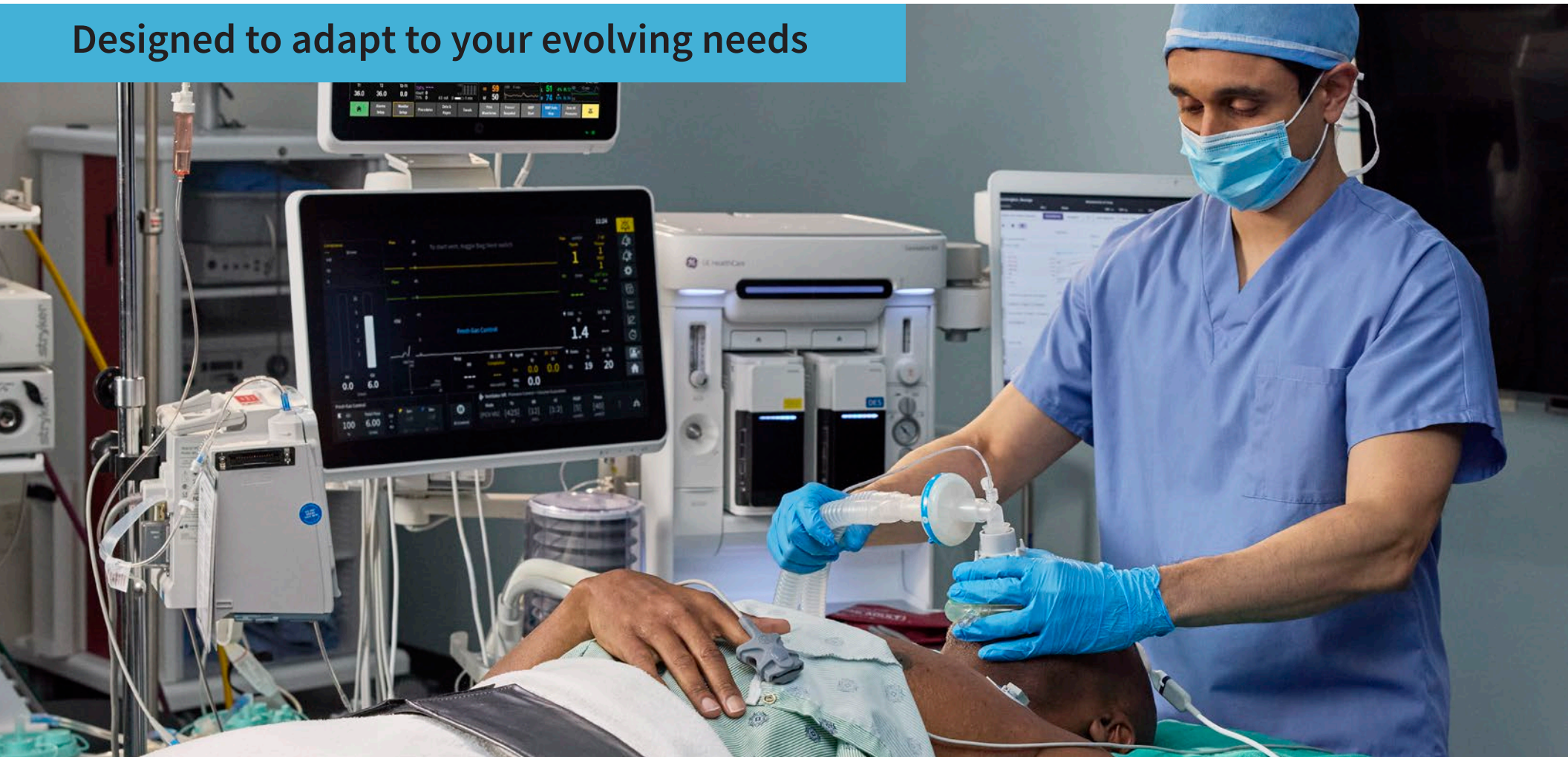GE HealthCare

Carestation™ 850
Anaesthesia Delivery System

Designed to adapt to your evolving needs

Advanced technology for today—adaptable for tomorrow

Your anaesthesia delivery needs are continually changing, workloads are increasing, and your technology must not only keep up, but be poised for the future.

GE HealthCare, committed to innovation, brings you our latest technological advancement in anaesthesia care—the Carestation™ 850 anaesthesia delivery system.

The Carestation 850 is designed to adapt, for you, your patients and the future of anaesthesia care.

You will experience innovative technology and have access to an evolving network of continuously optimized algorithms, automations, and applications that are designed to streamline workflows, while helping protect your patients, the environment, and your investment.

Carestation 850 anaesthesia delivery system, with the Carescape Canvas™ patient monitor

Tailored for today

Enable clinical precision for patients, from neonates to adults, with smart tools and customizable applications that aim to adapt to the needs of each patient.

Responsive to changing needs

Ease your experience and workflow while optimally delivering anaesthesia care with our large display and user-friendly interface, advanced automation, and personalized clinician presets by patient or procedure.

Ready for tomorrow

Navigate the evolving landscape of anaesthesia care with a forward thinking solution — built with your needs in mind for more sustainable practice, proactive maintenance, and access to innovative technology through a future-focused hardware and software design.

Tailored for today

Clinical precision for each patient

The next generation of GE HealthCare's technology empowers you to deliver more exceptional patient care.

