GE Healthcare

Aespire* View

Clarity of view...Clarity of decision

Aespire* View shown with GE Tec 7* Vaporizer and CARESCAPE Monitor B650

Features

- Large 12-inch color ventilator display with color waveform and alarm message indicators

- Lightweight and compact for easy maneuverability

- Optional Total Fresh Gas modules for electronic measurement and display of the total fresh gas flow and individual gas flow (O_2, Air, N_2O)

- Optional integrated auxiliary O_2 flowmeter and suction control

- Enhanced monitor integration capabilities with our GE Healthcare Anesthesia Monitor and Compact Monitor

Advanced Ventilation: 7900 SmartVent*

- Maximum versatility for full patient range

- Ventilation Modes:

   - VCV (Volume Control)

   - PCV Pressure Control (optional)

   - PSVPro* (Pressure Support with Apnea Backup) (optional)

   - SIMV/PSV (Synchronized Intermittent Mandatory Ventilation with pressure support) (optional)

   - SIMV-PC (Synchronized intermittent Mandatory Ventilation with pressure control) (optional)

   - PCV-VG (Pressure Controlled Ventilation – Volume Guaranteed) (optional)

- Electronic PEEP

- Automatic fresh gas flow (tidal volume) compensation

- Cardiac bypass case mode

- Direct access to ventilator parameter settings

- Pressure waveform for visual reference on a breath-by-breath basis

- Smart alarms direct user to specific problems and affected parameters

- Inspired oxygen monitoring

Advanced Breathing System (ABS)

- Easy to clean, autoclavable, latex-free

- Fast response – exceptional for low flow anesthesia

- Easy removal – no tools required

- Integrated design – less parts and connections helps reduce potential for leaks and misconnects

- One step bag/vent switch turns ventilator on/off

- Optional CO_2 bypass with electronic detection of "absorber off"

- Optional EZChange and condensor

Physical Specifications

Dimensions

Height:	136 cm/53.5 in
Width:	75 cm/29.5 in
Depth:	74 cm/29.1 in
Weight:	approximately 136 kg/300 lbs

Top shelf

Weight limit:	34 kg/75 lbs
Width:	65 cm/26 in
Depth:	43 cm/15.75 in

Work surface

Height:	83.8 cm/33 in
Size:	2160 cm^2/334 in^2

Folding side shelf (optional)

Height:	87.5 cm/34.5 in
Width:	26.5 cm/10.4 in
Depth:	31.5 cm/12.4 in
Weight limit:	11.3 kg/25 lbs

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

Ventilator screen

Display size	31 cm/12.1 in (diagonal)

Ventilator Operating Specifications
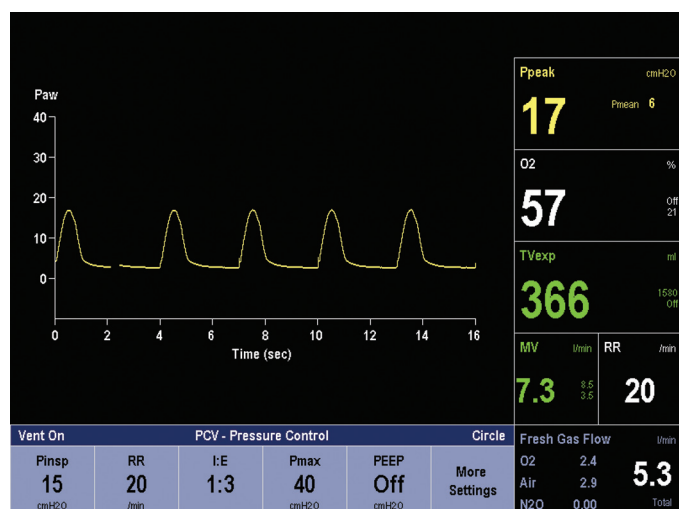
Ventilation operating modes

