B|BRAUN
SHARING EXPERTISE

Space® 2nd GENERATION INFUSION PUMP LEARNING MODULE

Infusomat® Space® 2nd Generation Infusion Pump & Perfusor® Space® 2nd Generation Syringe Pump

We're committed to providing efficient, effective, and evidence-based product training, clinical best practices education, and clinical consulting services focused on improving patient care.

Classroom and Simulation-Based Learning

Next Page

SH-SS Workbook

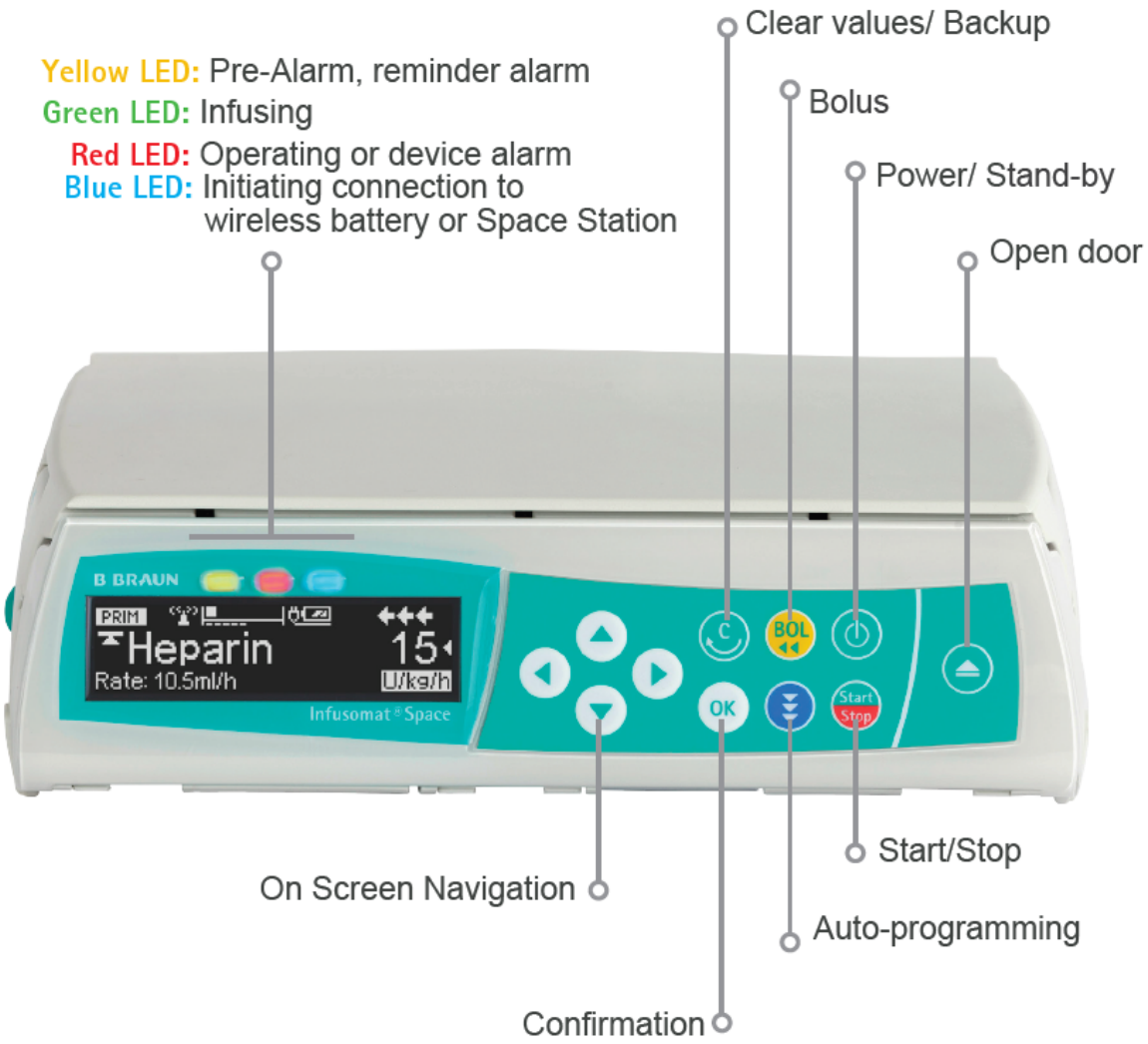
Disclaimer

This workbook is designed for the purpose of hands on simulated based training under the guidance of a B Braun Clinical Educator(s) in a simulated environment only.

