

GE Healthcare

# Avance Carestation

Innovating with you, shaping exceptional care



# Clinician inspired perioperative solutions



GE's Avance® Carestation® was developed using Datex-Ohmeda's unique approach to perioperative solutions – close and continuous collaboration with clinicians. With you as our guide, we designed a compact, integrated anesthesia carestation that combines our highly advanced anesthesia delivery, the very best in anesthesia patient monitoring, and information management. By combining these care elements with our supplies and services, we deliver an essential component of your integrated perioperative solution.

### **Simply the best anesthesia ventilation**

You asked for sophisticated ventilation capabilities that help you meet the needs of the full patient range. The Avance satisfies your request with the 7900 SmartVent™ ventilator. Ventilation capabilities include: Volume Control, Pressure Control, PSVPro, SIMV (Volume and Pressure), and manual ventilation.

The SmartVent uses a similar gas delivery system to that found in most critical care ventilators, yet has been adapted specifically for anesthesia applications and is easily controlled via our intuitive user interface.

The SmartVent's latest modes, Synchronized Intermittent Mandatory Ventilation (SIMV) with Pressure Support and PSVPro® (Pressure Support with Apnea backup mode), expand the clinical capabilities of the Avance to help meet the needs of your patients. With an adjustable flow trigger, electronic PEEP and an apnea backup mode, the SIMV and PSVPro modes help simplify the work of caring for your spontaneously breathing patients. Pediatric patients, patients with laryngeal mask airways (LMAs) and those that cannot tolerate certain anesthetic agents are examples of persons that will benefit from the use of these modes.

Avance is now available with Pressure Control Ventilation - Volume Guaranteed (PCV-VG) mode on SmartVent. PCV-VG provides the physiological benefits of pressure ventilation, with the added security of consistent tidal volume. Combining the best of pressure and volume ventilation.

## Setting the standard for electronic gas mixing

Incredible response time and accuracy provides you with the ultimate in fresh gas control and efficiency.

- Low flow anesthesia supported: minimum gas flow of 150 mL/min.
- 500 millisecond mixer response time – even for dramatic flow changes. This allows you to deliver exactly what you want, exactly when you want it.
- Since the mixer delivers fresh gas directly to the inspiratory port on your command, there is no fresh gas or agent wasted to “charge the circuit”. This facilitates low flow clinical practices – even when changing from very high flows to very low flows.
- Intuitive and fast setting of fresh gas flow mixture makes using our state-of-the-art gas mixer easy.
- Dual flow sensing technology helps ensure safe operation. Gas flow is checked 200 times per second to insure the carestation is delivering the proper blend based on your setting.
- Electronic cylinder pressure sensing technology alerts you when cylinders are low.
- Alternate O<sub>2</sub> control provides an independent fresh gas source and flow meter control when required – helping you to support your patient under unforeseen conditions.







### **Advanced Breathing System (ABS)**

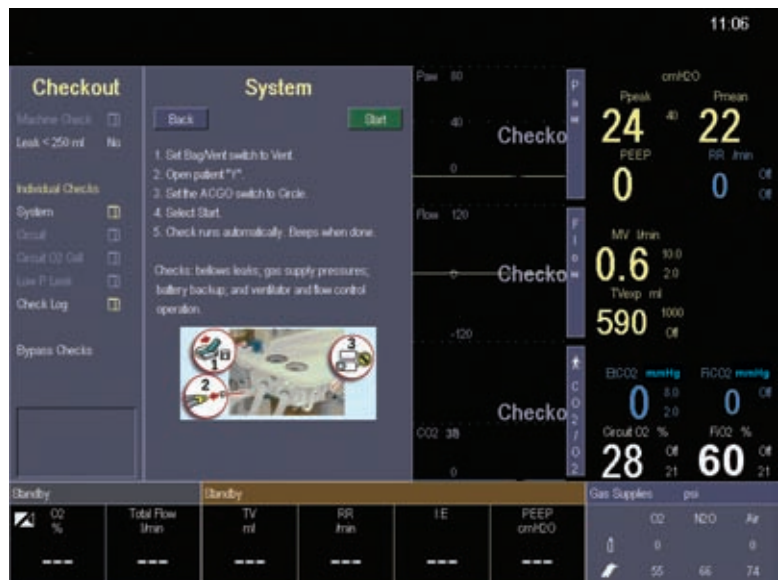
The Avance comes equipped with our Advanced Breathing System, the ABS™. Its design, based on your needs and our expertise, is fully integrated into the carestation.

