Cardiohelp System

Setup Guide

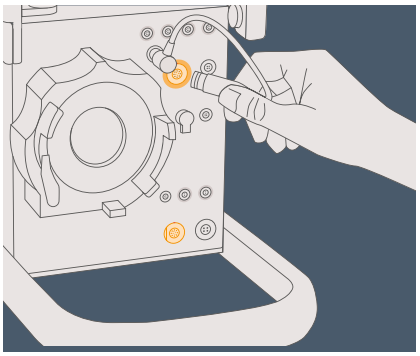
GETINGE

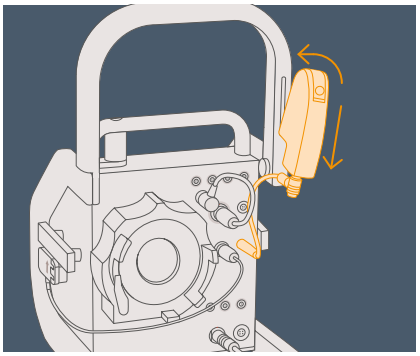
Contents

Cardiohelp System

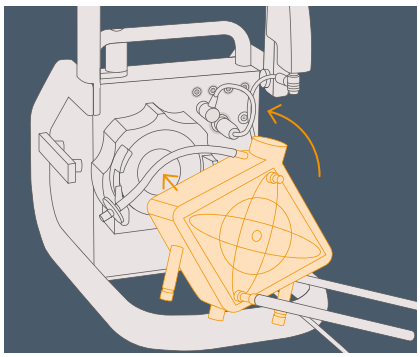
Preparation and Installation

1 Open Safety Bar. Connect Integrated Sensor Cable and Flow/Bubble Sensor. Connect Venous Probe and place probe in stand-by position attached to the safety bar.

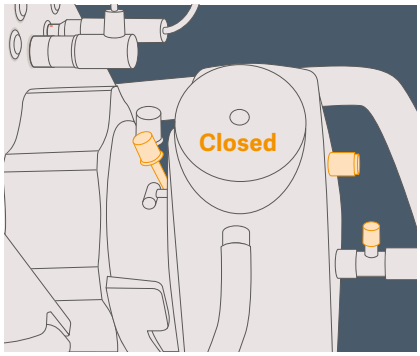


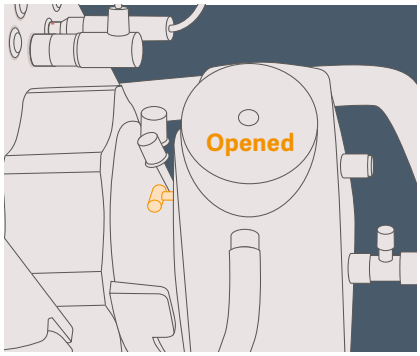


2 Install the red HLS Module on the Cardiohelp drive.

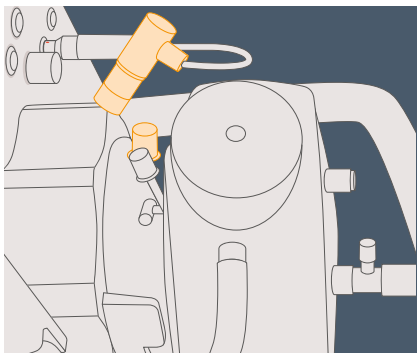


3 Attach sampling lines if desired and close all stopcocks. Secure all 3 Luer lock connections, but leave the yellow cap off the De-airing Membrane.

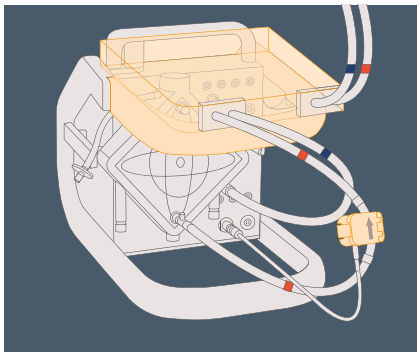




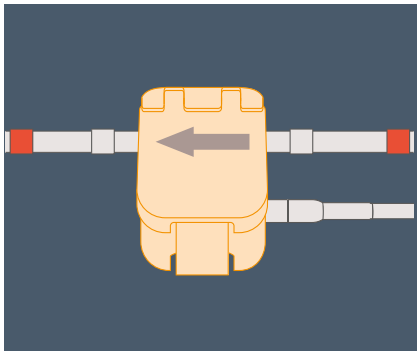
4 Connect the Integrated Sensor Cable to the HLS Module.



