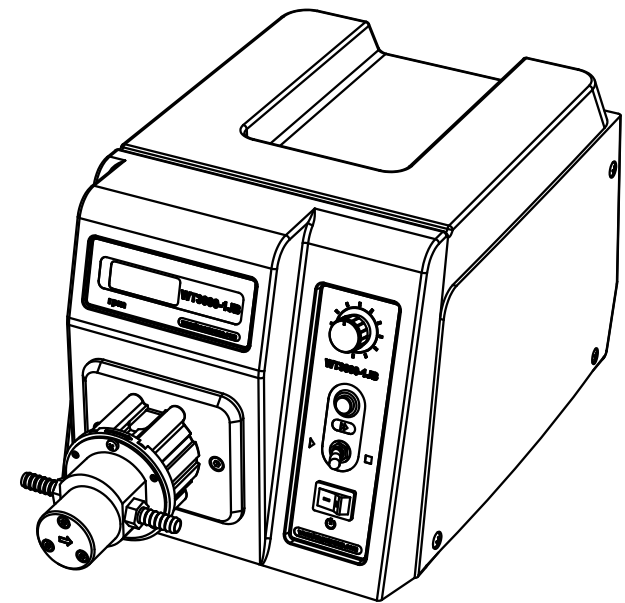


LONGER

WT3000-1JB  
Micro Gear Pump Drive  
Operating Manual



LONGER

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WT3000-1JB Gear Pump Drive

**Baoding Longer Precision Pump Co.,Ltd.**

A Halma company

## Micro Gear Pump Drive Operating Manual

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### **Important Information:**

Please read operating manual carefully before operation.

### **Warning:**

- To prevent damage to pump, do not run the pump dry.
- 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.
- The International Protection rating of this pump is IP31. Do not let liquid enter this pump drive.

### **Warranty:**

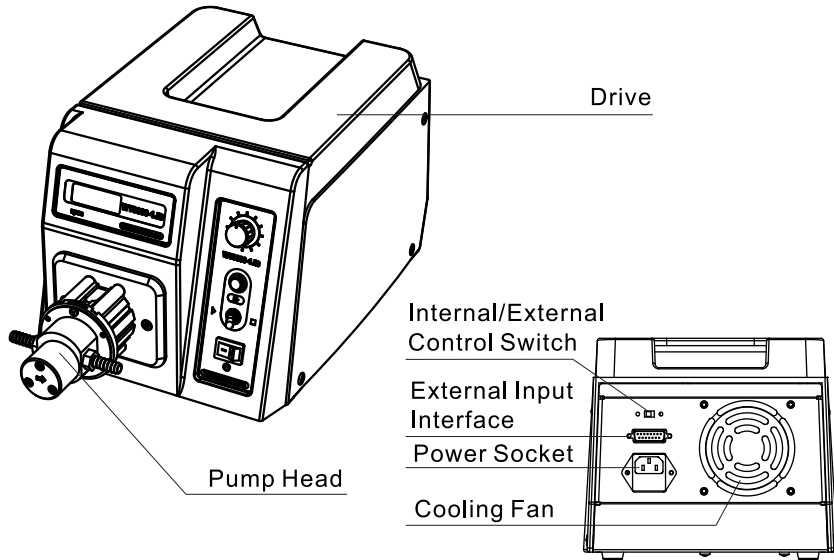
- The warranty period of this product is one year. If repair or adjustment is necessary within the warranty period, the problem will be corrected at no charge if it is not due to misuse or abuse on your part, as determined by the manufacturer. Repair costs outside the warranty period, or those resulting from product misuse or abuse, may be invoiced to you.
- Contact Longer Company or Longer's dealers before returning pump to repair.
- Adopt original carton or reliable package when returning pump to repair.
- Write a note on detailed description of failure phenomena and contact information and put this note along with pump before returning pump to repair.

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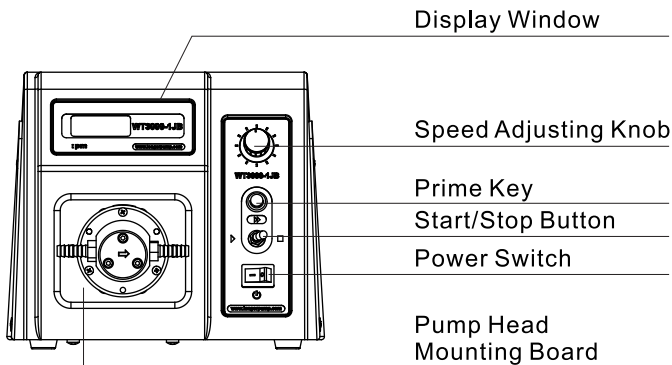
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**Instruction**

WT3000-1JB gear pump delivers flow rates from 85.7 to 2571.4 ml/min. It adopts DC brushless motor which has features of high efficiency and free maintenance. Equipped with compact, precise stainless steel gear pump head which has characters of low noise and no pulse, this pump is suitable for delivering high pressure and high temperature liquid.



