



2021-2022

### Lead Fluid Technology Co.,Ltd.

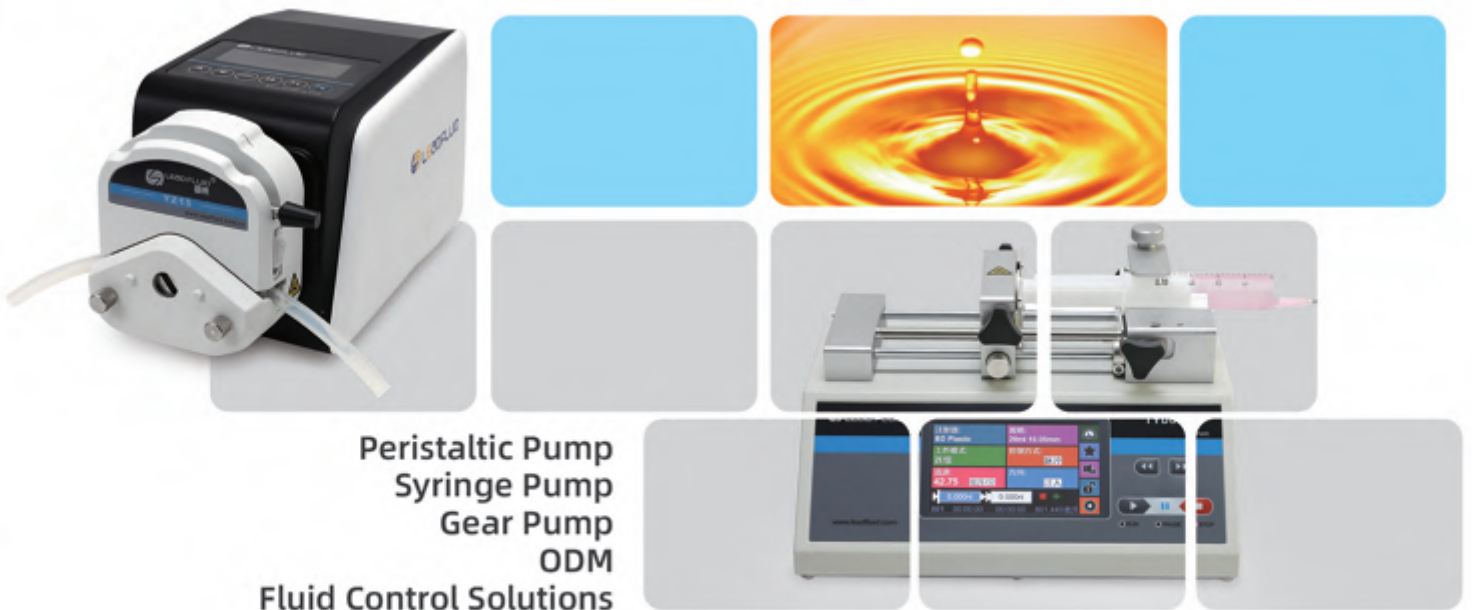
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Peristaltic Pump  
Syringe Pump  
Gear Pump  
ODM  
Fluid Control Solutions

# COMPANY PROFILE |

Baoding Lead Fluid Technology Co., Ltd. was founded in October 1999. It mainly engaged in R&D, production and the sale of peristaltic pumps, laboratory syringe pumps, micro syringe pumps, precision gear pumps and related accessories, and is committed to continuously providing users with competitive micro Fluid transmission solutions and services.

The company's products are widely used in molecular diagnostics, biopharmaceuticals, genetic engineering, scientific instruments, material preparation, environmental monitoring, food and beverages, printing and packaging, etc. The performance and quality have been praised unanimously, and they have a high reputation and reputation.

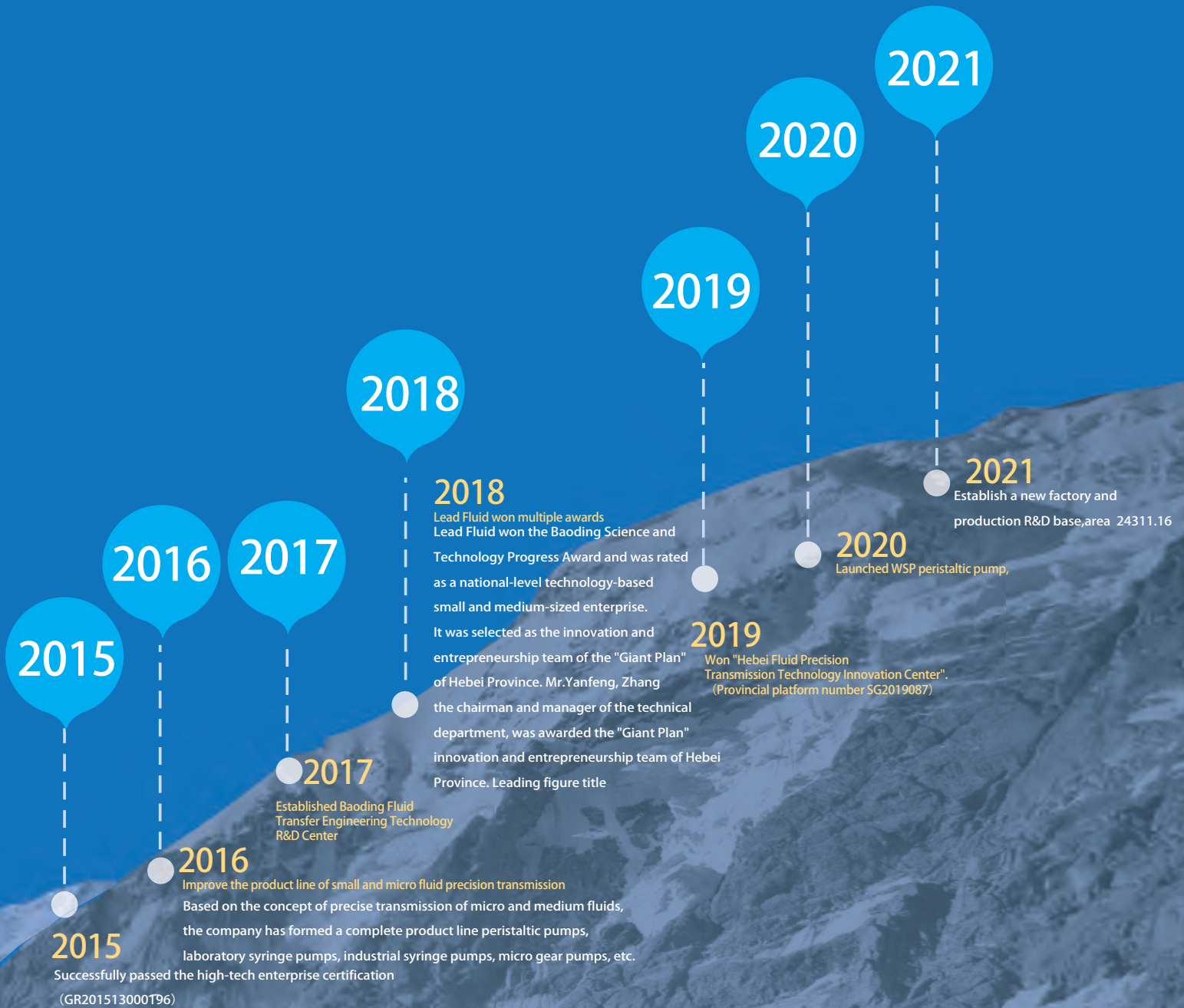
The company registered the "LEADFLUID" brand, which is the Chinese abbreviation of "LEADFLUID", which means that we are committed to becoming the pioneer and leader of fluid control technology. The company has always adhered to this concept in its development, vigorously introducing and training high-tech talents, and increasing research and development. We continue to apply new materials, new structures, and new processes to production and research and development, and have obtained dozens of patents including national and international invention patents. The products are sold at home and abroad, serving 100+ countries and regions around the world, 10,000 +Customers.

Lead Fluid sincerely hopes to move forward hand in hand with users and friends, bravely climb the peak, and create a better future.





- 1 **Core value** More effort, more courage, more communication
- 2 **Corporate vision** Leading the new vitality of fluid, the pump moves with the heart.
- 3 **Company Mission** Make the transmission of micro fluids more accurate and simple.





STRENGTH  
CAST MAGNIFICENTLY

## COMPANY HONOR >



High-tech Enterprises



Technology Research Center



ISO9001-2015





CE Certificate

ROHS&Reach

Patent Certificate

# Service area



Medical Treatment



Food and Beverage



Pharmaceutical



Laboratory



Chemistry



Water Treatment

## Typical Application

- Cell Culture
- Extracorporeal Blood Circulation
- Tissue Perfusion
- Material Preparation
- Chromatographic Filtration
- Fermentation
- Spray Drying
- Thermal Ablation
- Ion Chromatography
- Titrator
- Water Treatment
- Environmental Monitoring
- Fine Chemicals
- Electronics Industry
- Analysis and Testing Equipment
- Teaching Equipment
- Filling Machine Supporting
- Papermaking
- Printing Ink
- Construction
- Ceramic Industry
- Paint and Coating Industry
- Mining and Metallurgical Industries



Our customers come from all over the world



Partners







## Microliter Peristaltic Pump WSP3000

Lead Fluid WSP3000 series products are mainly used for high-precision filling of various aqueous solutions, filling range  $1\mu\text{l}\sim 3000\mu\text{l}$ . It has the advantages of high accuracy, high repeatability, high efficiency, high cleanliness, maintenance friendly and simple operation. It can be used manually and automatically.



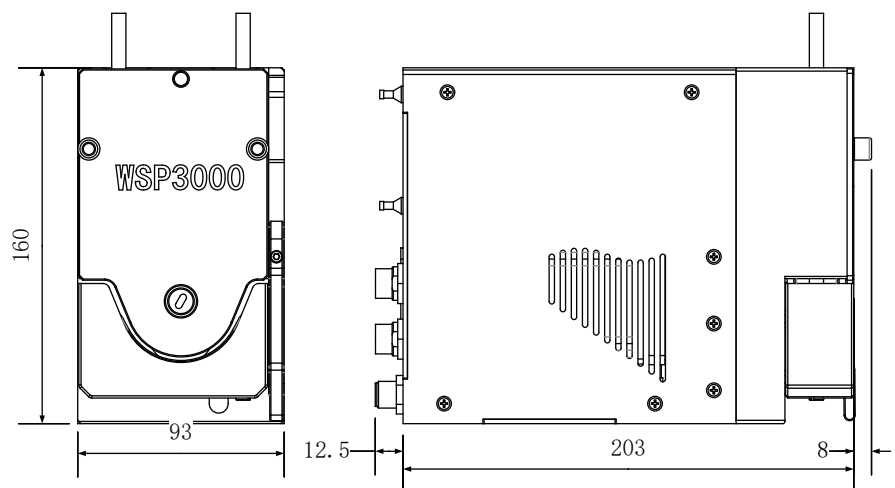
## Function and Feature

- High filling accuracy, the error is less than  $\pm 0.2\%$ .
- Modular design, easy to expand, compact, multiple pumps can be cascaded to form a multi-channel filling system
- The man-machine interface directly input liquid volume parameters, easy to operate.
- High precision servo motor drive, large torque, free-maintenance.
- Rotary pressure tube structure, high efficiency.
- The pump tube is low in loss, the continuous service life up to 1000 hours, 12 hours attenuation rate  $< 1\%$ .
- Suction back function, zero dripping, instant shutdown.
- High clean pipeline, easy to disassemble, easy to clean and sterilize, support CIP and SIP.
- The pipeline is not easy to be blocked, and it can easily cope with materials that are easy to precipitate and have a certain viscosity such as magnetic beads, glycerin, etc.
- It can be operated manually or used with an automatic production line.
- Multi-roller precise positioning technology, rotary running, perfect combination of precision, efficiency and stability

## Parameters

Filling range	1 $\mu$ l~3000 $\mu$ l
Accuracy	10 $\mu$ l $\pm 0.1$ , 50 $\mu$ l $\pm 0.2$ , 100 $\mu$ l $\pm 0.5$ , 500 $\mu$ l $\pm 4$ , 1000 $\mu$ l $\pm 8$ , 3000 $\mu$ l $\pm 13$
Channel	1(Single), up to 16 channels cascade are supported
Filling time	0.1~99.99S
Interval time	0.4~99.99S
Filling times	0 (Infinite loop) ~9999
Tubing	ID 0.5~6.4mm
Display	7 inch HD color touch screen
External control	Dry contact start signal, lack of bottle filling stop signal, feedback signal
Communication	RS485, MODBUS communication protocol
Power consumption	Single channel<30W
Power supply	AC100~240V, 50/60Hz

## Dimension(mm)





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## Speed Variable Peristaltic Pump

BQ80S	0.004~64ml/min-----	P01
BT103S	0.0001 ~ 480ml/min-----	P02-P03
BT100S	0.0001~720ml/min-----	P04-P05
BT300S	0.006~1600ml/min-----	P04-P05
BT600S	0.006~2900ml/min-----	P04-P05
BT101S	0.0001~720ml/min-----	P06-P07
BT301S	0.006~1600ml/min-----	P06-P07
BT601S	0.006~2900ml/min-----	P06-P07
BT100S-1	0.0001~1500ml/min-----	P08
WT300S	3~3500ml/min-----	P09
WT600S	3~6000ml/min-----	P09

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BT300L	0.006~1600ml/min-----	P10-P11
BT600L	0.006~2900ml/min-----	P10-P11
BT101L	0.0001~720ml/min-----	P12-P13
BT301L	0.006~1600ml/min-----	P12-P13
BT601L	0.006~2900ml/min-----	P12-P13

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BT600F	0.006~2900ml/min-----	P14-P15
BT101F	0.0001~720ml/min-----	P16-P17
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## BQ80S Speed-Variable Peristaltic Pump

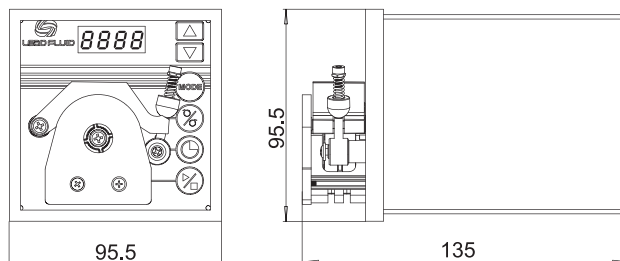
### Features

- Simple operation, small size, easy installation, suitable for ancillary equipment and laboratories.
- Four-figure digital LED indicator displays working speed.
- LF-LED-O Software system.
- Mask keypad operation.
- Start/stop, reversible direction, full speed and adjust speed, state memory (power-down memory).
- Easy dispensing function, it realizes the repeat timing quantitative dispensing.
- Speed resolution is 0.1rpm.
- Engineering plastic housing, embedded design, can also be placed independently for desktop use.
- The circuit board with conformal coating makes it dust-proof and moisture-proof.
- Super anti-interference feature, wide input voltage range, acceptable for the complex power environment.
- External high-low electrical level controls the start/stop, reversible direction and optically coupled isolator.
- Can input the electrical level 5V, 12V, 24V.
- RS485 communication, MODBUS protocol is available, easy to connect with other equipments
- Optional external foots switch or time distributor.

### Technical Parameters

Flow range	0.004 ~ 64ml/min
Speed range	0.1 ~ 80rpm
Speed resolution	0.1 rpm
Speed accuracy	< ±0.5%
Power supply (Add power adapter)	AC 100-240V, 50Hz/60Hz
Power consumption	< 10W
External control interface	External control input level 5V, 12V (standard), 24V (optional)
Communication interface	RS485 communication, MODBUS protocol is available
Working environment	Temperature 0 ~ 40°C, relative humidity < 80%
IP grade	IP31
Dimension (L×W×H)	135×96×96mm
Weight	0.8kg

### Dimension (mm) (Sample pump head: DW10-1)

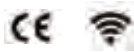


### BQ80S Applicable Pump Head and Tube, Flow Parameters

Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate ( ml/min)
BQ80S	DW10-1	1	Wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.005 ~ 32
	DW10-2	2	Wall thickness 0.8 ~ 1mm, ID≤2.54mm	0.005 ~ 19
	DW10-3	3	Wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.005 ~ 32
	DW15-1	1	13#14#19#16#25#	0.004 ~ 64

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

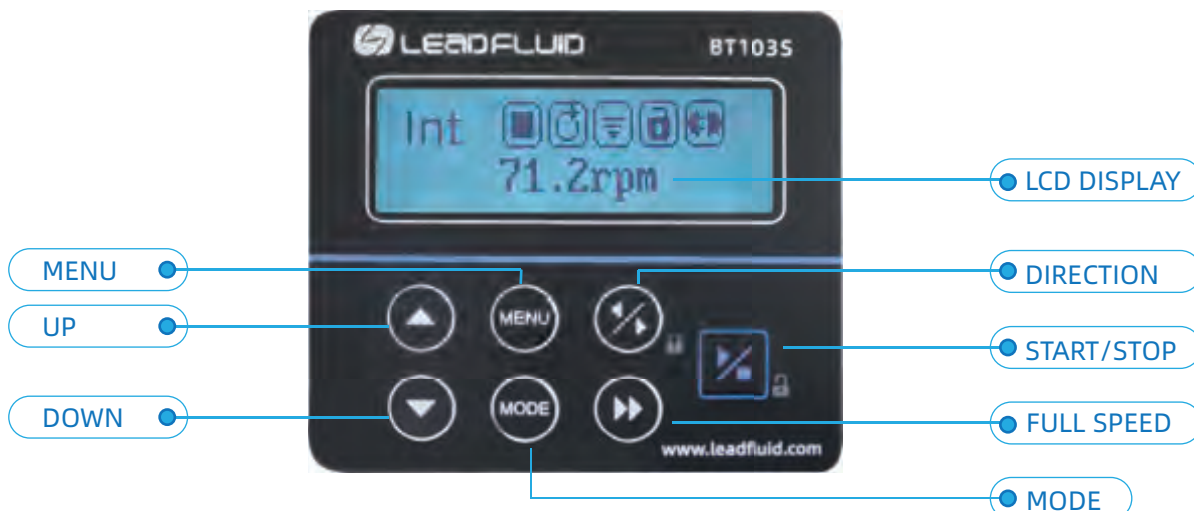
## BT103S Speed-Variable Peristaltic Pump



BT103S speed-variable peristaltic pump adopts high quality closed-loop stepper motor drive, speed range 0.1 ~ 100rpm, speed accuracy $\leq\pm 0.2\%$ , one channel flow range 0.0001 ~ 480ml/min. Through Lead Fluid APP software, the pump can be controlled remotely and running status can be monitored in real time. RS485 communication, MODBUS protocol is available, can be connected to upper computers such as computers, single-chip microcomputers, PLCs, frequency converters, and human-machine interfaces through a variety of signal modes to achieve systematic centralized control.

### Features

- LF-LED-OS software system, high definition lattice LCD display, switching between Chinese-English, parameter setting simply, intuitive state display.
- Industrial mask keypad operation, simple and convenient, high durability.
- High quality closed-loop stepper motor drive, speed precision, running stability, high-precision flow transmission.
- Start/Stop, adjust speed, reversible direction, full speed and, state memory (power-down memory).
- Can set the parameters of running time, interval time and cycle times to meet the requirements of timing, quantitative, liquid dispensing and flow testing.
- Slow speed stop and suction function, which can effectively prevent the dropping of liquid when the machine stops.
- Keypad locked function to prevent misoperation.
- Streamline injection molding shell design, simple, beautiful and easy to clean.
- The circuit board with conformal coating makes it dust-proof and moisture-proof.
- Super anti-interference feature, wide input voltage range, acceptable for complex power environment.
- External analog adjust speed, external control start-stop, reversible direction, external control signal physical isolation.
- RS485 communication interface, Modbus protocol is available, support setting communication parameters, easy to connect with various control devices.
- Can match various high performance pump head, realize different pump head and drive combination.
- The remote start-stop, adjust speed and timing operation can be realized through LeadFluid APP software. It also has monitoring functions such as stop alarm, change of pump tube (optional).
- Support blocking turn alarm, leakage alarm (optional).
- Thermal printer can be connected, real-time printing operation parameters (optional).





## Technical Parameters

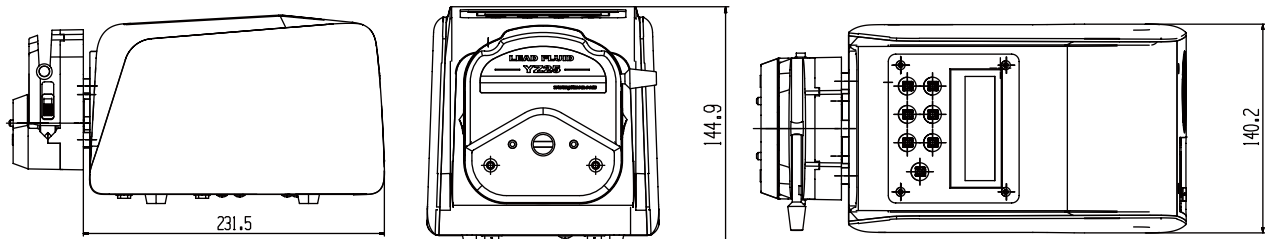
Flow range	0.0001 ~ 480ml/min
Speed range	0.1 ~ 100rpm
Speed resolution	0.1rpm
Speed accuracy	<±0.2%
Display mode	Window 77x32mm, Monochromatic 128x32 lattice liquid crystal
Language	Switching between Chinese and English
Operation mode	Industrial mask keypad
Keypad locked	Long press direction keypay to lock, long press start andstop key to unlock
Timing function	Timing running time 0.1 ~ 999 S/Min/H/D, interval time 0.1 ~ 999 S/Min/H/D
Cycle times	0 ~ 999 (0 Infinite cycle)
Back suction angle	0 ~ 720°
External control signal input	(1)Start /Stop: passive contact, external control input level (5~24V) (2)Reversible direction: passive contact, external control input level (5~24V) (3)Adjust speed: analog quantity 0~5V, 0~10V, 4~20mA can set.
External control signal output	(1)Start /Stop: level signal (following input voltage) (2)Reversible direction: level signal (following input voltage) (3)Speed state: analog quantity 0~5V
Communication interface	RS485, MODBUS protocol is available, DB15 external control interface
Power supply	AC100 ~ 240V, 50Hz/60Hz
Power consumption	<30W
Working environment	Temperature 0 ~ 40°C, relative humidity<80%
IP Grade	IP31
Dimension (L×W×H)	232x140x145mm
Drive weight	2.9 kg

## Applicable pump head and tube, flow parameters

			
YZ15\25 pump head	YT15\25 pump head	DG-1\2\4 pump head	DT10-18\28 pump head
Pump head	Channel	Tube	Per channel flow rate (ml/min)
DG6 (6 rollers)	1, 2, 4	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 49
DG10(10 rollers)	1, 2, 4	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0001 ~ 41
DT10-18	1	13#14#, wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 82
DT10-28	2	13#14#, wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 82
YZ15	1	13#14#19#16#25#17#	0.006 ~ 280
YZ25	1	15#24#	0.16 ~ 280
YT15	1	13#14#19#16#25#17#18#	0.006 ~ 380
YT25	1	15#24#35#36#	0.16 ~ 480

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc.Above for reference only.

## Dimension (mm)



## BT100S/BT300S/BT600S Speed-Variable Intelligent Peristaltic Pump



This series of peristaltic pumps adopts imported core processor, high quality stepper servo motor drive, speed control accuracy is  $\pm 0.2\%$ . Through the Lead Fluid APP software, the pump can be remotely controlled and the running status can be monitored in real time. RS485 communication, Modbus protocol, can be connected to the upper computer such as computer, single chip microcomputer, PLC, frequency converter, man-machine interface through a variety of signal modes, to achieve systematic centralized control.

### Features

- LF-LCD-OS software system, high definition lattice LCD display, switching between Chinese-English interface, simple parameter setting, intuitive state display.
- High-quality and high-torque stepper servo motor drive, speed accuracy, wide range, operation stability, high-precision flow transmission.
- Industrial mask key operation, simple and convenient, high durability.
- LF-EasyChange universal design, large torque output, strong expansibility, can match various high-performance pump head.
- Start/Stop, adjust speed, reversible direction, full speed and state memory (power-down memory).
- The parameters of running time, interval time and cycle times can be set to meet the requirements of timing, quantitative, liquid dispensing and flow testing.
- Slow speed stop and suction function, which can effectively prevent the dropping of liquid when the machine stops.
- Keyboard lock function to prevent misoperation.
- The remote start-stop, adjust speed and timing operation can be realized by using Lead Fluid APP software. It also has monitoring functions such as stop alarm, change of pump tube and so on (optional).
- Stainless steel 304 material housing, effective prevention of erosion of various organic solvents, easy to clean.
- The internal structure adopts double-layer isolation design, and the circuit system provides special protection, which effectively improves the anti-dust, moisture-proof, anti-corrosion and oxidation resistance.
- Super anti-interference characteristic, wide voltage design, suitable for complex power supply environment.
- RS485 communication interface, Modbus protocol, easy to connect with various control devices.
- Acceptable multiple external industrial control signals to control start-stop, reversible direction and speed adjustment, optically coupled isolator.
- Support start-stop, reversible direction, current speed etc. working state signal output.
- External thermal printer (optional), real-time printing operation parameters.
- It can be equipped with foot switch, pulse damper, leak detector and other accessories.

### BT100S/BT300S/BT600S Applicable Pump Head ▶▶



DG-2(6, 10 rollers)



DG-4(6, 10 rollers)



DT15-44



DT10-48



YT15(YT25)

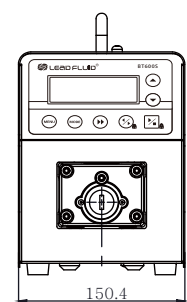
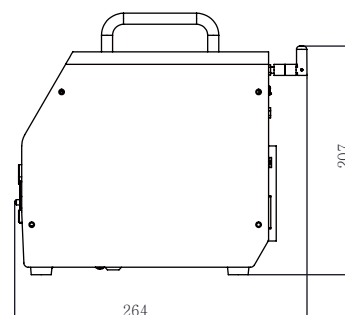


YZ15(YZ25)



2xYZ15(YZ25)

### Dimension (mm)



## Technical Parameters

Parameters	model	BT100S	BT300S	BT600S
Flow range		0.0001~720 ml/min	0.006~1690 ml/min	0.006~2900 ml/min
Speed range		0.1~150 rpm	0.1~350 rpm	0.1~600 rpm
Speed resolution		0.1rpm (speed≤100rpm), 1rpm (speed > 100rpm), speed accuracy < ±0.2%		
Display mode		Window 77mmx32mm, Monochromatic 132x32 lattice liquid crystal		
Language interface		Switching between Chinese and English		
Operation mode		Industrial mask key		
Key locking		Long press direction key to lock, long press start and stop key to unlock		
Timing function		Timing running time 0.1 ~ 999 S/Min/H/D, interval time 0.1 ~ 999 S/Min/H/D		
Cycle times		0 ~ 999 (0 Infinite cycle)		
Back Suction angle		0 ~ 720°		
External control signal input		(1)Start /Stop: passive contact, external control input level (5~24V) (2) Reversible direction: passive contact, external control input level (5~24V) (3)Adjust speed: analog quantity 0~5V, 0~10V, 4~20mA can set		
External control signal output		(1)Start /Stop: level signal (following input voltage) (2) Reversible direction: level signal (following input voltage) (3)Speed state: analog quantity0~5V		
Communication interface		RS485, Modbus protocol is available, DB15 external control interface		
Power supply		AC100 ~ 240V, 50Hz/60Hz		
Power consumption		<40W	<50W	<60W
Working environment		Temperature 0 ~ 40°C, relative humidity < 80%		
IP grade		IP31		
Dimension (LxWxH)		264x150x207mm		
Drive weight		4.9kg	5.2kg	5.5kg

### BT100S/BT300S/BT600S Applicable Pump Head And Tube, Flow Parameters

Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate (ml/min)
BT100S	DG (6 rollers)	1, 2, 4	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 49
	DG (10 rollers)	1, 2, 4	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0001 ~ 41
	DT10	1, 2, 4	13#14#, wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 82
	YZ15	1, 2	13#14#19#16#25#17#	0.006 ~ 420
	YZ25	1, 2	15#24#	0.16 ~ 420
	YT15	1, 2	13#14#19#16#25#17#18#	0.006 ~ 570
	YT25	1, 2	15#24#35#36#	0.17 ~ 720
	DT15-14/24	1, 2	19#16#25#17#	0.07 ~ 560
BT300S	DT15-44	4	19#16#25#	0.07 ~ 330
	YZ15	1, 2	13#14#19#16#25#17#	0.006 ~ 990
	YZ25	1, 2	15#24#	0.17 ~ 990
	YT15	1, 2	13#14#19#16#25#17#18#	0.006 ~ 1300
	YT25	1, 2	15#24#35#36#	0.17 ~ 1690
BT600S	DT15-14/24	1, 2	19#16#25#17#	0.07 ~ 1300
	YZ15	1, 2	13#14#19#16#25#17#	0.006 ~ 1700
	YZ25	1, 2	15#24#	0.17 ~ 1700
	YT15	1, 2	13#14#19#16#25#17#18#	0.006 ~ 2300
	YT25	1	15#24#35#36#	0.17 ~ 2900
DT15-14/24	1, 2	19#16#25#17#	0.07 ~ 2240	

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.



## BT101S/BT301S/BT601S Speed-Variable Peristaltic Pump



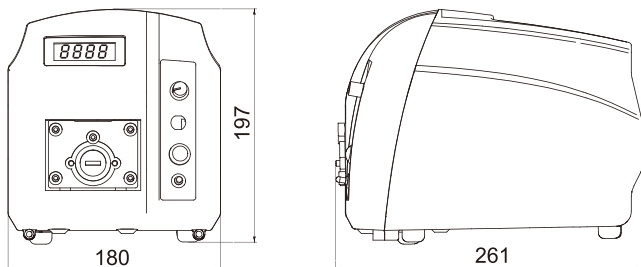
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This series of peristaltic pumps use imported core processor, speed control, stepper motor drive, digital display. It has basic functions such as reversible direction, start/stop, full speed (fast cleaning, empty), and speed-variable. Easy dispensing function can realize the repeat timing quantitative dispensing. RS485 interface, as adopting the MODBUS communication protocol, the pump is easier to be connected with other equipments, such as computer, human machine interface and PLC.

### Features

- Four-figure digital LED indicator displays working speed.
- LF-LED-OS software system.
- The LED indicator displays the reversible direction, internal control, external control, foot switch working mode.
- The button is combined with the knob for operation.
- Start/stop, reversible direction, full speed, adjust speed, state memory (power-down-memory).
- Easy dispensing function, it realizes the repeat timing quantitative dispensing.
- Streamlined plastic shell design, simple and stylish.
- Large torque output, can drive multi-channels and various types of pump heads.
- Internal double-deck isolation structure, circuit board with conformal coating makes it dust-proof and moisture-proof.
- Super anti-interference feature, wide input voltage range, acceptable for the complex power environment.
- External high-low electrical level controls the star/stop, reversible direction and easy dispensing function, optically coupled isolator, external analog adjusts the rotate speed.
- RS485 interface, MODBUS protocol is available, easy to connect other equipments.
- It can be equipped with foot switch, pulse damper, leak detector and other accessories.

