



GE HealthCare

# Carestation™ 600 Series Anaesthesia Systems

Sleek. Simple. Scalable. It's all within reach.



# Accessible anaesthesia care

Discover anaesthesia systems that deliver  
high-quality care with ease.

Expanding surgical and procedural care services to improve accessibility for more patients can be a major investment for any healthcare organization. And that is why we developed our Carestation 600 series of cost-effective, compact anaesthesia systems to help grow with your perioperative care needs.

No compromises are made when you use our sleek, simple and scalable anaesthesia systems, now with advanced clinical tools for affordable, high-performance anaesthesia care. When combined with the GE HealthCare B1x5M patient monitors, you now have a powerful anaesthesia workstation that helps you respond quickly to changing patient needs.



## Patients

may benefit from advanced lung protective ventilation (LPV) tools to customize anaesthesia care and help minimize postoperative pulmonary complications (PPCs), ensuring adequate ventilation during surgery and outpatient procedures.



## Anaesthesia staff

can rely on an intuitive workstation that includes self-guided checkout, low-flow anaesthesia tools and familiar interfaces between the patient monitor and anaesthesia machine for efficient workflows.



## Healthcare management

can protect their investment for the future by maintaining a low cost of ownership with verified GE HealthCare services and parts for a workstation that can also support sustainability initiatives.



# Care that can think one step ahead

Let's help you gain the confidence and control you need for delivering anaesthesia care using the combined power of GE HealthCare B1x5M patient monitors and Carestation 600 series anaesthesia machines — all in one integrated workstation. This is how we can help power your performance when managing life support for your patient.

You can rely on our anaesthesia workstations to provide:



## Sleek, compact size

A small footprint makes delivering therapy possible in tight spaces without compromising care



## Simple, familiar interface

A consistent, touchscreen experience helps users efficiently navigate settings and view patient responses



## Scalable capabilities

Easily add more parameters and ventilation tools as you grow to support a wide range of patient acuities



Carestation 650 Anaesthesia System and GE HealthCare B155M patient monitors

Note: An F2 module frame may be required for the B1x5M monitors when additional parameters are needed.

## Now enhance care with advanced clinical tools

We can help you make delivering anaesthesia care fast and efficient with clinical tools that are immediately accessed from the anaesthesia machine main screen.

- Predicted Body Weight calculator to save time
- Programmable recruitment maneuvers for lung protection
- Pause Gas Flow to help respond to changing patient needs

# Fit your care almost anywhere

GE HealthCare innovation brings you a modern design to help you respond to patient needs in tight spaces.

Surgical and procedural care is increasingly complex, but your technology and tools shouldn't be. Designed with essential flexibility in mind, the Carestation 600 series anaesthesia workstation features cutting-edge technology and a user-friendly design in a compact, transportable system that can go anywhere you need it. Easy to use and economical to operate, the Carestation 600 anaesthesia workstation is a hybrid of digital technology and trusted performance that puts affordable innovation within reach.



Carestation 650 Anaesthesia System and GE HealthCare B155M Patient Monitor

Note: An F2 module frame may be required for the B1x5M monitors when additional parameters are needed.

# Engineered for access and mobility

The first thing you'll notice about the Carestation 600 anaesthesia workstation is its sleek, modern and compact design made to fit wherever you need it. This sleek workstation is durable and stable with a similar touchscreen interface between our patient monitors and anaesthesia machines for a friendly, ergonomic design that offers:

Consistent, tactile controls

Smooth transport between rooms

Durable, stable frame

Touch-free alarm silencing

## Ergonomic controls

Familiar, easy-to-use controls like the APL valve and Bag Vent Switch are comfortably within reach to help eliminate stretching and awkward positions when responding to changing patient needs.

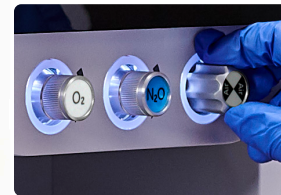
## Intelligent lighting controls

Intelligent lighting highlights active flow controls while visible reinforcement is provided on the ventilation screen to highlight flow status whenever auxiliary ports are in use.

