

# Aisys CS<sup>2</sup> Anesthesia Delivery System with End-tidal Control

## Confident control of low-flow anesthesia



End-tidal Control (Et Control)<sup>\*</sup> is an optional, fresh gas delivery software offered on the Aisys™ CS<sup>2</sup> Anesthesia Delivery System. This mode is simple, vigilant, and efficient at delivering low-flow anesthesia. It may also provide a way to help decrease greenhouse gas emissions from the volatile anesthetic agents wasted during general anesthesia.<sup>1</sup>

Et Control is designed to complement anesthesia providers' expertise in managing complex cases in the operating room. The provider sets the target End-tidal oxygen (EtO<sub>2</sub>) and the target End-tidal anesthetic agent (EtAA) values. The Et Control system monitors the Et O<sub>2</sub> and Et AA values and automatically adjusts the gas composition and total flow to maintain the set target values.



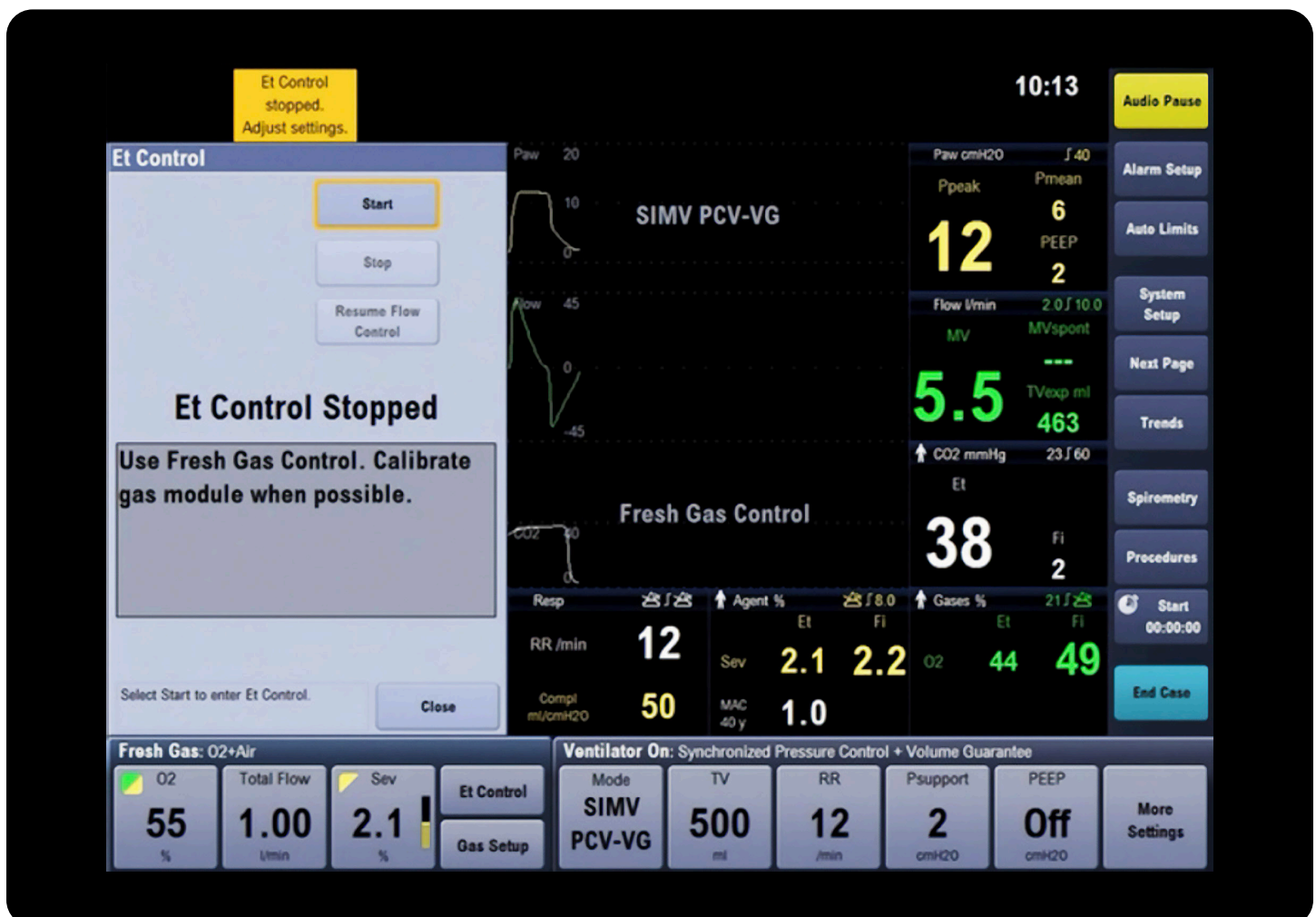
# Aisys CS<sup>2</sup> workstation with End-tidal Control safety mechanisms



Safety mechanisms such as system checks, leak checks, and accuracy checks occur automatically when in Et Control mode. The software continuously monitors the status of the anesthesia system for fault conditions.