### Dimension (mm)



### Technical Parameters

Parameters	model	BT101S	BT301S	BT601S
Flow range		0.0001 ~ 720ml/min	0.006 ~ 1690ml/min	0.006 ~ 2900ml/min
Speed range		0.1 ~ 150rpm	0.1 ~ 350rpm	0.1 ~ 600rpm
Speed resolution		0.1~100rpm is 0.1rpm, 100~600rpm is 1rpm		
Flow accuracy		< ±0.5%		
Power supply		AC100 ~ 240V, 50Hz/60Hz		
Power consumption		< 30W	< 40W	< 50W
External control interface		External control input level 5V, 12V (Standard), 24V (Optional), External control analog 0-5V (Standard), 0-10V, 4-20mA (Optional)		
Communication interface		RS485 communication interface, Modbus protocol is available		
Working environment		Temperature 0 ~ 40°C, relative humidity < 80%		
IP grade		IP31		
Dimension (L×W×H)		261×180×197mm		
Weight		4.5kg	4.7kg	4.9kg

BT101S/BT301S/BT601S Applicable Pump Head ▶▶

- 1 DG-1 (6, 10 rollers)
- 2 DG-2 (6, 10 rollers)
- 3 DG-4 (6, 10 rollers)
- 4 YZ15 (YZ25)
- 5 YT15 (YT25)
- 6 DT10-28



BT101S/BT301S/BT601S Applicable Pump Head and Tube, Flow Parameters

Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate (ml/min)
BT101S	DG (6 rollers)	1, 2, 4	wall thickness 0.8 ~ 1 mm, ID≤3.17mm	0.0002 ~ 49
	DG (10 rollers)	1, 2, 4	wall thickness 0.8 ~ 1 mm, ID≤3.17mm	0.0001 ~ 41
	DT10-18	1	13#14#, wall thickness 0.8 ~ 1 mm, ID≤3.17mm	0.0002 ~ 82
	DT10-28	2	13#14#, wall thickness 0.8 ~ 1 mm, ID≤3.17mm	0.0002 ~ 82
	YZ15	1	13#14#19#16#25#17#	0.006 ~ 420
	YZ25	1	15#24#	0.16 ~ 420
	YT15	1	13#14#19#16#25#17#18#	0.006 ~ 570
	YT25	1	15#24#35#36#	0.17 ~ 720
BT301S	YZ15	1	13#14#19#16#25#17#	0.006 ~ 990
	YZ25	1	15#24#	0.16 ~ 990
	YT15	1	13#14#19#16#25#17#18#	0.006 ~ 1300
	YT25	1	15#24#35#36#	0.16 ~ 1690
BT601S	YZ15	1	13#14#19#16#25#17#	0.006 ~ 1700
	YZ25	1	15#24#	0.16 ~ 1700
	YT15	1	13#14#19#16#25#17#18#	0.006 ~ 2300
	YT25	1	15#24#35#36#	0.16 ~ 2900

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

# BT100S-1 Large Torque Speed-Variable Peristaltic Pump

## Features

- Four-figure digital LED indicator displays working speed.
- LF-LED-OS software system
- LED indicator displays the reversible direction, internal control, external control, footswitch and other working mode.
- Start/stop, reversible direction, full speed, adjust speed, state memory (power down memory).
- Easy dispensing function, it realizes the repeat timing quantitative dispensing liquid.
- Large torque, can drive multi-channels and various types of pump heads.
- Super anti-interference feature, wide input voltage range, acceptable for complex power environment.
- External high-low electrical level controls the start/stop, reversible direction and easy dispensing function, optically coupled isolator, external analog adjusts the rotate speed.
- RS485 interface, MODBUS protocol is available, easy to connect other equipments.
- It can be equipped with foot switch, pulse damper, leak detector and other accessories .

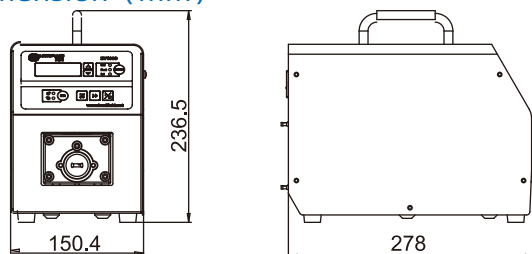


## Technical Parameters

Flow range	0.0001 ~ 1500ml/min
Speed range	0.1 ~ 150rpm
Speed resolution	0.1 ~ 100rpm is 0.1rpm, 100 ~ 150rpm is 1rpm
Speed accuracy	< ±0.5%
Power supply	AC100 ~ 240V , 50HZ/60HZ
Power consumption	< 40W
External control	external control input electrical level 5V, 12V (standard), 24V (optional), External control analog 0-5V(standard), 0-10V, 4-20mA (optional).
Communication interface	RS485 communication interface, Modbus protocol is available
Temperature	0 ~ 40°C
Relative humidity	< 80%
IP grade	IP31
Dimension (L×W×H)	278×150×237mm
Weight	4.7kg



## Dimension (mm)



Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate (ml/min)
BT100S-1	DG (6 rollers)	8, 12, 16, 24	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 49
	DG (10 rollers)	8, 12, 16, 24	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0001 ~ 41
	DT10-88	8	13#14#, wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 82
	YZ15	1, 2, 4	13#14#19#16#25#17#	0.006 ~ 420
	YZ25	1, 2, 4	15#24#	0.16 ~ 420
	YT15	1, 2, 4	13#14#19#16#25#17#18#	0.006 ~ 570
	YT25	1, 2, 4	15#24#35#36#	0.16 ~ 720
	KZ25	1, 2	15#24#35#36#	0.25 ~ 1500
	DT15-44	4	19#16#25#17#	0.07 ~ 560

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.



## WT300S/WT600S Large Torque Speed-Variable Peristaltic Pump

This pump adopts DC brushless motor drive which is large torque, free maintenance, more powerful, can cascade multiple pump heads. Has basic function such as start/stop, reversible direction, full speed, adjust speed and state memory. Control the start/stop, reversible direction, adjusts the speed via external analog quality, the time dispensing function. RS485 communication, MODBUS protocol is available, easy to connect other equipments such as computer, man-machine interface, PLC, etc.

### WT300S/WT600S Drive With Different Pump Heads Combination



2xKZ25



2xYZ15(YZ25)



YZ15(YZ25)



KZ25



YT15(YT25)

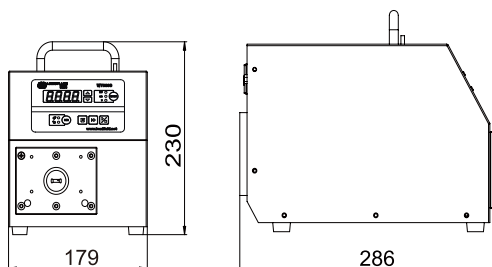


DT15-24



Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate (ml/min)
WT300S	YZ15	1, 2, 4	13#14#19#16#25#17#	3 ~ 990
	YZ25	1, 2, 4	15#24#	50 ~ 990
	YT15	1, 2, 4	13#14#19#16#25#17#18#	3 ~ 1300
	YT25	1, 2, 4	15#24#35#36#	50 ~ 1600
	DT15-24	2	19#16#25#17#	20 ~ 1300
	DT15-44	4	19#16#25#17#	20 ~ 1300
WT600S	YZ15	1, 2, 4	13#14#19#16#25#17#	3 ~ 1700
	YZ25	1, 2, 4	15#24#	50 ~ 1700
	YT15	1, 2, 4	13#14#19#16#25#17#18#	3 ~ 2300
	YT25	1, 2, 4	15#24#35#36#	50 ~ 2900
	DT15-24	2	19#16#25#17#	20 ~ 2240
	DT15-44	4	19#16#25#17#	20 ~ 2240
	KZ25	1, 2	15#24#35#36#	80 ~ 6000

### Dimension (mm)



Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

## BT100L/BT300L/BT600L Intelligent Flow Peristaltic Pump

BT100L/BT300L/BT600L intelligent flow peristaltic pump, can realize high precision continuous transmission and simple quantitative function. 4.3 inch HD LCD touch screen display, simple operation. Support Lead Fluid APP software, which can remotely control the pump and monitor the running status in real time. Powerful functions to meet complex transmission requirements. RS485 communication, MODBUS protocol is available, adapt to different communication equipment.

### Feature

- 4.3 inch color LCD display, visual.
- Touch screen cooperates with keypads operation, bring good user experience.
- LF-Touch-OS software system, efficient and stable, has a good human-computer interaction mode. convenient product customization and upgrading.
- With the standard function such as start/stop, reversible direction, full speed, back suction, state memory, Can directly input flow or speed parameters .
- With the flow and time working mode.
- Precise flow control and display, micro-step algorithm to ensure the dispensing accuracy of different settings.
- Wizard-type flow calibration function, simple and easy to use.
- Delay start and delay stop function.
- Unique back suction function to effectively prevent liquid dripping.
- Reserved five-group dispensing parameters for time dispensing.
- Intelligent temperature control function, automatically adjust heat dissipation according to the environment, so that the equipment is always in the best state.
- WIFI control function, remote operation can be realized through the Lead Fluid APP software, and has monitoring functions such as shutdown alarm and reminding to replace the pump tube.
- External analog speed regulation, external control signal control start-stop, reversible direction, dispensing, external control signal , physical isolation.
- RS485 communication, the MODBUS protocol, supporting up to 80 programming instructions, convenient connect with various control devices.
- Open multiple control parameters for OEM customized applications.
- The circuit board is sprayed with three anti paint processes to achieve dust and moisture-proof effect.
- Super Anti-interference characteristics, wide voltage design, suitable for complex power supply environment.



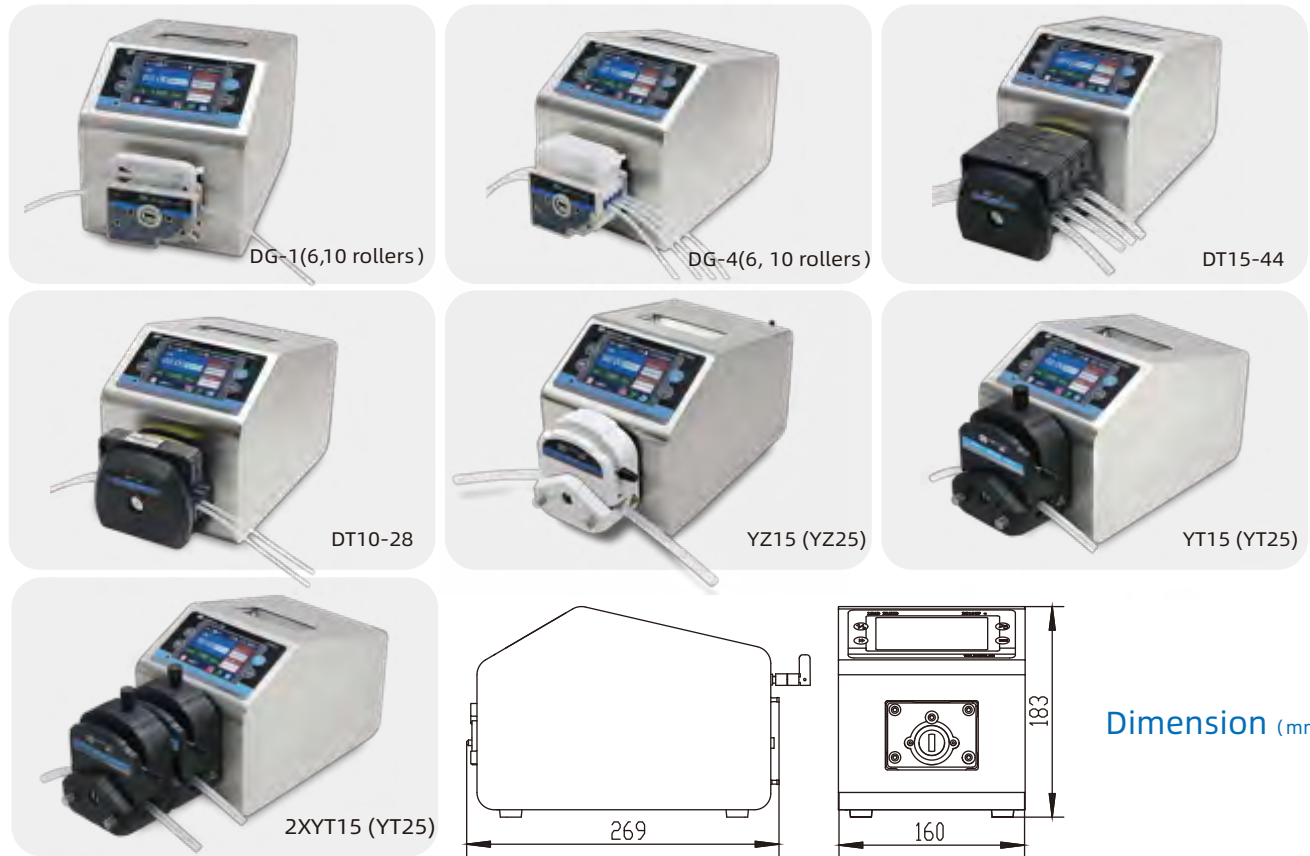
### Technical Parameters

Parameters \ Model	BT100L	BT300L	BT600L
Flow range	0.0001 ~ 720ml/min	0.006 ~ 1690ml/min	0.006 ~ 2900ml/min
Speed range	0.1 ~ 150 rpm	0.1 ~ 350 rpm	0.1 ~ 600 rpm
Speed resolution	0.1rpm		
Speed accuracy	< ±0.2%		
Delayed startup time	1S ~ 999 H		
Delay stop time	1S ~ 999 H		
Dispensing time	0.1~99.9 S		
Dispensing number	1~999, 0 Infinite cycle		
Dispensing interval	0.1~999 S/Min/H		
Back suction degree	0 ~ 720°		
Pump Head	DG, YZ15, YZ25, YT15, YT25, DT10, DT15		
Power supply	AC100 ~ 240V, 50Hz/60Hz		
Power consumption	< 40W	< 50W	< 60W
External control interface	external control input level 5V-24V, external control analog 0-5V, 0-10V, 4-20mA can set		
Communication interface	RS485 communication, support MODBUS protocol		
Working environment	Temperature 0 ~ 40°C, relative humidity < 80%		
IP grade	IP31		
Dimension(LxWxH)	269X160X183mm		
Weight	4.7kg	4.9 kg	5.2 kg

Main Interface



## BT100L/BT300L/BT600L Drive With Different Pump Heads Combination



## BT100L/BT300L/BT600L Applicable Pump Head and Tube, Flow Parameters

Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate (ml/min)
BT100L	DG (6 rollers)	1、2、4	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 49
	DG (10 rollers)	1、2、4	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0001 ~ 41
	DT10-18	1	13#14#, wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 82
	DT10-28	2	13#14#, wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 82
	DT10-48	4	13#14#, wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 82
	YZ15	1、2	13#14#19#16#25#17#	0.006 ~ 420
	YZ25	1、2	15#24#	0.16 ~ 420
	YT15	1、2	13#14#19#16#25#17#18#	0.006 ~ 570
	YT25	1、2	15#24#35#36#	0.17 ~ 720
	DT15-14	1	19#16#25#17#	0.07 ~ 560
	DT15-24	2	19#16#25#17#	0.07 ~ 560
DT15-44	4	19#16#25#	0.07 ~ 330	
BT300L	YZ15	1、2	13#14#19#16#25#17#	0.006 ~ 990
	YZ25	1、2	15#24#	0.16 ~ 990
	DT15-14	1	19#16#25#17#	0.07 ~ 1300
	DT15-24	2	19#16#25#17#	0.07 ~ 1300
	DT15-44	4	19#16#25#	0.07 ~ 770
	YT15	1、2	13#14#19#16#25#17#18#	0.006 ~ 1300
	YT25	1	15#24#35#36#	0.16 ~ 1690
BT600L	YZ15	1、2	13#14#19#16#25#17#	0.006 ~ 1700
	YZ25	1、2	15#24#	0.16 ~ 1700
	YT15	1、2	13#14#19#16#25#17#18#	0.006 ~ 2300
	YT25	1	15#24#35#36#	0.16 ~ 2900

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.



## BT101L/BT301L/BT601L Intelligent Flow Peristaltic Pump



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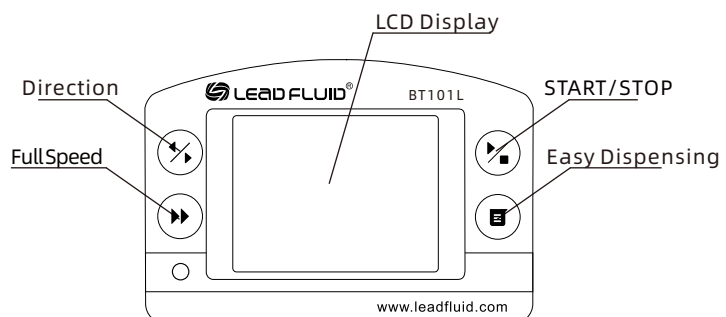
BT101L/BT301L/BT601L intelligent flow peristaltic pumps adopt color LCD and touch screen technology. The operator can input the flow rate directly, simple operation, the operating interface is intuitive. Mainly uses in controlling the flow transmission, the highest accuracy of controlling flow is  $\pm 0.5\%$ . Unique dispensing function to meet the requirement of repeated timing and quantitative transmission of fluids, intelligent temperature control technology, in order to reduce unnecessary operating noise. RS485 communication, adopts the MODBUS communication protocol, the pump is easier to be connected with other equipments, such as computer, human machine interface and PLC.

### Features

- Color LCD display, touch screen and keypad for operating.
- LF-Touch-OS software system.
- Start/stop, reversible direction, full speed, adjust speed and state memory (power-down memory).
- Speed resolution 0.1 rpm.
- Flow display, flow control and flow accumulation.
- Flow calibration function.
- Easy dispensing function, it realizes the repeat timing quantitative dispensing without the time controller.
- Peristaltic pump expert system, to the greatest extent user-friendly use.
- Intelligent temperature control function to minimize peristaltic pump noise, 45 decibel super mute design.
- External high-low electrical level controls the start/stop, reversible direction and easy dispensing function, optically coupled isolator, external analog adjusts the rotate speed.
- RS485 interface, MODBUS protocol is available, easy to connect other equipments.
- The internal structure adopts double-deck isolation design, and the circuit board with conformal coating makes it dust-proof and moisture-proof.
- Super anti-interference feature, wide input voltage range, acceptable for the complex power environment.
- ABS plastic housing, creative streamlined appearance, concise and beautiful.
- Can drive multi-channels and various types of pump heads.



### Display Panel and Operating Keypads



## Technical Parameters

Model	BT101L	BT301L	BT601L
Flow range	0.0001 ~ 720ml/min	0.006 ~ 1690ml/min	0.006 ~ 2900ml/min
Speed range	0.1 ~ 150rpm	0.1 ~ 350rpm	0.1 ~ 600rpm
Speed resolution		0.1rpm	
Speed accuracy		< ±0.2%	
Power supply	AC 100~240V, 50Hz/60Hz		
Power consumption	< 30W	< 40W	< 50W
External control interface	External control input level 5V, 12V (standard), 24V (optional), External control analog 0-5V (standard), 0-10V, 4-20mA (optional)		
Communication interface	RS485 communication interface, MODBUS protocol is available		
Working environment	Temperature 0 ~ 40°C, relative humidity < 80%		
IP grade	IP31		
Dimension (L×W×H)	257×180×197mm		
Weight	4.5kg	4.7 kg	4.9 kg

### BT101L/ BT301L/ BT601L Drive With Different Pump Heads Combination



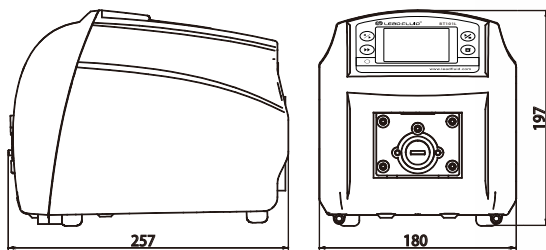
DG-1(6, 10 rollers)

DG-2(6, 10 rollers)

DG-4(6, 10 rollers)

DT10-28

### Dimension (mm)



YZ15(YZ25)



YT15(YT25)

### BT101L/BT301L/BT601L Applicable Pump Head and Tube, Flow Parameters

Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate (ml/min)
BT101L	DG (6 rollers)	1, 2, 4	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 49
	DG (10 rollers)	1, 2, 4	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0001 ~ 41
	DT10-18	1	13#14#, wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 82
	DT10-28	2	13#14#, wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 82
	YZ15	1	13#14#19#16#25#17#	0.006 ~ 420
	YZ25	1	15#24#	0.16 ~ 420
	YT15	1	13#14#19#16#25#17#18#	0.006 ~ 570
	YT25	1	15#24#35#36#	0.17 ~ 720
BT301L	YZ15	1	13#14#19#16#25#17#	0.006 ~ 990
	YZ25	1	15#24#	0.16 ~ 990
	YT15	1	13#14#19#16#25#17#18#	0.006 ~ 1300
	YT25	1	15#24#35#36#	0.16 ~ 1690
BT601L	YZ15	1	13#14#19#16#25#17#	0.006 ~ 1700
	YZ25	1	15#24#	0.16 ~ 1700
	YT15	1	13#14#19#16#25#17#18#	0.006 ~ 2300
	YT25	1	15#24#35#36#	0.16 ~ 2900

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

## BT100F/ BT300F/ BT600F Intelligent Dispensing Peristaltic Pump

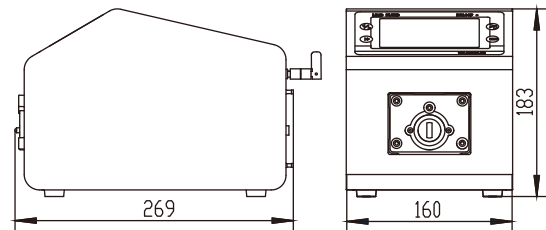
This series of peristaltic pumps adopt stepper servo motors, 4.3 inch HD LCD touch screen display and operation, multiple dispensing modes are available, Through the Lead Fluid APP software, the pump can be remotely controlled and the running status can be monitored in real time. It is mainly suitable for high-precision transmission and timing and quantitative dispensing of liquids.

### Features

- 4.3 inch color LCD display, intuitive image.
- Touch screen with key operation, convenient and fast.
- LF-Touch-OS software system, efficient and stable, with good human-computer interaction mode, convenient product customization and upgrade.
- Working modes: flow rate, time dispensing, volume dispensing, programming dispensing (cycle).
- Five sets of dispensing parameters for volume and time dispensing pre-storage.
- Programming mode supports 30 different quantitative parameter settings for complex control processes.
- Start/stop, reversible direction, full speed, suction function, timed start-stop.
- Accurate flow control and display, microstep algorithm to ensure the dispensing accuracy of different settings.
- Wizard flow calibration function, easy to use.
- Unique back suction function to prevent liquid drips.
- Support for serial print parameters and data.
- Intelligent temperature control function, automatically adjusting the heat according to the environment, so that the device is always in the best state.
- WIFI control function, remote operation can be realized through the Lead Fluid APP software, and has monitoring functions such as shutdown alarm and reminding to replace the pump tube.
- External analog adjust speed, external control start-stop, reversible direction, dispensing, external signal physical isolation.
- RS485 communication interface, MODBUS protocol is available, can set up communication parameters, convenient to connect various of control equipments.
- Open multiple control parameters, suitable for OEM custom applications.
- The circuit board is sprayed with three anti paint technology to achieve the effect of dustproof and moisture-proof.
- Super anti-interference feature, wide input voltage range, acceptable for the complex power environment.
- Innovative stainless steel housing, easy to clean, effectively prevent the erosion of various organic solvents.



### Dimension (mm)



### Technical Parameters

Parameters	Model	BT100F	BT300F	BT600F
Flow range		0.0001 ~ 720 ml/min	0.006 ~ 1690 ml/min	0.006~2900 ml/min
Speed range		0.1~150 rpm	0.1 ~ 350 rpm	0.1~600 rpm
Speed resolution			0.1rpm	
Dispensing volume			0.05ml ~ 9999l	
Dispensing time			1 ~ 999, "0" Infinite cycle	
Dispensing interval time			0.1 ~ 999.9 S/Min/H, time unit adjustable	
Speed accuracy			< ±0.2%	
Power supply			AC100 ~ 240V, 50Hz/60Hz	
Power consumption		<40W	< 50W	< 60W
External control		external control input level 5V-24V, external control analog 0-5V, 0-10V, 4-20mA can set		
Communication interface		RS485 communication interface, Modbus protocol is available		
Working environment		Temperature 0 ~ 40°C, relative humidity < 80%		
IP grade		IP31		
Dimension (L×W×H)		269×160×183mm		
Weight		4.8kg	5.3kg	5.5kg

## Filling Application Reference Table

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only

Filling fluid volume	Pump head	Tube	Speed (rpm)	Filling time (S)	Reliability error (%)
50µl	DG6-1	0.25×0.89mm	> 90	< 6.66	< ±2
0.1ml	DG6-1	0.5×0.92mm	> 90	< 3.33	< ±2
0.2ml	DG6-1	0.5×0.92mm	> 90	< 6.06	< ±1
0.3ml	YZ15	13#	> 500	< 0.6	< ±2
0.5ml	YZ15	13#	> 500	< 1	< ±1
0.8ml	YZ15	13#	> 500	< 1.6	< ±1
1ml	YZ15	13#	> 500	< 2	< ±1
2ml	YZ15	14#	> 500	< 1.1	< ±1
3ml	YZ15	14#	> 500	< 1.65	< ±1
5ml	YZ15	19#	> 500	< 1.68	< ±1
8ml	YZ15	16#	> 500	< 1.2	< ±1
10ml	YZ15	16#	> 500	< 1.5	< ±1
20ml	YZ15	25#	> 500	< 1.43	< ±1
50ml	YZ15	17#	> 500	< 2.11	< ±1

BT100F/BT300F/BT600F Applicable Pump Head ▶ ▶



DG-1(6, 10 rollers)

DG-4(6, 10 rollers)



DT15-44

DT10-48

YZ15(YZ25)

YT15(YT25)

Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate (ml/min)
BT100F	DG (6 rollers)	1, 2, 4	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 49
	DG (10 rollers)	1, 2, 4	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0001 ~ 41
	DT10-18	1	13#14#, wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 82
	DT10-28	2	13#14#, wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 82
	DT10-48	4	13#14#, wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 82
	YZ15	1, 2	13#14#19#16#25#17#	0.006 ~ 420
	YZ25	1, 2	15#24#	0.16 ~ 420
	YT15	1, 2	13#14#19#16#25#17#18#	0.006 ~ 570
	YT25	1, 2	15#24#35#36#	0.17 ~ 720
	DT15-14	1	19#16#25#17#	0.07 ~ 560
	DT15-24	2	19#16#25#17#	0.07 ~ 560
	DT15-44	4	19#16#25#	0.07 ~ 330
BT300F	YZ15	1, 2	13#14#19#16#25#17#	0.006 ~ 990
	YZ25	1, 2	15#24#	0.16 ~ 990
	DT15-14	1	19#16#25#17#	0.07 ~ 1300
	DT15-24	2	19#16#25#17#	0.07 ~ 1300
	DT15-44	4	19#16#25#	0.07 ~ 770
	YT15	1, 2	13#14#19#16#25#17#18#	0.006 ~ 1300
BT600F	YZ15	1, 2	13#14#19#16#25#17#	0.006 ~ 1700
	YZ25	1, 2	15#24#	0.16 ~ 1700
	YT15	1, 2	13#14#19#16#25#17#18#	0.006 ~ 2300
	YT25	1	15#24#35#36#	0.16 ~ 2900

BT100F/BT300F/BT600F Applicable Pump Head and Tube, Flow Parameters



## BT101F/ BT301F/ BT601F Intelligent Dispensing Peristaltic Pump

This series peristaltic pump adopts color LCD touch screen with intuitive and clear displaying interface, easy to operate. Mainly used for accurate measurement and dispensing of complex liquid. If you need high accuracy volume dispensing mode is available. If need high producing efficiency, time dispensing mode is more convenient. If want to separate fluid to number of equal parts, copy dispensing mode would be best. When working on flow mode, it is as same as intelligent flow peristaltic pump. Adopt intelligent temperature-control technology to reduce working noise. RS485 interface, as adopting the MODBUS communication protocol, easier to be connected with other equipments, such as computer, human machine interface and PLC.

### Feature

- Color LCD display, touch screen and keypad for operating.
- LF-Touch-OS software system, efficient and stable, with good human-computer interaction mode, convenient product customization and upgrade.
- Three types of working mode: volume dispensing mode, time dispensing mode, copy dispensing mode.
- Automatically store five groups of working parameters.
- Precious controlling technology for motor's rotating angle increases the dispensing accuracy comparing to traditional time dispensing mode caused by factors such as the slow start of the motor.
- Start/stop, reversible direction, full speed, adjust speed, state memory (power-down memory).
- Speed resolution is 0.1rpm.
- Display and control flow rate, accumulate dispensing volume automatically.
- Calibration function.
- The operating expert system guides users setting parameters correctly.
- Intelligent temperature-control technology reduces working noise
- External high-low electrical level controls the start/stop, reversible direction and easy dispensing function, optically coupled isolator, external analog adjusts the rotate speed.
- RS485 communication interface, MODBUS protocol is available, easy to connect other equipments.
- Internal double-deck isolation structure, circuit board with conformal coating makes it dust-proof and moisture-proof.
- Super anti-interference feature, wide input voltage range, acceptable for the complex power environment.
- ABS plastic housing, creative streamlined appearance, beautiful and simple.
- Can drive multi-channels and various types of pump heads.
- Connect foot switch control start-stop for dispensing volume.

