LongerPump®

Company Headquarters (Baoding)

- Research, development design, laboratory
- Marketing, sales
- Quality control
- Manufacture
- Service
- Warehouse, logistics

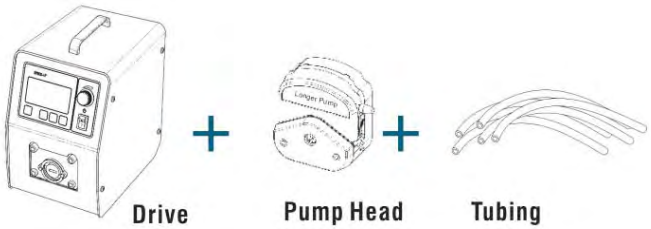
Company History

- Founded in 1997
- Incorporate a joint venture company with Amerihua International Enterprises Inc. in 2001
- Pass the ISO 9001:2000 quality certification system in 2003
- Peristaltic pumps and syringe pumps obtain CE certifications in 2004
- Become a wholely foreign-owned enterprise in 2010

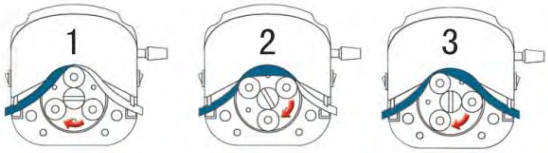
Company Mission

- Excellence because of profession: Longer only develops precision pumps
- Progress because of concept: Innovation and Precision
- Growth because of system: Perfect system results in success.

A Complete Peristaltic Pump



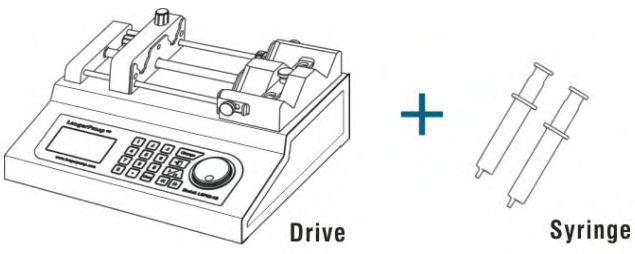
Peristaltic Pump Working Principle



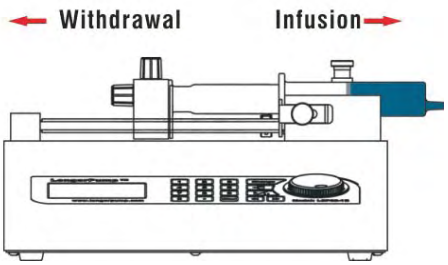
Peristaltic Pump Features

Non-contamination, easy to clean, low-shear, low maintenance

A Complete Syringe Pump



Syringe Pump Working Principle



Tel: 86 - 312 - 3110087
Fax: 86 - 312 - 3168553
Internet www.longerpump.com
E - mail:longer@longerpump.com

LongerPump®

Table of Contents

NEW
Diluters & Dispensers System

SMD02-1

Powerful

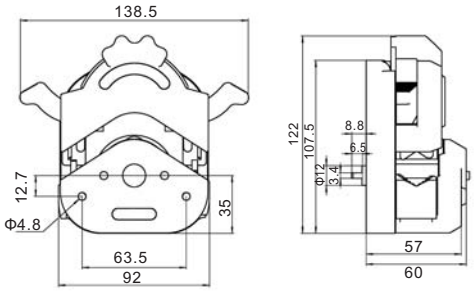
LSP01 - 1BH

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

Easy-load Pump Head

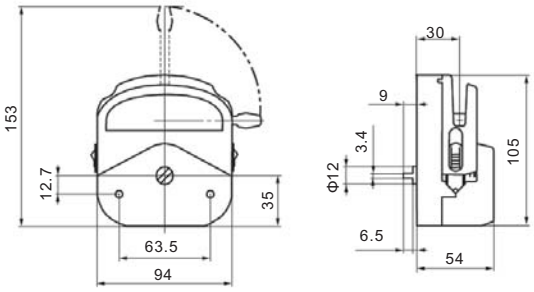
YZ II 15(YZ II 25)

Patent No.:200620026529.1.
Change tubing easily and rapidly; Compact size. The tubing retention set is a linkage, It is convenient to load the tubing; Accept several tubing sizes for a wide flow range; The rollers adopt high quality materials and has good wearing property; The housing material is PESU. It has perfect rigidity and structure property. It is stable and autoclavable (200°C)



YZ1515x(YZ2515x)

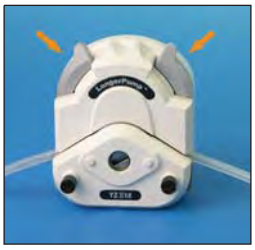
Change tubing easily and rapidly; Automatic tubing retention; Suitable for several tubing sizes; The rollers adopt high quality materials and has good wearing property; The housing of the pump head has perfect rigidity and structure property, and its material is PESU which is stable and autoclavable (200 °C)



Tubing Setting

1 Press down the triggers according to the arrow heads directions and open the compression block

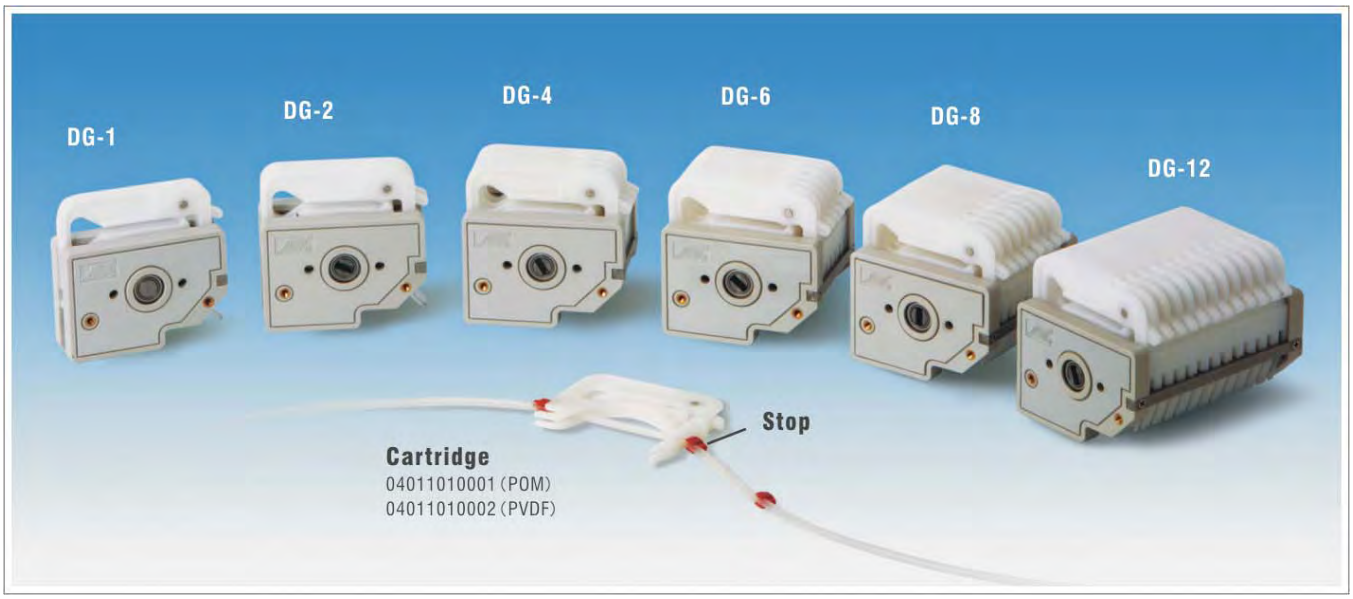
2 Load the tubing

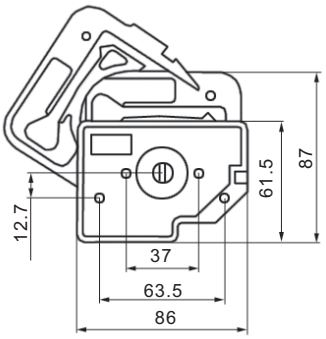


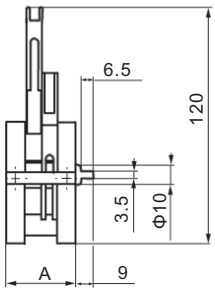
3 Press the triggers according to the arrow heads directions and close the compression block

Type	Tubing	Max. flow rates (mL/min)	Speed (rpm)	Housing Material	Part Number		Weight (kg)
					SS Rollers	RULON®J Rollers	
YZ1515x	13# 14# 19# 16# 25# 17# 18#	2200	≤ 600	PESU	0501521 (3 Rollers) 0501522 (6 Rollers)		0.4
YZ2515x	15# 24#	1600			0501531 (3 Rollers)		
YZ II 15	13# 14# 19# 16# 25# 17# 18#	2200			0501552	0501551	0.35
YZ II 25	15# 24# 35# 36#	3000			0501562	0501561	

Micro Flow Rates
Multi - channel Pump Head







Features

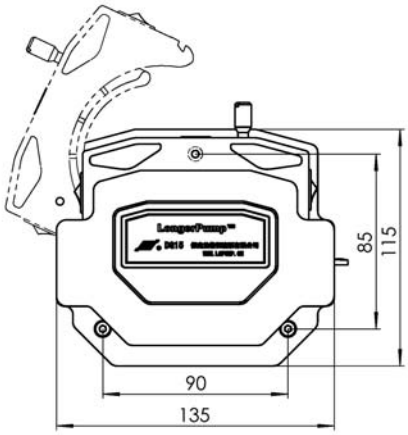
- Multi-channel transfer
- Change tubing easily
- Fix tubing easily
- Occlusion can be adjusted slightly by ratchet wheel to meet different tubing wall thickness requirements.
- 6-roller and 10-roller pump heads available.
- More rollers reduce pulsation and flow rates slightly.
- Skillful trigger design, convenient to open the cartridges (DG-1, DG-2)
- Rollers adopt 316 stainless steel which has chemical resistance to organic sdntion, acid and alkali.

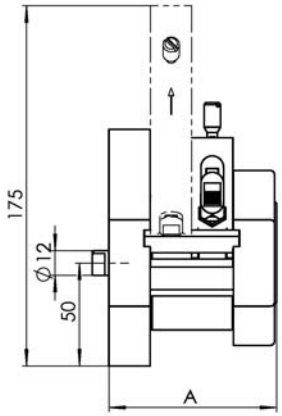
Introduction

DG series pump heads are designed for small flow rates, multi-channel fluids transfer. Easy to change and fix the tubing. Occlusion can be adjusted slightly. The rollers adopt high quality materials. The pump head consists of base, rotor assembly and easily dismounted cartridge.

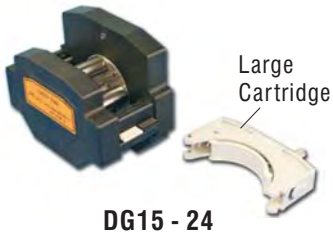
Type	Tubing	Max. Flow Rates (mL/min)		Speed (rpm)	Cartridge Material	Part Number		Weight (kg)	
		6 Rollers	10 Rollers			6 Rollers	10 Rollers	6 Rollers	10 Rollers
DG - 1	Inner Diameter ≤ 3.17 mm Wall Thickness 0.8 - 1 (mm)	48 (per channel)	32 (per channel)	⩽100	POM 04011010001	0501101	0501102	0.21	0.20
DG - 2						0501111	0501112	0.27	0.26
DG - 4						0501121	0501122	0.40	0.39
DG - 6						0501131	0501132	0.54	0.51
DG - 8					PVDF 04011010002	0501141	0501142	0.67	0.63
DG - 12						0501151	0501152	0.95	0.88

Medium and Small Flow Rates Multi-channel Pump Head





Pump Head Type



DG15 - 24

DG15 - 28

DG15 - 48

DG15 - 24: 2 Channels 4 Rollers
DG15 - 28: 2 Channels 8 Rollers
DG15 - 48: 4 Channels 8 Rollers

Features

- Cartridges and base can be separated. It's convenient to load the tubing
- Suitable for several tubing sizes for a wide flow range
- Occlusion can be adjusted slightly to meet different tubing wall thickness requirements
- The material of the roller is stainless steel
- The material of the cartridge working surface is POM. It has perfect self lubricating property to reduce tubing wear abrasion

Introduction

Patent No.: ZL 200520026479.2

DG15 series pump heads are designed for medium and small flow rates, multi-channel fluids transfer. Easy to change and fix the tubing. Occlusion can be adjusted slightly. The rollers adopt high quality materials. The pump head consists of base, rotor assembly and easy-to-load cartridges.

Type	Tubing	Max. Flow Rates (mL/min)	Speed (rpm)	Cartridge Material	Rollers Material	Rollers Quantity	Part Number	Weight (kg)
DG15 - 24	16# 25# 17#	1800	≤ 600	POM	SS	4	0501162	0.82
DG15 - 28	Inner Diameter ≤ 3.17mm Wall Thickness 0.8 - 1 (mm) 13# 14#	75	≤ 100			8	0501172	0.67
DG15 - 48							0501182	0.87

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

Standard Pump Head

Tubing loading Procedure

A

Open the pump head housing. Press the tubing using the loading key

B

Rotate the loading key to load the tubing between rollers and housing

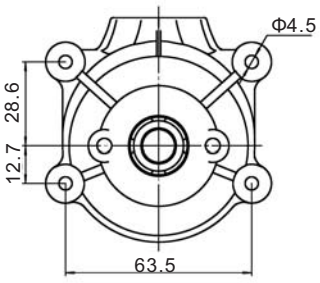
C

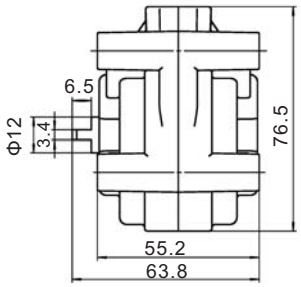
Close the pump head housing.

PERISTALTIC PUMP

Introduction

Stainless steel or high performance plastic rollers available
Transparent PC housing, visible operation





Features

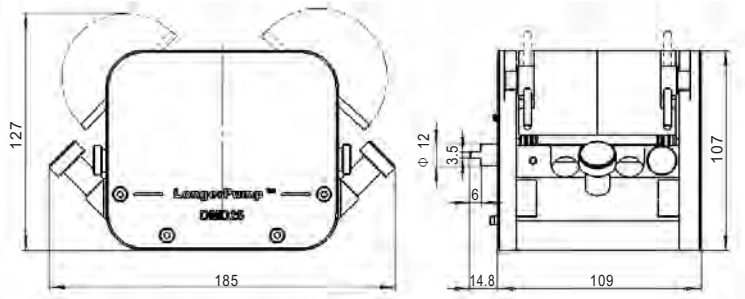
- Stable operation and stackable
- Compact size
- Dismounting the pump head from the drive is needed when loading the tubing
- Standard pump head, fixed occlusion
- Ideal for OEM

Type	Tubing	Max. Flow Rates (mL/min)	Speed (rpm)	Housing Material	Rollers Quantity	Part Number		Weight (kg)
						SS Rollers	PET - TX Rollers	
BZ25	24#	1600	≤ 600	PC	3	0501002	0501001	0.31

Low Pulse Pump Head

DMD25

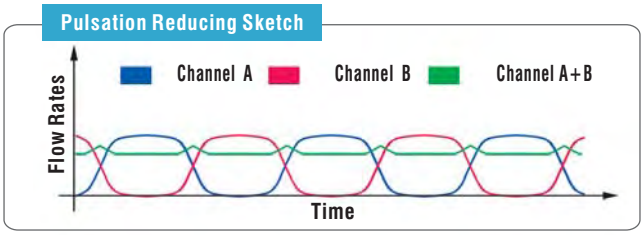
Part Number
0501251 Long Shaft(for single pump head)
0501252 Long Shaft (for stack, connect drive directly)
0501253 Short Shaft (for stack)

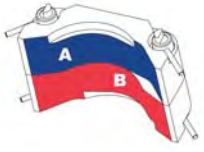


Features

- Suitable for accurate dispensing
- Track assembly and base are independent. Easy to load tubing
- Accept many sizes of tubing to realize wide range flow rates transferring
- Twin offset track combing with Double-Y tube elements reduce the pulsation successfully. The accuracy can reach ± 0.5%
- Hay cutter style fixing prevents the tubing from quick abrasion caused by shock
- The material of track assembly is POM

Pulsation Reducing Sketch





Twin offset tracks reduce the pulsation, increase the dispensing accuracy.

