

# **HLS Circuit Priming**

## **General comments**

- The HLS circuit is designed to be primed at the time of ECMO commencement
- Sterile attire and CO2 priming is not required
- All circuit connections to be performed with no touch technique

## **Equipment required**

- CardioHelp Pump
- HLS box with disposable circuit
- 3-way taps with extension (x3)
- 2 litres of 0.9% NaCl

## **Step 1 Connections to Cardiohelp**

- Place Cardiohelp arm is in the “up” position & connect module to Cardiohelp
- Leave de-airing port (yellow cap) off
- Add 3-way taps with extension tubing to pre (1x) and post (2x) oxygenator ports
- Connect integrated sensor cable (temperature and pressure) to HLS Module
- Connect flow probe (bubble sensor) to the return line and ensure the direction of flow is correct
- Ensure the Venous Probe is connected to the initializing station on the blue handle
- Lower the Cardiohelp arm and place sterile tray on top (should sit securely); contents of tray to remain sterile

## **Step 2 Complete circuit**

- Hang Priming Bag (alternatively use dedicated priming board to hang the priming bag)
- Remove ends from both the sterile tray tubing and the priming lines and then connect, pay attention to the direction of the white lip to place your thumb
- Connect pair of red and blue lines
- Clamp outlet (blue) of Priming Bag

## **Step 3 Pressure zeroing**

- Turn Cardiohelp on
- Go to second menu at the bottom of the screen
- Zero 3 pressures *Part*, *Pven* and *Pint* - enter pressure setting and perform zero

## **Step 4 Priming process**

- Connect filling line to 0.9% Saline & transfer almost 2L 0.9% Saline to Priming Bag (Open stop-cocks on the Priming Bag to de-air the reservoir)
- Ensure adequate elevation of Priming bag (>60cm)
- Allow priming to occur passively by opening all clamps
- Wait (!) for priming to occur
- Run Pump at 3000rpm for at least 2 min, then 4000rpm for an additional 1 minute
- Purge all 3-way taps
- Ensure all air removed from circuit - no air should be visible and the pump should be virtually silent

## **Step 5 final checks**

- Close De-airing port (yellow cap)
- Ensure the taps of the reservoir are all closed (contamination risk)
- Remove cap from oxygen connection
- Cover circuit and return to ECMO CPR area
- Turn off ECMO console and plug in
- Complete [Priming paperwork](#) and attach to circuit cover