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### Technical Parameter

Parameter	Model	BT101F	BT301F	BT601F
Flow range		0.0001 ~ 720ml/min	0.006 ~ 1690ml/min	0.006~2900ml/min
Speed range		0.1~150rpm	0.1 ~ 350rpm	0.1~600rpm
Speed resolution		0.1rpm		
Dispensing volume		0.05ml ~ 9999l		
Dispensing time		1 ~ 999, "0" Infinite loops		
Dispensing interval time		0.1 ~ 999.9 S/Min/H, time unit adjustable		
Speed accuracy		< ±0.2%		
Power supply		AC100 ~ 240V, 50Hz/60Hz		
Power consumption		<30W	< 40W	< 50W
External control		External control input level 5V, 12V(Standard), 24V (Optional), External control analog 0-5V(Standard), 0-10V, 4-20mA (Optional)		
Communication interface		RS485 communication interface, MODBUS protocol is available		
Working environment		Temperature 0 ~ 40°C, relative humidity < 80%		
IP grade		IP31		
Dimension (LxWxH)		257x180x197mm		
Weight		4.5kg	4.7kg	4.9kg

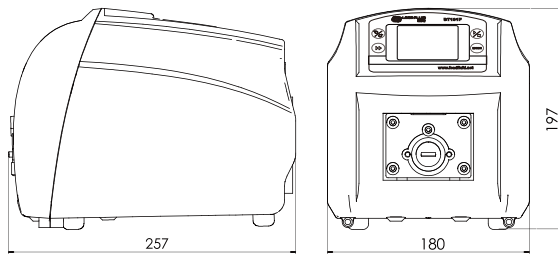
## Filling Application Reference Table

Filling fluid volume	Pump head	Tube	Speed (rpm)	Filling time (s)	Reliability Error (%)
50µl	DG6-1	0.25×0.89mm	> 90	< 6.66	< ±2
0.1ml	DG6-1	0.5×0.92mm	> 90	< 3.33	< ±2
0.2ml	DG6-1	0.5×0.92mm	> 90	< 6.06	< ±1
0.3ml	YZ15	13#	> 500	< 0.6	< ±2
0.5ml	YZ15	13#	> 500	< 1	< ±1
0.8ml	YZ15	13#	> 500	< 1.6	< ±1
1ml	YZ15	13#	> 500	< 2	< ±1
2ml	YZ15	14#	> 500	< 1.1	< ±1
3ml	YZ15	14#	> 500	< 1.65	< ±1
5ml	YZ15	19#	> 500	< 1.68	< ±1
8ml	YZ15	16#	> 500	< 1.2	< ±1
10ml	YZ15	16#	> 500	< 1.5	< ±1
20ml	YZ15	25#	> 500	< 1.43	< ±1
50ml	YZ15	17#	> 500	< 2.11	< ±1

## BT101F/BT301F/BT601F Applicable Pump Head ▶▶



## Dimension (mm)



## BT101F/BT301F/BT601F Applicable Pump Head and Tube, Flow Parameters

Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate (ml/min)
BT101F	DG (6 rollers)	1, 2, 4	壁厚0.8~1mm, 内径≤3.17mm	0.0002~49
	DG (10 rollers)	1, 2, 4	壁厚0.8~1mm, 内径≤3.17mm	0.0001~41
	DT10-18	1	13#14#, 壁厚0.8~1mm, 内径≤3.17mm	0.0002~82
	DT10-28	2	13#14#, 壁厚0.8~1mm, 内径≤3.17mm	0.0002~82
	YZ15	1	13#14#19#16#25#17#	0.006~420
	YZ25	1	15#24#	0.16~420
	YT15	1	13#14#19#16#25#17#18#	0.006~570
BT301F	YT25	1	15#24#35#36#	0.17~720
	YZ15	1	13#14#19#16#25#17#	0.006~990
	YZ25	1	15#24#	0.16~990
	YT15	1	13#14#19#16#25#17#18#	0.006~1300
	YT25	1	15#24#35#36#	0.16~1690
BT601F	DT15-24	2	19#16#25#	0.07~770
	YZ15	1	13#14#19#16#25#17#	0.006~1700
	YZ25	1	15#24#	0.16~1700
	YT15	1	13#14#19#16#25#17#18#	0.006~2300
	YT25	1	15#24#35#36#	0.16~2900

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only

# BT100F-1 Large Torque Intelligent Dispensing Peristaltic Pump



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## Technical Parameter

Flow range	0.0001 ~ 1700ml/min
Speed range	0.1 ~ 150rpm
Speed resolution	0.1rpm
Speed accuracy	< ±0.2%
Working mode	flow rate, volume dispensing, time dispensing, copy dispensing
Dispensing volume	0.05ml ~ 9999l
Dispensing time	1 ~ 999, "0" Infinite cycle
Dispensing interval time	0.1 ~ 999.9 S/Min/H
Power supply	AC100 ~ 240V, 50Hz/60Hz
Power consumption	< 60W
External control	external control input level 5V, 12V (standard), 24V (optional) external control analog 0-5V(standard), 0-10V, 4-20mA (optional)
Communication interface	RS485communication interface, Modbus protocol is available
Environment temperature	0 ~ 40°C
Relative humidity	< 80%
IP grade	IP31
Dimension (L×W×H)	278×150×237mm
Weight	4.7kg

## Feature

- LF-Touch-OS software system. color LCD display, touch screen and button operation, more friendly human-computer interaction.
- Multiple working modes, each dispensing mode can store five groups of working parameters.
- Precision microstep control technology reduces the traditional time control. Dispensing mode due to factors such as slow start of the motor and other dispensing errors.
- Start/stop, reversible direction, full speed, adjust speed, state memory (power-down-memory).
- Large torque output, cascading multiple pump heads.
- Display and control flow rate, accumulate dispensing volume automatically.
- Wizard flow calibrating function.
- The operating expert system guides users setting parameters correctly.
- Intelligent temperature-control technology reduces working noise
- External control controls the start/stop, reversible direction and dispensing function, optically coupled isolator, external analog adjusts the rotate speed.
- RS485 communication interface, MODBUS protocol is available, easy to connect other equipments.
- Internal double-deck isolation structure, circuit board with conformal coating makes it dust-proof and moisture-proof.
- Super anti-interference feature, wide input voltage range, acceptable for the complex power environment.
- 304 stainless steel shell, easy to clean, corrosion resistant.
- Can drive multi-channels and various types of pump heads.
- Connect foot switch control start-stop for dispensing fluid.

## BT100F-1 Applicable Pump Head and Tube, Flow Parameters

Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate (ml/min)
BT100F-1	DG (6 rollers)	8, 12, 16, 24	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 49
	DG (10 rollers)	8, 12, 16, 24	wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0001 ~ 41
	DT10-88	8	13#14#, wall thickness 0.8 ~ 1mm, ID≤3.17mm	0.0002 ~ 82
	YZ15	1, 2, 4	13#14#19#16#25#17#	0.006 ~ 420
	YZ25	1, 2, 4	15#24#	0.16 ~ 420
	YT15	1, 2, 4	13#14#19#16#25#17#18#	0.006 ~ 570
	YT25	1, 2, 4	15#24#35#36#	0.16 ~ 720
	KZ25	1, 2	15#24#35#36#	0.25 ~ 1500
	DT15-14	1	19#16#25#17#	0.07 ~ 560
	DT15-24	2	19#16#25#17#	0.07 ~ 560
	DT15-44	4	19#16#25#	0.07 ~ 330
	DMD25-T	1	15#24#35#36#	0.3 ~ 1700

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only



## WT300F/WT600F Intelligent Dispensing Peristaltic Pump

This series peristaltic pumps adopts LF-Touch-OS software system, color LCD touch screen with intuitive and clear displaying interface. Brushless servo motor drive with large torque, free maintenance. Four working mode: flow rate mode, volume dispensing, time dispensing, copy dispensing, suitable for different working requirements. The standard communication protocol, the pump is easier to be connected with other equipments. With intelligent temperature control fan, reduce noise, stainless steel housing, easy to clean, corrosion resistant.

### Filling Application Reference Table

Filling fluid volume	Pump head	Tube	Speed (rpm)	Filling time (s)	Reliability error (%)
30ml	DMD25-T	35#	> 300	< 0.7	< ±1
50ml	DMD25-T	36#	> 300	< 0.85	< ±1
80ml	KZ25	36#	> 300	< 0.96	< ±1



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### WT300F/WT600F Applicable Pump Head



### WT300F/WT600F Applicable Pump Head and Tube, Flow Parameters

Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate (ml/min)
WT300F	YZ15	1, 2, 4	13#14#19#16#25#17#	0.006 ~ 990
	YZ25	1, 2, 4	15#24#	0.16 ~ 990
	YT15	1, 2, 4	13#14#19#16#25#17#18#	0.006 ~ 1300
	YT25	1, 2, 4	15#24#35#36#	0.16 ~ 1600
	DT15-14	1	19#16#25#17#	0.07 ~ 1300
	DT15-24	2	19#16#25#17#	0.07 ~ 1300
	DT15-44	4	19#16#25#17#	0.07 ~ 1300
	KZ25	1, 2	15#24#35#36#	0.25 ~ 3500
WT600F	DMD25-T	1	15#24#35#36#	0.4 ~ 4000
	YZ15	1, 2	13#14#19#16#25#17#	0.006 ~ 1700
	YZ25	1, 2	15#24#	0.16 ~ 1700
	YT15	1, 2	13#14#19#16#25#17#18#	0.006 ~ 2300
	YT25	1, 2	15#24#35#36#	0.16 ~ 2900
	KZ25	1	15#24#35#36#	0.25 ~ 6000

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only



# WG600S Industrial Speed-Variable Peristaltic Pump



## Technical Parameters

Flow range	0.4 ~ 13l /min
Speed range	30 ~ 600rpm
Speed resolution	1rpm
Speed accuracy	< ±3%
Timed running	0.1-999 S
Power supply	AC100 ~ 240V, 50Hz/60Hz
Power consumption	< 300W
External control	analog 0-5V control speed, 0-10V, 4-20mA optional 5V, 12V, 24V input level (optional)
Communication interface	RS485 communication interface, Modbus protocol is available
Temperature	0 ~ 40°C
Relative humidity	< 80%
IP grade	IP31
Dimension (L×W×H)	356×235×225mm
Drive weight	13kg

WG600S industrial speed-variable peristaltic pump, is suitable for transferring large flow rate of fluid in industry. DC brushless motor drive with large torque, no maintenance, more power. Has the basic functions such as start/stop, reversible direction, full speed (fast cleaning), adjust speed and state memory power-down memory. It can cascade two pump heads. RS485 communication interface, adopts the MODBUS protocol, easier to be connected with other equipments, such as computer, human machine interface and PLC.

## Feature

- Rotary encoder controls running speed, reversible direction, start/stop, full speed, easy to operate.
- LF-LED-OS software system, figure digital displays speed and working status.
- Large torque brushless motor drive, more power, free maintenance.
- 304 stainless steel housing, easy to clean, effectively prevent the corrosion of organic solvents.
- Timing running, easy dispensing function.
- The circuit board with conformal coating makes it dust-proof and moisture-proof.
- External control controls start/stop, reversible direction, optically coupled isolator., 5V, 12V, 24V input level optional.
- External analog control speed.

Two Channels →



## WG600S Applicable Pump Head, Tube, and Flow Parameters

Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate (l /min)
WG600S	YZ35	1	73#82#	0.4 ~ 13
	2xYZ35	2	73#82#	0.4 ~ 13

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually use it is effected by specific factors such as pressure, medium etc. Above for reference only

## WG600F Industrial Intelligent Dispensing Peristaltic Pump

WG600F industrial intelligent dispensing peristaltic pump, is suitable for transferring and dispensing large flow rate of fluid industry. brushless servo motor drive with large torque, no maintenance, powerful, high accuracy. The basic function such as start/stop, reversible direction, full speed (fast cleaning), adjust flow. The pump has the volume dispensing mode, time dispensing mode and copy dispensing mode, meets all kinds of complex dispensing requirement. RS485 communication interface, MODBUS protocol is available, easier to be connected with other equipments such as computer, human machine interface and PLC.

### Feature

- Brushless servo motor drive, powerful, precise control, no maintenance.
- LF-Touch-OS software system, color LCD display, touch screen and keypad for operating.
- Flow display, flow adjustment, cumulative liquid volume display.
- Three working modes: volume dispensing, time dispensing and copy dispensing.
- Automatically store five groups of working parameters.
- Wizard flow calibration function.
- Intelligent expert system to minimize the difficulty of users.
- Remote Infrared controlling function.
- Super anti-interference feature, wide input voltage range, acceptable for the complex power environment.
- Circuit board with conformal coating makes it dust-proof and moisture-proof.
- 304 stainless steel shell, easy to clean, corrosion resistant.
- External control controls start/stop, reversible direction, optically coupled isolator, 5V, 12V, 24V input level optional, external analog control flow.
- RS485 communication interface, MODBUS protocol is available, easy to connect other control equipments.



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### Technical Parameters

Flow range	0.01 ~ 13 l / min
Speed range	0.1 ~ 600rpm
Speed resolution	0.1rpm
Speed accuracy	< ±0.2%
Working mode	flow rate mode, volume dispensing, time dispensing, copy dispensing
Dispensing liquid range	100ml ~ 9999l
Dispensing time	1 ~ 999, "0" infinite cycle
Dispensing interval time	0.1 ~ 999.9 S/Min/H, time unit adjustment
Power supply	AC100 ~ 240V, 50Hz/60Hz
Power consumption	< 400W
External interface	0-5V, 0-10V, 4-20mA control analog optional. 5V, 12V, 24V input level optional.
Communication interface	RS485 communication interface, MODBUS protocol is available.
Temperature	0 ~ 40°C
Relative humidity	< 80%
IP grade	IP31
Dimension (L×W×H)	350×235×315mm
Weight	15kg

Filling fluid volume	Pump head	Tube	Speed(rpm)	Filling time (s)	Reliability error (%)
100ml	YZ35	73#	> 500	< 0.89	< ±1
200ml	YZ35	82#	> 500	< 1.13	< ±1
300ml	YZ35	82#	> 500	< 1.7	< ±1
500ml	2×YZ35	82#	> 500	< 1.41	< ±1

Two Channels



### WG600F Applicable Pump Head and Tube, Flow Parameters

Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate ( l / min)
WG600F	YZ35	1	73#82#	0.01 ~ 13
	2×YZ35	2	73#82#	0.01 ~ 13

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc.Above for reference only.

# WT600S-65/WT600F-65 High Protection Peristaltic Pump



## WT600S-65 high protection speed variable peristaltic pump

Adopts DC brushless motor drive, powerful, free maintenance, Stainless steel housing, easy to clean and corrosion resistant. Has basic function such as start/stop, reversible direction, full speed, fast cleaning and adjust speed, state memory, power-down memory. Control the start/stop, reversible direction, adjusts the speed via external analog quality, the time dispensing function. RS485 communication, MODBUS protocol is available.

IP65 high protection grade, suitable for harsh working environment such as humidity and dust.

## WT600F-65 high protection dispensing peristaltic pump

Adopts LF-Touch-OS software system, color LCD touch screen, brushless servo motor, large torque, free maintenance. Stainless steel shell, easy to clean and corrosion resistant. Four working modes: flow rate mode, volume dispensing, time dispensing, copy dispensing, suitable for different working requirements. RS485 communication interface, MODBUS protocol is available.

IP65 high protection grade, suitable for harsh working environment such as humidity and dust.

### WT600S-65/WT600F-65 Applicable Pump Head and Tube, Flow Parameters

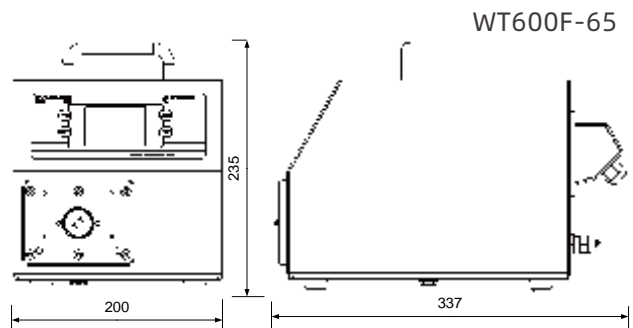
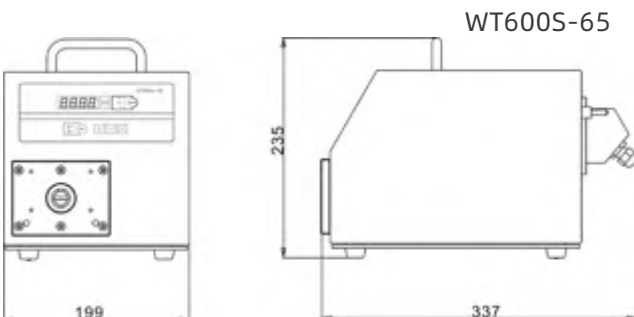
Drive Type	Pump Head	Channel	Tube	Single channel Flow Rate (ml/min)
WT600S-65	YZ15	1, 2	13#14#19#16#25#17#	3 ~ 1700
	YZ25	1, 2	15#24#	50 ~ 1700
	YT15	1, 2	13#14#19#16#25#17#18#	3 ~ 2300
	YT25	1, 2	15#24#35#36#	50 ~ 2900
	DT15-24	2	19#16#25#17#	20 ~ 2240
KZ25	1	15#24#35#36#	80 ~ 6000	
WT600F-65	YZ15	1, 2	13#14#19#16#25#17#	0.006 ~ 1700
	YZ25	1, 2	15#24#	0.16 ~ 1700
	YT15	1, 2	13#14#19#16#25#17#18#	0.006 ~ 2300
	YT25	1, 2	15#24#35#36#	0.16 ~ 2900
	KZ25	1	15#24#35#36#	0.25 ~ 6000

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

### Technical Parameters

Parameters	Model	WT600S-65	WT600F-65
Flow range		3 ~ 6000ml/min	0.006 ~ 6000ml/min
Speed accuracy		< 3%	< ±0.2%
Speed range		30 ~ 600rpm	0.1~600rpm
Speed resolution		1rpm	0.1rpm
Power supply		AC 100 ~ 240V, 50Hz/60Hz	
Power consumption		<200W	
External control		external control input level 5V, 12V(standard), 24V(optional) external control analog 0-5V(standard), 0-10V, 4-20mA (optional)	
Communication interface		RS485 communication interface, MODBUS protocol is available	
Environment temperature		0 ~ 40°C	
Relative humidity		< 80%	
IP grade		IP65	
Dimension (LxWxH)		337x199x235mm	337x200x235mm
Weight		6.2kg	7.1kg

### Dimension (mm)



## JP300S Batch Transfer Peristaltic Pump

Lead Fluid JP300S batch transfer peristaltic pump mainly used in industrial applications, The max flow rate is 33 L/min under normal pressure and the max pressure is 0.3Mpa. Compact and reasonable structure, easy to install the tube. The roller adopts the planetary gear transmission, safe and reliable, and prolong the tubing life.

### Applications

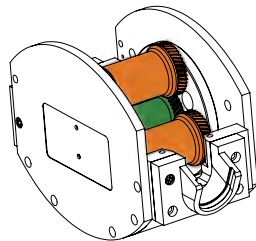
Biopharmaceutical      Food industry      Liquid medicine filtration  
 Fluidized bed supply      Liquid medicine transfer      Biocatalyst transfer



### Function

- Wide flow range, can reach 2m<sup>3</sup>/hour.
- Pump head adopts planetary gear design, powerful.
- The roller driving force rotation, rolling friction with tube can prolong the tubing life.
- Open the lid, the pump stop running, safe and reliable.
- Elastic pressure tube structure can prolong the tubing life.
- AC motor drive, external frequency control. It can be operated manually, also can be achieved networking operation with PLC, IPC and computer.

### Technical Parameters



Flow range	0.64~33l /min
Tube	88#, 92#, 193#, 191#
Shell material	Aluminum alloy
Roller	4
Speed range	30 ~ 350rpm
Gap adjustment	Adjustable
Temperature	0 ~ 40°C
Power supply	AC380V/220V
Power consumption	400W
IP grade	IP54 (Not include frequency converter)

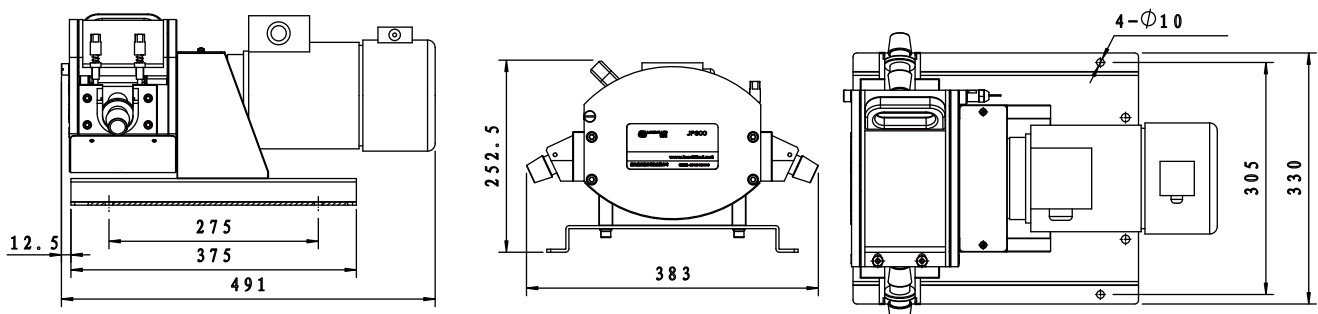
### Planetary Gear Transmission Structure

### Applicable pump head and tube, flow parameters

Drive Type	Pump Head	Channel	Tube	Single Channel Flow Rate (l/min)
JP300S-A3 (AC380V)	PL48	1~2	88#92#193#191#	0.64~33
JP300S-A (AC220V)				

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

### Dimension (mm)





## JP100S Series Batch Transfer Peristaltic Pump

Lead Fluid JP100S batch transfer peristaltic pumps can deliver fluids with up to 80% solid content through the operation mode of high-strength rotors continuously squeezing the pump tube. Industrial-grade application design, up to 9 meters suction lift, 10 Bar transfer pressure, tube life up to 2500 ~ 3000 hours, simple maintenance and low cost. It is an ideal choice to meet various long-distance, high-viscosity, high-solid content pumping requirements.



### Applications

Food industry	Beer, wine brewing, beverages
Mining industry	Sewage and industrial wastewater treatment
Chemical	Cosmetics industry
Textile printing and dyeing industry	Fishery
Animal feed	Recycling

### Feature

- Suitable for conveying fluids containing corrosiveness, high viscosity, high density, high solid content or sensitive to shear.
- Multi-layer compound tube with high transfer pressure up to 10Bar.
- Stable flow, high accuracy.
- Can transfer fluids up to 80°C.
- Can run dry and self-priming, no one-way valve, flushing system and dry-running protection, and the max suction range can reach 9 meters.
- Reverse operation can suck or discharge the blockage from the pipeline.
- The fluid only touches the pump tube, no pollution in the whole process.
- Daily maintenance is simple, generally only need to replace the pump tube.

### Technical Parameters

Product Mode	JP100S-20	JP100S-25	JP100S-32	JP100S-40	JP100S-65
Flow range	1.5~12l /min	3~28l /min	6~60l /min	13~130l /min	67~530l /min
Speed range	10 ~ 100rpm	10 ~ 100rpm	10 ~ 100rpm	10 ~ 100rpm	10 ~ 80rpm
Recommended speed	≤60rpm				≤50rpm
Inlet pressure	≤0.9 Bar	≤0.9 Bar	≤0.9 Bar	≤0.9 Bar	≤0.9 Bar
Outlet pressure	≤10 Bar	≤15 Bar	≤15 Bar	≤15 Bar	≤16 Bar
Tube material	NR---Standard NBR EPDM				
Connector	DN20 Pagoda (SS304)	DN32 Flange (SS304)	DN32 Flange (SS304)	DN40 Flange (SS304)	2-1/2" Flange (SS304)
Motor type	AC gear motor (standard) Explosion-proof motors optional, explosion-proof grade EXDII BT4)				
Power supply	three phase AC380V				
Power consumption	0.75 KW	2.2KW	2.2 KW	4KW	11 KW
Environment	Temperature 0 ~ 40°C, relative humidity < 80%				
Dimension (L×W×H)	517×385×307mm	688×516×460mm	688×516×460mm	786×690×613mm	1170×680×1030mm
Weight	> 50kg	> 80kg	> 80kg	> 200kg	> 700kg

**Remarks:** • Choose pump tubing according to different material characteristics. • Pump tube life is inversely proportional to speed.  
• The life of the pump tube of the three materials is the same

(1) NR: Normal use, smooth inside, good wear resistance, suitable for transmission of weakly corrosive and muddy materials.

(2) NBR: It is made from butadiene and acrylonitrile through emulsion polymerization, resistant to grease, alkali and detergent, and has good performance.

(3) EPDM: It is a copolymer of ethylene, propylene and a small amount of non-conjugated diene. It has excellent chemical resistance, especially ethanol and strong acids.

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

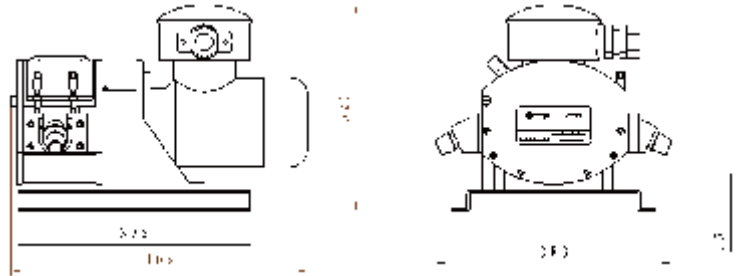
## FP300S-A3 Frequency Conversion Explosion-Proof Motor Peristaltic Pump

- Industrial grade AC frequency conversion explosion-proof motor (ExdIIBT4), with special pump head, safe and reliable.
- External frequency conversion control, with functions such as adjust speed, start-stop, reversible direction, analog adjust speed, RS485 communication.
- Pump head roller adopts planetary gear transmission structure, strong power.
- The roller rotates with power to roll and rub with the tube to extend the life of tube.
- Open the cover to stop the pump function to ensure the safety of the operator.
- Elastic pressure tube structure extends pump tube life.
- Stepless speed, speed range 34.5rpm ~ 345rpm, speed resolution 0.77rpm.
- Split design, the driver is separated from the frequency conversion, suitable for a variety of working environment.
- Large torque design, stable operation, max flow is 33l/min.
- IP55 high protection grade, suitable for complex working environmen.
- The standard frequency conversion is not explosion-proof and cannot be placed in a flammable and explosive environment.

**Remark:** 1. Industrial grade explosion-proof frequency conversion is optional.  
2. Protective shell can be installed.  
3. Customizable all-in-one model.



Dimension (mm)

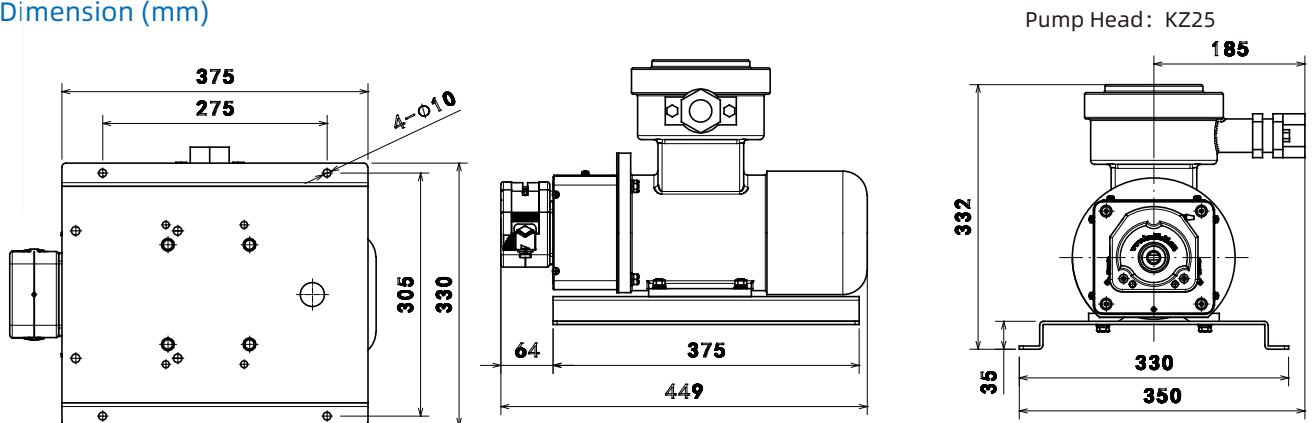


## FG600S-A3 Frequency Conversion Explosion-Proof Motor Peristaltic Pump

- Industrial grade AC frequency conversion explosion-proof motor (ExdIIBT4), with special pump head, safe and reliable.
- External frequency conversion control, with functions such as adjust speed, start-stop, reversible direction, analog adjust speed, RS485 communication.
- Stepless speed, speed range 72rpm ~ 600rpm, speed resolution 2rpm.
- Split design, the driver is separated from the frequency conversion, suitable for a variety of working environment.
- Install a variety of pump heads and tubes.
- IP55, suitable for complex working environmen.
- The standard frequency conversion is not explosion-proof and cannot be placed in a flammable and explosive environment.

**Remark:** 1. Industrial grade explosion-proof frequency conversion is optional .  
2. Protective shell can be installed.  
3. Customizable all-in-one model.

Dimension (mm)



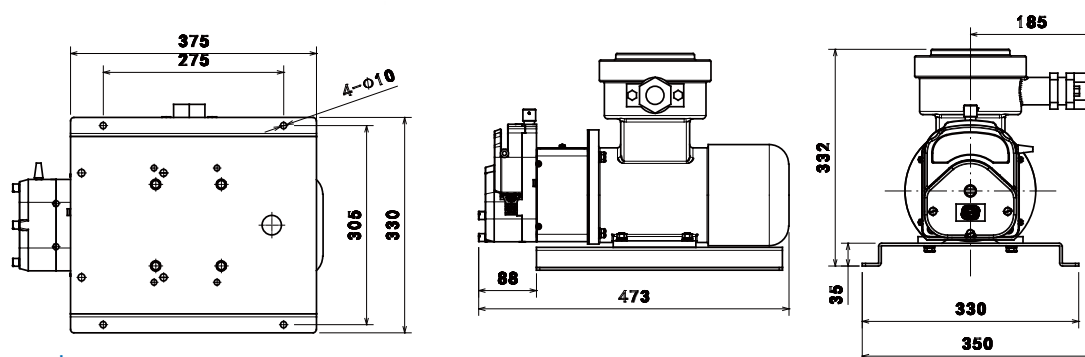


## FG601S-A3 Frequency Conversion Explosion-proof Motor Peristaltic Pump

- Industrial grade AC frequency conversion explosion-proof motor (ExdIIBT4), with special pump head, safe and reliable.
- External frequency conversion control, with functions such as adjust speed, start-stop, reversible direction, analog adjust speed, RS485 communication.
- Stepless speed, speed range 72rpm ~ 600rpm, speed resolution 2rpm.
- Split design, the driver is separated from the frequency conversion, suitable for a variety of working environment.
- Suitable for high flow rate pump head.
- IP55, suitable for complex working environmen.
- The standard frequency conversion is not explosion-proof and cannot be placed in a flammable and explosive environment.

**Remark:** 1. Industrial grade explosion-proof frequency conversion is optional. 2. Protective shell can be installed. 3. Customizable all-in-one model.

Dimension (mm)



### Technical Parameters

Parameters	Model	FP300S-A3	FG601S-A3	FG600S-A3
Pump Head		PL48	YZ35	YZ15, YZ25, YT15, YT25, KZ25, KZ25-L
Display function		Frequency converter display the Hz or flow rate (analog)		
Flow range		0.7 ~ 33l /min	1000 ~ 13000ml/min	4 ~ 6000ml/min
Speed range		34.5 ~ 345rpm	72 ~ 600rpm	72 ~ 600rpm
Speed resolution		0.1Hz (corresponding speed 0.77rpm)	0.1HZ (corresponding speed 2rpm)	0.1HZ (corresponding speed 2rpm)
Adjust speed		Frequency converter stepless speed (standard frequency converter motor without connection cable)		
Control function		Adjust speed, start/stop, reversible direction, analog speed control, RS485 communication		
Speed accuracy		<math>\pm 3\%</math>		
Power supply		3 phase 380V 50Hz		
Power consumption		0.37KW	0.55KW	0.55KW
Working condition		Temperature 0 ~ 40°C, relative humidity < 80%		
Anti-explosion grade		ExdIIBT4		
IP grade		IP55 (仅限电机)		
Dimension (L×W×H)		469×383×323mm	473×350×332 mm	449×350×332 mm
Weight		49kg	37kg	37kg

### Pump Head, Tube and Flow Parameters

Drive Model	Pump Head	Channel	Tube	Single Channel Flow Rate (ml/min)
FP300S-A3	PL48	1	88# 92# 193# 191#	700 ~ 33000
FG601S-A3	YZ35	1~2	73#82#	1000 ~ 13000
FG600S-A3	YZ15	1~4	13#14#19#16#25#17#	4 ~ 1700
	YT15	1~4	13#14#19#16#25#17#18#	4 ~ 2300
	YZ25	1~4	15#24#	120 ~ 1700
	YT25	1~4	15#24#35#36#	120 ~ 2900
	KZ25/KZ25-L	1~2	15#24#35#36#	177 ~ 6000

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

# FG600S-W3 Explosion-Proof Motor Peristaltic Pump

## Feature

- Industrial grade explosion-proof motor (ExdIIBT4), with special pump head, safe and reliable.
- Integral design, no frequency converter required, with functions such as manual adjust speed.
- During operation, the speed can be adjusted at any time through the handwheel.
- Can install a variety of pump heads, suitable for a variety of tube.
- IP55, can adapt to more complex working environment.