Administer low-flow anaesthesia with ease

Low-flow anaesthesia reduces agent waste, costs, and environmental impact[1], but it demands continual clinician oversight and manual adjustments to maintain safe and effective delivery. End-tidal (Et) Control software* automates agent and oxygen delivery, aiming to achieve these benefits, while you focus on your patient.

Et Control: Enhancing anaesthesia delivery with precision and efficiency

Designed to complement your expertise in managing complex cases in the operating room, GE HealthCare's proprietary Et Control software allows you to set targets for end-tidal oxygen (EtO_2) and anaesthetic agent (EtAA). Et Control automatically adjusts fresh gas concentrations to quickly achieve and maintain those targets, regardless of changes in the patient's hemodynamic and metabolic status.

When compared to manual fresh gas flow (FGF) control, studies have shown using Et Control software offers:

90%
Fast, low-flow control
Reach 90% of your target EtAA within an average of 90 seconds.[2] Maintains targets at minimal flow rates.

>50%
Reduced workloads
One study shows Et Control can reduce the number of key presses by >50% to help simplify adoption of low-flow strategies by your staff.[3]

2X
Vigilant patient support
According to one study Et Control is twice as accurate in maintaining the set EtO_2 and EtAA regardless of patient status.[3]

1. Sen, E., *et al.* The effects of end-tidal controlled low-flow anesthesia on anesthetic agent consumption in elective surgeries: randomized controlled trial. *BMC Anesthesiol* 25, 176 (2025). https://doi.org/10.1186/s12871-025-03051-9.

2. MASTER trial published data, McCabe, M., *et al.* End-tidal control versus manual control of inhalational anesthesia delivery: a randomized controlled noninferiority trial, *Anesthesia & Analgesia* (2024).

3. S. Singaravelu and P. Barclay, Automated control of end-tidal inhalation anaesthetic concentration using the GE Aisys Carestation. *British Journal of Anaesthesia*; 110 (4): 561–6. (2013).

* Et Control in the United States is indicated for patients 18 years of age and older.
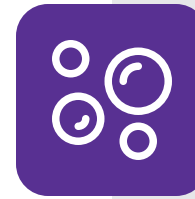
Serenity™: Your smart vaporization ally in helping deliver efficient anaesthesia care

Helping you deliver patient-centered care:
- Refill while delivering anaesthetic agent to the patient (fill-on-the-fly) without stopping delivery or impacting output accuracy.
- Audible and visual warnings alert you at 30 min, 15 min, and 5 min to empty, which may help prevent patient accidental awareness.
- Automatic leak protection helps minimize exposure to anaesthetic agent.
- Regular self-calibration enables accurate performance and consistency in delivery.

Improving your experience:
- Touch screen display with easy-to-use interface.
- Dynamic display of remaining liquid agent and "time to empty" based on current fresh gas flows and concentration.

Helping optimize performance and cost of ownership:
- No planned maintenance or mandatory part replacement within 10-year expected operational life.
- Non-spill system protects internal components and helps maintain output, even if previously tilted or inverted while handling.
- Extensive data output for anaesthetic record keeping, agent utilization monitoring, and service logs (including drop detection).
- Service and part replacement available to support continued use.

Ventilate with speed and precision

Designed to help you manage even the most challenging patients, the Carestation 850 anaesthesia delivery system equips you with advanced tools for precise ventilation. Featuring a novel ventilation engine, the Carestation 850 uses an electromagnetic proportional flow valve to control volumes and pressures with the same accuracy as ICU ventilators. This enables you to quickly reach and maintain your desired pressures and volumes, maximizing your patient's time available for gas exchange, which may lead to better outcomes.

Confidently ventilate the smallest of neonates with speed, accuracy and precision with tidal volumes as low as 5 mL in PCV-VG mode.

Circuit compliance compensation accounts for the volume in the patient circuit to ensure that what you set is what is being delivered to the patient.

30 ms   Responds to patient demand in less than 30 ms.[1]

250 times/sec   Monitors and responds to changes in the patient's airway pressure and respiratory efforts up to 250 times per second. [1]

3.0 L   Small, 3.0 L compact breathing system enables rapid wash-in and wash-out.[1]

Fresh gas is always delivered to your patient at the start of a breath, so the patient can quickly receive any desired gas concentration changes.

Designed to deliver precise, individualized care to even the smallest of neonates.

1. GE HealthCare internal document, DOC2156065.

May help reduce postoperative pulmonary complications

Perioperative lung protective ventilation (LPV) can help reduce postoperative pulmonary complications (PPCs) and improve patient outcomes.[1]

Several studies have shown that on average, 1 in 4 surgical patients is at an increased risk of PPCs, highlighting the need for clinicians to use LPV strategies consistently.[2]

The Carestation 850 is equipped with specialized LPV tools that are designed to allow you to implement automated lung recruitment maneuvers with ease. By configuring programmable steps, you may fine-tune PEEP levels during mechanical ventilation, supporting your ability to protect your patient's lungs throughout their procedure.*

Predicted body weight (PBW) calculator
Save time with automatically proposed initial lung protective tidal volume settings (6–8 mL/kg) and respiratory rate based on the patient's height and calculated PBW.

Automated lung recruitment maneuvers
Automate the manual "squeeze and hold" bag technique using programmable steps. Set "PEEP on Exit" to prevent de-recruitment and maintain an "open lung."

Real-time compliance trending
Displays compliance measurements in real time to help you assess the patient's lung condition and effectiveness of automated lung recruitment maneuvers.

Driving pressure measurements
Help prevent lung overdistention and barotrauma by monitoring P_{drive}. This means no need to calculate P_{drive} to help avoid PPCs when balancing alveolar pressures with adequate ventilatory support.