- Fewer parts and connections reduce the potential for leaks and misconnects, helping to provide greater patient safety.
- Our Multi Absorber canister facilitates fast, easy removal and replacement.
- Fully autoclavable.
- Choice of gas scavenging options helps provide compatibility with your existing waste gas system.
- Easy on/off capability and no tools disassembly of the ABS facilitates easier cleaning and reduces maintenance time.

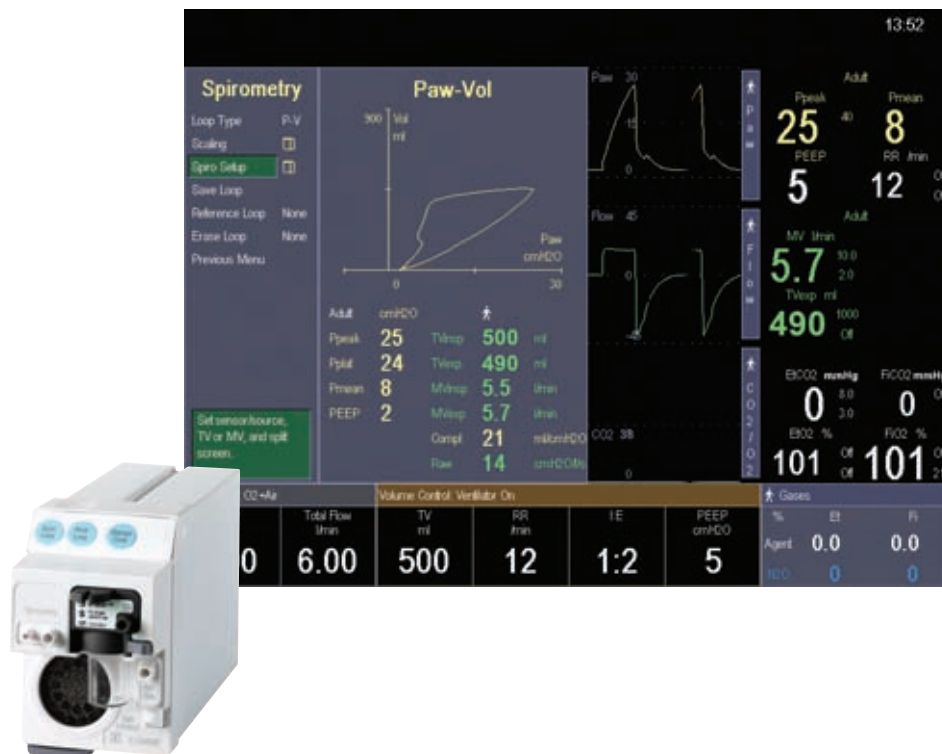
# Enhancing your productivity

Special features of the Avance make it easy to use and enable you to focus more attention on your patient.

- System checkout is fast and intuitive, with full-color photo images to illustrate each step and confirmation tones when each test is complete. A real-time clock displays time to complete each test and the date and time it passed.
- Patient trends can be displayed in three views: measured (numerical), settings, and graphical. Trend data is saved every five minutes for the most recent 48 hours and every 30 minutes from 48 hours to 14 days.
- Quick Keys let you easily change O<sub>2</sub> and total flow settings. You can use Vent Setup keys to enter and change multiple settings and one button to confirm them.
- You can press any Gas or Vent key to take the machine out of standby and initiate gas flow to start the case, essential for emergency cases.
- An 8-second power-down delay protects against accidental shutdown during a case.



Patient Spirometry™ measures airway pressures, flow, volumes, compliance and airway resistance breath by breath. On the Avance ventilation screen, the spirometry information is displayed as graphical loops, which may help you detect leaks or obstructions in the airway and adjust optimal ventilator settings. Because the spirometry loops are saveable, Patient Spirometry offers you an intuitive tool for detecting changes in the patient's ventilatory status.



