

Edwards Vigilance Monitor

Continuous Cardiac Output (CCO) and
Mixed Venous Oxygen Saturation (SvO₂)

Abbreviated Instructions for Use

CCO Combo Catheter

Length: 110 cm

Size: 7.5 F

Recommended Introducer Size: 8.5-9.0 F

Shelf Life: 18 months

CCO Combo VIP Catheter

Length: 110 cm

Size: 8 F

Recommended Introducer Size: 9.0 F

The Swan-Ganz CCO Combo and CCO Combo VIP Catheters and Vigilance Monitor provide the traditional parameters of the Swan-Ganz catheter with the addition of continuous cardiac output and mixed venous oxygen saturation monitoring.

Balloon Inflation Volume

- Appropriate inflation volume is 1.25 – 1.5 cc

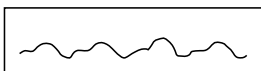
VIP Port

777F8, 777HF8

- 30 cm from tip

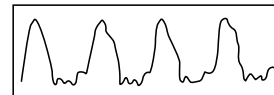
Proximal Injectate Port

- 26 cm from tip
- Located in RA or SVC
- If incorrectly positioned in introducer sheath, Bolus CO measurement will be erroneously high due to reflux of injectate within introducer
- Transduce Proximal Injectate Lumen – proper waveform is RA or SVC



PA Distal Port

- Transduce distal lumen – proper waveform is PA



Thermistor

- 4 cm from tip
- In main body of PA

Thermal Filament

- 14 – 25 cm from tip
- Rests between RA and RV
- Should be free floating and avoid endocardial surface
- Erroneous CCO measurements may result if beyond pulmonic valve

Note: Assess patient physiology. Atypical physiology and heart size may require special handling.

Troubleshooting the CCOmbo Catheter



PROBLEM OR DISPLAYED MESSAGE	POSSIBLE CAUSE	SUGGESTED ACTION
CCO measurements do not agree with Bolus CO measurements	<ul style="list-style-type: none"> • Catheter Position • Instrument Configuration • Faulty thermistor or injectate probe connection • Unstable baseline temperature affecting bolus CO measurements 	<ul style="list-style-type: none"> • Verify proper catheter position: <ul style="list-style-type: none"> - Balloon inflation 1.25-1.5cc. - Check for PAWP tracing. - Transduce Injectate (RA/Blue) Lumen. • Verify that injectate volume and catheter size OR computation constant have been correctly selected. • Check injectate probe and catheter connection. • Assess factors affecting PA temperature stability: <ul style="list-style-type: none"> - Rapid bolus infusions. - Shivering. - Patient movement. - Fighting ventilator. - Wait 60 seconds between injections.
“Check Thermal Filament Position”	<ul style="list-style-type: none"> • Flow around thermal filament may be reduced 	<ul style="list-style-type: none"> • Verify proper catheter position. • Verify free floating state of catheter.
“Warm Injectate” or “Injectate too Warm. Check Probe”	<ul style="list-style-type: none"> • Injectate temperature within 8°C of blood temperature • Injectate temperature >30°C 	<ul style="list-style-type: none"> • Use cooler injectate fluid: <ul style="list-style-type: none"> - Maintain ice slush solution. - If prefilled syringes, remove from cold source and use within 15 seconds. • Check injectate probe connection. • Replace injectate temperature probe.
“SQI = 4”	<ul style="list-style-type: none"> • Catheter too distal • Low blood flow at catheter tip or catheter tip against vessel wall • Change in Hgb/Hct values • Catheter kinked or damaged 	<ul style="list-style-type: none"> • Verify proper catheter position. • Verify patency of catheter. • Update Hgb/Hct values using UPDATE function. • Check catheter for kinking and recalibrate. • Replace catheter if required and recalibrate. • After all above troubleshooting measures are utilized, press OPTICAL RESET.
“Red/IR Transmit”	<ul style="list-style-type: none"> • Optical Module contamination/ Optical Module damage 	<ul style="list-style-type: none"> • Disconnect catheter from OM. • Clean Optical connector on catheter and OM. • Reconnect. If Error message disappears, do INVIVO calibration. • If Error message remains, try different Optical Module. • If Error message remains, change catheter.

If problem persists, call Edwards Technical Support at 1.800.822.9837 (US and Canada) or 949.250.2222.

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