

Aespire 7100

Exceptional performance
Compact design

Features

- Enhanced monitor integration capabilities with our Cardiocap*/5 and Dash* series of monitors
- Large color ventilator display with color waveform and alarm message indicator
- Lightweight and compact for easy maneuverability
- Optional integrated auxiliary O₂ flowmeter and suction control

Advanced Breathing System (ABS)

- One step bag/vent switch turns the ventilator on/off
- Minimal number of parts and tube connections may help to reduce the potential for leaks and misconnects
- Ease of disassembly (no tools)
- Autoclavable and latex-free

7100 Ventilator

- Volume and Pressure modes with electronic PEEP
- Exhaled volume, airway pressure and inspired oxygen monitoring capabilities
- Direct access to ventilator parameter settings
- Smart alarms direct user to specific problems and affected parameters
- Pressure bar graph for visual reference on a breath-by-breath basis (optional pressure waveform available)



Aespire* shown with Cardiocap*/5 monitor and Tec* 7 Vaporizers

Improved low flow/reduced life cycle costs

- Only one scheduled maintenance check per year
- Fresh gas flow compensation – automatically (available with tidal volume compensation option)
- Minimum O₂ flow of 50 mL
- Dual air flow tubes standard for higher resolution of low flows



Physical specifications

Dimensions

Height:	134.5 cm/52.9 in
Width:	72 cm/28.3 in
Depth:	73 cm/28.7 in
Weight:	Approximately 108 kg/238 lbs

Top shelf

Weight limit:	34 kg/75 lbs
Width:	66 cm/26 in
Depth:	40 cm/15.75 in

Work surface

Height:	81.7 cm/32.2 in
Size:	2160 cm ₂ /334 in ₂

DIN rail

Side of machine:	34.5 cm/13.6 in
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Drawers (internal dimensions)

Height:	17.5 cm/6.9 in
Width:	33 cm/13 in
Depth:	26.5 cm/10.4 in

Absorber bag arm (optional)

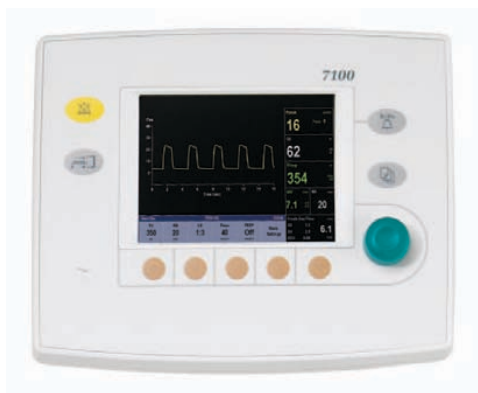
Arm length:	30.5 cm/12 in
Bag arm height (adjustable):	87 cm/34.3 in 104 cm/40.9 in

Casters

Diameter:	12.5 cm/5 in
Brakes:	Individual locking front casters



Ventilator operating specifications



Color ventilatory display

Modes of ventilation

Volume Control mode
With tidal volume compensation (optional)

Pressure mode (optional)

Ventilation parameters

Tidal volume range: 45 to 1500 mL
(Volume Control mode)

Incremental settings: 45 to 100 mL
(increments of 5 mL)
100 to 300 mL
(increments of 10 mL)
300 to 1000 mL
(increments of 25 mL)
1000 to 1500 mL
(increments of 50 mL)

Pressure
(P_{Inspired}) range: 5 to 50 cm H₂O
(increments of 1 cm H₂O)
5 to 1500 mL
volume delivery

Rate: 4 to 65 breaths per
minute (increments
of 1 breath per minute)

Inspiratory/
expiratory ratio: 2:1 to 1:6
(increments of 0.5)

Inspiratory
pause adjust: 5% to 60% of
inspiratory time
(increments of 5%)

Positive End Expiratory Pressure (PEEP)

Type: Integrated, electronically controlled

Range: OFF, 4 to 30 cm H₂O
(increments of 1 cm H₂O)