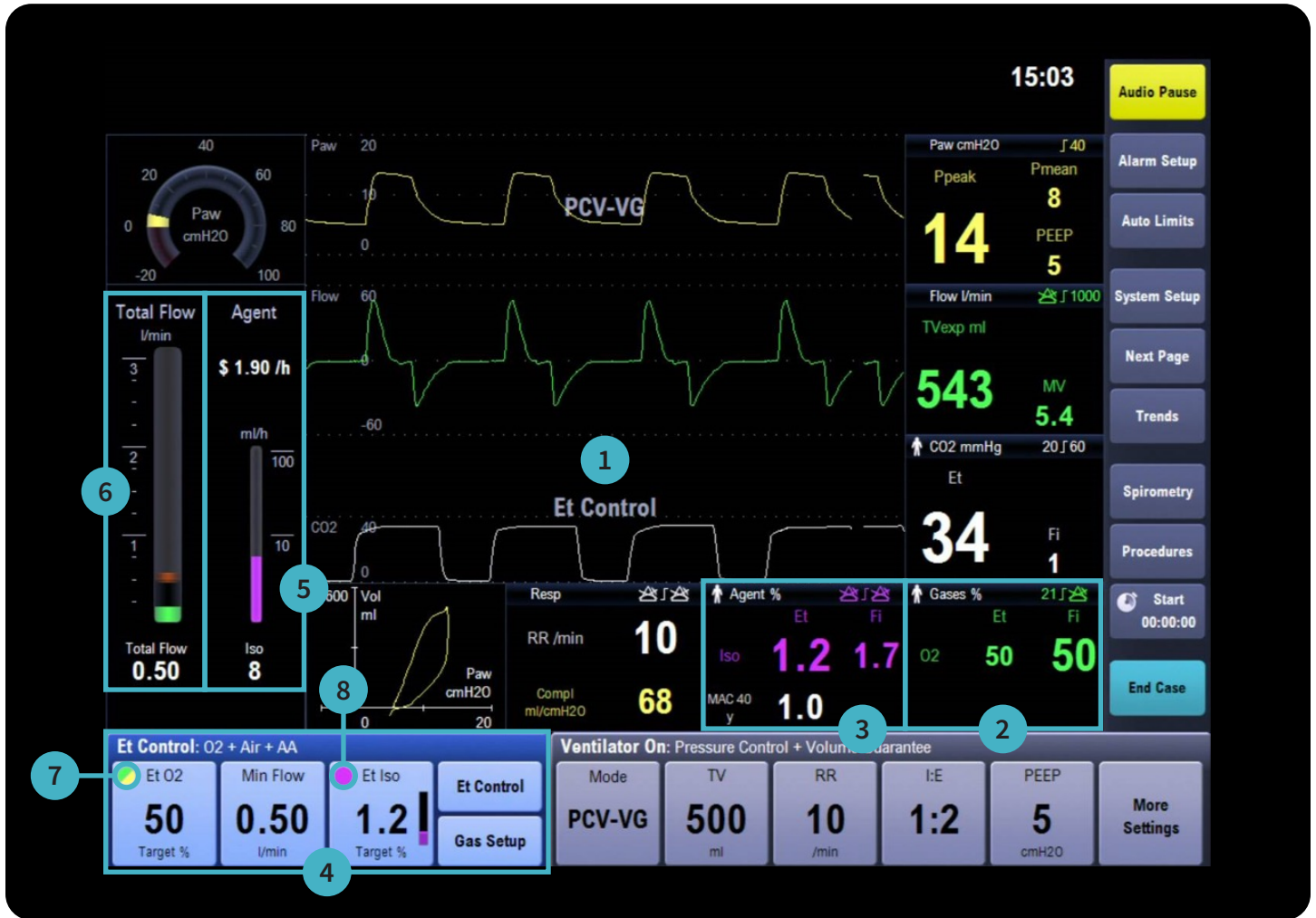
There are 5 safety mechanisms associated with Et Control:

- 1. Et Control Supervisor:** Ensures the controller is able to achieve the set target End-tidal control values to help prevent incorrect delivery of O<sub>2</sub> and agent
  - a. The check runs every 3 minutes in Et Control Mode and lasts 13.2 (±0.2) seconds
  - b. The fresh gas sample is taken from the anesthesia system instead of the sample line at the breathing circuit. The fresh gas reading is compared to the expected fresh gas output
- 2. Et Control System Check:** Ensures there are no leaks in the patient sampling line
  - If required, Check occurs upon entry into Et Control mode. Check will not occur if patient is pre-oxygenated prior to entering Et Control, and there are no leaks detected.*
- 3. Et Control Fresh Gas Sample Check:** Ensures the Carescape™ Respiratory Module is properly calibrated and measuring accurately
  - a. The check runs every 3 minutes in Et Control Mode and lasts 13.2 (±0.2) seconds
  - b. The fresh gas sample is taken from the anesthesia system instead of the sample line at the breathing circuit. The fresh gas reading is compared to the expected fresh gas output
- 4. Et Control Increased Flow:** Automatically increases fresh gas flows to ensure end target values are achieved
  - a. Et Control remains active in an increased flow state and increases flows to 6 l/min
  - b. Fresh gas concentrations are delivered to maintain a steady state
  - c. Normal flow is resumed automatically when the issue is resolved
- 5. Et Control Auto Exit:** Automatically exits out of Et Control when a detected issue cannot be resolved
  - a. If an issue is detected and cannot be resolved, the system will exit to Fresh Gas Mode and alert the user
  - b. Et Control button can be selected, and additional help information displayed



# Navigating the Et Control display

1. Waveform fields
2. Gases measured values
3. Agent measured values
4. Et Control settings
5. Vaporizer output (ml/h)
6. Electronic gas flow indicator
7. O2% indicator on the left and balance gas indicator on the right when in Et Control. Colors are associated with gas settings
8. Gas indicator when in Et Control mode. Color associated with gas settings. (+) Enhanced temperature sensing when in Et Control mode



\* Et Control in the United States is indicated for patients 18 years of age and older.

\*\* Refer to the Aisys CS<sup>2</sup> Et Control Option User's Reference Manual for conditions that will cause Et Control increased flow and Et Control Auto Exit states.

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.
2. GE HealthCare Et Control Pivotal Study Report DOC2163005.

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