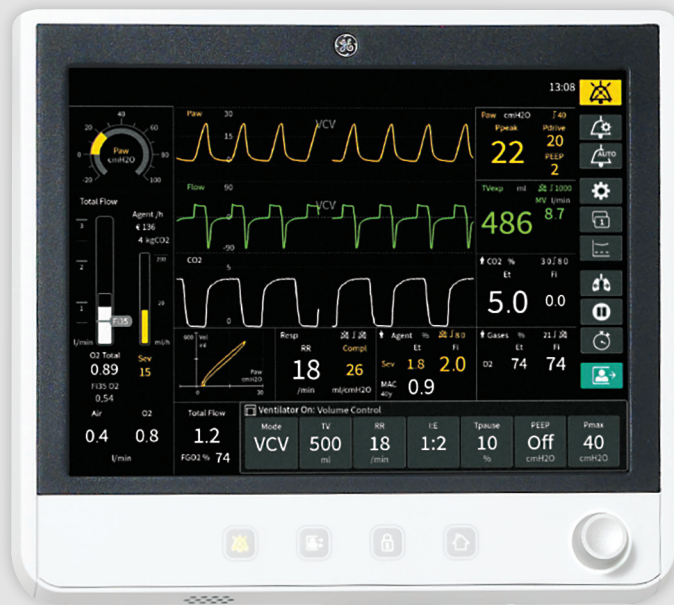
## Monitor alarm silencing

Audible alarms can be silenced for two minutes with gesture-based audible alarm silencing technology, helping to reduce unnecessary touches to support infection prevention protocols.

Note: An F2 module frame may be required for the B1x5M monitors when additional parameters are needed.







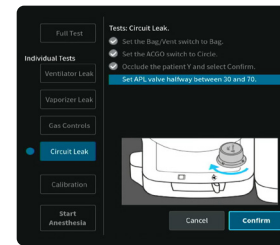
# Elevate your clinical efficiency

Let's help make your workflows more efficient with our intuitive interface and clinical tools, so you can respond quickly when life support changes at a dynamic pace.

A rotating clinical staff in a fast-paced OR requires simple tools to master with minimal product training. In order to focus more time on the patient, anaesthesia technology must balance intuitive user interface design with software intelligence to deliver information that can help enhance patient care. The Carestation 600 anaesthesia workstation combines next-generation, icon-based navigation that makes it simple to operate when seconds count.

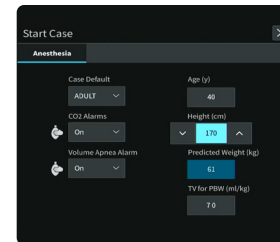
## ◀ User-friendly interface

The advanced 15-inch touchscreen user interface unites the ventilation and patient monitoring controls for a seamless Carestation experience. The system features a flat menu structure and crisp, high-contrast images with icons for Pause Gas Flow and recruitment maneuvers accessible on the main screen.



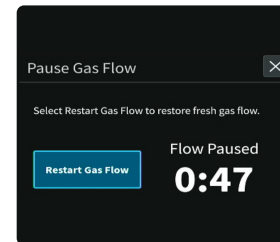
## Fast checkout

The daily checkout process is as simple as it is thorough. Run a complete checkout, including a vaporizer test, within three minutes, using step-by-step guidance on the display.



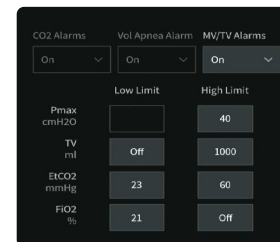
## Predicted Body Weight (PBW) calculator

The system calculates PBW based on the height value to save time when starting a case. PBW is used together with an ml/kg setting to quickly calculate Tidal Volume and Respiratory Rate settings.



## Pause Gas Flow

Simplify temporary circuit disconnects using one button that temporarily stops all gas flows and suspends alarms, agent delivery and ventilation for up to one minute, so you can focus on the patient.

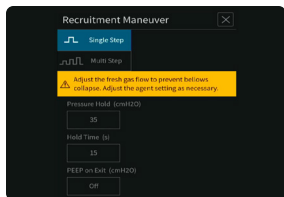


## Ventilator alarm management

Auto Alarm Limits software may help reduce alarm fatigue allowing you to quickly review and accept tailored CO<sub>2</sub> and MV/TV alarm limits in real time within a case.

