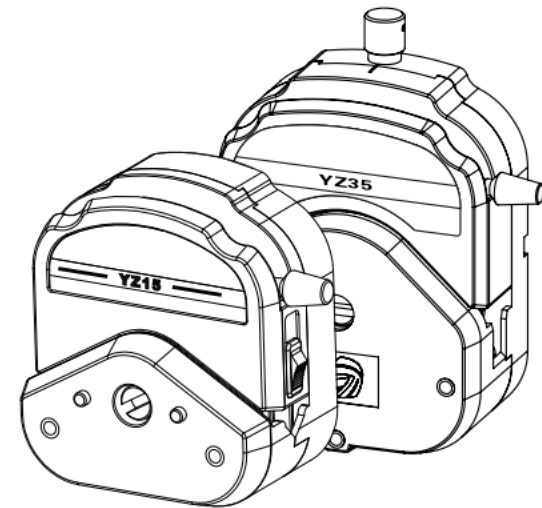




YZ/YT Series Easy-Load Peristaltic Pump Head Operation Manual



Version number:V1.0

While the product is improving, the manual information may be changed without notice.

Safety Precautions



Important information:

Be sure to read the manual carefully before operation!

	This icon warns: Keep fingers away from moving parts.
	This icon warns: Be careful.
	This icon warns: Be careful, the surface is hot.
	This icon warns: Be careful, electric shock hazard.
	This icon warns: To recycle this product.
	This icon warns: Personal protective equipment (PPE) must be worn.

Danger:

	Please use the same power supply as that on the nameplate of the machine, otherwise the equipment will be damaged!
	Do not disassemble the casing or modify the interior of the equipment by yourself, otherwise it may cause malfunctions or even electric shock accidents!
	When installing and disassembling the pump tube, please turn off the power first and do not approach the rotating roller to prevent fingers and clothing from getting entangled in the mechanical mechanism!
	If used for transporting hazardous liquids, a dedicated operating procedure must be established for this liquid, and personnel injury must also be prevented during using.

Warning:

	Before using, please confirm that the transmitted liquid will not react chemically with the tube or pump head, otherwise it will damage the tube or pump head. If unsure, please consult our engineers.
	Tubes are vulnerable parts, please pay attention to regular inspections. Our company is not responsible for the losses caused by tube damage, especially the leakage of toxic, harmful, and precious liquids!
	Please use tubes that are suitable for the pump head model and refer to the "Suitable Tube and Flow Rate of Pump Head" in the manual
	If the peristaltic pump is stopped for too long, please lift the pressure block on the pump head to prevent the inner wall of the tube from sticking due to prolonged compression.
	Due to actual working environment conditions (including temperature, humidity, power supply voltage, etc.) exceeding our technical specifications and causing machine damage, our company is responsible for paid warranty, but we do not bear any responsibility for any other damage caused by this!
	The main protection provided for operators to prevent them from being injured by the moving parts of the pump is provided by the safety device of the pump head. Please note that the safety devices for different products vary depending on the model of the pump head. Please refer to the pump head section in the manual.
	If the pump is running before the power outage, it will automatically start after the power is reconnected.

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Description

YZ/YT series peristaltic pump heads are suitable for various specifications of tubes. Replacing the tube is simple and fast with a compact and reasonable structure which can achieve the use of multiple pump heads in series. PPS material of pump shell is sturdy and durable, resistant to organic solvents and other corrosive liquids. There are two ways to press the tube: 1. fixed method 2. Adjustable mode, which can be flexibly selected according to needs.

Pump Head Structure

Suitable tubes for each model:

- YZ15 tube specifications: 13#,14#,19#,16#,25#,17#,18#
- YZ25 tube specifications: 15#,24#
- YT15 tube specifications: 13#,14#,19#,16#,25#,17#,18#
- YT25 tube specifications: 15#,24#,35#,36#
- YZ35 tube specifications: 73#,82#