**Remark:** Protective shell can be installed.



## Technical Parameters

Pump head	YZ15, YZ25, YT15, YT25, KZ25, KZ25-L
Flow range	8 ~ 6000ml/min
Speed range	135 ~ 600rpm
Handwheel resolution	0.2 rpm (Turn the handwheel to adjust 25rpm)
Adjust speed	Manual stepless adjust speed
Control function	Manual adjust speed
Power supply	3 phase 380V 50HZ
Power consumption	0.37KW
Environment	Temperature 0 ~ 40°C, relative humidity < 80%
Anti-explosion grade	ExdIIBT4
IP Grade	IP55 (only drive)
Dimension (L×W×H)	576×345×393mm
Weight	36.5kg

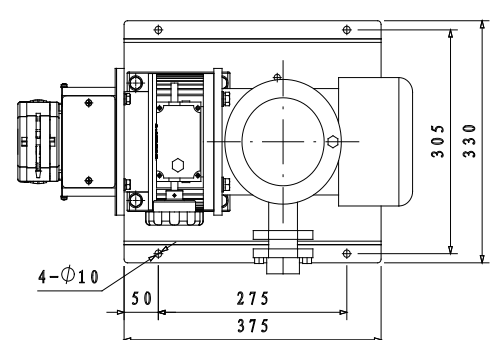
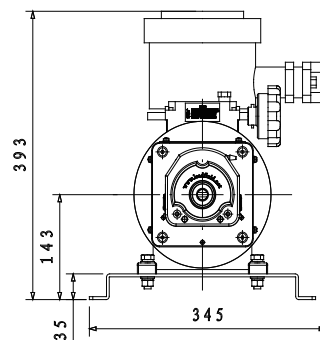
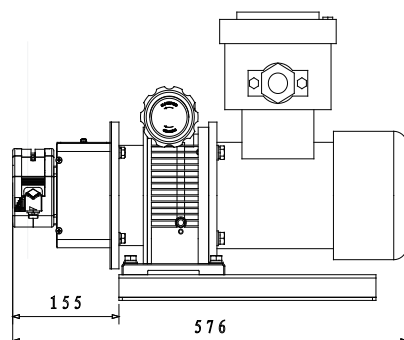
## FG600S-W3 Applicable Pump Head and tube, flow parameters

Drive model	Pump head	Channel	Tube	Single Channel Flow Rate (ml/min)
FG600S-W3	YZ15	1~4	13#14#19#16#25#17#	8 ~ 1700
	YT15	1~4	13#14#19#16#25#17#18#	8 ~ 2300
	YZ25	1~4	15#24#	225 ~ 1700
	YT25	1~4	15#24#35#36#	225 ~ 2900
	KZ25/KZ25-L	1~2	15#24#35#36#	332 ~ 6000

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

## Dimension (mm)

Pump Head: KZ25





# FG601S-W3 Explosion-Proof Motor Peristaltic Pump

## Feature

- Industrial grade explosion-proof motor (ExdIIBT4), with special pump head, safe and reliable.
- Integral design, no frequency converter required, with functions such as manual adjust speed.
- During operation, the speed can be adjusted at any time through the handwheel.
- Suitable for high flow pump head.
- IP55, can adapt to more complex working environment.

**Remark:** Protective shell can be installed.



## Technical Parameters

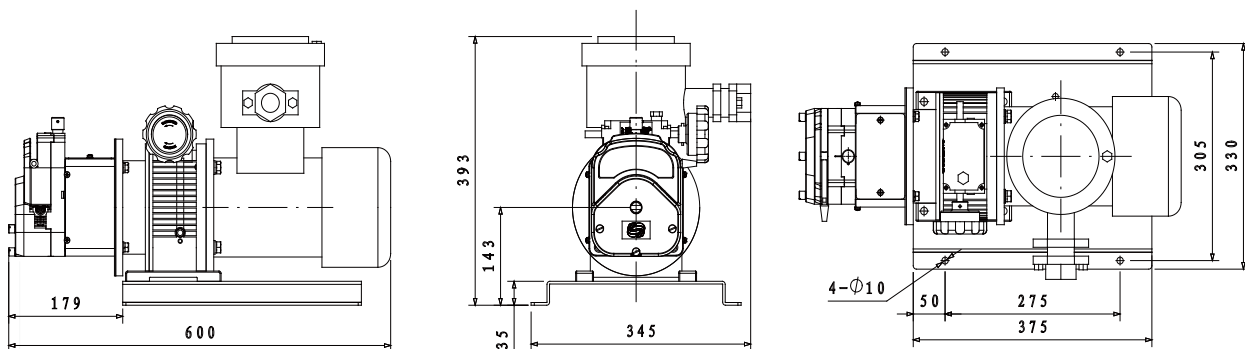
Pump head	YZ35
Flow range	1800 ~ 13000ml/min
Speed range	135 ~ 600rpm
Handwheel resolution	0.2 rpm (Turn the handwheel to adjust 25rpm)
Adjust speed	Manual stepless adjust speed
Control function	start/stop, manual adjust speed
Power supply	3 phase 380V 50HZ
Power consumption	0.37KW
Environment	Temperature 0 ~ 40°C, relative humidity < 80%
Anti-explosion grade	ExdIIBT4
IP Grade	IP55 (only drive)
Dimension (L×W×H)	600×345×393 mm
Weight	36.5kg

## FG601S-W3 Applicable Pump Head and tube, flow parameters

Drive model	Pump Head	Channel	Tube	Single Channel Flow Rate (ml/min)
FG601S-W3	YZ35	1~2	73#82#	1800 ~ 13000

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

## Dimension (mm)



# Pneumatic Motor Peristaltic Pump



**FG600S-Q**

## Feature

- High-quality pneumatic motor drive, quiet and stable operation, safe and reliable.
- Throttle valve stepless speed, wide flow range.
- Integrated desktop structure, easy to install and operate.
- Suitable for liquid transmission with general accuracy requirements.
- High protection level, can adapt to more complex working environment.

**Remark:** Customizable stainless steel shell

## Pump Head



YZ15 (YZ25)



YT15 (YT25)



KZ25-PPS



KZ25-L



YZ35

**FG601S-Q**



## Technical Parameters

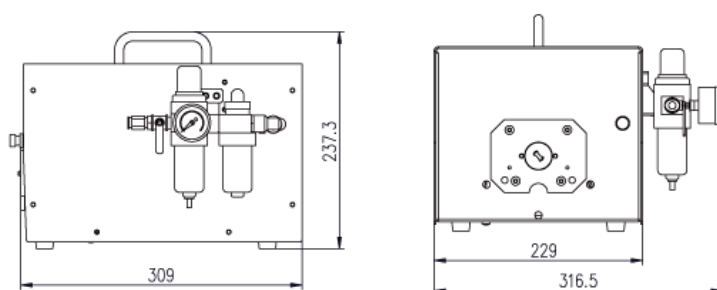
Model	FG600S-Q	FG601S-Q
Pump head	YZ15、YZ25、YT15、YT25、KZ25、KZ25-L	YZ35
Flow range	9 ~ 6000ml/min	2000 ~ 13000ml/min
Speed range	140 ~ 600rpm	
Adjust Speed	Throttle valve stepless speed	
Control Function	Start-stop (standard), reversing function (optional)	
Gas supply pressure	0.1 ~ 0.7Mpa	
Inlet pipe	6.5×10mm PU	
Gas consumption	≤0.25m <sup>3</sup> /min	≤0.3m <sup>3</sup> /min
Environment	Temperature 0 ~ 40°C, relative humidity < 80%	
IP grade	IP65	
Shell material	Metal anticorrosive spray (standard), 304SS (optional)	
Dimension (L×W×H)	309×316×237mm	
Drive weight	11kg	

### FG600S-Q\G601S-Q Applicable Pump Head, Tube and Flow Parameters

Drive model	Pump Head	Channel	Tube	Single Channel Flow Rate (ml/min)
FG600S-Q	YZ15	1~2	13#14#19#16#25#17#	9 ~ 1700
	YT15	1~2	13#14#19#16#25#17#18#	9 ~ 2300
	YZ25	1~2	15#24#	250 ~ 1700
	YT25	1~2	15#24#35#36#	250 ~ 2900
	KZ25	1	15#24#35#36#	350 ~ 6000
FG601S-Q	YZ35	1	73#82#	2000 ~ 13000

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

## Dimension (mm)



## DS600 Series Peristaltic Pump Filling System

This series product is design for the multi heads & high accuracy filling . HMI interface centralized operation, individually control each channel, Filling accuracy is  $< \pm 1\%$  . Not only for match the automatic production line, but also operation by hand.



### Feature

- HMI interface centralized control, easy to operate.
- High quality servo motor or stepper motor, stable and efficient operating system and pipeline greatly ensure the filling accuracy.
- Intelligent calibration system, greatly reducing the workload and improving the working efficiency.
- Fine adjustment on line, convenient to users adjusting flow rate as tubing's aging.
- Online and offline function.
- Can cascade for more channels.
- Each channel will stop working when lack of the bottle.
- Stainless steel shell, good chemical resistance and easy clean.
- The circuit board with conformal coating makes it dust-proof and moisture-proof.

### Technical Parameters

Filling range	0.1~5000ml
Filling time	0.1~99.99s, resolution 0.1s
Speed range	0.1~600rpm, resolution 0.1rpm
Channel	2~100
Signal input	start signal, bottle-lack signal
Signal output	5V Level start and stop status
External Interface	Line terminal/DB15
Power supply	AC220V $\pm 10\%$ , 50Hz/60Hz(standard) AC110V $\pm 10\%$ , 50Hz/60Hz(standard)
Power Consumption	$\leq 100$ W/channel
Environment Condition	Temperature 0~40°C, Relative humidity $< 80\%$
IP Grade	IP31
Dimensions	According to the needs customization
Weight	According to the needs customization



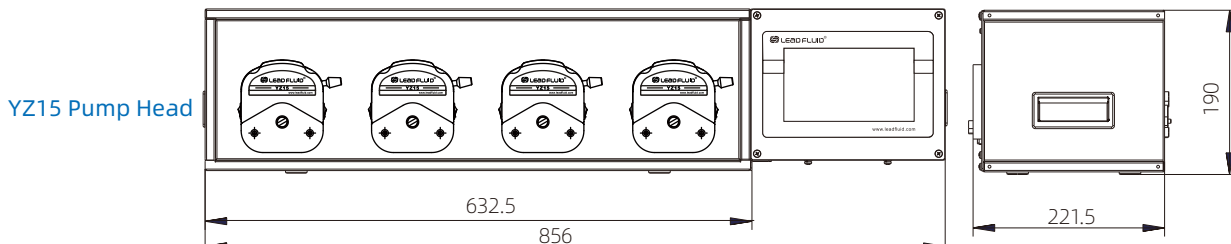
(Pump Head)

### Filling Application Reference Table

Drive	Pump Head	Tube	Filling volume ( ml )	Filling Time
DS600	YZ15	13#14#19#16#25#17#	0.1 ~ 50	0.6~3s
	YZ25	15#24#	10 ~ 50	1~3s
	YT25	15#24#35#36#	10 ~ 100	1~4s
	KZ25(pps/L)	15#24#35#36#	20~200	1~4s
	YZ35	73#82#	100~1000	2~5s

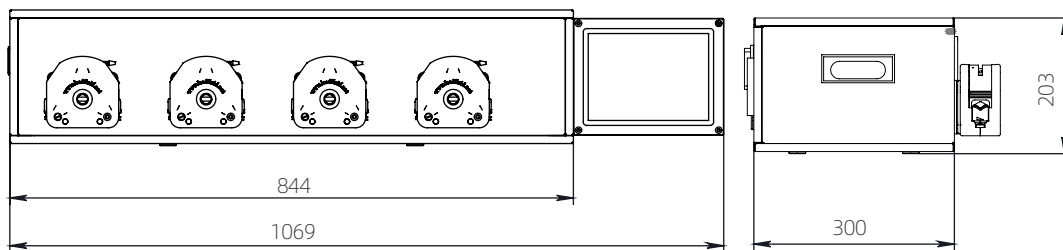
Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

### Dimension(mm)

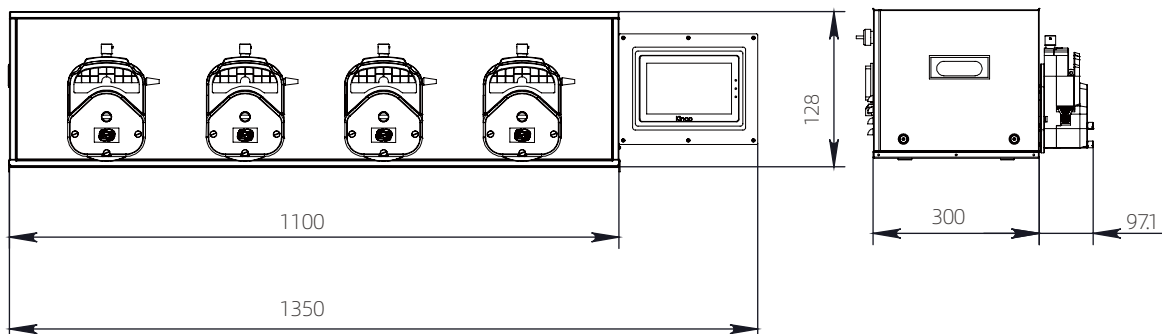




KZ25 Pump Head



YZ35 Pump Head



## BX600S Handheld Peristaltic Pump

### Feature

- Handheld design, easy to operate, smaller size, easy to carry.
- Adjustable flow.
- Adopts the rechargeable power supply, suitable for outdoor water sampling, emergency transmission or without AC power.
- An assemble a variety of specifications of the pump head, simple and convenient to replace the tube, wide flow range.
- The suction head lift 8 meters.
- Battery life: 20 ~ 30min (Single batteries, specific battery life variations in the pump head and tube used ).



Protective Box

### Technical Parameters

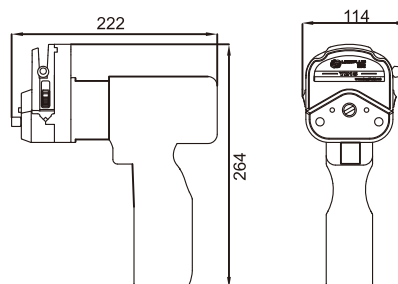
Power supply	DC10.8V lithium battery
Flow range	1.8 ~ 3300ml/min
Speed range	30 ~ 340rpm
Weight	0.9kg
Standard equipped	drive, chargers, batteries, pump head, tube, protective box

### BX600S Applicable Pump Head, Tube and Flow Parameters

Pump Head	Tube	Flow Rate ml/min
YZ15	13#14#19#16#25#17#	1.8 ~ 900
YZ25	15#24#	50 ~ 900
YT15	13#14#19#16#25#17#18#	1.8 ~ 1300
YT25	15#24#35#36#	50 ~ 1600
KZ25	15#24#35#36#	300 ~ 3300

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

### Dimension (mm)



## YZ15/YZ25 Pump Head

PES Shell



- YZ15 pump head flow range is 0.006~1700ml/min, suitable for tube size of 13#, 14#, 19#, 16#, 25#, 17#, wide flow range.
- YZ25 pump head flow range is 0.17~1700ml/min, suitable for tube size of 15#, 24#. It is an ideal choice for conveying more viscous liquids and meeting the requirements of larger suction range, head or outlet pressure.
- With self-adapting clamping device, it is easy to clamp tubes of different thicknesses without manual adjustment.
- Classic pump tube locking mechanism, replacing tube only takes several seconds, easy to deal with frequent tube change conditions.
- Special pressure tube structure, reduce wear and tear of pump tube and accidental rupture caused by misoperation.
- PPS\PES special functional plastic shell and SS roller ensure that the pump head can meet the high-strength use requirements such as high speed, long time, etc.
- Multiple pump heads can be superposition, maximum expansion to 10 channels.
- When two pump heads are series connection, the rollers are staggered at 60 degrees, which can obviously reduce the fluid pulsation and increase the transmission speed.
- YZ15,YZ25 pump head can match motor such as stepper motor, servo motor , AC motor, DC motor and other types of motor.
- We have low pulsation and waterproof pump heads for selection. Please confirm with Lead Fluid sales engineer or agent in advance.



PPS Shell



### YZ15 Pump Head Flow Parameters

Tube material Silicone, Pharmed, Viton, Tygon 3603, Chemical, A-60-FVG Wall thickness 1.6mm						
ID(mm)	0.8	1.6	2.4	3.1	4.8	6.4
	13#	14#	19#	16#	25#	17#
mL/rpm	0.06	0.22	0.48	0.8	1.67	2.83
Max flow rate(600rpm, ml/min)	36	130	286	480	1000	1700

### YZ25 Pump Head Flow Parameters

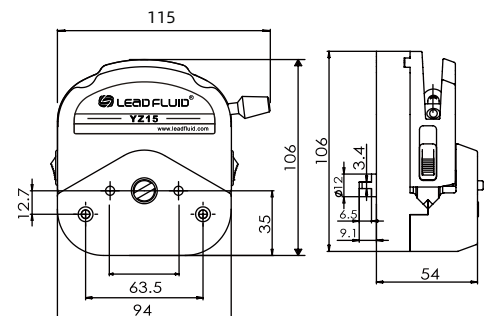
Tube material Silicone, Pharmed, Viton, Tygon 3603, Chemical, A-60-FVG wall thickness 2.4mm		
ID(mm)	4.8	6.4
	15#	24#
mL/rpm	1.67	2.83
Max flow rate(600rpm, ml/min)	1000	1700

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium, environment etc.

## Technical Parameters

Channel	1 channel (Max expand to 10 channels)
Roller	3\6
Tubing Method	Whole tube
Net Weight	454g (3 rollers) \480g (6 rollers)
Shell Material	PPS\PES
Roller Material	SS304
Pressure tube clearance	Fixed (Non-adjustable)
Bear Liquid Temperature	Less than 200°C
Corrosion Resistance	PPS is resistant to most acid, alkali, salt liquids and organic solvents. PES is resistant to most liquids except chlorinated hydrocarbons, ketones and strong acids.

## Dimension (mm)



## YT15/YT25 Easy Load Adjustable Pump Head

- YT15 pump head flow range is 0.006~2300ml/min, suitable for tube size of 13#, 14#, 19#, 16#, 25#, 17#, 18#, wide flow range.
- YT25 pump head flow range is 0.17~2900ml/min, suitable for tube size of 15#, 24#, 35#, 36#. It is an ideal choice for conveying more viscous liquids and meeting the requirements of larger suction range, head and outlet pressure.
- With self-adapting clamping device, it is easy to clamp tubes of different thicknesses without manual adjustment.
- Classic pump tube locking mechanism, replacing tube only takes several seconds, easy to deal with frequent tube change conditions.
- Special pressure tube structure, reduce wear and tear of pump tube and accidental rupture caused by misoperation.
- The pressure tube clearance can be fine-tuned manually, when reducing tube clearance it can convey the larger pressure, and increasing tube clearance it can prolong the life of pump tube. At the same time, it can adapt to the deviation caused by different processing accuracy of pump tube.
- PPS special functional plastic shell and 4 SS rollers ensure that the pump head, can meet the high-strength use requirements such as high speed, long time, etc.,simultaneously reduce transmission pulsation.
- Multiple pump heads can be superposition, maximum expansion to 4 channels.
- When two pump heads are series connection, the rollers are staggered at 45 degrees, which can obviously reduce the fluid pulsation and increase the transmission speed.
- YT15, YT25 pump head can match motor such as stepper motor, servo motor, AC motor, DC motor and other types of motor.



### YT15 Pump Head Flow Parameters

Tube material	Silicone, Pharmed, Viton, Tygon 3603, Chemical,A-60-F\G wall thickness 1.6mm						
ID(mm)	0.8	1.6	2.4	3.1	4.8	6.4	7.9
	13#	14#	19#	16#	25#	17#	18#
mL/rpm	0.06	0.22	0.48	0.8	1.67	2.83	3.8
Max flow rate(600rpm, ml/min)	36	130	286	480	1000	1700	2300

### YT25 Pump Head Flow Parameters

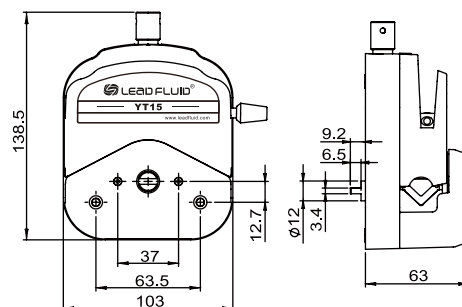
Tube material	Silicone, Pharmed, Viton, Tygon 3603, Chemical, A-60-F\G wall thickness 2.4mm			
ID(mm)	4.8	6.4	7.9	9.6
	15#	24#	35#	36#
mL/rpm	1.67	2.83	3.83	4.84
Max flow rate(600rpm, ml/min)	1000	1700	2300	2900

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium, environment etc. Above for reference only.

### Technical Parameters

Channel	1 channel (Single pump head )
Roller	4
Tubing Method	Whole tube
Net Weight	620g
Shell Material	PPS
Roller Material	SS304
Pressure Tube Clearance	Adjustable
Bear Liquid Temperature	Less than 200°C
Corrosion Resistance	PPS is resistant to most acid, alkali, salt liquids and organic solvents.

### Dimension (mm)



## DG Series MultichannePump Head



**Note** When transport corrosive liquid, users need to change the special material tubes, for details, please consult the Lead Fluid.

- Lead Fluid DG series pump head designed for small flow and multi-channel fluid transmission, it can realize simultaneous transmission of more than 1-48 pipelines with compact structure and convenient use.
- Exquisite structure design, even compared with traditional multi-roller pump head, can still provide very low transmission pulsation.
- Reasonable mechanical structure and high precision processing technology ensure the consistency of flow between channels.
- The card-type structure can be loaded and unloaded independently, which is easy to replace and fix the pump tube.
- There are two kinds of card pressure tube device ratchet adjusting device and adaptive spring device, adjustment card with shift display, pressure tube clearance can be based on manual adjustment according to the size of tube, to adapt to different wall thickness of tube and transmission pressure. Self-adaptive design of spring card, pressure tube clearance will be adjusted automatically according to the thickness of tube.
- High strength stainless steel is used as the material of pump head roller, and POM and PVDF high function plastics are selected as the card material to meet the requirements of different working conditions.
- Can suitable for tube of wall thickness 0.8~1mm, ID 0.13~3.17mm Silicone, Pharmed, PVC, Viton and other materials and specifications, single channel flow range is 0.0001~49ml/min.
- Number of pump head roller 6 or 10 optional, 6 rollers pump head with wide flow range, long tube lifetime, 10 rollers pump head with less transmission pulsation and tube wear higher.
- Can match speed below 100rpm stepper motor, servo motor, AC gear motor, DC gear motor and other motors.

### DG Series Pump Head

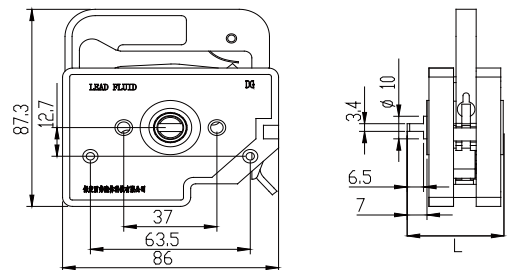
Model	DG-1	DG-2	DG-3	DG-4	DG-6	DG-8	DG-10	DG-12
L (mm)	38.5	47.5	55.5	63.5	80.5	95.5	112.5	128



### Flow Parameters

Tube material: Silicone, Pharmed, PVC, Viton	wall thickness 0.86~1mm						
ID(mm)	0.13	0.25	1	1.52	2	2.4	3.17
<b>(DG 6 Rollers)</b>							
mL/rpm	0.0016	0.005	0.058	0.17	0.21	0.26	0.49
mL/min(continuous working max100rpm)	0.16	0.5	5.8	17	21	26	49
<b>(DG10 Rollers)</b>							
mL/rpm	0.0011	0.0045	0.0484	0.1342	0.16	0.2	0.41
mL/min(continuous working max100rpm)	0.11	0.45	4.84	13.42	16	20	41

### Dimension (mm)

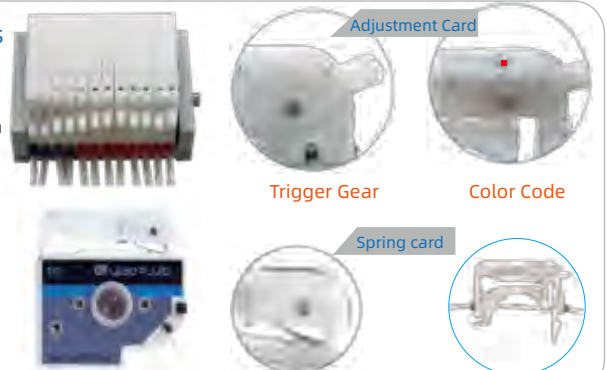


Above parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by pressure, medium specific factors. Above for reference only.

### Lead Fluid DG Series Pump Head Can Use Two Types of Cartridges

**Adjustment Cartridge** pressure tube clearance can be adjusted by ratchet structure, there are 7 adjusting gears with color marks corresponding to tube of different specifications and materials, can work under the optimum pressure tube clearance without user debugging, obviously prolonged the tube lifetime, if need larger outlet pressure, the pressure tube clearance can be reduced by adjusting the gear, and the operation is simple.

**Adjustment Cartridge** Automatic adjustment of pressure tube clearance through high performance alloy spring, in order to adapt to the wall thickness change of tube due to long-term use, the uniform stability of flow can be effectively guaranteed.





## DT Series Multichannel Pump Head

■ DT series pump head is designed for small and medium flow ,multichannel fluid transmission, according to different tubing size, there are two series DT10 series and DT15 series.

■ DT10 pump head single channel flow range 0.00023 ~ 64ml/min, suitable for tubing 13#, 14# and ID 0.13 ~ 3.2mm, wall thickness 0.8 ~ 1mm.

■ DT15 pump head single channel flow range 0.067 ~ 2240ml/min, suitable for tubing 19#, 16#, 25#, 17#.

■ The plug card structure that can be installed and removed independently, it is convenient and quick to replace and fix the pump tubing.

■ Multi-roller design reduces pulsation effectively.

■ The roller is made of high-strength stainless steel, and the shell and card are made of PPS, which is resistant to high temperature and excellent chemical resistance.

■ The roller is a bearing design, gap adjustment and the flow consistency is better.

■ Can instead of 2 or 4 YZ15 pump heads, smaller size.

■ Can match stepper motor, servo motor ,AC gear motor, DC gear motor etc.



DT10-88



DT15-44



### DT10 Flow Parameters

Tube material : Silicone, Pharmed, Viton, Chemical, Tygon 3603	wall thickness:0.8~1mm							
	13#14# wall thickness:1.6mm							
ID (mm)	0.13	0.25	1	2	2.4	3.2	0.8	1.6
							13#	14#
mL/rpm	0.0023	0.0069	0.07	0.3	0.39	0.64	0.05	0.18
mL/min(Continuous working max100pm)	0.23	0.69	7.4	30	39	64	5	18

### DT15 Flow Parameters

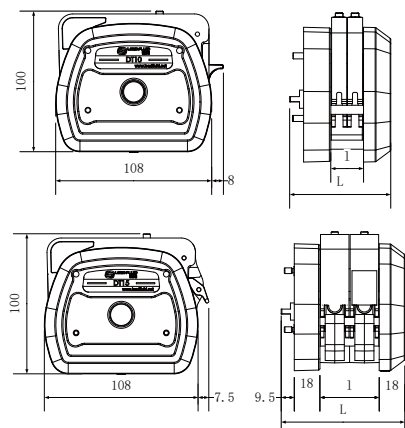
Tube material : Silicone, Pharmed, Viton, Chemical, Tygon 3603	wall thickness:1.6mm			
ID (mm)	2.4	3.1	4.8	6.4
	19#	16#	25#	17#
mL/rpm	0.67	1.0	2.2	3.7
mL/min(Continuous working max 600pm)	400	600	1320	2240

Model	Channel	Roller	Roller material	Card material	Max speed (rpm)	Tube	Max flow (mL/min)	Weight (kg)
DT15-14	1	4	304SS	PPS	600	19#,16#, 25#,17#	2240	0.62
DT15-24	2							1
DT15-44	4							1.44
DT10-18	1	8	304SS	PPS	100	ID < 3.17mm wall thickness 0.8~1mm	82	0.72
DT10-28	2							0.78
DT10-48	4							1.08
DT10-88	8							1.68

Above parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure ,medium. Above for reference only.



### Dimension (mm)



DT10	Pump Head	Length L (mm)
	DT10-18	57.5
	DT10-28	67
	DT10-48	87.5
	DT10-88	102

DT15	Pump Head	Length L (mm)
	DT15-14	67
	DT15-24	87.5
	DT15-44	102

# YZ35 Pump Head

- Lead Fluid YZ35 pump head flow range 0.01 ~ 13L/min, suitable for 73#, 82# tube, can be cascade multiple pump heads.
- New loading structure of tube, easy and fast to replace tube and the tube will not deviation in the process of operation.
- Pressure tube clearance can fine adjustment according to the tube size. Can adapt to small deviations of pump tube size.
- PPS shell material, 304SS roller material, resistant to organic solvents and other corrosive liquids and other corrosive liquids.
- Compact structure, durable, can meet the demand of high speed and long time running.
- Cascade two pump heads, install 60° dislocation between the rollers, can obviously reduce the pulse, and improve the transmission speed.

## Technical Parameters

Flow range	0.01 ~ 13l /min
Speed range	0.1 ~ 600rpm
Tube	73#, 82#
Shell material	PPS
Roller material	304SS
Roller	3
Tube clearance	Can be fine-tuned
Color	Black
Withstand liquid temperature	Within 200°C
Temperature	0°C ~ 40°C
Corrosion resistance	Resistance to acid, alkali and organic solvents

**Note** -----  
 New loading structure of tubing,  
 tube does not deviation in the  
 process of operation.  
 -----



## Flow Parameters

Tube material : Silicone, Pharmed, Norprene Chemical, Viton, A-60-G/F, Tygon 3603  
 wall thickness 3.3mm

ID (mm)	9.6	12.7
	73#	82#
mL/rpm	13	21
mL/min ((Continuous working max 600rpm)	8000	13000

Above parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure ,medium. Above for reference only.

