

**BeneFusion VP5**

**BeneFusion VP5 Ex**

**Infusion Pump**

**Operator's Manual**

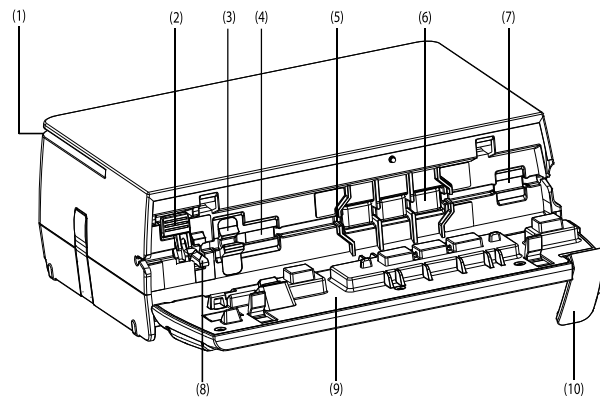


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Release date: 2021-03.

Revision: 1.0

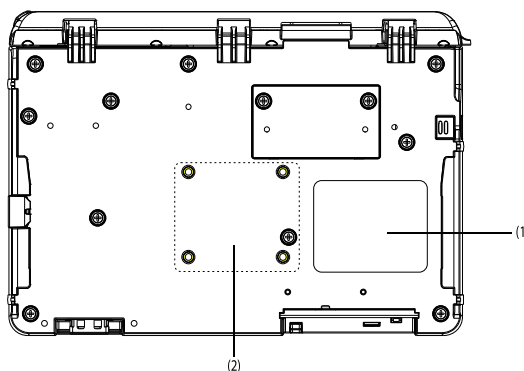


### 2.2.4.3 Infusion Pump with PVC Specified Infusion Sets



- (1) Connection rail
- (2) Liquid check clip operating lever
- (3) Ultrasonic sensor
- (4) Downstream pressure checkout slot
- (5) Infusion set slot
- (6) Waterproof membrane
- (7) Upstream pressure checkout slot
- (8) Liquid check rod
- (9) Door
- (10) Door latch

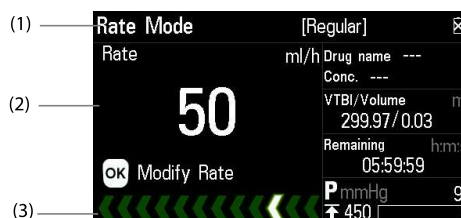
## 2.2.5 Bottom View



- (1) Product label
- (2) Placement area for pole clamp

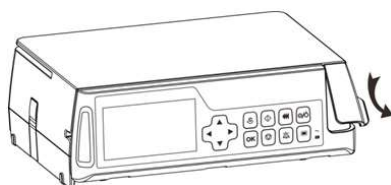
## 2.3 Screen Display

This pump has a LCD screen. The display information comprises three main parts:

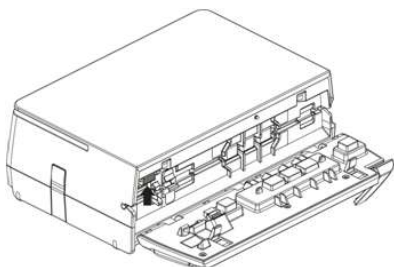


- 1. Title bar  
Displays current infusion mode, drug information, alarm information, battery icon, and etc.
- 2. Parameter area  
Displays every parameter and the parameter value of the current screen.
- 3. Prompt bar  
Displays run icon and so on. The run icon on the screen displays the running operation:

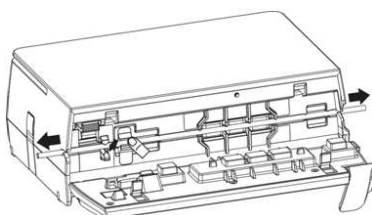
Load infusion set according to the following method:



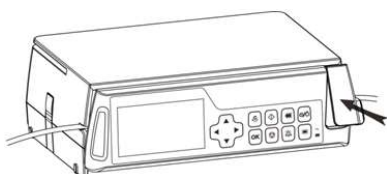
1. Pull the door latch up to open the door.



2. Push up the free flow clamp.



3. Load the set, confirm it is firmly loaded into the tube slot, and adjust or press the set at the gray zone, to confirm the set is loaded correctly.





4. Push the door latch and close the door gently, the system will enter the **[Set Selection]** interface, indicating that the infusion set is loaded correctly; otherwise, it needs to be reloaded.

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## WARNING

- The infusion set should be firmly loaded into the slot, and not jutting on the outside of the slot.

thus to set the expected rate, press  or  again for confirmation, then start to infuse under the new set rate.