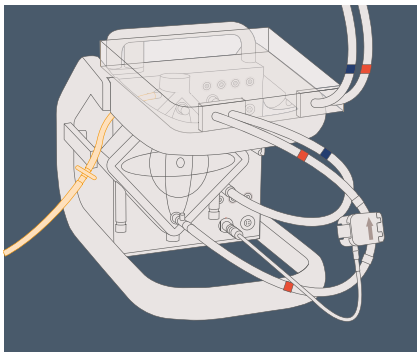
5 Close the Safety Bar. Place table tray on the Cardiohelp.



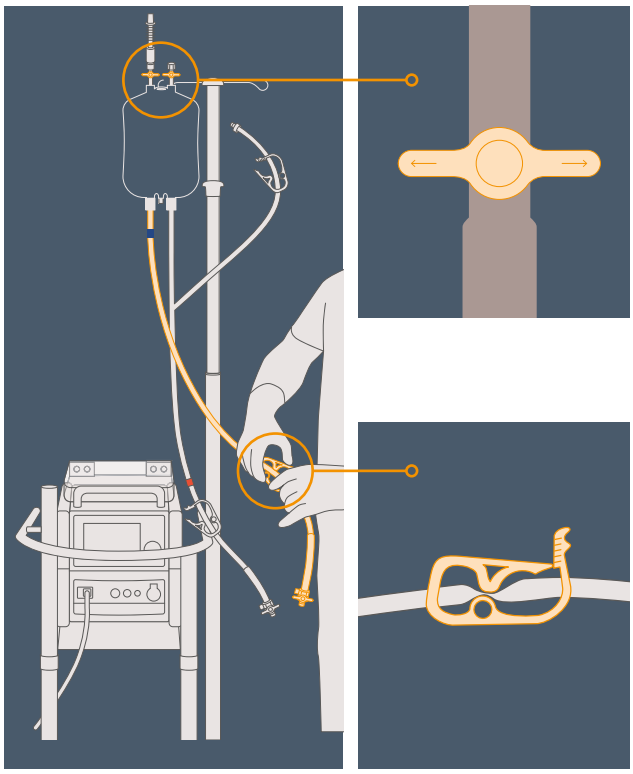
6 Attach the Flow/Bubble Sensor between the white marks on the Red Line (arrow in the direction of flow).



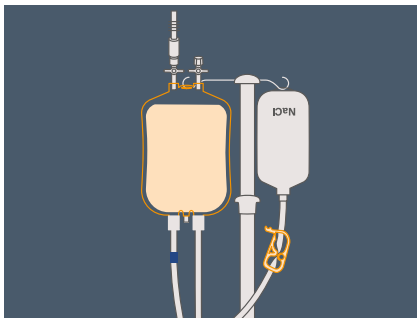
7 Connect the green Gas Tube between the gas source and the Gas Filter attached to the HLS Module.



