Aespire 7100

**Essential performance
Compact design**

Aespire® 7100 shown with Datex-Ohmeda
Cardiocap™/5 monitor and Tec® 7 Vaporizers

Features

- Enhanced monitor integration capabilities with our Datex-Ohmeda Anesthesia Monitor and Compact Anesthesia monitor

- Lightweight and compact for easy maneuverability

- Optional integrated auxiliary O_2 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 greatly reduces the potential for leaks and misconnects

- Ease of disassembly (no tools)

- Fully 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)

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 O_2 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 lb

Top shelf

Weight limit:	34 kg/75 lb
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

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
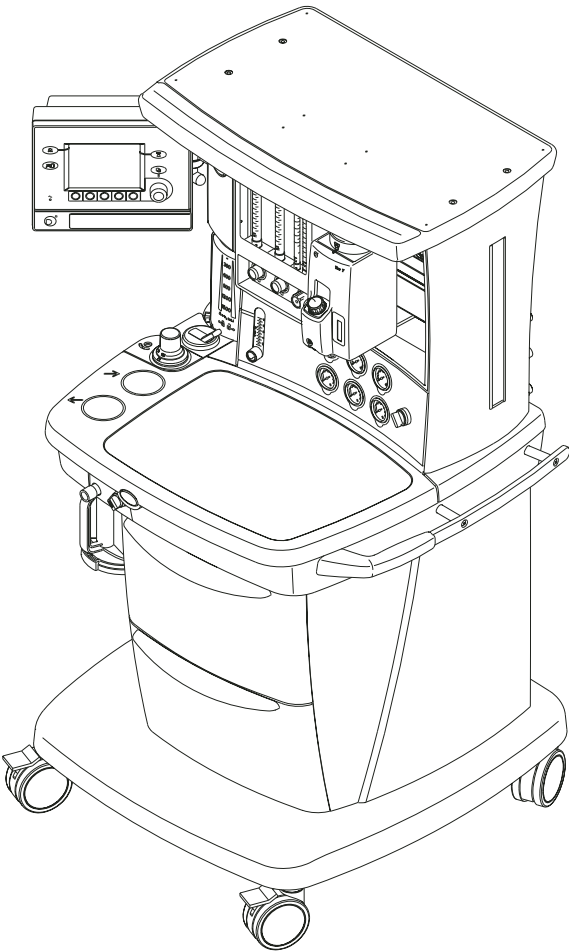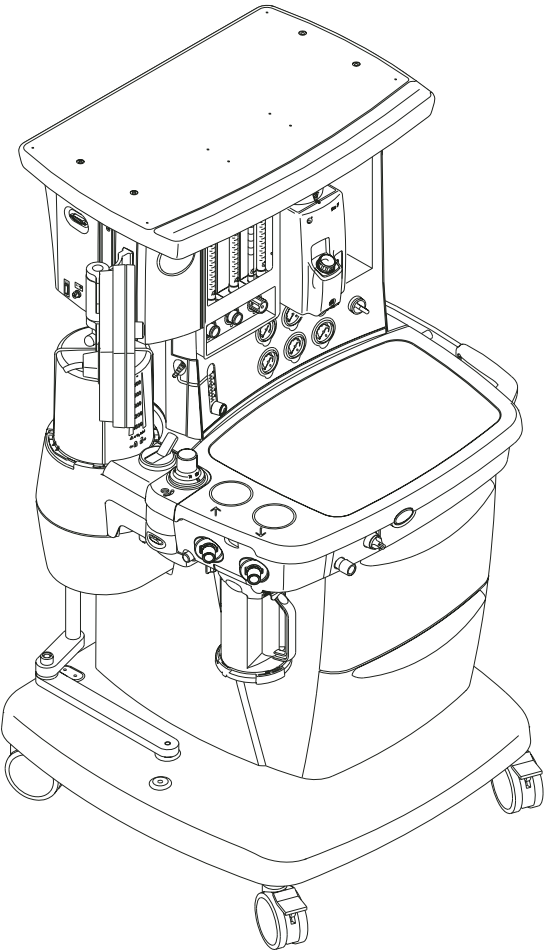
Ventilator Operating Specifications
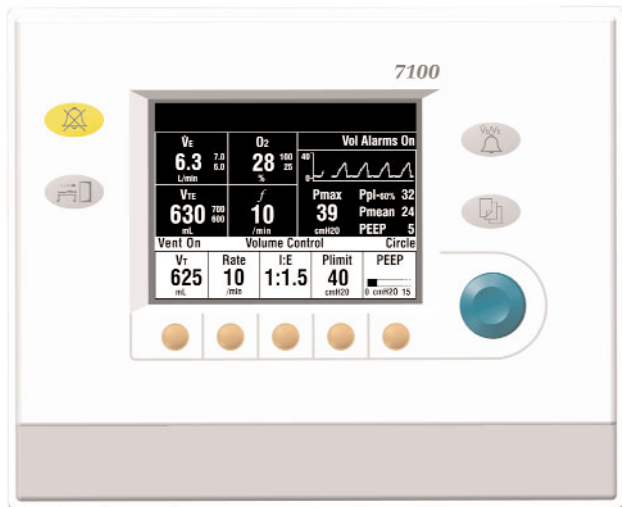
Optional pressure waveform shown