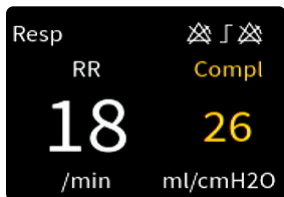
# Time-saving lung protection tools

When atelectasis appears in approximately 90% of all patients who are anesthetized, lung recruitment maneuvers can help mitigate this risk associated with PPCs.<sup>1</sup> The Carestation 600 workstation allows quick access to programmable lung recruitment maneuvers from the main menu. Then be able to view patient responses to these maneuvers on the patient monitor and anaesthesia display, so you know how effective your ventilation protocols are.



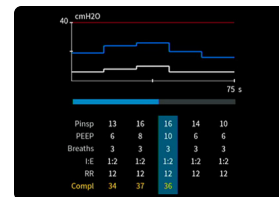
## Single Step procedures

Software automates the manual bag “squeeze and hold.” PEEP can be programmed at the end of the procedure to help sustain an open lung as well.



## Real-time compliance trending

View compliance measurements in real time to help you assess the effectiveness of automated lung procedures.



## Multi Step procedure

Configure lung recruitment maneuvers with programmable steps, and view compliance measurements at each step to assess the effectiveness of automated lung procedures.



## Driving pressure measurements

Help prevent lung overdistention and barotrauma by monitoring  $P_{drive}$  during the inspiratory pause.<sup>2</sup> This means no need to calculate  $P_{drive}$  to help avoid PPCs when balancing alveolar pressures with adequate ventilatory support.

1. Hedenstierna G, Edmark L. Mechanisms of atelectasis in the perioperative period. *Best Pract Res Clin Anaesthesiol.* 2010 Jun;24(2):157–69. DOI: 10.1016/j.bpa.2009.12.002. PMID: 20608554.

2. Meier A, Sell RE, Malhotra A. Driving Pressure for Ventilation of Patients with Acute Respiratory Distress Syndrome. *Anesthesiology.* 2020;132(6):1569–1576. DOI:10.1097/ALN.0000000000003195

# Expand your care options

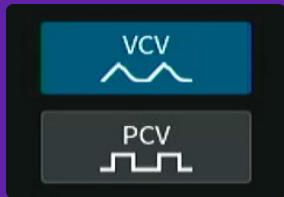
Investing in digital technology offers numerous possibilities and flexibility to enhance patient care — now and in the future. Software-enabled options can be tailored to expand performance to serve today's needs or added later to meet tomorrow's challenges.

With healthcare becoming more complex than ever, your anaesthesia system needs to adapt to suit a wide range of patient acuities. Our electronic flow valve technology offers precise flow sensor sensitivity to help you deliver individualized anaesthesia care with confidence.

Our advanced ventilation technology helps expand care from neonates to adults with:

- **Fast response times:** reacts in 30 ms to changing patient needs
- **Precise tidal volumes:** delivers as low as 5 ml in pressure controlled ventilation (PCV) mode<sup>3</sup>
- **Quickly set pressures and volumes:** monitors and responds 250 times/sec<sup>4</sup>

Thanks to its small volume and linear design, the Compact Breathing System provides a fast response to changes in fresh gas flow composition even at low and minimal flow rates. Choose from a variety of ventilation mode options to quickly customize care for optimizing life support.



## Compact Breathing System

The small, compact breathing system features digitally controlled flow valves and fast gas kinetics for rapid wash-in and wash-out to support low-flow anaesthesia.

3. GE HealthCare benchmark studies from 2011: GE HealthCare PCV to Tidal Volume Data Collection Test Results. Actual results may vary and are dependent on the patient. DOC0933949/DOC0970424.

4. GE HealthCare Carestation 600 and 700 Series Anaesthesia Control Board Software Design Description. DOC1993491 Rev 2. April 2023



# Quickly track depth of anaesthesia

Our GE Healthcare B1x5M patient monitors conveniently show anaesthesia settings on the screen, so you can monitor patient responses to anaesthesia therapy\* using only a single-wire connection between the monitor and anaesthesia machine.

Now add Adequacy of Anaesthesia (AoA) concept parameters to your B1x5M monitor to help you assess a patient's response to inhaled and intravenous hypnotics as well as neuromuscular blockade agents (NMBAs) during general anaesthesia.

\* All AoA parameters require an F2 module frame with the B1x5M monitors.

\*\* BIS: bispectral index

5. For patients older than 2 years.

6. SPI is not available in all countries and is not approved in the US and Japan.



## Entropy™ measurements for hypnotic state

Gain insights into the state of the brain during different phases of anaesthesia to help avoid unnecessary states of deep hypnosis. This can be used as an alternative to BIS\*\* measurements.<sup>5</sup>



## Neuromuscular transmission (NMT) for blockade response

Assess the effects of NMBAs that could prevent the patient from breathing spontaneously due to muscle relaxation from overdosing.



