



# Troubleshooting Topics

- System set-up
  - Priming
  - Tubing connections
  - Flow disturbances (red pinwheel)
- IFU update on leak checks
  - ABC'S of Leak Checks
  - Catheter Leak Testing
- Other Important Troubleshooting Information

# System Set-Up





# System Set-Up

## Priming Checklist

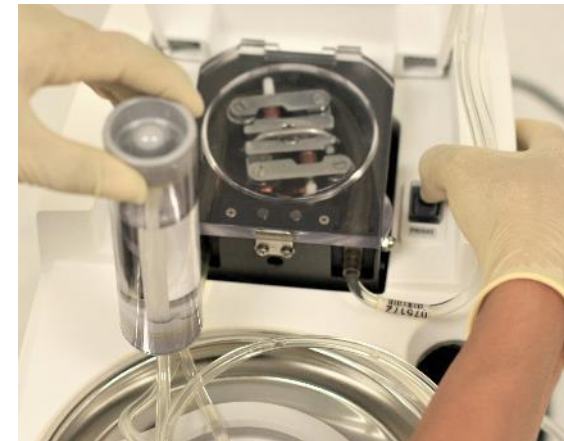
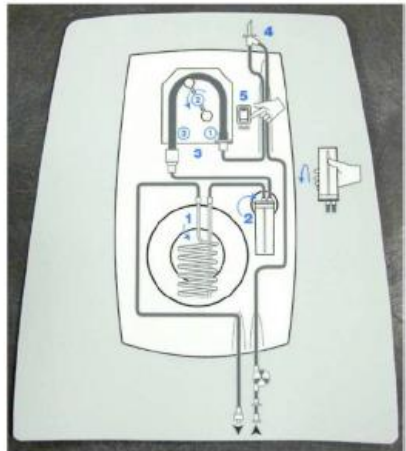
1. Follow “Start-Up Kit Tubing Set-Up” guide and/or sticker inside of console lid

2. Verify 500mL bag of sterile saline is used

3. Verify tubing is correctly placed into raceway

4. Verify that priming switch is held down firmly, and that airtrap is inverted during priming and filled completely before placing into airtrap chamber

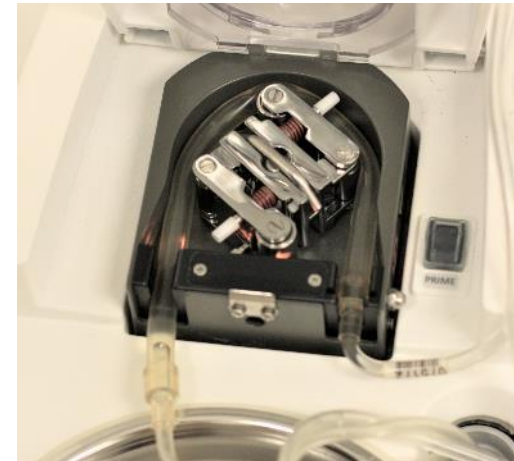
5. Check red pinwheel for any microbubbles during priming; inspect Start-Up Kit (SUK) tubing for any obstructions



# System Set-Up

## Tubing connections

- During priming, verify:
  - Saline bag is properly spiked to the hub (SUK spike reaches into the saline bag)
  - SUK tubing is properly loaded into raceway
  - SUK Luers are properly connected to each other during priming and are not cracked or damaged
- During therapy, verify:
  - IN and OUT Luers of the catheter are properly connected to the SUK Luers



# Flow Disturbances (Red Pinwheel)

If the flow indicator (red pinwheel) is not spinning:

- Confirm that console is in RUN mode
- Visually check if roller pump is turning
- Confirm SUK tubing is properly installed
- Check for obstructions in SUK tubing
  - Pinched under the console lid?
  - Pinched under the console wheels?
  - Pinched somewhere underneath the patient?
- Tap gently on the pinwheel to free any microbubbles
  - If roller pump is turning, pinwheel should also be turning; if not, check for any SUK tubing obstructions as outlined above



**RUN**



**STANDBY**





# IFU Update on Leak Checks



9% Sodium Chloride  
Injection USP

L8001

500 mL

**PULL**  
FOR THERAPEUTIC INFORMATION

# The ABC'S of Thermogard XP Leak Checks

## Airtrap (due to alarm)

Check the airtrap for air; if air exists, continue with additional steps

If no air exists but condensation is present, wipe airtrap, reinstall, and verify alarm is cleared