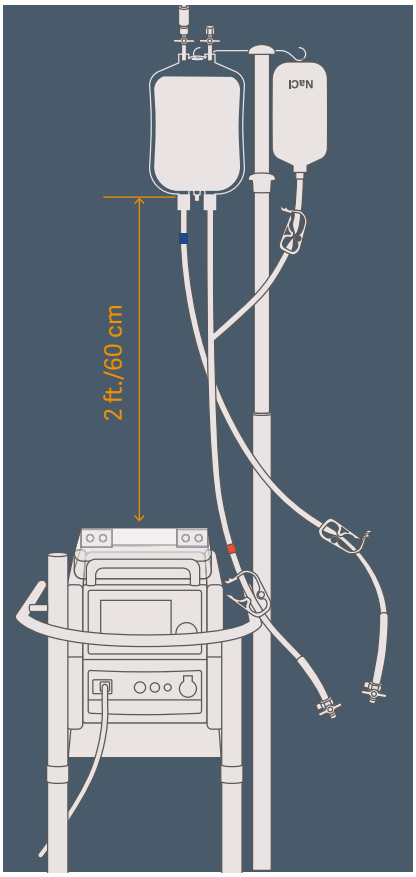
8 Hang the Prime Bag on the IV Pole ensuring that the Inlet and Outlet are unobstructed and not folded over. Close 2 Stopcocks at top of the bag and close the Clamp on the Blue Line of Prime Bag.



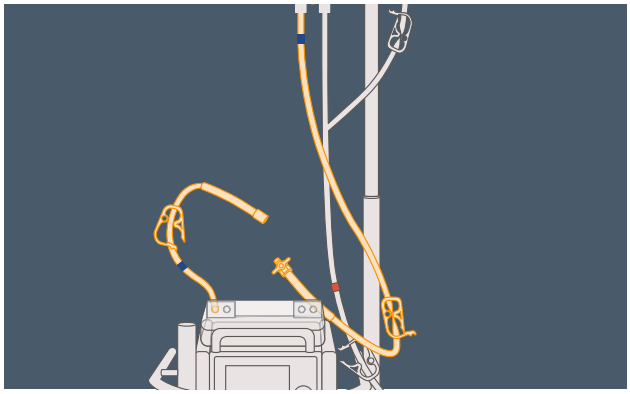
9 Add 1.5 to 2 l of Physiological Solution via the spike of the Prime Line. Close the clamp on the Prime Line.

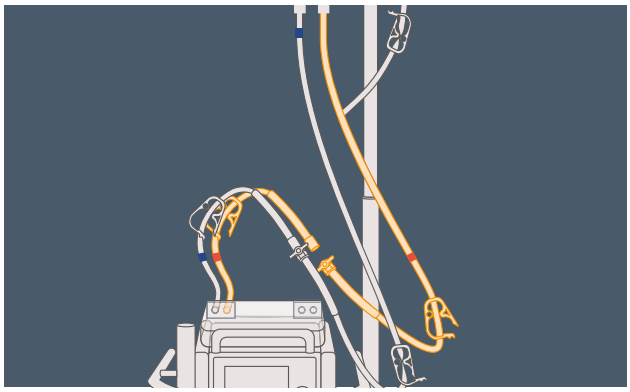


10 Make sure there is at least 60 cm (2 ft) between the top of the Cardiohelp and the bottom of the Prime Bag.

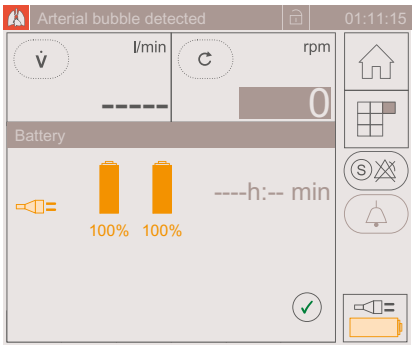


11 Remove the sterile protection "stubs" from the lines. Connect the blue line from the Prime Set to the blue line of the Table Set. Repeat for the red lines. Leave clamps on the red line open.

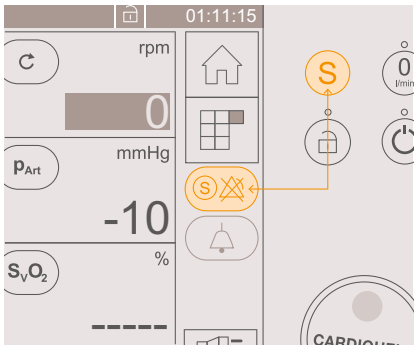




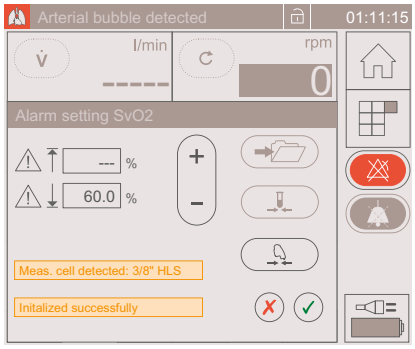
12 Switch on the Cardiohelp. Check battery charge. Select desired thApp.



