

- Lift up the plastic cover on the big green button on front of console. Press the big button and turn the console on.



- Press the clamp button (button on right hand side of display)
 - Press and turn the rotary knob to the left until the led display shows '0'.
 - Press the '0' button (2nd from right) and 'zero' the flow. keep finger on the zero button until it beeps 3 times and the LED display shows '0'
 - Turn RPM up to 1000-1500 RPM, the metal clamp remains insitu until RPM achieved.
 - At 1500 RPM slowly release metal clamp and increase RPM until ~3L/min are achieved
- Check blue safety switch on the back of console not turned off



2. Patient Desaturating

- Check oxygen tubing is attached correctly from small tubing at the back of blender to the wall oxygen and that it is turned on.
- Check colour of both access and return lines to troubleshoot if oxygen supply become unattached.

3. SIG Alarm

- Re-establishing the flow signal during patient support:
- The patient is changed to 100% Oxygen via the lungs (5min)
- Circuit is clamped (post oxygenator)
- Speed setting is immediately turned to 0 RPM
- Ultrasound cover is opened
- Pump head is removed
- The contact "cream" is applied to the ultrasound windows just distal to the pump head
- The pump head is re-inserted with the **leading edge placed under the locating pin** and the ultrasound cover is latched



collapse of the great veins around the access cannula occurs, causing unstable circuit blood flow

- VV: Insufficient Oxygenation
- VA: Insufficient support of Circulation
- *What are the causes?*
 - Anything that decreases venous return: Volume/Blood loss; vasodilation (sedation bolus); increased intrathoracic pressure (coughing/straining); cardiac tamponade
 - Excessive pump speed setting
 - Cannula obstruction: Abdominal compartment syndrome/distension; cannula thrombosis (rare)
- *Management of access insufficiency*
 - Immediately (slowly) turn down circuit flow until the flow becomes steady
 - Administer a fluid bolus or attend to obvious patient factors affecting venous return
 - Attempt to re-establish blood flow
 - Notify medical staff to trouble-shoot cause and consider second access cannula (High Flow configuration)

5. Low flow alarm

- Low flow alarm occurs when circuit blood flow falls below the set blood flow limit. The circuit blood flow is after-load and pre-load dependent.

What are the causes?

- Preload: Access insufficiency; Kinked/obstructed access line
- Pump: Pump speed setting changed; remote pump-drive failure or disengagement
- Afterload: Increased BP (VA ECMO); kinked/obstructed return line; thrombosed oxygenator (rare)

6. ACLS Considerations

- *Cardiac Arrest Management*
 - VA ECMO - don't panic
 - May lose pulsatility
 - Turn flows up (if previously on partial support)
 - VV ECMO -CPR
 - Flows will be limited by the venous return achieved
 - May require blood flow to be reduced during CPR