This workbook is NOT designed or intended to be used as an instructional manual, quick reference guide or how to program the pump. For complete instructions please refer to the B Braun Quick Reference Guides or Instructions for use.

This workbook does NOT contain any hospital policies or procedures that should be used in real practice. All scenarios in this workbook are designed for simulation based training only. Hospital policies and procedures should be referred to when practicing in any clinical area.

Getting to know your Infusomat Space Large Volume Pump



Goal: Load IV Tubing

Load the IV tubing into your pump and get to this screen

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Step by Step Instructions

1. Press  to power on pump

2. Press  to load the IV tubing.

3. Press  to answer “Yes” to “Opening door, IV line clamped?”

4. The infusion pump door will open automatically.

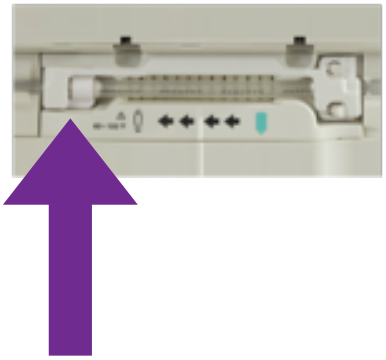
5. Locate flashing yellow triangle.

If the triangle is not flashing, press the green lever until it is fully engaged

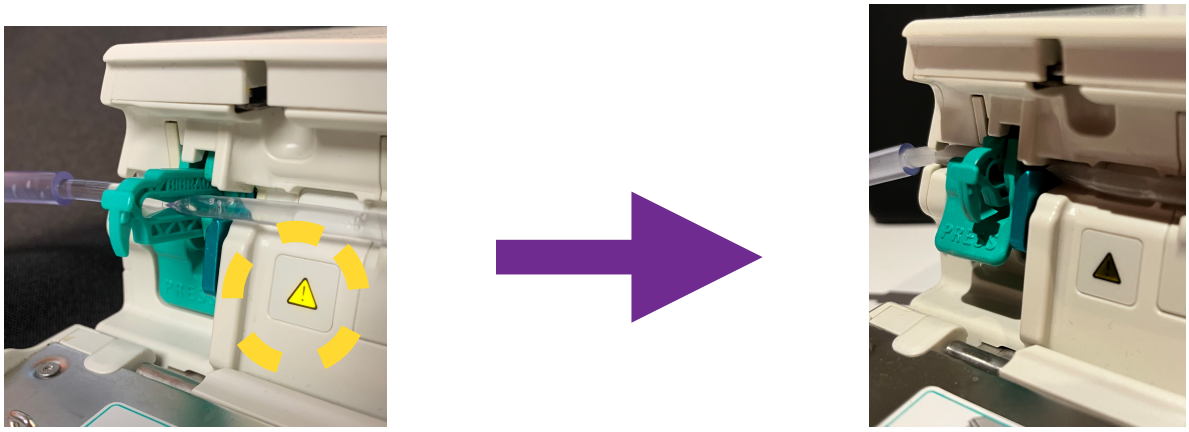
6. Hold the IV tubing with the white bar on top, the 2-hole clip in your right hand, and the green free-flow protection clip in your left hand.

7. Place the 2-hole clip on the 2 pins on the right side of the pump.

8. Insert the white clip into place.



9. Take the green free-flow protection clip with the hook facing down and toward you, insert it into the green slot.



10. Thread the IV set into the notches on the right and left side of the pump.
11. Run your finger along the IV set to secure it into the track.
12. Close the door firmly until you hear and feel the motorized door pulled shut.
13. Answer “Yes” to prime. Acknowledge on screen safety prompt.

14. Press OK to stop priming early or to confirm that priming is complete. You will be prompted to repeat priming if needed.

Congratulations, You loaded and Primed your set!