## Surgical Pleth Index (SPI)™ for nociception response<sup>6</sup>

By observing the SPI value clinicians can monitor real-time, adult patient responses to surgical stimuli and help optimize analgesic medications. The photoplethysmographic signal is measured using GE HealthCare's TruSignal™ SpO<sub>2</sub> finger sensors.

# Powering your performance

## Perfectly paired patient monitors for clinical efficiency.

The B1x5M patient monitors help you quickly take action when responding to changing patient needs. Develop effective care plans when you collect critical patient information in real time using B1x5M monitor technology and accessories.

## Parameter options to enhance decision support

- E-sCO<sub>2</sub>, N-CAiO<sub>2</sub>, and E-sCAiO<sub>2</sub> modules for monitoring respiratory gases and anaesthetic agents
- E-COP module for monitoring the functioning of the heart
- Pre-configured, multiparameter hemodynamic module for SpO<sub>2</sub>, NIBP, Temp, and Invasive Pressure monitoring

## Touchless alarm management

Set, review, and switch alarm limits ON and OFF from a single Alarm Overview menu with the ability of automatically setting new alarm limits for multiple parameters. Audible alarms can be silenced for two minutes with gesture-based, audible alarm silencing technology, helping to reduce unnecessary touches to support infection prevention protocols.

## Connectivity for cost-effective EMR inputs

With GE HealthCare B1x5M monitors, you no longer need middleware to connect the anaesthesia device to the patient monitor.

- A single-wire, direct connection is designed to streamline OR workflows, allowing easy access to spirometry, gases, alarm status, and ventilation settings data
- Both anaesthesia and monitor data can be exported to direct HL7®, S/5 network, and CARESCAPE™ Network to the EMR
- The anaesthesia and haemodynamic data can be printed to the network laser printers or exported to a USB drive in PDF format for documentation.

Note: An F2 module frame may be required for the B1x5M monitors when additional parameters are needed.

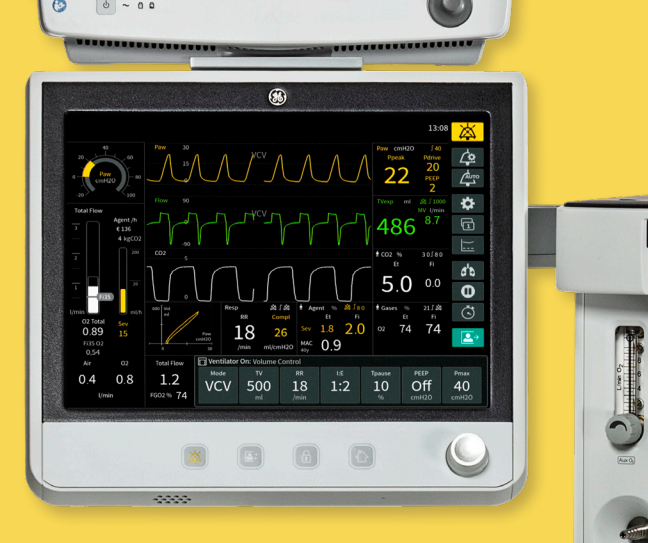


Choice of 10-, 12- or 15-inch capacitive touch screen displays



# Supporting your sustainability goals

Let's combine cost savings with sustainability to benefit patients and the planet.



## Low flow. High impact.

### ecoFLOW software

Clinicians skilled in the practice of low- and minimal-flow anaesthesia delivery understand that sometimes less is more. That's why we developed ecoFLOW, an efficient anaesthesia delivery technology that provides visual guidance to help you maintain the desired inspired oxygen concentration and identify unnecessarily high fresh gas flow rates.

Anaesthetic agents are not only costly, but scientific evidence suggests that excess inhaled agents released into the atmosphere have the potential to affect the environment.<sup>7</sup> The Caresation 650 machine with ecoFLOW software may have a positive impact on the environment when agent waste gases are reduced.



### Patient

Helps your patient care by continuously monitoring the precise flow rates required to maintain target inspired oxygen concentrations.