**Operation Panel**



**Basic Operation**

• **Start/Stop Control**

Turn on the pump, press down Start/Stop Button, the pump runs clockwise; press Start/Stop Button again, the button rebounds and the pump stops.

• **Speed control**

Turn 【Speed Adjusting Knob】 clockwise to increase the speed and turn 【Speed Adjusting Knob】 counter clockwise to decrease the speed. Turn the knob rapidly the speed changes rate is ten times the rate of turning the knob slowly. The speed range is from 300 to 3000 rpm.

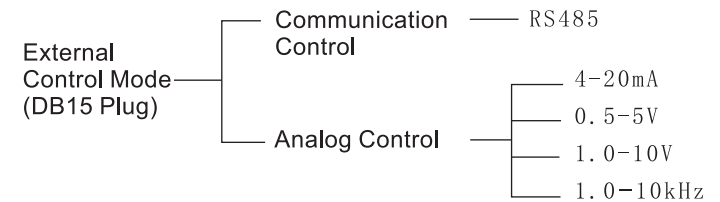
• **Prime function**

In running state, press the Prime Key to enter prime state when the pump runs at full speed and the LED displays “---” for emptying, filling and rinsing operation; Press the Prime Key again to return to running state.

**Acceptable Pump Head and Flow Rates**

Pump Head	Part Number	Flow Rates(mL/min)
	MS(Strong Magnet)	300-3000(rpm)
MS204	050501B	85.7-857.1
MS209	050502B	171.4-1714.3
Ms213	050503B	257.1-2571.4

**External Control Function**



**• Communication Control Mode**

Pump can provide RS485 communication module (see figure 1) to connect upper machine (computer, PLC, SCM). Customer can ask for communication protocol from Longer Company.

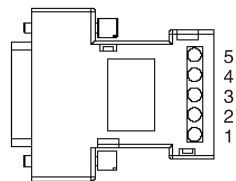
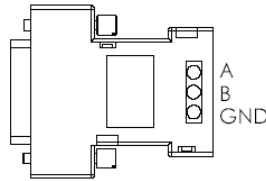


Figure 1: Communication Module      Figure 2: External Control Module

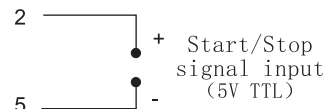
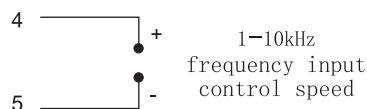
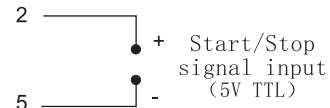
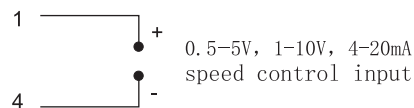
**• Analog signal control mode**

In external control mode, put 'Internal **【Control/External Control】**' switch to 'External Control' position. Connect external control module with pump according to pin defined as following.

Note: According to actual needs, 5 kind of external control modules require to be separately order.

**Terminals of external control module are defined as following**

- 1#: Common input end in 4-20mA, 0.5-5V and 1-10V external control module to control speed of pump.
- 2#: Input end of start/stop of external control. Pump runs during open circuit or inputting low TTL; pump stops during inputting high TTL. (Start/Stop signal is opto-isolated input mode)
- 3#: not available
- 4#: Common end of analog input in 4-20mA, 0.5-5V and 1-10V external control module to control speed of pump.
- 5#: Common end of input signal in 4-20mA, 0.5-5V and 1-10V external control module; common end of frequency input in 1-10kHz external control module.



**Footswitch**

Control the start/stop of the pump through the external control interface.

Footswitch is optional accessory; suitable type for WT3000-1J is JK-3.

**Maintenance**

Pump surface don't have chemical resistance to organic solution and strong corrosive liquids, it should be keep clean and dry, or it will decrease the life of pump.

**Technical Specifications and main functions**

Flow Rate	85.7-2571.4(mL/min)
Speed	300-3000(rpm)
Speed Accuracy	± 1.0%
Speed Resolution	1.0rpm
Display	Four digital LED display running status
Speed Control	Rotating Code Switch
Memory Functions	Automatically save running status before power down
Prime	Fast filling, emptying or cleaning tubing
Communication	RS485
External Input Functions	4-20mA, 0.5-5V, 1.0-10V, 1.0-10kHz 300-3000 ( rpm ) Speed control, start/stop control
Acceptable Liquid	Liquid containing particles smaller than 10µm
Acceptable Liquid Temperature	PTFE -45-50°C; PEEK -45-120°C
Acceptable Liquid Viscosity	≤200cst
Max. Outlet Pressure (Pumping Medium: Water)	MS204: 1.4MPa MS209: 0.9MPa MS213: 0.8MPa
Power Supply	AC176-264V/90-130V, 50Hz/60Hz
Power Consumption	≤150W
Cooling Mode	Heat-emitting fan
Operation Conditions	Temperature: 0 to 40°C
Relative Humidity	<90% (No dew)
Drive Dimensions (L x W x H)	292 x 185 x 180 (mm)
IP Rating	IP31
Drive Weight	5.1kg