- Optional gas module can be physically integrated into Avance for Patient Spirometry
- Airway gases CO<sub>2</sub>, O<sub>2</sub> and N<sub>2</sub>O and anesthetic agent measurement with automatic identification
- Patient Spirometry measured at the patient's airway as shown on the Avance ventilation screen
- A complete and integrated picture of your patient's ventilatory status

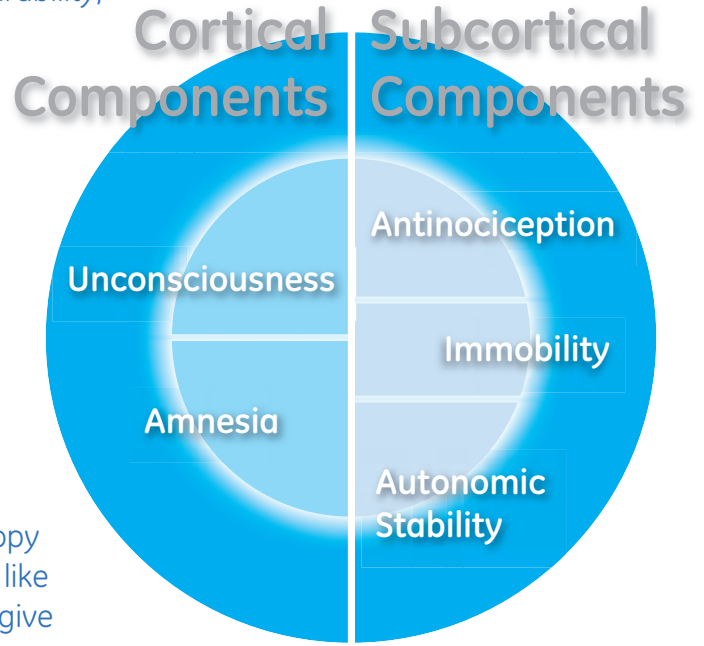
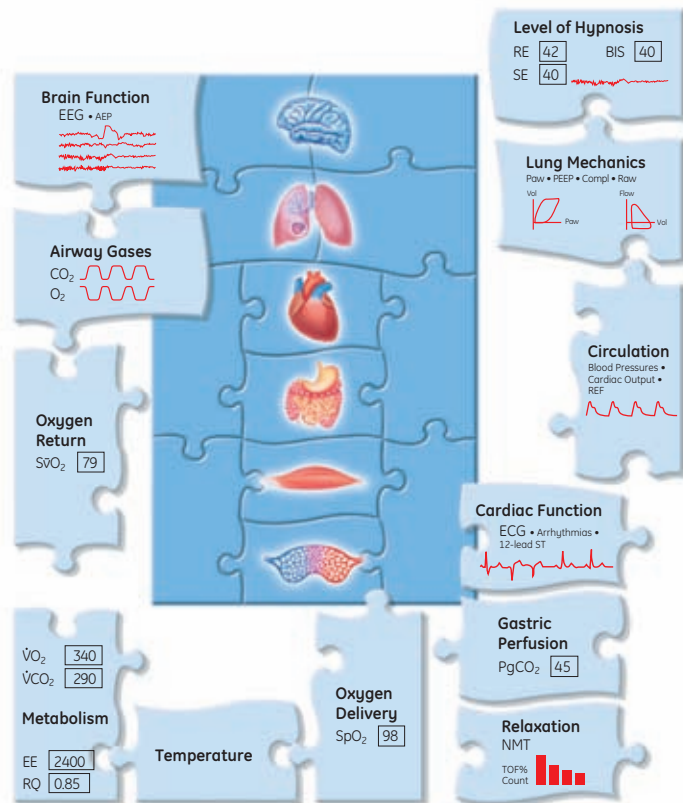
# Patient monitoring made easy

The Datex-Ohmeda Anesthesia Monitor gives you the time and freedom to monitor your patient effectively. It offers what you need for effortless patient monitoring in the OR and beyond – a full range of monitoring parameters, intuitive use, modular configurability, transparent device integration, and data transfer.

## The most complete Anesthesia Monitor

The Datex-Ohmeda Anesthesia Monitor, incorporates the vital parameters for anesthesia. In addition to the standard measurements the modular system is expandable for more demanding operations with special needs. The flexible modular frame allows implementation of future enhancements.

