

Centiva/5 Critical Care Ventilator

Meet a new level of expectations

Advanced Ventilation

- Adult to Pediatric
- Volume controlled, Pressure controlled
- Non-Invasive mask ventilation capability
- ARC: Airway Resistance Compensation for automatic endotracheal or tracheostomy tube compensation
- Synchronized and compensated pneumatic nebulizer drive

Informative display

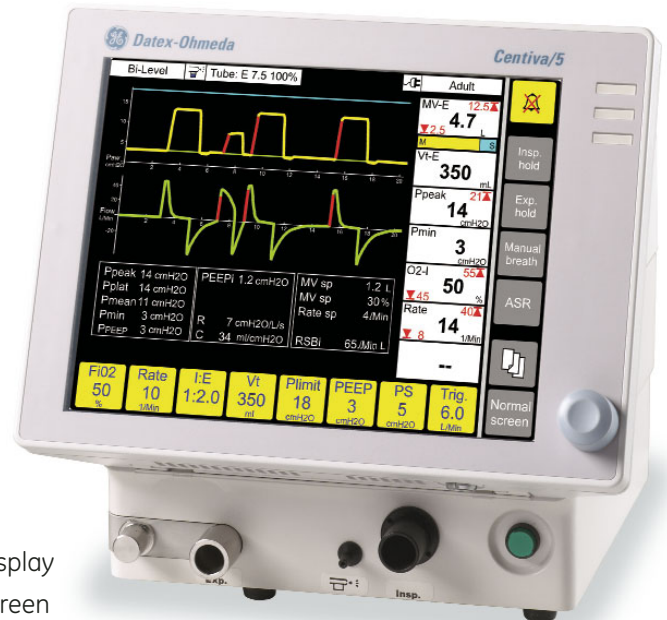
- Choice of a compact 6.5 inch or a large 12 inch touch screen display
- Settings, monitored values and waveforms visible on a single screen
- Displays can be detached and remote mounted for optimal placement

Ease of Use

- Simplified operation through ComWheel™ softkeys or touch screen and menus
- Fast and automatic system test and startup sequence
- APD: Automatic Patient Detection implementing safety and ease of use features
- ASR: Automatic Suction Routine facilitating bronchial suction procedures

Flexibility

- Optional features provide flexible purchasing and upgrade paths
- Possibility to start with the more economical 6.5 inch display and upgrade later to the 12 inch display with the advanced optional features
- Simple shelf mounting or an optional mobile cart with space for an internal compressor or cylinders for transporting patients within the hospital
- Internal backup battery and optional external battery pack



Physical Specifications

Centiva/5 with 6.5 inch Display:

Footprint:	25 x 24 cm/9.8 x 9.4 in
Height:	21 cm/8.3 in
Width:	26 cm/10.3 in
Depth:	29 cm/11.4 in
Weight:	13 kg/28.7 lb

Centiva/5 with 12 inch Display:

Footprint:	25 x 24 cm/9.8 x 9.4 in
Height:	32 cm/12.6 in
Width:	32 cm/12.6 in
Depth:	32 cm/12.6 in
Weight:	14.7 kg/32.3 lb

Environmental Conditions

During operation

Temperature:	Standard: 10° to 35°C Extended: 10° to 40°C For operation in e.g. burn units. Preventive maintenance is modified
Atmospheric pressure range:	600 to 1060 hPa
Humidity range:	0 to 90%, (non-condensing)

During storage and transport

Temperature:	-20° to 50°C
Atmospheric pressure range:	500 to 1060 hPa
Humidity range:	0 to 99%, (non-condensing)

Noise emission

Noise level:	≤ 43 db(A) when no alarm is active
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Electrical Specifications

Line supply

Line voltage:	207 to 253 Vac, 50/60 Hz 98 to 132 Vac, 50/60 Hz
Power consumption:	< 50 W

Alternate supply

DC supply voltage:	22.5 to 28 VDC
Max. current:	3 ADC

Battery backup

Backup battery:	Built-in
Type:	Lead Acid Gel
Battery backup time:	Minimum 30 minutes
Battery charging time:	12 hours from complete discharge

