

# PUMP OPERATION

## Operating Tips

### Follow all prompts on the pump screen.

- The Operator must press **OK** to confirm all entries and changes.
- Follow all prompts on screen to clear alarms.

### Be sure to load sets properly.

- Start with a fresh section of tubing loaded in the pump, make sure there is enough tubing for patient movement.
- To open the pump door, insert the gravity IV set's slide clamp fully into the keyhole.
- Observe the Direction of Flow diagram, left of the pumping mechanism with door opened.
- Load tubing tautly, from top to bottom in loading points 1, 2, 3 and 4, following the red/green prompts.
- Close the door with thumb pressure over both door hooks, which is at the top of the door and the bottom of the door.
- Open the slide clamp by pulling it straight up and out of the keyhole, while holding the tubing around it down to provide strain relief.

### Use the Dose Error Reduction System (DERS).

- DERS protects against human errors that could cause Adverse Drug Events.
- BASIC mode can not detect many of the human errors that DERS can. BASIC mode does possess some Generation 2 features such as Check Flow at Run, Secondary Error Prevention, and Single Step Titration.

### Confirm Safe Accurate Pump Operation

- Confirm at startup and periodically thereafter drops are falling in the drip chamber at the expected rate, IV or Container vents are properly functioning, tubing clamps are in the proper positions and tubing is free from kinks or signs of collapse outside the pump.

### Do not drop the AC Power Adaptor.

- The AC Power Adaptor has a built in power supply and is an electronic device. It is not simply a plug and it will break if repeatedly dropped.
- Keep the power cord plugged in whenever the pump is not in use.

### Follow secondary procedures.

- Use a secondary hanger fully extended to drop primary containers below secondary containers.
- With secondary rates above 300 mL/hr, look for and clamp off primary line siphoning.

## Placing the Pump in STANDBY (Hold)

You can place the pump in a standby state to prevent the occurrence of the Inactivity Alarm (see “Alarms” section, beginning on page 62) for the period of time specified in the User Settings / Alarm Settings menu option. The default setting is to provide an infinite period of time; however, this value may be changed from one minute up to 99 hours and 59 minutes.

1. Load the set and complete the infusion setup.

Once setup has been completed and the highlight is on the Volume Given mL value, a display appears stating that the pump may either be started or it may be placed in standby mode.

2. To place the pump in standby, press the **HOLD** soft key. (See Figure 63.)



Figure 63. HOLD Soft Key.

- When standby is activated, the IN STANDBY popup message, (See Figure 64.), is displayed in a flashing format.

*NOTE:* If the standby period is set to infinite, the time value in the display will be replaced with a dashed line.



Figure 64. IN STANDBY Popup Message.

3. While in standby, press **RUN** at any time to begin the infusion. Pressing any other key or opening the pump door cancels standby mode.
4. After pressing **RUN**, confirm check flow.

*NOTE:* To place a pump in standby after an infusion has started. Press **STOP**, **REVIEW** soft key, followed by the **HOLD** soft key.

## Operating the Keypad Lock

The keypad can be locked in two ways:

- Manually - by entering the keypad lock code.
- Automatically - by activating the Auto Keypad Lock feature in the Drug Library.

---

**CAUTION:** Use Keypad Lock to Avoid Tampering.

---

### Manually locking the keypad

To lock the keypad, enter the code 429 (“K”, “E”, “Y”).

*NOTE:* 429 is the default keypad lock code. Refer to the Library Configurations section in the MDL User Manual (P/N 41020) to change the keypad lock code. Keypad lock code is set hospital wide in the Drug Library and may be 1 to 4 digits (1-9 only, zero can not be used).

This code is entered when the pump is in the run mode to prevent unauthorized activation of specific key entries. A popup message appears briefly indicating the keypad has been locked. If locked, pressing any key will also result in this popup message being displayed. The Key lock icon is shown on the top left corner of the screen. 

When the keypad is locked, you can press the **REVIEW** soft key to view infusion setup data. However, no values can be changed and therefore navigation from value to value is not allowed when the keypad is locked.

The keypad allows certain alarm conditions to be silenced and cleared while in the Keypad Lock mode.

The code must be re-entered to unlock the keypad. If the keypad is unlocked while reviewing the setup data and the pump is not stopped, the keypad will automatically relock upon return to the run screen.

### Automatically locking the keypad

In the MDL, you can set the keypad to lock automatically by activating the Auto Keypad Lock feature by Care Area.

Keypad will be automatically locked 60 seconds after the run key is pressed.

Passcode must be entered on the keypad to unlock.

Always guard the keypad lock code from unauthorized view or access. Uncontrolled access by a patient or family member may cause injury to the patient.

For more information about this feature, refer to the Care Area Configurations section in the MDL User Manual (P/N 41020).