



The *heart* and *soul*
of hemodynamic
monitoring

Technical Specifications

OptiQ CCO/SvO₂ Pulmonary Artery Catheters*

Usable Length (cm)	110
Catheter Description	8F PVC
Fully Inflated Balloon Diameter (mm)	13
Balloon Capacity (cc)	1.5
Introducer Size	8.5 or 9F
Distance Between Markings (cm)	10
Lumen Volume (ml)	
Distal Lumen	0.8
Proximal Lumen	0.8
DTPP/RV Infusion Lumen	0.8
Minimal Flow Rate[†] (mL/hr with 100 cm H ₂ O head)	
Distal Lumen	3.5
Proximal Lumen	9
DTPP/RV Infusion Lumen	3.5
Recommended Guide Wire Size (in)	
Distal Lumen	0.021
Thermistor	14K ohms ± 15% at 37°C
Balloon Inflation Syringe	3cc limited to 1.5cc

*Models: OptiQ 52509 Q-tip w/ Heparin, OptiQ 52511 Q-Tip w/o Heparin, OptiQ 52510 J-Tip w/ Heparin

†The combined infusion rate through the Proximal and RV/DTPP Lumen should not exceed 500 mL/hr during CCO monitoring.

Rx only

A better way to receive the hemodynamic information that's critical to critical care

The enhanced Q₂ Plus™ Computer

- Large, color-coded screen information
- User-selected signal processing modes provide greater flexibility
- Exclusive Quality Signal Indicator (QSI) communicates the strength of the CCO output signal
- Large input keys
- Exclusive 3-wavelength technology designed to provide reliable SvO₂ measurements²
- Faster response to changes in cardiac output¹

Advanced OptiQ™ CCO/SvO₂ Catheters

- Exclusive algorithm promotes greater accuracy and potentially improved patient safety
- Eliminates the need for bolus cardiac output injections
- Confirmation of proper thermal coil placement without X-rays
- 15cm long thermal coil is smooth and flush with catheter body

Reference

1. Aranda M, Mihm FG, et al. Continuous cardiac output catheters: Delay in *in vitro* response time after controlled flow changes. *Anesthesiology*. 1998;89:1592-1595.
2. Hecker BR, Brown DL, Wilson, D. A comparison of two pulmonary artery mixed venous oxygen saturation catheters during the changing conditions of cardiac surgery. *Journal of Cardiac Anesthesia*. 1989;3:269-275.

Caution: Federal (U.S.A.) law restricts this device to sale by or on the order of a physician or other licensed practitioner.

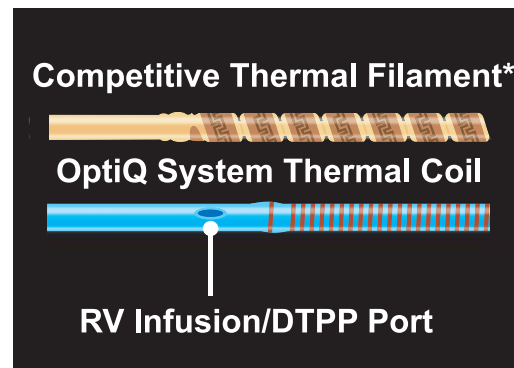


The advanced
OptiQ™
system

CCO/SvO₂ Monitoring System with the enhanced **Q₂ Plus**

OptiQTM catheters deliver the unparalleled accuracy that has long been recognized as the industry standard^{1,2}

- Exclusive, enhanced algorithm provides filtration of noise artifact, allowing OptiQ to minimize signal energy requirements. This may result in more accurate and reliable CCO data and may potentially improve patient safety.
- Eliminates the need for bolus cardiac output injections because the system is fully automatic. This may reduce the risk of fluid overload and potentially decreases the risk for contamination.
- Proper thermal coil placement can be confirmed without X-rays due to the OptiQ Catheter's RV/Distal Thermal Positioning Port (DTPPTM). This allows for as-needed confirmation of the correct coil position without costly, time-consuming X-rays.
- The 15 cm long thermal coil is smooth and flush with the catheter body. This allows the system to leverage its optimum detectable signal at the lowest possible power level per length of coil. Coil warming is kept at a safe, gentle level.



*Competitor: Edwards Lifesciences

Information is accessible at the touch of a button

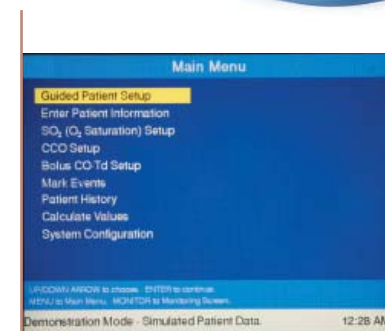


The completely redesigned Computer

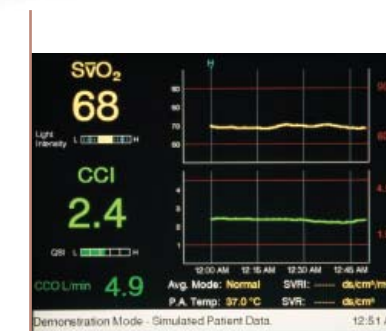
- Large, color-coded screen information allows clear communication of data.
- Large input keys provide convenient inputting of information.
- Exclusive 3-wavelength technology provides more accurate SvO₂ measurements independent of varying hemoglobin levels, eliminating the need for clinical updates of hemoglobin/hematocrit values.²
- User-selected signal processing modes allow you to configure the system to meet specific needs. All four modes are designed for reliable, accurate

CCO measurements by offering different levels of thermal noise artifact rejection and response time.

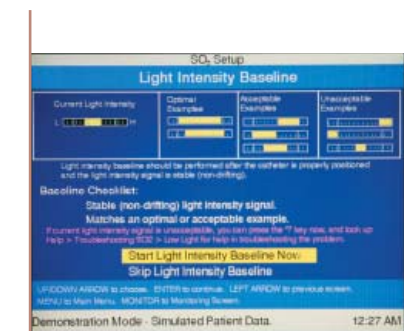
- Faster response to changes in cardiac output¹, especially under conditions of high thermal noise, results in more timely and accurate CO information.
- Exclusive Quality Signal Indicator (QSI) communicates, at a glance, how robust the CCO output is in relation to thermal background noise, providing an indication of the signal's quality.



Standard interactive screens have blue backgrounds. They display the Q₂Plus main menu, most of the subsequent interactive screens, and provide option choices or fields for entering information.



Data screens have black backgrounds with color-coded information: SvO₂ values are displayed in yellow and CCO/CCI values in green. Depending on your specific needs, they can contain a wide range of numeric and trend data, including concurrent patient information.



Obtaining a light intensity baseline is facilitated by the screen design. The screen shows the current light intensity; optimal, acceptable, and unacceptable examples of light intensity readings; and a baseline checklist. Once performed, the current light intensity will always be prominently displayed on your monitor screen.