1. Futier, E., M.D., Constantin, J., M.D., PhD., *et al.* A Trial of Intraoperative Low-Tidal-Volume Ventilation in Abdominal Surgery. *The New England Journal of Medicine*, 369(5) (2013). doi:10.341/f.718056191.793482037.

2. A. Miskovic, A. B. Lumb, Postoperative pulmonary complications, *BJA: British Journal of Anaesthesia*, Volume 118, Issue 3, March 2017, Pages 317–334, https://doi.org/10.1093/bja/aex002

* Improvements are dependent on individual patient types and clinician practice.

Responsive to changing needs

The next generation of GE HealthCare's anaesthesia technology is designed to ease your workflow while helping you deliver exceptional anaesthesia care.

With the Carestation 850 hardware and software working in harmony, you can focus on what really matters — your patient.

Your user experience is transformed, from the physical to the digital.

A minimal footprint with maximum flexibility allows you to comfortably position your widescreen display in any surgical space.

- **22" touchscreen display:** With a user-friendly interface, including simplified navigation.

- **Flexible arms:** Extend, tilt, raise, lower and swivel 360 degrees so you can stay close to your patient and have controls at easy reach.

- **Intelligent lighting:** Focus your attention where it matters most.

- **Customizable case profiles:** Up to 100, including preset alarm limits, apnea time, ventilation parameters, gas mix, and other essential parameters based on patient characteristics, procedure type, or other provider preference.*

- **Smart menus:** Fresh gas flow, oxygen, anaesthetic agent and ventilator modes can be adjusted in less than three seconds with task-specific, quick-pick menus.

- **Pause gas flow:** A simple process temporarily stops all gas flows, agent delivery, and ventilation, as well as suspends alarms, allowing you to respond to critical patient needs.

- **Auto alarm limits:** To help reduce alarm fatigue, easily manage upper and lower alarm limits for MV, TV, RR and $EtCO_2$ on a case-by-case basis.

- **Fast, complete guided checkout:** Comprehensive system checkout, including leak and vaporizer checks, with option for expedited circuit compliance check between cases.
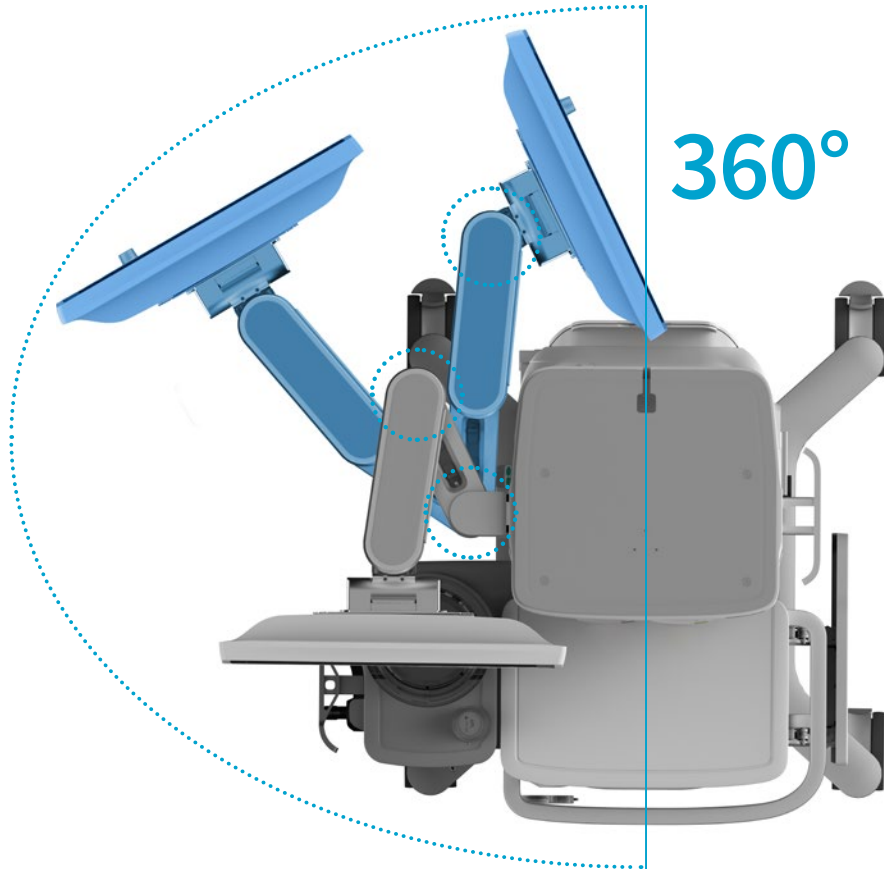

Easy-to-position display allows you to see data from wherever you are in your surgical space.

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* Clinicians review and adjust parameters prior to starting each case.

Discover improved ergonomics and control of your OR environment

Your experience may be enhanced with features designed to ease your workflow and help you be more efficient, so you can focus on your patient.

360°

Ample storage and cable management help keep your OR efficient with minimized hazards.

22"

A full-function premium arm supports the display.

With extend, tilt, raise, lower and 360-degree swivel, you have maximum flexibility to stay close to the patient and have all controls within easy reach. The display can be positioned for optimal viewing even if you need to step or move into an alternative position without compromising your view.

See data at a glance on a large, 22" touchscreen display with an expanded, user-friendly experience.