Goal: Program and start a PRIMary Infusion

1: Program a continuous infusion of:

Care Unit:	Adult General
Medication Selection:	IV Fluids
Initial Infusion Rate:	125ml /hr
VTBI of:	1000 ml

and Start the infusion

2: While Your Infusion Is Running…

Change the rate to	95 ml/hr

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Step by Step Instructions

Goal 1: Program and start a continuous infusion

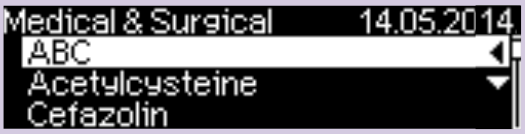
Starting at this Screen:

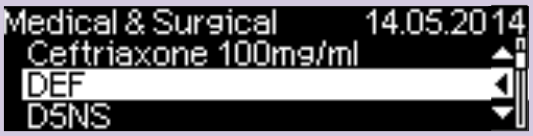
1. Follow prompts to program an infusion.
2. Select the applicable Care Unit

Adult General

? Did You Know That…

To navigate through the drug library quickly, use the right arrow at any time to jump to the next alphabet grouping (“ABC,” “DEF,” “GHI,” etc.).





All menus are circular, sometimes it’s faster to use the UP arrow to get to the bottom of the list.

3. Select the Medication entry from drug library

IV Fluids

4. Enter a rate of

125ml /hr

5. Enter VTBI (Volume to be infused) of

1000 ml

6. When the “START” icon has appeared in the upper right corner of the screen, press 

.

Congratulations, your infusion is running!

Goal 2: While Your Infusion Is Running…

1. While the pump is running, press  and change the values to

95 ml/hr

2. Confirm the rate change.

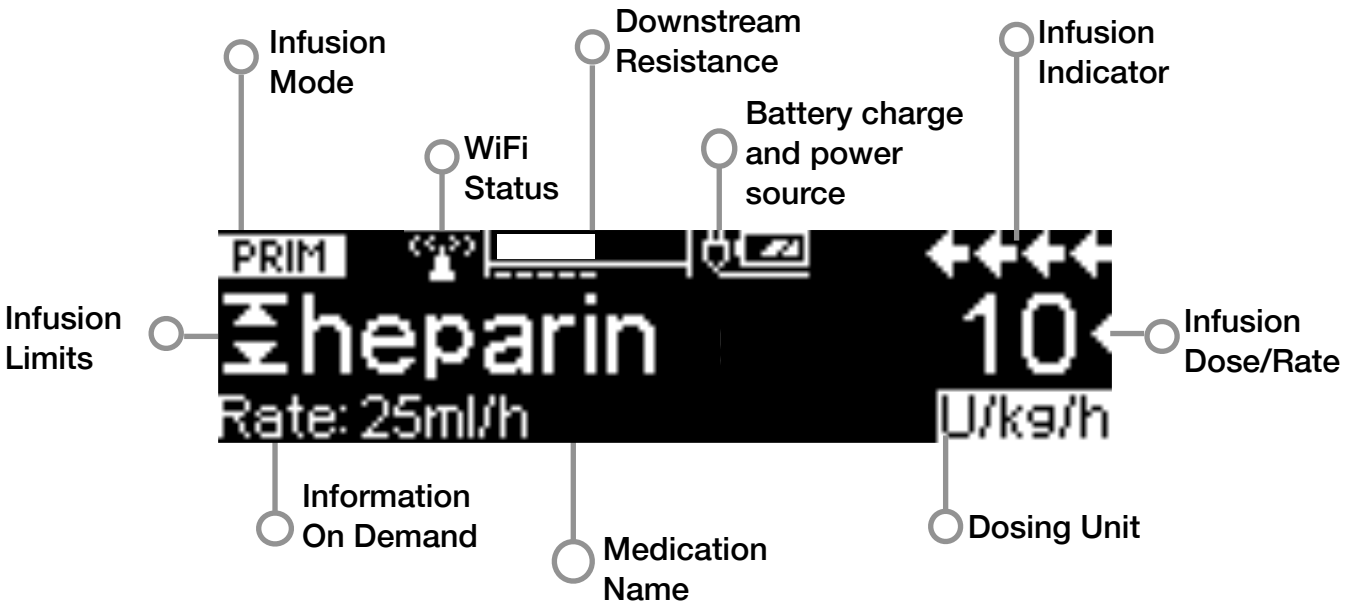
Congratulations, you titrated your infusion!