Tubing changing procedure

Lift the two levers at both sides of the pump head and remove the track.

Loose the knobs, open the hay cutter style fixing by turning it through one quarter turn. Put the Double-Y tubing on the rollers and locate it over the mushroom pegs on both sides of the pump head.

Close the hay cutter style fixing. Tighten the knobs on both sides of the pump head.

Replace the track and secure it by closing the two levers.

Introduction

DMD25 pump head is designed for high accuracy dispensing. Twin offset track design and Double-Y tubing ensure the high dispensing accuracy. Hay cutter style fixing prevents the tubing from quick abrasion caused by shock . The pump head adopts stainless steel, aluminum and POM materials. The performance is reliable and stable. It is ideal for industry application.

Type	Tubing	Max. Flow Rates (mL/min)	Speed (rpm)	Track Material	Rollers Material	Rollers Quantity	Part Number	Weight (kg)
DMD25	119#	150	≤ 350	POM	SS	6	0501051	2.5
	120#	800						
	15#	1500					0501052	
	24#	2400						
	35#	2950					0501053	
	36#	4000						

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

Quick-load Pump Head

KZ25

Flow Rates : 200 - 6000 mL/min

Part Number
0501251 Long Shaft (for stack, connect drive directly)
0501252 Short Shaft (for stack)

Tubing loading Procedure

A

Rotate lever to loosen the compression block, and then lift it.

B

Load tubing on the rollers and the two V-shaped slots of tubing retainers. Put down the compression block.

C

Press the compression block and rotate lever to lock the compression block. Adjust the screws to fix the tubing.

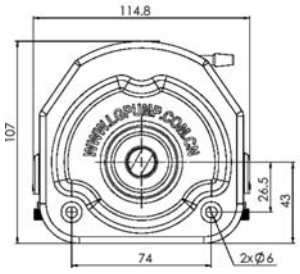
PUMP HEADS

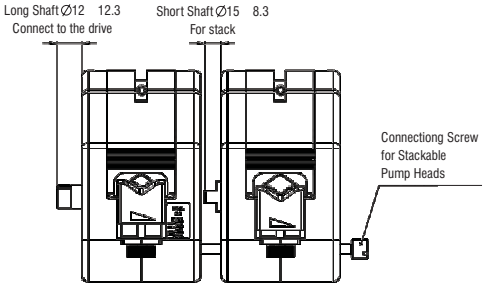
Introduction

Stainless steel or RULON®J rollers available
PPS compression block. Self-lubrication to reduce tubing wear. Good rigidity for stable size. Good chemical compatibility and high temperature resistance
High quality materials form a perfect combination. That offers excellent technical and service performance

Features

- Cartridges and base can be separated. It's convenient to load the tubing
- Pump heads can be stackable
- Compact size and a wide flow range
- Ideal for OEM





Type	Tubing	Max. Flow Rates (mL/min)	Speed (rpm)	Rollers Material	Housing Material	Compression Block Material	Rollers Quantity	Part Number	Weight (kg)
KZ25	15#	1800	≤ 600	SS	PC	PPS	3	0501251	0.79
	24#	3500							
	35#	5000		RULON®J				0501252	
	36#	6000							

Industrial Easy-load Pump Head

YZ35-13

Tubing loading Procedure

A

Following the indication of arrow, rotate lever to left to open pump head.

B

Load the tubing

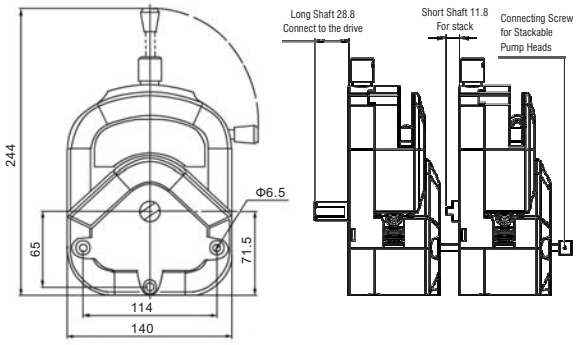
C

Following the indication of arrow, rotate lever to right to close pump head.

Knob

Rotate knob to micro-adjusted the gap between compression blcok and rotor .

Installation Drawing



Features

- Pump heads can be stackable
- Change tubing easily and rapidly
- Automatic tubing retention
- Suitable for several tubing sizes
- The rollers adopt high quality materials and has good wearing property
- The housing of the pump head has perfect rigidity and structure property
- Its material is PSU which has stable performance and high temperature resistance（150 °C）

Type	Tubing	Max. Flow Rates (mL/min)	Speed (rpm)	Rollers Material	Rollers Quantity	Housing Material	Part Number	Weight (kg)
YZ35 - 13	73# 82#	11000	≤ 600	SS	3	PSU	0501591 0501592	1.65

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

Industrial Quick-load Pump Head

KZ35

Pump Number
0501261 Long Shaft(for single pump head)
0501262 Long Shaft (for stack, connect drive directly)
0501263 Short Shaft (for stackable head)
0501264 Short Shaft (stackable head for both side)

Tubing Fittings/Clamps Installation Procedure

A

Turn the left and right lever and take out the compression block.

B

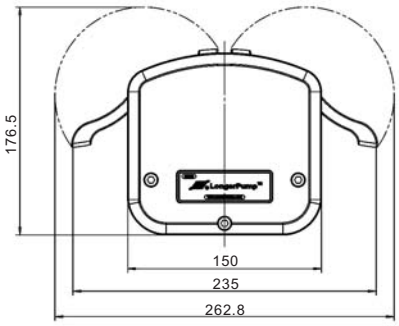
Insert the tubing fittings/clamps with tubing into the slots on both sides.

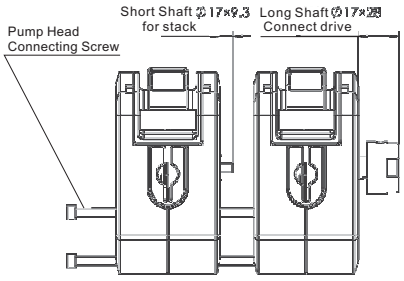
C

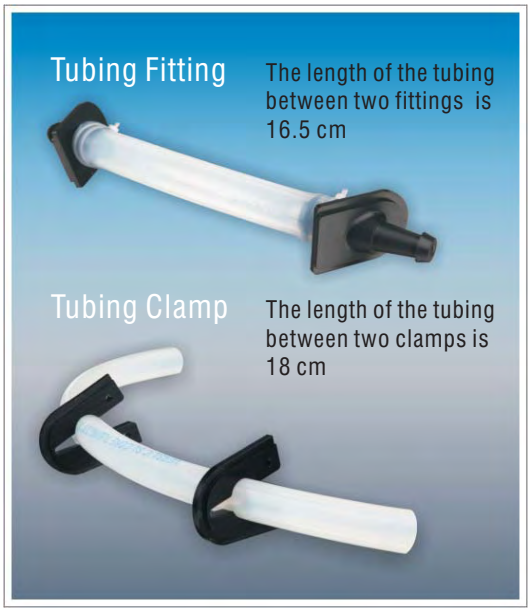
Put the compression block on the tubing and turn the left and right levers to lock the compression block.

PUMP HEADS

Installation Drawing







Features

- Key parts adopt 304 stainless steel. Suitable for pharmaceutical and food industry.
- Compression block and base are separate. Easy to load the tubing.
- Accept 73# and 82# tubing. The flow rate range is wide.
- Two pump heads can be stacked.
- The advantage of selecting tubing clamps: No residue fluids in the tubing
- The advantage of selecting tubing fitting: Save tubing cost. The low cost tubing can be connected outside of the pump head.

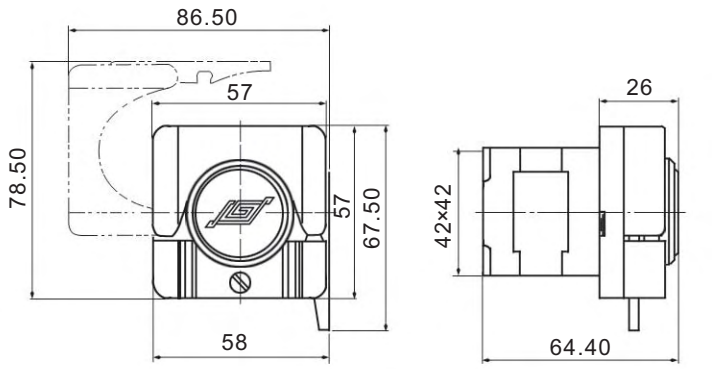
Pump Head	Tubing	Max. Flow Rates (mL/min)	Speed (rpm)	Tubing Clamp/Fitting Material	Pump Head Material	Roller Quantity	Part Number	Weight (kg)
KZ35	73# 82#	11000	<600	PVDF	304 Stainless Steel	3	0501261 0501262 0501263 0501264	3.7

Other Pump Head

Part Number
0501451 (Black)
0501452 (White)

WX10-14 Patent No: ZL200420092094. 1

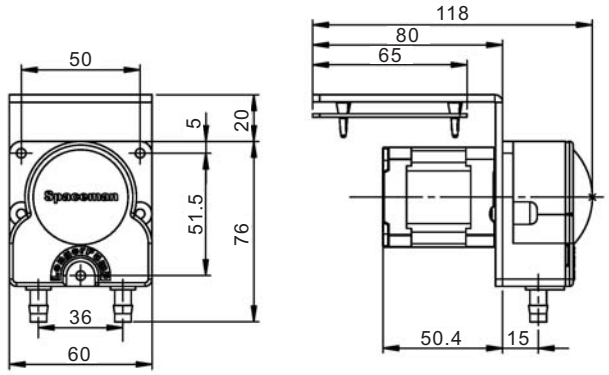
Features: Trigger, flip-open, small flow rates



Part Number
0501211

JY15-12

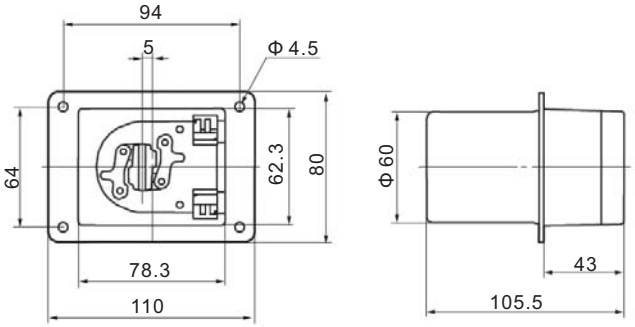
Features: Compact size, high flow rates, thicker wall thickness tubing are acceptable



Part Number
0501401 (Soft spring,with tubing connector)
0501402 (Hard spring,with out tubing connector)
0501403 (Soft spring,with tubing connector)
0501404 (Hard spring,with out tubing connector)

TH15

Features: Flexible rotor assembly, occlusion can be adjusted automatically, which prelong the tubing life



Type	Tubing (mm)	Max. Flow Rates (mL/min)	Motor speed (rpm)	Rollers Quantity	Rollers Material	Part Number	Housing Material
WX10 - 14	Wall Thickness: 0.8 - 1.0 Inner Diameter: ≤ 3.17	24	≤ 60	4	POM	0501451 0501452	ABS
JY15 - 12	25# 17#	170	≤ 100	2	PET	0501211	PPS
TH15	13# 14# 19# 16# 25#	167	≤ 100	2	POM PVDF	0501401 0501402 0501403 0501404	PPS

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

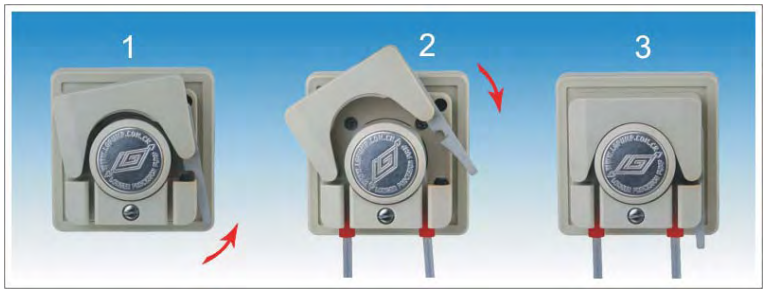
Basic (Micro) Peristaltic Pump

Flow Rates

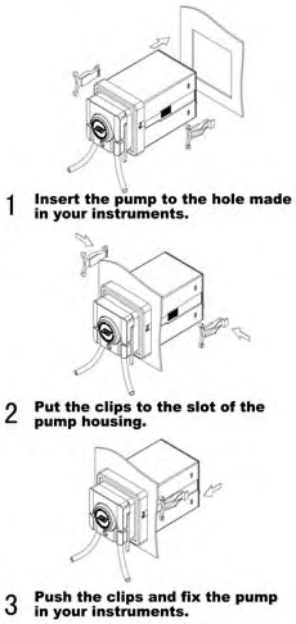
0.0001 mL/min — 100 mL/min

0.0002 - 20mL/min

BQ50-1J



BQ50-1J peristaltic pump combines low flow and compact size into a single pump that mounts in the equipment rack or panel. The pump provides flow rates from 0.0002 to 20.0 mL/min. And it can be operated through hand-held remote controller, analog interface or RS485. White and black colors are available.



OEM Installation Sketch

Features

- Prime Function
  - Fast Filling
  - Fast Empting
- Memory function
- Ideal for OEM
  - Compact size
  - Light weight
- Installation Modes
  - Inlaid
  - Rack
- Control Modes
  - Hand-held remote controller
  - Analog external control
  - Communication external control
- Tubing Loading
  - Flexible
  - Reliable

Specifications

Speed: 1 to 50 rpm, reversible
Speed precision: 1 rpm (External control 0.1 rpm)
Speed control: Hand-held remote controller
Display: Hand-held remote controller displays speed range and running status
External control: Start/stop and cw/ccw control, 0 to 5 V, 0 to 10 V, 4 to 20 mA and 0 to 10 kHz speed control
Communication interface: RS485
Power supply: DC 12 V/1A adapter
Power consumption: < 10 W
Operating condition: Temperature 0 - 40 °C Relative humidity < 80%
Drive dimensions (L×W×H) : 135×72×72 (mm)
Controller dimensions (L×W×H) : 105×50×16 (mm)
Drive weight: 0.5 kg
IP rating: IP 31

Standard Configuration	Optional Accessories
1.Pump Head	1.Small V-base
2.Drive	2.Polished Stainless Steel Frame Tube
3.Hand-held Remote Controller	3.Fixed Plate
4.Adapter	
5.Data Wire	

LAB OEM

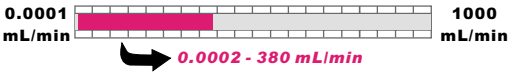
Drive	Part Number	Pump Head	Flow Rates (mL/min)	Tubing (mm)	Weight (kg)
BQ50 - 1J	0502021 0502022	WX10 - 14	0.0002 - 20	Wall Thickness: 0.8 - 1.0 Inner Diameter: ≤ 3.17 ex. 0.5×0.8 1×1 2×1 2.4×0.8 3×1 etc.	0.5

Basic Peristaltic Pump

BT100-2J

Acceptable pump heads for BT100-2J are YZ1515x, YZ2515x, YZII15, YZII25, DG-1 and DG-2. The pump provides flow rates from 0.0002 to 380 mL/min. The speed can be adjusted manually or automatically through external control. Store the running parameters automatically. Easy to operate.