- Simplified navigation
- Clear data visualization
- Magnification

Streamline your workflow with smart vaporization

Trust in the Carestation 850, designed with advanced digital control over ventilation, gas delivery, and agent vaporization aiming to deliver the speed, precision, and accuracy you request. Serenity, our latest in vaporizer technology, has a fill-on-the-fly, self-contained design, enabling you to deliver anaesthesia, uninterrupted. Advanced alarms, including time-to-empty and refill alerts, give you greater control to proactively manage cases and minimize disruptions.

Ready for tomorrow

Navigate the evolving landscape of anaesthesia care with a forward thinking solution — built with your needs in mind for more sustainable practice, proactive maintenance, and access to exceptional technology through a future-focused hardware and software design.

Simplifying maintenance procedures

Be ready for the ORs of tomorrow

Intelligent separation enables a secure, seamless experience.

Harness the power of two dedicated computing systems — one focused on precise, reliable patient therapy, and the other delivering advanced connectivity for secure device communication and remote serviceability. This smart separation supports uninterrupted care while enabling continuous innovation.

Keep your machine current with embedded upgradeability.

Thanks to advanced engineering and robust cybersecurity features, you can confidently embrace today's digital innovations and be prepared for tomorrow's technology:

- **Future-ready:** Extra computing power to accommodate smart tools and features.
- **Connectivity:** Built-in Wi-Fi antenna and ports reserved for future integration.

Be ready for tomorrow by meeting your sustainability goals today.

Support your hospital's eco friendly practices with analytics and emission control practices. With low-flow automation, you can reduce your anaesthetic agent by up to 40%.[1]
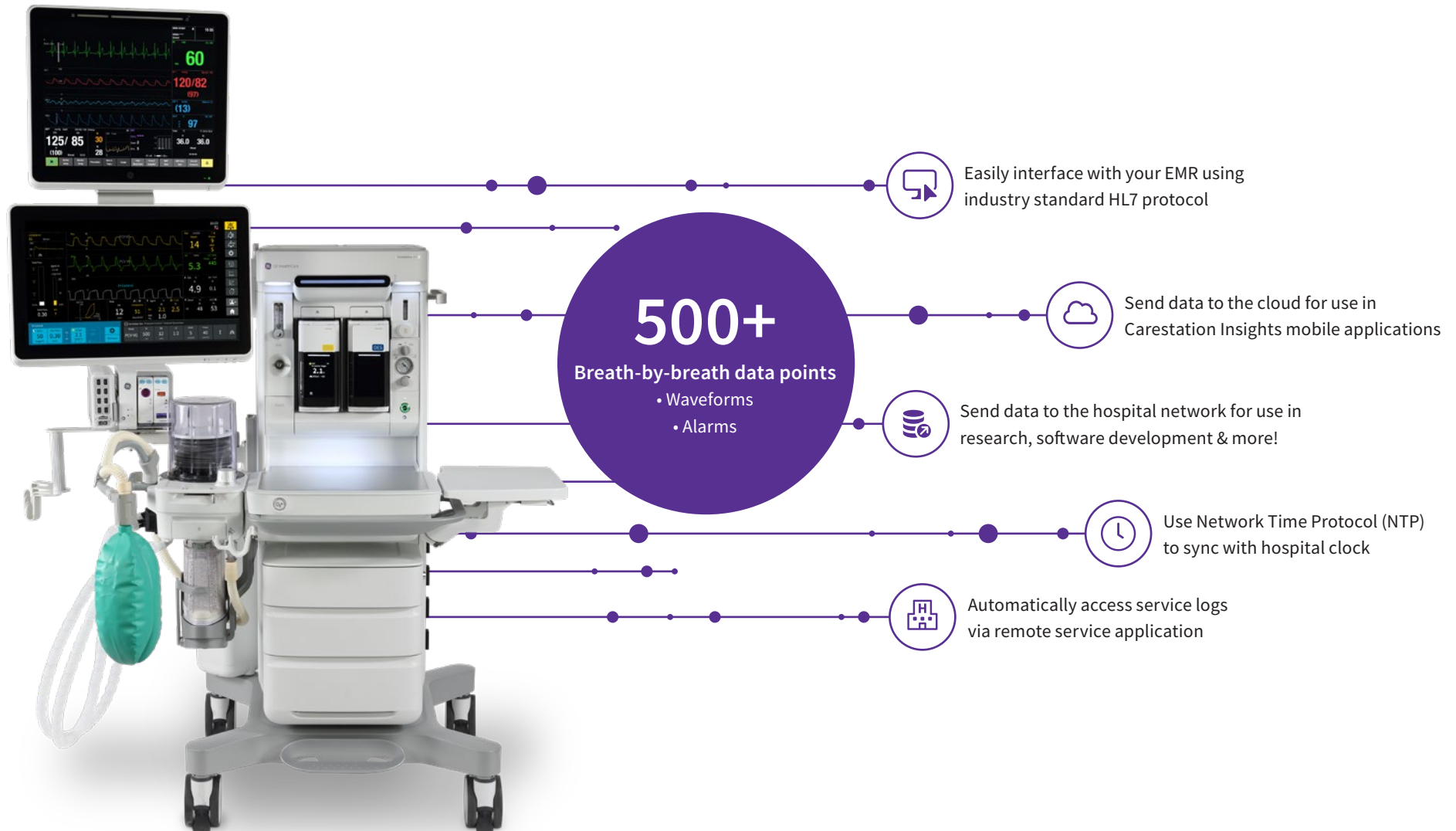
Keep your machine at peak performance and ready for care.