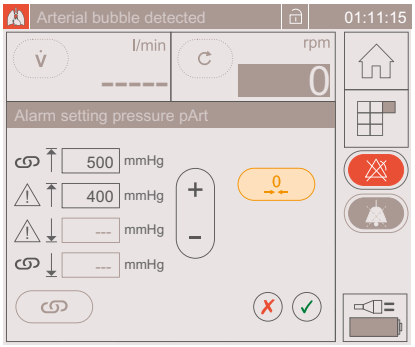
13 Activate Global Override (while pressing (S), press (S)).



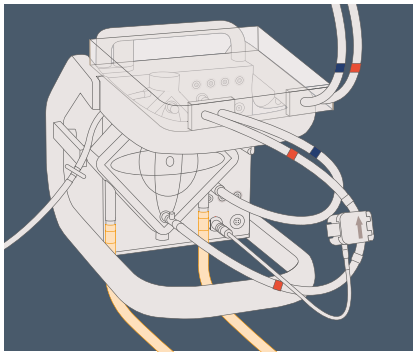
14 Confirm that the Venous Probe has been initialized by selecting any blood parameter.



15 With the tubing free of liquid, zero all pressures P_{Art}, P_{Ven} and P_{Int}.



16 Connect Water Lines from Heater-cooler Unit to the HLS Module. Run water through the heat exchanger to check for leaks. Set Heater-cooler Unit to desired temperature.



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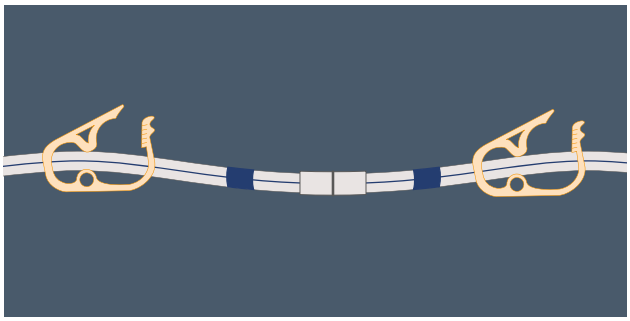
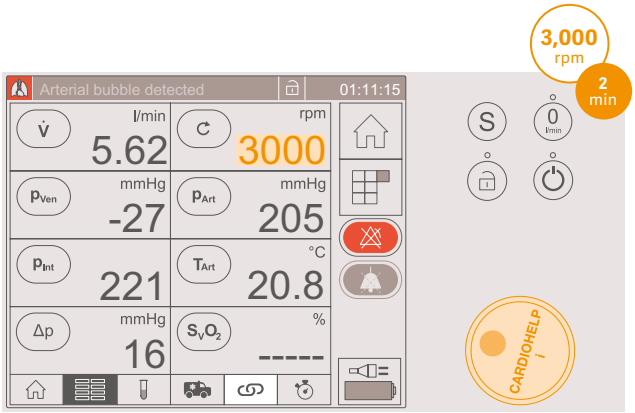
Priming the System

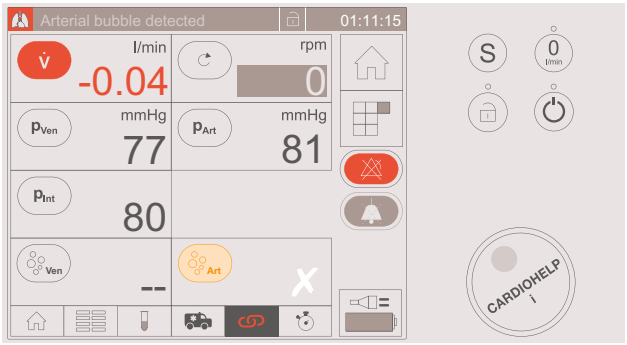
17 Open the Clamp on Blue Line to passively prime the Set.

