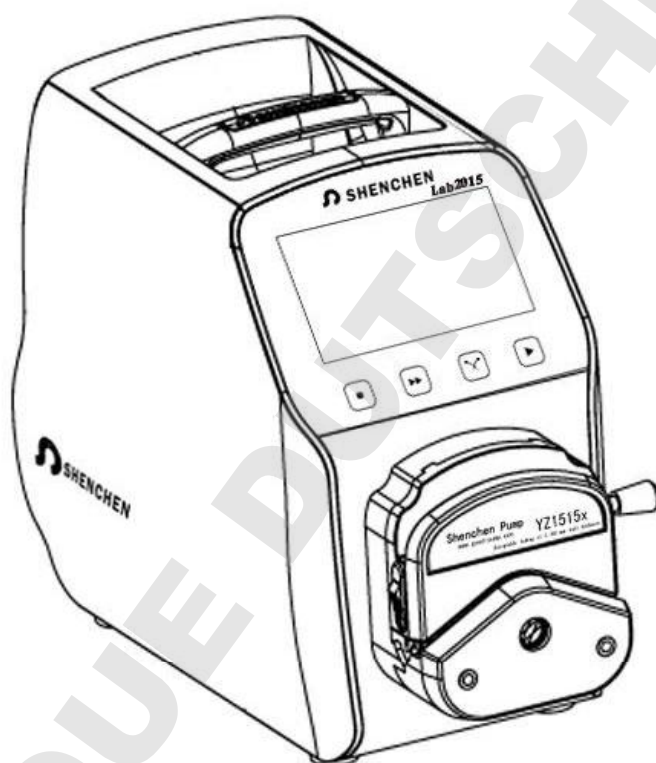


Shenchen Peristaltic Pump Manual of Lab2015 Series





Important Information

- Please read the manual carefully before operating the product.



Warning

- Tubing may have crack due to wear. It results in the overflow of fluid from tubing. In that time human body and instruments may be damaged. So user must check usually and change tubing in time.
- Connect directly the power line to the wall socket, and avoid using the extense electric line.
- If the power line or plug had wear and other damage, please hold the plug to unplug it, not hold the line.
- If following situations happened, please turn off the electric power and unplug the plug, holding the plug and not the line.
 1. Fluid splash on the pump.
 2. You think the pump need to maintain or amend.
- The user's power socket must have ground wire, and have reliable grounding

Catalogue

Lab2015 Series Product Introduction:	- 1 -
Lab2015 Series Product Appearance	- 1 -
Lab2015 Series Keyboard Instruction	- 2 -
Lab2015 Series Operation Interface Instruction	- 2 -
Main Functions Operation Process	- 10 -
Lab2015 Series Technical Specification	- 13 -
Lab2015 Series Function and Features	- 13 -
Product Dimension (mm):	- 15 -
Maintenance.....	- 16 -
Warranty and After Service.....	- 16 -

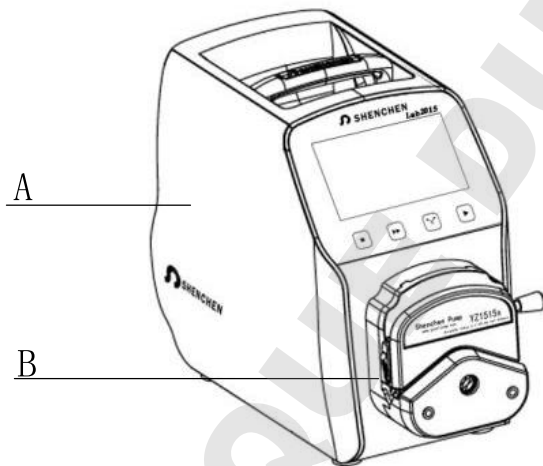
DOMINIQUE DUTSCHER SAS

Lab2015 Series Product Introduction:

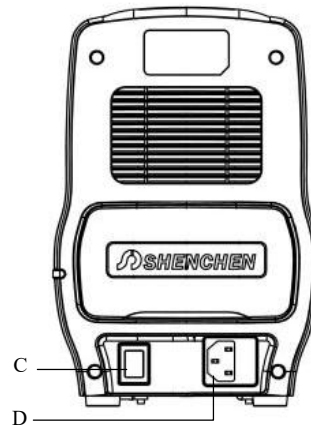
4.3 inch color touch screen control; dynamic display working status; flow data, setted parameters and system settings displays in the same screen. Intelligent calibration and online micro adjusting function; three measurement mode; fixed volume measurement, fixed time and volume, timer start and stop. It can load different pump head. It is the ideal choice for laboratory, industrial production and equipment supporting.

