

FLUSH FEATURE TIPS

Medfusion® Syringe Infusion Pump

For detailed instructions, specifications, warnings or additional information regarding the Medfusion® Syringe Infusion Pump Model 3500 V6 or 4000 and PharmGuard® Toolbox 2 Software, refer to the Medfusion® Pump Operator's manual and PharmGuard® Toolbox 2 Administrator and User's manuals.

BACKGROUND

Some medications require a flush after administration to infuse residual medication left in the tubing. The PharmGuard® Medication Safety Software has a flush feature that can automatically prompt the end user to flush the tubing when a timed infusion is complete. The flush setting is configured at the profile level and when enabled, is only available for intermittent type infusions and will not apply to continuous type infusions. The flush volume is included in the Program Volume Delivered and Total Volume Delivered for the infusion.

If the flush feature is enabled for a profile:

- 1. Begin Flush Setup:** For intermittent infusions, when a "Syringe Empty" or "Infusion Complete" alarm occurs, the pump prompts the user to begin flush setup.
- 2. Enter Flush Volume:** Once the flush syringe is loaded and confirmed, the next programming step is to enter in a flush volume. **Note:** Flush volume limits that display on the pump screen are calculated by the pump using the following parameters:
 - a. Confirmed size of the flush syringe in use
 - b. Rate of the previous infusion
 - c. Maximum flush infusion time of 59 minutes
 - d. Maximum flush volume set in the software, if enabled (see your software administrator)
- 3. Confirm Same Rate:** If **Flush Time** is enabled (see your software administrator), the next programming step is to confirm same rate as previous infusion or to change the infusion time for the flush. If flush time is not enabled, this screen will not appear and the pump will default the rate to the previous infusion.
- 4.** The last step is to **Confirm Setup** and **Begin Flush**.

FLUSH FEATURE CONSIDERATIONS

- Always follow policies and procedures established by your institution regarding medication administration and flushing.
- See pump operator's manual for more information on which syringe manufacturers and sizes are characterized. Note that the pump will only recognize syringe models selected for use within a profile (see your software administrator).
- Note that the pump algorithm when programming an infusion does not add the volume of the flush before it calculates the total volume to deliver and the rate in mL/hr.
- Familiarize yourself with the maximum flush volume allowed by the pump based on the rate of the previous infusion. Alternatively, familiarize yourself with the minimum rate requirements for the desired flush volume. See charts on back page.
- **Please note:** If the desired volume to infuse for the flush (mL) is greater than (>) the rate of the previous infusion (mL/hr), the flush feature will not work as desired since the flush volume limits will be adjusted to a smaller volume.

Rate of Previous Infusion (mL/hr)	Maximum Flush Volume Allowed by the Pump (mL)*
0.1	0.098
0.2	0.197
0.3	0.295
0.4	0.393
0.5	0.492
0.6	0.59
0.7	0.688
0.8	0.786
0.9	0.885
1	0.983
2	1.966
3	2.949
4	3.932
5	4.915

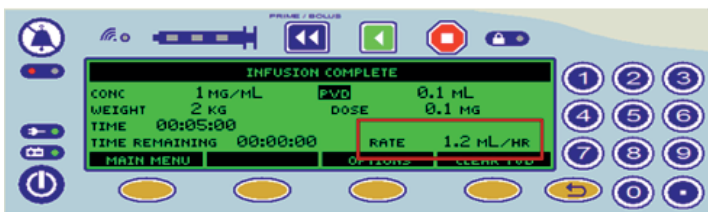
Desired Flush Volume Amount to Infuse (mL)	Minimum Rate Requirement for Previous Infusion (mL/hr)*
1	1.02
2	2.03
3	3.05
4	4.07
5	5.09
6	6.10
7	7.12
8	8.14
9	9.16
10	10.17

*Minimum Rate = Flush Vol / Max Flush Time
 Max Flush Time = 59 min or 0.983 hr

*Max Flush Volume = Rate x Max Flush Time
 Max Flush Time = 59 min or 0.983 hr

FLUSH FEATURE WORKFLOW EXAMPLE:

1. Note the volume needed to clear the line.
2. When the "Infusion Complete" or "Syringe Empty" alarm occurs, note the infusion rate before silencing the alarm and beginning Flush Setup.



3. Utilize the charts above to determine if using the flush feature is the best option for you or utilize the general rule of thumb and compare the flush volume to the rate of the infusion:

- a. If Flush Volume (mL) is less than (<) the Rate (mL/hr), proceed with Flush Setup, as desired.
- b. If Flush Volume (mL) is greater than (>) the Rate (mL/hr), the flush feature will not work as desired. When asked to Begin Flush Setup, select No.
 - Use a flush drug program (if built into the library – see software administrator) to administer the desired flush volume over the desired time.
 - If a flush drug program is not available in your library, select a manual delivery mode (e.g., Volume over Time, mL/hr) to deliver the desired flush volume over the desired time.

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