

Tender enclosure



aeolus critical care ventilator



Introduction

Aeolus is Medec’s new intensive care ventilator for adult and paediatric patients. Aeolus is a microprocessor-controlled driven ventilator intended to provide continuous or intermittent ventilatory support for the care of patients who require mechanical ventilation.

Aeolus is a powerful ventilator, capable of delivering flow rates up to 180 L/min, guaranteeing the highest precision ventilation over an extensive set of ventilation modes, as well as in non-invasive ventilation. Volume-controlled ventilation can provide a tidal volume as low as 20 ml, PRVC as low as 5 ml.

Aeolus comes with an ergonomic trolley and with an 18.5” capacitive full-colour touch screen display which provides maximum flexibility to different care set-ups. Its unique PureTouch® user interface allows you to adjust all ventilation parameters and choose out of 7 waveforms like pressure, flow, volume, P-V loop, F-V loop, C_{20} and O_2 with a touch of a finger.

A wide range of ventilation modes supports all types of patients: (S)CMV-PC, SIMV-PC, PRVC, Bi-Level/APRV, (S)CMV-VC, SIMV-VC and CPAP/PSV. The following parameters can be adjusted: FIO_2 , P_{INSR} , PEEP, RR, I:E, trigger, rise time, tube compensation, C_{20} and O_2 support, TV, Insp. trigger, Exp. trigger, sensitivity, flow.

Several steps of operation are supported with graphical simulations that help physicians to assess settings. In addition, the Tube Compensation allows continuous compensation for the work of breathing caused by the endotracheal tube.

A comprehensive list of measured values is displayed: TV_{EXP} , $TV_{EXP SPONT}$, $TV_{EXP MAND}$, TV_{INSR} , MV_{EXP} , $MV_{EXP SPONT}$, MV_{INSR} , P_{PEAK} , PEEP, $P_{PLATEAU}$, P_{MEAN} , P_{MIN} , RR_{TOTAL} , RR_{SPONT} , FIO_2 , FLOW, $PEAK I/E$ and V_{LEAK}

The real-time simultaneous waveforms, loops, trends and measured values provide a complete overview of the current ventilation situation and can be configured as required. A complete logbook of events, alarms and ventilation parameters can also be displayed and easily exported via USB.

Aeolus offers precise volume monitoring and responsive trigger reaction. Its inspiratory flows up to 150 L/min, enabling optimal non-invasive ventilation with smart leakage compensation.

Optional the Aeolus comprises a mesh-type nebuliser and bronchial suction with automatic oxygenation, as well as a multitude of support functions such as: software for non-invasive monitoring of ETCO₂, a non-expirable paramagnetic sensor and continuous oxygen concentration monitoring.

After switching on the Aeolus, the physician can choose between default settings of ventilation parameters and alarms limits or adjust them based on patient weight and their experience. Ventilation modes and settings can also be configured to meet the physician's daily demands.

Aeolus' alarm system classifies all alarms according to clinically relevant priorities and shows a straightforward message to inform the user.

Moreover, Aeolus can be upgraded with unique functionalities:

- qCON (Depth of Hypnosis Index), allows you to monitor consciousness of each individual patient providing improved patient outcome.
- qNOX (Level of Nociception Index), allows you to monitor the nociception (response to pain stimulus) during general anaesthesia or in intensive care. When using nociception monitoring, analgesics / sedation can be dosed more accurately.

Aeolus includes the following standard accessories:

- Expiratory valve and flow sensor
- Extendable arm with tubing holder
- High-pressure hose for O_2 air supply with NIST connector
- Galvanic Oxygen Sensor (optional: Paramagnetic)
- Power cord
- Four-wheel trolley

Optional accessories:

- Heater-humidifier
- Nebuliser kit
- Capnography sensor

Environment

During operation		
	Temperature	10 - 40° C (50 - 104° F)
	Pressure	570 - 1060 hPa (428 - 795 mmHg)
	Humidity	10 - 95% (non-condensing)
During storage / transportation		
	Temperature	-20 - 50° C (-4 - 122° F)
	Pressure	500 - 1060 hPa (375 - 795 mmHg)
	Humidity	10 - 95% (non-condensing)

Dimensions and weight

Trolley		
	Height	135.6 cm (53.4 in)
	Width	68.2 cm (26.9 in)
	Depth	59.0 cm (23.2 in)
Display		
	Type	TFT full-colour capacitive touch screen
	Diagonal size	46.9 cm (18.5 in)
Casters		
	Diameter	10.0 cm (3.9 in)
	Brakes	4 casters
Tubing holder		
	Length	125 cm (49.2 in)

Power supply

Mains power		
	Mains power	100 - 240V, AC 50-60 Hz
Battery		
	Type	Rechargeable
	Operating time	Minimum 180 minutes

Gas supply

Central supply		
	O ₂ /Air range	2.7 - 6 bar / 39.2 - 87 psi / 270 - 600 kPa
	Oil content	<0.1 mg/m ³
	Particles	dust-free air (filtered with pores: <1µm)
Backup supply		
	O ₂ range	2.7 - 6 bar / 39.2 - 87 psi / 270 - 600 kPa
	Oil content	<0.1 mg/m ³
	Particles	dust-free air (filtered with pores: <1µm)