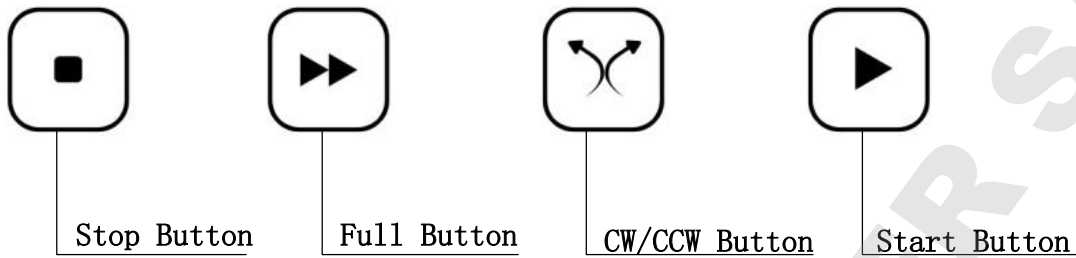
The pump can load different pump head: YZ1515x, YZ2515x easy load pump head; MC series multichannel pump head(MC1-MC8);SN series standard pump head (SN15,SN25).

Lab2015 Series Product Appearance



- A——Drive
- B——Pump Head
- C——Power Switch
- D——Power Port



Lab2015 Series Keyboard Instruction


Stop Button: Press stop button, stop working. Forbidden buttons can be used on the main interface.

Full Button: When stop state or transferring state, press this button, the pump will running with highest speed. This button can be used for wash tube or fast filling liquid.

CW/CCW Button: Press this button, the motor will change running direction. When the pump working with fixed volume measurement function or fixed time and volume function, this button does not work.

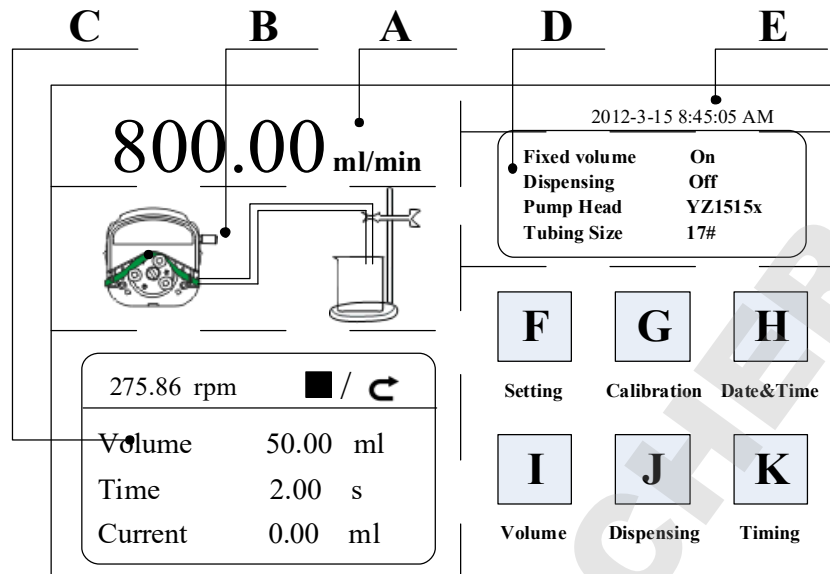
Start Button: Press this button, the motor start running. When fixed volume measurement function or fixed time and volume function turn on, press this button, the pump will start work with the function.

Lab2015 Series Operation Interface Instruction
1. Boot Interface:

After power on the system, enter the welcome interface, choose system language, Chinese/English. If do not choose, it will enter the English main interface after 2.5 seconds automatically.

2. Main Interface:

Main Interface Composition as below:



Speed/Flow Rate Display: Under the flow rate mode, display the current set up flow rate, the motor speed display at the C frame. Under the rotating speed mode, display the current set up speed, flow rate display at the C frame. Click A to amend the flow rate or speed. When fixed time and volume function turn on, A is forbidden, not allowed to amend the flow rate or speed.

Real-time Dynamic Display: Display the current running state.

Real-time Parameter Display: Display the current running state and set up parameter. When the fixed volume measurement turn on, display the fixed volume measurement parameter; when the fixed time and volume function turn on, display the fixed time and volume parameter. When these two functions turn off, display the parameter is all 0.

Set Parameter Display: Display the fixed volume measurement, fixed time and volume state information, the model of pump head and tube size.

Date and Time Display: Display the current data and time, you can change it in the system setting. When it display an alarm clock on the right side, it

means the timer start and stop function is turn on.

System Setting Button: Click this button, set up other parameters.

Flow Calibration Button: Click this button enter the flow rate calibration interface.

Date & Time Button: Click this button enter set up current date and time interface.

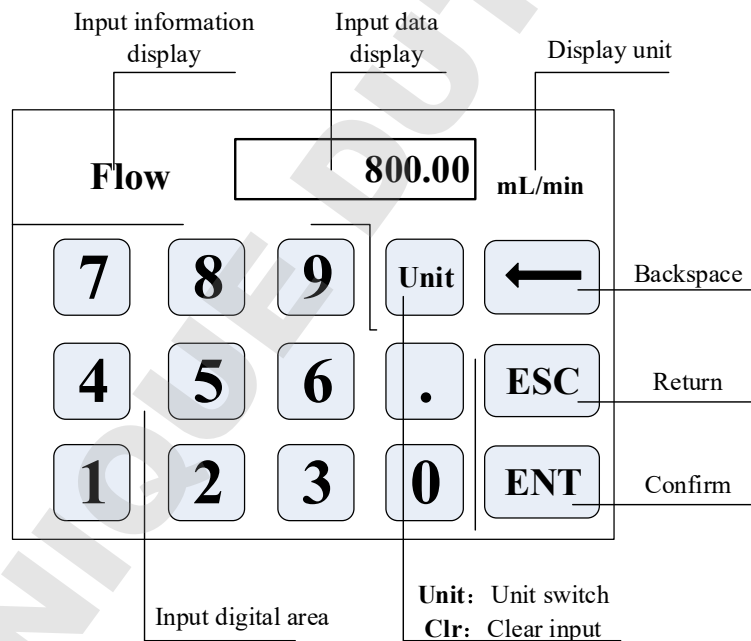
Fixed Volume Measurement Button: Click this button, enter the fixed volume measurement interface.