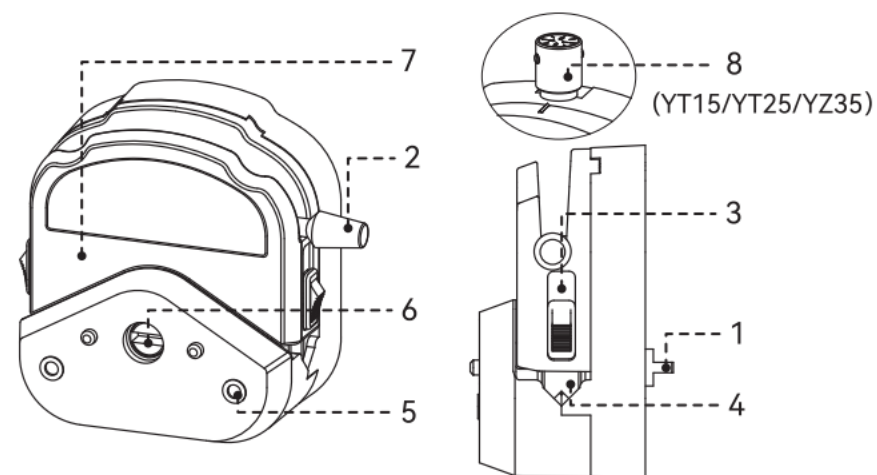


Figure 1 YZ/YT Series Pump Head Structure

◆ Component Name and Function

1. **Flat Shaft End:** Used to connect the drive coupling and cascade the pump heads.
2. **Lever:** When install tubing need to use it.
3. **Sliding Block:** After press it, squeeze the tubing together with the roller device.
4. **Tube clamp:** After the sliding block down, the tubing gets stuck, make the tubing can't move.
5. **Mounting Hole:** With the screw the pump head is fixed on the drive.
6. **Coupling:** Using to cascade pump heads.
7. **Upper Pressure Block:** Pull the lever to drive the upper pressure block to move up and down, press or release the tube
8. **Fine Adjustment Knob (Structure of YT15, YT25, and YZ35 Pump Head):** fine adjustment of pressure tube clearance.

Usage Method

◆ Selection of Pressure Tube Method

- The pressure tube method is divided into two types: "fixed method" and "adjustable method".
- Fixed method:
 1. The pressure tube gap is fixed and can be used after installing the tube without adjustment.
 2. Suitable for pump head is YZ15 and YZ25.
- Adjustable method:
 1. After installing the tube, the pressure tube gap can be changed by adjusting the fine adjustment knob. Turning the fine adjustment knob clockwise will reduce the pressure tube gap and increase the liquid transmission pressure, but the tube life will be shortened.
 2. Turning the fine adjustment knob counterclockwise increases the gap between the pressure tube, reduces the liquid transmission pressure, but prolongs the service life of the tube.

3. The suitable models of the pressure tube gap adjustable pump head are YT15, YT25, and YZ35



Note: It is not recommended to change the flow rate of the tube line through the fine adjustment knob.
It is not recommended for high-voltage transmission unless otherwise specified.

◆ Install YZ15/YZ25/YT15/YT25 Pump Head

- Put one side of the pump head flat shaft towards to drive, push on the groove of coupling in front of drive. Make the pump head in suitable position through the two positions column of pump head support, put the pump head cling to the drive.
- Insert the 2 pieces of pump head screws to mounting holes, tighten pump head screws.