Flow Rates



Applicable pump heads

YZ1515x
YZ2515x

YZII15
YZII25

DG-1

DG-2

Functions and Features

Applicable pump heads: YZ1515x, Yz2515x, YZII15, YZII25, DG - 1, DG - 2
Max key: For fast filling and emptying
Communication function: RS485
External control: Start/stop and cw/ccw control, 0 - 5 V, 0 - 10 V, 4 - 20 mA, 0 - 10 kHz speed control
Adjust speed manually or automatically through external control interface
Memory function: Storing the running parameter automatically
Membrane keypad, easy to operate
Good performance and economical price
At normal lab conditions

Specifications

- Speed: 0.1 to 100 rpm, reversible
- Speed precision: 0.1 rpm
- Speed control: Membrane keypad
- Display: 3-digit LED displays current rpm
- External control: Start/stop, cw/ccw control, and 0 - 5 V, 0 - 10 V, 4 - 20 mA and 0 - 10kHz speed control
- Power supply: AC 90 V - 260 V 50/60 Hz
- Power consumption: ≤30 W
  Operating condition: Temperature 0 to 40 °C
  Relative humidity < 80%
- Dimensions (L×W×H) : 232×142×149 (mm)
- Drive weight: 2.3 kg
- IP rating: IP 31

Drive	Part Number	Pump Head	Tubing	Flow Rates (mL/min)	Weight (kg)
BT100 - 2J	0502111	YZ1515x、YZ II15	13# 14# 19# 16# 25# 17#18#	0.07 - 380	3.0
		YZ 2515x	15#	1.7 - 150	3.0
		YZ II25	15#	1.7 - 150	3.0
		DG - 1 (6 Rollers)	Wall Thickness：0.8 - 1.0 (mm) Inner Diameter：≤ 3.17 mm	0.00025 - 48	2.5
		DG - 1 (10 Rollers)		0.0002 - 32	2.5
		DG - 2 (6 Rollers)		0.00025 - 48 (Single channel)	2.6
		DG - 2 (10 Rollers)		0.0002 - 32 (Single channel I)	2.6

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

Basic Peristaltic Pump

Flow Rates

0.001 mL/min — 5000 mL/min

0.07 - 1140 mL/min

BT300-2J

Acceptable pump heads for BT300-2J are YZ1515x, YZ2515x, YZII15, YZII25. The pump delivers flow rates from 0.07 to 1140 mL/min. The speed can be adjusted manually or automatically through external control interface. Store the running parameters automatically. Easy to operate.

Applicable Pump Heads

YZ1515x
YZ2515x

YZII15
YZII25

Specifications

Speed: 1 to 300 rpm, reversible
Speed precision: 1 rpm
Speed control: Rotary encoded switch
Display: 3-digit LED displays current speed
External control: Start/stop and cw/ccw control, 0 to 5 V, 0 to 10 V, 4 to 20 mA and 0-10 kHz speed control
Power supply: AC 90 V - 260 V 50/60 Hz
Power consumption: < 48 W
Operating condition: Temperature 0 to 40 °C Relative humidity < 80%
Dimensions (L W H): 285 207 180 (mm)
Drive weight: 3.6 kg
IP rating: IP 31

Functions and Features

- Applicable pump heads: YZ1515x, YZ2515x,YZII15, YZII25
- Prime button for fast filling and emptying
- Adjust speed manually or automatically through external control
- Memory function, storing the running parameters automatically
- Equipped with Longer dispensing controller for filling function
- At normal lab conditions

LAB

Drive	Part Number	Pump Head	Tubing	Flow Rates (mL/min)	Weight (kg)
BT300 - 2J	0502311	YZ1515x、YZ II 15	13# 14# 19# 16# 25# 17# 18#	0.07 - 1140	4.0
		YZ2515x、YZ II 25	15# 24 #	1.7 - 870	4.0

Basic Peristaltic Pump

Flow Rates

0.001 mL/min — 5000 mL/min

0.07 - 3000 mL/min

BT600-2J

Applicable pump heads for BT600-2J are YZ1515x, YZ2515x, YZII15, YZII25. The pump delivers flow rates from 0.07 to 3000 mL/min. The speed can be adjusted manually or automatically through external control. Easy to operate. Dispensing function can be realized by connecting Longer dispensing controller FK-1C.

Applicable Pump Heads

YZ1515x
YZ2515x

YZII15
YZII25

Specifications

- Speed: 1 to 600 rpm, reversible
- Speed precision: 1 rpm
- Speed control: Rotary encoded switch
- Display: 3 - digit LED displays current rpm
- External control: Start/stop and cw/ccw control, 0 to 5 V, 0 to 10 V, 4 to 20 mA and 0-10 kHz speed control
- Communication interface: RS485
- Power: AC 90 - 260 V 50/60 Hz
- Power consumption: < 100 W
- Operating condition: Temperature 0 to 40°C
  Relative humidity < 80%
- Dimensions (L×W×H) : 285×207×180 (mm)
- Drive Weight: 3.8 kg
- IP rating: IP 31

Functions and Features

- Acceptable pump heads: YZ1515x, YZ2515x, YZII15, YZII25
- Prime button: For fast filling and emptying
- Memory function, storing the running parameters automatically
- The speed can be controlled by external control analog input or pulse input
- Good performance and economical price
- Indoor use only
- Realize computer control through RS-485 communication interface.

LAB

Drive	Part Number	Pump Head	Tubing	Flow Rates (mL/min)	Weight (kg)
BT600 - 2J	0502621	YZ1515x、YZⅡ15	13# 14# 19# 16# 25# 17#18#	0.07 - 2200	4.2
		YZ2515x	15# 24#	1.6 - 1600	4.2
		YZⅡ25	15# 24# 35# 36#	1.7 - 3000	4.2

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

Basic Peristaltic Pump

Flow Rates

0.001 mL/min — 10000 mL/min

4.2 - 6000 mL/min

WT600 - 2J

WT600-2J peristaltic pump adopts brushless DC motor. It has features of high output torque, low vibration, high efficiency and free maintenance. It can drive double pump heads. It accepts many pump heads and delivers flow rates from 4.2 to 6000 mL/min. The speed can be adjusted manually or automatically through external control.

Applicable Pump Heads

Functions and Features

- Prime button: For fast filling and emptying
- Memory function: Store the speed and the address of the pump
- Communication function: Realize the computer control through RS485 interface
- Display: 3 digits LED displays the speed of the pump
- External control input: Control the speed, start/stop and direction of the pump
- Suitable for different pump heads and tubing for multiple application
- High output torque which can drive double pump heads
- Brushless DC motor, high output torque and free maintenance
- Operation mode: Switch, button and knob. Easy to operate

INDUSTRIAL LAB

Specifications

Speed: 60 to 600 rpm
Speed accuracy: ± 1.0%
Speed resolution: 1.0 rpm
Output torque: ≥ 1.60 N · M
External control input: Start/stop and cw/ccw control, 0.5 to 5 V, 1 to 10 V, 4 to 20 mA and 1-10 kHz speed control
Communication interface: RS485
Power supply: AC 176 - 264V 50Hz/60Hz
Power consumption: ≤ 200 W
Operating condition: Temperature 0 to 40 °C Relative humidity < 80%
Dimensions (L×W×H) : 285×207×180 (mm)
Drive weight: 5.2 kg
IP rating: IP 31

Drive	Part Number	Pump Head	Tubing	Flow Rates (mL/min)	Weight (kg)
WT600 - 2J	0502631	(1, 2) ×YZ1515x	13# 14# 19# 16# 25# 17# 18#	Single channel 4.2 - 2200	5.6 - 6.0
		(1, 2) ×YZ II 15			
		(1, 2) ×YZ2515x	15# 24#	Single channel 100 - 1600	
		(1, 2) ×YZ II 25	15# 24# 35# 36#	Single channel 100 - 3000	
		KZ25		200 - 6000	6.0
		DG15 - 24	16# 25# 17#	50 - 1800	6.0
		DMD25 (≤350rpm)	119# 120# 15# 24# 35# 36#	30 - 4000	7.7

* Max. speed for DMD25 is 350 rpm

Basic Peristaltic Pump

Flow Rates

0.001 mL/min — 10000 mL/min

4.2 - 6000 mL/min

WT600 - 3J

WT600-3J peristaltic pump is high IP rating and high efficiency. It adopts brushless DC motor and speed closed loop control. It has features of high output torque, low vibration and free maintenance. It accepts multiple two channels pump heads and delivers flow rates from 4.2 to 6000 mL/min (single channel) .

Part Number
0502641 (0.5-5V)
0502642 (4-20mA)
0502643 (1-10V)
0502644 (1-10kHz)

Applicable pump heads

Functions and Features

- High IP rating: Suitable for moist and dust working condition
- MAX key: For fast filling and emptying
- Memory function: Storing the running parameters automatically
- Communication function: Realize the computer control through RS485 interface
- Display: 3 digits LED displays the speed of the pump
- External control input: Control the speed, start/stop and direction of the pump
- Suitable for different pump heads and tubing
- High output torque which can drive double pump heads
- Brushless DC motor, high output torque, free maintenance
- Operation mode: Switch and membrane keypad. Easy to operate

Specification

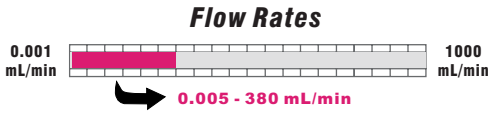
Speed: 60 - 600 (rpm)
Speed accuracy: ±1.0%
Speed resolution: 1.0 rpm
Output torque: ⩾1.50 N·M
Display: 3 digits LED displays the speed of the pump; 4 pcs LED indicators display the working state
Memory function: Storing the running parameters automatically when the parameters don't change after 3 seconds
External speed control: 0.5 - 5 V, 1 - 10 V, 4 - 20 mA or 1 - 10 kHz are corresponding to 60 - 600 rpm
Communication interface: RS485
Power supply: AC 176 - 264V 50Hz/60Hz
Power consumption: ⩽190 W
Operating condition: Temperature 0 to 40℃ Relative humidity <80%
Drive dimensions (L×W×H) : 273×190×272 (mm)
Drive weights: 7.3 kg
IP rating: IP55

Drive	Part Number	Pump Head	Tubing	Flow Rates (mL/min)	Weight (kg)
WT600 - 3J	0502641 0502642 0502643 0502644	(1,2) YZ1515x	13# 14# 19# 16# 25# 17# 18#	Single channel 4.2 - 2200	7.7 - 8.1
		(1,2) YZ II 15			
		(1,2) YZ2515x	15# 24#	Single channel 100 - 1600	
		(1,2) YZ II 25	15# 24# 35# 36#	Single channel 100 - 3000	
		KZ25		200 - 6000	8.1
		DG15 - 24	16# 25# 17#	50 - 1800	8.1
		DMD25 (⩽350rpm)	119# 120# 15# 24# 35# 36#	30 - 4000	9.8

* Max. speed for DMD25 is 350 rpm

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

Flow Rates Peristaltic Pump



LEAD-2

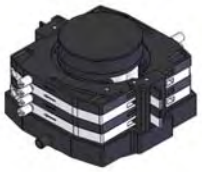
The applicable pump heads for Lead-2 are Lead15-48, Lead15-88, Lead15-24, Lead15-44 and max. 8 channels are available. The pump delivers flow rates from 0.005 to 380 mL/min. It has flow rates display and flow rates calibration functions. It also has functions of speed adjustment, start/stop, cw/ccw, prime (rinsing), tubing selection, RS485 communication, analog control, etc.

Applicable Pump Heads

LEAD15-24
(2 channels, 4 rollers)

LEAD15-44
(4 channels, 4 rollers)

LEAD15-48
(4 channels, 8 rollers)



LEAD15-88
(8 channels, 8 rollers)

Specifications

Speed: 1.0 to 100.0 rpm, reversible
Speed precision: 0.1 rpm
Speed control: Rotary encoded switch coupled with membrane keypad
Display: 128×32 graphic LCD displays current running status
External control: Start/stop and cw/ccw control, 0 to 5 V, 0 to 10 V, 4 to 20 mA and 0-10 kHz speed control
Communication: RS485
Power supply: AC 90 - 260V 50/60 Hz
Power consumption: < 50W
Operating condition: Temperature 0 to 40 °C
Relative humidity < 80%
Dimensions (L × W × H): 190×162×275 (mm)
Drive weight: 3.5 kg
IP rating: IP 31

Functions and Features

- Vertical structure
- Accept 4 special pump heads
- Display can switch between flow rates and speed
- Calibration function for more accurate flow rates
- Computer control available through RS485 communication
- Prime key for fast filling and emptying

Drive	Part Number	Pump Head	Tubing	Flow Rates (Single channel:mL/min)	Weight (kg)
LEAD - 2	0502197	LEAD15 - 24	16# 25# 17#	1 - 380	4.36
		LEAD15 - 44		1 - 380	4.42
		LEAD15 - 48	Inner Diameter ≤ 3.17 mm Wall Thickness 0.8 - 1.0 mm 13# 14#	0.005 - 75 0.07 - 20	4.48
		LEAD15 - 88	Inner Diameter ≤ 3.17 mm Wall Thickness 0.8 - 1.0 mm 13# 14#	0.005 - 75 0.07 - 20	4.48

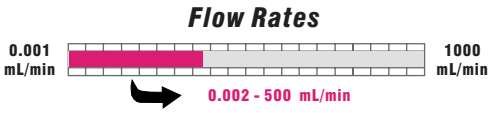
Flow Rates Peristaltic Pump

BT100-1L

The max. output torque of BT100-1L drive is 1.65 N·M. Multiple pump heads are avaiable. The pump delivers flow rates from 0.002 to 500 mL/min. 128 64 graphic LCD displays running menus and parameter setting menus. The flow rates and the speed (rpm) can be displayed in the same screen. The display interfaces are friendly. It has flow rates calibration function to make the flow rates more accurate. It has many control modes. The external control can be realized through standard external interface or RS485 communication interface.

Functions and Features

Display can switch between flow rates and rpm
Calibration capability for more accurate flow rates
Graphic LCD together with rotary encoded switch make the pump easy to use
Higher torque to accept more pump heads and more channels
RS485 communication interface available. Offering communication protocol to customer and customizing software according to customer's requirements



Flow Rates Display High Torque

Applicable Pump Heads

DG-2
I
DG-24

DG15-24
DG15-28
DG15-48

YZ1515x
YZ2515x

YZII15
YZII25

Specifications

Speed: 1.0 to 100.0 rpm, reversible
Speed precision: 0.1 rpm
Speed control: Rotary encoded switch coupled with membrane keypad
Display: 128×64 graphic LCD displays current running status
External control: Start/stop and cw/ccw control, 0 to 5 V, 0 to 10 V, and 4 to 20 mA speed control
Communication interface: RS485
Power supply:
AC 220 V ± 10% 50Hz/60 Hz (standard)
AC 110 V ± 10% 50Hz/60 Hz (optional)
Power consumption: < 50 W
Operating condition: Temperature 0 to 40 °C
Relative humidity < 80%
Dimensions (L × W × H): 202×160×239 (mm)
Drive weight: 5.34 kg
IP rating: IP 31

Drive	Part Number	Pump Head	Tubing	Flow Rates (Single channel: mL/min)	Weight (kg)
BT100 - 1L	0502122 0502125	DG15 - 24	16# 25# 17#	1 - 380	6.16
		DG15 - 28, DG15 - 48	Wall Thickness: 0.8 - 1.0 (mm) Inner Diameter: ≤ 3.17 mm 13# 14#	0.005 - 75	6.01
		DG - (2,4,6,8,12,16,24) (6,10 rollers)	Wall Thickness: 0.8 - 1.0 (mm) Inner Diameter: ≤ 3.17 mm	0.0025 - 48 (6 rollers) 0.002 - 32 (10 rollers)	5.82 - 8.70
		(1,2,3,4) YZ1515x (1,2,3,4) YZ II 15	13# 14# 19# 16# 25# 17# 18#	0.07 - 380	5.76 - 7.02
		(1,2,3,4) YZ2515x	15# 24#	1.7 - 270	5.76 - 7.02
		(1,2) YZ II 25	15# 24# 35# 36#	1.7 - 500	5.70 - 6.04

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

Dispensing Peristaltic Pump

Flow Rates

0.0001 mL/min — 1000 mL/min

0.2 μL/min - 500 mL/min

BT100-1F

Acceptable pump heads for BT100-1F are YZ1515x, YZ2515x, YZII15, YZII25 and DG-1, DG-2, DG-4. The pump delivers flow rates from 0.2 μL to 500 mL/min and dispensing volumn is from 0.01 mL to 9900 mL. Combining 128 32 LCD display with membrane keypad and rotary encoded switch makes the operation easy and prompt. The speed can be adjusted manually or automatically through external control interface.