Fixed Time and Volume Button: Click this button, enter fixed time and volume interface.

Timer Start and Stop Button: Click this button, enter timer start and stop interface.

3、Numeric Keypad Input Interface:

Numeric keypad input interface as below:



Input Information Display: The information displayed is the current operation object.

Input Data Display: Display the current input data, range is 0.01-9999.

Unit Display: Display input units when input flow rate or volume.

Input Digital Area: Numeric keypad.

Unit/Clr Button: When input flow rate or volume, this button is unit switch, you can choose different unit. When it is Clr, you can clear the current input data.

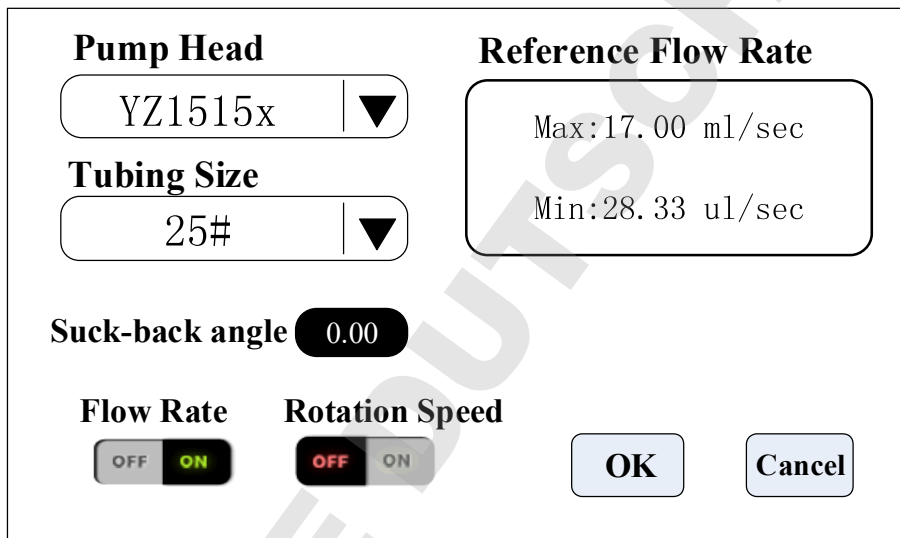
Backspace Button: Delete an input digital.

ESC Button: Cancel the current input, back to prev interface.

ENT Button: Confirm the current input.

4、The Basic Configuration Interface:

The basic configuration interface:



The screenshot shows a configuration menu with the following elements:

- Pump Head:** A dropdown menu currently showing 'YZ1515x'.
- Tubing Size:** A dropdown menu currently showing '25#'.
- Reference Flow Rate:** A box displaying 'Max: 17.00 ml/sec' and 'Min: 28.33 ul/sec'.
- Suck-back angle:** A numerical keypad showing '0.00'.
- Flow Rate:** A toggle switch currently set to 'ON' (green).
- Rotation Speed:** A toggle switch currently set to 'OFF' (red).
- OK and Cancel:** Two buttons at the bottom right of the interface.

Click the pump head and tubing size to choose the pump head and tubing.

Reference flow rate display the max. and min. flow rate with the current pump head and tubing.

Click back suction angle button, appear back suction angle numerical keypad, input back suction angle then click enter button, the pump will back suction according to given angle.

Click the flow rate mode or rotating speed mode button to choose the working mode. When you choose the flow rate mode, the flow rate is adjustable, the speed will change with the flow rate. When you choose the rotating speed mode, the speed is adjustable, the flow rate will change with the rotating speed.

Click the confirm button back to the main interface.

5、 Flow Rate Calibration Interface:

Flow Rate Calibration Interface as below:

FixedVolume	Actual Vol. 0.0000ml	Volume adjust +0.0000ml
Volume 10.00 ml	Test	Add
Run Time 1.00 s	CAL	Dec
	Reset	Esc

The top left corner display the function, when fixed volume measurement turn on, display fixed volume; when fixed time and volume turn on, display fixed time and volume. Others display transferring mode.

If fixed time and volume turn on, the target volume and running time is set up parameter, unable to amend. Other modes, the running time is 60s, you can click the run time button to amend the running time.