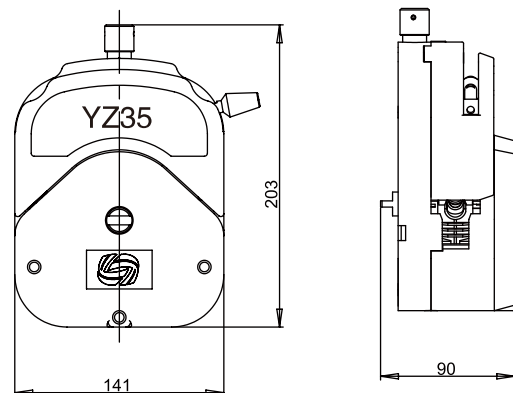


Adaptive gripper tube settings



Installation tube method

## Dimension (mm)



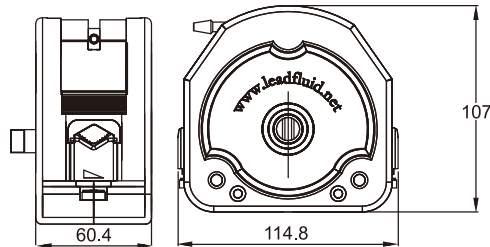
# KZ25 Pump Head

- Lead Fluid KZ25 pump head flow range 0.3~6000mL/min, suitable for 15#, 24#, 35#, 36# tube, can be cascade multiple pump heads.
- Easy, fast load and replace tubes.
- The rollers adopts 304SS, excellent mechanical properties, can work continuously at high speed for a long time.
- The shell adopts kinds of material, suitable for various working environment.

## Technical Parameters

Flow range	0.3~6000ml/min
Speed range	0.1~600rpm
Shell material	PC, PPS, AL
Upper holder block	PPS, AL
Roller material	304SS
Number of roller	3
Tubing fixing	Manual
Clearance adjustment	Fixed
Tube	15#, 24#, 35#, 36#

## Dimension (mm)



## Flow Parameters

Tube material: Silicone, Pharmed, Viton, Chemical, A-60-G/F		wall thickness 2.4mm			
ID(mm)	4.8	6.4	7.9	9.6	
	15#	24#	35#	36#	
mL/rpm	3	5	7	10	
mL/min (continuous working max 600rpm)	1800	3000	4200	6000	

Above parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure , medium. Above for reference only.

**KZ25-PC**

The shell adopts transparent PC material with moderate strength, which is convenient for observing the internal working condition of the pump head. Upper holder block adopts PPS, high strength, good chemical stability and high temperature resistance.

**KZ25-PPS**

The shell and upper holder block adopts pps material, super corrosion resistance, more adaptable.

**KZ25-L**

All finished aluminum alloy material with high precision, suitable for tube with high hardness, strong weather fastness.

**Installation Tube Method (AL)**

**Installation Tube Method (PC\PPS)**

## BZ Pump Head

- Lead Fluid BZ series pump head max flow rate 2100 mL/min, can be cascade multiple pump heads.
- The ingenious pressure tube structure ensures very low transmission pulsation without increasing the roller, highest transmission accuracy and repeatability.
- Each type of pump head corresponds to a special one size tube. It has better performance and longer service life than general pump head.
- The shell material can be PC or PPS, the PC is transparent and easy to observe the internal operation of the pump head, PPS is better chemical resistance.
- The roller adopts 304SS, can work long time with high speed.
- Support two kinds of tube fixed way the whole tube and built-in tube connector, strong applicability.
- Classic design, stable structure, high cost performance, It can be widely used in various small and medium-sized instruments and equipment.

- BZ15 Pump Head:** BZ15-13# (suitable for 13# tube)  
 BZ15-14# (suitable for 14# tube)  
 BZ15-19# (suitable for 19# tube)  
 BZ15-16# (suitable for 16# tube)  
 BZ15-25# (suitable for 25# tube)  
 BZ15-17# (suitable for 17# tube)  
 BZ15-18# (suitable for 18# tube)

- BZ25 Pump Head:** BZ25-15# (suitable for 15# tube)  
 BZ25-24# (suitable for 24# tube)



### Technical Parameters

Flow range	0.0033 ~ 2100ml/min
Speed range	0.1 ~ 600rpm
Shell material	PPS\PC
Roller material	SS304
Number of roller	3
Tubing method	Tube connector built-in\The whole tube
Clearance adjustment	fixed clearance
Motor	Stepper motor\DC gear motor\AC gear motor

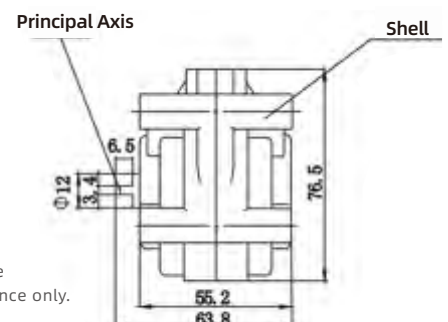
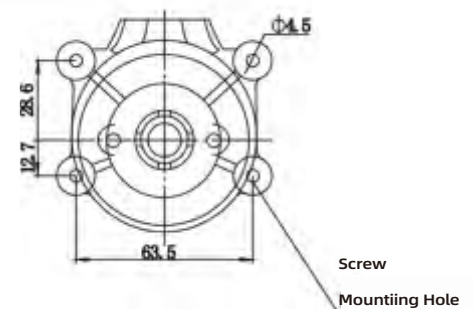
### BZ15 Flow Parameters

Tube material: Silicone, Pharmed, Norprene, Viton	wall thickness 1.6mm						
ID(mm)	0.8	1.6	2.4	3.1	4.8	6.4	7.9
	13#	14#	19#	16#	25#	17#	18#
mL/rpm	0.033	0.18	0.43	0.67	1.7	3.0	3.5
mL/min (continuous working max 600rpm)	20	110	260	400	1020	1800	2100

### BZ25 Flow Parameters

Tube material: Silicone, Pharmed, Norprene, Viton	wall thickness 2.4mm	
ID (mm)	4.8	6.4
	15#	24#
mL/rpm	1.8	2.6
mL/min (continuous working max 600rpm)	1056	1560

### Dimension (mm)



Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.



# DMD25-T Pump Head

- Lead Fluid DMD25-Tperistaltic pump head flow range 0.4~4000mL/min, It mainly meets higher requirements such as high precision filling and large flow and low pulsation.
- The transmission smoothness is greatly improved by the double line pulsation complementary method.
- Elastic upper block structure reduces flow attenuation rate and greatly prolongs the service life of pump tube.
- Three pump heads can cascade to form three channels,increase productivity.
- The overall uses of aluminum alloy and SS304 material, excellent mechanical properties.



## Technical Parameters

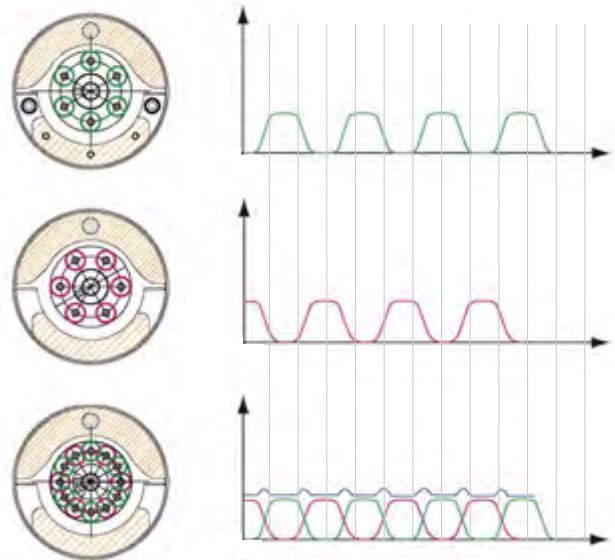
Flow range	0.4~4000ml/min
Speed range	0.1~350rpm
Tube	15#, 24#, 35#, 36#
Number of channel	1
Number of roller	6
Pressure tube Structure	Elastic self-adaptation
Transmission Pressure	≤0.12MPa
Dimension	168.2x105x125mm
Net Weight	2.8kg

## Flow Parameters

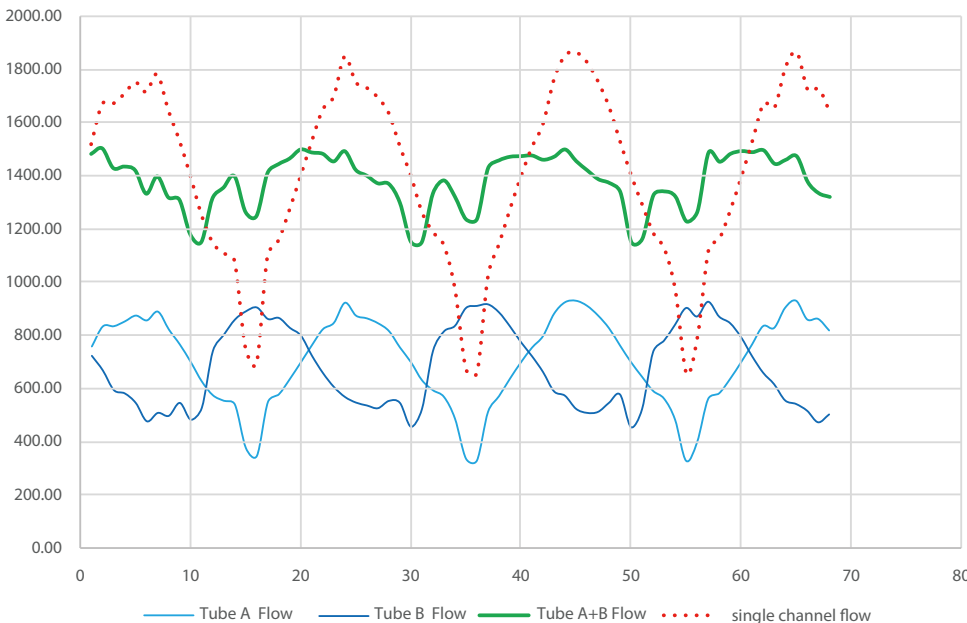
Tube material: Silicone, Pharmed, Viton, Norprene	A-60-G/F				wall thickness
					2.4mm
ID (mm)	4.8	6.4	7.9	9.6	
	15#	24#	35#	36#	
mL/rpm	4.09	6.86	8.29	11.43	
mL/min(continuous working max350rpm)	1430	2400	2900	4000	

Above parameters are obtained by using silicone tube to transfer pure water under normal pressure, in actually using it is effected by specific factors such as pressure ,medium. Abo

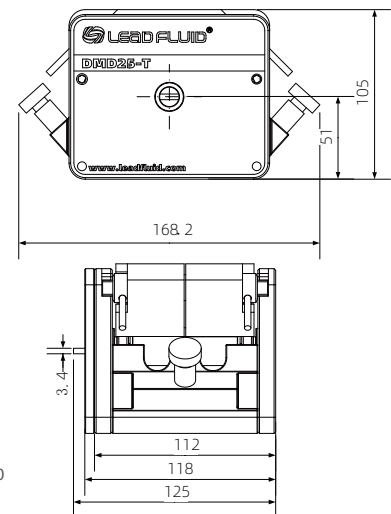
## Pulsation Complementary Schematic Diagram



## DMD25-T Pulsation Curve Simulation Diagram



## Dimension (mm)



DMD25 is A+B double pipeline. Under the same environmental conditions, compare the mixed pipeline flow with the flow pulsation curve of a single pipeline with the same flow.

## WMD15 Micro Pulsation Pump Head

- Lead Fluid WMD15 micro pulsation pump head flow range 0.006~1700mL/min, suitable for tube of 13# 14# 19# 16# 25# 17#.
- Unique micro pulsation patent technology, liquid transmission lower pulse, excellent transmission continuity, especially suitable for glue coating, film coating, chemical synthesis and other industries with high requirements for transmission stability.
- Entirety adopts the aluminum alloy and 304ss, sturdy and durable. suitable for continue working at high speed.

### Technical Parameters

Flow range	0.006~1700ml/min
Speed range	0.1~600rpm
Tube	13#, 14#, 19#, 16#, 25#, 17#
Shell material	aluminum alloy
Roller material	304SS
Number of roller	3
Temperature	0°C ~ 40°C
Clearance adjustment	Fixed



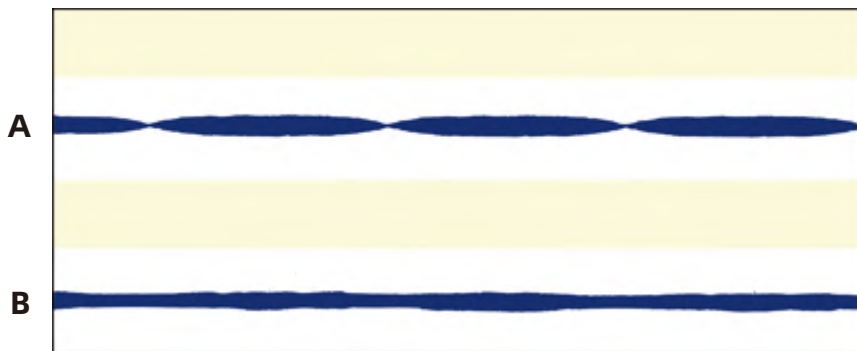
### Flow Parameters

Tube material	Silicone, Pharmed, Viton, Chemical, A-60-G/F						wall thickness	1.6mm								
ID (mm)	0.8	1.6	2.4	3.1	4.8	6.4										
	13#	14#	19#	16#	25#	17#										
mL/rpm	0.06	0.22	0.48	0.8	1.67	2.83										
mL/min (continuous working max600rpm)	36	130	286	480	1000	1700										

Micro pulsation patent design  
Patent No.: [ZL201420691450.5](#)

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

### Comparison of transmission stability

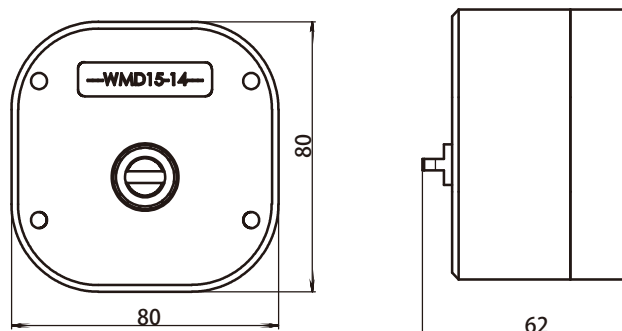


#### Note

Pulse videos please contact with Lead Fluid

- Test Conditions **A** Lead Fluid YZ15 pump head 14# silicone tube speed 20rpm  
**B** Lead Fluid WMD15 pump head 14# silicone tube speed 20rpm

### Dimension (mm)



# GN10 High-Pressure Corrosion-Resistant Pump Head

- GN10 high pressure corrosion resistance pump head suitable for PTFE tube, excellent chemical resistance, suitable for strong acids, strong bases and various organic solvents ,especially suitable for small flow transmission of liquids that cannot be transmitted by ordinary peristaltic pumps.
- Using aluminum alloy and POM material, excellent mechanical properties.
- Adjustable pressure tube clearance, locking structure design, the max adaptive outlet pressure is 0.68Mpa.
- Easy and quick tube installation , lower running noise, compact and beautiful appearance.

## Technical Parameters

Max flow rate	65ml/min
Speed range	<300rpm
Tube	2.48×0.76mm \ 4.48×0.76mm (PTFE)
Number of channel	1
Number of roller	6
Pressure tube structure	Adjustable pressure tube clearance
Transmission pressure	≤0.68MPa
Suction stroke	Not higher than 2 meters
Temperature	Temperature 0~40°C, humidity<80%
Dimension	83×65×140mm
Weight	0.92kg

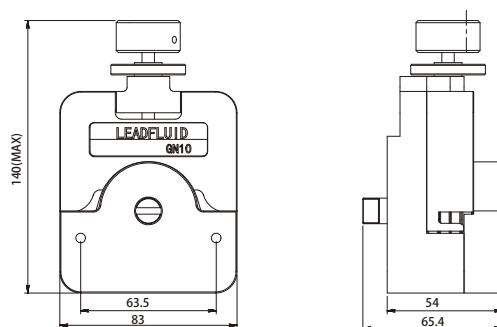
## Flow Parameters

Tube material PTFE	wall thickness 0.76mm	
ID (mm)	2.48	4.48
mL/rpm	0.04	0.21
mL/min(Continuous working max 100rpm)	4	21
mL/min(Continuous working max 300rpm)	12	65

Above parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium. Above for reference only.



## Dimension (mm)



## Lead Fluid Silicone Tubing






















Lead Fluid silicone tube is made of imported silicone rubber material and processed by platinum vulcanization process, high cleanliness, excellent elasticity and abrasion resistance, it is a high-quality peristaltic pump tube and transmission tube. It is widely used in pharmaceutical, bioengineering, fine chemical, food, medical and other fields.







### Function and Feature:

1. Has excellent biocompatibility.
2. Odorless, non-toxic, no plasticizer, very little precipitation.
3. The inner wall is very smooth and has good antibacterial performance.
4. Good elasticity, can quickly restore shape after radial compression (Shore Hardness:50~55)
5. Weatherproof, ozone-resistant, anti-radiation, excellent anti-aging performance.
6. Suitable for neutral liquids, weak acids, weak bases and some low-concentration solvents.
7. Temperature resistance range -50~230°C under static state, -40~100°C temperature resistance under working condition.
8. Can use hot water, distilled water for cleaning; high temperature and high pressure, ethylene oxide, gamma ray sterilization.
9. The color is transparent, translucent to milky white, etc.

### Silicone Tubing Specifications:

Tubing No.	0.5×0.92	1×0.92	2×0.92	2.4×0.92	3×0.92	13#	14#	19#	16#	25#	17#	18#	
Tubing section (1:1)													
Wall thickness (mm)	0.92					1.6							
ID (mm)	0.5	1.0	2.0	2.4	3.0	0.8	1.6	2.4	3.1	4.8	6.4	7.9	
Tubing pressure (Mpa)	Continuous	0.1					0.17			0.14	0.1	0.07	
	Interval	0.1					0.27			0.24	0.14	0.1	

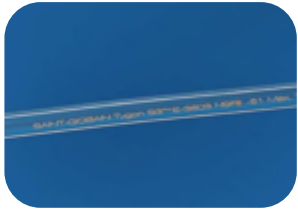
Tubing No.	114#	119#	116#	15#	24#	35#	36#	
Tubing section (1:1)								
Wall thickness (mm)	2.4							
ID (mm)	1.6	2.4	3.1	4.8	6.4	7.9	9.6	
Tubing pressure (Mpa)	Continuous	0.17					0.14	
	Interval	0.27					0.24	

Tubing No.	73#	82#	193#	191#	88#	92#
Tubing section (1:1)						
Wall thickness (mm)	3.3			4.8		
ID (mm)	9.6	12.7	9.5	19	12.7	25.4
Tubing pressure (Mpa)	Continuous	0.17	0.1	0.14		
	Interval	0.27	0.1	0.14		

1. The tubing picture in the table is a 1:1 cross-sectional view of the actual product
2. The tubing specifications are marked with a tubing no. or "ID × wall thickness", such as : 25# or 4.8×1.6mm.
3. The wall thickness of 1.6mm or more can adapt to the higher speed of the peristaltic pump, generally up to 600rpm.  
High speed cannot be used below 1.0mm wall thickness, generally not more than 100rpm.



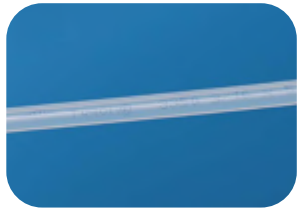
## Imported Pump Tubing



### Tygon S3™ E-3603

Tygon S3™ tubing based on bio-materials combines high-performance standards required by customers with bio-environmentally friendly requirements. Crystal-like transparency, flexibility, durability, and anti-cracking characteristics make the delivery performance of the new Tygon S3™ E-3603 tube meet your needs.

Tygon S3™ E-3603 tubing does not contain phthalate plasticizers and is used to transport the most demanding food and beverages. It will not be oxidized and contaminated, and the air tightness is better than that of a rubber tube. The glass-smooth cavity helps prevent particles from accumulating and facilitates cleaning.

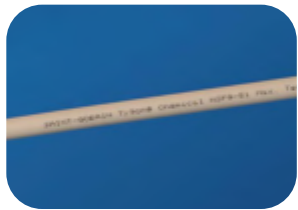


### Tygon® SPT-3350

The inner surface smoothness of Tygon® SPT-3350 silicone tube is three times that of other silicone tubes, reducing the risk of particle retention and micro-scale fouling when transporting fluid.

Due to the smoother fluid flow, the overall hygiene of the conveying system is also better. Tygon® SPT-3350 silicone tubing will not be clogged even if it is reused, which is helpful for thorough cleaning and disinfection.

Comply with USP Class VI, FDA and NSF related standards. The biocompatibility of Tygon3350 can reach ISO10993 standard. The max operating temperature can reach 205 °C.



### Tygon® Chemical

As a high-performance co-extrusion product, Tygon chemical peristaltic pump tubing adopts a special formula to ideally combine chemical resistance and pump tubing life. Its inert, super-smooth, plasticizer-free inner cavity can inhibit fluid adsorption or adhesion, and its Tygon elastic outer layer ensures long pump tube life.

Tygon chemical peristaltic pump tubing is the best choice for disinfection and detergent delivery.

- Long life of peristaltic pump tube
- Withstand a wide temperature range, from -60°C to 74°C
- Excellent chemical resistance
- Plasticizer-free cavity
- Meets FDA's food contact requirements
- Anti-fluid adsorption/adhesion performance
- Hardly affected by chemical disinfectants and cleaning agents.



### Tygon® Pharmed BPT

Maintains the integrity of the fluid during delivery, and delivers fluid through a peristaltic pump, reducing the risk of fluid contacting any part of the pump body. It has a long service life of the pump tube, shortens the production downtime caused by the failure of the pump tube, and simplifies the production process. The PharMed® BPT tubing is easy to clean and disinfect. It is compatible with almost all commercially available cleaning agents and disinfectants, and it can also be exposed to up to 5MRads of cobalt 60 gamma irradiation. In terms of gas and vapor permeability, PharMed® BPT tubing is lower than silicone tubing. PharMed® BPT tubing has good chemical resistance and excellent resistance to acids, alkalis and oxides. Since it is impervious to visible and UV light, PharMed® BPT hose helps protect light-sensitive fluids.

- The service life of the peristaltic pump tube is 30 times better than that of the silicone tube
- High temperature and high pressure sterilization can be repeated
- The temperature range is -60F(-51°C) to 275F(135°C)
- Can withstand repeated CIP and SIP
- Comply with REACH, RoHS, USP Class VI, FDA, NSF and ISO 10993 certification



### Tygon® A-60-F

Tygon® A-60-F tubing is designed to transport the specified food or beverage in the temperature range of -59°C to 135°C without cracking or aging.

The tubing has excellent flexibility, simple and quick installation, anti-knot and anti-deformation. Its excellent resistance to bending fatigue makes this tubing particularly suitable for use in peristaltic pumps for dispensing equipment.

Because the tubing can be repeatedly heated and pressurized, it can be steam cleaned online without frequent replacement. When it is strictly disinfected, it exhibits excellent chemical resistance and is completely unaffected by various cleaning methods.

- Long service life in peristaltic pumps
- Wide temperature range, from -59°C to 135°C
- Can withstand almost all common disinfectants and cleaning agents
- Ozone and UV resistant
- Can be heated and pressurized repeatedly
- Chemical resistance to a variety of foods and cleaning agents



### Versilon™ F-5500-A \ Viton®

Made of patented fluorine rubber, its physical and chemical properties make it an ideal choice for harsh environment hoses, such as dry cleaning fluids and solvent recovery systems, where most tubing are not suitable.

Can work continuously at temperatures up to 400°F (204°C). At the same time, the black body of the tubing can protect the transported light-sensitive materials, and will not crack and age prematurely under the influence of ozone, sunlight and bad weather.

- Can work continuously at temperatures up to 204°C
- Excellent resistance to corrosion chemicals, oils, fuels and solvents
- Resistance to ozone and sunlight, good weather resistance
- Opaque black can protect light-sensitive fluids



### Tygon® 2475

No plasticizers, no particles precipitated.

Good hydrophobicity, very smooth inner wall; resistant to corrosion by strong acids, strong alkalis and a variety of organic solvents.

Comply with USP Class VI, FDA and NSF related standards.



### Tygon® F-4040-A

Tygon® F-4040-A fuel and lubricating oil delivery pipe can withstand the swelling and hardening caused by hydrocarbon fluids, so it is specially designed to deliver most fuels and industrial lubricants. The application of the tubing can significantly reduce failures caused by rupture and leakage. Its extremely low precipitation can protect the conveyed fluid or steam from being mixed with impurities.

- Embrittlement resistance
- Compatible with most hydrocarbons
- Anti-swelling
- Excellent flexibility, high flexibility, easy to install
- Specially used to transport fuel and lubricants
- Ozone and UV resistant

## How to choose Peristaltic Pump Tubing

### Chemical compatibility:

Chemical compatibilities of tubing are some good chemical properties the tubing appears when transferring fluid. The normal tubing only general touch with chemical material, but peristaltic pump's tubing touch with chemical material under working conditions, so the chemical compatibility level is different between peristaltic pump's tubing and general tubing. Peristaltic pump's tubing has the corresponding materials to meet demand, according to transmission various liquid. The user should check every kind of chemical material in the solution, to make sure it can handle with the chosen tubing compatible.

### Compression:

The factors of affecting the tubing compression: material, diameter and the wall thickness of the scale. If the system pressure over the limit of the tubing, the tubing will be expended, result in the tubing excessive wear or tubing burst.

### Temperature:

The working temperature range of tubing is the main factor of user considers. Different materials have different temperature performance. Some materials such as silicone rubber is wider temperature range, it is suitable for the high temperature and low temperature. But some tubing materials can work only for a small range. The user in the selection of tubing materials, should first make clear the maximum and minimum temperature, then ensure the selected tubing can work in the temperature range.

### Size:

The size of the tubing direct influence on the flow, the inner diameter of the tubing decided the flow, is directly proportional to the flow. Wall thickness not only influences the resilience of tubing, but also influences the life of the tubing.

### Transparency:

If the operator needs observe the status such as: the bubbles, particles, pollution case, should choose the Tygon® or silicone rubber tubing, and if the fluid is not easy to exposure, should choose not transparent tubing.

### Gas permeability:

For some fluid is sensitive with the gas, some easy by oxidation, or anaerobic cell cultures. Users should consider the gas permeability factor of tubing. In general, the highest porosity is silicon tubing. So some fluid that unfavorable contact with the gas, should choose the low porosity of tubes.



### The authentication:

Tubing is used for related purposes may be through the relevant authentication. Such as the United States pharmacopoeia USP, European pharmacopoeia EP, the United States food and drug administration standard FDA, the United States department of agriculture standard USDA and the national sanitation foundation standard NSF.

### The service life of tubing:

Different tubes have different abilities of roller extruding, friction resistance. Different tubing type pipe, pump head, operation speed, the life are different. Choose the long life, thick wall tubing, big flow pump, run in lower speed can be obtained more long service life.

### Flow range:

Each tubing is corresponding fixed flow range. We according to our customers needs of flow range choose corresponding tubing.

### Routine disinfection and sterilization method of silicone tube :

1. **Boiling method:** boiling disinfection, using high temperature steam to kill viruses and bacteria.
2. **High pressure steam method :** Put the silicone tube in a closed high-pressure steam sterilization pot and keep it under a certain pressure for 15-30 minutes for sterilization. It can kill all microorganisms including spores. It is the most reliable and widely used physical sterilization law.
3. **Ethylene oxide fumigation :** Ethylene oxide is a kind of spectrum sterilizing agent, which can destroy and eliminate the activity of protein, and kill all kinds of microorganisms at room temperature, including spores, tubercle bacillus, bacteria, viruses, fungi, etc.
4. **Gamma-ray sterilization:** through gamma-ray irradiation, the DNA of microorganisms is destroyed and cell activity is lost, so as to achieve the purpose of sterilization.

## Imported Pump Tube Specification

Specification ID×OD×wall thickness (mm)	Tubing	3350	E-3603	Pharmed BPT	Chemical	Viton	A-60-F	A-60-G	Tygon 2475	F-4040-A
0.19×1.99×0.9			√							
0.25×2.05×0.9			√	√						
0.38×2.18×0.9			√	√						
0.44×2.24×0.9			√							
0.5×2.1×0.8		√								
0.5×3.7×1.6				√						
0.51×2.31×0.9		√	√	√						
0.64×2.44×0.9		√	√							
0.76×2.46×0.85		√	√	√						
0.8×2.4×0.8		√	√							
0.8×4×1.6	13#	√	√	√	√	√	√	√		√
0.89×2.59×0.85		√	√	√		√				
1×2×0.5		√								
1×3×1				√			√	√		
1.02×2.72×0.85		√	√							
1.14×2.84×0.85		√	√	√		√				
1.3×3×0.85		√	√	√						
1.42×3.12×0.85		√	√	√		√				
1.5×3.5×1				√				√		
1.52×3.22×0.85		√	√	√						
1.6×3.2×0.8		√	√	√		√			√	
1.6×4.8×1.6	14#	√	√	√	√	√	√	√	√	√
1.6×6.4×2.4		√		√						
1.65×3.35×0.85		√	√			√				
1.85×3.55×0.85		√	√	√						
2×3.6×0.8										√
2×4×1		√	√	√			√	√		
2.06×3.76×0.85		√	√	√		√				
2.29×3.99×0.85		√	√	√						
2.4×4×0.8		√	√							
2.4×4.8×1.2										√
2.4×5.6×1.6	19#	√	√	√				√		
2.5×4.5×1				√			√	√		
2.4×7.2×2.4				√						
2.54×4.24×0.85		√	√			√				
2.64×4.88		√								
2.79×4.49×0.85		√	√	√		√				
3×5×1			√	√			√	√		
3.2×4.8×0.8		√	√	√		√				√
3.2×6.4×1.6	16#	√	√	√	√	√	√	√	√	√
3.2×8×2.4		√		√						
3.2×9.6×3.2		√						√		
3.5×5.44×0.97				√						
4×5.6×0.8		√	√							
4×6×1			√	√			√	√		
4×7.2×1.6			√							
4.8×6.4×0.8		√	√			√				
4.8×8×1.6	25#	√	√	√	√	√	√	√	√	√
4.8×9.6×2.4	15#	√	√	√	√	√	√	√		√

Specification ID×OD×wall thickness (mm)	Tubing	3350	E-3603	Pharmed BPT	Chemical	Viton	A-60-F	A-60-G	Tygon 2475	F-4040-A
4.8×11.1×3.2		√	√						√	
4.8×14.3×4.8			√					√		
5×8×1.5		√	√							
6×9×1.5		√	√							
6.4×8×0.8		√	√			√				
6.4×9.6×1.6	17#	√	√	√	√	√	√	√	√	√
6.4×11.1×2.4	24#	√	√	√	√	√	√	√	√	√
6.4×12.7×3.2	26#	√	√	√	√	√	√	√	√	√
6.4×13.08		√								
6.4×16×4.8			√					√		
7×10×1.5		√								
8×11.1×1.6	18#		√	√	√	√	√	√	√	
8×12×2		√	√							
8×11.1×1.6		√								√
8×12×2			√							
8×12.7×2.4	35#	√	√	√	√	√	√	√		√
8×14.4×3.2		√	√					√		
8×16×4			√							
9.6×12.7×1.6		√	√	√	√	√	√	√	√	√
9.6×14.4×2.4	36#	√	√	√	√	√	√	√		√
9.6×16×3.2	73#	√	√	√	√	√	√	√	√	√
9.6×16.64×3.52		√								
9.6×19.1×4.8		√	√	√	√			√		
9.6×22.4×6.4		√	√	√			√			
9.6×25.4×8								√		
10×14×2		√								
11.2×14.4×1.6		√	√					√		√
11.2×16×2.4		√	√							
11.2×17.5×3.2			√							
12×16×2		√								
12.7×16×1.6		√	√			√		√		√
12.7×17.6×2.4		√	√				√	√		
12.7×19.1×3.2	82#	√	√	√	√		√	√	√	√
12.7×20.8×4			√							
12.7×22.4×4.8		√	√	√	√		√	√		
12.7×25.4×6.4		√		√	√		√			
12.7×28.6×8			√							
14.4×19.1×2.4			√							
14.4×20.8×3.2			√							
16×20.8×2.4		√	√					√		
16×22.4×3.2		√	√	√		√	√	√	√	√
16×18×4			√							
16×25.4×4.8		√	√		√		√	√		
16×35×9.6			√					√		
17.6×22.4×2.4			√							
18×24×3		√								
19.1×25.4×3.2		√	√	√		√	√	√	√	√
19.1×27×4			√				√		√	
19.1×28.6×4.8			√							



Specification ID×OD×wall thickness (mm)	Tubing	3350	E-3603	Pharmed BPT	Chemical	Viton	A-60-F	A-60-G	Tygon 2475	F-4040-A
19.1×31.8×6.4	90#	√	√	√	√		√	√		
19.1×38.2×9.6			√							
22.2×28.6×3.2			√							
22.2×30.2×4			√							
25.4×31.8×3.2		√	√					√		
25.4×35×4.8		√	√	√			√		√	
25.4×38.2×6.4			√							
25.4×50.8×12.8			√							
28.6×38.2×4.8			√							
31.8×38.2×3.2		√	√							
31.8×41.6×4.8			√							
31.8×44.45×6.4		√								
38.2×47.6×4.8			√							
38.2×50.8×6.4		√	√						√	
44.6×57.4×6.4			√							
50.8×63.6×6.4			√							
50.8×70×9.6									√	

## Peristaltic Pump Accessories

### Frequency Converter

Use with AC geared motor or AC explosion-proof motor to display operating frequency or flow rate (Analog), using vectorized V/F control technology, It has many common functions such as PID, multi-speed, DC braking, Modbus communication, etc., with complete functions and small size.