Applicable Pump Heads

YZ1515x
YZ2515x

DG-4

YZII15
YZII25

DG-1
DG-2

Functions and Features

- Acceptable pump heads: YZ1515x, YZ2515x, YZII15, YZII25 and DG - 1, DG - 2, DG - 4
- Micro flow rates transferring: The smallest flow rate can reach 0.2 μL/min
- Back suction function: In dispensing mode, the pump runs reversely after finishing one filling operation to prevent the liquid from dripping
- Operating mode: Membrane keypad and rotary encoded switch
- Speed control: The speed can be adjusted manually or automatically through external control interface
- Display: LCD displays current running status
- Prime key: For fast filling and emptying
- Memory function: Storing the running parameters automatically
- Calibration function: The flow rates and the dispensing volume can be calibrated to increase the accuracy
- Communication function: Realize computer control through RS485 communication interface

Specifications

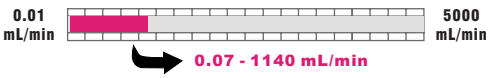
Flow rates: 0.2 μL / min to 500 mL / min
Dispensing volume: 0.01 mL to 9.99 L
Speed: 0.1 rpm to 100.0 rpm
Copy number: 0 to 9999
Pause time: 0.1 s to 99.9 min
Back suction time: 0 to 99.9 s
External control: start/stop control, direction control, flow rates control (0 - 5V ,0 - 10V , 4 - 20 mA , 0 - 10 kHz optional)
Signal output: start/stop, direction output and 0 - 10 kHz frequency output (corresponding to 0 to 100.0 rpm) with insulating function
Communication: RS485
Power supply:
AC 100 - 240V ± 10% 50Hz/60Hz
Power consumption: < 40 W
Operating condition:
Temperature 0 to 40°C
Relative humidity < 80%
Dimensions (L × W × H):
285×207×180 (mm)
Drive weight: 3.8 kg
IP rating: IP 31

LAB

Drive	Part Number	Pump Head	Tubing	Flow Rates (*/min)	Weight (kg)
BT100 - 1F	0502132	YZ1515x , YZ II 15	13# 14# 19# 16# 25# 17# 18#	7 μL - 380 mL	4.2
		YZ2515x	15# 24#	0.17 mL - 500 mL	
		YZ II 25	15# 24# 35# 36#		
		DG - 1, DG - 2, DG - 4 (6 rollers)	Wall Thickness: 0.8 - 1.0 (mm) Inner Diameter: ≤ 3.17 mm	0.25 μL - 48 mL (single channel)	4.0 - 4.2
		DG - 1, DG - 2, DG - 4 (10 rollers)		0.2 μL - 32 mL (single channel)	

Dispensing Peristaltic Pump

Flow Rates



BT300-1F

Applicable pump heads for BT300-1F are YZ1515x, YZ2515x, YZII15, YZII25. The pump delivers flow rates from 0.07 to 1140 mL/min. 128 x 64 graphic LCD displays running menus and parameters setting menus. The display interfaces are friendly. It has many control modes. The external control can be realized through standard external control interface or RS485 communication interface.

Applicable Pump Heads

YZ1515x
YZ2515x

YZII15
YZII25

Functions and Features

- Acceptable pump heads: YZ1515x, YZ2515x, YZII15, YZII25
- Set pause time to realize dispensing and filling automatically
- Display can switch between flow rates and rpm
- Calibration function to acquire more accurate flow rates
- RS485 communication interface available. Offering communication protocol to customer and customizing software according to customer's requirements.

Specifications

Speed: 1 to 300 rpm, reversible
Speed precision: 1 rpm
Speed control: Rotary encoded switch coupled with membrane keypad
Display: 128×64 graphic LCD displays flow rates, speed or dispensing mode
Copy number: 1 to 999
Dispense volume: 0.1 mL to 99.9 L
Pause time: 1 to 999 s
Back suction angle: 0 to 360 18° increments
External control: Start/stop and cw/ccw control, 0 to 5 V, 0 to 10 V, and 4 to 20 mA speed control
Communication interface: RS485
Power supply:
AC 220 V ± 10% 50/60 Hz (standard)
AC 110 V ± 10% 50/60 Hz (optional)
Power consumption: < 50 W
Operating condition: Temperature 0 to 40 °C
Relative humidity < 80%
Dimensions (L × W × H): 202×160×239 (mm)
Drive weight: 4.3 kg
IP rating: IP 31

Drive	Part Number	Pump Head	Tubing	Flow Rates (mL/min)	Weight (kg)
BT300 - 1F	0502322	YZ1515x YZ II15	13# 14# 19# 16# 25# 17# 18#	0.07 - 1140	4.7
	0502325	YZ2515x YZ II25	15# 24#	1.7 - 870	4.7

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

Dispensing Peristaltic Pump

WT600-1F

Acceptable various pump heads for WT600-1F are YZ1515x, YZ2515x, YZII15, YZII25, KZ25, DMD25 and DG15-24. The pump delivers flow rates from 0.7 mL to 6000 mL/min and dispensing volumn is from 0.1 mL to 99.9 L. Combining 128 32 LCD display with membrane keypad and rotary encoded switch makes the operation easy and prompt. The speed can be adjusted manually or automatically through external control interface.

Flow Rates

Applicable Pump Heads

Functions and Features

- Acceptable pump heads: YZ1515x, YZ2515x, YZII15, YZII25, DG15 - 24, KZ25, DMD25
- Back suction function: In dispensing mode, the pump runs reversely after finishing one filling operation to prevent the liquid from dripping
- Operating mode: Membrane keypad and rotary encoded switch
- Speed control: The speed can be adjusted manually or automatically through external control
- Display: LCD displays current running status and parameters
- Prime key: For fast filling and emptying
- Memory function: Storing the running parameters automatically
- Calibration function: The flow rates and the dispensing volume can be calibrated to increase the accuracy

Specifications

Flow rates: 0.7 to 6000 mL / min
Dispensing volume: 0.1 mL to 99.9 L
Speed: 10 to 600 rpm
Copy number: 0 to 9999
Pause time : 0.1 s to 99.9 min
Back suction: 0 to 9.9 revolution
Flow rates calibrating time: 0.5 - 30 min
External control: start/stop control, direction control, flow rates control (0 - 5V ,0 - 10V , 4 - 20 mA , 0 - 10kHz optional)
Output interface: start/stop, direction output and 0 - 10 kHz frequency output
Communication: RS485
Power supply: AC 176V - 264V, 50Hz/60Hz
Power consumption: < 140 W
Operating condition: Temperature 0 to 40°C
Relative humidity < 80%
Drive Dimensions(L×W×H):
285×207×180 (mm)
Drive weight: 5.2 kg
IP rating: IP 31

Drive	Part Number	Pump Head	Tubing	Flow Rates (mL/min)	Weight (kg)
WT600 - 1F	0502661	(1,2) ×YZ1515x	13# 14# 19# 16# 25# 17# 18#	Single channel 0.7 - 2200	5.6 - 6.0
		(1,2) ×YZ II 15			
		(1,2) ×YZ2515x	15# 24#	Single channel 17 - 1600	
		(1,2) ×YZ II 25	15# 24# 35# 36#	Single channel 17 - 3000	
		KZ25		34 - 6000	6.0
		DG15 - 24	16# 25# 17#	8.2 - 1800	6.0
		DMD25 (≤350rpm)	119# 120# 15# 24# 35# 36#	5 - 4000	7.7

* Max. speed for DMD25 is 350 rpm

Industrial Peristaltic Pump

Flow Rates

0.001 mL/min — 20000 mL/min

600 mL/min- 11000 mL/min

YT600-1J

Applicable pump heads

YZ35-13

KZ35

INDUSTRIAL

The pump delivers flow rates from 600 to 11000 mL/min. The speed can be adjusted manually or automatically through external control interface. Driven by DC motor YT600-1J has higher torque and can drive double pump heads. Suitable for industrial applications which need high pressure and flow rates.

Specifications

Speed	60–600 (rpm) , reversible
Speed control	10 turn potentiometer
Power supply	AC 220 V±10% 50/60 Hz
Power consumption	＜400 W
Operating condition	Temperature 0 to 40℃ Relative humidity ＜80%
External control	Start/stop control, speed control (1 - 10 kHz, 1 - 10 V, 4 - 20 mA optional, 4 - 20 mA is standard configuration)
Dimensions (L×W×H)	325×236×193 (mm)
IP rating	IP 54

Functions and Features

- Acceptable pump heads: YZ35-13, KZ35
- Suitable for industrial applications
- Can be equipped with Longer Dispensing Controller for filling function when connecting single channel pump head

Drive	Part Number	Pump Head	Tubing	Flow Rates (mL/min)	Weight (kg)
YT600 - 1J	0502521 0502522 0502523	YZ35 - 13	73# 82#	600 - 11000	20
		KZ35		600 - 11000	
		2×YZ35 - 13		(Single Channel) 600 - 11000	
		2×KZ35		(Single Channel) 600 - 11000	

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

Industrial Peristaltic Pump

Flow Rates

100 mL/min — 20000 mL/min

100 - 11000 mL/min

WT600-4F

WT600-4F is a high IP rating and high efficient pump with high-power DC brushless motor, it is suitable for working in dust and damp industrial environment. It delivers flow rates from 100 to 11000 ml/min and dispensing volume from 100ml to 999 liters when loading YZ35 or KZ35 pump head. WT600-4F adopts 128 32 LCD to display all the running information and parameters and membrane keypad to set parameters. It is easy to operate. This pump can be controlled adopts manually or externally through standard external control module and RS485.

INDUSTRIAL

Specifications

Flow rates: 100 to 11000 ml/min
Dispensing volume: 100 ml to 999 liters
Speed: 10 to 600 rpm
Copy Number: 0 to 9999, “0” means running continuously
Pause time: 1s to 99.9 min
Back suction: 0 to 9.9 revolutions, (increment is 0.1 revolution)
Calibration time: 30 to 1800 seconds
External control input: Start/stop control, direction control, flow rates control (0 - 5V, 0 - 10V, 4 - 20 mA , 0 - 10kHz optional)
External control output: Start/stop output, direction output, 0 - 7.5 kHz frequency output corresponding to 0 to 600 rpm.
Communication: RS485
Power: AC 176 - 264 V, 50/60 Hz
Power consumption: < 300 W
Operating condition: Temperature 0 to 40 C, Relative humidity < 100%
Dimensions (L × W × H): 292×185×180 (mm)
Drive weight: 12 kg
IP Rating: IP65

Functions and Features

Acceptable pump head: YZ35-13, KZ35.

Back suction: Prevent dripping of liquid when dispensing a certain liquid volume.

Operating mode: Membrane keypad to set parameters and operation.

Control mode: Pump can be controlled internally through membrane keypad or externally through external control modules.

Display: 128 32 LCD displays all the running information and parameters.

Prime function: Fast filling or emptying the tubing.

Memory function: Save the parameters and working status automatically.

Calibration: The flow rates and dispensing volume can be calibrated to improve the accuracy.

Drive	Part Number	Pump Head	Housing Material	Tubing	Flow Rates (mL/min)	Weight (kg)
WT600-4F	0502662 0502664 0502663 0502661	YZ35 - 13 (1,2)	PSU	73# 82#	100 - 11000 (Single Channel)	13.65
		KZ35 (1,2)	304 Stainless Steel			15.7

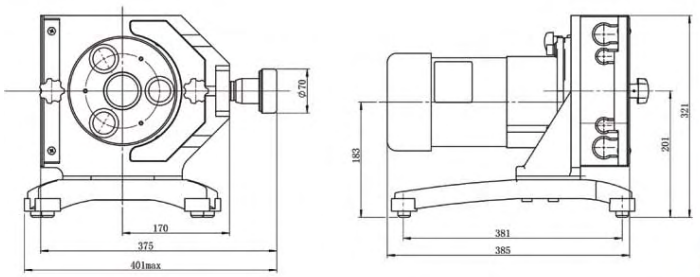
Batch Transferring Pump

JL350-2J

Flow Rates

0.001 mL/min — 35 L/min

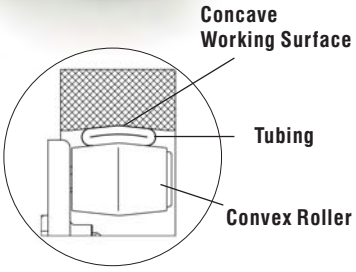
≤ 35 L/min



INDUSTRIAL

Specifications

Speed:
30 to 350 rpm, reversible
Speed precision: 0.6 rpm
Power supply:
AC 220 V ± 10% 50/60 Hz
Power consumption: < 400 W
Operating condition: Temperature 0 to 40 °C
Relative humidity < 80%
Dimensions (L×W×H): 417×401×321 (mm)
Drive weight: 32 kg
IP rating: IP 55



Tubing Loading

A
1. Turn the knob ① ② counter clockwise.
2. Turn the hand wheel to loose the compression block
3. Pull the knob ③ and take out the front cover

B 4. Select suitable tubing slots. Place the tubing between the roller and the compression block, then put the tubing in the corresponding tubing slots

C
5. Pull the knob ③, insert the front cover, tighten the knob ①
6. Turn the hand wheel and adjust the occlusion between the roller and the compression block
7. Tighten the knob ② and fix the compression block

Functions and Features

- High-power pumps, and the maximum flow rates can reach 35L/min
- The structure of concave working surface and convex roller realizes the tubing self-position function. It reduces abrasion and prolongs tubing life.
- Variable frequency speed control to AC motor with creeper gear
- Adjustable occlusion
- Strong drive
- Pump head operation is visible through transparent front cover

Drive	Part Number	Pump Head	Tubing	Flow Rates (L/min)	Weight (kg)
JL350 - 2J	0502352	KZ48/63	86#	0.8 - 7.5	32
			88#	1.3 - 15	
			90#	2.7 - 32	
			92#	3 - 35	

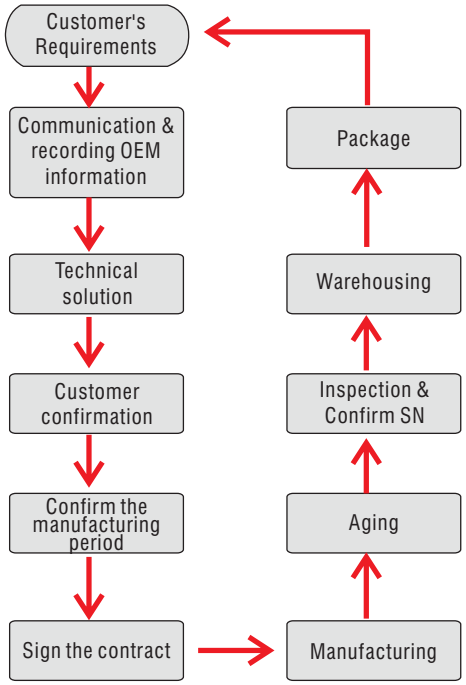
Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

OEM Products

Longer company has accumulated rich experience in research and manufacture of peristaltic pump. Utilizing present resources which include software, hardware, materials and market, etc. we can provide reasonable and economical OEM products with professional design. Longer company also can design or manufacture special products to meet customers' requirements.

