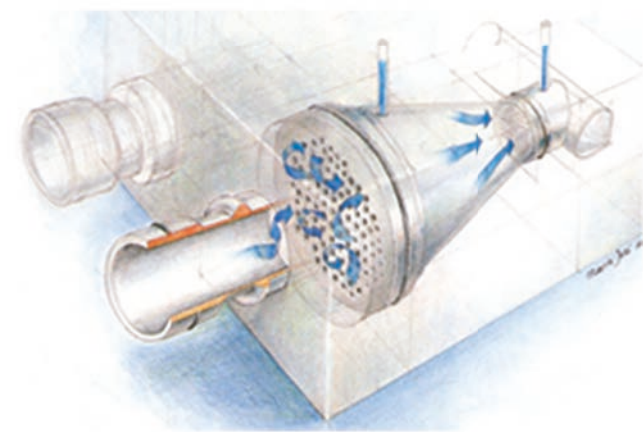
Its slim design makes it an ideal solution for even the smallest of operating theatres with its reduced footprint space allocation is no longer an issue. A writing shelf (option) can be installed to extend the working surface. DIORA also has a top shelf as well as monitor holder arm(optional), two gas cylinders are being fitted on the back of the trolley with separate pressure regulators (option). DIORA comes with an integrated airway suction system, which operates on a medical vacuum system.

<input checked="" type="radio"/> CMV	<input type="radio"/>	= VCV , ACMV
<input checked="" type="radio"/> PCV	<input type="radio"/>	= PCV , APCV
<input checked="" type="radio"/> Manual / spont.	<input type="radio"/>	= MAN, SPONT
<input checked="" type="radio"/> Standby	<input type="radio"/>	



• Durable flow sensor

Atlantamed durable flow sensor measures the differential pressure (Fleisch principle). A laminar plate transforms turbulent flow into laminar flow to obtain a more precise measurement. The flow sensors can be autoclaved (134°C) as part of the Patient Breathing Unit (PBU) and can be reused during the entire life cycle of the unit. A 10-year warranty on the flow sensor guarantees an unequalled cost-efficiency. Atlantamed's flow sensor can reduce the cost of ownership of an anaesthesia ventilator by up to 30%.



• Service-friendly

The DIORA platform is very accessible for technical interventions. All crucial components are positioned in such a way that they can be accessed without any major disassembly. Opening just two screws allows the whole ventilator casing to tilt downwards. To further improve the service-friendliness an interactive calibration screen allows the service engineer to access the status of internal components. DIORA is designed to minimise downtime.



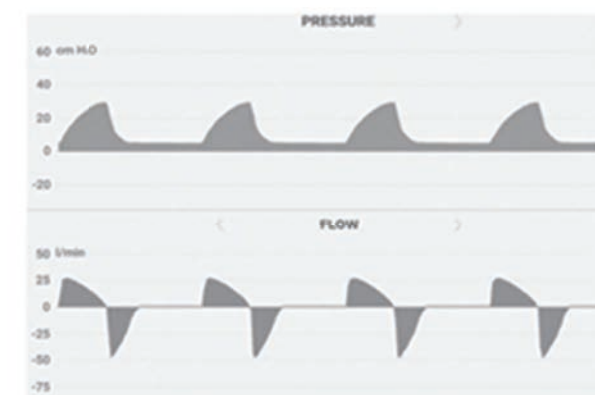
• BaroProtect

reduces the risk of ventilator-induced lung injury during volume-controlled ventilation. It effectively prevents barotrauma by limiting unexpected pressure spikes (e.g., due to changing lung compliance). At the same time, a full breathing cycle is completed without any risk of barotrauma. BaroProtect assesses each individual patient's respiratory functionality to determine the pressure level at which it is activated automatically.



• D flow

provides a decelerating flow pattern in volume-controlled ventilation. A decelerating flow provides a more desirable result in volume control. It reduces the risk of barotrauma at the end of inhalation. It improves patient-ventilator synchrony for patients requiring a high flow at the start of inhalation. And it allows for a more efficient oxygenation by delivering a larger part of the volume at an earlier stage of the inspiratory phase. In short, D flow makes volume-controlled ventilation a safer option.



• Balanced bag-in-bottle

Atlantamed introduces the balanced bag-in-bottle ventilator. It is a pneumatically driven, electronically controlled system and it can use oxygen or air gas drive. When compressing the internal bag with drive gas the breathing gas is pushed towards the patient's lung using a positive pressure. Exhalation is a completely passive process, which allows the patient to exhale spontaneously. Atlantamed balanced bag-in-bottle ventilator provides a very natural approach of lung ventilator.



• Global performance

Anaesthesiologists from the four corners of the world have grown to love the simplicity of this performant machine, even in the most demanding environments. Whether it's in a rural, urban or academic hospital, whether it's in an induction room or operating theatre, DIORA has a proven track record. The reason for its success can be found in its unique combination of affordability and reliability. That's why today, DIORA is ventilating patients in over tens of countries worldwide.

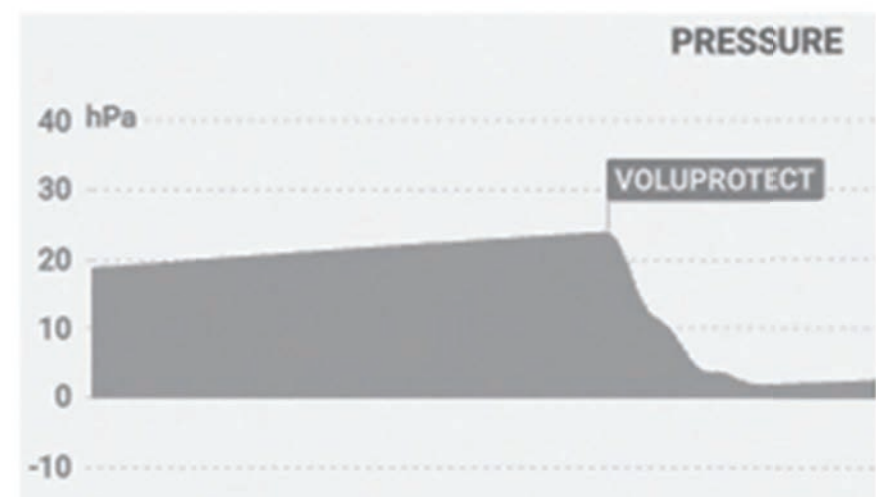


• Emergency performance

In case of emergency, DIORA can easily continue ventilating. The backup battery guarantees a minimum of 4 hours. In case of complete power and battery failure, DIORA still supports manual ventilation with administration of anaesthetic agent. Even without power the ORC and nitrous oxide cut-off maintain full functionality. Backup gas cylinders (option) for oxygen and nitrous oxide can be fitted onto the trolley for continued ventilation. When power is restored, it takes only 5 seconds to restart DIORA.

• VoluProtect

reduces the risk of ventilator-induced lung injury during manual or spontaneous ventilation. Clinical research has shown that sustained lung pressure at a critically high level can cause irreversible damage to lung tissue. VoluProtect is designed to prevent this and to improve patient outcome. It effectively prevents volutrauma by reducing the lung pressure automatically in case of an inadvertently closed APL valve.



VIEW PDF



The Art of Breathing

Address: Unit 2, Kingsmill Business Park, Kingston, London, United Kingdom

Email : info@atlantamed.co.uk

Tel : +44 20 3417 9600

www.atlantamed.co.uk