VCV
PCV
SIMV/PSV
PSVPro* with Apnea backup
SIMV-PC
PCV-VG

Ventilator (VT) parameter ranges

Tidal volume range:	20 to 1500 mL (Volume Control SIMV/PSV and PCV-VG modes)
	5 to 1500 mL (Pressure Control Mode)
Incremental settings:	20 to 50 mL (increments of 1 mL)
	50 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)
Minute volume range:	0 to 99.9 L/min
Pressure ($P_{Inspired}$) range:	5 to 60 cm H_2O (increments of 1 cm H_2O)
Pressure (P_{limit}) range:	12 to 100 cm H_2O (increments of 1 cm H_2O)
Pressure ($P_{support}$) range:	Off, 2 to 40 cm H_2O (increments of 1 cm H_2O)

Rate:	4 to 100 breaths per minute for PCV-VG, Volume Control and Pressure Control vent modes
	2 to 60 breaths per minute for SIMV/PSV, PSVPro and SIMV vent modes (increments of 1 breath per minute)
Inspiratory/expiratory ratio:	2:1 to 1:8 (increments of 0.5)
Inspiratory time:	0.2 to 5.0 seconds (increments of 0.1 seconds) (SIMV and PSVPro vent modes)
Trigger window:	0 to 80% (increments of 5%)
Flow trigger:	0.2 to 1.0 L/min (increments of 0.2 L/min)
	1 to 10 L/min (increments of 0.5 L/min)
Inspiration termination level:	5 to 75% (increments of 5%)
Backup mode delay:	10 to 30 seconds (increments of 5 seconds)

Positive End Expiratory Pressure (PEEP)

Type:	Integrated, electronically controlled
Range:	OFF, 4 to 30 cm H_2O (increments of 1 cm H_2O)

Ventilator performance

Pressure range at inlet:	240 kPa to 700 kPa/ 35 psig to 100 psig
Peak gas flow:	120 L/min + fresh gas flow
Flow valve range:	1 to 120 L/min
Fresh gas flow compensation	

Ventilator monitoring

Expiratory minute volume range:	0 to 99.9/min
Expiratory tidal volume range:	0 to ≥ 1500 mL
O_2%:	≤ 5 to 110%
Peak pressure:	–20 to 120 cm H_2O
Mean pressure:	–20 to 120 cm H_2O
Plateau pressure:	0 to 120 cm H_2O
Pressure waveform sweep speed:	4 to 25 breaths per minute (0 to 16 seconds)
	26 to 75 breaths per minute (0 to 8 seconds)
	75 breaths per minute (0 to 4 seconds)

Ventilator accuracy

Delivery/monitoring accuracy

Volume delivery:
> 210 mL = better than 7%
< 210 mL = better than 15 mL
< 60 mL = better than 10 mL

Pressure delivery: ±10% or ±3 cm H_2O

PEEP delivery: ±1.5 cm H_2O

Volume monitoring:
> 210 mL = better than 9%
< 210 mL = better than 18 mL
< 60 mL = better than 10 mL

Pressure monitoring: ±5% or ±2 cm H_2O

Alarm settings

Tidal volume (TV_{exp}):
Low: OFF, 5 to 1500 mL
High: 20 to 1600 mL, OFF

Minute volume (Mv_{exp}):
Low: OFF, 0.1 to 10 L/min
High: 0 to 30 L/min, OFF

Inspired oxygen (FiO_2):
Low: 18 to 99%
High: 21 to 99%, OFF

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

Mechanical ventilation OFF:
< 5 mL breath measured in 30 seconds

Low airway pressure: 4 cm H_2O above PEEP

High pressure:
12 to 100 cm H_2O
(increments of 1 cm H_2O)

Sustained airway pressure: *Mechanical ventilation ON:*
P_{limit} < 30 cm H_2O,
the sustained limit is 6 cm H_2O
P_{limit} 30 to 60 cm H_2O,
the sustained limit is 20% of P_{limit}
P_{limit} > 60 cm H_2O,
the sustained limit is 12 cm H_2O

PEEP and mechanical ventilation ON:
Sustained limit increases by
PEEP minus 2 cm H_2O

Mechanical ventilation OFF:
P_{limit} ≤ 60 cm H_2O,
the sustained limit is 50% of P_{limit}
P_{limit} > 60 cm H_2O,
the sustained limit is 30 cm H_2O

