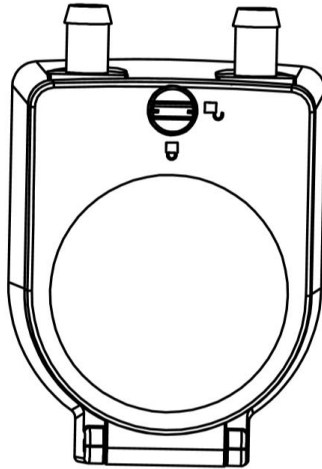


UD15 Pump Head USER'S MANUAL





Note:

- Please read the operation manual before using the product.



Warning:

- Tubing may have crack due to wear. It results in the overflow of fluid from tubing. In that time human body and instruments may be harmed. So users must check frequently and change tubing in time.
- When changing the tubing or the position of the tubing, please stop the pump head rotating, otherwise fingers or clothes may be caught.
- There are moving parts of the pump head inner, before opening the upper block, it must be carried out according to the following requirements:
 - Ensure the pump is isolated from the main power supply.
 - Ensure there is no pressure in tubing.
 - If the tubing gets mistakes, ensure the liquid in the tubing is discharged to other containers or drain tubing.
 - If transports the dangerous liquid, must wear the protective clothing and eye protection.

Table of contents

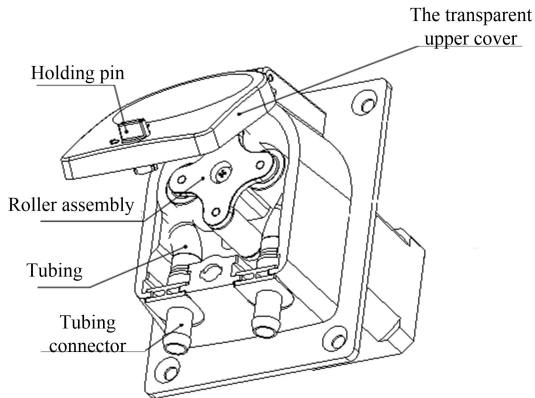
1. Product Overview	- 1 -
2. Product Instruction	- 1 -
3. Dimension Drawing	- 5 -
4. Pump Head Specification	- 6 -
5. Troubleshooting	- 7 -
6. Maintenance	- 7 -

1. Product Overview

The main body of UD15 pump head is made of imported engineering plastic to make sure the useful life under high-intensity working conditions. It is convenient for observe running status of the pump head and tubing with transparent protective cover. There are blue and transparent cover for option. The mounting face has waterproof groove.

UD15 pump head can fit for stepper motor, DC motor, and AC motor.

2. Product Instruction



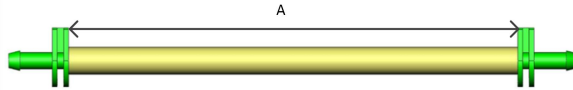
2.1 Pump Head Installation

Before leaving the factory, UD15 pump head has already installed on the driver or OEM, the pump head doesn't sell separately. Install the pump head need positioning tool, so, please don't remove the pump head by yourself.

2.2 Tubing Installation

2.2.1 Tubing installation of pump head with standard quick plug connector.

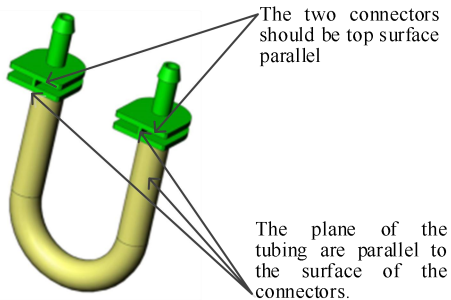
- 1) Take a tubing and cut it to the required length.



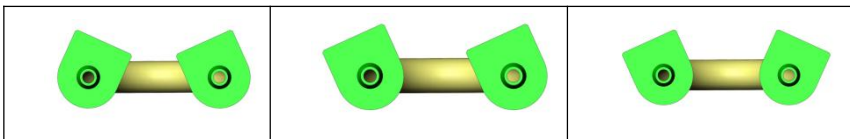
Tubing length	PharMed tubing	Silicone tubing
A	139±1mm	135±1mm

- 2) Insert two standard quick plug connectors into the two terminals of the tubing. Adjust the direction of the tubing and the connectors, the two connectors should be top surface parallel, the plane of the tubing are parallel to the surface of the connectors. As the follow picture shows, after adjusting, tie up connector and standard quick plug connector with two small tie straps.