Did You Know That…

Pressing 

may be used to clear existing data entry and return all values to 0.

Getting to know your pump screen

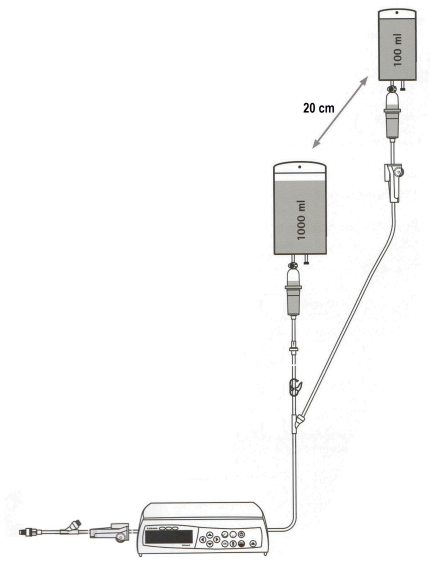


Goal: Program a SECondary Infusion

1: With the existing PRIMary infusion, now program a SECondary infusion of

Medication Selection:	Antibiotic
Infusion rate of:	100 ml/hr
VTBI of:	50 ml

SECondary setup



IMPORTANT TO REMEMBER

The SECondary bag must be hung at least 20cm above the PRIMary bag.

2: While infusing change the Rate of Infusion to

120 ml/hr

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Step by Step Instructions

Goal 1: With a PRIMary Infusion running, Program a SECondary infusion of

Starting from the infusion screen:

1. Press 

to stop the PRIMary infusion and bring up the Home Screen.
2. From the Home Screen, scroll down to locate and select “SECondary”.
3. Select “New SECondary” from the sub-menu.
4. Select the medication

   Antibiotic

   from the drug library.
5. Enter an infusion rate of

   100 ml/hr
6. Enter a VTBI of

   50 ml

   and confirm the entry.
7. Review all entries and confirm that “START” icon is present in the upper right corner of the screen.
8. Start the “SECondary” infusion.
9. Acknowledge on-screen safety prompt and ensure your “SECondary” infusion is running.

Congratulations, your secondary is infusing!

Goal 2: Change The Rate Of Infusion Of Your Secondary

1. Press  to change the rate of the infusion to

120 ml/hr

and confirm the entry. .

IMPORTANT TO REMEMBER

If the SECondary rate exceeds 300 mL/h Clamp the PRIMary line to prevent concurrent sympathetic flow.

Congratulations, you titrated your infusion!

Goal: Program a Doserate Infusion

To get to the starting point, stop your infusion and press the C key to clear infusion. Repeat if necessary to get to starting point.

Starting at this Screen:

1: Program a Doserate Infusion:

Care Unit	Adult Critical Care
Medication	Insulin
Concentration	0.99 units/ml
Doserate	1 U/hr
VTBI	101 ml

2: Identify the Infusion Safety Limits

Titrate your infusion to

20 Units/hr

Identify the Soft Limits and override.

Titrate your infusion to

25 Units/hr

Identify the hard limit alert and correct the infusion to

20 Units/hr

Attempt to accomplish this goal on your own
OR
Advance to the next page for step by step instructions.

Step By Step Instructions

Goal 1: Program a Dosrate Infusion

Starting at this Screen:

1. Select the Care Unit

Adult Critical Care

2. Select the medication

Insulin

3. Select the concentration

0.99 units/ml

4. Program a doserate of

1 U/hr

and confirm with OK.

5. Program a VTBI of

101 ml

6. Press 

to start the infusion.

Goal 2: Identify Infusion Safety Limits

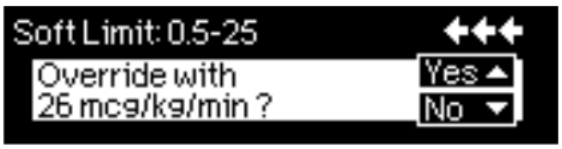
Starting from the running screen:

1. Press  to change doserate to

20 Units/hr

and confirm new doserate. The pump provides a soft limit alert.