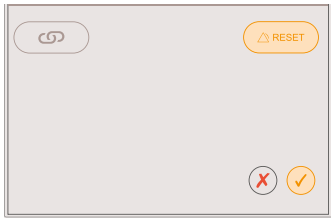


18 Once the flow stops, set speed to 3000 rpm for 2 min.

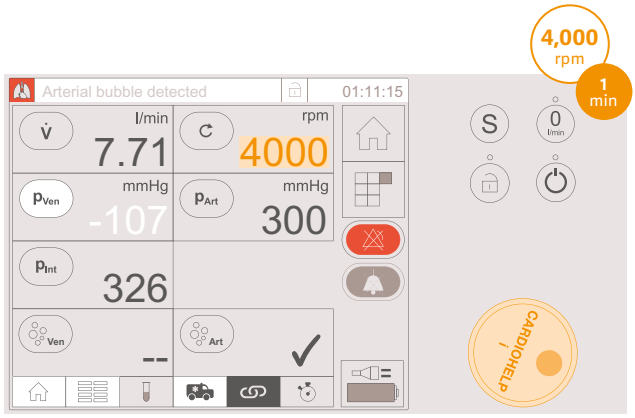


19 Reduce speed to 0 rpm for at least 5 seconds. Reset the flow/bubble sensor. Tap the tube and the HLS Module with your hand to remove gas bubbles.

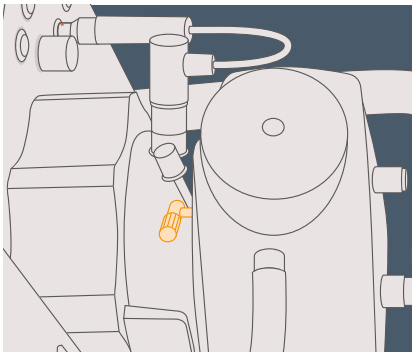




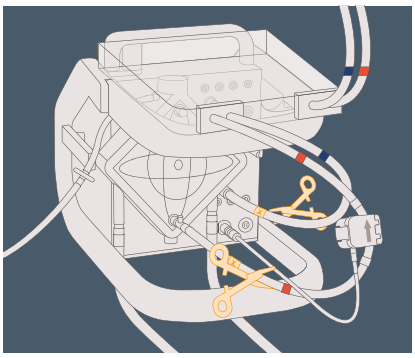
20 Set the speed to 4000 rpm for 1 minute and then reduce speed to 0 rpm. De-air the 3 Luer lock connectors. If a bubble is detected, go back to step 18.



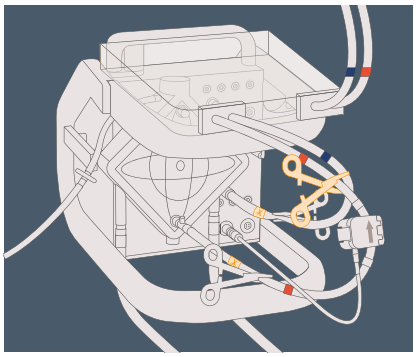
21 Close the de-airing membrane with the yellow cap.