Pneumatic Specifications

Gas supply

Single gas operation:	Yes
Emergency air valve:	Built-in

Oxygen supply







Pressure range:	280 to 600 kPa/40 to 80 psi
Flow:	120 L/min

Air supply



Pressure range:	280 to 600 kPa/40 to 80 psi
Flow:	120 L/min

Ventilator Operating Specifications, Continued



Alarm settings

MV max:	50 to 0.6 L/min  9.99 to 0.2 L/min 
MV min:	0.5 to 49.9 LPM  0.1 to 9.98 L/min 
Pmax:	Set Pressure + 2 cm H ₂ O to 70 cm H ₂ O
Flow:	Automatic
Leakage:	5 to 95%
Apnea time:	10 to 60 sec  5 to 30 sec 
Rate max:	3 to 200 bpm
Rate min:	2 to 199 bpm
FiO ₂ High:	Automatically tracking set FiO ₂
FiO ₂ Low:	Automatically tracking set FiO ₂

Airway Resistance Compensation (ARC)






Type of compensation:	Electronic tube compensation
Compensation for:	Endotracheal and tracheostomy tubes
Tube diameter:	4 to 10 mm, select from database 
Tube diameter:	3 to 6 mm, select from database 
Level of compensation:	25 to 100%

Automatic Suction Routine (ASR)

Pre oxygenation:	≤ 2 min with 100% O ₂ 
Standby for suction:	≤ 2 min with automatic patient (re-connection) detection
Post oxygenation:	≤ 2 min with 100% O ₂ 

Note: FiO₂ can be set to level other than 100%

Nebulization

Nebulizer Flow:	Synchronized with inspiration for rates < 16 bpm  Continuous for rates > 16 bpm  Continuous 
Nebulizer Control:	On/Off, Automatic off after 30 minutes  On/Off, Automatic off after 5 minutes 
Compensations:	Tidal Volume and FiO ₂
Nebulizer Pressure range:	1.6 to 2.0 bar/22.5 to 28.2 PSI
Nebulizer Flow range:	4 to 12 L/min

Non-Invasive Ventilation (NIV)

Leakage compensation:	Always active in all modes, trigger sensitivity compensated
Limited to 50% of the set tidal volume in volume modes (VCV and SIMV-VC and Bi-Level VG)	
Mask ventilation:	Yes










Automatic Patient Detection (APD)

Detection by:	I and E ByFlow difference
Prevention of Standby or power off when patient connected	
Patient detected alarm when in Standby	





Trends

Time based trends:	All measured parameters and all settings with 5 minutes resolution
Period:	288 hours (12 days)
Selectable resolution:	5 minutes, 15 minutes, 30 minutes and 60 minutes
Event based trends (log):	All alarm activations and deactivations, all setting changes etc.
Number of events stored:	In excess of 1000 events

Ventilator monitoring

Airway pressure:	-9 to +90 cm H ₂ O
Patient flow:	-150 to +200 L/min
Tidal volume:	0 to 2,500 mL resolution 1 mL 
	0 to 400 mL resolution 0.1 mL 
Minute volume:	0 to 99 L/min resolution 0.1 L/min 
	0 to 9.99 L/min resolution 0.01 L/min 
Minute volume	0 to 99 L/min resolution 0.1 L/min 
Spont.:	0 to 9.99 L/min resolution 0.01 L/min 
Rate:	0 to 200 breaths per minute
Rate Spont.:	0 to 200 breaths per minute
O ₂ Inspiratory:	0 to 100%
Peak pressure:	-9 to 90 cm H ₂ O
Plateau pressure:	-9 to 90 cm H ₂ O
Mean Airway Pressure:	-9 to 90 cm H ₂ O
Pmin:	-9 to 90 cm H ₂ O, measured
PEEP:	-9 to 90 cm H ₂ O
PEEPi:	-9 to 90 cm H ₂ O (measured during exp Pause)  
Compliance:	1 to 999 mL/cm H ₂ O
Resistance:	1 to 99 cm H ₂ O/L/s
RSBI:	1 to 999 