## Bag

Check the saline bag level; if bag is empty, check around the path between the bag and console for any leaks



## Connections

Check the Luer connections: confirm that the Luers are intact and tightly connected



## Start-Up Kit (SUK)

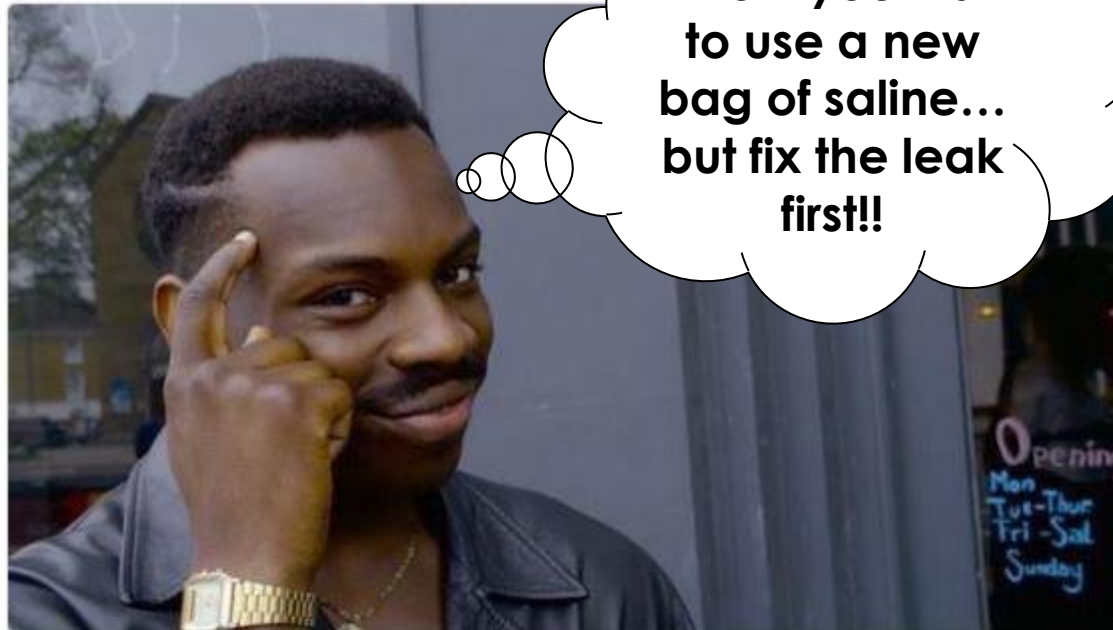
Check for any leaks in the SUK tubing; replace SUK if there is a leak, and also check for a leak in the catheter (see instructions)