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 H_2O (increments of 1 cm H_2O)
	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 H_2O (increments of 1 cm H_2O)

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 H_2O, 1 cm H_2O resolution

Alarm settings

Tidal volume (V_{TE}):	Low: OFF, 5 to 1500 mL High: 20 to 1600 mL, OFF
Minute volume (V_E):	Low: OFF, 0.1 to 10 L/min High: 0.5 to 30 L/min, OFF
Inspired oxygen (FiO_2):	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 H_2O above PEEP
Pressure (P_{limit}) range:	12 to 99 cm H_2O (increments of 1 cm H_2O)
Sustained airway pressure:	6 to 30 cm H_2O + PEEP (adjusted based on ventilator settings)
Subatmospheric pressure:	Paw < -10 cm H_2O
Alarm silence countdown timer:	120 to 0 seconds

Ventilator Accuracy

Delivery/monitoring accuracy

Volume delivery:	> 200 mL = better than ±10% Set TV
	75 to 200 mL = better than ±20 mL
	< 75 mL = better than ±15 mL
Pressure ($P_{Inspired}$) delivery repeatability:	±2 cm H_2O
PEEP delivery repeatability:	±2 cm H_2O
Volume monitoring:	> 200 mL = better than ±10%
	75 to 200 mL = better than ±20 mL
	< 75 mL = better than ±15 mL
Pressure monitoring:	Better than ±2 cm H_2O and ±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

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 VGA standard

Battery backup

|	
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
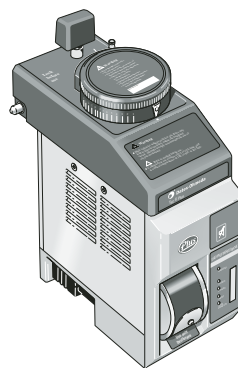
Tec 6 Plus vaporizer
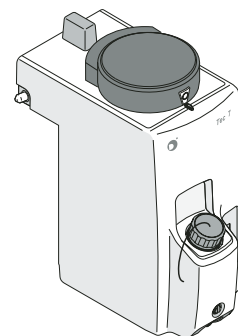
Tec 7 vaporizer

Electrical Specifications

Current leakage

100/120 V:	< 300µA

Power

Power input:	100-120 Vac, 50/60 Hz
Power cord:	Length: 5 m/16.4 ft Rating: 15A @ 120 Vac

Inlet/outlet modules (120 V)

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
Pipeline connections:	DISS-male, DISS-female, DIN 13252, AS4059, S90-116 or NIST (ISO 5359). All fittings available for O_2, N_2O, and Air, and contain pipeline filter and check valve.
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 < 407 kPa/59 psig DIN cylinder connections

O$_2$ controls

Method:	Proportionate decrease of N_2O with reduction in O_2 pressure
Supply failure alarm:	Range: 193 kPa to 221 kPa/ 28 psig to 32 psig Sounds at maximum volume every 10 seconds
O$_2$ flush:	Range: 25 to 75 L/min

Flowmeters

O$_2$ ranges:	0.05 to 0.95 L/min and 1 to 15 L/min; Minimum O_2 flow: 50 mL/min ±25 mL
N$_2$O ranges:	0 to 0.95 L/min and 1 to 10 L/min
Air range:	0 to 0.95 and 1 to 15 L/min

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_2O 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 10 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 reservoír

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_2O

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_2O
Tactile knob indication at:	30 cm H_2O and above
Adjustment range of rotation:	0.8 to 30 cm H_2O (0 to 230°) 30 to 70 cm H_2O (230 to 330°)

Materials

All materials in contact with exhaled patient gases are autoclavable, except disposable flow sensors and O_2 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 H_2O
	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	P_{exp} Bag Mode Pressure drop	P_{exp} Vent Mode Pressure drop
10 L/min	0.78 cm H_2O	0.77 cm H_2O
30 L/min	1.59 cm H_2O	1.71 cm H_2O
60 L/min	3.48 cm H_2O	3.88 cm H_2O

Note: With patient circuit and wye piece add +0.89 cm H_2O

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/min	

For more than 100 years, healthcare providers
worldwide have relied on GE Healthcare for medical
technology, services, and productivity solutions. So
no matter what challenges your healthcare system
faces, you can always count on GE to help you
deliver the highest quality healthcare. For details,
please contact your GE representative today.

GE Healthcare
P.O. Box 7550
Madison, WI 53707-7550
USA

www.gehealthcare.com

imagination at work

AN3969-B   11/05