#### 4.2.14 Complete

When **[VTBI]** is not set during the infusion and infusion is completed, if drop sensor is installed and the switch of **[Drop sensor]** is on, the **[Empty]** alarm will be triggered.

When **[VTBI]** is set during the infusion and the remaining infusion time is close to the **[Time Near End]** set by the users, the **[Time Near End]** alarm will be triggered. If no action has been taken, the alarm will not be cancelled automatically until the infusion is completed, and then switch to **[VTBI Complete]** or **[Empty]** alarm. Set **[Time Near End]**, please refer to **6.9 Time Near End**.

When infusion is completed, enter to **[KVO]** mode, and KVO mode will run for 30 mins at most. Infusion will stop automatically after the KVO is finished, and the **[KVO Finish]** alarm will be triggered. Set KVO rate, please refer to **6.1 KVO**.

#### 4.2.15 Standby


Under non-running status, press  to enter the standby countdown shutdown interface. Press  to modify standby time (range is 00:01-99:59 h:min). The pump cannot be put in standby mode if there is a high-level alarm.

When the standby state is ended, the title bar will display **[Standby Time Expired]**, press

 or  to cancel alarm.

#### 4.2.16 Turn off the Pump

Follow the steps below to turn off the pump:

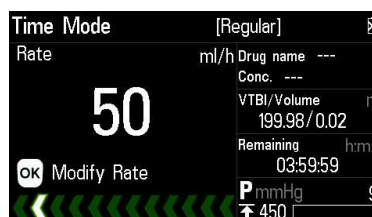
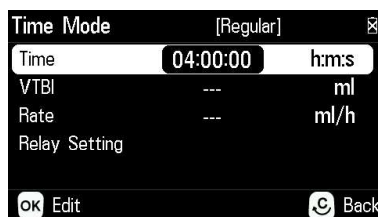
1. Disconnect from the patient;
2. Hold down , until the Turn Off progress bar complete, and the power will turn off.

#### NOTE

- **The current operating data and saved data will always be autosaved when the device is powered off properly. The effective storage duration of the data is equal to the service life of the device.**

## 5.2 Time Mode

### ■ Unit of Rate (ml/h)



### ■ Unit of Rate (d/min)



Mode	Parameters	Parameter Range
Time Mode	Time	00:00:01-99:59:59 h:m:s
	VTBI	0.1-9999.99ml
	Rate	Same as Rate Mode

## 5.3 Body Weight Mode

1. Select [Main Menu]→[User Maintenance]→Input User Maintenance Password→[BW Mode Configuration].
2. Select [BW Mode Configuration]: Conc., Drug Amount and Volume.
3. Select [Main Menu]→[Select Mode]→[Body Weight Mode].

Conc. Configuration:

Pancuronium	Magnesium Sulphate	Hexadecadrol	Insulin
10%NaCl	25%MgSO	10%KCl	50%Glucose
Calcium Gluconate			

### 6.2.2 Dose Error Reduction Systems (DERS)

If a drug library is enabled on the pump, the pump can give alarms when the preconfigured parameter limits are violated.

- **Hard limit:** If the set **[Flow Rate]**, **[Dose Rate]** or **[Bolus Rate]** exceeds the hard limit value stored in the drug library, the drug will be rejected and a prompt message will be displayed.
- **Soft limit:** If the set **[Flow Rate]**, **[Dose Rate]** or **[Bolus Rate]** exceeds the soft limit value stored in the drug library, the pump will give a prompt message to remind you whether to continue the current setting.
  - ◆ **Accept current setting:** the current setting on the pump takes effect. The related rate value is marked with a special color.
  - ◆ **Reject current setting:** the pump returns to the previous menu, and you need to make the setting again.

## 6.3 Occlusion Pressure

Occlusion pressure is adjustable, which can meet the requirements for occlusion pressure of different patients during infusion. Pressure in the infusion tube can be measured by the built-in pressure sensor, pressure can be calculated by the internal CPU, which is compared with the preset occlusion alarm threshold. **[Occlusion]** alarm will be triggered if pressure exceeds the threshold.

### 6.3.1 Set Occlusion Pressure

1. Select **[Main Menu]**→**[General Options]**→**[Pressure]**.
2. Select **[Pressure]**: Occlusion pressure Degree 12, lowest at 75mmHg, and highest at 975mmHg. Occlusion pressure should be selected according to actual needs.

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#### CAUTION

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- **If the patient experiences discomfort at a higher occlusion pressure, monitor the patient's physical conditions under the higher occlusion pressure closely, and take measures instantly if any abnormal condition occurs.**
- **When the infusion set with ultrafilter at a lower occlusion pressure, the **[Occlusion]** alarm might be triggered at high rate due to resistance generated**