NOTE: The alert has the drug library limits shown in the upper display as well as the value being attempted



2. Answer “Yes” to override soft limit and deliver the programmed dose.
3. Change doserate to

   25 Units/hr

   The pump provides a hard limit alert.
4. A drug library hard limit upper limit has been reached. Acknowledge the alert.

NOTE: When a hard limit has been reached, the pump editor will revert back to last confirmed programmed value.

5. Change the doserate back to

   20 Units/hr

   and confirm new doserate.

Congratulations, you found the soft and hard limits!

Did You Know That…

Indicates you are between the the soft safety limits

Indicates you are above the the soft safety limit

Indicates you are below the the soft safety limit

CONTINUE RUNNING THE CURRENT INFUSION FOR THE NEXT SCENARIO

Goal: Explore the SubMenus

Continue from the previous infusion:

Care Unit	Adult Critical Care
Medication	Insulin
Concentration	0.99 units/ml
Doserate	20 U/hr
VTBI	101 ml

1: Change Care Unit

Without interrupting the infusion, change the Care Unit to

Adult General

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Step by Step Instructions

Goal 1: Change Care Unit

1. While pump is running, press  to return to the Home Screen, locate select “Change Care Unit”.
2. Choose the Care Unit

   Adult General

   and confirm Care Unit change.
3. Verify Care Unit change by pressing  on the Run Screen. The new Care Unit is visible in the bottom left corner.

Congratulations, you changed the Care Unit

Goal 2: Clear infused totals

Without interrupting the infusion, clear the infused totals.

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Step by Step Instructions

Goal 2: Clear infused totals

1. Without interrupting your infusion, press  to return to the Home Screen.
2. Locate “Infused Totals” and select it.
3. Highlight “Total” and select it.
4. Answer "Yes" to "Reset to zero?".

Congratulations, you cleared the infused totals

Goal 3: Simulate a bag change and reset the VTBI

Reset the VTBI of your infusion to

100 ml

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Step by Step Instructions

Goal 3: Change the VTBI

1. Press 

to stop infusion.
2. Scroll down to select " VTBI".
3. Press 

to clear current value.
4. Enter a new VTBI of

100 ml

and confirm the entry.
5. Restart the infusion.

Congratulations, you changed the VTBI

Did You Know That…

When the VTBI is complete, your pump will enter into KVO mode.

The KVO rate will never be faster than the programmed infusion rate and will be based on your facility preferences.

Goal 4: Resolve a downstream occlusion alarm

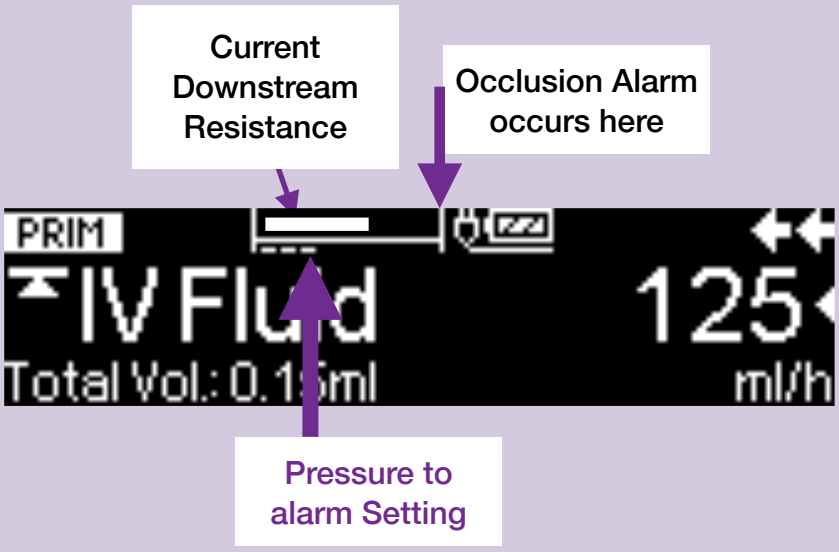
While the pump is infusing, pinch the tubing to trigger an occlusion alarm.

