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Graseby™ 1200

Large Volume Infusion Pump


Quick Reference Guide

Read the entire Instruction Manual before operating the Graseby™ 1200 Infusion Pump . Failure to properly follow warnings, cautions and instructions could result in death or serious injury to the patient.

The Graseby™ 1200 is a volumetric infusion pump that provides accurate and reliable infusions at a rate of 1 - 1200 mL/h

Start the pump

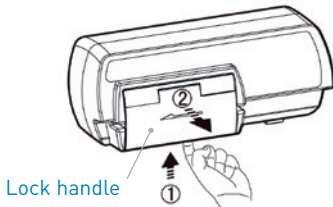
Before starting, the infusion pump must be placed horizontally for use, and should be placed on a stable surface or attached to an IV pole. Please keep a safe distance between the infusion pump and the patient to help prevent the IV pole from falling over onto the patient.

1. Connect the AC power supply plug to the pump
2. Press the Power key  for two seconds
3. The pump switches on and automatically performs a self-check
4. After the self-check, continue installing the infusion tubing if there isn't an alarm. Make sure the infusion tubing is in good shape before starting the pump.

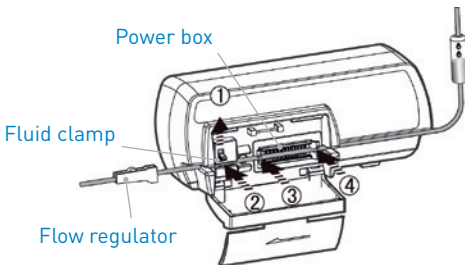
Install the infusion tubing

Ensure that the drip chamber is located between the infusion bottle/bag and the pump, while the roller clamp is located between the patient and the pump. The infusion tubing should be inserted in accordance with the infusion direction indicator on the pump.

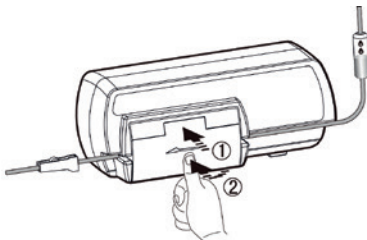
1. Hang the infusion bottle (bag) filled with medication on the IV pole, close the flow regulator, and make sure the drip chamber is about half filled.
2. Lift the pump lock handle to open the pump door



3. Position the infusion tubing in the power box slot, lift up the fluid clamp, and press the infusion tubing firmly into the ultrasonic sensor slot.



4. Lift the lock handle to make sure the retractor clasps the door pin, then press the lock handle down to close the pump door. At this time, the surface of the lock handle should be flush with the pump's outer case.









Program a Continuous Infusion

The Graseby™ 1200 infusion pump can be programmed to infuse in two ways:

1. Set the infusion volume and rate, and the infusion time will automatically be calculated
2. Set the infusion volume and infusion time, and the infusion rate will automatically be calculated



After installing the infusion tubing, set up the infusion pump

1. Use    to input the infusion rate in mL/h. The rate unit is only altered at a configuration interface
2. Move cursor below using the  key
3. Use   to input the infusion volume in mL. The pump will automatically calculate the infusion time based on the infusion rate and infusion volume
4. The brand of the infusion tubing can only be set in the configuration screen. It is recommended to set the parameters such as brand, occlusion grade, rate unit and KVO rate before setting the rate, infusion, and other parameters.

Priming the Infusion Set

After the infusion tubing is installed and the pump is programmed, prime the line to remove any remaining air in the tubing before connecting to the patient.






While priming, ensure that the tubing is not connected to the patient.

1. Open the flow regulator between the patient and the infusion pump
2. Press the Priming/Bolus key  twice and hold at the second time to prime the infusion tube at the rate of 1000 mL/h
3. Release the Priming/Bolus key  when you observe that the air has been expelled and fluid begins to drip from the end of the tubing.


