⚠ Important Information:

Please read operation manual carefully before operation.

⚠ Warning:

- Tubing breakage may result in fluid sprayed from pump. Use appropriate measures to protect operator and equipment. Please check the tubing frequently and changing the tubing in time.
- If the power line or the plug are worn or damaged please pull out the plug (Hold the plug not the power line when pulling out).
- Please shut down the power supply and pull out the plug when you think the pump needs to be maintained or repaired.
- Shut down the power supply of the pump when connecting to external control equipment.

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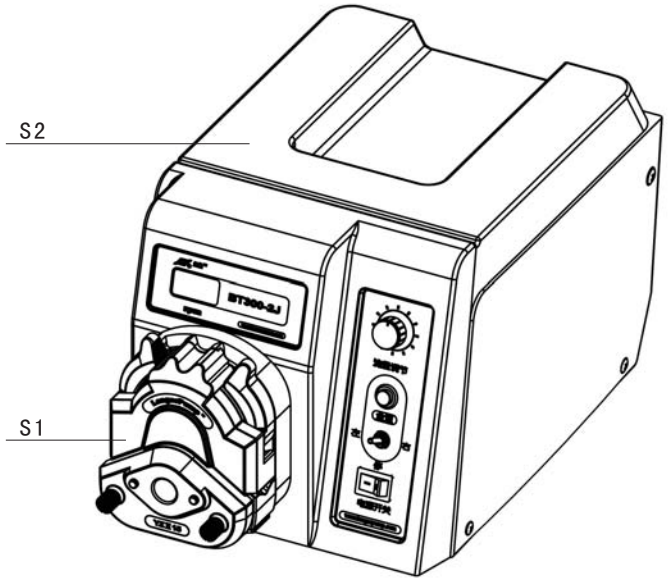
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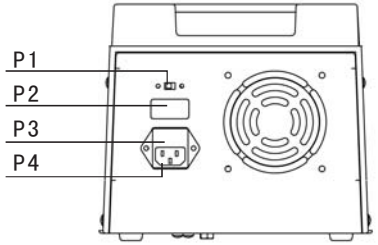
Introduction

Acceptable pump heads for BT300-2J are YZ1515x, YZ2515x, YZII15, YZII25, BZ25. The pump delivers flow rates from 0.07 to 1140 mL/min. The speed can be adjusted manually or automatically through external control interface. It can be equipped with FK-1C dispenser for filling function. Store the running parameter automatically. Easy to operate.



S Standard Configuration
S1 Pump Head
S2 Drive

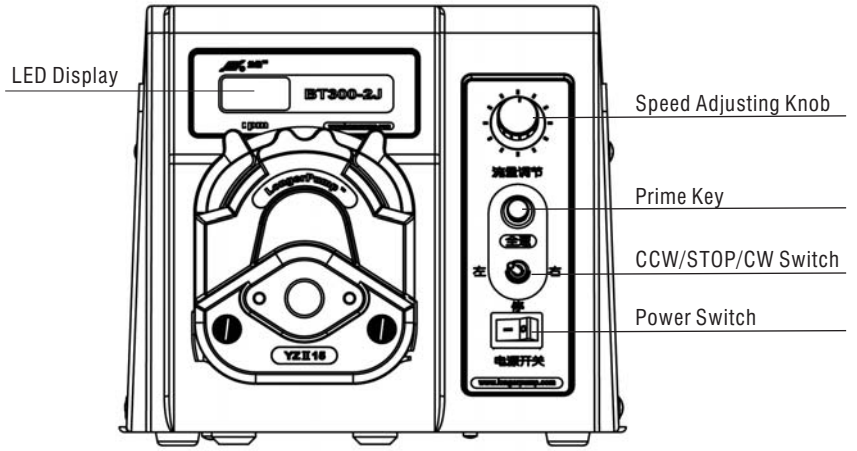
P Parts
P1 External Control Switch
P2 External Control Interface
P3 Fuse Socket
P4 Power Socket



Reference:

Make sure the power line of the pump is grounded reliably to protect the operator in humid condition.

Basic Operation



- **Speed Adjusting Knob**

  In manual control mode, turn the **Speed Adjusting Knob** clockwise the speed increase; Turn the **Speed Adjusting Knob** counter clockwise the speed decrease.