Utilize present products — Stable functions and short delivery period (preferred)

Custom design — To meet your special requirements(Batch purchasing)



OEM Applications

- Fluids sampling of inspection or testing instruments
- Feeding of fluids equipments
- Dispensing and filling fluids equipments
- Other fluids transfer

OEM Examples

Type	Introduction	Functions and Features	Specifications
 OEM10/TH15	OEM10 has four kinds of optional fixed speed which can deliver max. flow rates of 167 ml/min, it is one of ideal OEM product and has been widely used in environment monitoring, ferment, and filling industry, etc.	OEM10 adopts AC synchronous motor which has stable speed and high repeatability. Pump head with two spring rollers can reduce the abrasion of tubing and prolong the tubing life.	Speed: Four kinds of fixed speed of 5, 20, 60, 110 rpm, reversible Power supply: AC220V Power consumption: 15W Dimensions: 105.5 110 80 (mm) Weight: 0.7kg
 OEMBJ60-01/WX10	The pump delivers flow rates from 0.001 to 24 mL/min. The speed can be adjusted by BCD DIP coding switch which is divided into 15 levels, or controlled by external pulse.	Suitalbe for tubing which the inner diameter is less than 3.17 mm and wall thickness is from 0.8 to 1.0 mm. Reasonable and fine shape, compact size, DC power supply, ideal for OEM.	Speed: 0 - 60 rpm, reversible Speed precision: 1 rpm Speed control: BCD switch, the speed is 1, 3, 5, 7 rpm when the speed is less than 10 rpm and the increment is 5 rpm when the speed is more than 10 rpm Power supply: 12V/1A DC Power consumption: Less than 10 W Dimension: 116 60 73 (mm) Weight: 0.55 kg
 OEMBJ100-01/JY15-12	The pump delivers flow rates from 0.7 to 170 mL/min. The speed can be adjusted by BCD DIP coding switch which is divided into 15 levels, or controlled by external pulse.	Suitable for tubing with wall thickness of 1.6 mm. Low speed, high flow rates, long life. Reasonable and fine shape, compact size, DC power supply, ideal for OEM.	Speed: 0 - 60 rpm, reversible Speed precision: 1 rpm Speed control: BCD switch, the increment is 5 rpm when the speed is less than 50 rpm and the increment is 10 rpm when the speed is more than 50 rpm Power supply: 12V/2A DC Power consumption: Less than 25 W Dimension: 118 60 86 (mm) Weight: 0.58 kg
 OEM103/DG-2	OEM103 adopts step motor with bracket and shock absorption parts which reduce the vibration and make it easy to load pump head. It has been widely used in flow injection analysis instrument and ultraviolet radiation analysis instrument.	Driver need to be designed or selected to drive the step motor. Acceptable pump heads are YZ and DG series pump heads.	Max. Speed: 100 rpm (DG pump heads) 300 rpm (YZ pump heads) Dimensions: 130 120 115 (mm)
 OEMWX15-12	OEMWX15-12 delivers the maximum flow rates of 46 ml/min, small size; it is suitable to be built in customers equipment.	OEMWX15-12 adopts DC gear motor and #16 silicon tubing, user can control flow rates by adjusting voltage of motor.	Speed: 0-100 rpm, reversible Power supply: DC24V or DC12V Dimension: 70 60 50 (mm) Weight: 0.2kg

Note: Operating condition is temperature 0 to 40℃, relative humidity <80%.

Tubing

Features of peristaltic pump tubing

- Good flexibility. Spring back after pressed radially
- Good wear abrasion resistance
- A certain extent pressure bearing capabilities
- Lower gas permeability
- Low absorption, good temperature resistance, not easy to aging, not swelling, anti-corrosion, fewer extractable

Tubing parameters

Inner diameter and wall thickness are the main parameters of the tubing. Deferent manufacturers have deferent notations. Such as: specification codes or inner diameter wall thickness.

Tubing materials

Silicon rubber, rubber, plastic, synthetic material, etc. Different materials have different characteristics and different applications.

Tubing selection factors

- Chemical Compatibility

  When transfer different fluids, the tubing should have good chemical characteristics, which is chemical compatibility. Such as: low absorption, good temperature resistance, not easy to aging, not swelling, anti-corrosion, fewer extractable
  Chemical resistance decreases as temperature increases. Chemicals that have no effect on the tubing at room temperature could attack the tubing at elevated temperatures.

  Chemical compatibility test method:

  When the chemical compatibility of the tubing is uncertain, an immersion test is needed. In an immersion test, a small piece of tubing is weighed, and its diameter and length are measured. The tubing then is immersed in a closed vessel with the chemical in question for a minimum of 48 hours. Afterward, the test piece of tubing is rinsed, dried, weighed and measured, and any changes are recorded. The tubing also should be examined for signs of softening or embrittlements, which indicate the chemical has attacked the tubing.
  If the tubing survives the test without discoloration, swelling, cracking, loss of flow or other signs of deterioration, then it is compatible with the fluid.

- Pressure

  Peristaltic pump applications typically have been limited by the pressure capabilities of the tubing.
  If the pressure is too high, the tubing could swell, resulting in an improper fit through the pump head, which causes excessive wear and tubing failure
  The factors which affect the pressure are material, the proportion of diameter and wall thickness, etc.

- Temperature

  The working temperature range of a tubing material is another important consideration. Different materials have different temperature range.

- Dimension

  The size of the tubing has a direct effect on the amount of fluid delivered. Well-designed pumps are engineered to work with an optimum tubing size or range of tubing sizes, taking into account the tubing's inner diameter and wall thickness. The inner diameter determines the amount of fluid delivered with each turn of the rotor. The wall thickness affects the tubing's ability to spring back to its original shape after each compression, which has a great influence on the overall life of the tubing.

- Regulatory Approval

  Many tubing materials are designed to meet these various regulatory approvals, including those issued by the United States Pharmacopoeia (USP) , European Pharmacopoeia (EP) , U.S. Food and Drug Administration (FDA) , U.S. Department of Agriculture (USDA) and National Sanitation Foundation (NSF) .

- Tubing Flex Life

  Different tubing materials have differing abilities to withstand the repeated squeezing action of the rollers. In general, each tubing size, tubing material, pump head style, and operating speed in combination has its own life characteristics. Service life, or flex life in the pump, is the primary concern in a new application. Pump performance is very consistent in a specific application. Maximize the life of a pump system by selecting a tubing material that offers long flex life, using thicker wall tubing, and/or by operating a larger pump at slower speed.

Tubing

Tubing Types which Longer Company Can Provide

Silicon Tubing

- Platinum-Cured Silicone Tubing

  Slightly clarity, smooth surface, low protein binding levels, fewer potential leachable
  Ideal for pharmaceutical and biotechnology use, suitable temperature range -51 to 238 °C

- Peroxide-Cured Silicone Tubing

  Slightly clarity, smooth surface, economical, longer tubing life, suitable temperature range -51 to 238°C

SAINT-GOBAIN Tubing

Tygon®, PharMed® BPT , Viton®, Fluran® , Norprene® , Please contact Longer Company for detail information

Tubing Specifications:

Medium flow rates tubing

Tubing Sizes		13#	14#	19#	16#	25#	17#	18#	15#	24#	35#	36#
Tubing cross sections (1:1)												
Wall thickness (mm)		1.6							2.4			
Inner diameter (mm)		0.8	1.6	2.4	3.1	4.8	6.4	7.9	4.8	6.4	7.9	9.6
Maximum pressure (Mpa)	Continuous	0.17				0.14	0.10	0.07	0.17		0.14	
	Intermittent	0.27				0.24	0.14	0.10	0.27		0.24	

Micro flow rates tubing

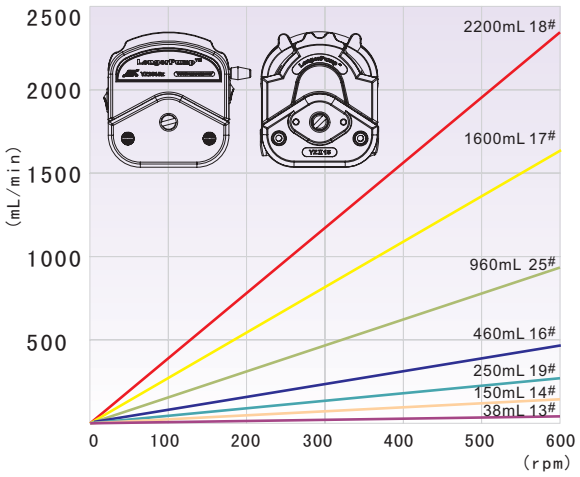
Tubing Sizes		0.13 0.86	0.5 0.86	0.86 0.86	1.52 0.86	2.06 0.86	2.4 0.86	2.79 0.86	3.17 0.86	1 1	2 1	3 1
Tubing cross sections (1:1)												
Wall thickness (mm)		0.86								1.0		
Inner diameter (mm)		0.13	0.5	0.86	1.52	2.06	2.4	2.79	3.17	1.0	2.0	3.0
Maximum pressure (Mpa)	Continuous	0.1										
	Intermittent	0.1										

Industrial tubing

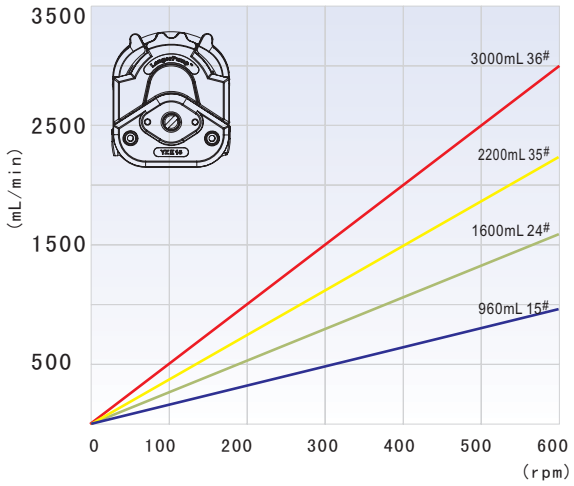
Tubing Sizes		73#	82#	86#	90#	88#	92#
Tubing cross sections (1:1)							
Wall thickness (mm)		3.3		6.3		4.8	
Inner diameter (mm)		9.6	12.7	9.6	19	12.7	25.4
Maximum pressure (Mpa)	Continuous	0.17	0.07	0.14			
	Intermittent	0.27	0.14	0.14			

Tubing Ref.Flow Rates Curve

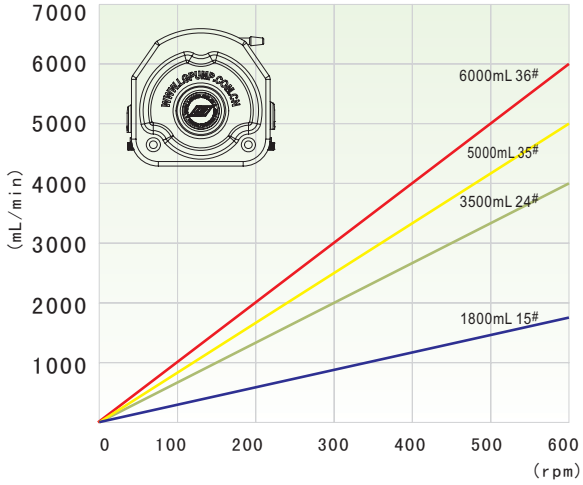
YZ1515x YZ II 15



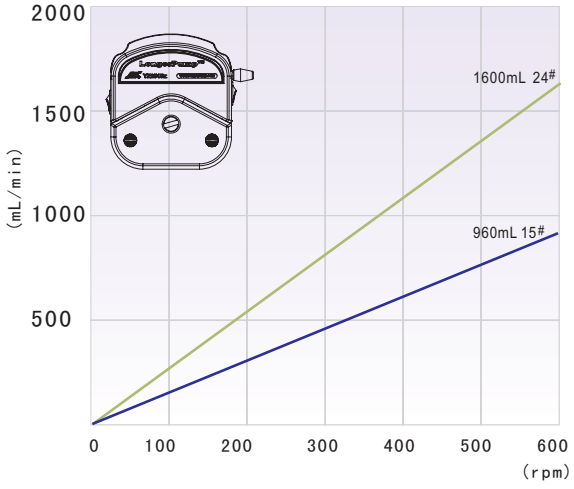
YZ II 25



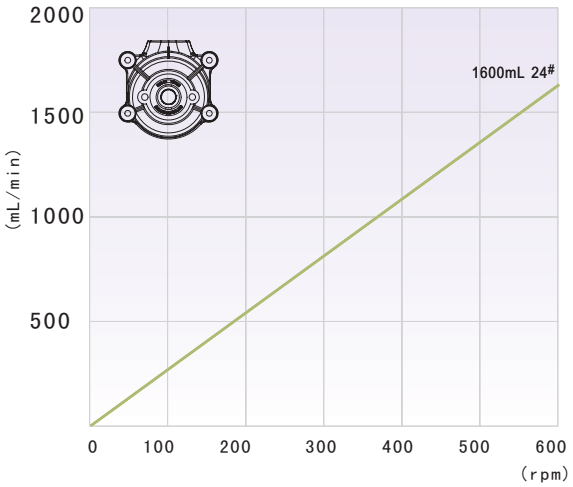
KZ25



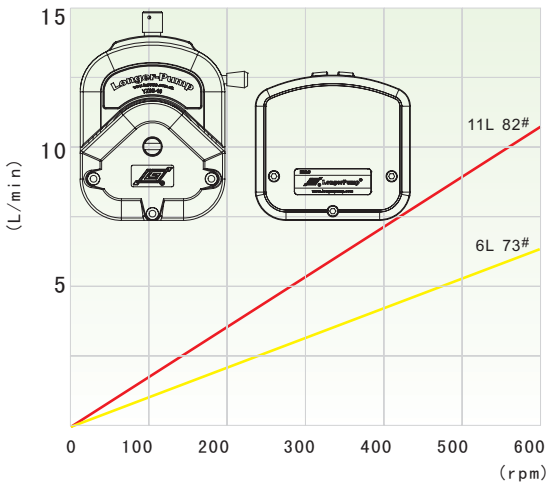
YZ2515x



BZ25



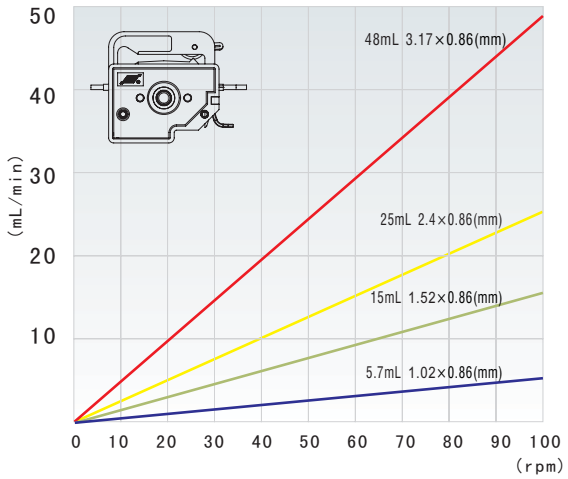
YZ35-13 KZ35



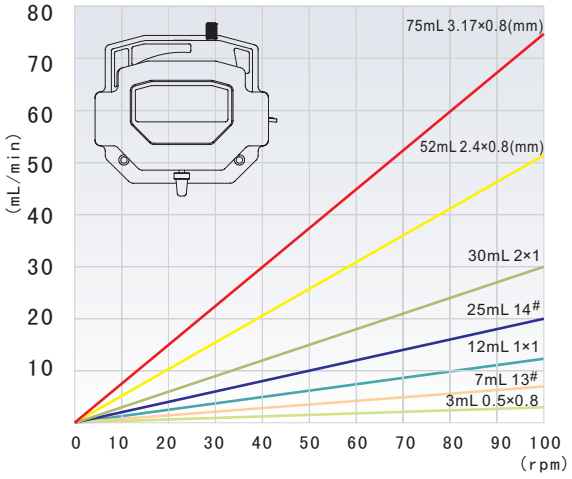
Tel:98-21-66486437/66486438Fax:98-21-66485558InternetE-mail:info@navidkala.com
www.naivdkala.com