Optimize performance and maintenance costs and get the most out of each machine's lifecycle:
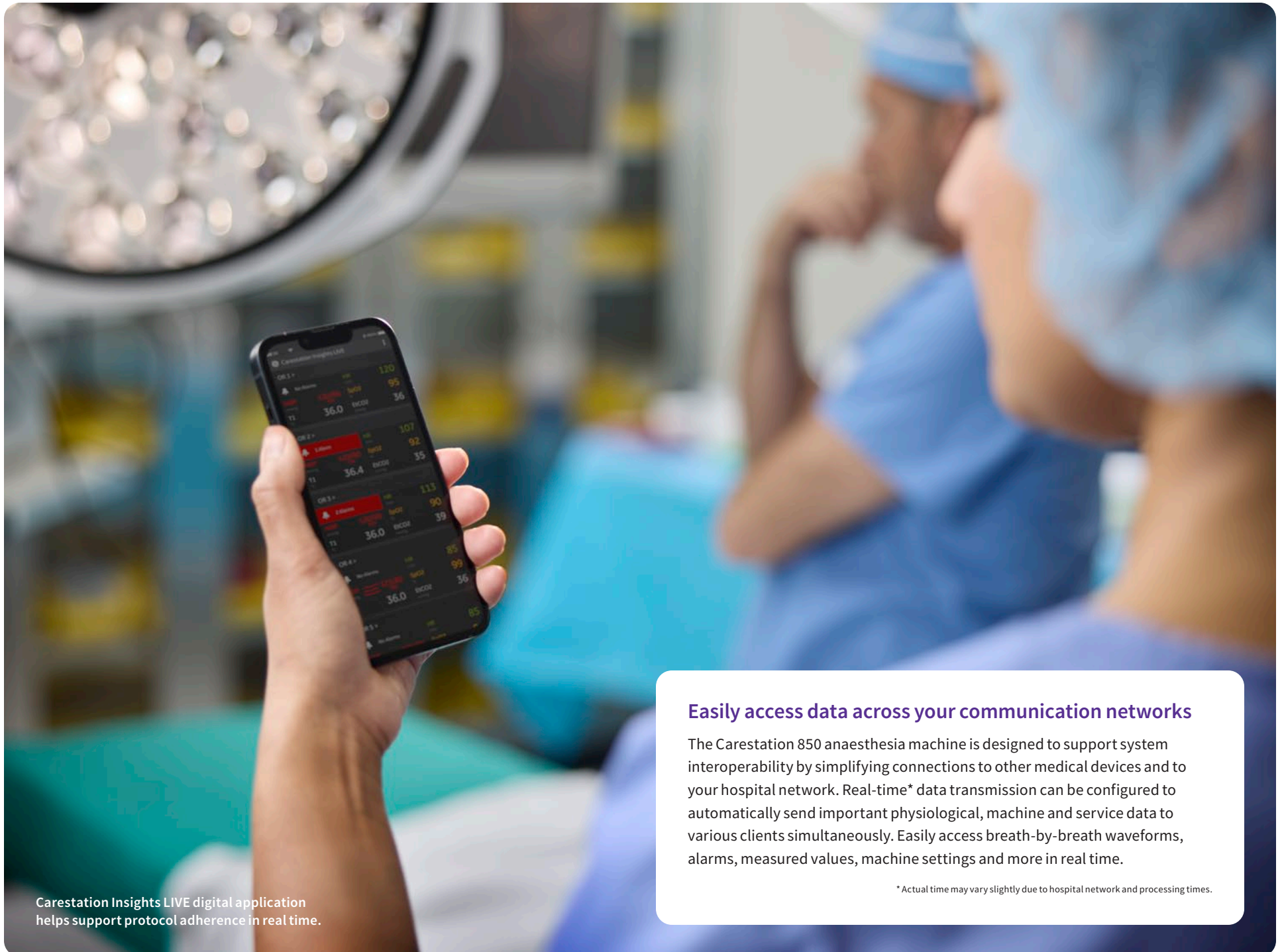
- **Reduced downtime:** Remote service capabilities minimize machine downtime.
- **Easy maintenance and cleaning:** User-friendly service and productivity tools make maintenance more efficient. The machine's modular design allows for easy removal of self-contained subsystems with no special tools required and simplifies cleaning and maintenance.
- **Proactive updates:** Software updates direct to machine via e-delivery help keep it up to date and secure.
- **Cost-effective maintenance:** Designed to reduce total cost of ownership.

1. Tay. S, *et al.* Financial and environmental costs of manual versus automated control of end-tidal gas concentrations, *Anaesth Intensive Care* (2013); 41: 95–101.

Seamless connectivity designed to give you faster insights where and when you need them.

500+
Breath-by-breath data points
• Waveforms
• Alarms

Easily interface with your EMR using industry standard HL7 protocol

Send data to the cloud for use in Carestation Insights mobile applications

Send data to the hospital network for use in research, software development & more!

Use Network Time Protocol (NTP) to sync with hospital clock

Automatically access service logs via remote service application

Carestation Insights LIVE digital application helps support protocol adherence in real time.

Easily access data across your communication networks

The Carestation 850 anaesthesia machine is designed to support system interoperability by simplifying connections to other medical devices and to your hospital network. Real-time* data transmission can be configured to automatically send important physiological, machine and service data to various clients simultaneously. Easily access breath-by-breath waveforms, alarms, measured values, machine settings and more in real time.

* Actual time may vary slightly due to hospital network and processing times.