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Did You Know That…



Step by Step Instructions

Goal 4: Resolve a downstream occlusion alarm

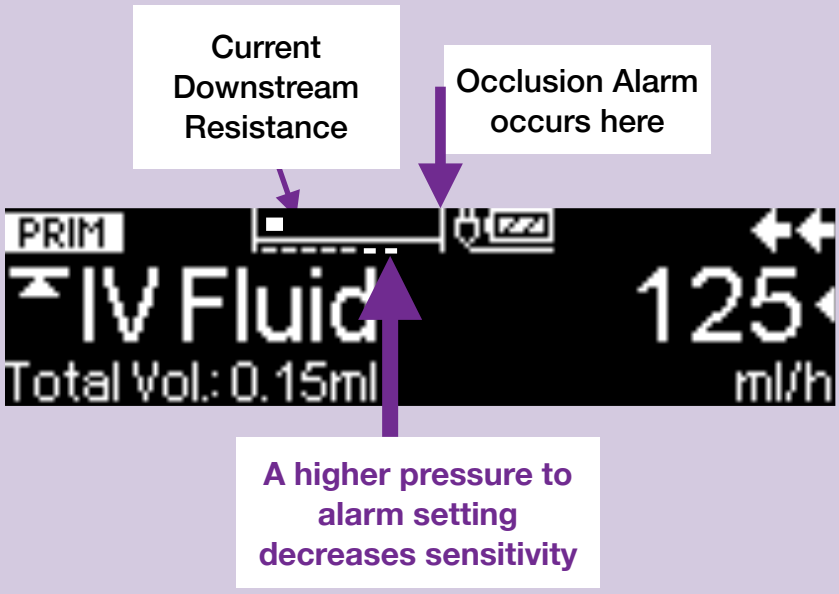
1. Trigger a downstream occlusion alarm by pinching a section of the tubing on the left side of the pump while the infusion is running.
2. Acknowledge and silence the alarm.
3. Resolve the cause of the occlusion and restart your infusion.

Congratulations, you managed an alarm

Goal 5: Locate the downstream pressure setting.

? Did You Know That…

You can adjust the sensitivity to a downstream occlusion alarm. The higher your downstream pressure setting is, the longer it will take for the pump to alarm when there is an occlusion.



Goal 6: Locate time remaining on battery charge

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Goal 5: Locate the downstream pressure setting.

Step by Step Instructions

1. While the pump is infusing press  to return to the Home Screen.
2. Scroll up or down in the main menu to find the Options submenu, where you will find the downstream pressure setting.

Goal 6: Locate time remaining on battery charge.

Step by Step Instructions

1. While the pump is infusing, press  to return to the Home Screen.
2. Scroll up or down in the main menu to find the Status submenu, where you will find the battery time remaining for your infusion.

Congratulations, you discovered the Options and Status Submenus

Goal: Use Data Lock to prevent unwanted tampering

Continue your current infusion

1: Lock the pump to prevent tampering

Lock Using "Level 2" and Enter your facility's unique data lock code of

2992

2: Turn the lock feature off

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Did You Know That…

Data Lock level 1, locks programming except for the Start/Stop and Opening door/tubing change functions.

Data Lock Level 2, locks all programming except the Stop function.

Goal 1: Lock the pump to prevent tampering

Step by Step Instructions

1. Stop the infusion
2. Navigate to the Options menu
3. Locate “Data Lock” and select it.
4. Highlight “Level 2” and select it.
5. Enter your Facility’s access code of

   2992

   and confirm.
6. Return to the Home Menu
7. Start your infusion, you will notice the  symbol will appear next to the current infusion rate on the Run Screen.

Goal 2: Turn the lock feature off

8. Navigate to the Options Menu.
9. Locate and select “Data Lock”.
10. When prompted, enter your Facility’s access code of

    2992

    and confirm.
11. Highlight and Select “OFF”.

Congratulations, you Locked and Unlocked your pump

Goal: Program an Infusion Using the Dose Rate Calculator

To be used when operating a doserate infusion outside of the drug library.

Starting at this Screen:

To get to starting point, stop your infusion and press the  key.