Correct installation method:



Error installation method:

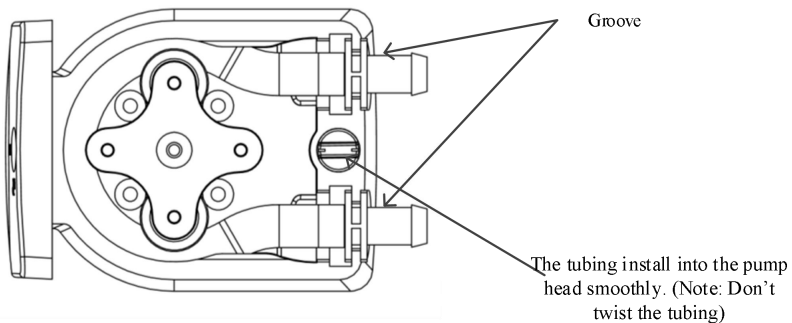


- 3) Open the pump cover, insert one end of the standard quick plug into groove on one side of the pump head. Turn on the drive, adjust the speed to 20-30rpm/min, allow the tubing to enter slowly along the roller assembly until the tubing all fall down between pump head and roller assembly, and then insert another

UD15 Pump Head

standard quick plug connector into another groove on the pump head. If there are no drive, then rotate the roller assembly manually, let the tubing to enter slowly along the roller assembly.

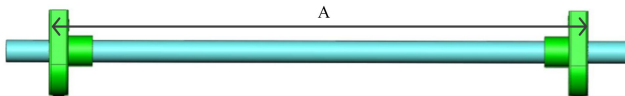
Notice: It is forbidden for firstly inserting two sides of standard quick plug connectors into the groove of pump head, and then insert the tubing between the pump head and rollers.



- 4) Check whether the tubing and standard quick plug connector are properly installed.

2.2.2 Tubing installation of pump head without connector

- 1) Take a tubing, the length between two tube clamps.



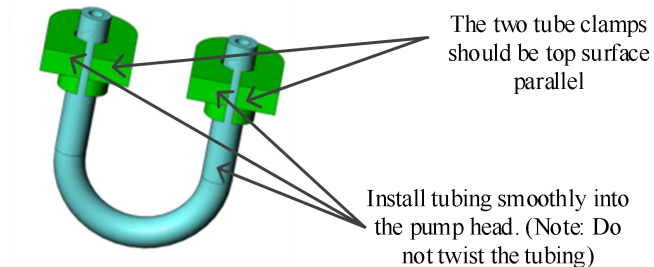
Tubing length	PharMed tubing	Silicone tubing
A	143mm	138mm

- 2) Measure a desired length by ruler, then draw a line in the position of corresponding size on the tubing. Respectively install two tube clamps at the corresponding positions on both sides of the tubing. Use your hand to pinch both sides of the tube until two top surface in parallel. Adjust the direction of

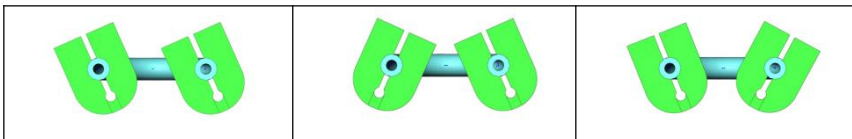
UD15 Pump Head

tubing and tube clamp, the two tube clamps should be top surface parallel, the plane of the tubing are parallel to the surface of the tube clamps, as the follow pictures.

Correct installation method:



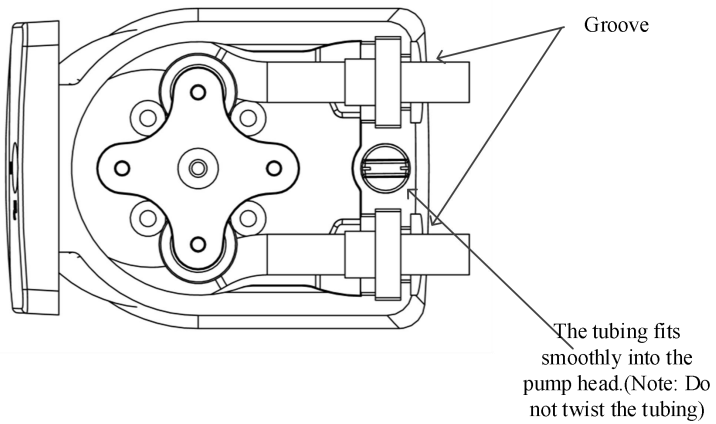
Error installation method:



- 3) Open the pump cover, insert one end of the tube clamp into groove on one side of the pump head. Turn on the drive, adjust the speed to 20-30rpm/min, allow the tubing to enter slowly along the roller assembly until the tubing all fit between pump head and roller assembly, and then insert another tube clamp into another groove on the pump head. If there are no drive, then rotate the roller assembly manually, let the tubing to enter slowly along the roller assembly.

