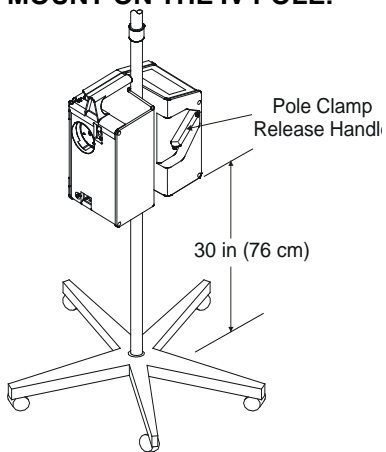


Step-By-Step Quick Set-Up

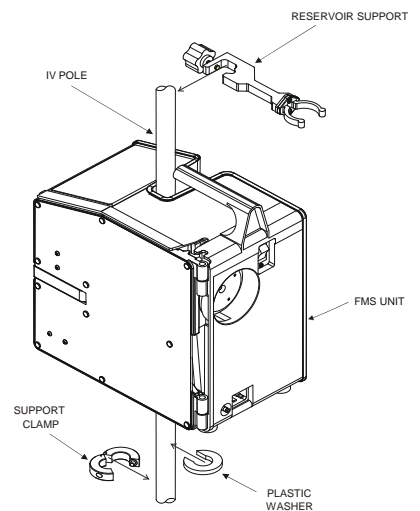
SETUP:

- Inspect the system
 - Power cord: 14/3 SJT cable with Hospital plug
(USE ONLY SUPPLIED POWER CORD)
 - IV pole: 5 wheel IV pole (max. diameter 1 1/4")
 - Pole mount support assembly (Support Clamp & Plastic washer)
 - Reservoir support
 - Disposable set
 - 3L Reservoir and reservoir holder, if needed

MOUNT ON THE IV POLE:



- Mount the Belmont® Rapid Infuser app. 30" from the ground
- Tighten the "Pole Clamp Release Handle" onto the IV pole
- Install the Pole Mount Support Assembly (support clamp and plastic washer) under the Rapid Infuser
- Clamp the Reservoir Support above the Rapid Infuser



SETUP / MOUNT ON IV POLE

INSTALL DISPOSABLE SET:



- Snap reservoir chamber into the reservoir support clamp.
- Open the door. Insert heat exchanger with red arrow pointing up (**Red tinted tubing to red stripe on unit**).
- Firmly position the interlock block into the fluid out detector.
- Guide the curved piece of pump tubing (**Blue tinted tubing**) over the pump head. Check that the thinner recirculate line is in the groove to the right.

Do not kink or twist the tubing.

- Place the thinner recirculate line to the right of the air detector, and to the right of the valve wand.
- Close and latch the door. Make certain the pump tubing is not caught.
- Place the pressure chamber into the pressure chamber well. Firmly insert the wider infuse line into the air detector and to the left of the valve wand.

3-STEP OPERATING INSTRUCTIONS:

We strongly recommend loading and priming the disposable set just prior to the procedure.

1. POWER ON

- Turn power switch ON. Wait for PRIME screen to appear
- **Completely** close bag clamps. Hang and spike fluid bag(s)
- Open bag clamp(s) - if not connected to a fluid bag, leave closed

2. SYSTEM/PATIENT LINE PRIME

DO NOT MIX LACTATED RINGER'S OR OTHER SOLUTIONS CONTAINING CALCIUM WITH CITRATED BLOOD PRODUCTS

- Press PRIME to prime the system (circulate 100 ml of fluid at 500 ml/min.) Prime volume (100 ml) countdown is displayed on screen. Stop automatically when countdown reaches 0 ml
- Prime patient line. Press PT. LINE PRIME once to pump at 50 ml/min or press and hold to pump at 200 ml/min. Press STOP when line is free of air bubbles

3. INFUSE

A single dedicated intravenous access should be used exclusively for infusing blood components and solutions compatible with blood.