Ventilator

Pneumatically driven, electronically controlled		
	Ventilation mode:	CMV-VC S-CMV-VC SIMV-VC CMV-PC S-CMV-PC SIMV-PC BiLevel/APRV PRVC CPAP/PSV
Parameter setting range		
	Tidal volume (V _T)	10 - 2000 ml
	Resolution	increments of 1 ml
	Inspiration time (T _{INSPI})	0.15 - 30 sec
	Resolution	increments of 0.01 sec
	Expiration time (T _{EXP})	0.15 - 30 sec
	Resolution	increments of 0.01 sec
	Positive End-Expiratory Pressure (PEEP)	0 - 40 cmH ₂ O
	Resolution	increments of 1 cmH ₂ O
	Fraction of inspired O ₂ (FIO ₂)	21 - 100 Vol. %
	Resolution	increments of 1 Vol. %
	Respiratory rate	1 - 50 bpm
	Resolution	increments of 1 bpm

	Flow trigger	0.2 - 15 L/min
	Resolution	increments of 0.001 L/min
	Inspiration pressure (P _{IP})	6 - 70 cmH ₂ O
	Resolution	increments of 1 cmH ₂ O
	Rise Time	slow - medium - fast
	Apnoea time	1 - 60 sec
	Resolution	increments of 1 sec
	Expiration flow trigger	70 - 5 %
	Resolution	increments of 1 %
	Pressure support (P _{supp})	1 - 70 cmH ₂ O
	Resolution	increments of 1 cmH ₂ O
	Tube compensator	0 - 100 %
	Resolution	increments of 1 %
	Sigh frequency	0 - 255 bpm
	Resolution	increments of 1 bpm
	Sigh volume	20 - 2500 ml
	Resolution	increments of 1 ml

Interfaces

External connections		
	Serial ports	1 x
	Connector	9 pole D-sub connector
	USB port	1 x
	Type	USB 2.0
	Connector	Type A
	Network port	1 x
	Connector	RJ45
	Nurse call system	1 x connection

General

Latex use	
	No parts of the breathing system contain latex. All parts which can come into contact the patient or patient gases are latex-free.
Classification according to IEC 60601-1-2:2007	
Class I equipment	Type of protection against electrical shock
Type B equipment	Degree of protection against electrical shock
Continuous operation	Mode of operation
Classification according to medical device directive 2017/45	
Critical care ventilator classification	Class II b
EMC	
Electromagnetic compatibility	Tested as per IEC 60601-1-2:2007

C55

Medical Air Compressor

4.3 LED Screen ColorTFT

Can be used either together with ventkiklator or independently

- 4.3" color LED screen
- Central gas supply system(main gas supply system), compressor pump gas supply system (ssist gas supply system).
- Overall monitoring & controlling to ensure gas supply safety
- High-efficiency cooling and vapor removing system
- Low noise
- Easy to maintenance

Temperature:	-20~+70°C (Storage)	+5~+40°C (Operatkikon)
Relatkikve Humidity:	0~99%(No condensatkikon)(Storage)	10~95%(No condensatkikkon)(Operatkikon)
Atmosphere:	500~106kPa(Storage)	660~106kPa(Operatkikon)
Power supply:	115±10%VAC,60Hz (American standard) 220~240VAC,50Hz/230VAC,60Hz (European standard) 220~240VAC,50Hz (Chinese standard)	
Power:	<350VA	
Output pressure:	400kPa (compressor pump gas supply mode) / 280~600kPa(central gas supply mode)	
Output peak flow:	>180L/min(0.6S),(under 350kPa /51PSI)	
Output flow:	45L/min(Under 350kPa/51PSI)	
Output dew point:	5°C lower than ambient temperature (when ambient temperature is ≤40°C,working pressure at 380kPa/51PSI)	
Noise Level:	<50dB(Four directkikon from the compressor diameter of 1.5m,1.5m high)	
Filtratkikon:	5µm	
Weight:	45kg	
Dimensions:	650x550x923(complete machine)(L×W×H)(mm):650x550x452(Main body)	
Display:	4.3LED screen. It displays pressure value, prompts message of compressor pump/central gas supply and power connectkikon status.	
Monitoring and Alarm:	Compressor pump gas supply mode is default.The compressor pump start to supply gas when pressure is ≥320kPa(afktker lasts 5s).Audible and visual alarm is given when gas airway pressure is <250kPa(afktker lasts5s). Audible and visual alarm is given when gas airway pressure is <250kPa(afktker lasts5s). The alarm stops when gas pressure under any mode reach 280kPa (afktker last 5s) Audible and visual alarm is given when temperature near compressor pump iz> 80°C. The alarm stoos when the temperature drops lower than 45°C.	



a smart choice.

Medec International bv
Wijngaardveld 14
BE - 9300 Aalst
Belgium

Phone: +32 53 70 35 44
Fax: +32 53 70 35 33
sales@medec-intl.com
www.medec-intl.com

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V1.2