Subatmospheric pressure: Paw < -10 cm H_2O

Alarm silence
countdown timer: 120 to 0 seconds

Ventilator components

Flow transducer

Type: Variable orifice flow sensor

Dimensions: 22 mm OD and 15 mm ID

Location: Inspiratory outlet and expiratory outlet

(optional autoclavable sensor available)

Oxygen Sensor

Type: Galvanic fuel cell

Life Cycle: Approximately 12 months (Dependent on usage)

Anesthetic agent delivery

Delivery

Vaporizers: 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
220/240 V:	< 500µA

Power and battery backup

Power input:	100-120 Vac, 50/60 Hz 220-240 Vac, 50/60 Hz
Backup power:	Demonstrated battery backup time under typical operating conditions is 90 minutes when fully charged
Battery type:	Internal rechargeable sealed lead acid
Power cord:	Length: 5 m/16.4 ft or 3m /9.8ft Rating: 10A @ 220 Vac or 15A @ 120 Vac

Communication port

Serial interface:	RS-232 compatible port

Inlet/outlet modules

	120 V
System circuit breakers:	15A
Outlets:	4 outlets on back, 3-2A, 1-3A individual breakers with isolation transformer

Pneumatic specifications

Auxiliary common gas outlet

Connector:	ISO 22 mm OD and 15 mm ID

Gas supply

Pipeline input range:	280 kPa to 600 kPa/41 psi to 87 psi
Pipeline connections:	DISS-male, DISS-female, AS4059, FS90-116, SS 87 524 30, 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: 35 to 75 L/min

Flowmeters

O_2 ranges:	0.05 to 0.95 L/min and 1.0 to 15.0 L/min; Minimum O_2 flow: 50 mL/min ±25 mL
N_2O ranges:	0 to 0.95 L/min and 1.0 to 10.0 L/min
Air range:	0 to 0.95 and 1.0 to 15.0 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.

Total flow sensor

Accuracy: Greater of ± 25 sccm (smlpm) or ± 6.0% of measured value

Calibration conditions: 23° C ± 2°C, 69.7 ± 2 psi

Note: Different breathing circuit pressures, barometric pressures or temperature changes total flow sensor accuracy

Hypoxic guard system

Type: Mechanical Link-25

Range: Provides a nominal minimum 25% concentration of oxygen in O_2/N_2O mixture

Environmental specifications

System operation

Temperature: 10° to 40°C/50° to 104°F

Humidity: 15 to 95% relative humidity

Altitude: –440 to 3565 m/500 to 800 mmHg

System storage

Temperature: –25° to 65°C/–13° to 149°F

Humidity: 15 to 95% relative humidity

Altitude: –440 to 5860 m/375 to 800 mmHg

Oxygen cell storage: –15° to 50°C/5° to 122°F
15 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 60601-1,
CSA C22.2 #601.1
EN/IEC 60601-1
CE

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: -2 to 10 kPa/–20 to 100 cm H20

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: 0.5 to 70 cm H_2O

Tactile knob indication at: 30 cm H_2O and above

Adjustment range of rotation: 0.5 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 (including absorber)
1.2 L Bag Mode

Expiratory resistance:	Flow rate	Pexp Bag Mode Pressure drop	Pexp 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

System Type	Outlet Connector	Hospital waste gas disposal system requirements
Active Adjustable Flow, High Vacuum	DISS EVAC	12inHg (305 mmHg) minimum vacuum @ 36 LPM flow Extract Flow limited to 30 LPM @ 12 inHg vacuum
Active Low Flow, High Vacuum	DISS EVAC	12 inHg (305 mmHg) minimum vacuum @ 36 LPM flow
Active Low Flow, Low Vacuum	12.7 mm Barb	36 LPM minimum flow

About GE Healthcare

GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services help our customers to deliver better care to more people around the world at a lower cost. In addition, we partner with healthcare leaders, striving to leverage the global policy change necessary to implement a successful shift to sustainable healthcare systems.

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.

GE Healthcare
3030 Ohmeda Drive
P.O. Box 7550
Madison, WI 53707-7550
U.S.A.

www.gehealthcare.com

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