Note: Priming volume is not calculated in the cumulative volume

Calibration of brand and serial number of infusion tubing

The infusion tubing brand should be updated and calibrated. If you're using other brands, calibration should be done after selecting a serial number at the first use. The calibration methods are as follows:

1. At the stop status, press the move cursor key  and select key  at the same time to enter the rate calibration screen
2. Load the infusion tubing
3. Set the serial number, rate and test volume (e.g. No. 02 Lifeline, calibration rate 200 mL/h, calibration volume 20 mL)
4. Press the Start key  to start the calibration. Once it reaches to the test volume, press the Stop key immediately. The first calibration is completed .
5. Repeat steps 3 and 4 to calibrate the tubing again
6. After finishing the second calibration, "OK" is shown on the screen, if successful; move the cursor to "OK" by pressing the Move cursor key .
7. If the same brand of infusion tube is used after calibration, only the brand or serial number will have to be selected before use. In consideration of the manufacturer's accuracy factor for the infusion set, it is advised to calibrate all brands of infusion tubing before use. For more details on the calibration procedure, please refer to the Instruction Manual.

Start the infusion

1. Set up the infusion pump and make sure the infusion tubing has been primed
2. Connect the infusion tubing to the patient and open the flow regulator
3. Press the green Start key  and the infusion will begin
4. The water droplet symbol flowing on the left of the LCD display screen indicates the infusion pump is working. After 15 seconds in the screensaver mode, the pump screen displays the infusion rate values, the infusion rate unit, infusion time left and the dynamic water droplet symbol, as shown in Figure 1.

High: 120 kPa; Middle: 66.7 kPa; Low: 10 kPa

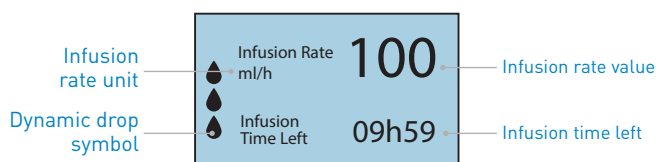











Figure 1: Pump screensaver

Infusion program setting









The Graseby™ 1200 infusion pump can be used for consecutive infusions through two different infusion programs. Before setting up the infusion pump, first install the infusion tubing.

1. In the programming mode, press the Select key until the screen is changed to the infusion program setting screen
2. To set Infusion Program 1: Use    to input the infusion rate and press  to move the cursor to the infusion volume. Use    to input the infusion volume and press  to move the cursor to the infusion rate for Infusion Program 2.
3. To set Infusion Program 2: Use the same method from Infusion Program 1 to set the infusion rate and infusion volume for Infusion Program 2.
4. After the correct infusion program is displayed, press  to move the cursor to "OK", then press the Select key to confirm and save the infusion program setting and return to the main screen. On the Infusion Program Setting screen, press the Stop key and then the Select key concurrently to clear the infusion program.

Note: When infusion programs are applied, the infusion pump will perform Infusion Program 2 automatically after the end of Infusion Program 1.

Alarms

If the infusion pump alarms, listen for the beeps and check the display screen for alarm messages or symbols.

Alarms	Tips/reason	Operation
Battery low Beep-beep-beep	The battery capacity is low/infusion pump could work about 30 minutes	Press the Mute key  , connect the pump to an AC power supply as soon as possible
Battery depleted Beep	The battery capacity is empty, the infusion pump stops	Connect the infusion pump to an AC power supply immediately
Nearly completed infusion Beep-beep-beep	The infusion is about to complete in 3 minutes	Press the Mute key  , prepare to stop the infusion
Completed infusion Beep-beep-beep	The infusion is completed, the pump will operate in the KVO rate	Press the Stop key  to stop the infusion
Tubing route occlusion Beep-beep-beep	The infusion tubing or cannula is blocked	Turn off the flow regulator and press the Stop key  . After the occlusion is eliminated, open the flow regulator and press the Start key  to continue the infusion or start over.
Forget to operate Beep-beep-beep	The pump has been left idle for 2 mins without any operation	Press the Mute key  to clear the alarm and start the infusion or close the infusion pump
The door isn't closed Beep-beep-beep	The door isn't closed, the infusion stops or the infusion cannot begin	Press the Stop key  to stop infusion or close the door and repress. Start key  to continue infusion.

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