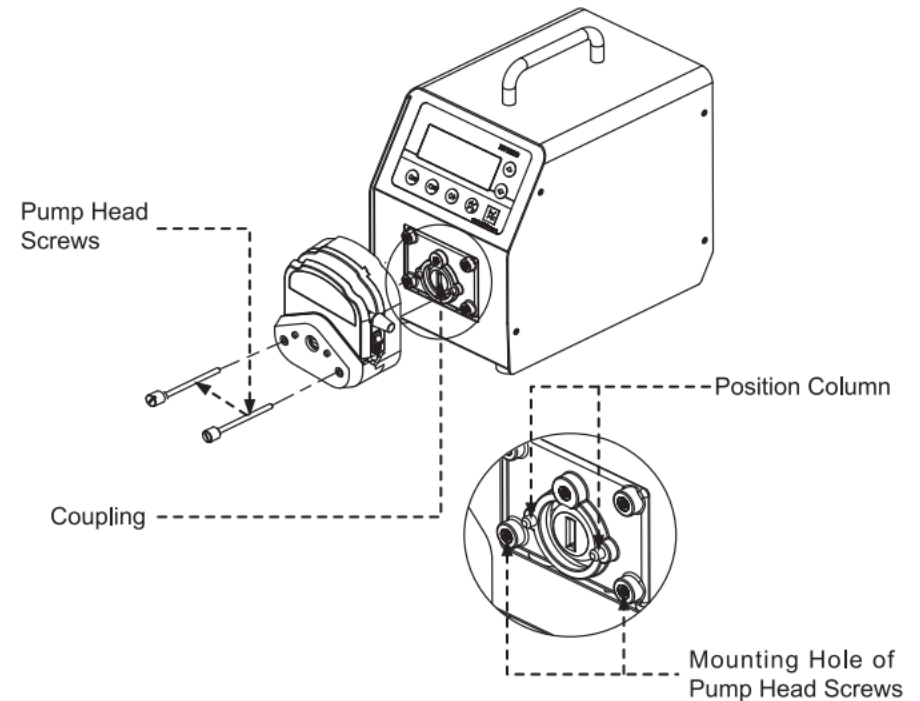


Figure 2 Installation Diagram of YZ15/YZ25/YT15/YT25 Pump Head

◆ Install YZ35 Pump Head

- Firstly, insert the shaft protection sleeve shown in the right figure into the flat shaft end of the YZ35 pump head.
- Place one side of the pump head flat shaft towards the driver, align the flat shaft end with the coupling groove and push it in, with the back of the pump head tightly against the installation plate.
- Insert the attached 2 screws and 3 pump head screws into the corresponding installation holes and tighten the pump head screws.



Shaft protective

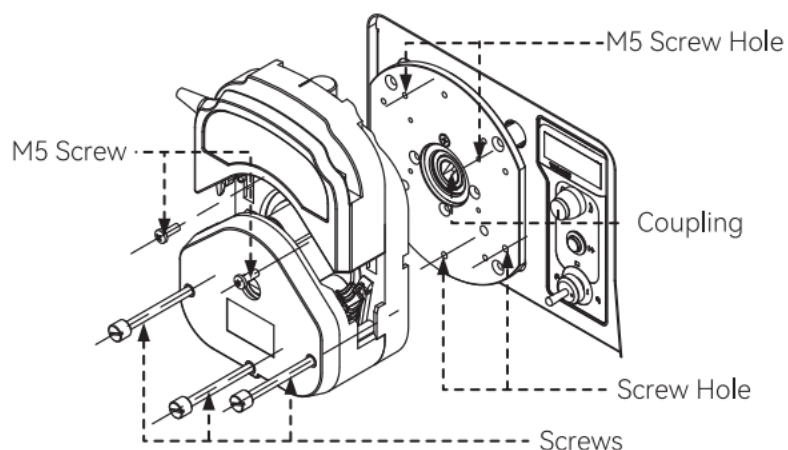


Figure 3 Installation Diagram of YZ35 Pump Head



Note: When tightening the pump head screws, it is important to ensure that the tightening torque of the two screws is the same and not too tight!

◆ Tube Selection

- The tubes suitable for YZ/YT series pump heads are divided into domestic tubes and imported tubes.
- The size accuracy of the wall thickness and inner diameter of the tube can affect the flow accuracy.

◆ Install the Tube for YZ15/YZ25/YT15/YT25 Pump Head

- Pull the lever to the left to the horizontal position and lift the upper pressure block.
- Select tubes that are suitable for the specified wall thickness of the pump head.



Figure 4 Example Diagram of Tube Installation Process

- Pull one side of the tube clamp upwards (Figure 5), insert the tube, then pull the other side of the tube clamp, and insert the other side of the tube.

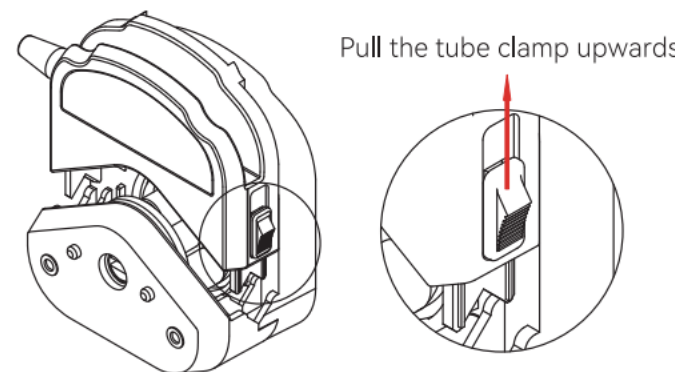


Figure 5 Schematic Diagram of YZ15/YZ25 Pump Head Tube Clamp Operation

- Straighten the internal tube of the pump head, tighten both ends of the tube with both hands to make it naturally extend without distortion or deviation.
- Rotate the lever to the right to the horizontal position, and press the upper pressure block down into place.