Integrated solutions complete your patient care

Focusing on your patient's care needs, we offer an array of integrated solutions that aim to support your surgical and procedural activities no matter where they occur. Critical capabilities, flexible workflow options and confident decision-making tools may help optimize a variety of surgical and procedural environments for the best possible care.
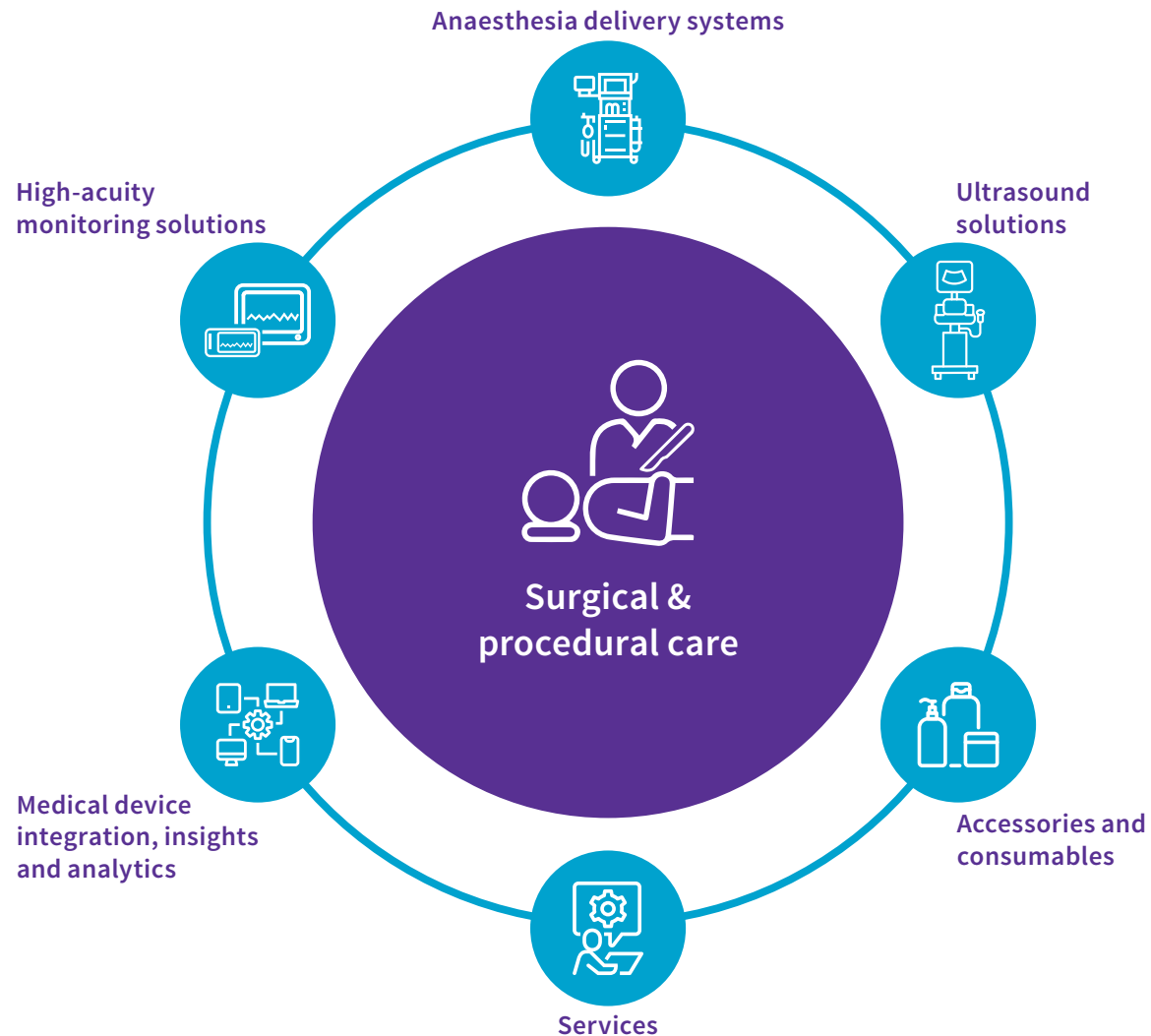
We're committed to providing quality solutions for patient needs wherever they receive care.

In addition to quality anaesthesia delivery systems, you can benefit from a broad portfolio of solutions providing a premium experience for you and your care teams.

Take advantage of exceptional patient monitoring systems, ultrasound devices, consumables and accessories that are enabled with premium digital capabilities and supported by GE HealthCare service. So, you have the devices, data and support you need to elevate patient care across the care pathway.

Anaesthesia delivery systems

Ultrasound solutions

High-acuity monitoring solutions

Surgical & procedural care

Medical device integration, insights and analytics

Accessories and consumables

Services

Transform complex data into actionable insights

Mobile applications inform your decisions for better care and best practices

Once the Carestation 850 anaesthesia machine and Carescape patient monitors are connected to the hospital network, use Carestation Insights mobile applications to help you identify opportunities that may:

- Improve perioperative productivity
- Reduce operating costs and optimize revenue
- Standardize best practices across anaesthesia providers

This intelligent OR ecosystem automatically captures and analyzes high-fidelity case data. Our applications use advanced algorithms to interpret this data and uncover actionable insights that are displayed on your personal devices: desktop, laptop, tablet and smart phone. Use these insights to help improve patient care and support your operational and financial goals.