Ventilator monitored values

Tidal volume: 5 to 1500 mL, 1 mL resolution

Minute volume: 0 to 99.9 L/min, 0.1 L/min resolution

Breathing rate: 0 to 65 breaths per minute,
1 breath per minute resolution

Oxygen
percentage: 5% to 110%, 1% resolution

Airway pressure: -9 to 99 cm H₂O, 1 cm H₂O resolution

Alarm settings

Tidal volume
(VTE): Low: OFF, 5 to 1500 mL
High: 20 to 1600 mL, OFF

Minute volume
(VE): Low: OFF, 0.1 to 10 L/min
High: 0.5 to 30 L/min, OFF

Inspired oxygen
(FiO₂): Low: 18 to 100%
High: 21 to 100%, OFF

Apnea alarm: Mechanical ventilation ON: < 5 mL
breath measured in 30 seconds
Mechanical ventilation OFF: < 25 mL
breath measured in 30 seconds

Low airway
pressure: Change of < 4 cm H₂O above PEEP

Pressure
(P_{limit}) range: 12 to 99 cm H₂O
(increments of 1 cm H₂O)

Sustained
airway pressure: 6 to 30 cm H₂O + PEEP
(adjusted based on ventilator settings)

Subatmospheric
pressure: Paw < -10 cm H₂O

Alarm silence
countdown
timer: 120 to 0 seconds

Ventilator accuracy

Delivery/monitoring accuracy

Volume delivery:	> 200 mL = better than $\pm 10\%$ Set TV 75 to 200 mL = better than ± 20 mL < 75 mL = better than ± 15 mL
Pressure (Pinspired) delivery repeatability:	± 2 cm H ₂ O
PEEP delivery repeatability:	± 2 cm H ₂ O
Volume monitoring:	> 200 mL = better than $\pm 10\%$ 75 to 200 mL = better than ± 20 mL < 75 mL = better than ± 15 mL
Pressure monitoring:	Better than ± 2 cm H ₂ O and $\pm 5\%$ of reading (whichever is greater)

Ventilator components

Flow transducer

Type:	Variable orifice flow sensor
Dimensions:	22 mm OD and 15 mm ID
Location:	Inspiratory outlet and expiratory inlet

(Optional autoclavable sensor available)

Oxygen sensor

Type:	Galvanic fuel cell
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Ventilator pneumatics

Pressure range at inlet:	240 kPa to 700 kPa/35 psig to 100 psig
Peak gas flow:	70 L/min + fresh gas flow
Flow range:	2 to 70 L/min
Flow compensation range:	200 mL/min to 15 L/min

Ventilator screen

Display size:	120 mm x 92 mm
Display density:	1/4 color VGA

Battery back-up

Backup power: Demonstrated battery time under typical operating conditions is 90 + minutes when fully charged. Battery time under extreme conditions is 30 minutes.

Battery type: Internal rechargeable sealed lead acid

Communication port

Serial interface: Isolated RS-232C compatible port

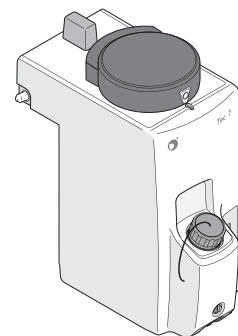
Anesthetic agent delivery

Delivery

Vaporizers:	Tec* 5, Tec 6 Plus, Tec 7
Number of positions:	2
Mounting:	Tool-free installation Selectatec* manifold interlocks and isolates vaporizers



Tec 6 Plus vaporizer



Tec 7 vaporizer

Electrical specifications

Current leakage

100/120 V: < 300 μ A

Power

Power input: 100-120 Vac, 50/60 Hz

Power cord: Length: 5 m/16.4 ft
Rating: 15A @ 120 Vac

Inlet/outlet modules

System circuit breakers: 15A

Outlets (optional): 4 outlets on back, 3-2A, 1-3A individual breakers, optional isolation transformer

Pneumatic specifications

Auxiliary common gas outlet

Connector: ISO 22 mm OD and 15 mm ID

Gas supply

Pipeline input range: 240 kPa to 600 kPa/35 psig to 88 psig

Cylinder input: Pin indexed in accordance with CGA-V-1 or DIN (nut and gland); contains input filter and check valve

Note: Maximum 3 cylinders; two inboard mounted, one outboard mounted.