Tubing Ref.Flow Rates Curve

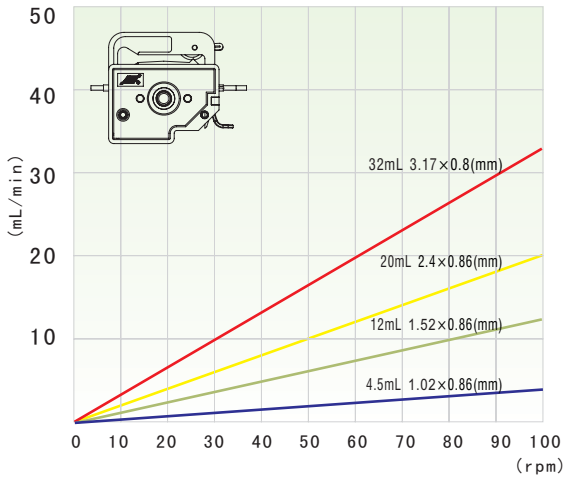
DG-1 DG-2 DG-4 DG-6 DG-8 DG-12 (6 rollers)



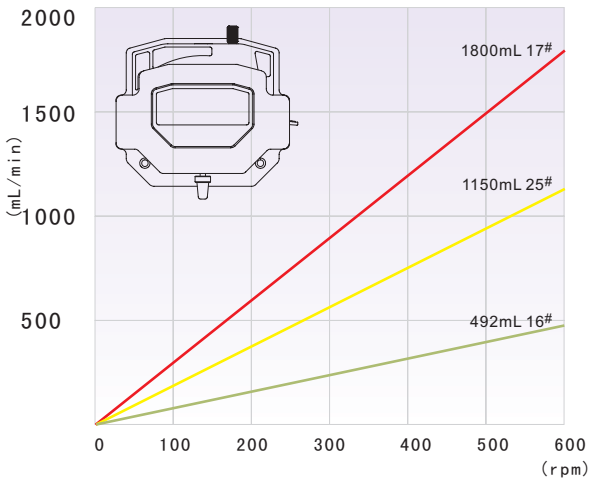
DG15-28、DG15-48



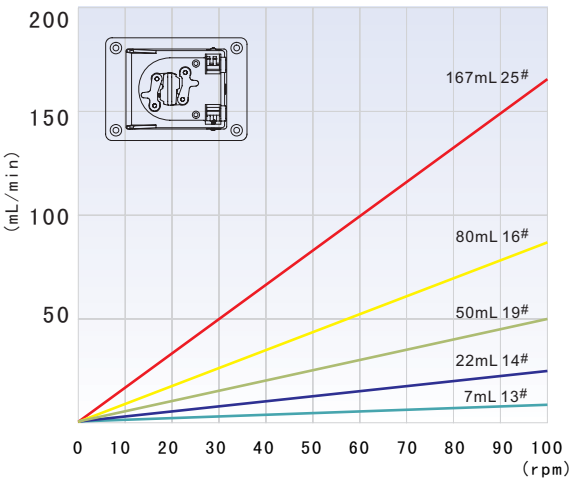
DG-1 DG-2 DG-4 DG-6 DG-8 DG-12 (10 rollers)



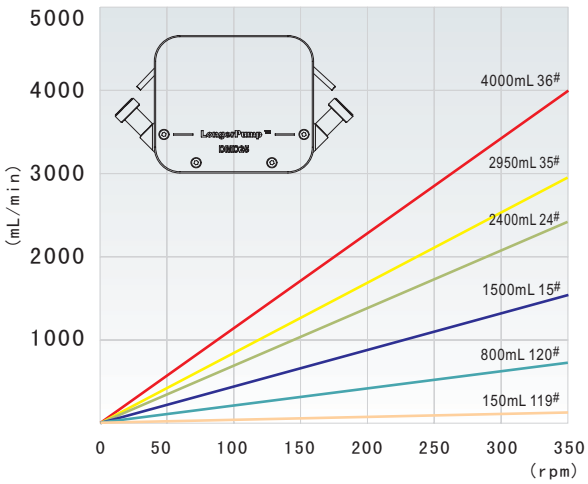
DG15-24



TH15



DMD25



TUBING

Fitting

Four materials are available for fittings. These fittings match perfectly to the tubing to ensure smooth flow and a proper fit.

High-Density Polyethylene (HDPE): Very good chemical resistance. Temperature range: –53 to 87°C. Sterilize by ethylene oxide only.
Nylon: Good chemical resistance.
Temperature range: –40 to 93°C. Sterilize by ethylene oxide only.
Natural Polypropylene (Natural PP): Very good chemical resistance.Temperature range: –17 to 135°C. Sterilize by ethylene oxide or autoclave.
PVDF: Excellent chemical resistance.Temperature range: –62 to 129°C. Sterilize by ethylene oxide or autoclave.

Fitting Type	Connector ID	Use with tubing sizes		
		Laboratorial Type	Industrial Type	Batch Transferring Type
Straight connectors 	1/16″（1.6mm）	13# 14#	–	–
	1/8″（3.2mm）	16#	–	–
	3/16″（4.8mm）	15# 25#	–	–
	1/4″（6.4mm）	17# 24#	26#	–
	3/8″（9.6mm）	18# 35# 36#	70# 73#	86#
	1/2″（12.7mm）	–	82# 88#	88#
	5/8″（15.9mm）	–	89#	–
	3/4″（19.0mm）	–	–	90#
	1″（25.4mm）	–	–	92#
"T "type connectors 	1/16″（1.6mm）	13# 14#	–	–
	1/8″（3.2mm）	16#	–	–
	3/16″（4.8mm）	15# 25#	–	–
	1/4″（6.4mm）	17# 24#	26#	–
	3/8″（9.6mm）	18# 35# 36#	70# 73#	86#
	1/2″（12.7mm）	–	82# 88#	88#
	5/8″（15.9mm）	–	89#	–
	3/4″（19.0mm）	–	–	90#
	1″（25.4mm）	–	–	92#
"Y "type connectors 	1/16″（1.6mm）	13# 14#	–	–
	1/8″（3.2mm）	16#	–	–
	3/16″（4.8mm）	15# 25#	–	–
	1/4″（6.4mm）	17# 24#	26#	–
	3/8″（9.6mm）	18# 35# 36#	70# 73#	86#
	1/2″（12.7mm）	–	82# 88#	88#
Male threaded connectors 	1/8″–1/8″	16#	–	–
	3/16″–1/8″	15# 25#	–	–
	1/4″–1/4″	17# 24#	26#	–
	3/8″–1/4″	18# 35# 36#	70# 73#	86#
	1/2″–1/2″	–	82# 88#	88#
	5/8″–1/2″	–	89#	–
	3/4″–1/2″	–	–	90#
Reducing connectors 	1/16″–1/8″	13# 14#	–	–
	1/8″–3/32″	16#	–	–
	3/16″–1/8″	15# 25#	–	–
	1/4″–1/8″	17# 24#	26#	–
	3/8″–1/4″	18# 35# 36#	70# 73#	86#
	1/2″–3/8″	–	82# 88#	88#
	5/8″–1/2″	–	89#	–
	3/4″–1/2″	–	–	90#
	1″–1/2″	–	–	92#

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

Accessories

Standard External Control Interface

Applicable Drive Types

BQ50 - 1J	BT100 - 1L
BT100 - 2J	BT100 - 1F
BT300 - 2J	BT300 - 1F
BT600 - 2J	WT600 - 2J
LEAD - 2	WT600 - 1F

Five Kinds of Control Modes

0 - 5V analog input
0 - 10V analog input
4 - 20mA analog input
0 - 10kHz Pulse Input
Communication control

Note: Please see above picture for part numbers

Dispensing Controller

Type	Part Number	Function and Feature
FK - 1C	0505212	Dispensing controller can be equipped with many peristaltic pumps to realize dispensing automatically

Footswitch

Type	Connector	Part Number	Applicable Products
JK - 1	DB - 9	0505201	Peristaltic Pump
JK - 2	DB - 9	0505202	Dispensing Controller
JK - 3	DB - 15	0505203	Peristaltic Pump
JK - 4	DB - 9	0505204	LSP Series Syringe Pump (the PCB board of the pump needs to be modified)
JK - 5	DB - 15	0505205	TJ Series Syringe Pump
JK - 6	None	0505203	TS Series Syringe Pump

Footswitch Working Modes

JK-1	1. Gated: Connect the footswitch to the pump. The pump stops after power up. The pump runs as long as the footswitch is pressed. 2. Trigger: Connect the footswitch to the pump. The pump stops after power up. Press footswitch, the pump starts running. Press footswitch again, the pump stops.
JK-2	Trigger: Press the footswitch one time, dispensing controller FK-1C starts running according to the set running time. When the set running time is out, FK-1C stops.
JK-3	Gated: The pump runs as long as the footswitch is pressed.
JK-4	1. Gated: Connect the footswitch to the pump. The pump stops after power up. The pump runs as long as the footswitch is pressed. 2. Trigger: Connect the footswitch to the pump. The pump stops after power up. Press footswitch, the pump starts running. Press footswitch again, the pump stops.
JK-5	Trigger: Connect the footswitch to the pump. The pump stops after power up. Press footswitch, the pump starts running. Press footswitch again, the pump stops.
JK-6	Trigger: Connect the footswitch to the pump. The pump stops after power up. Press footswitch, the pump starts running. Press footswitch again, the pump stops.

TJ-1A/L0107-1A
TJ-2A/L0107-2A SYRINGE PUMP

The pumps combine precison, compact size with ease of install and operation. It can hold μL unit standard glass syringe. The features of accurate distance control and broad linear speed range (7.94μm/min - 79.4mm/min) can meet versatile requirements. Its vertical (horizontal) installation structure makes this pump easily used in micromanipulator, stereotaxic instrument for various biologic research applications.

Functions and Features

Working mode: TJ-1A/L0107-1A: Infusion
TJ-2A/L0107-2A: Infusion, withdrawal, infusion/withdrawal, withdrawal/infusion, continuous

User-defined glass syringe: Save 4 inner diameters of user-defined glass syringe barrel

Linear force output: Full stroke ＞20 N

Memory functon: Select resume operaton or remain stopped when power returns after an interruption

Signal output: Start/Stop output, cw/ccw output (open collector)

Calibration: Acquire accurate volume through calibration

Fast forward & fast reverse: Infusion or filling at the max. Speed

Specifications

Max. Infusion distance: 70 mm

Acceptable glass syringe: 5 - 1000 (μL)

Linear speed: 7.94 μm/min - 79.4 mm/min

Adjusting resolution: 7.94 μm/min

Distance resolution: 0.165 μm

Linear force: ＞20 N

Operating mode: Membrane keypad and rotary encoded switch

Accuracy: ≤ 0.5% error in the condition of ≥ 30% of max. infusion distance

Display: 128×64 graphic LCD

External control: Start/Stop control, fast forward control, fast reverse control

Communication interface: RS485

Power: AC 100 V - 240 V or DC 12 V

Power consumption: ≤ 10 W

Operating condition:
Temperature 0 - 40 °C
Relative humidity ＜80 %

Controller dimensions (L×W×H): 170×108×65 (mm)

Controller weight: 0.8 kg

Drive unit dimensions (L×W×H): 180×46×78 (mm)

Drive unit weight: 0.6 kg

IP rating: IP 21

Syringe Pump (Part Number)	Glass Syringe Specification (μL)	Barrel Inner Diameter (mm)	Effective Stroke (mm)	Flow Rates (nL/min - μL/min)	Syringe Material	Weight (kg)
TJ - 1A / L0107 - 1A (0503101) (0503001)	5	0.35	51.97	0.764 - 7.64	Glass Syringe	Controller 0.8 Drive Unit 0.6
	10	0.50	50.93	1.559 - 15.59		
	25	0.80	49.74	3.989 - 39.89		
	50	1.10	52.61	7.544 - 75.44		
TJ - 2A / L0107 - 2A (0503111) (0503011)	100	1.60	49.74	15.96 - 159.6		
	250	2.30	60.17	32.98 - 329.8		
	500	3.25	60.27	65.85 - 658.5		
	1000	4.61	59.91	132.5 - 1325		

Note: Flow rates = Linear rate × Section area of the barrel

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

TS-1A/L0107-1A
TS-2A/L0107-2A SYRINGE PUMP

The pumps combine precison, compact size, multiple functions with ease of operation. It can hold μL unit standard glass syringe. The features of accurate distance control and broad linear speed range (7.94μm/min-79.4mm/min) can meet versatile requirements. The drive unit is separate, easy to installation and combination. Its vertical (horizontal) installation structure makes this pump easily used in micromanipulator, stereotaxic instrument for various biologic research applications.

TS-2A/L0107-2A
Infusion/Withdrawal
Lock devices
See
View

Specifications

Max. infusion distance: 70 mm
Acceptable glass syringe: 5 μL - 1000 μL
Linear speed: 7.94 μm/min - 79.4 mm/min
Adjusting resolution: 7.94 μm/min
Distance resolution: 0.165 μm
Linear force: ＞20 N
Operating mode: Membrane keypad and rotary encoded switch
Accuracy: ≤ 0.5% error in the condition of ≥ 30% of max. infusion distance
Display: 128×64 graphic LCD
External control: Start/Stop control, fast forward control, fast reverse control
Communication interface: RS485
Power: AC 100 V - 240 V or DC 12 V
Power consumption: ＜40 W
Operating condition: Temperature 0 - 40 °C
Relative humidity ＜80 %
Controller dimensions (L × W × H):
170×108×65 (mm)
Controller weight: 0.9 kg
Drive unit dimensions (L × W × H):
180×46×78 (mm)
Drive unit weight: 0.6 kg
IP rating: IP 21

Functions and Features

Parameters setting: The parameters of each channel can be different.
Running control: Each drive unit can be controlled separately; Or four drive units can be controlled to run simultaneously or run at different time.
Channel copy: All drive units can run according to the parameters of one drive units of them
Delaying startup: Delaying startup time of each channel can be controlled separately
Memory functon: Select resume operaton or remain stopped when power returns after an interruption
Block protection: When one drive unit stops accidently, the system will warm and stop
Working mode: TS-1A/L0107-1A: Infusion
TS-2A/L0107-2A: Infusion, withdrawal, infusion/withdrawal, withdrawal/infusion, continuous
External control: Start/stop input control signal which is pulse mode to swith the states of start and stop
Each channel has two ways OC gate output to indicate the start/stop and direction of the channel
Communication: Realize computer control through RS485 communication interface

Main Functions for Each Channel

Syringe selection: The syringe can be selected in the manufacturer table which includes manufacturer, material and size
User-defined glass syringe: Save 4 inner diameters of user-defined glass syringe barrel
Parameters setting: Set dispensing volume, infusion time, pause time and copy number
Display mode selection: Different parameters (volume, flow rate, linear speed) can be selected in the main display interface
Fast forward & fast reverse: Infusion or withdrawal at the max. speed
Calibration: Acquire accurate volume through calibration

Syringe Pump (Part Number)	Glass Syringe Specification (μL)	Barrel Inner Diameter (mm)	Effective Stroke (mm)	Flow Rates (nL/min - μL/min)	Syringe Material	Weight (kg)
TS - 1A / L0107 - 1A (0503151) (0503001)	5	0.35	51.97	0.764 - 7.64	Glass Syringe	Controller 0.8 Drive Unit 0.6
	10	0.50	50.93	1.559 - 15.59		
	25	0.80	49.74	3.989 - 39.89		
	50	1.10	52.61	7.544 - 75.44		
TS - 2A / L0107 - 2A (0503161) (0503011)	100	1.60	49.74	15.96 - 159.6		
	250	2.30	60.17	32.98 - 329.8		
	500	3.25	60.27	65.85 - 658.5		
	1000	4.61	59.91	132.5 - 1325		

Note: Flow rates = Linear rate × Section area of the barrel

TJ-3A/W0109-1B Syringe Pump

This pump is a single channel micro syringe pump which has infusion/withdrawal mode. It combines precison, compact size, multiple functions with ease of operation. It can hold milliliter unit standard syringe. The features of accurate distance control and broad linear speed range (7.94 μm/min - 79.4 mm/min) can meet versatile requirements. The drive unit is independent. It is easy to combination and installation. It can meet different operation requirements and is suitable for various research fields.