Before the pump working, need to calibrate the flow rate to ensure the transferring or dispensing accuracy

Process as below:

- A、 Confirm the running time, if fixed time and volume function, the running time is set up time, unable to change.
- B、 Click **Start** button to test, countdown display the run time, it will stop automatically, and display numerical keyboard, input the actual volume, then it will ask whether continue test (suggest more than 3 times), choose **Yes**, the pump will test again, choose **No**, back to the calibration interface.
- C、 After click the **Start** button, during the pump running, you can click the **Stop** button to stop the test.

- D、 After finish the tests, the actual volume area display the average data, click the **CAL** button, the calibration is finished. Now the request flow rate or volume is close to theoretical data.
- E、 If request higher accuracy, you can click **Add** and **Dec** button to micro adjust the flow rate, to reach high accuracy transferring and dispensing.
- F、 Click **Cancel** button, cancel the test data, the actual volume return to 0.

Online Micro Adjust Volume Process:

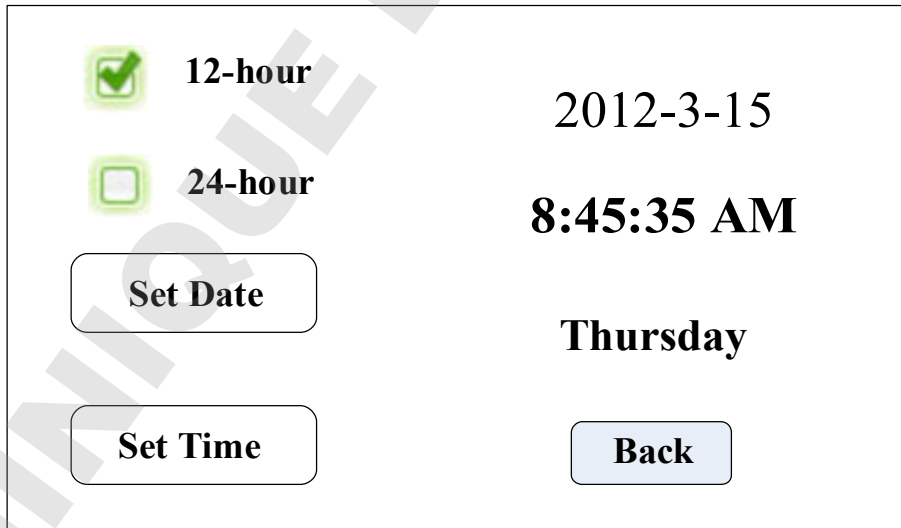
Flow Rate Transferring Mode: If the actual flow rate is big or small than the set up flow rate, you can micro adjust the flow rate online without affect the product line.

Fixed Time and Volume Mode: If the dispensing volume is big or small than the set up volume, you can micro adjust the volume online, no need to stop the pump.

Fixed Volume Measurement Mode: Do not support online micro adjust function.

6、 Date & Time Interface:

Setting Date & Time Interface as below:



The screenshot shows a control interface for setting the date and time. On the left, there are two radio button options: '12-hour' (which is selected with a green checkmark) and '24-hour'. Below these are two buttons: 'Set Date' and 'Set Time'. On the right side, the current date is displayed as '2012-3-15', the time as '8:45:35 AM', and the day as 'Thursday'. At the bottom right, there is a 'Back' button.

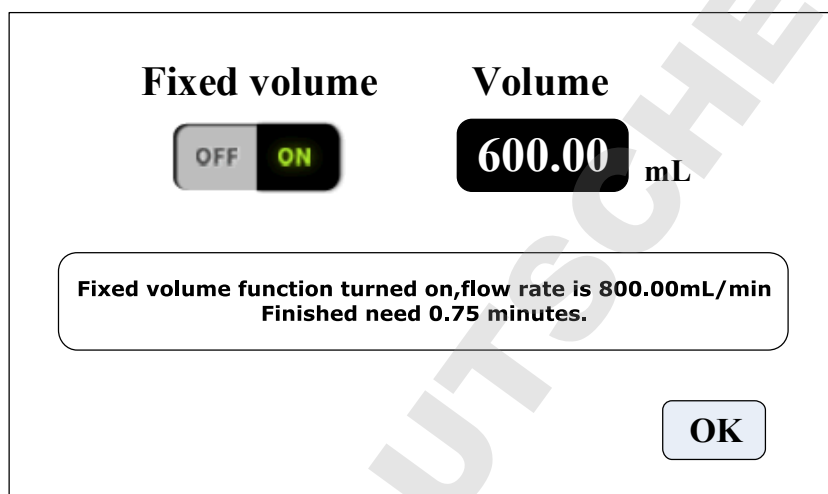
Click the **System Setting** button from the main interface, click **Date** and **Time** button, enter date and time setting interface. The date and time will display on the top right corner of main interface.

Click **Set Date** button, come out the **Set year** numeric keypad, the range of the year is **1970-2099**. After set up the year, then set the month and date.

Click **Set Time** button, come out the numeric keypad, set the hour, minute and second.