◆ Install the Tube for YZ35 Pump Head

- Pull the lever to the left to the horizontal position and lift the upper pressure block.

- Choose the tube applicable to the specified wall thickness of the pump head.
- Press down the spring tube clamp on one side (Figure 6) to put the tube in, and then press down the spring tube clamp on the other side to put the tube on the other side.

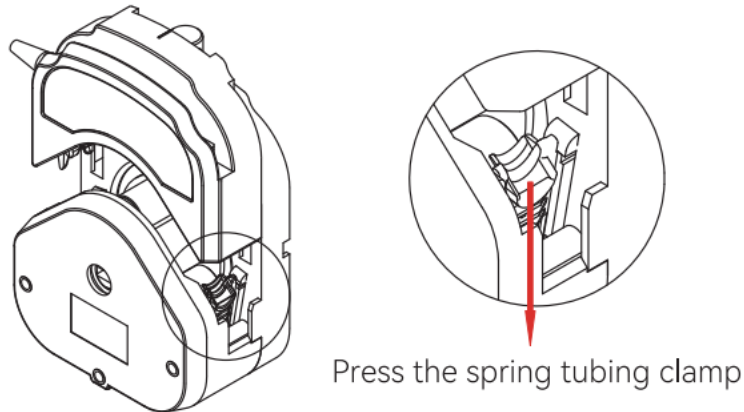


Figure 6 Schematic Diagram of YZ35 pump head Tube clamp operation

- Straighten the internal tube of the pump head, tighten both ends of the tube with both hands to make it naturally extend without distortion or deviation.
- Rotate the lever to the right to the horizontal position, and press the upper pressure block down into place.

◆ Take Out the Tube

- Pull the lever to the left to the horizontal position and lift the upper pressure block.
- YZ15/YZ25/YT15/YT25 refer to the corresponding tube installation diagram, respectively lift the tube clamps on both sides and take out the tube .
- YZ35 refer to the corresponding tube installation diagram, press down the tube clamps on both sides respectively according to the corresponding installation diagram of the tube, and take out the tube.

◆ Precautions for Using

- The tube flow will fluctuate with the extension of service time. Please pay attention to timely adjust the speed of peristaltic pump (for flow type

peristaltic pump, please recalibrate the flow).

- This series of pump heads can be used cascaded. When multiple pump heads are used at the same time, there is a deviation in the flow between each channel. If the consistency of flow is required to be high, please contact the engineer of Enterprise.
- YT15/YT25/YZ35 pump heads are all adjustable pressure tube clearance pump heads. Among them, the YT15/YT25 pump head fine adjustment knob adjustment method: Select 1~5rpm for the driver speed, slowly adjust the fine adjustment knob clockwise until it can continuously transport liquid without back flow during shutdown. If you need to transmit a large amount of pressure, you can adjust the knob clockwise.
- Adjustment method for YZ35 pump head fine adjustment knob: Select a speed of 30rpm and slowly adjust the fine adjustment knob clockwise until it can continuously transport liquid without back flow during shutdown. If large pressure needs to be transmitted, the knob can be further adjusted clockwise
- After fine-tuning the YZ35 knob, the upper pressure block and the body should be basically in the same plane (Figure 7). To increase the service life of the tube, the pressure block plane can be slightly higher than the body plane.