### Liquid Level Sensor

The LEADFLUID YW01 intelligent non-contact liquid level sensor is a liquid level detecting device with convenient installation and high sensitivity. Breaking through the influence of the wall thickness of the non-metallic container, the liquid level sensor is installed on the outer wall of the container to be tested, and the liquid level of the toxic substances, strong acid, strong alkali and various liquids in the closed container can be detected. Accurate automatic feeding is achieved by connecting to a peristaltic pump.

### Bubble Sensor

The LEADFLUID QP01 bubble sensor is used to monitor air bubbles in the transmission line in real time.

#### Feature :

- High detection accuracy, the smallest detectable 5ul small bubbles.
- Snap-in tube, no need to cut off the pipeline, no pollution to the detection liquid.
- Detects bubbles in most liquids regardless of fluid color and tube changes.
- No external power supply required (use the internal 12V power supply of the peristaltic pump).
- The peristaltic pump automatically stops when a bubble is detected.



### Pulse Damper

Model	ZN90-PE	ZN90-PTFE
Tube material	silicone, pharmed, PVC, Viton, A-60-G/F	
Tube ID	1.6~9.6mm	
Connect	External thread ~ Pagoda	
Volume	180ml	
Max pressure	0.3Mpa	
Dimension	90x90x90mm	
Shell material	PE	PTFE
Sealing material	EPDM	FFKM
Temperature	0~40°C	0~80°C
Temperature change	< 5°C/min	< 5°C/min
Weight	220g	510g



Lead Fluid ZN90 pulse damper is a damper developed for the characteristics of peristaltic pumps, is a pressurized container, the container is divided into two upper and lower chambers. The lower chamber has a fluid to be transported through, and the upper chamber is a gas. Due to the compressibility of the gas and the instantaneous absorption of the pulse, the system can obtain a stable flow and pressure and slow down the pulsation of the pipeline.

## PH Controller

### Feature:

Mainly used for the stabilization of the pH value of the solution in the production process. Through RS485 communication (4-20mA analog signal), it can realize closed-loop control with peristaltic pump, so as to realize automatic addition of acid solution or Alkali to maintain the pH value of the solution.

### Technical Parameters:

- **Application:** various acid and alkali solutions
- **PH range:** 0~14pH
- Target PH value setting
- Add acid or Alkali
- **Control mode:** RS485, 4-20mA
- **Power supply:** DC24V(AC220V optional)
- **Temperature:** 0~60°C



## Pressure Sensor

It is used for detecting and alarming the pressure in the outlet end pipeline during liquid transfer to prevent the hose from rupturing or damaging other external equipment due to excessive pressure.

### Feature:

- Detect pipeline pressure to prevent the tube from over-pressure rupture.
- Detection range: 0~0.4MPa.
- The external control wire can be connected to the peristaltic pump.

The peristaltic pump can set the pressure alarm threshold. When the pressure transmitter detects the alarm value, the peristaltic pump automatically stops.

- The peristaltic pump can be started again after the alarm message has been manually cleared.



FK-10 dispensing controller is mainly matched with Lead Fluid peristaltic pump to dispense fluid semi-automatically, multifunction, simple operation,



### Technical Parameters:

- **Display mode:** 4.3 inch LCD
- **Parameter setting:** mask button
- **Dispense time:** 0.01~9999S, 0.01S resolution
- **Interval time:** 0.01~9999S, 0.01S resolution
- **Recycle times:** 1~9999 times, " 0 "infinite loops
- **External control:** external start and stop signal input

## Hand Dispenser

The SF01 hand dispenser is equipped with LEADFLUID ZT series filling needles, which are mainly suitable for manual and semi-automatic dispensing of peristaltic pumps.

The grip is comfortable, small in size and light in weight.

### Feature:

- **Adapted tube:** ID≤8mm, wall thickness≤2.4mm
- **Adapter needle:** ZT series
- **Main function:** start and stop signal output
- **Status display:** power indicator, working status indicator
- **Cable length:** 1 meter



## Leak Detection Controller

LY01 leakage controller is mainly used for the detection of various liquid leaks and alarm, wide detection range, stable and reliable. After receiving the sensor signal, the sound and light alarms and turns off the main pump, and outputs a TTL level signal.



## Footswitch

Light touch front step design, clear touch and anti-fatigue.

The high-strength carbon steel plate is stretched and formed, and the outer layer of baking plastic is anticorrosive, which is resistant to wear.

Momentary switch, 24K gold-plated contacts, strong reliability.

Mainly cooperate with Lead Fluid's full range of products to control the start and stop of the pump.

**Material:** Baked plastic steel plate

**External control plug:** DB15

**Cable length:** 1 meter

**Contact resistance:** 50mΩ or less (first time)

**Insulation resistance:** 100mΩ or more 500VDC test

**Medium withstand voltage:** 2000VAC (1minute)

**Service life:** mechanical: ≥100 million times, electrical: ≥100,000 times

**Working environment:** temperature-25 ~ +70°C, humidity≤85%

**IP grade:** IP54

**Dimensions:** 103×72×25mm

## Filling Table



**Mainly used for small batches of single and multi-heads, Increase productivity**

**Dimensions:** 290×180×250mm

**Table size:** 210×140mm

**Filling head:** 1~4 (other quantities can be customized)

**Needle interval range:** ≥35mm

**Container height:** ≤150mm






**Main material:** SS304

Model	Needles	Tubing size
GDT-1	ZT-1	13# 0.5×0.92mm
GDT-2	ZT-2	1×0.92mm
GDT-3	ZT-3	14# 19# 2×0.92mm 3×0.92mm
GDT-6	ZT-6	16# 25# 15#
GDT-8	ZT-8	17# 24#



## Connector

Variety of materials: PP, PVDF, stainless steel 316

Straight, Y type, T type		Change ID connector		
				
1.6mm	7.9 mm	1.6-2.4mm	2.4-6.4mm	4.8-9.6mm
2.4 mm	9.6 mm	1.6-3.2mm	3.2-4.8mm	6.4-7.9 mm
3.2 mm	12.7 mm	1.6-4.8mm	3.2-6.4mm	6.4-9.6 mm
3.9 mm	17.8mm (straight)	2.4-3.2mm	3.9-4.8mm	6.4-12.7 mm
4.8 mm	25mm (straight)	2.4-3.9mm	3.9-6.4mm	7.9-9.6 mm
6.4 mm		2.4-4.8mm	4.8-6.4mm	9.6-12.7 mm
		2.4-5.6mm	4.8-7.9mm	12.7-19 mm

## Dispensing Needles

Dispensing needle is designed for liquid dispensing and anti-dropping, it can be directly applied by hand, it can be equipped with LEADFLUID handheld dispenser, simple filling table or self-supporting fixing bracket.



Model	Material	Dimension mm (ID×OD×H)	Tubing size
ZT-1	304	0.7×0.9×100	13# 0.5×0.92mm
ZT-2	304	1.8×2×100	1×0.92mm
ZT-3	316L	2×3×100	14# 19# 2×0.92mm 3×0.92mm
ZT-6	316L	4×6×100	16# 25# 15#
ZT-8	316L	5×8×100	17# 24#
ZT-12	316L	9×12×100	18# 35# 36# 73#
ZT-12B	316L	4×12×100	36# 73#
ZT-16	316L	13×16×100	82#

## Anti Adsorption Countersunk



Model	Material	Dimensionmm (ID×OD)	Tubing size
CT-2	316L	1.5×2.5	13# 1×0.92mm
CT-3	316L	2×3	14# 19# 2×0.92mm 3×0.92mm
CT-6	316L	4×6	16# 25# 15#
CT-10	316L	8×10	17# 24#
CT-12	316L	9×12	18# 35# 36# 73#
CT-16	316L	13×16	82#

# TYD Series Laboratory Syringe Pump

- Lead Fluid TYD series syringe pump adopts integrated table model design, 4.3-inch HD LCD touch screen display and operation, can assembly 1 ~ 10 plastic syringes or gas tight syringes, size range of syringe 10 $\mu$ l ~ 140ml, flow range 0.184nl/min ~ 173.718ml/min.
- Use excellent control system and precision mechanical structure, linear travel accuracy $\leq$ ± 0.35%, multiple working modes are available, powerful function It is very suitable for high precision micro-transmission of various fluids in scientific research and experiment.
- Drive screw fixation using high strength aviation bearing, compared with traditional copper sleeve bearing, the service life of the screw has been significantly improved, and the accuracy is higher.
- Strong Anti-EMI performance, continuous and stable operation under high voltage electrostatic field.
- RS485 communication, compatibility MODBUS protocol, automation control system can be composed of computer, PLC, single chip computer etc. multiple host computers.

- Assembly 1 to 10 plastic syringes or gas tight syringes.
- Multiple working mode options.
- Color LCD touch screen, convenient operation.
- Support screen lock, key mute operation.
- Button with indicator light,clearly working state.
- support for a variety of syringes, can be customized
- High accuracy control.
- Syringe protection and traffic jam alarm.
- RS485 communication, support the MODBUS protocol.
- External signal control start-stop and direction.
- Wide range power input.
- All-metal anti-static, anti-corrosion spraying process housing



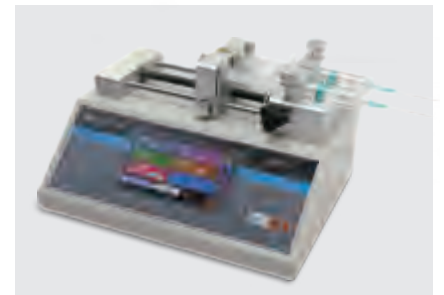
TYD01-01(Single channel)



TYD02-01(Single channel)



TYD03-01(single channel)



TYD01-02(dual channel)



TYD02-02(dual channel)



TYD02-04(4 channels)



TYD02-06(6 channels)



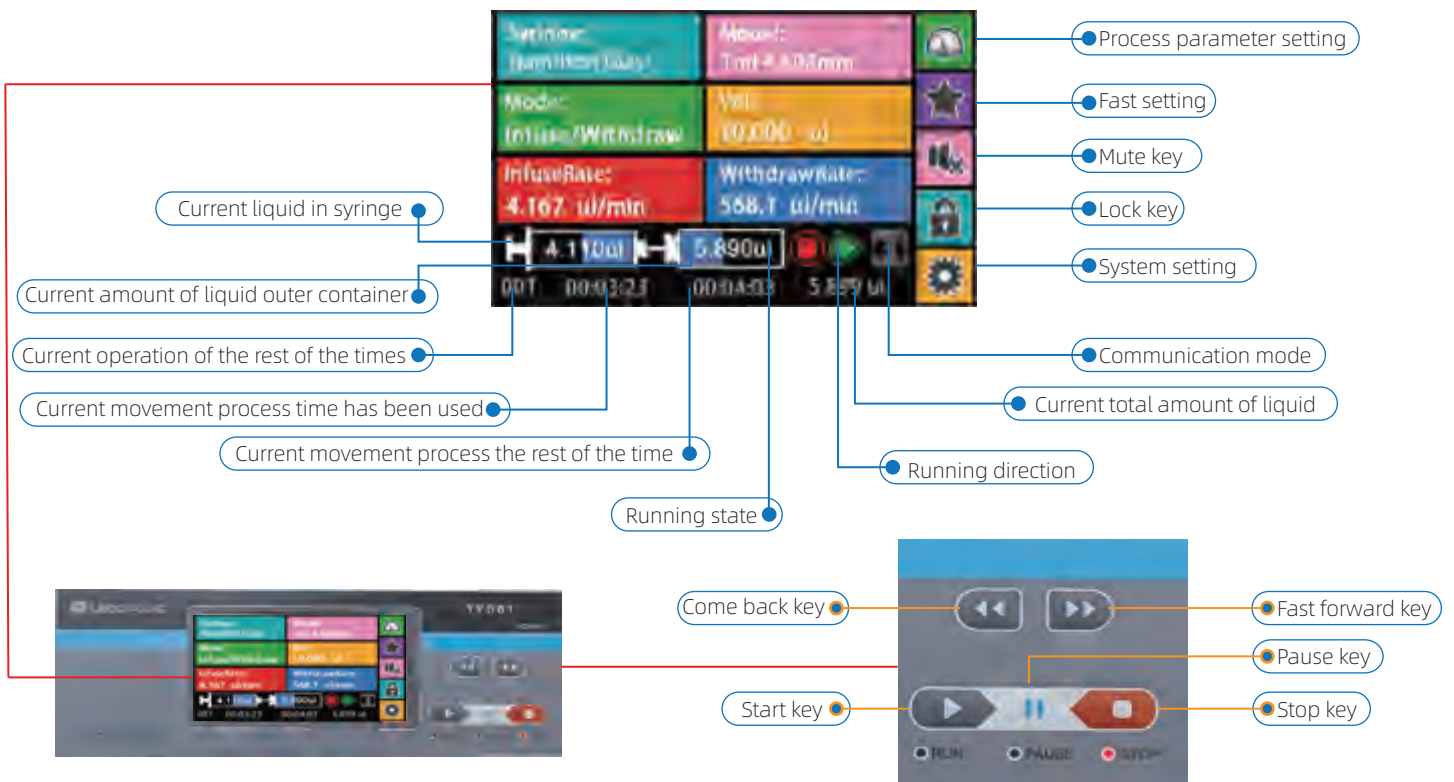
TYD02-10(10 channels)

## Technical Parameters

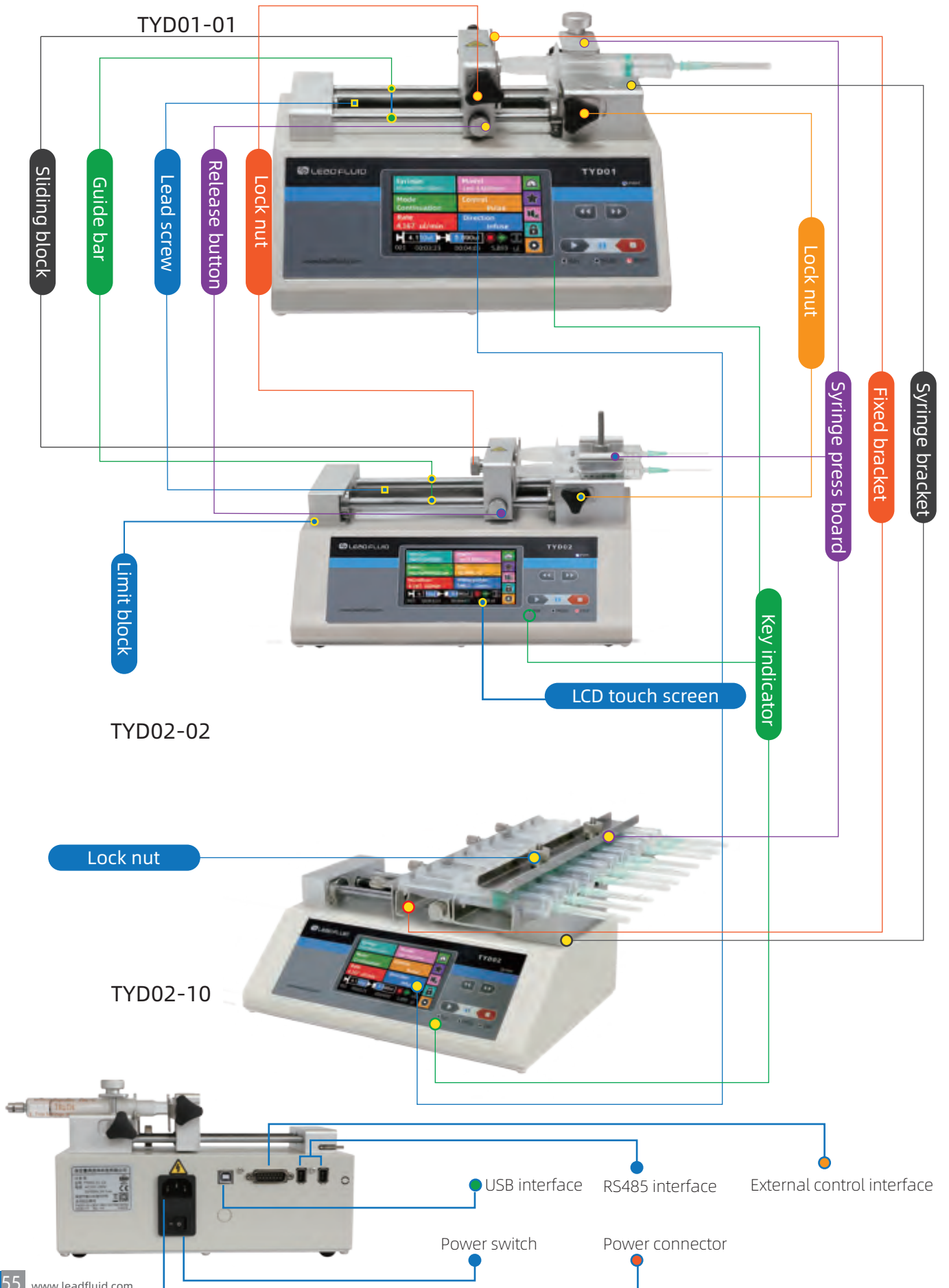
Parameters \ Model	TYD01-01	TYD01-02	TYD02-01	TYD02-02	TYD03-01	TYD02-04	TYD02-10	TYD02-06
Work mode	infuse,withdraw,infuse /withdraw,withdraw/infuse,continuous mode							
Number of channel	1	2	1	2	1	4	10	6
Stroke of pump	110mm		140mm		110mm		140mm	
Advance per microstep	0.156μm/μstep		0.156μm/μstep		0.03125μm/μstep		0.156μm/μstep	
Linear speed	1μm/min ~ 150mm/min		1μm/min ~ 150mm/min		0.2μm/min ~ 30mm/min		1μm/min ~ 150mm/min	
Linear resolution	1μm/min		1μm/min		0.2μm/min		1μm/min	
Accuracy	error<±0.35% (>30% of pump stroke)							
Max rated linear force	>16kgf		>20kgf		>16kgf		>20kgf	
Thrust regulation	1 ~ 100% arbitrary adjustable							
Syringe size	10μl ~ 60ml		10μl ~ 140ml		10μl ~ 60ml		10μl ~ 10ml	
Syringe selection	built-in main manufacturers, the main model syringe to choose. Can use custom syringe, direct input syringe size and diameter							
Flow rate	0.184nl/min ~ 83.318ml/min		0.184nl/min ~ 173.718ml/min		0.037nl/min ~ 16.663ml/min		0.184nl/min ~ 24.520ml/min	
Flow calibration	through the calibration procedure to obtain more accurate fluid volume							
Display	4.3" color LCD screen display and transfusion volume, residual fluid volume, flow ,operation direction ,syringe specification, etc. Animation display operation							
Operation mode	touch screen + button							
Power-off memory	storing the running parameters automatically							
Function	pause and stop, the sound tip, the lock parameters, fast forward and retreat quickly ,display brightness adjustment							
State signal output	1 road start-stop status ,1 road direction status							
Control signal input	1 road startup status ,1 road directional signal							
Communication interface	RS485, MODBUS Protocol							
Dimension mm	245×195×140		290×205×180		245×195×140		290×228×180	
Weight	3.2kg		4.4kg		3.2kg		4.8kg	
Power supply	AC100 ~ 240V, 50/60Hz							
Temperature	5 ~ 40°C							
Relative humidity	<80%							

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

## LCD Touch Screen



Components and Connectors





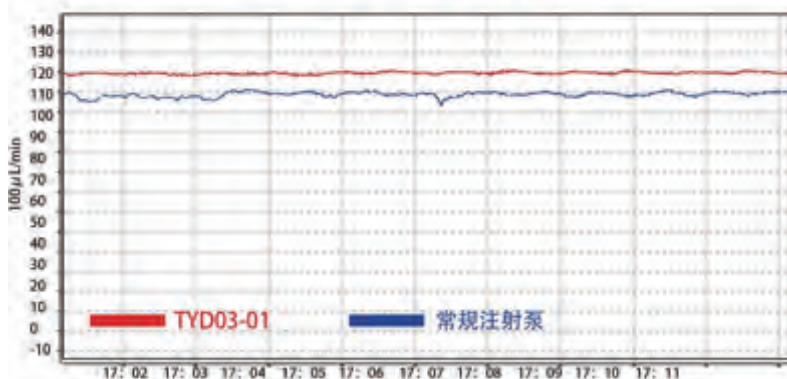
## Reference Table of Syringe Specifications and Flow Rate

Flow Range (nl/min ~ ml/min)

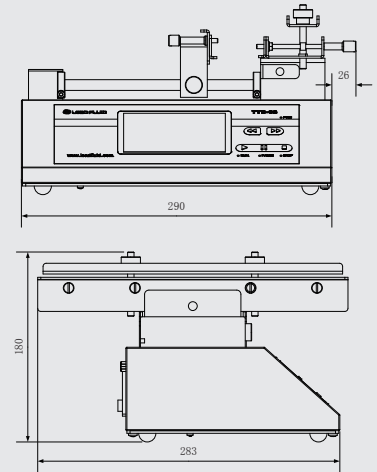
Syringe size	Syringe ID (mm)	TYD01-01\02	TYD02-01\02	TYD03-01	TYD02-04\10	TYD02-06
10μl	0.485	0.184 ~ 0.027	0.184 ~ 0.027	0.037 ~ 0.005	0.184 ~ 0.027	0.184 ~ 0.027
25μl	0.729	0.417 ~ 0.0626	0.417 ~ 0.0626	0.083 ~ 0.0125	0.417 ~ 0.0626	0.417 ~ 0.0626
50μl	1.03	0.833 ~ 0.125	0.833 ~ 0.125	0.166 ~ 0.025	0.833 ~ 0.125	0.833 ~ 0.125
100μl	1.457	1.667 ~ 0.250	1.667 ~ 0.250	0.333 ~ 0.050	1.667 ~ 0.250	1.667 ~ 0.250
250μl	2.304	4.169 ~ 0.625	4.169 ~ 0.625	0.833 ~ 0.125	4.169 ~ 0.625	4.169 ~ 0.625
500μl	3.256	8.326 ~ 1.248	8.326 ~ 1.248	1.665 ~ 0.249	8.326 ~ 1.248	8.326 ~ 1.248
1ml	4.699	17.342 ~ 2.601	17.342 ~ 2.601	3.468 ~ 0.520	17.342 ~ 2.601	17.342 ~ 2.601
5ml	11.989	112.890 ~ 16.933	112.890 ~ 16.933	22.578 ~ 3.386	112.890 ~ 16.933	112.890 ~ 16.933
10ml	14.427	163.469 ~ 24.520	163.469 ~ 24.520	32.694 ~ 4.904	163.469 ~ 24.520	163.469 ~ 24.520
20ml	19.05	285.027 ~ 42.754	285.027 ~ 42.754	57.004 ~ 8.550	—	285.027 ~ 42.754
30ml	21.59	366.090 ~ 54.913	366.090 ~ 54.913	73.219 ~ 10.982	—	366.090 ~ 54.913
60ml	26.594	555.459 ~ 83.318	555.459 ~ 83.318	111.093 ~ 16.663	—	555.459 ~ 83.318
100ml	35.7	—	1000.982 ~ 150.147	—	—	—
140ml	38.4	—	1158.117 ~ 173.718	—	—	—

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

## Flow Stationarity Curve

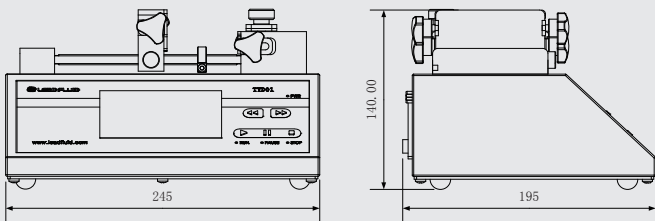


TYD02-10

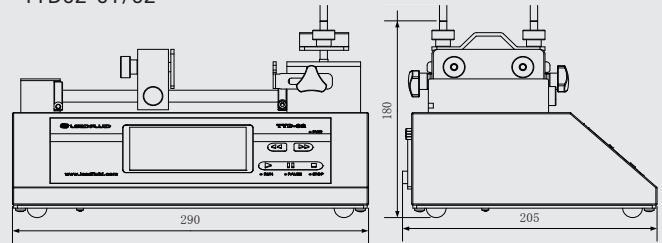


## Dimension (mm)

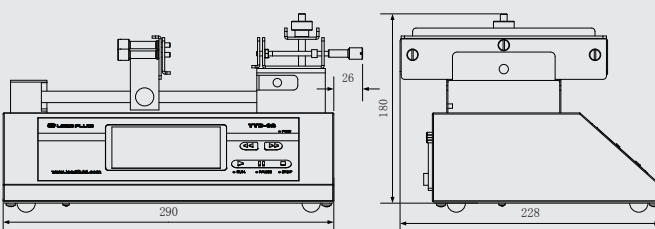
TYD01/TYD03



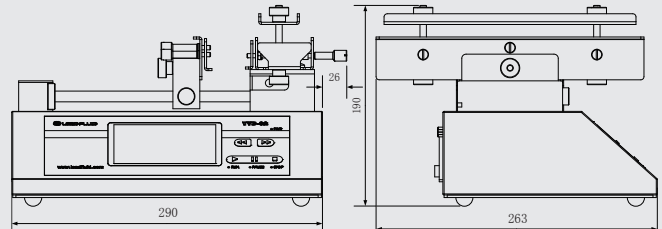
TYD02-01/02



TYD02-04



TYD02-06



# TYB01-01 Laboratory Syringe Pump

- Lead Fluid TYB01-01 syringe pump can assembly a 10 $\mu$ l ~ 60ml plastic syringe or gas tight syringe, flow range 0.184nl/min ~ 66.654ml/min, flow accuracy <math>\pm 1\%</math>.
- Integrated desk type design, compact size, powerful function, it can meet many applications, such as timing and quantification, circulating operation and high precision continuous infusion.
- The keys control the common functions, a quick setting of operating parameters, convenient and quick.
- Strong Anti-EMI performance, continuous and stable operation under high voltage electrostatic field.
- RS485 communication, compatibility MODBUS protocol, automation control system can be composed of computer, PLC, single chip computer etc .multiple host computers.

## Feature

- 128x32 LCD, Chinese and English language ,visual display of status.
- LF-LCD-OS software system
- 15 function buttons, quick setting of parameters.
- Storage five sets of operational parameters , convenient and fast call.
- Loss of step alarm function ,protect syringes from damage.
- Linear force adjustable.
- Flow calibration function.
- External control signal controls Start and Stop, Direction, Physical isolation of External Control Signals.
- Self-retaining syringe clamping mechanism, easy installation syringe.
- RS485 communication ,MODBUS protocol ,support for communication parameter settings ,convenient connection with various control devices.
- Special protection design, can working in general humid, dust environment.
- Super anti-interference characteristics, wide voltage design ,Suitable for complex power supply environment.



Reference Table of Syringe Specifications and Flow Rate

## Technical Parameters

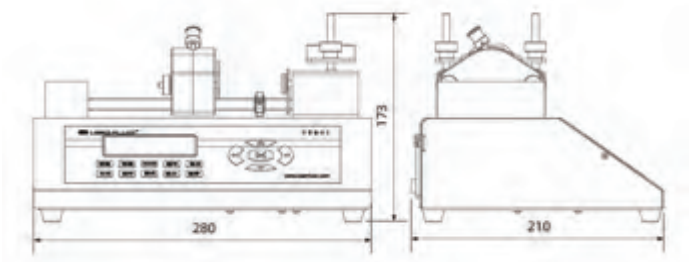
Work mode	infusion, withdraw
Channel	1
Syringe size	10 $\mu$ l ~ 60ml
Flow range	0.184nl/min ~ 66.654ml/min
Max stroke of pump	110mm
Pusher advance per microstep	0.156 $\mu$ m/ $\mu$ step
Linear speed	1 $\mu$ m/min ~ 120mm/min
Linear travel accuracy	erro <math>\pm 1\%</math> (>30% of pump stroke)
Linear force	>16kgf, force adjustable
Operation mode	Mask button
Display mode	128x32 LCD display
Power-off memory	storing the running parameters automatically
External control	External control signal controls Start and Stop
通信接口	Direction,5-24V wide range start-stop and directional state signal output.
Communication interface	RS485, MODBUS protocol
Power supply	AC 100 ~ 240V, 50/60Hz
Power consumption	<20W
Working environment	temperature 5 ~ 40 $^{\circ}$ C, relative humidity<80%
IP grade	IP31
Dimension	280x210x173mm (LxWxH)

## Reference Table of Syringe Specifications and Flow Rate

Syringe Size	Syringe ID (mm)	Min flow rate(nl/min)	Max flow rate(ml/min)
10 $\mu$ l	0.485	0.184	0.021
25 $\mu$ l	0.729	0.417	0.05
50 $\mu$ l	1.03	0.833	0.099
100 $\mu$ l	1.457	1.667	0.2
250 $\mu$ l	2.304	4.169	0.5
500 $\mu$ l	3.256	8.326	0.999
1ml	4.699	17.342	2.001
5ml	11.989	112.890	13.546
10ml	14.427	163.469	19.616
20ml	19.05	285.027	34.201
30ml	21.59	366.090	43.93
60ml	26.594	555.459	66.654

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

Dimension (mm)



# TSD01-01 Two Way Push Pull Syringe Pump

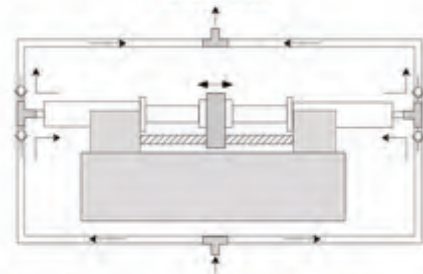
- Lead Fluid TSD01-01 is a small flow, high precision, can be continuous transmission liquid syringe pump.
- Durable mechanical transmission design, long life and good reliability. Screw fixation using special high precision aviation bearing alternatives to traditional copper, longer service life and high precision.
- High resolution color LCD, touch screen is convenient fast set parameters, multiple light clear confirmed its working state.
- Support for multiple syringe to choose, to meet the requirements of different experimental flow and high precision control, and protection agencies and alarm mechanism.
- RS485 communication, support the MODBUS protocol, wide range power input, adapt to various occasions.
- Can be used with solenoid valve control box to realize continuous and accurate transmission.