7、 Fixed Volume Measurement Interface:

Fixed Volume Measurement Interface as below:

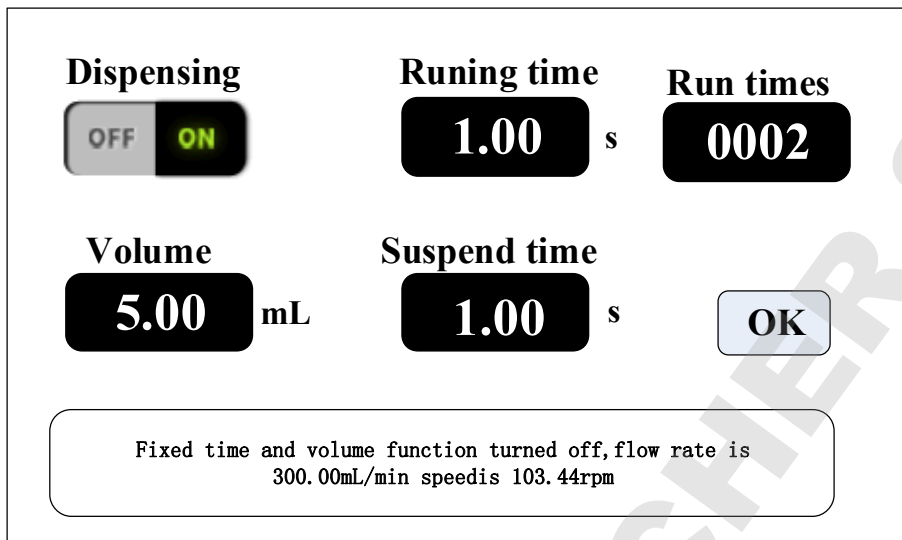


After turn on this function, the peristaltic pump will measure the volume automatically, when the volume reach set up volume, the pump will stop working automatically. The flow rate can be changed during the pump working.

Click the **Fixed Volume** button, set **ON** to turn on this function. Click **Set Volume**, to input volume, the unit can be mL or L, range is 0.01mL to 9999L. The prompting frame display the needed time to finish the volume with set up flow rate. The maximum time is 9999min, when more than 9999min, the system will warn.

8、 Dispensing Interface:

Dispensing Interface as below:

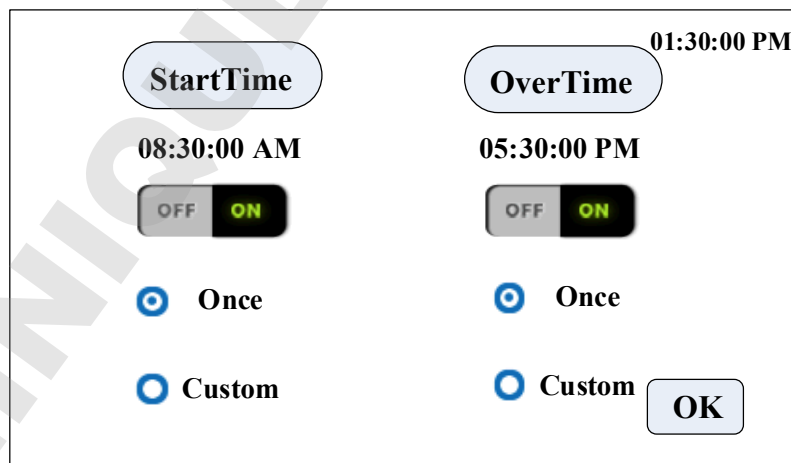


After turn on this function, the pump will enter dispensing mode.

Peristaltic pump transfer fixed volume in fixed time, transfer number of times is the run times, click suspend time button then input suspend time, prompt box display current diameter, after click the OK button, click the start button, the pump begin dispensing according to the diameter.

9、Fixed Time and Volume Interface:

Fixed time and volume Interface as below:



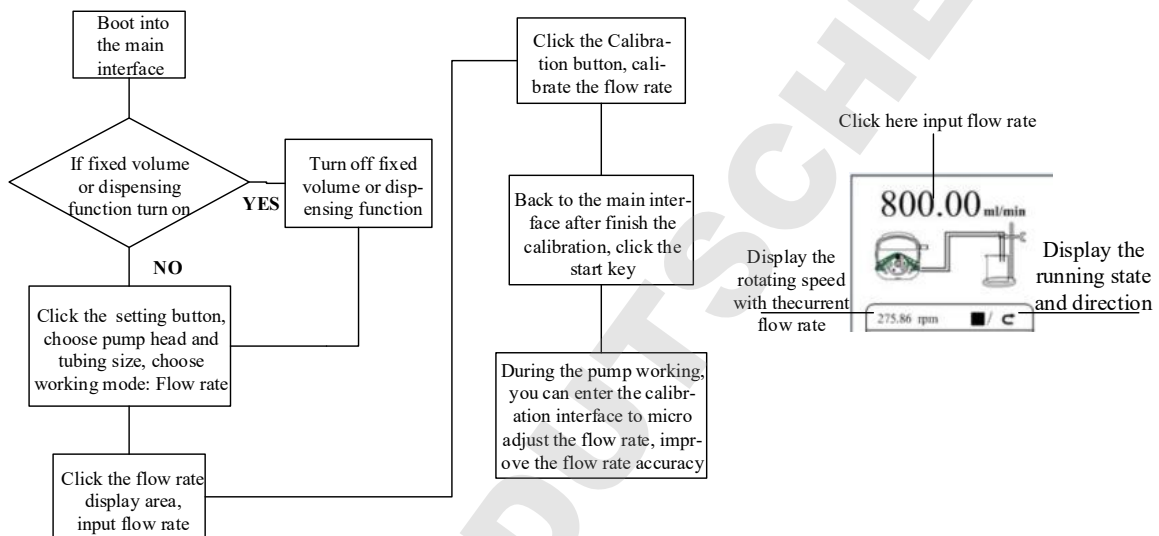
After turn on this function, the pump will enter dispensing mode.