- Using aseptic technique, make patient connection without entrapping air
- Press INFUSE
- Infusion starts at 10 ml/min. Press INFUSE RATE • / – to change flow rate

BATTERY

- System automatically switches to battery when AC is disconnected

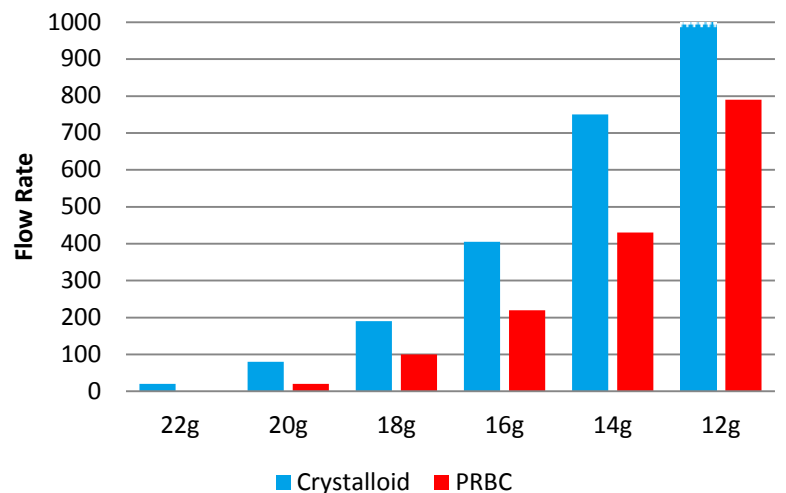
BOLUS INFUSION

- Infuse fixed volume at 200 ml/min (Fixed volume: Factory set at 200 ml)
- Return to previous flow rate if flow rate was set at 50 ml/min or lower.
- Return to 50 ml/min if flow rate was set higher than 50 ml/min
- Change the preset BOLUS volume: Press and hold the BOLUS key. Release the key when the desired BOLUS volume appears in the volume delivered position

CAUTION:
Immediately wipe any spills from the device.

CANNULA SIZE: Match Infusion Set to Flow Rate and Fluid Type

Maximum Achievable Flow (at 300 mmHg with 2" cannula)



ALARM/MESSAGE	POSSIBLE CAUSE	SOLUTION
OPERATIONAL ALARMS		
UNIT DOES NOT POWER UP	<ul style="list-style-type: none"> Power switch not completely depressed 	<ul style="list-style-type: none"> Depress power switch completely
AIR DETECTION	<ul style="list-style-type: none"> Air in the line Tubing in Air detector Sensor not fully seated Leak in disposable set Air detector sensor dirty 	<ul style="list-style-type: none"> Open door, squeeze tubing directly below air detector sensor to clear air. Recirculate to remove air in line Reseat tubing in Air detector Sensor Replace disposable set, if leak Clean sensor with moistened Q-tip and dry
DOOR OPEN	<ul style="list-style-type: none"> Door is open 	<ul style="list-style-type: none"> Close the door
FLUID OUT	<ul style="list-style-type: none"> Out of fluid Bag clamps not fully opened Bag not fully spiked Tubing in Fluid OUT Sensor not fully seated Filter clogged Recirculate line (smaller tubing) blocked 	<ul style="list-style-type: none"> Add fluid Open bag clamps Check bag spikes Reseat tubing in Fluid OUT Sensor Replace filter if it becomes clogged Check recirculate line
HIGH PRESSURE	<ul style="list-style-type: none"> Infusion site may be positional Cannula bore size is too small Patient line is blocked Recirculate line is kinked Pressure limit setting is set too low 	<ul style="list-style-type: none"> Check the infusion site Use appropriate cannula size Check patient line Check recirculate line Increase pressure limit setting. See Chapter IV of Operator's Manual
LOW BATTERY	<ul style="list-style-type: none"> Battery voltage is too low 	<ul style="list-style-type: none"> Plug system into AC outlet Check power cord at AC outlet and unit
MISSING DISPOSABLE	<ul style="list-style-type: none"> No disposable set in the unit 	<ul style="list-style-type: none"> Install disposable set