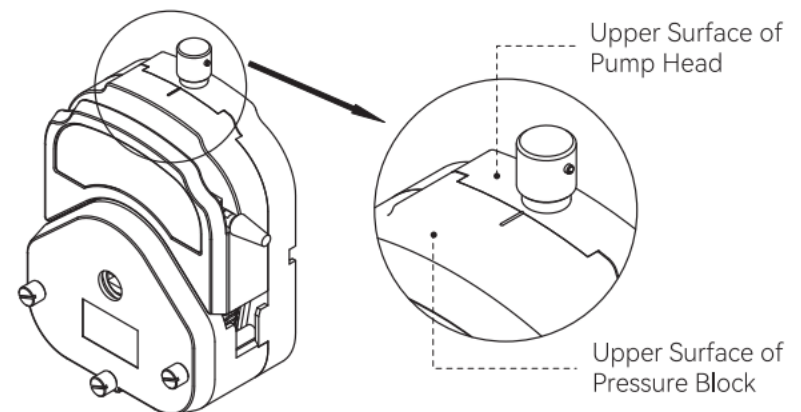


Figure 7 Schematic Diagram of YZ35 Knob position

Malfunction and Maintenance

◆ Warranty and After-sales

● YZ/YT series pump head comes with a one-year free warranty

1. The warranty scope is only for YZ/YT pump heads, and tubes and other consumables are not included in this warranty scope.
2. The warranty period starts from the purchase date displayed on the customer's valid purchase certificate.
3. If there are quality issues during the warranty period, Enterprise is responsible for free repair and replacement.
4. If there are problems caused by human factors such as leakage, falls, improper use, etc., Enterprise is exempt from manual repair fees and only charges material cost fees .

● Special Instructions

Please check the model specifications before using tubes and other consumables. Please note that once opened for using, returns and exchanges are no longer accepted unless there are quality issues.

◆ Daily Maintenance

- Regularly inspect the tubes for damage or loss of elasticity.
- Applying silicone oil on the wall of the pressure block can reduce tube wear and prolong the service life of the tube.
- The pump head cannot be washed with water. If the pump tube breaks during operation, the liquid in the pump head shall be wiped or dried in time.
- Do not use chemical reagents to clean the pump head.

◆ Malfunction Solutions

NO.	Malfunction	Solution	Remarks
1	Unable to inhale liquid	1. Whether the viscosity of the liquid too high. When the viscosity is too high, the flow rate will seriously decrease or even become unusable 2. If the negative pressure at the inlet of the tube is too high or the inlet is blocked, check the inlet tube line 3. If the tube is not installed in the correct position, reinstall it according to the instructions for use 4. Whether the tube specification is appropriate, and select the appropriate specification of tube according to the instructions for use 5. If the model is YZ 35 or YT15, YT 25 pump head, adjust the knob clockwise according to the fine adjustment method to just fill the water.	Precautions for adjusting the knob: 1. Select 1-5rpm for the speed of the YT15/YT25 driver (select high speed for tubes with small inner diameters, and low speed for hoses with large inner diameters); 2. Select 30rpm for the YZ35 driver speed.
2	The service life of the tube has significantly shortened	1. To detect whether the liquid contains solid particles, please choose an imported tube. Excessive particle impurities can seriously reduce the service life of the tube and even render it unusable 2. If the tube is not installed in the correct position, reinstall it according to the instructions for use 3. Check whether the roller rotates flexibly 4. If the model is YZ 35 or YT15, YT 25 pump head, follow the adjustment method of the fine adjustment knob and adjust the pressure tube gap fine adjustment knob counterclockwise (Please ensure that there is no backflow during stop).	



Note: If the above methods still cannot be solved, please contact the after-sales service of Enterprise!

Suitable Tube and Flow Rate of Pump Head

Experimental conditions:

1. Normal temperature and pressure
2. Test medium: Water
3. Tubeline: The length of inlet and outlet is 500mm, and the inlet and outlet are at the same level.

When the liquid, viscosity, tubeline length, inlet and outlet pressure difference and other service conditions change, the flow value will change. Please consult the engineer of Enterprise.

Suitable Tube and Flow Rate of YZ15 Pump Head (unit: mL/min)

Tube Speed	13#	14#	19#	16#	25#	17#
30 rpm	1.5	6.0	15	24	57	90
60 rpm	3.0	12	30	48	114	180
100 rpm	5.0	20	50	80	190	300
300 rpm	15	60	150	240	570	900
600 rpm	30	120	300	480	1140	1800

Suitable Tube and Flow Rate of YT15 Pump Head (unit: mL/min)

Tube Speed	13#	14#	19#	16#	25#	17#	18#
30 rpm	1.8	6.9	17	26	60	100	130
60 rpm	3.6	14	35	50	120	200	270
100 rpm	6.0	23	56	90	200	330	450
300 rpm	18	70	170	260	590	990	1350
600 rpm	36	140	340	520	1200	2000	2700