### Economical

Anaesthetic agents are the biggest ongoing expense associated with anaesthesia units. The ecoFLOW option offers cost savings through more efficient utilization of inhaled anaesthetics.<sup>8</sup>



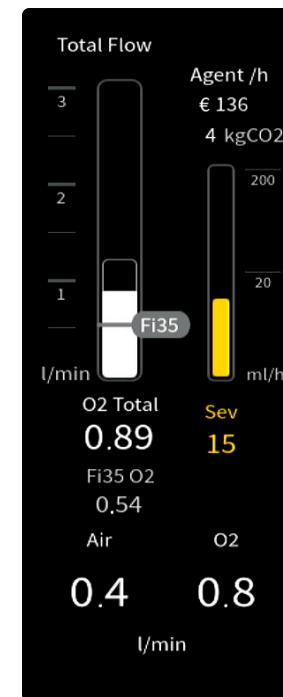
### Ecological

By choosing a low-flow practice, the environmental impact of anaesthetic vapors and gases can be minimized to help reduce the impact of these greenhouse gases.

### ecoFLOW technology

A new way to look at flow tubes to help you ensure your inspired oxygen target settings are achieved.

The illustration shows flows above the Fi35 target as potential waste gas or excess to the patient's consumption. Whenever fresh gas flow exceeds the patient's requirement, gases enter the scavenging system and, ultimately, contaminate the atmosphere.



### ecoFLOW savings

ecoFLOW shows you a target and displays the cost of the liquid agent that corresponds with your set flow rate.

Use the information to adjust oxygen flow to help avoid hypoxic delivery or unnecessarily high fresh gas flow rates.

**30.5%**  
cost reduction in anaesthetic agent was reported in one quality improvement program when ecoFLOW was used by clinicians.<sup>9</sup>

7. There are several online resources available to learn more about the environmental impact of anaesthetic agents including: Ishizawa, Y. General Anesthetic Gases and the Global Environment. *Anesth Analg*. 2011 Jan;112(1):213-7. DOI: 10.1213/ANE.0b013e3181fe02c2
8. Ryan, S.M., and Nielsen, C.J. Global Warming Potential of Inhaled Anesthetics: Application to Clinical Use. *International Society for Anaesthetic Pharmacology* July 2010 111(1):92-8. DOI: 10.1213/ANE.0b013e3181e058d7
9. ECRI Institute Healthcare Product Comparison: Anaesthesia Units. 2011.
9. Shores, R.T., Meuti, K.N., Hogan, G.T., and Pabalate, J. Consumption Feedback to Reduce Inhalation Anaesthesia Costs: A Quality Improvement Project. *Nursing Economics* May/June 2022, Vol 40(3):109-117. <http://www.nursingeconomics.net/necfiles/2022/MJ22/109.pdf>



# Uptime matters in serving patients and protecting your investment.

We can help by providing services, parts, and accessories to keep your care teams ready to go.

Fast, secure support throughout the equipment lifecycle can help ensure medical device reliability and:

- Help your teams respond faster
- Minimize patient care disruption
- Reduce staff training and operating expenses
- Standardize your fleet with parts, accessories, updates and upgrades