Peristaltic pump transfer fixed volume in fixed time, transfer number of times is

the repetition times, click interval time, input interval time, prompt box display current diameter, after click the enter button, click the start button, the pump begin dispensing according to the diameter.

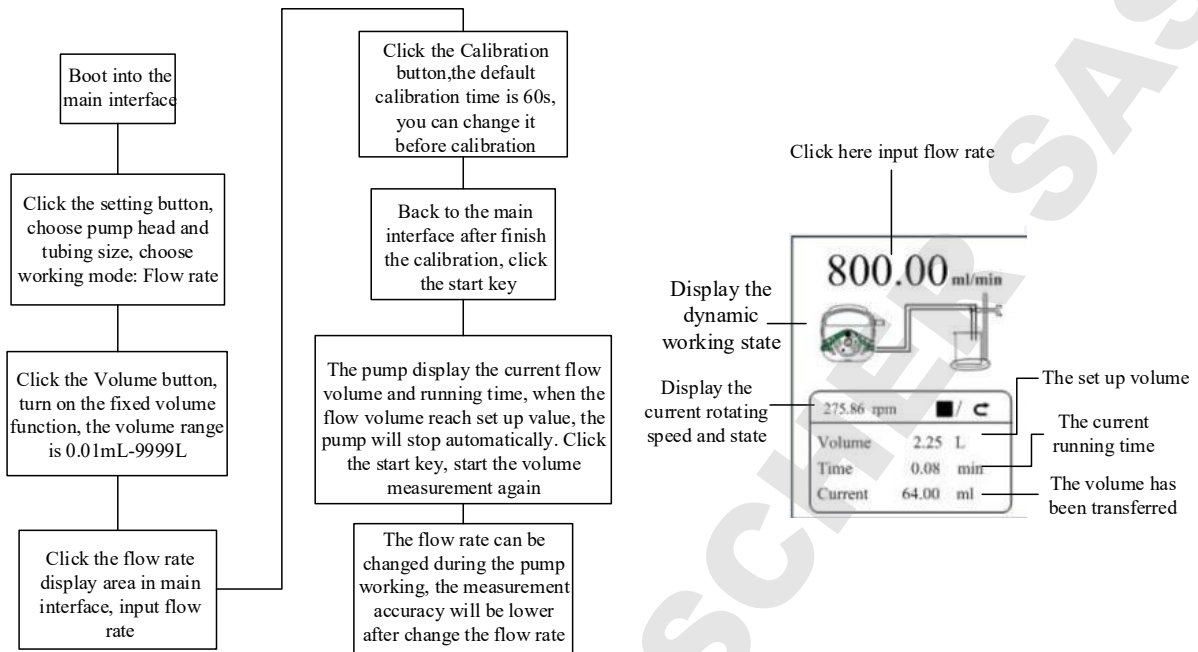
Main Functions Operation Process

1、 Flow Rate Transferring Function



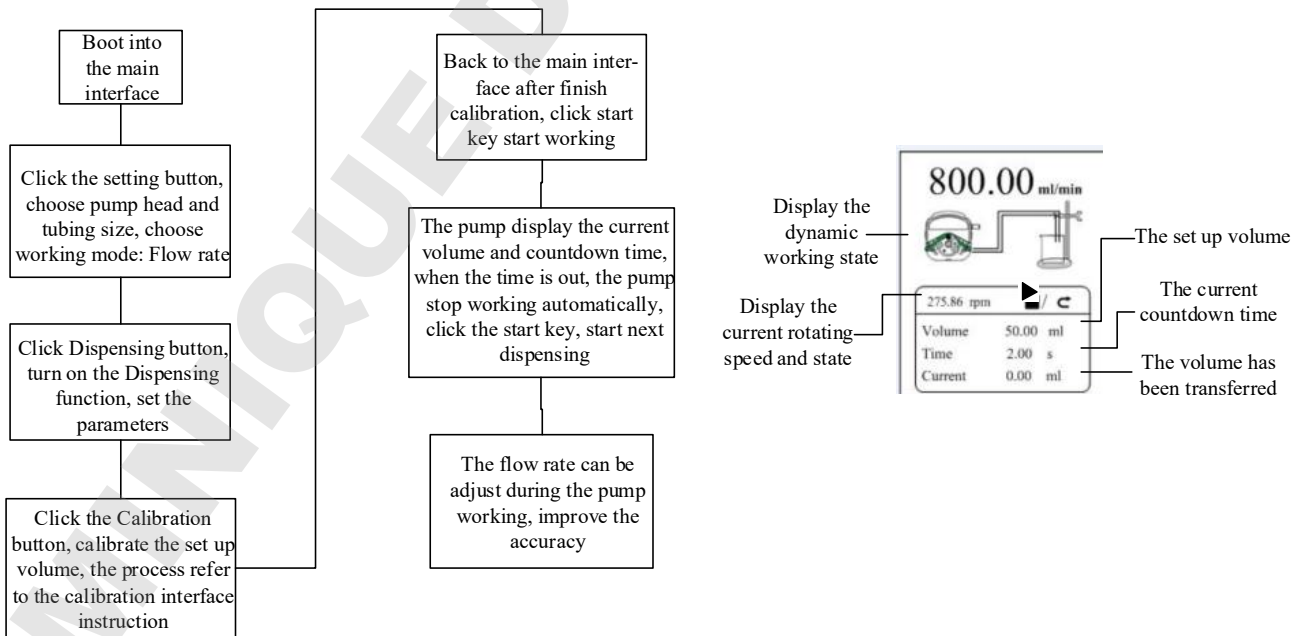
Note: Flow rate calibration process please refer the flow rate calibration interface instruction.