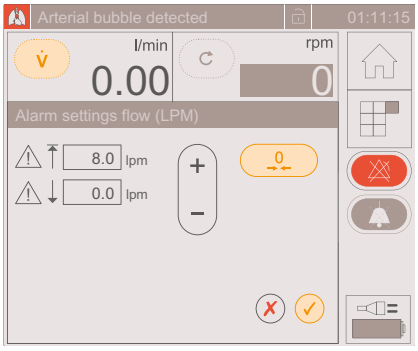


22 Using Metal Clamps, clamp the ✂ symbol on the red and blue lines.

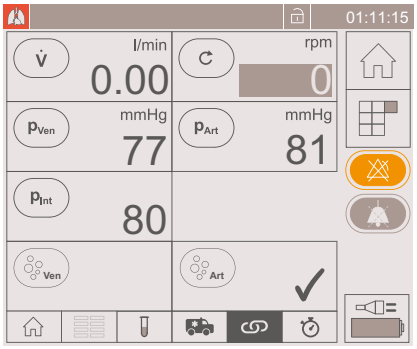


23 Clamp downstream of the Flow/Bubble Sensor and calibrate the Flow/Bubble Sensor. Remove the downstream Clamp.

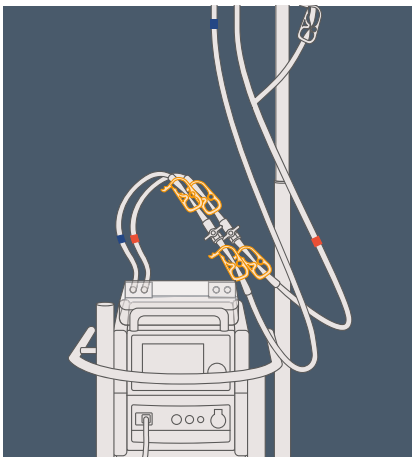


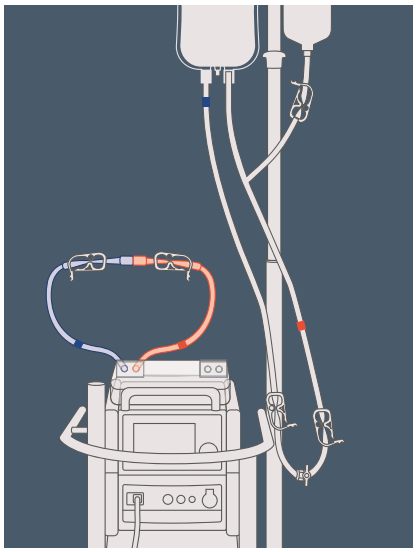


24 Deactivate Global Override mode. Open all of the metal clamps on the red and blue lines.



25 Close all Integrated Tubing Clamps and separate the Prime Bag from the Table Set by disconnecting the quick connects. Connect the red and blue lines of the Table Set.





Cardiohelp System

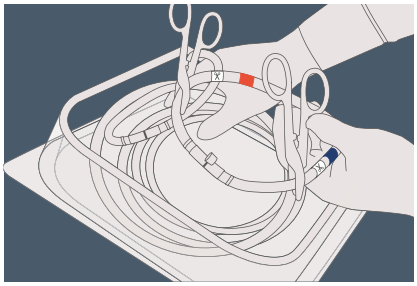
Connecting to the Patient

26 Non-sterile Person: open the Table Set.

Sterile person

(for all following steps in this section)

27 Clamp the red and blue tubes close to the clamp symbol. Disconnect the two quick connects and remove the lines and bring it into the sterile field.



28 Cut-off the quick connects.

29 Attach the tubing to the cannulae forming an air-free connection. Secure with cable ties.

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Starting and Ending Perfusion

Starting Perfusion

30 Optional: After the set has been connected to the patient, attach the venous bubble sensor to the blue line as near to the patient as possible. Plug the sensor into the Cardiohelp.

31 Ensure:
- Proper anticoagulation has been achieved
- Heater-cooler Unit is set appropriately
- Adequate gas mix and gas flow

32 Release clamp from the blue line. Increase pump speed high enough to ensure forward flow prior to releasing clamp from the red line.

33 Attach the Venous Probe to the Venous Measuring Cell on the HLS Module. Check that the venous probe has been successfully calibrated.

Ending Perfusion

34 Reduce flow if needed and clamp red and then blue line.

35 Adjust gas flow and temperature as needed.

36 Stop centrifugal pump.

37 Switch off heater-cooler unit.

38 Turn off gas flow.

This guide does not replace the corresponding instructions for use. Only use the Cardiohelp-i and all other products mentioned in this guide together with the respective instructions for use. See instructions for use for full prescribing information, including indications, contraindications, warnings, precautions and adverse events.

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