Suitable Tube and Flow Rate of YZ25 Pump Head (unit: mL/min)

Tube Speed	15#	24#
30 rpm	50	90
60 rpm	100	180
100 rpm	170	300
300 rpm	510	900
600 rpm	1000	1800

Suitable Tube and Flow Rate of YT25 Pump Head (unit: mL/min)

Tube Speed	15#	24#	35#	36#
30 rpm	55	93	120	150
60 rpm	110	190	230	300
100 rpm	180	310	390	500
300 rpm	550	930	1200	1500
600 rpm	1100	1900	2300	3000

Suitable Tube and Flow Rate of YZ35 Pump Head (unit: mL/min)

Tube Speed	73#	82#
30 rpm	400	660
60 rpm	800	1300
100 rpm	1300	2200
300 rpm	4000	6600
600 rpm	8000	13200

Dimensions

Unit: mm

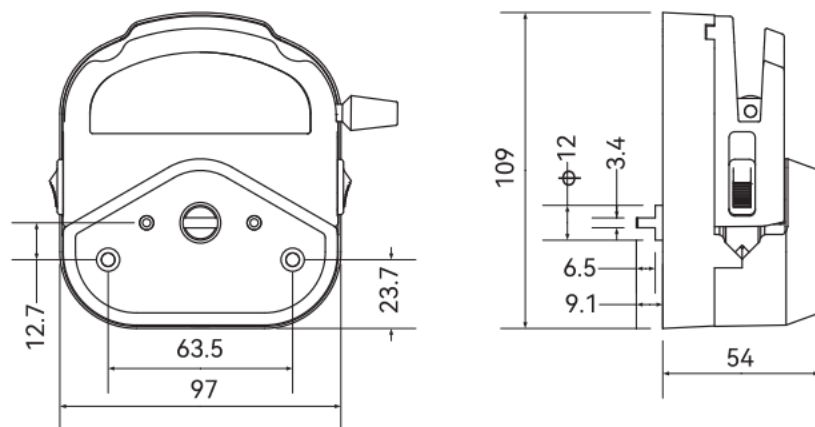


Figure 8 Dimensions of YZ15/YZ25 Pump Head

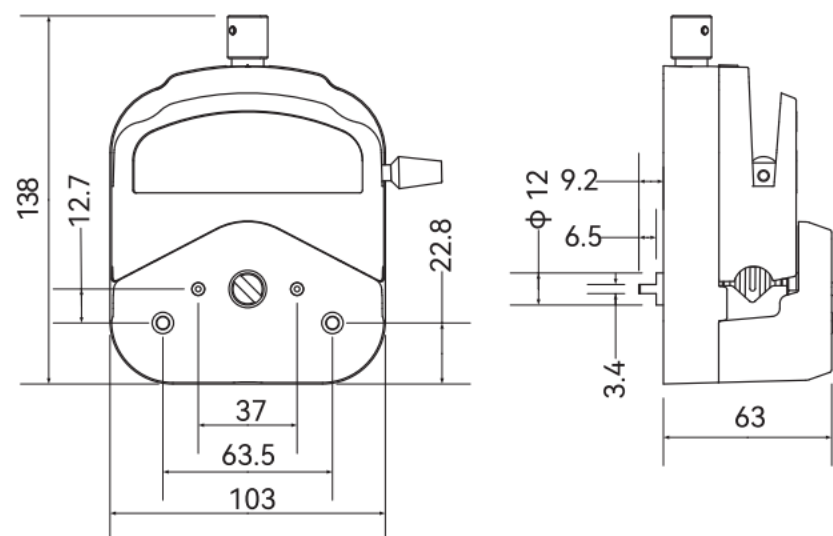


Figure 9 Dimensions of YT15/YT25 Pump Head

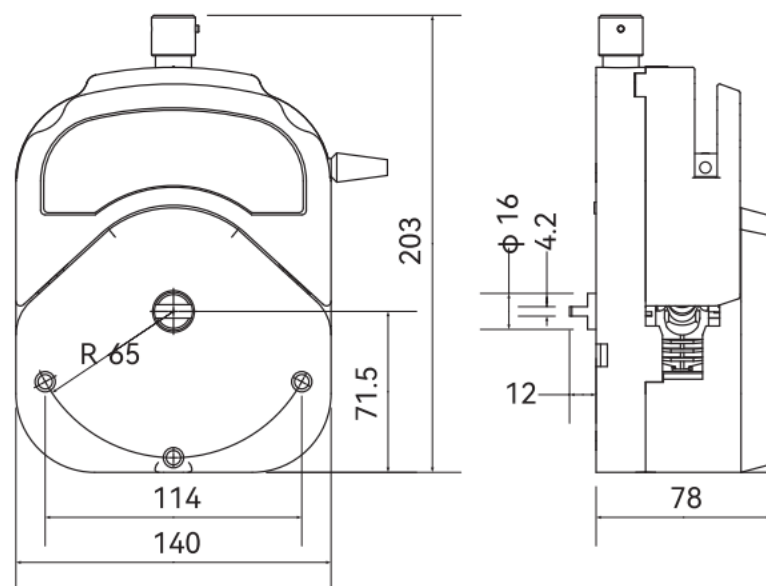


Figure 10 Dimensions of YZ35 Pump Head

Technical Parameters

YZ15 pump head

Suitable Drive	BT series, WT series
Suitable Tube Size	13#,14#,19#,16#,25#,17# (Wall Thickness 1.6mm, ID 0.8-7.9mm)
Suitable Tube Type	Silicone, pharmed, A-60-G, A-60-F, F5500A,2275,2475,3603, Viton
Speed Range	Maximum 600 rpm
Flow Range	Maximum 1800 mL/min
No. of Rollers	3 rollers,304 stainless steel
Case Material	PPS black or PPSU white
Work Environment	Temperature 0~40°C Relative humidity <80%
Dimension	109*97*54mm
Pump Head Weight	0.4kg

YZ25 pump head

Suitable Drive	BT series, WT series
Suitable Tube Size	15#,24# (Wall Thickness 2.4mm, ID 4.8,6.4mm)
Suitable Tube Type	Silicone, pharmed, A-60-G, A-60-F, F5500A,2275,2475,3603
Speed Range	Maximum 600 rpm
Flow Range	Maximum 1800 mL/min