2、 Fixed Volume Measurement Function



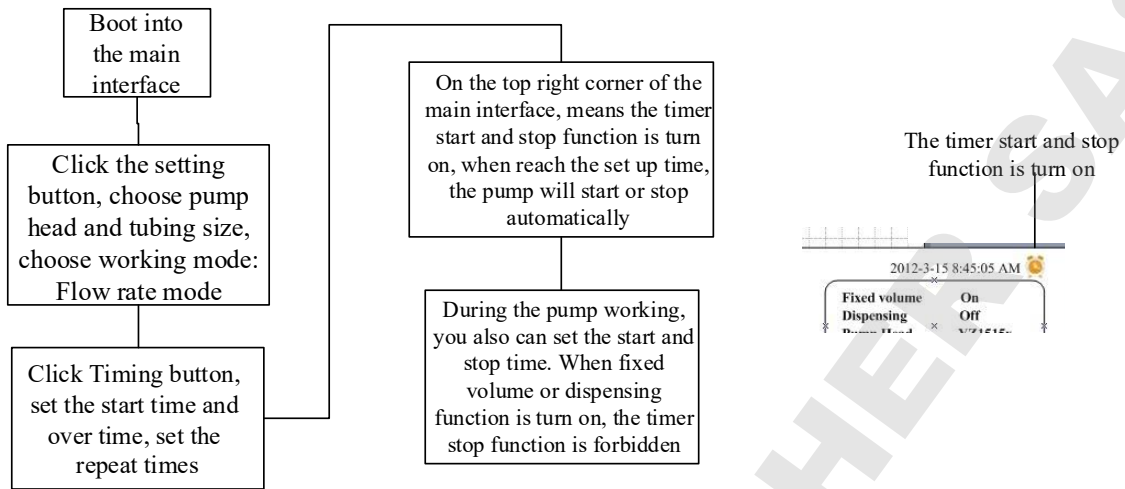
Note: Flow rate calibration process please refer the flow rate calibration interface instruction.

3、Dispensing

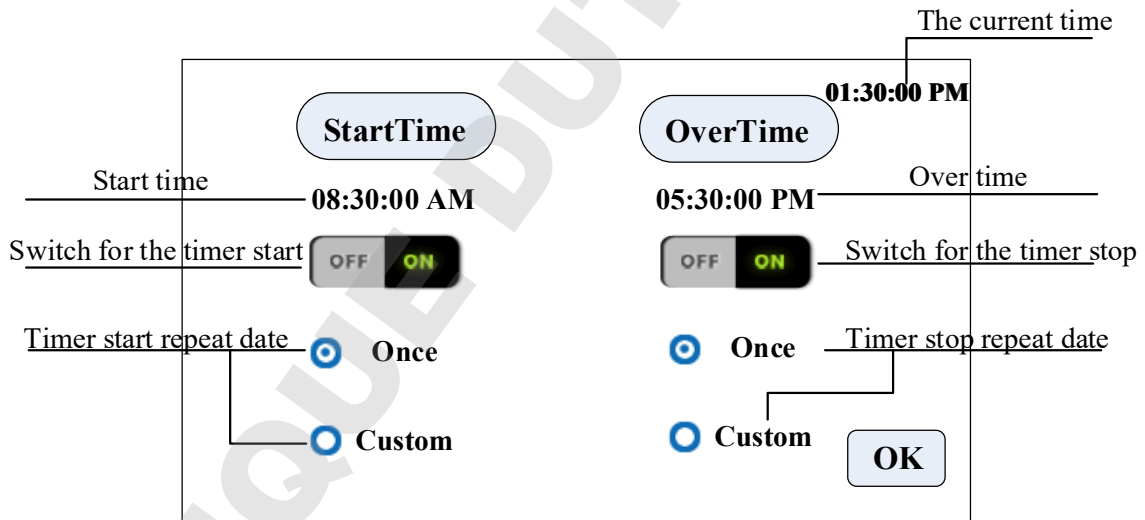


Note: Flow rate calibration process please refer the flow rate calibration interface instruction.