- **Prime Key**

  In manual control mode press down the **Prime Key** to enter prime status when the pump runs at full speed (that is 300 rpm) and the LED displays the max. speed for empting, filling and rinsing operation. Release the **Prime Key** the pump returns to its primary status.

- **CCW/STOP/CW Switch**

  In manual control mode, pull the CCW/STOP/CW switch in left position the pump rotates counter clockwise and in right position the pump rotates clockwise and in middle position the pump stops.

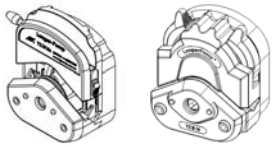
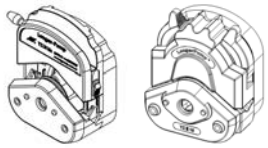
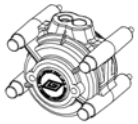
Note:

The CCW/STOP/CW switch must be pulled out first, then put it in the right position. Or the CCW/STOP/CW switch can not be triggered.

- **Power Switch**

  Open or shut down the power supply.

Acceptable Pump Heads and Tubing

Pump Head	Tubing	Flow Rates (mL/min)
 YZ1515x(w) YZⅡ15	13# 14# 19# 16# 25# 17# 18#	0.07 – 1140
 YZ2515x YZⅡ25	15# 24#	1.7 – 870
 BZ25	24#	2.9 – 870

Changing the Pump Head

The pump head has been installed on drive before leaving the factory. Please follow below procedure when changing a new pump head is needed.

1. Loose the tightening screws which connecting the pump head and the drive. Take down the pump head.
2. Insert the flat end of the new pump head's shaft to the slot of drive's coupling. Make the positioning hole of the pump head match the positioning pin of the drive.
3. Tighten the screws which connecting the pump head and the drive. Try your best to tighten the screws in the same degree. Do not over-tighten the screws to prevent the housing from deforming. (Please reference the pump head operating manual for details.)

Note:Shut down the power supply before changing a new pump head.

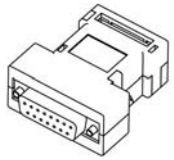
❖ **Check the Pump Head Occlusion**
Load the tubing in pump head and insert one side of tubing in water and blow to the other side. There should be no air bubble in water. If there is air bubble in water, that's because the wall thickness of the tubing is too thin to be used in this pump head.

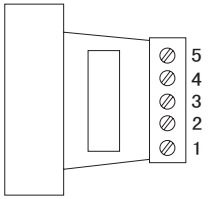
External Control Function

External Analog Control Mode DB15
- 4 to 20 mA speed control
- 0 to 5 V speed control
- 0 to 10 V speed control
- 0 to 10KHz speed control

❖ Analog Control Mode

- External control module is shown as below. When using external control function just trigger the **External Control Switch** in external control position and insert external control module to the external control interface which is in the rear panel of peristaltic pump, and then connect the corresponding control signal wire.

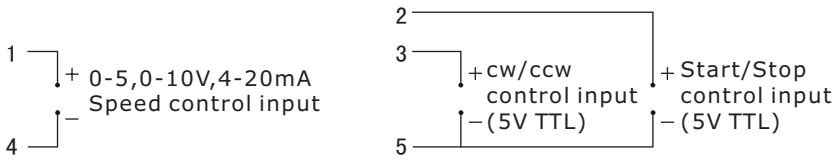

External Control Module



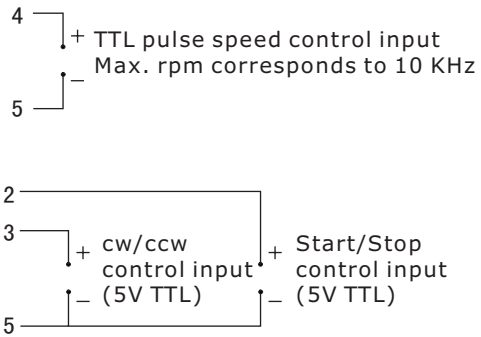
Note: Standard external control module needs order separately.