Functions and Features

Working mode: Infusion, withdrawal, infusion/withdrawal, withdrawal/infusion, continuous
User-defined syringe: Save 4 inner diameters of user-defined syringe barrel
Linear force output: Whole course ＞90 N
Memory functon: Select resume operaton or remain stopped when power returns after an interruption
Signal output: Start/Stop output, cw/ccw output (open collector)
Calibration: Acquire accurate volume through calibration
Fast forward & fast reverse: Infusion or withdrawal at the max. speed

Specifications

Max. infusion distance: 90 mm
Acceptable syringe: 5 μL - 60 mL
Linear speed: 7.94 μm/min - 79.4 mm/min
Adjusting resolution: 7.94 μm/min
Distance resolution: 0.165 μm
Linear force: ＞90 N
Operating mode: zMembrane keypad and rotary encoded switch
Accuracy: ≤ ±0.5% error in the condition of ≥ 30% of max. infusion distance
Display: 128×64 graphic LCD
External control: Start/stop control, fast forward control, fast reverse control
Communication interface: RS485
Power: AC 90 V - 240 V or DC 12 V
Power consumption: ≤ 10 W
Operating condition: Temperature 0 - 40 °C
Relative humidity ＜ 80 %
Controller dimensions (L×W×H): 170×108×65 (mm)
Controller weight: 0.8 kg
Drive unit dimensions (L×W×H): 245×100×95 (mm)
Drive unit weight: 1.3 kg

Syringe Pump (Part Number)	Glass Syringe Specification (mL)	Barrel Inner Diameter (mm)	Effective Stroke (mm)	Flow Rates (μL/min - mL/min)	Syringe Material	Weight (kg)
TJ - 3A / W0109 - 1B (0503121) (0503021)	1	4.7	57.0	0.138 - 1.38	Class Syringe Plastic Syringe	Controller 0.8 Drive Unit 1.3
	2	8.98	31.6	0.503 - 5.03		
	5	12.25	42.5	0.936 - 9.36		
	10	14.9	58.2	1.384 - 13.84		
	20	19.05	70.0	2.262 - 22.62		
	30	22.05	78.0	3.031 - 30.31		
	60	29.15	89.9	5.297 - 52.97		

Note: Flow rates = Linear rate × Section area of the barrel

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

TS-1B/W0109-1B Syringe Pump

This pump is a four-channel micro syringe pump which has infusion/withdrawal mode. It combines precison, compact size, multiple functions with ease of operation. It can hold milliliter unit standard syringe. The features of accurate distance control and broad linear speed range (7.94 μm/min - 79.4 mm/min) can meet versatile requirements. The drive unit is independent. It is easy to combination and installation. It can perform complex operation and is suitable for various research fields.

Specifications

Max. infusion distance: 90 mm
Acceptable syringe: 5 μL - 60 mL
Linear speed: 7.94 μm/min - 79.4 mm/min
Adjusting resolution: 7.94 μm/min
Distance resolution: 0.165 μm
Linear force: ＞90 N
Operating mode: Membrane keypad and rotary encoded switch
Accuracy: ≤ 0.5% error in the condition of ≥30% of max. infusion distance
Display: 128×64 graphic LCD
External control: Start/stop control
Communication interface: RS485
Power: AC 90 V - 240 V or DC 12 V
Power consumption: ≤40 W
Operating condition:
Temperature 0 - 40 °C
Relative humidity ＜80 %
Controller dimensions (L×W×H):
235×178×74 (mm)
Controller weight: 0.9 kg
Drive unit dimensions (L×W×H):
245×100×95 (mm)
Drive unit weight: 1.3 kg

Functions and Features

Parameters setting: The parameters of each channel can be different.
Running control: Each drive unit can be controlled separately; Or four drive units can be controlled to run simultaneously or run at different time.
Channel copy: All drive units can run according to the parameters of one drive units of them
Delaying startup: Delaying startup time of each channel can be controlled separately
Memory functon: Select resume operaton or remain stopped when power returns after an interruption
Block protection: When one drive unit stops accidently, the system will warm and stop
Working mode: Infusion, withdrawal, infusion/withdrawal, withdrawal/infusion, continuous
External Control: Accept pulse signal to control the start/stop of the pump. Each channel has two ways OC gate output to indicate the start/stop and direction of the channel
Communication: Realize computer control through RS485 communication interface

Main Functions for Each Channel

Syringe selection: The syringe can be selected in the manufacturer table which includes manufacturer, material and size
User-defined syringe: Save 4 inner diameters of user-defined glass syringe barrel
Working mode: Infusion, withdrawal, infusion/withdrawal, withdrawal/infusion, continuous
Parameters setting: Set dispensing volume, infusion time, withdrawal time, pause time and copy number
Display mode selection: Different parameters (volume, flow rates, linear speed) can be selected in the main display interface
Fast forward & fast reverse: Infusion and withdrawal at the max. speed
Calibration: Acquire accurate volume through calibration

Syringe Pump (Part Number)	Glass Syringe Specification (mL)	Barrel Inner Diameter (mm)	Effective Stroke (mm)	Flow Rates (μL/min - mL/min)	Syringe Material	Weight (kg)
TS - 1B / W0109 - 1B (0503171) (0503021)	1	4.7	57.0	0.138 - 1.38	Class Syringe Plastic Syringe	Controller 0.8 Drive Unit 1.3
	2	8.98	31.6	0.503 - 5.03		
	5	12.25	42.5	0.936 - 9.36		
	10	14.9	58.2	1.384 - 13.84		
	20	19.05	70.0	2.262 - 22.62		
	30	22.05	78.0	3.031 - 30.31		
	60	29.15	89.9	5.297 - 52.97		

Note: Flow rates = Linear rate × Section area of the barrel

LSP01-1A/2A、LSP04-1A Syringe Pump

Infusion only syringe pumps. The acceptable syringes for LSP01-1A/2A are from 10 μL to 60 mL and for LSP04-1A is from 10 μL to 10 mL. Suitalbe for high accuracy and small flow rates liquid transferring.

Functions and Features

Syringe selection: The syringe can be selected in the manufacturer table which includes manufacturer, material and size or input the inner diameter of the syringe barrel directly

Easy to operate: Combining big screen LCD display with rotary encoded switch and membrane keypad makes the operation simple and prompt

Working mode: Infusion

Memory function:

1. The parameters are saved in EEPROM.The parameters don't need to be reset when power returns after an interruption

2. In flow rates mode, the pump remains running or stop according to the setting parameters when power returns after an interruption

Protection function: The pump will stall and give an alarm when the drive structure of the pump is blocked

Communication function: Realize computer control through RS485 communication interface

External control function: Input/output control

Calibration function: Acquire accurate volume through calibration

Syringe protection: Adjust syringe rest to prevent syringe from damaging

Specifications Comparison Table

Syringe Pump	LSP01 - 1A	LSP01 - 2A	LSP04 - 1A
Max. No. of syringes	1	1	4
Infusion volume per microstep	0.13μL (60 mL Syringe)	0.026μL (60 mL Syringe)	0.026μL (10mLSyringe)
Syringe size	10μL - 60mL	10μL - 60mL	10μL - 10mL
Flow rates	0.831nL/min - 54.155mL/min	0.166nL/min - 10.83mL/min	0.831nL/min - 21.675mL/min
Advance per mircostep	1/16step：0.156μm	1/16step：0.03125μm	1/16step：0.156μm
Max. linear rate	65mm/min	13mm/min	130mm/min
Min. linear rate	5μm/min	1μm/min	5μm/min
Max. step rate	6933 (1/16step) / sec		13867 (1/16step) /sec
Min. step rate	16 (1/16 step) /30 sec		
Working mode	Infusion		
Linear force	＞ 9kgf		
Accuracy	≤±0.5% error in the condition of ＞ 30% of max. infusion distance		
Operating mode	Rotary encoded switch and membrane keypad		
Display	128 x 64 graphic LCD		
Power	AC 100 - 240 V		
Operating condition	Temperature 5 °C - 40 °C Relative humidity ＜ 80 %		
Dimensions	280×210×140 (mm)		280×250×140 (mm)
Weight	3.6 kg		4.5kg

Syringe Pump	Syringe	I.D. (mm)	Flow Rates (μL/min - mL/min)	Linear Rate	Part Number
LSP01 - 1A	50μL	1.03	0.004 - 0.054	5μm/min - 65mm/min	0503401
	10mL	14.57	0.834 - 10.837		
	60mL	32.57	4.166 - 54.155		
LSP01 - 2A	50μL	1.03	0.001 - 0.011	1μm/min - 13mm/min	0503411
	10mL	14.57	0.167 - 2.167		
	60mL	32.57	0.833 - 10.831		
LSP04 - 1A	50μL	1.03	0.004 - 0.108	5μm/min - 130mm/min	0503451
	1mL	4.61	0.083 - 2.170		
	10mL	14.57	0.834 - 21.675		

Note：Flow rates＝Linear rate×Section area of the barrel

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

LSP02/10-1B Syringe Pump

These pumps are multi-channel syringe pump which have infusion/withdrawal mode. The acceptable syringes for LSP02-1B are from 10μL to 140mL and the acceptable syrings for LSP10-1B are from 10μL to 10mL. Suitable for high accuracy and small flow rates liquid transferring.

Functions and Features

Syringe selection: The syringe can be selected in the manufacturer table which includes manufacturer, material and size or input the inner diameter of the syringe barrel directly
Easy to operate: Combining big screen LCD display with rotary encoded swith and membrane keypad makes the operation simple and prompt.
Working mode: Infusion, withdrawal, infusion/withdrawal, withdrawal/infusion, continuous
Memory function:

1. The parameters are saved in EEPROM.The parameters don't need to be reset when power returns after an interruption.
2. In flow rates mode, the pump remains running or stop according to the settting parameters when power returns after an interruption.

Protection function: The pump will stall and give an alarm when the drive structure of the pump is blocked
Communication function: Realize computer control through RS485 communication interface
External control function: Input/output control
Calibration function: Acquire accurate volume through calibration
Syringe protection: Adjust syringe rest to prevent syringe from damaging

Specifications Comparison Table

Syringe Pump	LSP02 - 1B	LSP10 - 1B
Max. No. of syringes	2	10
Infusion volume per microstep	0.13μL (60 mL BD Syringe)	0.0257μL (10mL BD Syringe)
Syringe size	10μL - 140mL	10μL - 10mL
Flow rates	0.831nL/min - 150.5mL/min	0.831nL/min - 21.675mL/min
Advance per mircostep	1/16step：0.156μm	
Max. step rate	13867 (1/16step) /sec	
Min. step rate	16 (1/16 step) /30sec	
Max. linear rate	130mm/min	
Min. linear rate	5μm/min	
Working mode	Infusion, withdrawal, infusion/withdrawal, withdrawal/infusion, continuous	
Linear force	＞18kgf	
Accuracy	≤ ± 0.5% error in the condition of ＞30% of max. infusion distance	
Operating mode	Rotary encoded switch and membrane keypad	
Display	128×64 graphic LCD	
Power	AC 100 - 240 V	
Operating condition	Temperature 5°C–40°C Relative humidity：＜80%	
Dimensions	280×250×140 (mm)	280×330×140 (mm)
Weight	4.3 kg	5.3 kg

Syringe	I.D. (mm)	LSP02 – 1B			LSP10 – 1B		
		Ref. Flow Rates (μL/min - mL/min)	Linear Rate (μm/min - mm/min)	Part Number	Flow Rates (μL/min - mL/min)	Linear Rate (μm/min - mm/min)	Part Number
50μL	1.03	0.004 - 0.108	5 - 130	0503441	0.004 - 0.108	5–130	0503461
1mL	4.61	0.083 - 2.170			0.083 - 2.170		
2.5mL	7.28	0.208 - 5.411			0.208 - 5.411		
5mL	10.30	0.417 - 10.832			0.417 - 10.832		
10mL	14.57	0.834 - 21.675			0.834 - 21.675		
25mL	23.03	2.083 - 54.153					
50mL	32.57	4.166 - 108.310					
60mL	32.57	4.166 - 108.310					

Note：Flow rates＝Linear rate×Section area of the barrel

LSP01-1C Syringe Pump

This pump is a two-syringe push-pull syringe pump. The acceptable syringes are from 10μL to 10mL. Suitable for high accuracy and small flow rate liquid continuously transferring.

Functions and Features

Syringe selection: The syringe can be selected in the manufacturer table which includes manufacturer, material and size or input the inner diameter of the syringe barrel directly
Easy to operate: Combining big screen LCD display with rotary encoder switch and membrane keypad makes the operation simple and prompt
Working mode: Push-pull
Memory function:
1. The parameters are saved in EEPROM. The parameters don't need to be reset when power returns after an interruption
2. In flow rate mode, the pump remains running or stop according to the setting parameters when power returns after an interruption

Protection function: The pump will stall and give an alarm when the drive structure of the pump is blocked
Communication function: Realize computer control through RS485 communication interface
External control function: Input/output control
Calibration function: Acquire accurate volume through calibration
Syringe protection: Adjust syringe rest to prevent syringe from damaging

Specifications

Syringe size	10μL - 10mL
Linear force	9kg
Advance per mircostep	0.156μm (1/16step)
Infusion volume per Microstep	0.026μL (10mL syring 1/16step)
Max. step rate	6933 (1/16step) /sec
Min. step rate	16 (1/16step) /30sec
Max. linear rate	65mm/min
Min. linear rate	5μm/min
Flow rates	0.831nL/min - 10.84mL/min
Accuracy	≤ 0.5% error in the condition of ≥30% of max. Infusion distance
Operating mode	Rotary coded switch and membrane keypad
Display	128×64 graphic LCD
Power	AC100-240V
Operating condition	Temperature 5℃- 40℃ Relative humidity ＜80%
Dimensions	280×220×140 (mm) (L×W×H)
Weight	3.6kg

Syringe Pump	Part Number	Syringe	Inner Diameter (mm)	Flow Rates	Linear Rate	Weight (kg)
LSP01 - 1C	0503421	10μL	0.46	0.049μL/hr - 10.80μL/min	5μm/min - 65mm/min	3.6
		1mL	4.61	5.007μL/hr - 1085μL/min		
		2.5mL	7.28	12.49μL/hr - 2706μL/min		
		5mL	10.30	25.00μL/hr - 5415μL/min		
		10mL	14.57	50.02μL/hr - 10833μL/min		

Note: Flow rates = Linear rate × Section area of the barrel

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

LSP01-1BH Syringe Pump

This pump is a single channel high pressure syringe pump. The acceptable syringes are 2.5mL-100mL stainless steel syringes. Because of the extra linear force this pump is suitable for transferring viscous fluids or delivering the fluid to reactors in chemical applications.