No. of Rollers	3 rollers,304 stainless steel
Case Material	PPS black or PPSU white
Work Environment	Temperature 0~40°C Relative humidity <80%
Dimension	109*97*54mm
Pump Head Weight	0.4kg

YT15 pump head

Suitable Drive	BT series, WT series
Suitable Tube Size	13#,14#,19#,16#,25#,17#,18# (Wall Thickness 1.6mm, ID 0.8-7.9mm)
Suitable Tube Type	Silicone, pharmed, A-60-G, A-60-F, F5500A,2275,2475,3603
Speed Range	Maximum 600 rpm
Flow Range	Maximum 2700 mL/min
No. of Rollers	4 rollers,304 stainless steel
Case Material	PPS black
Work Environment	Temperature 0~40°C Relative humidity <80%
Dimension	138*103*63mm
Pump Head Weight	0.62kg

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YT25 pump head

Suitable Drive	BT series, WT series
Suitable Tube Size	15#,24#,35#,36# (Wall Thickness 2.4mm, ID 4.8,6.4,7.9,9.6mm)
Suitable Tube Type	Silicone, pharmed, A-60-G, A-60-F, F5500A,2275,2475,3603
Speed Range	Maximum 600 rpm
Flow Range	Maximum 3000 mL/min
No. of Rollers	4 rollers,304 stainless steel
Case Material	PPS black
Work Environment	Temperature 0~40°C Relative humidity <80%
Dimension	138*103*63mm
Pump Head Weight	0.62kg

YZ35 pump head

Suitable Drive	WG series
Suitable Tube Size	73#,82# (Wall Thickness3.3mm, ID 9.7,13mm)
Suitable Tube Type	Silicone, pharmed, A-60-G, A-60-F, F5500A,2275,2475,3603
Speed Range	Maximum 600 rpm
Flow Range	Maximum 13L/min
No. of Rollers	3 rollers,304 stainless steel
Case Material	PPS black
Work Environment	Temperature 0~40°C Relative humidity <80%
Dimension	203*104*78mm
Pump Head Weight	1.8kg