Notice: It is forbidden for firstly inserting two tube clamps into the groove of pump head, and then insert the tubing between the pump head and rollers.

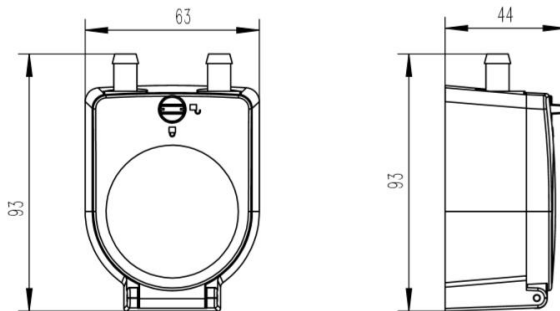
UD15 Pump Head



- 4) Check whether the tubing and tube clamp installation are properly, and the tube distance (the position of marking line on the tubing) are correct.

3. Dimension Drawing

(Unit:mm)



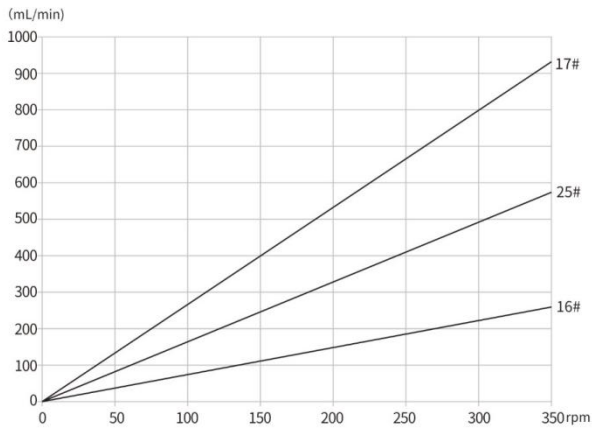
UD15 Pump Head

4. Pump Head Specification

4.1 Pump Head Technical Specification

Pump Mode	Shell Material		Suitable Tubing		Speed Range (rpm)	Ml/Rpm	Flow Range (ml/min)
	Base	Protective cover	Tubing Size	ID×Wall Thickness (mm)			
UD15	PSF	Transparent PC	16#	3.1×1.6	0.1-350	0.8	0.08~280
			25#	4.8×1.6		1.6	0.16~580
			17#	6.4×1.6		2.6	0.26~930

4.2 Flow Rate Chart



Note: The above-mentioned flow reference data is measured under the conditions of no pressure and no suction lift at room temperature under standard atmospheric pressure with pure water as the transmission medium, In actual use, it is affected by many factors such as transmission medium, inlet and outlet pressure, tube material and error, working environment, etc. The flow rate may vary, this data is for reference only.

5. Troubleshooting

If the pump head is running but the flow is small or no flow, please check the following items:

- Check whether the pump is supplied with transmission liquid;
- Detect whether the suction side pipeline of the pump is blocked by suction wall;
- Check if the tube is cracked;
- Check for blockages or kinks in the tube;
- Check whether the wall thickness of the tube used is correct;
- Check whether all valves in the tube are open;
- Check whether the rotation direction of the pump is correct.

6. Maintenance

- When pump does not work, please loose the upper block which press the tubing for avoiding changing the shape of tubing because of longtime extrusion.
- Keep pump head rollers clean and dry to prevent rapid tubing wear, reduced lifespan, or roller damage caused by solid particles in the liquid.
- Before the peristaltic pump start running each time, check the tubing carefully if it is damage.
- If the pump head gets wet, dry it immediately with a soft absorbent cloth.
- After replacing the tube, fluid or any connecting tube, must be re-calibrated the pump. It is recommended to re-calibrate the pump regularly to maintain accuracy.
- The pump head is not suitable for organic solvents (unless specifically indicated) or strongly corrosive liquids. Please use caution during operation.
- Regarding the tubing, there is a certain deviation in the inner diameter and wall thickness of the hose due to its own tolerance and different batches; it will

UD15 Pump Head

affect the product flow accuracy, and it is recommended that customers should leave a certain margin design when selecting.

- The pump's flow rate will decrease when there is a minor change between the input and output ports or when suction and lift are present.
- Data presented in this manual may differ than data obtained with extended use.
- The company is not liable for any losses resulting from product malfunctions or misuse of the product.