The latest addition to the range of clinical parameters is the Entropy technology for monitoring the effects of certain anesthetics on the central nervous system of your patient. Combining the information gained by entropy and the rest of the adequacy of anesthesia parameters, like hemodynamics and neuromuscular transmission, helps give you full understanding of the state of your patient.



The eye on anesthesia signals our commitment to providing you with the best and most complete range of clinical parameters to address the Adequacy of Anesthesia. It will also help to understand various components of anesthesia, specific effects of anesthetics, as well as drug interactions.

GE's anesthesia monitoring offers a variety of unique clinical concepts and a full range of parameters. Its modularity makes it highly adaptable in virtually every clinical situation.





- Hemodynamic measurements of ECG, NIBP, up to six invasive blood pressure channels, temperature, SpO<sub>2</sub> and respiration rate
- Add SvO<sub>2</sub>, cardiac output and alternative SpO<sub>2</sub> technologies to obtain a thorough view of your patient's hemodynamic status



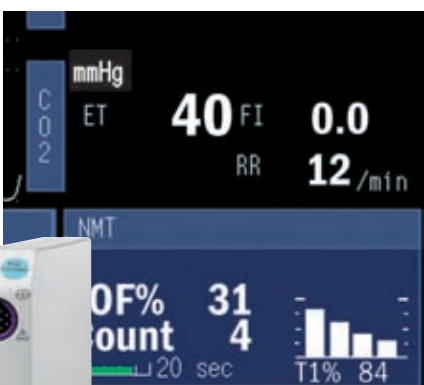
- 3-, 5- and 12-lead ECG with multi-lead arrhythmia analysis
- Adjustable ST alarms for lateral, inferior and anterior views of the heart
- Sophisticated trending displays your patient's ischemic status



- Unique Entropy algorithm designed for monitoring the state of the central nervous system during anesthesia
- Enables you to adjust the anesthesia according to individual needs
- Helps ensure faster and more predictable wake-up and extubation, and avoid unnecessarily deep anesthesia



- A sensitive tool for monitoring the neurophysiological status of the perioperative patient
- Compressed Spectral Array with Spectral Edge Frequency display trending
- Auditory Evoked Potentials for demanding neurological surgery close to the auditory nerves



- The NMT module measures the patient's individual response to nerve stimulation and regional block
- Continuous hands-free measurement
- All simulation modes (TOF, ST, DBS, PTC) to optimize the patient's level of relaxation

# Integrated solutions designed to enhance your care

Our constant cooperation and interaction with clinicians allows us to continuously refine and improve our user interface capabilities and identify valuable integration benefits. We recognize that making our carestations easy to use is absolutely one of the most important aspects we can provide to you and your practice.

## **Unique ergonomic advantages**

- Heralded user interface shared with all components of the carestation
- Consistent menus, quick key actions and alarm management help minimize the need for training and reduce complexity during critical and non-critical events
- One switch power up for the entire carestation
- Flexibility with different display options for monitored data
- Extra large work surface area – space to meet your needs
- LED light strip provides bi-level work surface illumination
- Mains electrical surge protection and battery backup provide operation capability even under abnormal power conditions

## **Support in decision making**

- By combining the set and measured inspiratory and expiratory gas values on the same full-color, 12 inch ventilation screen helps make the administration and control of gases delivered to the patient logical and easy to use
- Sophisticated, yet simple alarm management provides you with intelligent information when you need it most
- Help screens provide you with immediate assistance
- Strong commitment to enhancing the Avance's ability to provide decision support through intelligent parameter interaction

## **Make the right connection**

As we continuously improve care process management, we provide supplies and accessories solutions to optimize the efficiency of our carestation.



### **Information at the point of need**

The Network integrates monitoring, anesthesia delivery and care process management across the care areas. All essential information is stored, including cardiac, hemodynamic, neurological and respiratory waveforms full disclosure for up to 72 hours. The information can be accessed remotely in real time, for example between the ORs and the PACU or other care areas, and can also be stored permanently for later use. Viewing of information can happen between any two networked monitors, or through the iCentral and CARESCAPE Mobile Viewers (including Web Viewer, Pocket Viewer and Cellular Viewer).

- The iCentral and CARESCAPE Mobile Viewers give you an integrated view of the patient status, wherever you are. At the point of care, at the office, in transit or at home.
- The Anesthesia System is also an open platform that allows interfacing with third-party information management systems.

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