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

Abbreviated Instructions for Use

CCOmbio Catheter
Length: 110 cm
Size: 7.5 F
Recommended Introducer Size: 8.5-9.0 F
Shelf Life: 18 months

CCOmbio VIP Catheter
Length: 110 cm
Size: 8 F
Recommended Introducer Size: 9.0 F

The Swan-Ganz CCOmbio and CCOmbio 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

PA Distal Port
• Transduce distal lumen – proper waveform is PA

VIP Port
777F8, 777HF8
• 30 cm from tip

Thermistor
• 4 cm from tip
• In main body of PA

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

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

The Swan-Ganz CCOmbio and CCOmbio VIP Thermodilution Catheters
Model 744HF75 and 746HF8
## Troubleshooting the CCOmbo Catheter

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| **CCO measurements do not agree with Bolus CO measurements** | • Catheter Position | • Verify proper catheter position:  
- Balloon inflation 1.25-1.5cc.  
- Check for PAWP tracing.  
- Transduce Injectate (RA/Blue) Lumen. |
| | • Instrument Configuration | • Verify that injectate volume and catheter size OR computation constant have been correctly selected. |
| | • Faulty thermistor or injectate probe connection | • Check injectate probe and catheter connection. |
| | • Unstable baseline temperature affecting bolus CO measurements | • Assess factors affecting PA temperature stability:  
- Rapid bolus infusions.  
- Shivering.  
- Patient movement.  
- Fighting ventilator.  
- Wait 60 seconds between injections. |
| **“Check Thermal Filament Position”** | • Flow around thermal filament may be reduced | • Verify proper catheter position.  
• Verify free floating state of catheter. |
| **“Warm Injectate” or “Injectate too Warm. Check Probe”** | • Injectate temperature within 8°C of blood temperature  
• Injectate temperature >30°C | • Use cooler injectate fluid:  
- 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”** | • Catheter too distal  
• Low blood flow at catheter tip or catheter tip against vessel wall  
• Change in Hgb/Hct values  
• Catheter kinked or damaged | • Verify proper catheter position.  
• Verify patency of catheter. |
| | • Optical Module contamination/ Optical Module damage | • 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”** | • Optical Module contamination/ Optical Module damage | • 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.