

Carestation 30

Features

- GE Datex-Ohmeda family look and quality
- One or Two gases: O₂+ N₂O or Air (optional)
- 5.7-inch color ventilator display with waveforms
- and alarm message indicators
- Lightweight and compact for easy maneuverability
- One or two vap positions
- Dove tails for mounting accessories (optional)

Enhanced monitor integration capabilities

- Inspired oxygen monitoring (optional)
- SPO₂ monitoring with waveform (optional)

Advanced Ventilation

- Ventilation Modes:
 - VCV (Volume Control)
- WYSIWYG (What You Set Is What You Get) Tidal Volume setting
 - Compensation for breathing circuit compliance
 - Compensation for Fresh Gas Flow (optional)
- Pressure waveform for visual reference on a breath-by-breath basis
- Standby-mode



Revolutionary New Breathing Circuit

- Easy to clean, fully autoclavable, latex-free
- Easy removal-no tools required
- Quick Release for fast remove canister and refill soda lime
- Integrated design-less parts and connections helps reduce potential for leaks and misconnects
- One step bag/vent switch turns ventilator on/off
- Passive AGSS (optional)
- Auxiliary Comment Gas Outlet (optional)



Physical Specifications

Dimensions

Height: 148 cm/58 in

Width: 90 cm/35 in

Depth: 70 cm/28 in

Weight: 70 kg/220 lbs

Top shelf

Weight limit: 15 kg/33 lbs

Width: 40 cm/16 in

Depth: 30 cm/12 in

Work surface

Height: 74 cm/29 in

Size: 630 cm²/98 in²

Casters

12.5 cm/5 in, with brakes on the front casters

Drawers

20 cm x 30 cm x 30 cm/8 in x 12 in x 12 in

Ventilator display

5.7 inch TFT, 640 x 480

Ventilator Operating Specifications

Ventilation operating modes

VCV

Ventilator (VT) parameter ranges

Tidal volume range:

50 to 1500 mL

Incremental settings:

10 mL

Rate:

4 to 100 breaths per minute
(increments of 1 breath per minute)

Inspiratory/expiratory ratio:

2:1 to 1:8 (increments of 0.5)

Ventilator performance

Pressure range at inlet:

280 kPa to 600 kPa/ 41 psi to 87 psi

Peak gas flow:

63 L/min + fresh gas flow

Ventilator monitoring

Expiratory minute volume range: 0 to 63 L/min

Expiratory tidal volume range: 50 mL to 1500 mL

O₂ %: 15% to 100%

Peak pressure: -20 to 100 cmH₂O

Mean pressure: -20 to 100 cmH₂O

Ventilator accuracy

Delivery/monitoring accuracy

Volume delivery:

≥ 100 mL = better than 20%

< 100 mL = better than 20 mL

Volume monitoring:

≥ 100 mL = better than 20%

< 100 mL = better than 30 mL

Alarm settings

Tidal volume (TV_{exp}):

Low: 0 to 800 mL

High: 100 to 1800 mL

Inspired oxygen (FiO₂):

Low: 18 to 99%

High: 19 to 100%

Apnea alarm:

In Bag Mode, Apnea alarm happens under condition of no flow value, PAW fluctuates less than 2cmH₂O, and continue time exceeds 30 seconds.

Airway pressure (PAW):

Low: 4 to 20 cm H₂O

High: 5 to 100 cm H₂O

Sustained airway pressure:

Paw ≥ 10cmH₂O continuously for 10 seconds

Ventilator components

Flow transducer

Type: TVX Flow Transducer Cartridge

Dimensions: 22 mm OD and 15 mm ID/22 mm ID

Location: Expiratory Port

Oxygen Sensor

Type: Oxygen Sensor OOM102

Life Cycle: 15 Months

Anesthetic agent delivery

Vaporizers:

Tec 7 or V5

Number of positions:

2 or 1

Mounting:

Tool-free installation

Selectatec manifold interlocks or

Cagemount

Electrical specifications

Current leakage

100/120 V: < 500μA

220/240 V: < 500μA

Power and battery backup

Supply voltage:

100-120 Vac, 50/60 Hz

Power input:	220-240 Vac, 50/60 Hz
Backup power:	≤ 50 VA
Battery type:	Demonstrated battery backup time under typical operating conditions is 360 minutes when fully charged
Power cord:	Internal rechargeable sealed lead acid
	Length: 5 m/16.4 ft

Provides a nominal minimum 22% concentration of oxygen in O₂/N₂O mixture

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; S90- 116 (French Air Liquide); BSPP 3/8 (Scandinavian) or NIST (ISO 5359). All fittings available for O₂, Air, and N₂O

Cylinder input: Pin indexed in accordance with CGA-V-1; contains input filter and check valve
Note: Maximum 2 cylinders; all 2 inboard mounted.