HEATING ALARMS		
HEATING FAULT	<ul style="list-style-type: none"> IR probes are wet, dirty, or blocked Disposable set windows are wet, dirty, or blocked IR probe fails 	<ul style="list-style-type: none"> Clean IR probes with moistened Q-tip and dry Clean window and dry. Replace disposable set, if clogged Press RETRY to continue. If error persists, call service
OVER TEMPERATURE 'OVER TEMPERATURE. TURN OFF POWER. DISCARD BLOOD AND DISPOSABLE. RESTART SYSTEM WITH A NEW DISPOSABLE. SERVICE MACHINE IF PROBLEM PERSISTS.	<ul style="list-style-type: none"> IR probes are wet, dirty, or blocked Fluid supply is over temperature limit Restricted flow or out of fluid 	<ul style="list-style-type: none"> Clean IR probes with moistened Q-tip and dry. Clean window and dry. Replace blood and disposable set Make sure bag clamps are open and flow is unimpeded. Make sure that filter (in reservoir chamber) is not clogged, replace if needed. Add more fluid, if fluid out
INTERNAL SYSTEM FAULT ALARMS		
AIR DETECTOR FAULT	<ul style="list-style-type: none"> Air detector fails 	<ul style="list-style-type: none"> Power down and call service
HEATER POWER READ BACK FAULT	<ul style="list-style-type: none"> Power feedback circuit malfunction 	<ul style="list-style-type: none"> Restart the system, and try again If error persists, power down and call service
HEATER OVER POWER FAULT	<ul style="list-style-type: none"> Heater hardware malfunction 	<ul style="list-style-type: none"> Press RETRY to continue. If error persists, call service
HEATER FAULT LATCH	<ul style="list-style-type: none"> Excessive AC power line noise or internal failure 	<ul style="list-style-type: none"> Press RETRY to continue. If error persists, call service
POWER MODULE OVERTEMP	<ul style="list-style-type: none"> Power driver module overheating 	<ul style="list-style-type: none"> Make sure air vent, at the bottom of the unit, is not blocked Wait for unit to correct problem. Display will return to infuse screen when error clears If error persists, call service
PUMP FAULT	<ul style="list-style-type: none"> Fluid pump fails 	<ul style="list-style-type: none"> Check that pump turns freely and head is clean Press RETRY to continue. If error persists, call service
VALVE FAULT	<ul style="list-style-type: none"> Valve fails Valve position sensor malfunction 	<ul style="list-style-type: none"> Check that valve is not blocked Restart the system and try again. If error persists, call service
CONTINUOUS ALARM (no message)	<ul style="list-style-type: none"> Internal computer fails 	<ul style="list-style-type: none"> Restart the system and try again. If error persists, call service
ALARM/MESSAGE	POSSIBLE CAUSE	SOLUTION

TROUBLESHOOTING OTHER DIFFICULTIES

DIFFICULTY	POSSIBLE CAUSE	SOLUTION
BATTERY NO HEAT	<ul style="list-style-type: none"> • Power cord not plugged in AC outlet • Power cord is loosened from back of the unit 	<ul style="list-style-type: none"> • Plug into AC outlet • Check power cord connection
DIM DISPLAY	<ul style="list-style-type: none"> • Display brightness has been set to the lowest 	<ul style="list-style-type: none"> • To increase display brightness, see SYSTEM PARAMETERS SETTING below
FLOW RATE SLOWING DOWN AND DOES NOT GO TO SET FLOW RATE	<ul style="list-style-type: none"> • Line kinked or obstructed • Cannula is too small • System keeps pressure in-line under pressure limit setting 	<ul style="list-style-type: none"> • Check if line is kinked • Use appropriate cannula size • To change pressure limit, see SYSTEM PARAMETERS SETTING below
KEY PAD NOT RESPONDING	<ul style="list-style-type: none"> • Key pad sensitivity has been set to SLOW • Key pad fails 	<ul style="list-style-type: none"> • To reset key pad sensitivity, see SYSTEM PARAMETERS SETTING below • Power down and retry. If error persists, call service
WILL NOT HEAT	<ul style="list-style-type: none"> • Windows on disposable set or IR probes are wet, dirty, or obstructed • Power Driver module is not calibrated properly • IR probes are out of calibration 	<ul style="list-style-type: none"> • Clean IR probes with moistened Q-tip and dry. Replace disposable set, if clogged • Re-calibrate, Chapter IV • Re-calibrate, Chapter IV
WILL NOT PRIME	<ul style="list-style-type: none"> • Out of fluid • Bag clamps not fully opened • Bag not fully spiked • Tubing in Fluid OUT Sensor not fully seated • Filter clogged • Recirculate line (smaller tubing) blocked 	<ul style="list-style-type: none"> • Add fluid • Open bag clamps • Check bag spikes • Reseat tubing in Fluid OUT Sensor • Replace filter if it becomes clogged • Check recirculate line
UNABLE TO CALIBRATE	<ul style="list-style-type: none"> • Hardware malfunctions 	<ul style="list-style-type: none"> • Call service