- Terminal Definition of Standard External Control Module

1# Analog speed control input, for external speed control in external control modules of 4 - 20 mA, 0 - 5V and 0 - 10 V.
2# External start/stop control input. When connected to COM, the pump runs, when connected to high level (5 - 12 V), the pump stops.
3# External cw/ccw control input. When connected to COM, the pump rotates cw, when connected to high level (5 - 12 V), the pump rotates ccw.
4# Reference potential for 4 - 20 mA, 0 - 5V/10V speed control input. Pulse speed control input, for external speed control in external control module of 0 - 10 KHz.
5# Reference potential for external cw/ccw, external start/stop and pulse speed control input.



0 - 5V, 0 - 10V, 4 - 20mA External Control Module Wiring Diagram



Pulse Input External Control Module Wiring Diagram

Optional Accessory

❖ **Dispenser**

Connect to external control interface. Control the start and stop of the pump to realize dispensing and filling.

❖ **Footswitch**

Connect to external control interface. Control the start and stop of the pump.

Note:

Dispenser and footswitch are optional accessories. They can only control the start and stop of the pump. The speed and direction of the pump are controlled by switches on front panel.

Maintenance

- When the pump is idle, we recommend you to release the tubing from pressure. This helps to protect the tubing from unnecessary strain and prolongs its service life
- Keep rollers clean and dry. This will prolong the service lives of tubing and pump head.
- The surface of drive and the pump head are not organic solvent and aggressive liquids resistant. Please pay attention when using.

Note:

If a trouble happens, please contact us or our dealers.

Warranty

The warranty period for this product is one year. If repair or adjustment is necessary within the warranty period, the problem will be corrected at no charge if it is not due to misuse or abuse on your part, as determined by the manufacturer. Repair costs outside the warranty period, or those resulting from product misuse or abuse, may be invoiced to you.

Technical Specifications

❖ Functions

Applicable Pump Head: YZ1515x, YZ2515x, YZII15, YZII25, BZ25
External Control: Start/stop, direction control and speed ontrol (0 to 5 V, 0 to 10 V, 4 to 20 mA and 0 to 10 KHz optional)
Prime: Fast filling and emptying
Speed Control: Adjusting the speed
Communication:RS 485
Display:Display current rpm
Direction Control: cw and ccw reversible

❖ Specifications

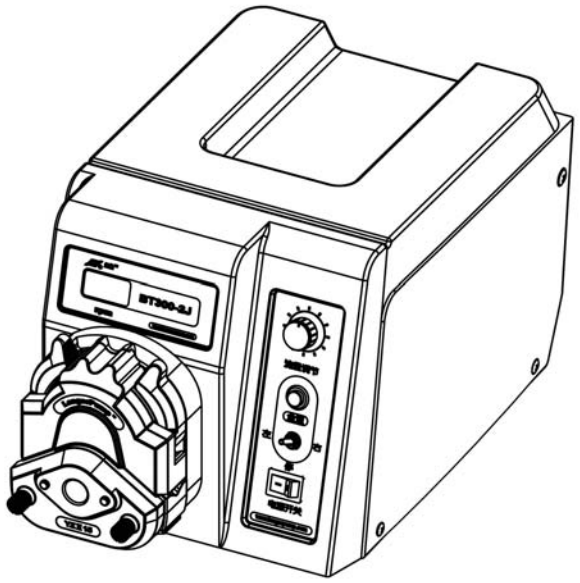
Speed: 1 to 300 rpm
Speed Precision: 1 rpm
Speed Adjusting: Continuous adjusting by rotary coded switch
Display Mode: 3 digit LED displays current rpm
Applicable Power: AC 90 to 260 V 50/60Hz
Power Consumption: < 48 W
Operating Condition: Temperature 0 to 40℃ Relative humidity < 80%
Drive Dimensions (L × W × H): 280 × 200 × 180 (mm)
Drive Weight: 3.6Kg
IP Rating: IP 31

Baoding Longer Precision Pump Co.,Ltd

ADD: Building A,Chuangye Center Baoding
National High - Tech Industrial Development Zone
Baoding, Hebei, China 071051
TEL: 86 - 312 - 3110087 3138553
FAX: 86 - 312 - 3168553
E - mail: longer@longerpump.com
Http:www.longerpump.com

BT300-2J Longer Peristaltic Pump

BT300-2J PERISTALTIC PUMP OPERATING MANUAL



Baoding Longer Precision Pump Co.,Ltd.