OR Digital Ecosystem

Retrospective analysis
Departmental view of protocols. Visibility into results and trends.
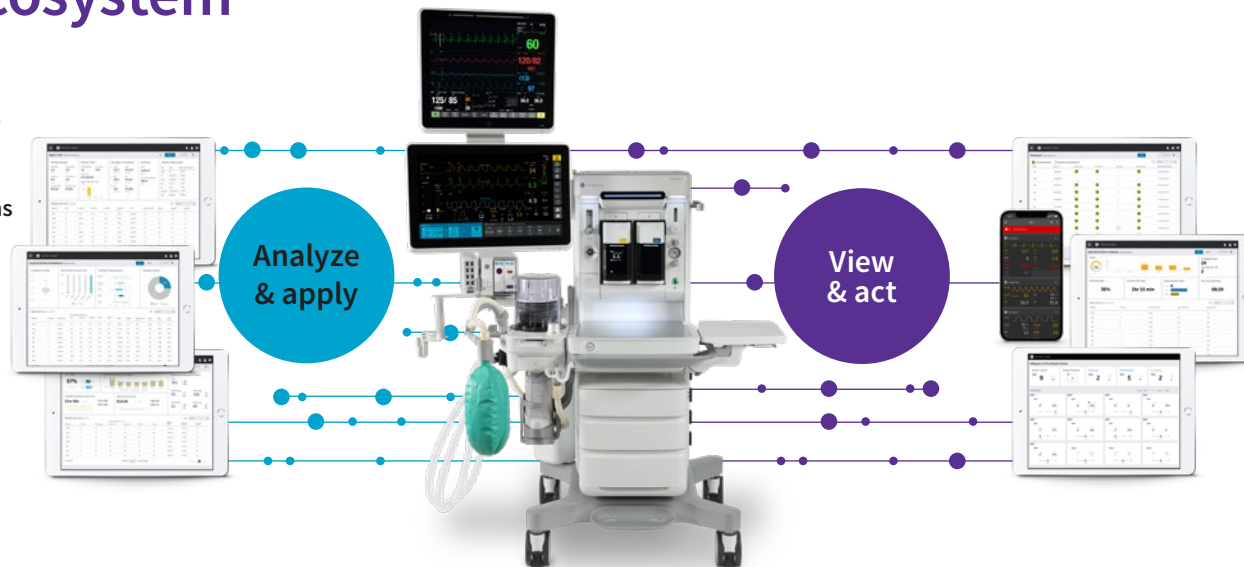
Carestation Insights applications
- Agent Cost
- Lung Protective Ventilation
- OR Workflow
- Adequacy of Anaesthesia (AoA)

Analyze & apply

View & act

Live view
Support protocol adherence in real time.* Remote supervision.

Carestation Insights applications
- LIVE
- Checkout
- OR Workflow
- Adequacy of Anaesthesia (AoA)

Carestation 850 anaesthesia machine and Carescape patient monitors

* Actual time may vary slightly due to hospital network and processing times.

Carescape patient monitors — a perfect OR pairing

Enhance patient care with Carescape patient monitors

You can rely on the Carescape™ patient monitoring platform, a FlexAcuity™ solution, to help you make the best decisions for each of your patients. We can help you optimize care across different patient populations with robust parameters that deliver the accuracy you need to make proactive clinical decisions from the OR to the bedside.

A standard user interface on the Carestation anaesthesia machine and the GE HealthCare patient monitor helps reduce training time, so you can easily follow your patients from transport to bedside.

Deliver precise anaesthesia with Adequacy of Anesthesia (AoA)

Adequacy of Anesthesia (AoA) is a concept consisting of various unique parameters to help you assess a patient's response to the delivery of inhaled and intravenous hypnotics, opioids, and other analgesic drugs, as well as neuromuscular blocking agents, during general anaesthesia.

GE HealthCare's unique parameters provide continuous measurements for each of these components:

- Level of consciousness and amnesia with **Entropy™**
- Nociception-antinociception balance with **Surgical Pleth Index (SPI™)***
- Muscle relaxation and immobility with neuromuscular transmission **(NMT)**
- Autonomic stability with hemodynamic parameters

The Carescape monitor offers a holistic view of the patient's response to anaesthesia with its AoA split-screen. The monitor displays values and trends obtained from parameter modules for SPI, Entropy (State Entropy SE, Response Entropy RE and burst suppression ratio), and NMT.

The monitor's BalanceView feature provides clear visualization of the patient's response to changes in anaesthesia conditions, helping you to adjust the analgesic levels and optimize patient consciousness to the desired level.

Carescape Canvas
1000 monitor

BalanceView screen

Carescape ONE intra-hospital
transport monitor
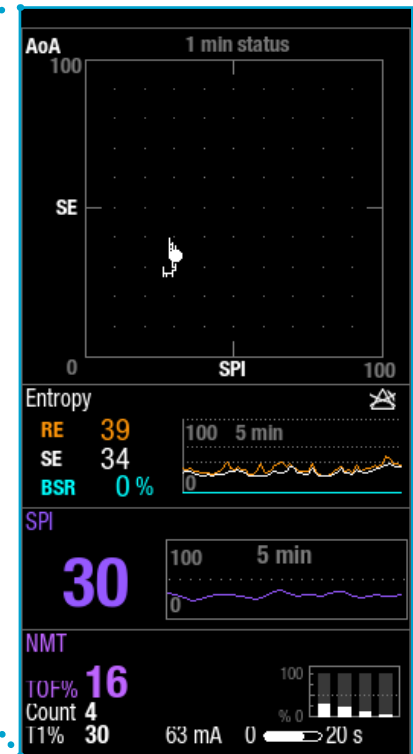
* SPI is not available in the US or Japan.