Monitoring accuracy

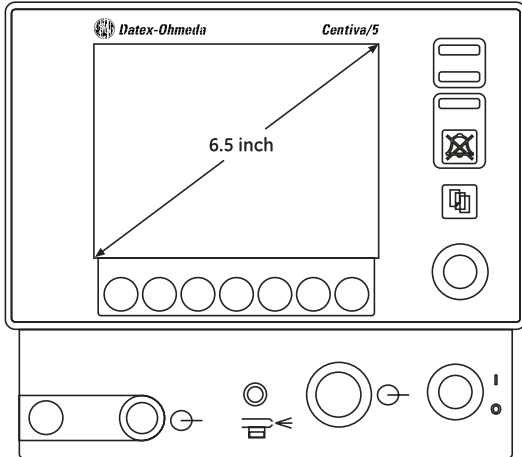
Pressure readings:	±(0.5 cm H ₂ O + 2%)
Volume readings:	±15 mL or ±10% of reading  , whichever is greater
Volume readings:	±(5 mL + 5%) @ 3 to 100 mL  ±(10 mL + 5%) @ 101 to 300 mL  +5% @ 301 to 400 mL 
O ₂ Inspiratory:	±3% of full scale

Accuracy settings

Pressure settings:	±(0.5 hPa + 2%)
FiO ₂ settings:	±5% at 21 to 30 Vol %
FiO ₂ settings:	±4% at 31 to 40 Vol %
FiO ₂ settings:	±3% at 41 to 70 Vol %
FiO ₂ settings:	±5% at 81 to 100 Vol %
Frequency:	≤ 0.1 sec

Screens

Display type: 6.5 inch full color LCD screen



Adjustable viewing angle and detachable

Waveforms on screen: Two at a time

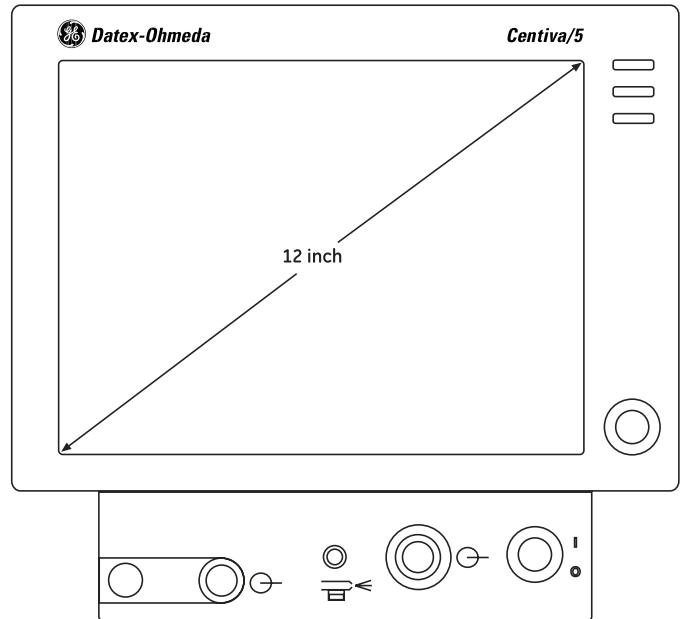
Waveform parameters: Pressure and flow

Graphic scaling: Automatic for optimal size

Numeric data: Ventilator settings, monitored data, alarm settings

Status indicator: Ventilation mode, battery level, test status, tube compensation, nebulizer on

Display type: 12 inch full color LCD touch screen



Adjustable viewing angle and detachable

Waveforms on screen: Two at a time

Waveform parameters: Pressure and flow

Graphic scaling: Automatic for optimal size

Numeric data: Ventilator settings, monitored data, alarm settings

Status indicator: Ventilation mode, battery level, line supply, test status, tube compensation, nebulizer on

Feature Matrix



	Screen size	6.5 inch	12 inch
Modes	VCV, aVCV	●	●
	SIMV-VC	●	●
	Bi-Level	●	●
	Bi-Level VG		○
	CPAP/PSV	●	●
	Apnea Backup	●	●
Monitored Parameters	TVe, MVe Tot., Sp.	●	●
	Rate Tot., Sp.	●	●
	Ppeak	●	●
	Pplat, Pmean	●	●
	PpEEP, Pmin	●	●
	Comp., Res.	●	●
	PEEPi		●
	RSBI		●
	MVsp/MVmand bar graph		●
	Features	ARC, compensation	●
APD		●	●
ASR, suction routine		●	●
NIV, Non Invasive		●	●
Neb drive		●	●
IBW startup			●
Insp/Exp hold			●
Int Battery		●	●
Ext Battery pack		○	○
Newborn extensions		○	○
Trends package			○
RS-232 / Real Time		●	●
Serial Out / Trends			○

● Standard
○ Optional

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