## Feature

- It can assemble two syringes, through several tube-line connection, realize continuous transmission liquid.
- A variety of working mode.
- Color touch screen, LCD display, convenient operation.
- LF-Touch-OS software system.
- Support screen lock, key mute operation.
- Button with indicator light, clearly working state.
- Support a variety of standard syringe, customize syringe.
- High precision control.
- Syringe protection and traffic jam alarm.
- RS485 communication, support the MODBUS protocol.
- External signal control start-stop and direction.
- Wide range voltage power input.
- All-metal anti-static, anti-corrosion spraying process housing



Schematic diagram of continuous flow principle



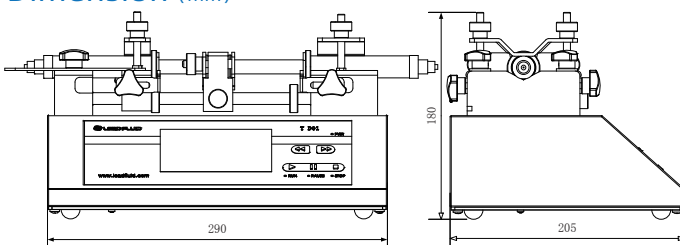
## Technical Parameters

<b>Woke mode</b>	infuse, withdraw, infuse/withdraw, withdraw/infuse, continuous mode
<b>Syringe size</b>	10 $\mu$ l ~ 60ml
<b>Flow range</b>	0.184nl/min ~ 83.318ml/min
<b>Display mode</b>	4.3 inch color LCD, displays the transfer liquid volume, remaining liquid volume, flow rate, running direction, syringe specifications on screen, animation shows the running status
<b>Operation mode</b>	touch screen + mask button
<b>Accuracy</b>	erro $\leq \pm 0.35\%$ ( $\geq 30\%$ of pump stroke)
<b>Linear force</b>	>20kgf, linear force adjustable
<b>Advance per microstep</b>	0.15625 $\mu$ m/ $\mu$ step
<b>Slowly moving speed</b>	1 $\mu$ m/min
<b>Fastest moving speed</b>	150mm/min
<b>External control</b>	External 24V signal input control start-stop, work state signal output
<b>Power supply</b>	AC100 ~ 240V, 50/60Hz
<b>Environment</b>	temperature 5 ~ 40°C, relative humidity < 80%
<b>Dimension</b>	290x205x180mm (LxWxH)

Reference Table of Syringe Specifications and Flow Rate

Syringe size	Syringe ID (mm)	Min (nl/min)	Max (ml/min)
10 $\mu$ l	0.485	0.184	0.027
25 $\mu$ l	0.729	0.417	0.0626
50 $\mu$ l	1.03	0.833	0.125
100 $\mu$ l	1.457	1.667	0.250
250 $\mu$ l	2.304	4.169	0.625
500 $\mu$ l	3.256	8.326	1.248
1ml	4.699	17.342	2.601
5ml	11.989	112.890	16.933
10ml	14.427	163.169	24.754
20ml	19.05	285.027	42.754
30ml	21.59	366.090	54.913
60ml	26.594	555.459	83.318

## Dimension (mm)



Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

# TFD Laboratory Syringe Pump

- Lead Fluid TFD series laboratory syringe pump consists of two parts, controller and execution unit. exquisite structure, high precision, stable operation.
- The controller and execution unit are separated, through cables connecting, and equipped with fast socket connector, easy to disassemble and assemble. It can be used in conjunction with other instruments and devices, such as brain stereotaxis.
- Execution unit can cooperate with 0.5 $\mu$ l ~ 60ml syringe, which is suitable for various micro-injection.

## Feature

- LF-Touch-OS software system, stable and reliable running, powerful function.
- 4.3 inch color LCD touch screen operation, image of the animation and icon is displayed, and colorful interface, the commonly used function keys, make the device more easy to use.
- A variety of working mode choice.
- Controller and execution unit split design, easy to installation and fixation.
- Support screen lock, key mute operation.
- Button with indicator light, clearly working state.
- Support a variety of standard syringe, customize syringe.
- High precision control.
- RS485 communication, support the MODBUS protocol.
- External signal control start-stop and direction.
- A wide range of power input.



**TFD01-01 Execution Unit**  
Suitable for syringe size 5 $\mu$ l-1ml  
Linear speed 0.635 $\mu$ m/min-95.25mm/min



TFD02-01

**TFD02-01 Execution Unit**  
Suitable for syringe size 10 $\mu$ l-60ml  
Linear speed 1 $\mu$ m/min-150mm/min

## Smaller Size, Easier To Clamp

**TFD03-01 Execution Unit**  
Suitable for syringe size 0.5 $\mu$ l-100 $\mu$ l  
Linear speed 0.6096 $\mu$ m/min-91.44mm/min



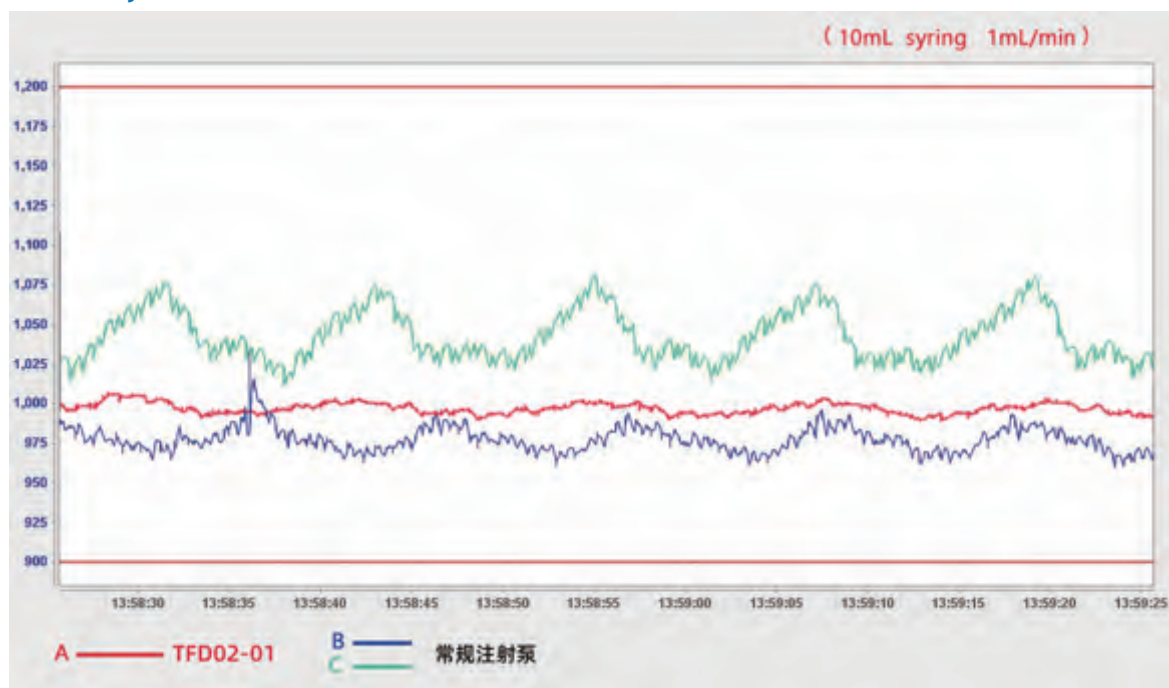
TFD03-01

## Technical Parameters

Model	TFD01-01	TFD02-01	TFD03-01
Parameters			
Work mode	infuse, withdraw, infuse/withdraw, withdraw/infuse, continuous mode		
Channel	1	1	1
Stroke of pump	70mm	110mm	70mm
Advance per microstep	0.198 $\mu$ m/ $\mu$ step	0.156 $\mu$ m/ $\mu$ step	0.1905 $\mu$ m/ $\mu$ step
Linear speed	0.635 $\mu$ m/min ~ 95.25mm/min	1 $\mu$ m/min ~ 150mm/min	0.6096 $\mu$ m/min ~ 91.44mm/min
Linear resolution	0.635 $\mu$ m/min	1 $\mu$ m/min	0.6096 $\mu$ m/min
Linear travel accuracy	error $\leq$ $\pm$ 0.35% (>30% of pump stroke)		
Max rated linear force	>4kgf	>10kgf	>1kgf
Thrust regulation	1 ~ 100% arbitrary adjustable		
Syringe size	5 $\mu$ l ~ 1000 $\mu$ l	10 $\mu$ l ~ 60ml	0.5 $\mu$ l ~ 100 $\mu$ l
Syringe selection	built-in main manufacturers, the main model syringe to choose, Can use custom syringe, direct input syringe size and diameter		
Flow range	0.058nl/min ~ 1.587ml/min	0.184nl/min ~ 83.318ml/min	0.005nl/min ~ 152.456 $\mu$ l/min
Flow calibration	through the calibration procedure to obtain more accurate fluid volume		
Display mode	4.3inch color LCD, with screen display and transfusion volume, residual fluid volume, flow, operation display operation status, direction, syringe size, Animation display operation status		
Operation mode	touch screen + common function keys		
Power-off memory	storing the running parameters automatically		
Function	pause and stop,the sound tip,the lock parameters,fast forward and retreat quickly,display brightness adjustment		
State signal output	1 road start-stop status ,1 road direction status		
Control signal input	1 road the falling edge triggers start and 1 road the falling edge triggers stop		
Communication interface	RS485, MODBUS protocol		
Controller dimension	245x205x115mm	245x205x95mm	245x205x105mm
Execution unit dimension	190x32x65mm	266x86x76mm	173x24x52mm
Weight (controller + execution unit)	2+0.5kg	2+1.8kg	2+0.25kg
Power supply	AC100 ~ 240V, 50/60Hz		
Environment	5 ~ 40°C		
Relative humidity	<80%		

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

## Flow Stability Curve





## Reference Table of Syringe Specifications and Flow Rate

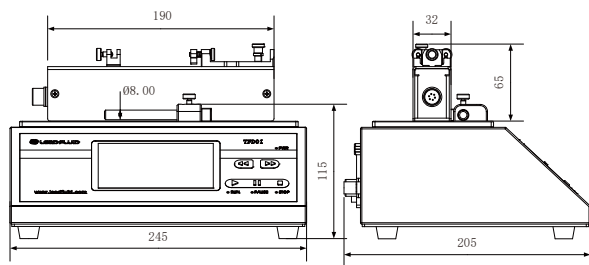
Model	Syringe size	Syringe ID(mm)	Min flow rate(nl/min)	Max flow rate(ml/min)
TFD01-01	5 $\mu$ l	0.343	0.058	0.009
	10 $\mu$ l	0.485	0.117	0.017
	25 $\mu$ l	0.728	0.264	0.039
	50 $\mu$ l	1.03	0.529	0.079
	100 $\mu$ l	1.457	1.058	0.158
	250 $\mu$ l	2.303	2.645	0.396
	500 $\mu$ l	3.257	5.290	0.793
	1000 $\mu$ l	4.606	10.580	1.587

Model	Syringe size	Syringe ID(mm)	Min flow rate(nl/min)	Max flow rate(ml/min)
TFD02-01	10 $\mu$ l	0.485	0.184	0.027
	25 $\mu$ l	0.729	0.417	0.0626
	50 $\mu$ l	1.03	0.833	0.125
	100 $\mu$ l	1.457	1.667	0.250
	250 $\mu$ l	2.304	4.169	0.625
	500 $\mu$ l	3.256	8.326	1.248
	1mL	4.699	17.342	2.601
	5mL	11.989	112.890	16.933
	10mL	14.427	163.469	24.520
	20mL	19.05	285.027	42.754
	30mL	21.59	366.090	54.913
	60mL	26.594	555.459	83.318

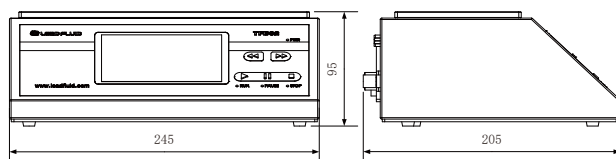
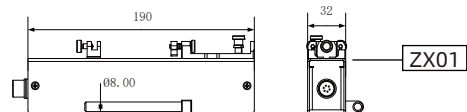
Model	Syringe size	Syringe ID(mm)	Min flow rate(nl/min)	Max flow rate( $\mu$ l/min)
TFD03-01	0.5 $\mu$ l	0.103	0.005	0.761
	1 $\mu$ l	0.146	0.010	1.531
	2 $\mu$ l	0.206	0.020	3.047
	5 $\mu$ l	0.3257	0.051	7.618
	10 $\mu$ l	0.485	0.112	16.893
	25 $\mu$ l	0.729	0.254	38.166
	50 $\mu$ l	1.03	0.507	76.190
	100 $\mu$ l	1.457	1.016	152.456

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

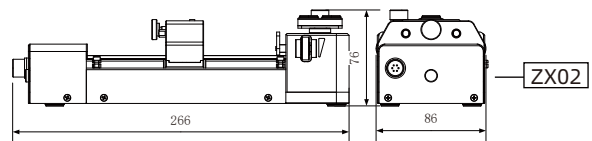
### Dimension (mm)

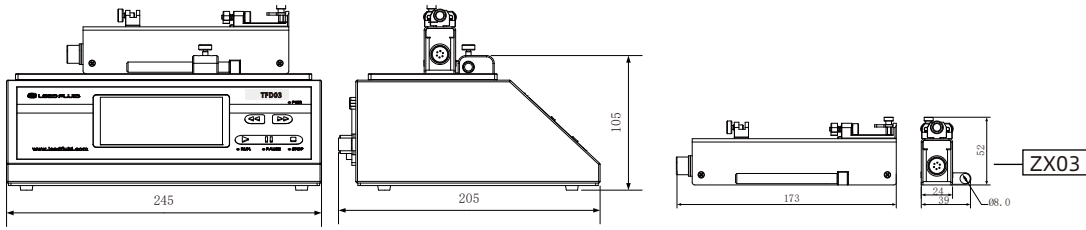


TFD01-01



TFD02-01





## TFD04 Laboratory Syringe Pump

Lead Fluid TFD04 laboratory syringe pump, transmission accuracy error  $< \pm 0.5\%$ , can independently control 1 ~ 8 channel operation. Split design, more flexible usage. 7 inch HD color touch screen display and operation, powerful functions, simple operation, rich operating information. RS485 communication, support MODBUS protocol.



Display and control of each channel      Cooperative channel control      Parameter setting      Sidebar

Control button      Status Bar

## Function and Features

- Can independently control 1 ~ 8 channel operation.
- 7 inch HD color touch screen display and operation, bringing a good user experience.
- LF-Touch-OS software system, friendly interface, reliable operation.
- Accurate flow control, transmission accuracy error <math>< \pm 0.5\%</math>.
- Intelligent flow correction function.
- Four working modes: only infuse, only withdraw, infuse/withdraw, withdraw/infuse.
- With fast filling and emptying function.
- Support start delay and cyclic operation.
- Save five groups of formula parameters.
- RS485 communication, MODBUS protocol, support the setting of communication parameters, convenient to connect with various control device.
- External control signal controls start, stop, pause, and physical isolation.
- Super anti-interference characteristics, wide voltage design, suitable for complex power supply environment.
- High-strength metal case with protective coating corrosion-resistant and easy to clean.
- The internal circuit is treated with special protection to prevent dust, moisture and static electricity.



## Technical Parameters

Channel	1 ~ 8 channels , independently control
Syringe size	0.5 $\mu$ l ~ 60ml ( replace the execution unit)
Syringe selection	built-in mainstream brand syringe specifications, support customization
Working mode	infuse, withdraw ,infuse/withdraw, withdraw/infuse
Accuracy	error <math>< \pm 0.5\%</math> ( > 30% of pump stroke)
Flow calibration	intelligent guide
Display	7 inch 65565 color LCD
Operation method	touch screen
Delay time	0.1 ~ 999 s/min/h
Cycles times	0 ~ 9999
Cycles interval time	0.1 ~ 999 s/min/h
Power-down memory	memorize parameters set before power off
Status signal output	5V TTL, 1 road indicates running status, 1 road indicates direction status
Control signal input	5 ~ 24V Wide voltage, control start, stop and pause
Communication	RS485, support Modbus protocol
Power supply	AC100 ~ 240V, 50Hz/60Hz
Power consumption	Controller 40W+30W (each execution unit)
Environment	temperature 5 ~ 40 $^{\circ}$ C , relative humidity <math>< 80\%</math>
Controller dimension	200 $\times$ 142 $\times$ 88mm
Controller weight	2.0kg

Execution Unit	ZX01	ZX02	ZX03
Syringe	5 $\mu$ l ~ 1000 $\mu$ l	10 $\mu$ l ~ 60ml	0.5 $\mu$ l ~ 100 $\mu$ l
Flow range	0.058nl/min ~ 1.587ml/min	0.184nl/min ~ 83.318ml/min	0.005nl/min ~ 152.456 $\mu$ l/min
Channel	1 ~ 8	1 ~ 4	1 ~ 8
Max stroke of pump	70mm	110mm	70mm
Max rated thrust	>2kgf, Adjustable thrust	>10kgf, Adjustable thrust	>1kgf, Adjustable thrust
Advance per microstep	0.198 $\mu$ m/ $\mu$ step	0.156 $\mu$ m/ $\mu$ step	0.1905 $\mu$ m/ $\mu$ step
Linear speed	0.635 $\mu$ m/min ~ 95.25mm/min	1 $\mu$ m/min ~ 150mm/min	0.6096 $\mu$ m/min ~ 91.44mm/min
Execution unit dimension	195x43.5x70mm	266x86x76mm	173x39x52mm
Execution unit weight	0.85 kg	1.8 kg	0.25 kg

### Reference Table of Syringe Specifications and Flow Rate

#### ZX01

Syringe size	Syringe ID(mm)	Min(nl/min)	Max(ml/min)
5 $\mu$ l	0.343	0.058	0.009
10 $\mu$ l	0.485	0.117	0.017
25 $\mu$ l	0.728	0.264	0.039
50 $\mu$ l	1.03	0.529	0.079
100 $\mu$ l	1.457	1.058	0.158
250 $\mu$ l	2.303	2.645	0.396
500 $\mu$ l	3.257	5.290	0.793
1000 $\mu$ l	4.606	10.580	1.587

#### ZX02

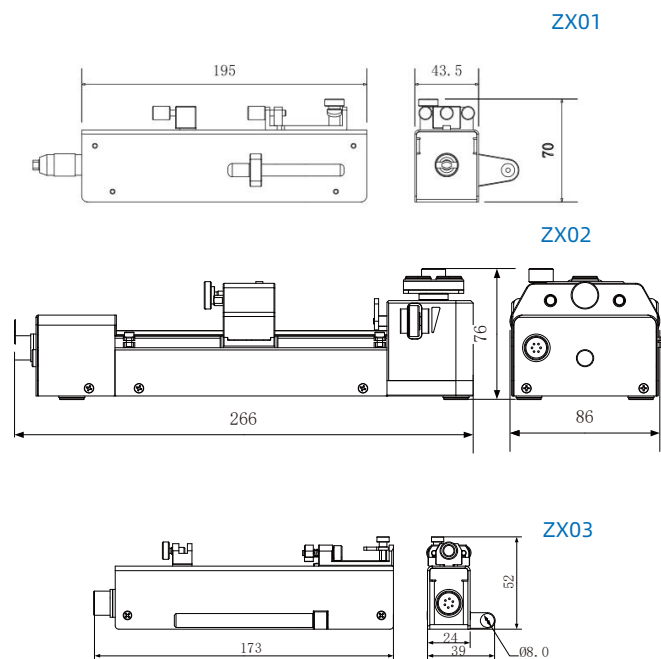
Syringe size	Syringe ID(mm)	Min(nl/min)	Max(ml/min)
10 $\mu$ l	0.485	0.184	0.027
25 $\mu$ l	0.729	0.417	0.0626
50 $\mu$ l	1.03	0.833	0.125
100 $\mu$ l	1.457	1.667	0.250
250 $\mu$ l	2.304	4.169	0.625
500 $\mu$ l	3.256	8.326	1.248
1ml	4.699	17.342	2.601
5ml	11.989	112.890	16.933
10ml	14.427	163.469	24.520
20ml	19.05	285.027	42.754
30ml	21.59	366.090	54.913
60ml	26.594	555.459	83.318

#### ZX03

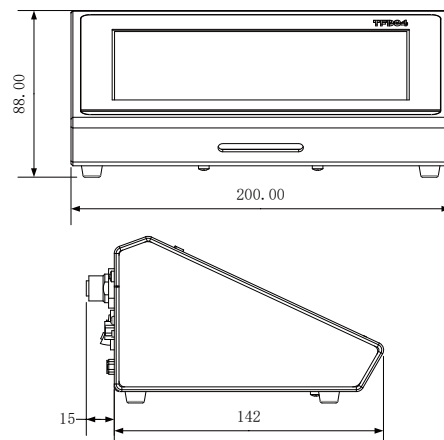
Syringe size	Syringe ID(mm)	Min(nl/min)	Max( $\mu$ l/min)
0.5 $\mu$ l	0.103	0.005	0.761
1 $\mu$ l	0.146	0.010	1.531
2 $\mu$ l	0.206	0.020	3.047
5 $\mu$ l	0.3257	0.051	7.618
10 $\mu$ l	0.485	0.112	16.893
25 $\mu$ l	0.729	0.254	38.166
50 $\mu$ l	1.03	0.507	76.190
100 $\mu$ l	1.457	1.016	152.456

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

### Execution Unit Dimension (mm)



### Controller Dimension (mm)



## TGD01 Precision High Pressure Syringe Pump

Lead Fluid TGD01 is a single channel high pressure syringe pump, HD LCD touch screen, transmission of linear thrust > 200lbs (91kg) in a wide range of flow rate, support five working modes such as infuse and withdraw.

RS485 communication, compatibility MODBUS protocol, wide range power input, suitable for high-precision transmission of liquids (including high viscosity).

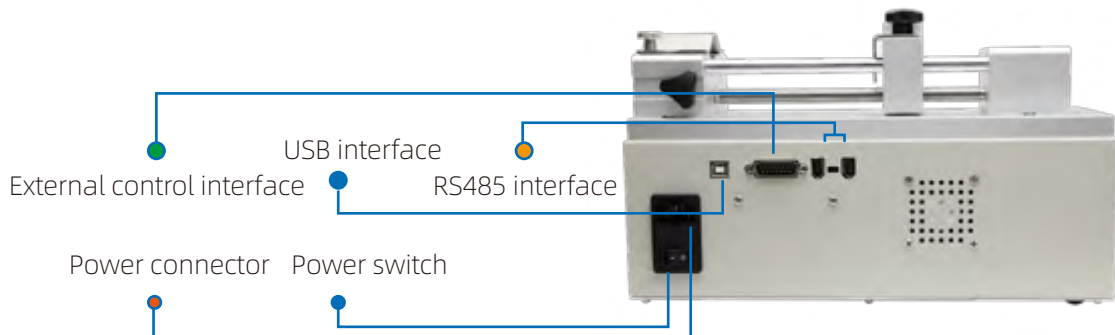


### Function and Feature

- Accurate and stable flow rate
- Can be loaded with stainless steel syringes for high pressure or viscous liquid transmission.
- Accuracy and stability of liquid injection.
- Power-off memory function.
- Simple to complex programming operations can be performed without a computer.
- Super anti-interference characteristics, wide voltage design, suitable for complex power supply environment.

### Application

- High thrust injection
- Highly corrosive liquid injection
- High viscosity liquid injection
- Micro high precision injection
- Injection into a high-pressure container





## Technical Parameters

<b>Syringe size</b>	0.5 $\mu$ l ~ 140ml
<b>Flow range</b>	3.06pl/min (0.5 $\mu$ l syringe) ~ 215ml/min (140ml syringe)
<b>Working mode</b>	infuse, withdraw, infuse /withdraw, withdraw/infuse, continuous mode
<b>Channel</b>	1 Channel
<b>Stroke of pump</b>	140mm
<b>Pusher advance</b>	0.156 $\mu$ m/ $\mu$ step
<b>Linear speed</b>	1 $\mu$ m/min ~ 190mm/min
<b>Accuracy</b>	error < $\pm$ 0.35% (> 30% of pump stroke)
<b>Rated linear force</b>	91kg (100% thrust)
<b>Thrust regulation</b>	1 ~ 100% arbitrary adjustable
<b>Syringe selection</b>	built-in main manufacturers, the main model syringe to choose, can use custom syringe, direct input syringe size and diameter.
<b>Flow calibration</b>	through the calibration procedure to obtain more accurate fluid volume.
<b>Display</b>	4.3 inch color LCD with screen display transfusion volume, residual fluid volume, flow, direction, syringe.Animation display operation status.
<b>Operation mode</b>	touch screen + button
<b>Power-off memory</b>	storing the running parameters automatically
<b>Communication</b>	RS485 , MODBUS Protocol
<b>External control</b>	External signal control start/stop, status signal output
<b>Power supply</b>	AC100 ~ 240V, 50Hz/60Hz
<b>Environment</b>	Temperature 5 ~ 40°C, relative humidity<80%
<b>Dimension</b>	305x222x190 mm
<b>IP grade</b>	IP31
<b>Shell material</b>	Metal with anti-corrosion coating
<b>Weight</b>	6.6kg

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

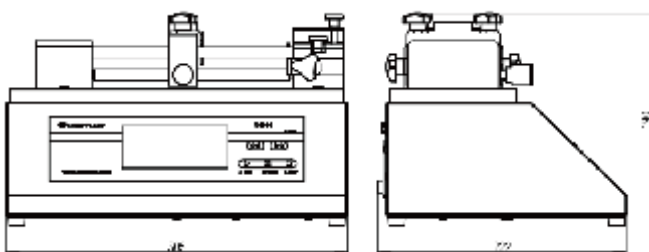
## Syringe Size

Type	Size
Plastic syringe	1~140ml
Micro injection needle	0.5~1000 $\mu$ l
Glass syringe	1~50ml
Gas tight syringe	5~100ml
Stainless steel syringe (316L syringe, Perfluoro/fluoro rubber seal)	8ml 20ml 50ml 100ml Stock inventory2.5ml 8ml 20ml customized

## Stainless Steel Syringe

Syringe size	8ml	20ml	50ml	100ml
ID (mm)	9.53	19.13	28.6	34.9
OD (mm)	13	22	32	38
Effective strokeRated working pressure PN (Mpa)	112.4	69.6	77.83	104.5
Adapter pipeline	12.8	4.8	4.8	4.8
	$\phi$ 3x0.5 mm	$\phi$ 6x1.0 mm	$\phi$ 8x1.0 mm	$\Phi$ 10x1.5 mm

## Dimension (mm)



# Accessories

## syringe/gas tight syringe

Size	Type	Material	Product display
1ml 3ml 5ml 10ml 20ml 30ml 60ml	straight	plastic syringe	
1ml 3ml 5ml 10ml 20ml 30ml 60ml 100ml 140ml	Luer	plastic syringe	
1ml 2ml 10ml 5ml 20ml 30ml 50ml	Luer	glass syringe	
0.5μl 1μl 2μl 5μl 10μl 25μl 100μl 250μl 500μl 1ml	Fixed needle	gas tight syringe	
25μl 50μl 100μl 250μl 500μl 1ml 2.5ml 5ml 10ml 25ml 50ml 100ml	Luer	gas tight syringe	

### Caution

#### plastic syringe

1. In a syringe pump with a knob compression structure, after the syringe is in contact with the pressure plate, the screw nut is selected to rotate 1/2-3/4 turns to pre-compact the syringe.
2. When there is no liquid or gas in the syringe, it is recommended to push the piston to the bottom of the syringe and then hold the syringe.
3. When a large pressure is expected to occur in the syringe, please set the thrust of the syringe pump within a safe range (Section × pressure for theoretical calculation).

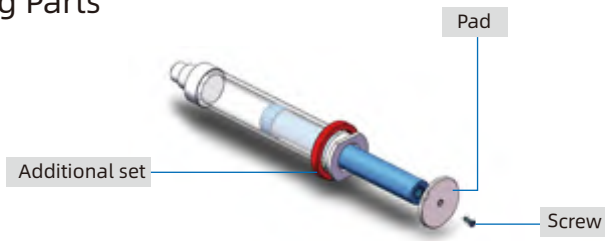
#### glass syringe

1. It is recommended to select the single push mode when using a glass syringe.
2. When selecting the single push mode, remove the syringe clamp on the syringe pump.
3. When using a glass syringe for injection, it is recommended to adjust the thrust to 30%.
4. If you find that the shape of the glass syringe needle is not regular cylinder, please consult our company to avoid rupture of the syringe due to irregular syringe.

#### gas tight syringe


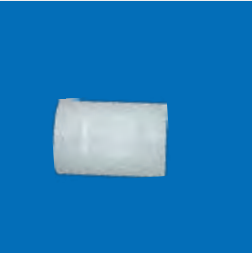
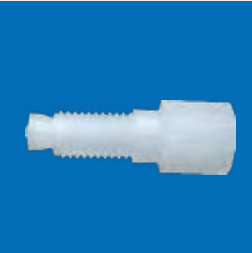


1. Gas tight syringes are usually used for high precision injection of corrosion-resistant liquids or liquids.
2. There are metal parts on both ends of the gas tight syringe, which makes it difficult to clamp the injection pump and requires additional clamping parts.