Primary regulator diaphragm minimum burst pressure: 2758 kPa/400 psig

Primary regulator nominal output: <338 kPa/49 psig
Pin indexed cylinder connections

O₂ controls

Method: Proportionate decrease of N₂O with reduction in O₂ pressure

Supply failure alarm: Range: 193 kPa to 221 kPa/28 psig to 32 psig
Sounds at maximum volume every 10 seconds

O₂ flush: Range: 25 to 75 L/min

Flowmeters

O₂ ranges: 0.05 to 0.95 L/min and 1.0 to 15.0 L/min;
Minimum O₂ flow: 50 mL/min \pm 25 mL

N₂O ranges: 0 to 0.95 L/min and 1.0 to 10.0 L/min

Air range: 0 to 0.95 and 1 to 15 L/min

Pneumatic specifications, continued

Calibration:	Percent of full scale flow	Accuracy (% of flowrate)
	100	±2.5%
	90	±2.5%
	80	±2.6%
	70	±2.7%
	60	±2.9%
	50	±3.1%
	40	±3.4%
	30	±4.0%
	20	±5.0%
	10	±8.1%

Calibration conditions:* 20°C/68°F, 101.3 kPa/760 mmHg

* Different breathing circuit pressures, barometric pressures or temperatures change flowtube accuracy.

Hypoxic guard system

Type:	Mechanical Link-25*
Range:	Provides a nominal minimum 25% concentration of oxygen in O ₂ /N ₂ O mixture

Materials

All materials in contact with patient breathing gases are free of natural rubber latex.

Environmental specifications

System operation

Temperature:	10° to 40°C/50° to 104°F
Humidity:	15 to 95% relative humidity (non-condensing) per IEC 68-2-3
Altitude:	-440 to 3565 m/500 to 800 mmHg

System storage

Temperature:	-15° to 50°C/-5° to 122°F
Humidity:	10 to 95% relative humidity (including condensing) per IEC 68-2-3
Altitude:	-440 to 5860 m/375 to 800 mmHg
Oxygen cell storage:	-15° to 50°C/5° to 122°F 1 to 95% relative humidity 500 to 800 mmHg

Electromagnetic compatibility

Immunity:	Complies with all requirements of EN 60601-1-2
Emissions:	CISPR 11 group 1 class B
Approvals:	UL 2601-1, CSA C22.2 #601.1 EN/IEC 60601-1 CE 0197

Breathing circuit specifications

Operational modes

Breathing circuit is circle mode only

Carbon dioxide absorbent canister

Absorbent capacity:	800 g
Integrated expiratory limb water reservoir	

Ports and connectors

Exhalation:	22 mm OD ISO 15 mm ID taper
Inhalation:	22 mm OD ISO 15 mm ID taper
Bag port:	22 mm OD

Pressure gauge

Scale range:	0 to 10 kPa/ -20 to 100 cm H ₂ O
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Bag-to-Ventilator switch

Type:	Bi-stable
Control:	Controls ventilator and direction of breathing gas within the circuit

Integrated Adjustable Pressure Limiting (APL) valve

Range:	0.8 to 70 cm H ₂ O
Tactile knob indication at:	30 cm H ₂ O and above
Adjustment range of rotation:	0.8 to 30 cm H ₂ O (0 to 230°) 30 to 70 cm H ₂ O (230 to 330°)

Materials

All materials in contact with exhaled patient gases are autoclavable, except disposable flow sensors and O₂ cell. (Autoclavable flow sensors optional).

All materials in contact with patient gas are free of natural rubber latex.

Breathing circuit parameters

Compliance: Bag mode: 1.82 mL/cm H₂O
Mechanical mode: Automatically compensates for compression losses within the absorber and bellows assembly

Circuit volume: 2.7 L Vent Mode
1.2 L Bag Mode

Expiratory resistance:	Flow rate	Pexp Bag Mode	Pexp Vent Mode
		Pressure drop	Pressure drop
	10 L/min	0.78 cm H ₂ O	0.77 cm H ₂ O
	30 L/min	1.59 cm H ₂ O	1.71 cm H ₂ O
	60 L/min	3.48 cm H ₂ O	3.88 cm H ₂ O

Note: With patient circuit and wye piece add +0.89 cm H₂O

Anesthetic gas scavenging

Type	Hospital system required	Machine connection
Active low flow:	High vacuum 36 L/min (300 mmHg) @ 12 in Hg	DISS evac
Passive:	Passive or externally attached active system	30 mm/0.5 in M ISO taper
Active adjustable flow:	>30L/mi	

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Our “healthymagination” vision for the future invites the world to join us on our journey as we continuously develop innovations focused on reducing costs, increasing access and improving quality around the world. Headquartered in the United Kingdom, GE Healthcare is a unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employees are committed to serving healthcare professionals and their patients in more than 100 countries. For more information about GE Healthcare, visit our website at www.gehealthcare.com.

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