4、Timer Start And Stop Function



Under the flow rate transferring mode, set the pump start at 8:30 a.m. from Monday to Friday, stop at 5:30 p.m., the process as below:



Click **Start Time**, set the start time is 8:30 a.m., turn the button to **ON**.

Click **Custom**, come out the repeat date window, as below:

Monday Friday
 Tuesday Saturday
 Wednesday Sunday
 Thursday

Timer stop setting process is same with the timer start.

Lab2015 Series Technical Specification

Speed range	0.1-100rpm	Power supply	AC220V ± 10%, 50Hz/60Hz(standard)
Power consumption	<50W		AC110V ± 10%, 50Hz/60Hz(optional)
Speed resolution	0.1rpm	Temperature	0-40℃
Flow rate resolution	0.01	Relative humidity	<80%
Operation mode	Touch screen and membrane keypad	Dimensions (L*W*H)	315.2*157.3*236.9mm
Display	4.3 inch true color display screen	Weight	5.02Kg
External control	TTL level	Protection rating	IP31

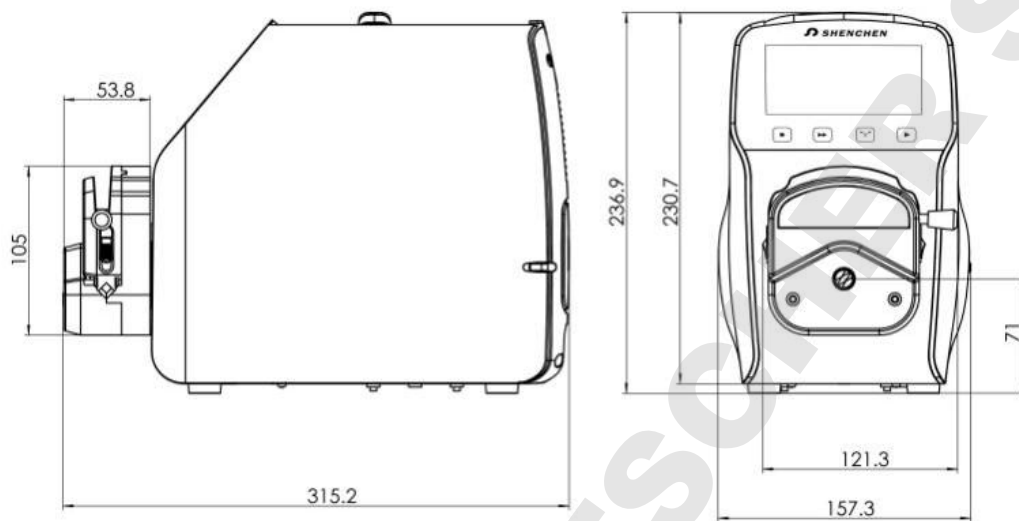
Lab2015 Series Function and Features

- 4.3 inch color touch screen control, dynamic display working status, the flow volume and motor speed display in the same screen.
- Intelligent calibration function, it can calibrate the flow rate and dispensing volume, ensure the flow accuracy, suitable for high

accuracy transferring liquid.

- On-line micro adjusting function, it can adjust the flow rate during production progress, to avoid the filling errors because of tubing fatigue and elasticity decreased.
- Accurate angle control technology, reach high precision dispensing and measurement.
- Fixed volume measurement function: After turn on this function, the peristaltic pump will measure the liquid volume automatically, it will stop automatically after the volume reaches the set value. During this process, the volume can be changed. It is suitable for laboratory liquid dosing and chemical reaction process.
- Fixed time and volume function: After turn on this function, the peristaltic pump will transfer fixed volume within set time. It is suitable for liquid dispensing in laboratory and industrial production.
- Timer start and stop function: Can set the pump start and stop time freely, reach automation control.
- Load-shedding memory function, store the running parameters in time, safe and reliable.
- Fast fluid-filled function, can wash the tubing and also fill fluid into the tubing.
- High torque and low power loss, it can load several pump heads or multichannel pump head, meet different application requests.

Product Dimension (mm):



Maintenance

When pump is not working, please loose the cartridges of pressing the tubing for avoiding changing the shape of tubing because of longtime extrusion.

Keep the rollers of pump head clean and dry, otherwise it can quicken the tubing wearing, reduce the useful life of tubing and lead the rollers to damage in earlier.

Pump head can not resist super corrosive liquid. Please pay attention to it when it is using.

Keep the rollers of pump head clean and dry. If the surface of rollers is not clean, it can quicken the tubing wearing, and reduce the useful life of tubing. If liquid were on the rollers, please dry it. Longtime moisture can damage the rollers.

Warranty and After Service

Products have 1 year warranty (not including tubing). In the warranty, the products are damaged because of users' wrong operation or other human damages, our company do not responsibility for warranty. Beyond the warranty, we only charge the cost of maintenance. Refer to all maintenance including in and beyond the warranty, we do not bear any freight charges because of maintenance.

MADE IN CHINA

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