Secure and fast remote support



Continuous software updates through eDelivery



High-quality OEM parts and accessories

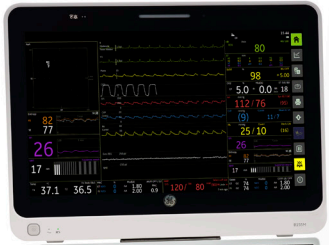


Flexible and affordable service offerings

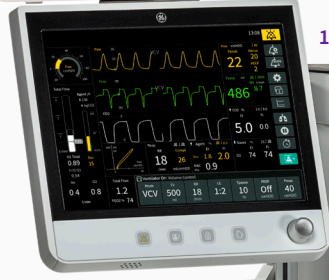


Training and education

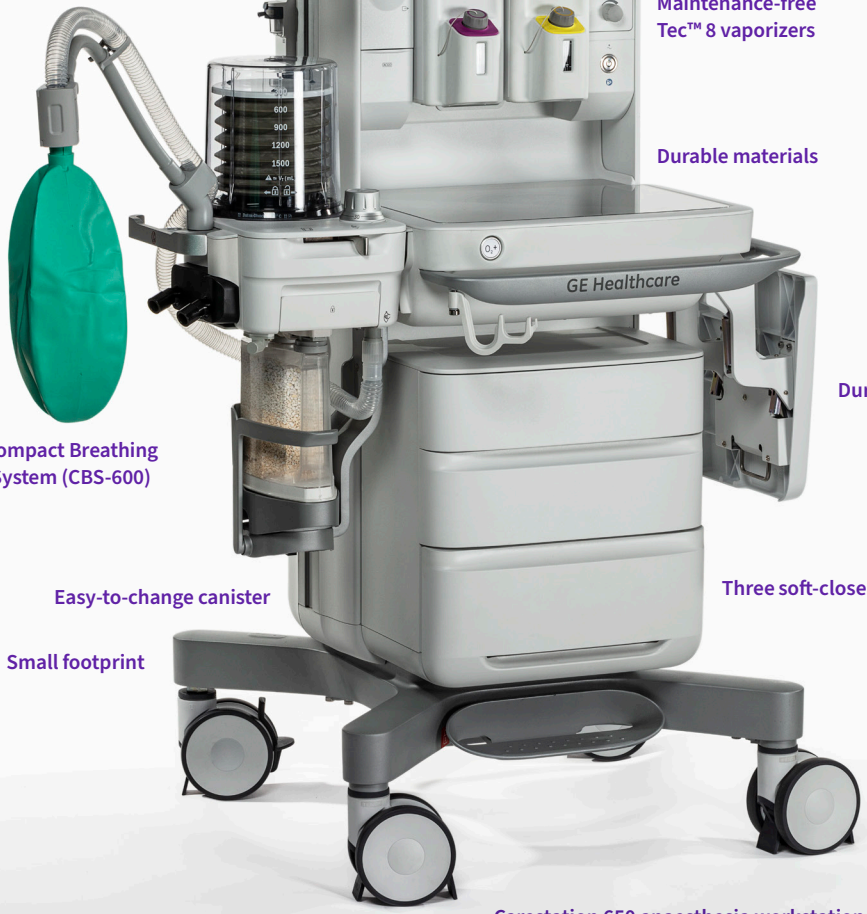




**B155M Patient Monitor**



**15" Touchscreen user interface**



**Flexible mounting rails**

**Maintenance-free Tec™ 8 vaporizers**

**Durable materials**

**Durable flip shelf**

**Three soft-close storage drawers**

**Compact Breathing System (CBS-600)**

**Easy-to-change canister**

**Small footprint**

**Carestation 650 anaesthesia workstation**



**Wall mount system option  
(Carestation 650c anaesthesia workstation)**



**Pendant system option  
(Carestation 650c anaesthesia workstation)**



**Carestation 620 anaesthesia workstation**

# Carestation 600 Series

Carestation 620/650/650c Anaesthesia Systems with B1x5M Patient Monitors

Note: An F2 module frame may be required for the B1x5M monitors when additional parameters are needed.

# Reliable.

Making better possible for over a century.

With its sleek design, simple user interface and scalable platform the Carestation 600 anaesthesia system offers innovations developed from our rich legacy of Carestation technology over the past 100 years. And with 51,000+ hours of reliability and endurance testing, equal to over 1,200,000 simulated cases, you can trust it to meet the rigorous demands of your OR and beyond.\*

It's all within reach.



**500,000+**

Hardware component cycles



**45,000,000+**

Software actions stress test



**-60° to +120° C**

Extreme temperature testing



**Rigorous**

interference and shock testing



**Stability**

and tip testing under harsh conditions



**Industry-leading**

Lean Six Sigma manufacturing



**120,000,000+**

Flow sensor tests



**1,000,000,000+**

Flow valve cycles



**150,000+**

Hardware and software reboot cycles

\* GE HealthCare internal verification and validation testing report 2015. DOC1677887.

[gehealthcare.com](https://www.gehealthcare.com)

Not all products or features are available in all markets. Full product technical specifications are available upon request. Contact a GE HealthCare Representative for more information. Please visit [www.gehealthcare.com/promotional-locations](https://www.gehealthcare.com/promotional-locations)

Data subject to change.

© 2023 GE HealthCare. GE is a trademark of General Electric Company used under trademark license. CARESCAPE, Carestation, Entropy, SPI, and TruSignal are trademarks of GE HealthCare. HL7 is a registered trademark of Health Level Seven International.

Reproduction in any form is forbidden without prior written permission from GE HealthCare. Nothing in this material should be used to diagnose or treat any disease or condition. Readers must consult a healthcare professional.

JB27070XX December 2023



GE HealthCare