Keep operating smoothly.
Find everything you need from us.

Vaporizer bottle adapters ⊕

Patient breathing tubes, circuits and bags ⊕

Breathing masks ⊕

CO₂ absorbers ⊕

Flow sensors ⊕

Quality accessories you can count on

Every moment in the OR is critical for you and your patients. Quality and uptime cannot be compromised, and that is why GE HealthCare offers you a reliable, one-stop solution for compatible supplies and accessories. With an expansive portfolio verified by our engineers, you can rest easy knowing you are using high-quality components that optimize machine performance. This includes a simple, single point of contact for all questions, accessories and service needs for your GE HealthCare equipment.

⊕ **Breathing masks**

⊕ **Flow sensors**

⊕ **Patient breathing tubes, circuits and bags**

⊕ **CO$_2$ absorbers**

⊕ **Vaporizer bottle adapters**

⊕ **Adequacy of Anesthesia (AoA) accessories:** Entropy, NMT, and TruSignal SpO$_2$ sensors*

* TruSignal sensor required for SPI measurement.

Ultrasound systems designed with your needs in mind

Experience ultrasound solutions that address your challenges and achieve the accuracy you need with AI-enabled tools that support your critical decisions. Designed to help reduce healthcare-acquired infection, the Venue Go™ offers a compact, portable solution that endures the demands of the OR environment, giving you more confidence to care for your patients.

A trusted anaesthesia delivery platform that continues to evolve and grow

Analog system ——————————————————————— Fully digital

Scalable ——————————————————————————— Upgradable

Precision care ————————————————————————— Precision care

Secure ——————————————————————————————— Secure

Carestation 620   **Carestation 650**   **Carestation 750**   **Carestation 850**
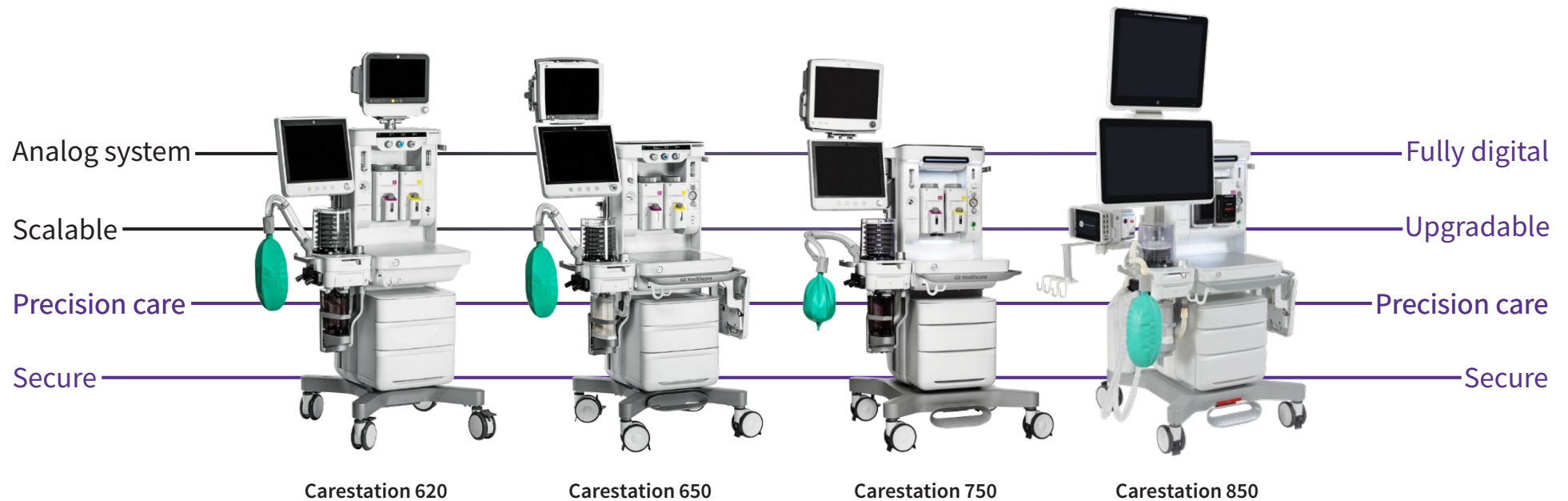
Scalable. Tailored. Connected. Protected

Portfolio-wide secure, precision care, with additional digital options and extended functionality to help ensure the best possible patient care and long-term value for your healthcare enterprise.

Sustainability for the future matters to you. And us.

Helping you achieve sustainability goals while elevating patient care

Our tools and technologies are designed to support your hospital's eco-friendly practices with the goal of elevating patient care, together.

Et Control Software

Build confidence when you use the Carestation 850 anaesthesia delivery system with Et Control* instead of relying on manual adjustments for managing agent and O_2 delivery. This software allows you to practice precise low-flow anaesthesia, while helping hospitals reduce GHG emissions by more than 40%[1] according to one study.

Carestation Insights Agent Cost Application

This convenient tool analyzes anaesthetic agent usage for each case and tracks trends across different ORs. The information is displayed in a user-friendly app to help you drive compliance to low-flow initiatives and track environmental impact.

AMSORB® Plus CO_2 Absorbent

The unique absorbent formulation breaks down into harmless organic compounds, so it's easier on patients and staff and potentially simpler to dispose of by not going into medical waste. The violet color indicator lets you know when it's time to change the canister, so you produce less waste.

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