Functions and Features

Syringe selection: The syringes can be selected in the manufacturer table which includes manufacturer, material and size or input the inner diameter of the syringe barrel directly
Easy to operate: Combining big screen LCD display with rotary encoder switch and membrane keypad makes the operation simple and prompt.
Working mode: Infusion, withdrawal, infusion/withdrawal, withdrawal/infusion, continuous
Memory function:
1.The parameters are saved in EEPROM . The parameters don't need to be reset when power returns after an interruption
2. In flow rate mode, the pump remains running or stop according to the setting parameters when power returns after an interruption
Protection function: The pump will stall and give an alarm when the drive structure of the pump is blocked
Communication function: Realize computer control through RS485 communication interface
External control function: Input/output control
Calibration function: Acquire accurate volume through calibration
Syringe protection: Adjust syringe rest to prevent syringe from damaging

Specifications

Syringe size	2.5 - 100 (mL)
Linear force	45kg
Advance per mircostep	0.156μm (1/16step)
Infusion volume per microstep	0.149μL (100mL syringe 1/16step)
Max. Step rate	13867 (1/16step) /sec
Min. step rate	16 (1/16step) /30sec
Max. linear rate	130mm/min
Min. Linear rate	5μm/min
Flow rates	0.09μL/min - 124.36mL/min
Accuracy	≤ 0.5% error in the condition of ≥30% of max. Infusion distance
Operating mode	Rotary coded switch and membrane keypad
Display	128 64 graphic LCD
Power	AC100 - 240V
Operating condition	Temperature 5℃- 40℃ Relative humidity ＜80%
Dimensions	280 250 140 (mm) (L×W×H)
Weight	6.3kg

Syringe Pump	Part Number	Inner Diameter (mm)	Syringe (mL)	Flow Rates	Outlet Pressure	Linear Rate	Weight (kg)
LSP01 - 1BH	0503431	4.79	2.5	5.406μL/hr - 140.5mL/hr	＞19.48MPa	5μm/min - 130mm/min	6.3
		9.53	8	21.399μL/hr - 556.3mL/hr	＞5.05MPa		
		19.13	20	86.226μL/hr - 2241.8mL/hr	＞1.25MPa		
		28.6	50	192.727μL/hr - 5010.9mL/hr	＞0.56MPa		
		34.9	100	286.986μL/hr - 7461.6mL/hr	＞0.37MPa		

Note：Flow rates＝Linear rate×Section area of the barrel

WT3000-1JA Micro Gear Pump

Flow Rates

100 mL/min — 30000 mL/min

85.7 - 2571.4 mL/min

Applicable Pump Heads

MG204
MG209
MG213

WT3000-1JA micro gear pump adopts brushless DC motor which features high efficiency and free maintenance. It can deliver flow rates from 85.7 to 2571.4 ml/min with the features of small pulse and big pressure.

Specifications

Flow rates	85.7-2571.4 (mL/min)
Speed	300-3000 (rpm)
Speed precision	1.0%
Speed resolution	1.0 rpm
Viscosity of liquid	≤200 cSt
External input control	Speed control (4-20mA, 0.5-5V, 1.0-10V, 1.0-10kHz corresponding to 300-3000 rpm), start/stop control
Diameter of particle in liquid	≤10μm
Liquid temperature range	-45-50℃ with PTFE gear, -45-120℃ with PEEK gear
Communication interface	RS485
Max. outlet pressure (testing medium is water)	MG204: 0.8MPa
	MG209: 0.8MPa
	MG213: 0.3MPa
Power supply	AC 176-264V/90-130V, 50/60 Hz
Power consumption	≤50W
Operating condition	Temperature 0 to 40℃ Relative humidity <90% (non-condensing)
Drive dimensions	232×142×149 (mm) (L×W×H)
Weight	2.83 kg
IP rating	IP31

Functions and Features

- Acceptable pump head: MG204, MG209, MG213
- Operating mode: Membrane keypad
- Prime function for fast filling and emptying
- Display: 4 digits LED displays the speed of the pump, two LED lights indicate the running status and external control status
- External input function: Control the start/stop and the speed of the pump
- Footswitch: Control the start/stop of the pump
- Communication function: Realize computer control through RS485 interface
- Memory function: Store the running parameters automatically
- Cooling mode: Heat-emitting fan
- Running direction: Clockwise

Drive	Part Number	Pump Head	Speed (rpm)	Flow Rates (mL/min)	Weight (kg)
WT3000-1JA	0502701	MG204	300–3000	85.7-857.1	3.25
		MG209		171.4-1714.3	3.26
		MG213		257.1-2571.4	3.28

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

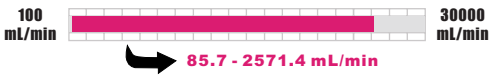
WT3000-1JB Micro Gear Pump

WT3000-1JB adopts brushless DC motor. It has features of high efficiency and free maintenance. It accepts multiple pump heads and delivers flow rates from 85.7 to 2571.4 mL/min. The compact and precise gear pump heads are noiseless, pulsation-free and suitalble to transfer viscous, high temperature fluids or transfer the fluids in pressure condition.

Specifications

Flow rates	85.7 - 2571.4 (mL/min)
Speed	300 - 3000 (rpm)
Speed accuracy	1.0%
Speed resolution	1.0 rpm
Fluids viscosity	≤200 cSt
External control	Start/stop control, speed control (0.5 - 5V, 1 - 10 V, 4 - 20 mA, 1 - 10 kHz optional)
Communication interface	RS485
Max. outlet pressure (testing medium is water)	MS204 : 1.4MPa
	MS209 : 0.9MPa
	MS213 : 0.8MPa
Power supply	AC 220/110V ±20%, 50Hz/60Hz
Power consumption	≤150 W
Operating condition	Temperature 0 to 40℃ Relative humidity ＜90% (non-condensing)
Drive weights	5.1 kg
Drive dimensions	290×207×180 (mm) (L×W×H)
IP rating	IP 31

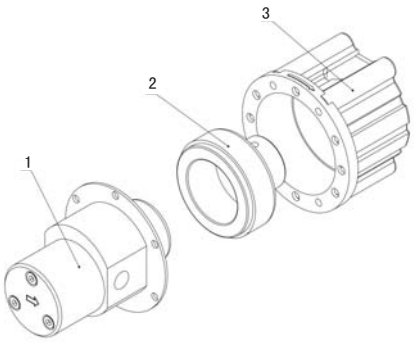
Flow Rates



Applicable Pump Heads

MS204
MS209
MS213

Pump Head Structure Drawing



1.Pump Head 2.Outer Magnet 3.Adapter Kit

Functions and Features

- Acceptable pump heads: MS204, MS209, MS213
- Suitable to transfer viscous, high temperature fluids or transfer the fluids in pressure condition
- Compact size, noiseless, pulsation-free
- 4 digits LED displays the speed of the pump
- Combine the knob and rotary encoder switch to make the operation easy
- Prime function for fast filling and emptying
- The start/stop and speed of the pump can be controlled through external control port
- Store the running parameters automatically
- Decoupling will occur when the pump load exceeds the maximum coupling torque provided by the alignement of the two magnets

Drive	Part Number	Pump Head	Speed (rpm)	Flow Rates (mL/min)	Weight (kg)
WT3000 - 1JB	0502702	MS204	300 - 3000	85.7 - 857.1	5.39
		MS209		171.4 - 1714.3	5.40
		MS213		257.1 - 2571.4	5.42

WT3000-1FA Micro Gear Pump

Flow Rates

Applicable Pump Heads

WT3000-1FA micro gear pump has two work modes of flow rate and dispensing to deliver flow rates from 85.7 to 2571.4 ml/min and dispense liquid volume from 0.1 ml to 999 liter. It adopts 128×32 LCD display all the running parameters. Stainless pump head is compact and precise with the features of low noise and small pulse. It is suitable to deliver high pressure and high temperature liquid.

Specifications

Flow rates	85.7-2571.4 (mL/min)
Dispensing volume	0.1mL-999L
Copy No.	0-9999 , '0' means running continuously
Pause time	1s-999h, min. adjustment resolution: 0.1s
Flow rate calibration time	30-1800 second, adjustment resolution: 1s
Viscosity of liquid	≤200 cSt
External input control	Flow rate control (4-20mA, 0.5-5V, 1.0-10V, 1.0-10kHz) , start/stop control
External output control	1.25-12.5kHz frequency output corresponding to 300-3000 rpm; start/stop status output
Diameter of particle in liquid	≤10μm
Max. outlet pressure (testing medium: water)	MG204 : 0.8MPa MG209 : 0.8MPa MG213 : 0.3MPa
Liquid temperature range	-45-50℃ with PTFE gear, -45-120℃ with PEEK gear
Communication intreface	RS485
Power supply	AC 176-264V/90-130V, 50/60 Hz
Power consumption	≤50W
Operating condition	Temperature 0 to 40℃ Relative humidity ＜90% (non-condensing)
Drive dimensions	232×142×149 (mm) (L×W×H)
Weight	2.83 kg
IP rating	IP31

Functions and Features

- Acceptable pump heads: MG204, MG209, MG213
- Flow rate function: Deliver the liquid according to the set flow rates
- Dispensing function: Dispensing volume, copy number and pause time can be set
- Calibration function: The flow rates and the dispensing volume can be calibrated to increase the accuracy
- Display: 128 32 LCD display all the running parameters
- Operating mode: Membrane keypad
- Prime function for fast filling and emptying
- External control input: Control the flow rates and start/stop of the pump
- External control output: Output start/stop and speed signal
- Footswitch: Control the start/stop of the pump
- Communication function: Realize computer control through RS485 interface
- Memory function: Store the running parameters automatically
- Cooling mode: Heat-emitting fan
- Running direction: Clockwise

Drive	Part Number	Pump Head	Speed (rpm)	Flow Rates (mL/min)	Weight (kg)
WT3000-1FA	0502711	MG204	300–3000	85.7 - 857.1	3.25
		MG209		171.4 - 1714.3	3.26
		MG213		257.1 - 2571.4	3.28

Tel: 86 - 312 - 3110087 Fax: 86 - 312 - 3168553 Internet www.longerpump.com E - mail:longer@longerpump.com

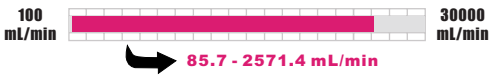
WT3000-1FB Micro Gear Pump

WT3000-1FB gear pump has two work modes of flow mode and dispensing mode. It delivers flow rates from 85.7 to 2571.4 mL/min and the dispensing volume is from 0.1 mL to 999L. 128×32 LCD displays the parameters and information. The compact and precise gear pump heads are noiseless, pulsation-free and suitable to transfer high temperature and high pressure fluids.

Specifications

Flow rates	85.7 - 2571.4 (mL/min)
Dispensing volume	0.1 mL - 999 L
Copy number	0 - 9999 (″0" means running continuously)
Pause time	1s - 999 h
Fluid viscosity	≤200 cSt
External control input	Start/stop control, flow rates control (0.5 - 5 V, 1 - 10V, 4 - 20 mA, 1 - 10 kHz optional)
External control output	Pulse output 0 - 12.5 kHz (corresponding to 0-3000 rpm) , start/stop state output
Communication interface	RS485
Max. outlet pressure (testing medium is water)	MS204: 1.4MPa
	MS209: 0.9MPa
	MS213: 0.8MPa
Power supply	AC 220/110V ±20%, 50Hz/60Hz
Power consumption	≤150 W
Operating condition	Temperature 0 to 40℃ Relative humidity ＜90% (non-condensing)
Drive weights	5.1 kg
Drive Dimensions	290×207×180 (mm) (L×W×H)
IP rating	IP 31

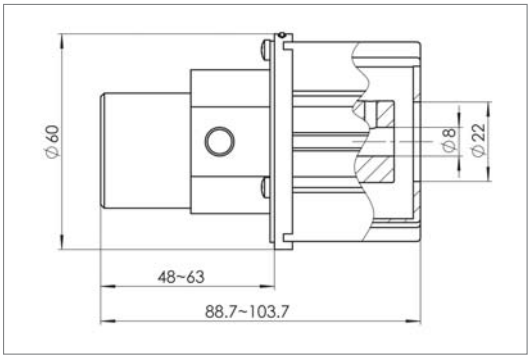
Flow Rates



Applicable Pump Heads

MS204
MS209
MS213

Pump Head Installation Drawing



Functions and Features

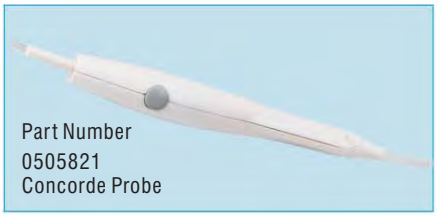
- Acceptable pump heads: MS204, MS209, MS213
- Suitable to transfer viscous, high temperature fluids or transfer the fluids in pressure condition
- Compact size, noiseless, pulsation-free
- Dispensing volume, copy number and pause time can be set
- Flow rates and dispensing volume can be calibrated for higher accuracy
- Combine the membrane keypad and rotary encoder switch to make the operation easy
- Prime function for fast filling and emptying
- The pump has external control input and output ports
- Store the running parameters automatically
- Decoupling will occur when the pump load exceeds the maximum coupling torque provided by the alignement of the two magnets

Drive	Part Number	Pump Head	Speed (rpm)	Flow Rates (mL/min)	Weight (kg)
WT3000 - 1FB	0502712	MS204	300-3000	85.7 - 857.1	5.39
		MS209		171.4 - 1714.3	5.40
		MS213		257.1 - 2571.4	5.42

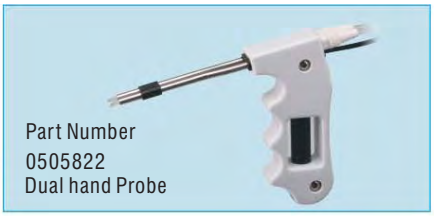
SMD02-1 Diluters & Dispensers System

SMD02-1 Dispenser & Dilutor handles liquid sample precisely. It consists of software, two pieces control units and probe.It has functions of semi-automatically dispensing and diluting. SMD02-1 features accurate control, easy and reliable operation to match the requirements to prepare liquid sample for analytical laboratory. SMD02-1 completely replaces the traditional manual operation of dispensing and diluting and widely used in blood analysis, emulsion analysis, chemical analysis, food analysis, urine analysis.

Accessories



Part Number
0505821
Concorde Probe



Part Number
0505822
Dual hand Probe

Part Number
0505823
Big Volume Probe

SMD01-1 Diluters & Dispensers System

SMD01-1 Dispenser & Dilutor has one piece control unit. Other features and functions are the same with SMD02-1 except dilution proportion range.

Accessories

Part Number
0505821
Concorde Probe

Part Number
0505823
Big Volume Probe

Tel: 86 - 312 - 3110087
Fax: 86 - 312 - 3168553
Internet
www.longerpump.com
E - mail:longer@longerpump.com

Diluters & Dispensers System

Functions and Features

- User-friendly interface. Easy to operate.
- The precision of handling volume is ≤±0.5%, and the accuracy of handling volume is ≤99% that avoid the artificial error between different operators.
- Save the preparation time of testing and the consumption of solvent.
- Five dispensing modes are available.
- Communication: Bluetooth wireless and RS232.

Work Modes

Dispensing mode:

1.Withdraw liquid to syringe according to programmed speed and volume.
2.Dispense liquid from syringe according to programmed speed and volume.

Diluting mode:

1.Withdrawing liquid from solvent bottle according to programmed parameters.
2.Withdraw liquid from sample bottle to probe.
3.Dispense sample and solvent to bottle.

User define mode:

According to customer actual need, there are four operation modes for each syringe (inlet withdrawing, inlet dispensing, outlet withdrawing, outlet dispensing) to complete complicate work.

Technical Specifications

Type	SMD02-1		SMD01-1
Specifications	Acceptable syringe	50μL- 25mL	同SMD02-1
	Liquid volume	1μL- 25mL	
	Precision	≥0.5% in the stroke of 30% - 100%	
	Accuracy	≥99%	
	Control resolution	0.017% of syringe capacity	
	Min. volume increment	0.017% of syringe capacity	
	Flow rates	2.5μL/min to 1250ml/min	
	Communication	Bluetooth or RS232, Bluetooth wireless communication max. distance is 100 meters	
	Dimension (L×W×H)	21.6×19.5×30.2 (cm)	
	Storage temperature	20℃- 65℃	
	Operating temperature	15℃- 40℃	
	Power supply	AC90 - 260V, 50/60Hz	
	Humidity	10%-90%, (non-condensing)	
	Pipeline	PTFE tubing and borosilicate glass	
	Power consumption	<72W	<36W
	Control unit	2	1
	Max. Dilution propertion	1:25000	1:50
	Weight	5.5kg	3.5kg