SYSTEM PARAMETERS SETTING

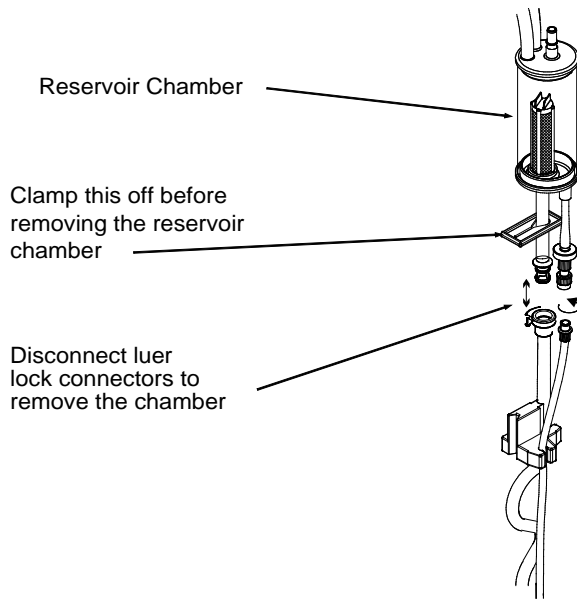
The CALIBRATION/SET-UP screen is accessed by pressing SERVICE key during power-up
This key appears on the BELMONT logo screen and remains active for 4.5 seconds before system enters the PRIME screen.

<p>DATE/TIME</p> <ul style="list-style-type: none">• Press DATE TIME key• Start with either DATE or TIME• Enter appropriate date or time. Enter time in 24 hour clock format (i.e 1:00 PM = 13:00)• Press UPDATE to save the new value• Press NEXT to return to setup screen		<p>DISPLAY BRIGHTNESS</p> <ul style="list-style-type: none">• Press DISPLAY BRIGHT key• There are nine (9) levels of display brightness. Release the key when the desired brightness appears Factory set at level 7
<p>KEY RATE</p> <ul style="list-style-type: none">• Press KEYSRATE key.• There are three (3) levels of key pad sensitivity, FAST, MEDIUM, SLOW. Factory set at MEDIUM• Press to select the time required to depress a key for stroke to be recognized. (SLOW requires the most time and makes the touch key less sensitive).	<p>BOLUS VOLUME</p> <ul style="list-style-type: none">• Press SETUP BOLUS key. Factory set at 200 ml• Change the preset volume: Press and hold BOLUS key. The bolus volume can be set from 100 to 1000 ml and can be changed from 100, 200, 400, 500, and 1000 ml each time SETUP BOLUS key is pressed.• Release the key when the desired volume appears in the volume delivered position	<p>PRESSURE LIMIT</p> <ul style="list-style-type: none">• Press PRESS LIMIT key. Factory set at 300 mmHg• Press and hold to change the limit in increment of 50 mmHg

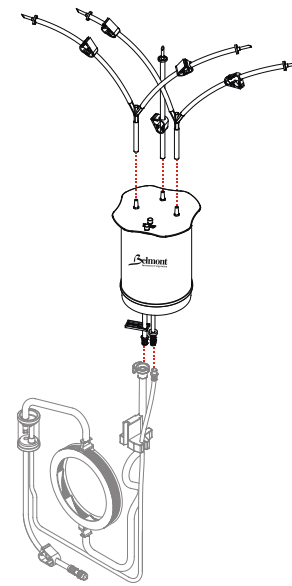
TROUBLESHOOTING OTHER DIFFICULTIES / SYSTEM PARAMETERS SETTING

REPLACING RESERVOIR CHAMBER / INSTALL 3 LITER RESERVOIR

REPLACE FILTER / RESERVOIR CHAMBER (FLUID SUPPLY)