Program the following infusion <u>outside</u> of the drug library

Drug Concentration Unit	mg
Amount of drug in the bag or syringe	250 mg
Volume of solution in bag or syringe	600 ml
Patient Criteria	weight based
Patient weight	72kg
DoseRate unit	mg/kg/hr
Doserate	1 mg/kg/hr
VTBI	600 ml

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Step by Step Instructions

Starting at this Screen:

1. Follow prompts to program an infusion.
2. Locate and select “Basic Infusion” from list of Care Units.
3. Navigate to the options menu
4. Select DoseRate Calculator
5. When prompted to “ Select drug concentration unit”. Select

   mg

   and confirm.
6. When prompted to “ Enter amount of drug in the bag or syringe” enter

   250 mg

   and confirm.
7. When prompted to “ Enter volume of solution in the bag or syringe” Enter

   600 ml

   and confirm.
8. Select unit of measure

   weight based

   and confirm.
9. Enter patient weight of

   72kg

   and confirm.
10. Select dosing unit of

    mg/kg/hr

    and confirm.

11. Enter a doserate of

1 mg/kg/hr

and confirm.

12. Scroll down to VTBI to enter a volume of

600 ml

and confirm.

13. Confirm the settings and start infusion.

Congratulations, you programmed an infusion outside the Drug Library using the Dose Rate Calculator

Goal: Standby and Power Off

1: Put your pump in Standby for 1 hour

2: Power down your pump and get to one of these 2 screens:

or

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Did You Know That…

The pump cannot be powered down while the tubing is loaded.

Step By Step Instructions

Goal 1: Put your pump in standby for 1 hour

1. Stop your infusion.
2. Press and hold  for 3 seconds until Standby mode is engaged.
3. Press  to change timer settings.
4. Press  to clear previous time.
5. Program a Standby time of 1 hour and confirm.
6. Cancel the Standby timer and resume your infusion.

Goal 2: Power off your pump

1. Stop the running infusion.
2. Close the roller clamp.
3. Press  and confirm the prompt to open door. The door will partially open.
4. Pull the door completely open. You will feel slight resistance as the door pulls the free-flow protection clip to clamp off the tubing.
5. Press the green opening lever on the far left side until the yellow triangle begins flashing and continues to flash.
6. Remove the IV set.
7. Push the door shut firmly.
8. Turn off pump by pressing  for 3 seconds.

Congratulations, you placed your pump in Standby and learned to power it down

Congratulations you completed all the scenarios with the Infusomat Space Pump!

Please complete the survey by scanning the QR code on your smart device so that we can continue to improve our training.

Alarms

Yellow PreAlarms

LED will illuminate, a low alert will sound and the infusion continues to infuse

Can occur when:

- Volume or Time to be infused is near end
- 30 minutes before the battery is depleted
- Keep Vein Open m (KVO) mode has been activated
- A programming sequence has not been completed/confirmed

Red Alarms

LED will illuminate, a high alert will sound and the infusion will stop infusing

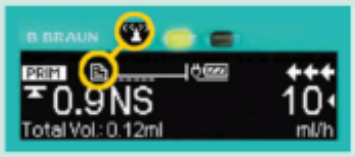
Can occur when:

- Upsteam or Downstream pressure threshold has been reached
- Air has been detected in the line
- End of an infusion OR end of KVO mode
- Battery empty

Wireless Drug Library Upload Process

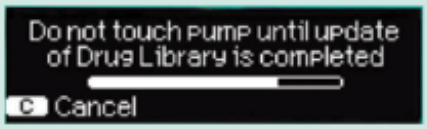
Please ensure that all pumps and Space Stations are plugged into a power source PRIOR to a scheduled wireless drug library update via the wireless network.

1. When a "File" is received the symbol will flash alternately with the "Wireless Antenna" symbol

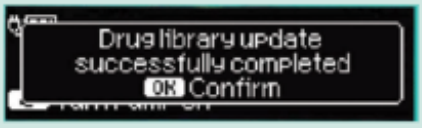


2. When therapy is complete and you Power OFF the pump, this will initiate the DL upload process.

3. Progress bar indicates that the upload is in progress. Large DL files could take up to 30 minutes or more to upload completely



4. When the upload is complete, press OK to confirm. The pump powers OFF.



5. When the pump is powered ON, you will see a confirmation screen. Press OK to confirm that the new DL has been activated on pump.

NOTE: To **Confirm the pump has the most recent DL.** Navigate into the DL and confirm the date located in the upper right corner is the date of the most recent DL. This date represents the date the DL was created.