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

Primary regulator nominal output: Pin indexed: The primary regulator is set to pressure less than 345 kPa (50 psi).

O₂ controls

Method: Proportionate decrease of N₂O with reduction in O₂ Pressure

Supply failure alarm range: ≤0.22Mpa continuously for 3 seconds

O₂ flush: Range: 25 to 75 L/min

Flowmeters

O₂ ranges: 0.1 to 1.0 L/min and 1.0 to 10.0 L/min

N₂O ranges: 0.1 to 1.0 L/min and 1.0 to 10.0 L/min

Air range: 0.1 to 1.0 L/min and 1.0 to 10.0 L/min

Hypoxic guard system

Type: Mechanical gear

Range:

Environmental specifications

System operation

Temperature: 10° to 40°C/50°F to 104°F

Humidity: 15 to 95% relative humidity

Altitude: -440m to 3565m

System storage

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

Humidity: 15 to 95% relative humidity

Altitude: -440m to 5860m

Electromagnetic compatibility

Immunity: Complies with all requirements of EN/IEC

Emissions: CISPR 11 group I class B

Approvals: EN/IEC 60601-1-2

Breathing circuit specifications

Operational modes

Breathing circuit is circle mode only

Carbon dioxide absorbent canister

Absorbent capacity: 1450 mL

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:

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 to 70 cm H₂O

Tactile knob indication at: 30 cm H₂O and above

Adjustment range of rotation: 0 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 flow sensor and O₂ cell.

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

Breathing circuit parameters

Compliance:

Bag Mode		Vent Mode	
Internal Compliance	Internal Compliance	Internal Compliance	Internal Compliance
(ml/cmH ₂ O)	(ml/30cmH ₂ O)	(ml/cmH ₂ O)	(ml/30cmH ₂ O)
1.45	44	1.3	39

Breathing system resistance in bag mode*:

Bag mode*	Flow (L/min)	Resistance (kPa)	Resistance (cmH ₂ O)
	5	0.03	0.3
	30	0.17	1.7
	60	0.56	5.6

*Values include patient circuit tubing and Y-piece 0.15 kPa (0.20 psi) expiratory resistance at 1 L/s. Patient circuit tubing and breathing

Anesthetic gas scavenging

Passive scavenging

Negative pressure relief:

0.3 cmH₂O

Outlet connector:

30 mm male taper ISO

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imagination at work

Integrated Pulse Oximetry

SpO₂

Declared range:

70 to 100%

Displayed range:

0 to 100%

First reading, full accuracy:

≤ 10 seconds

Accuracy:

70 to 100% ± 2 digits (without clinical motion)

70 to 100% ± 3 digits (during clinical motion)

70 to 100% ± 2 digits (during low perfusion)

Below 70% unspecified

Pulse rate

Displayed range:

30 to 300 beats per minute (bpm)

First reading, full accuracy:

≤ 15 seconds

Accuracy:

30 to 250 bpm: ± 2 digits or ± 2%, whichever is greater, (without clinical motion)

30 to 250 bpm: ± 5 digits (during clinical motion)

30 to 250 bpm: ± 3 digits (during clinical low perfusion)

251 to 300 bpm unspecified

Alarm for SpO₂ module on CS30 machine

1. "SpO₂ no valid data" alarm: the board does not provide SpO₂ or pulse rate values.
2. "SpO₂ board removed" alarm: the communication between the board and the host stops
3. "SpO₂ probe " alarm : Sensor is patient (see SENSOR_OFF)
4. "Check SpO₂ Probe" alarm: Sensor placement is poor or plethysmographic waveform amplitude is too low to calculate SpO₂ or pulse rate values (see SENSOR_SITE)
5. "No SpO₂ Probe" alarm: No sensor plugged in (see NO_SENSOR)
6. "SpO₂ Faulty Probe" alarm: Probe hardware error (see PROBE_FAULT)

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