INSTALL 3 LITER RESERVOIR



Connect 3 Liter Reservoir to the 3-Spike Disposable Set

REPLACING RESERVOIR CHAMBER

CAUTION

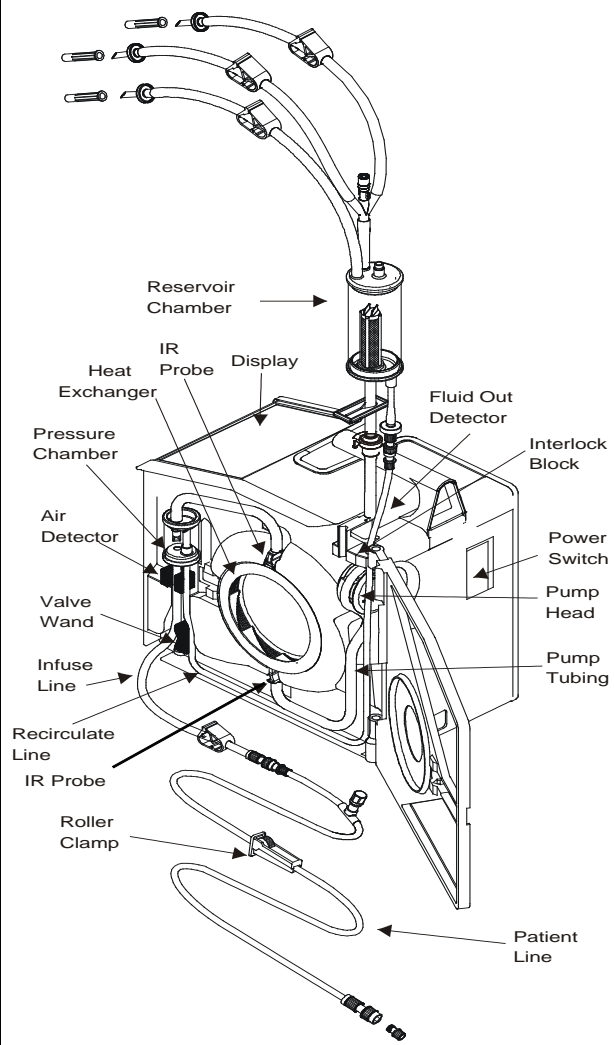
Replace filter, reservoir chamber and/or disposable set if filter(s) becomes clogged. If it becomes occluded the fluid out sensor will activate, an audible alarm will sound, a message "Fluid Out, Check inlet tubing and Filter. Add more fluid" will appear and the pump will stop.

1. Clamp off the pump tubing using the slide clamp.
2. Using aseptic techniques, remove the reservoir chamber from the 3-Spike disposable set by disconnecting the luer connectors:
 - Disconnect the larger pump tubing by pressing in the luer lock tab and pulling out the connector.
 - Disconnect the thinner recirculate line by unscrewing the connector.
3. Connect the reservoir chamber to the luer connectors of the 3-Spike disposable set.

INSTALL 3 LITER RESERVOIR

1. Assemble the 3L Reservoir using aseptic techniques by attaching the three fluid supply tails onto the top of the reservoir.
2. Attach the reservoir holder on the IV pole, place reservoir in the holder.
3. Clamp off the pump tubing on the 3-Spike disposable set using the slide clamp. Remove reservoir chamber, see 'REPLACING RESERVOIR CHAMBER, step 2'.
4. Connect the 3L Reservoir to the luer connectors of the 3-Spike disposable set.
5. Adjust the reservoir holder to make sure that the two connection leads underneath the reservoir are not stretched or kinked.

REPLACING RESERVOIR CHAMBER / INSTALL 3 LITER RESERVOIR



CONVERSIONS & HEATING		ml/min	ml/hr
No Heating:		60	3,600
ml/min	ml/hr	70	4,200
2.5	150	80	4,800
5	300	90	5,400
Heats to 39° C.		100	6,000
ml/min	ml/hr	200	12,000
300	18,000	400	24,000
10	600	500	30,000
20	1,200	600	36,000
30	1,800	700	42,000
40	2,400	750	45,000
50	3,000		

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702-00035 Rev. N

**THE BELMONT® RAPID INFUSER
QUICK REFERENCE GUIDE**



For Emergency Assistance:
Call
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IT IS ESSENTIAL THAT YOU READ AND UNDERSTAND THE OPERATOR'S MANUAL BEFORE USING THIS DEVICE

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