## Auxiliary Clamping Parts



Size	500µl	1000µl	5ml	10ml	25ml	50ml	100ml	50ml glass syringe
Additional set	TYD319 additional set	TYD319 additional set	TYD318 additional set	TYD106 additional set	TYD339 additional set	TYD317 additional set	TYD317 additional set	TYD337 additional set
Putter accessories	—	—	—	TYD338 additional screw	TYD338 additional screw	TYD316 pad+screw	TYD316 pad+screw	—

## Hard Pipe Connection Element

Luer female male connector	Swivel nut	Inverted cone joint	Luer male threaded joint	PTFE\PEEK hard tube (ID×OD)
1/4-28	1/4-28	1.6/3.2(mm)	1/4-28	0.5×1.6 \ 1.0×1.6 \ 1.6×3.2(mm)
				

## External Control Module



USB data line

USB to RS485 converter

DB15

Footswitch

## DF Series Solenoid Valve Control Box

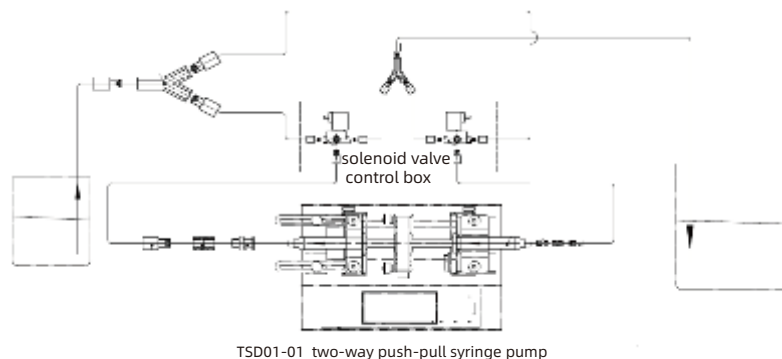
- Lead Fluid DFseries solenoid valve control box is matched with Lead Fluid laboratory syringe pump to complete the automatic conversion of the transmission liquid path,It has the advantages of accurate commutation, short time, zero leakage, long life.
- According to the liquid characteristics, the valve body has a variety of materials to choose, with excellent corrosion resistance and aging resistance.



### Function and Feature

Product model	DF01-E	DF01-F	DF02-E	DF02-F
Tube connect interface	1/4-28 thread			
Tube diameter	1.52mm			
Cv flow coefficient	0.035			
Internal volume	<67μl			
Work pressure	<0.3Mpa			
Number of channels	1		2	
Max viscosity	35cst (Suitable for low viscosity liquids)			
Solenoid valve body material	PEEK			
Solenoid valve sealing material	EPDM	Rubber	EPDM	Rubber
Suitable liquid	General liquid	Strong acid strong alkali	General liquid	Strong acid, strong alkali
Action response time	<20ms			
Liquid temperature	-10°C~100°C			
Working temperature	0~40°C			
External control interface	DC5~24V, 2 channels of signal, each channel can be controlled separately			
Power supply	AC85~264V , 50/60HZ			
Power Consumption	<10W			
Dimensions (LxWxH)	98x166x119mm			
Pump head weight	0.76kg		0.81kg	

### Two-way push-pull syringe pump+solenoid valve control box connection diagram



# Reference Table of Syringe Specifications and Flow Rate(nl/min ~ ml/min)

Syringe pump Syringe	Syringe ID (mm)	TYD01-01	TYD01-02	TYD03-01	TYD02-01	TYD02-02	TYD02-04	TYD02-06	TYD02-10	TSD01-01	TFD02-01	TFD01-01	TFD03-01
<b>Plastic syringe</b>													
1ml	4.699	17342 ~ 2.601	17342 ~ 2.601	3.468 ~ 0.520	17342 ~ 2.601	17342 ~ 2.601	17342 ~ 2.601	17342 ~ 2.601	17342 ~ 2.601	17342 ~ 2.601	17342 ~ 2.601	—	—
5ml	11.989	112.890 ~ 16.933	112.890 ~ 16.933	22.578 ~ 3.386	112.890 ~ 16.933	112.890 ~ 16.933	112.890 ~ 16.933	112.890 ~ 16.933	112.890 ~ 16.933	112.890 ~ 16.933	112.890 ~ 16.933	—	—
10ml	14.427	163.469 ~ 24.520	163.469 ~ 24.520	32.694 ~ 4.904	163.469 ~ 24.520	163.469 ~ 24.520	163.469 ~ 24.520	163.469 ~ 24.520	163.469 ~ 24.520	163.469 ~ 24.520	163.469 ~ 24.520	—	—
20ml	19.05	285.027 ~ 42.754	285.027 ~ 42.754	57.004 ~ 8.550	285.027 ~ 42.754	285.027 ~ 42.754	—	285.027 ~ 42.754	—	285.027 ~ 42.754	285.027 ~ 42.754	—	—
30ml	21.59	366.090 ~ 54.913	366.090 ~ 54.913	73.219 ~ 10.982	366.090 ~ 54.913	366.090 ~ 54.913	—	366.090 ~ 54.913	—	366.090 ~ 54.913	366.090 ~ 54.913	—	—
60ml	26.594	555.459 ~ 83.318	555.459 ~ 83.318	111.093 ~ 16.663	555.459 ~ 83.318	555.459 ~ 83.318	—	555.459 ~ 83.318	—	555.459 ~ 83.318	555.459 ~ 83.318	—	—
140ml	38.4	—	—	—	1158.117 ~ 173.718	1158.117 ~ 173.718	—	—	—	—	1158.117 ~ 173.718	—	—
150ml	40	—	—	—	1256.636 ~ 188.495	1256.636 ~ 188.495	—	—	—	—	1256.636 ~ 188.495	—	—
200ml	48.35	—	—	—	1836.041 ~ 275.406	—	—	—	—	—	—	—	—
<b>MicroVolume Syringe</b>													
0.5µl	0.103	0.008 ~ 0.00125	0.008 ~ 0.00125	0.00167 ~ 0.00025	0.008 ~ 0.00125	0.008 ~ 0.00125	—	—	—	0.008 ~ 0.00125	0.008 ~ 0.00125	0.00529 ~ 0.000794	0.005 ~ 0.000761
1µl	0.146	0.0167 ~ 0.0025	0.0167 ~ 0.0025	0.0033 ~ 0.00050	0.0167 ~ 0.0025	0.0167 ~ 0.0025	—	—	—	0.0167 ~ 0.0025	0.0167 ~ 0.0025	0.0106 ~ 0.001595	0.010 ~ 0.001531
2µl	0.206	0.0333 ~ 0.0045	0.0333 ~ 0.0045	0.0666 ~ 0.001	0.0333 ~ 0.0045	0.0333 ~ 0.0045	—	—	—	0.0333 ~ 0.0045	0.0333 ~ 0.0045	0.02116 ~ 0.003175	0.020 ~ 0.003047
5µl	0.3257	0.0833 ~ 0.0125	0.0833 ~ 0.0125	0.01666 ~ 0.0025	0.0833 ~ 0.0125	0.0833 ~ 0.0125	—	—	—	0.0833 ~ 0.0125	0.0833 ~ 0.0125	0.058 ~ 0.009	0.051 ~ 0.007618
10µl	0.485	0.184 ~ 0.027	0.184 ~ 0.027	0.037 ~ 0.005	0.184 ~ 0.027	0.184 ~ 0.027	—	—	—	0.184 ~ 0.027	0.184 ~ 0.027	0.117 ~ 0.017	0.112 ~ 0.016893
25µl	0.729	0.417 ~ 0.0626	0.417 ~ 0.0626	0.083 ~ 0.0125	0.417 ~ 0.0626	0.417 ~ 0.0626	—	—	—	0.417 ~ 0.0626	0.417 ~ 0.0626	0.264 ~ 0.039	0.254 ~ 0.038166
50µl	1.03	0.833 ~ 0.125	0.833 ~ 0.125	0.166 ~ 0.025	0.833 ~ 0.125	0.833 ~ 0.125	—	—	—	0.833 ~ 0.125	0.833 ~ 0.125	0.529 ~ 0.079	0.507 ~ 0.076190
100µl	1.457	1.667 ~ 0.250	1.667 ~ 0.250	0.333 ~ 0.050	1.667 ~ 0.250	1.667 ~ 0.250	—	—	—	1.667 ~ 0.250	1.667 ~ 0.250	1.058 ~ 0.158	1.016 ~ 0.152456
500µl	3.256	8.326 ~ 1.248	8.326 ~ 1.248	1.665 ~ 0.249	8.326 ~ 1.248	8.326 ~ 1.248	—	—	—	8.326 ~ 1.248	8.326 ~ 1.248	5.290 ~ 0.793	—
1000µl	4.608	16.677 ~ 2.501	16.677 ~ 2.501	3.335 ~ 0.500	16.677 ~ 2.501	16.677 ~ 2.501	—	—	—	16.677 ~ 2.501	16.677 ~ 2.501	10.590 ~ 1.588	—
<b>Gas tight syringe</b>													
5ml	11.989	112.890 ~ 16.933	112.890 ~ 16.933	22.578 ~ 3.386	112.890 ~ 16.933	112.890 ~ 16.933	—	—	—	112.890 ~ 16.933	112.89 ~ 16.933	—	—
10ml	14.427	163.469 ~ 24.520	163.469 ~ 24.520	32.694 ~ 4.904	163.469 ~ 24.520	163.469 ~ 24.520	—	—	—	163.469 ~ 24.520	163.469 ~ 24.520	—	—
25ml	23	415.475 ~ 62.321	415.475 ~ 62.321	83.095 ~ 12.464	415.475 ~ 62.321	415.475 ~ 62.321	—	—	—	415.475 ~ 62.321	415.475 ~ 62.321	—	—
50ml	32.573	—	—	—	833.307 ~ 124.996	833.307 ~ 124.996	—	—	—	833.307 ~ 124.996	833.307 ~ 124.996	—	—
100ml	35.7	—	—	—	1000.982 ~ 150.147	1000.982 ~ 150.147	—	—	—	—	—	—	—
<b>Glass syringe</b>													
1ml	4.699	17342 ~ 2.601	17342 ~ 2.601	3.468 ~ 0.520	17342 ~ 2.601	17342 ~ 2.601	—	—	—	—	17342 ~ 2.601	—	—
5ml	11.989	112.890 ~ 16.933	112.890 ~ 16.933	22.578 ~ 3.386	112.890 ~ 16.933	112.890 ~ 16.933	—	—	—	—	112.89 ~ 16.933	—	—
10ml	14.427	163.469 ~ 24.520	163.469 ~ 24.520	32.694 ~ 4.904	163.469 ~ 24.520	163.469 ~ 24.520	—	—	—	—	163.469 ~ 24.520	—	—
20ml	19.05	285.027 ~ 42.754	285.027 ~ 42.754	57.004 ~ 8.550	285.027 ~ 42.754	285.027 ~ 42.754	—	—	—	—	285.027 ~ 42.754	—	—
30ml	21.59	366.090 ~ 54.913	366.090 ~ 54.913	73.219 ~ 10.982	366.090 ~ 54.913	366.090 ~ 54.913	—	—	—	—	366.090 ~ 54.913	—	—
50ml	32.573	833.307 ~ 124.996	833.307 ~ 124.996	166.661 ~ 24.999	833.307 ~ 124.996	833.307 ~ 124.996	—	—	—	—	833.307 ~ 124.996	—	—

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.



## Precision Gear Pump CT3001S/CT3000S



CT3001S CE

CT3001S/CT3000S adopts brushless motor drive, high performance, low noise, stainless steel, magnetic drive pump head, can be realized without pulsation, constant velocity flow transmission. Digital display, key operation, easily set parameters. Speed display, time dispensing, suitable for various experimental fields. A variety of external control way, convenient use together with other devices, support MODBUS protocol communication, simplify the difficulty of system development.

### Feature

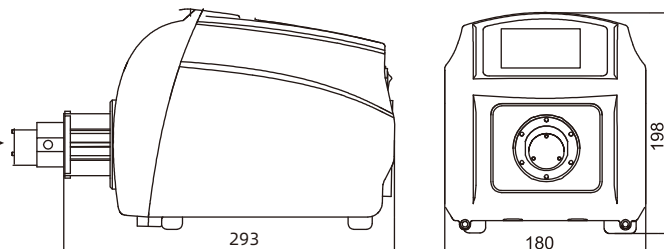
- Can install various pump heads.
- Suitable for transmission more viscous, high pressure liquid.
- No pulsation transmission, low noise.
- The magnetic coupling is designed, easy to maintain.
- Brushless drive, high efficiency, maintenance-free.
- Digital display, key operation.
- LF-LED-OS software system.
- Speed display.
- Time dispensing.
- External control signal control, physical isolation, analog control.
- RS485 communication, support MODBUS protocol.
- Wide range power input, adapted to different environments.

CT3000S



### Dimension(mm)

CT3001S/CT3001F



### Technical Parameters

Parameters \ Model	CT3001S	CT3000S	CT3001F	CT3000F
Flow range	90~2700 ml/min		15~2700 ml/min	
Speed range	300~3000rpm		50~3000rpm	
Speed resolution	1rpm			
Working mode	Speed-variable mode, time dispensing		Flow rate mode, time dispensing, volume dispensing, copy dispensing	
Dispensing time	0.1 ~ 999 S			
Transport limitation of liquid particles	particles ID≤10μm (recommended pre-filter)			
Transmission liquid viscous	≤200cSt			
Analog input signal	0 ~ 5V (Standard), 0 ~ 10V, 4 ~ 20mA (Optional)			
Speed output signal	—		0 ~ 5V	
External control signal	5V, 12V(Standard), 24V (Optional)			
Communication	RS485 communication, MODBUS protocol			
Working environment	Working temperature 0 ~ 40°C, relative humidity < 80%			
Power supply	AC100-240V, 50/60Hz			
Power consumption	< 50W	< 150W	<50W	<150W
IP grade	IP31			
Dimension (L×W×H)	293×180×198mm	320×150×237mm	293×180×198mm	320×150×237mm
Shell material	plastic shell	304SS	Plastic shell	304SS
Weight	3.3kg	5.5kg	3.5kg	5.5kg

# Precision Gear Pump CT3001F/CT3000F

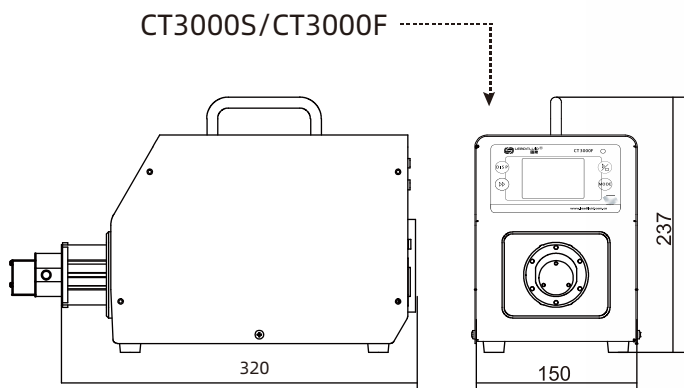
CT3001F/CT3000F adopts brushless servo motor drive, high performance, low noise, stainless steel, magnetic drive pump head, can be realized without pulsation, constant velocity flow transmission. Color LCD display, touch screen operation, can be easily set parameters. A variety of work mode, flow display, it is suitable for all kinds of lab areas. A variety of external control way, convenient use together with other devices, support the MODBUS protocol communication, simplify the difficulty of system development.



## Feature

- Can install various pump heads.
- Suitable for transmission more viscous, high pressure liquid.
- No pulsation transmission, low noise.
- The magnetic coupling is designed, easy to maintain.
- Brushless servo drive, high efficiency, high accuracy, maintenance-free.
- Color LCD display, touch screen operation.
- LF-Touch-OS software system.
- Flow display and control.
- A variety of work mode.
- Flow calibration wizard, ensure the accuracy of fluid volume.
- Intelligent temperature control function.
- External control signal control, physical isolation, analog control.
- RS485 communication, support MODBUS protocol.
- Wide range of power input, adapted to different environment.

Dimension(mm) **CT3001F**

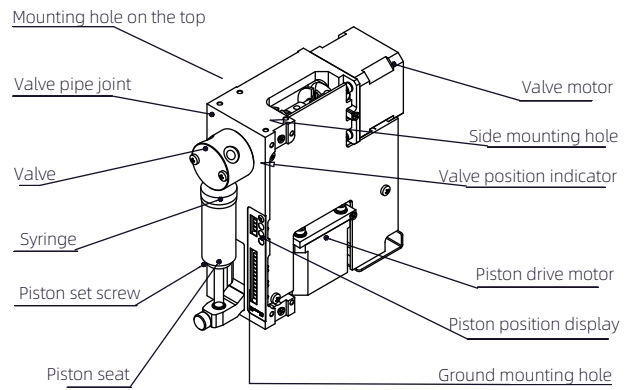


**CT3000F**

## Pump Head Specifications and Flow Rate Reference

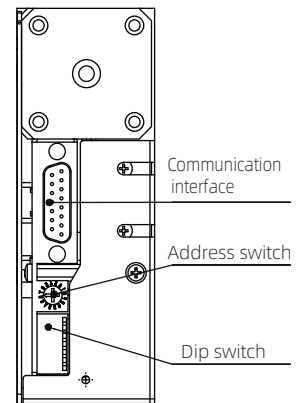
Drive Model	Pump Head	Gear Material	Speed Range (rpm)	Transfer Pressure (Mpa)	Flow Range (ml/min)
CT3001S	MG204XD0PT00000	PEEK	300 ~ 3000	≤0.8	90 ~ 900
	MG209XD0PT00000			≤0.8	180 ~ 1800
	MG213XD0PT00000			≤0.3	270 ~ 2700
CT3000S	MS204XD0PT00000			≤1.4	90 ~ 900
	MS209XD0PT00000			≤0.9	180 ~ 1800
	MS213XD0PT00000			≤0.8	270 ~ 2700
CT3001F	MG204XD0PT00000		50 ~ 3000	≤0.8	15 ~ 900
	MG209XD0PT00000			≤0.8	30 ~ 1800
	MG213XD0PT00000			≤0.3	45 ~ 2700
CT3000F	MS204XD0PT00000			≤1.4	15 ~ 900
	MS209XD0PT00000			≤0.9	30 ~ 1800
	MS213XD0PT00000			≤0.8	45 ~ 2700

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.



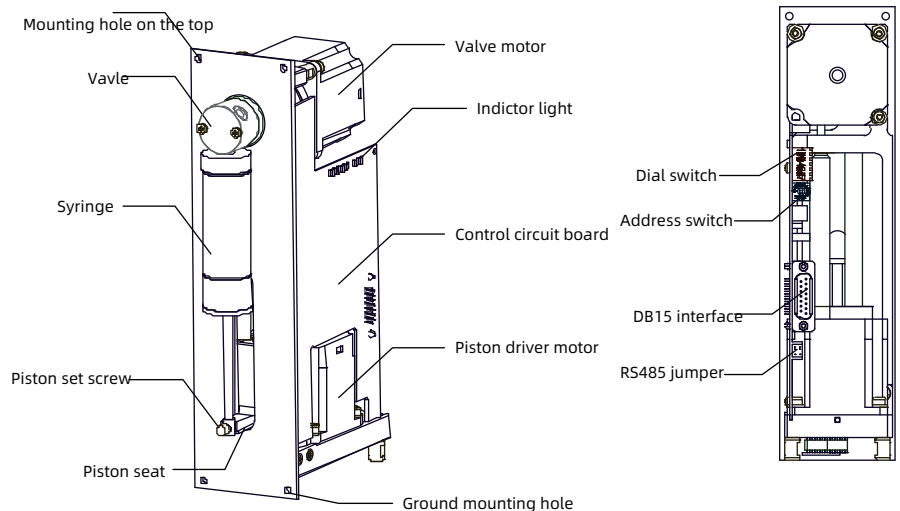
## G3030-1S Industrial Micro Syringe Pump

- Lead Fluid industrial micro syringe pump G3030-1S mainly suitable for high-precision micro liquid of continuous transmission, dilution and dispensing.
- Rated stroke 30mm, standard mode 3000 steps, microstep mode up to 24000 steps.
- Stepper motor, the slide rail cooperates with the lead screw drive, mechanical reversing, with high transmission stability and accuracy.
- Can assembly a 50 $\mu$ l ~ 5ml gas tight syringe, wide linear speed range.
- The material of the valve body and the fluid path has excellent chemical properties, adapting to various neutral and corrosive solutions.
- LED lights dynamically display syringe piston position and valve status.
- It can be used in various ways, it can be controlled by external signal, it can also be controlled by PC communication or it can run automatically offline.



## G6060-1S Industrial Micro Syringe Pump

- Lead Fluid industrial micro syringe pump G6060-1S mainly suitable for high-precision micro liquid of continuous transmission, dilution and dispensing.
- Rated stroke 60mm, standard mode 6000 steps, microstep mode up to 48000 steps.
- Stepper motor, backlash compensation screw assembly drive, mechanical reversal with extremely high transmission stability and accuracy.
- Can assembly a 50 $\mu$ l ~ 25ml gas tight syringe, and the linear velocity range is wider.
- The material of the valve body and the fluid path has excellent chemical properties, adapting to various neutral and corrosive solutions.
- It can be used in various ways, it can be controlled by external signal, it can also be controlled by PC communication or it can run automatically offline.



## Technical Parameters

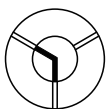
Parameters	Model	G3030-1S	G6060-1S
Linear speed		0.005mm/s~25mm/s	0.01mm/s~50mm/s
Running time		1.25~100 min (Rated stroke)	
Flow accuracy		errors≤1% (Rated stroke)	
Flow repeatability		CV≤0.05% (Rated stroke, 25°C Deionized water, 1ml syringe)	
Power supply		DC 24V/1.5A	DC 24V/2.0A
Syringe		50μl/100μl/250μl/500μl/1ml/2.5ml/5ml	50μl/100μl/250μl/500μl/1ml/2.5ml/5ml/10ml/25ml
Rated stroke		30mm	60mm
Control resolution		standard mode 3000 steps, microstep mode 24000 steps (rated stroke)	standard mode 6000 steps, microstep mode 48000 steps (rated stroke)
Syringe fitting		1/4-28UNF inner thread	
Syringe material		Borosilicate glass syringe, stainless steel push rod, PTFE piston	
Piston drive		stepper motor, slide rail with lead screw drive, quadrature encoding detects lost steps	stepper motor, Backlash compensation screw assembly drive, orthogonal encoding to detect position
Reversing valve		standard : 120°3 port.	
Valve position time		≤250 millisecond (Between two adjacent valves)	
Valve material		PTFE, PCTFE	
Valve fitting		1/4-28UNF inner thread	
Signal input		2 gates TTL Level signal input	2 gates TTL Level signal input (drive current > 16mA)
Signal output		3 gates TTL level signal output	
Communication		RS485/RS232	
Protocol		DT protocol, ODM protocol,	
Bit rate		9600bps/38400bps can set	
Parameter setting		7 digit dial switch	
Chain communication		Supports up to 15 pumps communication, no converter is needed to realize the conversion of RS232 and RS485	
Firmware upgrade		Upgrade via computer RS232 interface	
Status Display		12-segment LED display operating status	—
Programming function		Ramp, cut-off speed, gap compensation, infuse speed, circulation, real-time termination of movement and delay, error detection, valve rotation selection, storage of 15 groups of operating modes	
Working environment		temperature 15°C~40°C, relative humidity < 80%	
Storage environment		-20°C ~ 65°C	
Dimension(LxWxH)		110x44.5x127mm	114x65x254mm
Weight		1.23kg	2.1kg

**Statement:** The final explanation right of above information belongs to Lead Fluid

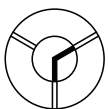
### Schematic diagram

#### (Three-port valve)

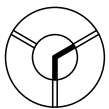
Z Initialization Command Y Initialization Command



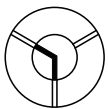
I - Input to left



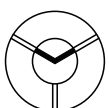
I - Input to right



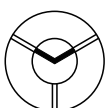
O- Output to right



O- Output to left



B- Bypass to input and output



B- Bypass to input and output

### Syringe



#### G3030-1S

Syringe	50μl	100μl	250μl	500μl	1ml	2.5ml	5ml
Min Flow (ml/min)	0.0005	0.0010	0.0025	0.005	0.010	0.025	0.05
Max Flow (ml/min)	2.5	5	12.5	25	50	125	250



#### G6060-1S

Syringe	50μl	100μl	250μl	500μl	1ml	5ml	10ml	25ml
Min Flow (ml/min)	0.0003125	0.000625	0.001563	0.003125	0.00625	0.03125	0.0625	0.15625
Max Flow (ml/min)	2.5	5.0	12.5	25	50	250	500	1250

Above flow parameters are obtained by using silicone tube to transfer pure water under normal temperature and pressure, in actually using it is effected by specific factors such as pressure, medium etc. Above for reference only.

## Connector and Pipeline

Thread inverted taper joint

Specification 1/4-28UNF

Material PTFE



connector

Transmission line

Specification 0.5×1.6mm 1.0×1.6mm 1.6×3.2mm

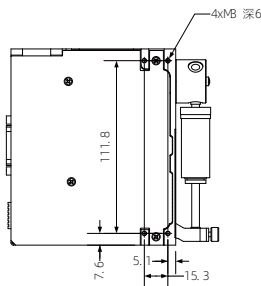
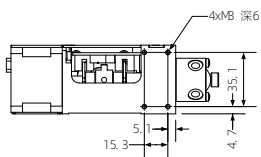
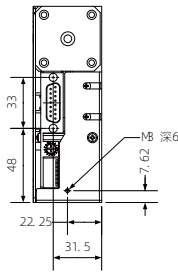
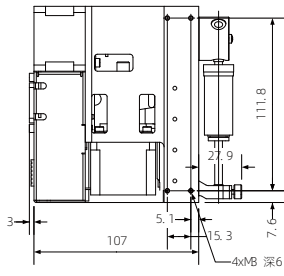
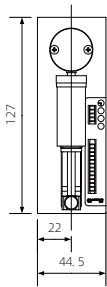
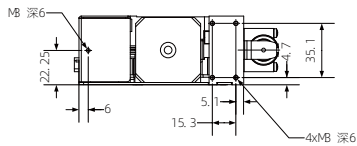
Material PTFE



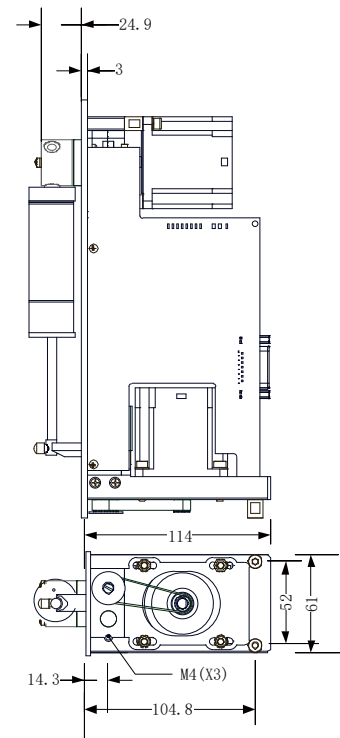
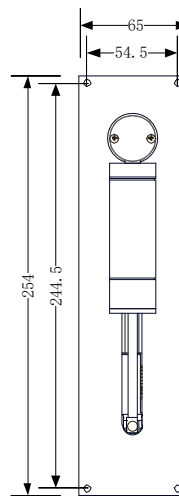
Pipeline

## Dimension (mm)

G3030-1S



G6060-1S



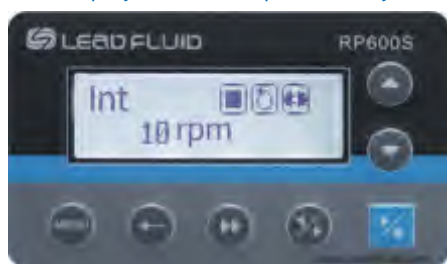


## RP600S Dispensing Valveless Rotary Piston Pump



Lead Fluid RP600S dispensing valveless rotary piston pump is a small liquid precise transmission pump. It is suitable for high-precision dispensing and transmission of microfluids. Unique design of rotary pump head with consideration of accuracy and efficiency. The combination of LCD and membrane key can display real-time information such as speed, number of cycles and so on. The operation of users is intuitive and simple. External control input support wide voltage input, analog voltage and current can be automatically switched through software settings. Stainless steel shell design, simple and smooth, suitable for various working environments. The program has more parameter settings to make it perform well in different workplaces.

Display Panel and Operation Key



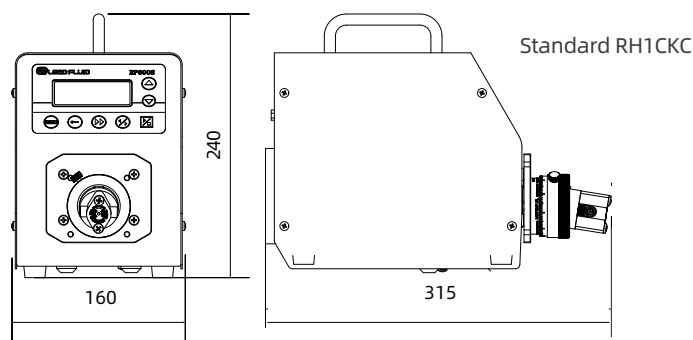
### Feature

- Unique design of rotary pump head, compact structure, stable and reliable.
- The outlet pressure can reach 6.9 bar, With reasonable pipeline design, the transmission capacity of viscous liquid can be improved.
- Can't transport liquid containing solid particles.
- The flow rate does not change with the change of inlet and outlet pressure, so it has more reliable flow rate and liquid volume accuracy.
- Single cycles liquid volume adjustable, dispensing repetitive accuracy is higher than 0.5%.
- Efficient and stable LF-LCD-OS Software System.
- New user interface, LCD panel, keyboard shortcut operation.
- Three working modes: flow rate, time dispensing and volume dispensing.
- The basic functions of start-stop control, reverse direction, full-speed emptying, speed regulation and so on.
- Unique back suction function, effectively prevent liquid drip leakage.
- Support MODBUS protocol RS485 communication, can realize remote digital control, support the setting of communication parameters, and facilitate the connection with various control devices.
- Adaptive external control signal input, support 5-24V wide voltage, physical isolation, with start-stop, reversible direction functions.
- Can set different analog signals.
- Open multiple control parameters for OEM customized applications.
- The process of spraying three anti-paint on circuit board can achieve the effect of dust and moisture proof.
- All stainless steel shell design, high strength, impact resistance, corrosion resistance.
- Super anti-interference characteristic, wide voltage design, suitable for complex power supply environment.

### Technical Parameters

Parameters	Pump head	
	RH1CKC	Q2CKC
Flow per cycle	0~0.1ml	0~0.72ml
Flow Range	0~60ml/min	0~432ml/min
Speed Range	0.1~600rpm	
Outlet pressure	0.69Mpa	
Speed resolution	<0.1rpm	
Speed accuracy	error<±0.2%	
Dispensing cycles	1~9999	
Dispensing time	0.1~999.9 s/min/h	
Dispensing number	1~999, "0" Infinite cycle	
Dispensing interval	0.1~999.9 s/min/h	
External control signal	External control analog 0-5V/0-10V/4-20mA, software setting, automatic switching external control start and stop, directional signal support 5V~24V wide voltage	
Communication signal	RS485 communication, support MODBUS protocol	
Power supply	AC 100~240V, 50/60Hz	
Power consumption	<60W	
Working environment	temperature 0~40°C, relative humidity<80%	
IP grade	IP31	
Dimension(LxWxH)	315x160x240 mm	345x160x240 mm
Weight	4.7kg	4.9 kg

### Dimension (mm)



### Applicable Pump Head

Drive Model	Pump Head	Single Cycle	Pressure	Flow Range	Pump Head Material
RP600S	RH1CKC	0 ~ 0.1ml	0.69Mpa	0 ~ 60ml/min	Ceramic+PVDF
	Q2CKC	0 ~ 0.72ml	0.69Mpa	0 ~ 432ml/min	Ceramic+PVDF