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)

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

<table>
<thead>
<tr>
<th>Dimensions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>134.5 cm/52.9 in</td>
</tr>
<tr>
<td>Width</td>
<td>72 cm/28.3 in</td>
</tr>
<tr>
<td>Depth</td>
<td>73 cm/28.7 in</td>
</tr>
<tr>
<td>Weight</td>
<td>Approximately 108 kg/238 lbs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Top shelf</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight limit</td>
<td>34 kg/75 lbs</td>
</tr>
<tr>
<td>Width</td>
<td>66 cm/26 in</td>
</tr>
<tr>
<td>Depth</td>
<td>40 cm/15.75 in</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work surface</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>81.7 cm/32.2 in</td>
</tr>
<tr>
<td>Size</td>
<td>2160 cm²/334 in²</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIN rail</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Side of machine</td>
<td>34.5 cm/13.6 in</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drawers (internal dimensions)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>17.5 cm/6.9 in</td>
</tr>
<tr>
<td>Width</td>
<td>33 cm/13 in</td>
</tr>
<tr>
<td>Depth</td>
<td>26.5 cm/10.4 in</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Absorber bag arm (optional)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arm length</td>
<td>30.5 cm/12 in</td>
</tr>
<tr>
<td>Bag arm height (adjustable)</td>
<td>87 cm/34.3 in</td>
</tr>
<tr>
<td></td>
<td>104 cm/40.9 in</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Casters</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>12.5 cm/5 in</td>
</tr>
<tr>
<td>Brakes</td>
<td>Individual locking front casters</td>
</tr>
</tbody>
</table>
Ventilator operating specifications

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 (Plimit) 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

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_{\text{in}}) 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%)
Ventilator accuracy

Delivery/monitoring accuracy

<table>
<thead>
<tr>
<th>Volume delivery</th>
<th>&gt; 200 mL = better than ±10% Set TV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>75 to 200 mL = better than ±20 mL</td>
</tr>
<tr>
<td></td>
<td>&lt; 75 mL = better than ±15 mL</td>
</tr>
</tbody>
</table>

Pressure (P_inspired) delivery repeatability: ±2 cm H₂O

PEEP delivery repeatability: ±2 cm H₂O

Volume monitoring:

<table>
<thead>
<tr>
<th>Volume</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 200 mL</td>
<td>±10%</td>
</tr>
<tr>
<td>75 to 200 mL</td>
<td>±20 mL</td>
</tr>
<tr>
<td>&lt; 75 mL</td>
<td>±15 mL</td>
</tr>
</tbody>
</table>

Pressure monitoring: Better than ±2 cm H₂O and ±5% of reading (whichever is greater)

Ventilator components

Flow transducer

<table>
<thead>
<tr>
<th>Type</th>
<th>Variable orifice flow sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>22 mm OD and 15 mm ID</td>
</tr>
<tr>
<td>Location</td>
<td>Inspiratory outlet and expiratory inlet</td>
</tr>
</tbody>
</table>

(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 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**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Leakage</th>
</tr>
</thead>
<tbody>
<tr>
<td>100/120 V</td>
<td>&lt; 300µA</td>
</tr>
</tbody>
</table>

**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
- **Nominal output:** <338 kPa/49 psig

**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 ±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

<table>
<thead>
<tr>
<th>Calibration:</th>
<th>Percent of full scale flow</th>
<th>Accuracy (% of flowrate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>±2.5%</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>±2.5%</td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>±2.6%</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>±2.7%</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>±2.9%</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>±3.1%</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>±3.4%</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>±4.0%</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>±5.0%</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>±8.1%</td>
<td></td>
</tr>
</tbody>
</table>

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 O₂/N₂ mixtures

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 H₂O

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 H₂O

Tactile knob indication at: 30 cm H₂O and above

Adjustment range of rotation: 0.8 to 30 cm H₂O (0 to 230°)

30 to 70 cm H₂O (230 to 330°)
**Materials**

All materials in contact with exhaled patient gases are autoclavable, except disposable flow sensors and \( \text{O}_2 \) 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 \( \text{H}_2\text{O} \)
- 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:

<table>
<thead>
<tr>
<th>Flow rate</th>
<th>Pexp Bag Mode Pressure drop</th>
<th>Pexp Vent Mode Pressure drop</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 L/min</td>
<td>0.78 cm ( \text{H}_2\text{O} )</td>
<td>0.77 cm ( \text{H}_2\text{O} )</td>
</tr>
<tr>
<td>30 L/min</td>
<td>1.59 cm ( \text{H}_2\text{O} )</td>
<td>1.71 cm ( \text{H}_2\text{O} )</td>
</tr>
<tr>
<td>60 L/min</td>
<td>3.48 cm ( \text{H}_2\text{O} )</td>
<td>3.88 cm ( \text{H}_2\text{O} )</td>
</tr>
</tbody>
</table>

Note: With patient circuit and wye piece add +0.89 cm \( \text{H}_2\text{O} \)

**Anesthetic gas scavenging**

<table>
<thead>
<tr>
<th>Type</th>
<th>Hospital system required</th>
<th>Machine connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active low flow:</td>
<td>High vacuum 36 L/min (300 mmHg) @ 12 in Hg</td>
<td>DISS evac</td>
</tr>
<tr>
<td>Passive:</td>
<td>Passive or externally attached active system</td>
<td>30 mm/0.5 in</td>
</tr>
<tr>
<td>Active adjustable flow:</td>
<td>&gt;30L/mi</td>
<td>M ISO taper</td>
</tr>
</tbody>
</table>
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.

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