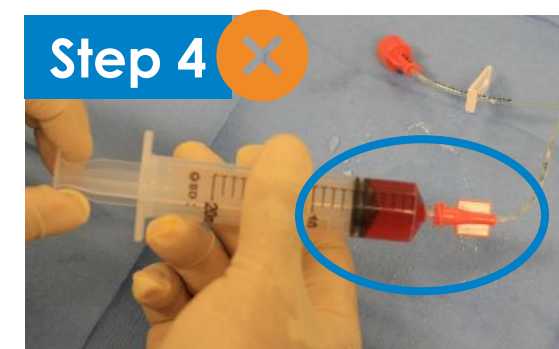
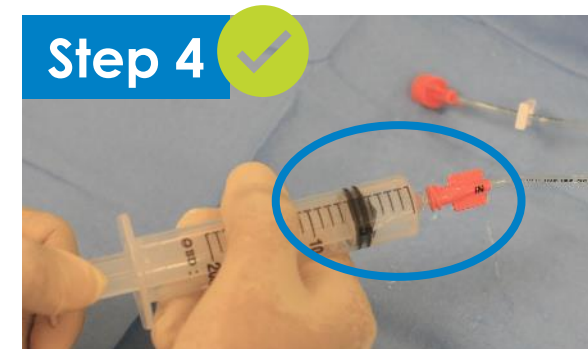
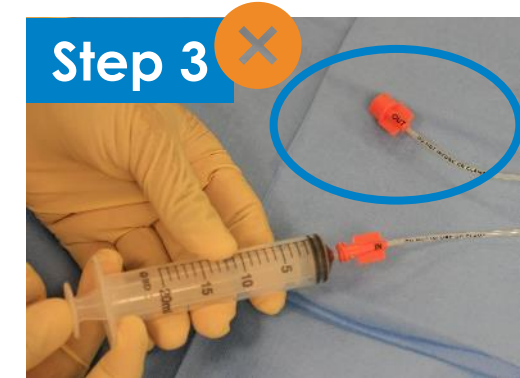
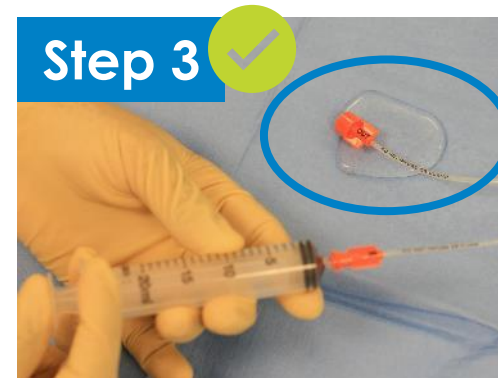
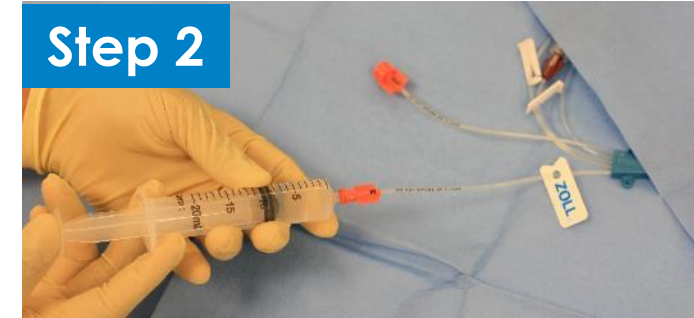
## Important Reminder

**Thermogard XP is a closed loop saline circuit!  
DO NOT replace the saline bag before performing a  
thorough leak check of the system!**



# How to Test for a Catheter Leak

1. Disconnect SUK from catheter
2. Fill a slip tip syringe with 10 mL of sterile saline
3. Connect the syringe to the IN Luer of the catheter – with the OUT Luer open, infuse the sterile saline
  - ✗ *Saline should flow out of the OUT Luer – if it does not, a catheter leak is indicated*
4. Cap OUT Luer and pull vacuum with the syringe for at least 10 seconds
  - ✗ *If traces of blood are seen in the syringe, or vacuum cannot be maintained, a catheter leak is indicated*
5. If catheter leak is confirmed: replace catheter, then replace saline bag and re-prime SUK
6. Reconnect catheter and SUK Luers, then continue therapy



A ZOLL medical device is shown in a hospital setting. The device's screen displays patient temperature information. A blue text box is overlaid on the left side of the image, containing the text 'Other Troubleshooting Information'. The device screen shows 'PATIENT TEMP' at 36.0°C, with a low limit of 28.0°C and a high limit of 42.0°C. Below this, it shows 'TARGET TEMP' at 36.0°C and 'RATE' at 'MAX'. The device is labeled 'ZOLL' and has a 'PULL' button. A bag of 9% Sodium Chloride Injection USP is visible in the foreground.

## Other Troubleshooting Information

PATIENT TEMP  
**36.0°C**  
Lo 28.0° Hi 42.0°  
TARGET TEMP RATE  
**36.0°C MAX**  
MAX WARMING  
MAX COOLING

ZOLL

PULL

9% Sodium Chloride  
Injection USP  
L8001  
500 mL



# Other Important Troubleshooting Information

- If any issues persist, contact the following:
  - **24/7 Delta Surgical Technical Support Line: 02089 383069**
  - Your local Clinical Application Specialist: Eve Spillane 07936937377 or [espillane@zoll.com](mailto:espillane@zoll.com)
- Please save any catheters or SUKs with suspected leaks and send back to ZOLL for analysis
  - Contact either the 24/7 Technical Support Line or your local Clinical Application Specialist for assistance

