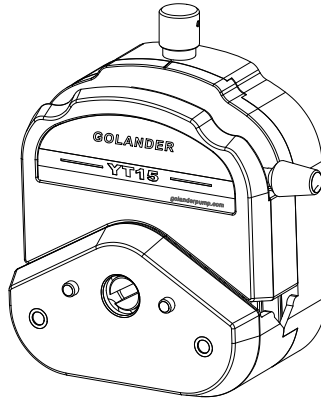




GOLANDER PUMP

YT15/YT25 Pump Head User's Guide



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1 Safety Cautions



Warning: Please read through this user's guide carefully before operating the pump head.



Danger: Remove the power from the pump before mounting or unmounting pump head to the drive.

Danger: Remove the power from pump before attempting any maintenance or any cleaning operation is started.

Danger: Turn drive off before removing or installing tubing. Fingers or loose clothing could get caught in drive mechanism.



Warning: Tubing breakage may result in fluid being sprayed from pump. Please check the tubing frequently and change the tubing in time.

Warning: Please power the pump off before installing external control devices.

Warning: This product is not designed for, nor intended for use in patient connected applications; including, but not limited to, medical and dental use.

Note:

- Only use matched tubing with the pump head to ensure optimum performance. Use of other tubing may void applicable warranties.
- Release the tubing loading lever if the drive stopped for a long time to prevent the rollers from squeezing the tubing all the time.
- Change the squeeze section of the tubing in time to extend its lifetime.
- When tubing breakage occurs, please use a mild detergent solution to clean the pump head. Do not immerse nor use excessive fluid. Please check if the rollers can still rotate smoothly. If not, please stop the drive to prevent it from damaging the pump head.
- Fine adjustment can be made to the gap between the roller and the housing for the tubing. If the pump head can not deliver fluid successfully or the output pressure is too weak, please try to

reduce the gap by tightening the occlusion adjustment knob until the pump head delivers fluid as expected.

2 Introduction

YT series pump heads are designed to provide a simple, easy-to-use peristaltic pump system. The pump head accepts several different tubing sizes for a wide range of flow rates. The unique over-center cam design and automatic tubing retention allow quick tubing changes and greatly reduced maintenance time.

The pump head is compatible with most GOLANDER S/L/F drives with a standard tang interface. Mount the pump head using the 2 screws provided. The two screws can be tightened to the drive by hand easily. No tool is needed.

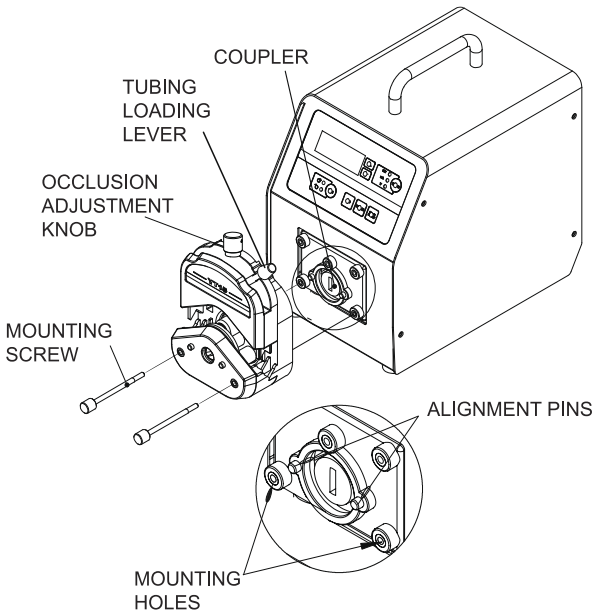


Figure 1. YT Pump Head

3 Specifications

Suitable Drive	BT, WT series pumps
Suitable Tubing Size	YT15: 13# 14# 19# 16# 25# 17# 18# YT25: 15# 24# 35# 36#
Suitable Tubing type	Silicone, pharmed, A-60-G, A-60-F, F5500A, 2275, 2475, 3603
Speed Range	0-600 rpm
Flow Range	YT15: 2300 mL/min YT25: 2900 mL/min
No. of Rollers	4 (304 SS)
Case Material	PPS (Black), PES (White)
Occlusion	Adjustable
Operating condition	Temperature 0~40 °C, Relative humidity<80%
Dimensions	138.5x103x66 mm
Weight	0.62 kg

4 Setup and Operation

4.1 Tube Loading

- 1) Be sure the pump drive is turned off.
- 2) Rotate the lever all the way to the left to open the pump head.
- 3) Load the correct size tubing. Center the tubing between the retainers.
- 4) Rotate the lever to the right to close.
- 5) For optimum tubing life, keep tubing straight where it enters and exits the pump head.

Warning: Stop the drive when changing the tubing or its position in the rotor mechanism. The rotor is partially exposed when the LOADING LEVER is in the open position.

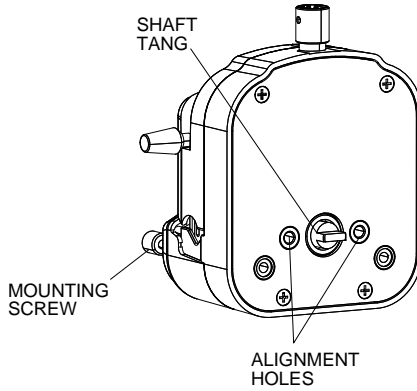


Figure 2. Setup

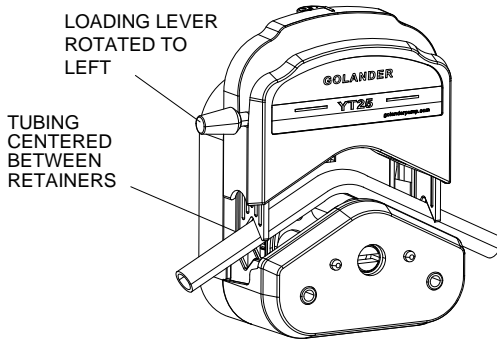


Figure 3. Open and Load

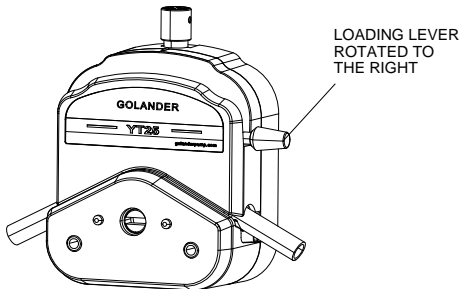


Figure 4 Close Pump Head

4.2 Occlusion Adjustment

Adjust occlusion setting by using the Occlusion Adjustment Knob near top of pump head.

For optimum performance, turn the knob to “1” after loading the tubing. Start drive and adjust knob until pump primes and fluid begins to flow. To increase output pressure/vacuum, turn the knob in clockwise direction. Please note decrease the occlusion will reduce tubing life. Occlusion usually does not need to be readjusted when changing tubing.

4.3 Multiple channel Mounting

Depending on the torque capabilities of the drive, the pump heads can be mounted in tandem. Longer screws are required for multiple pump heads setup. The tubing on the inside can be changed without removing the outside pump head(s) from the drive.

5 Dimensions

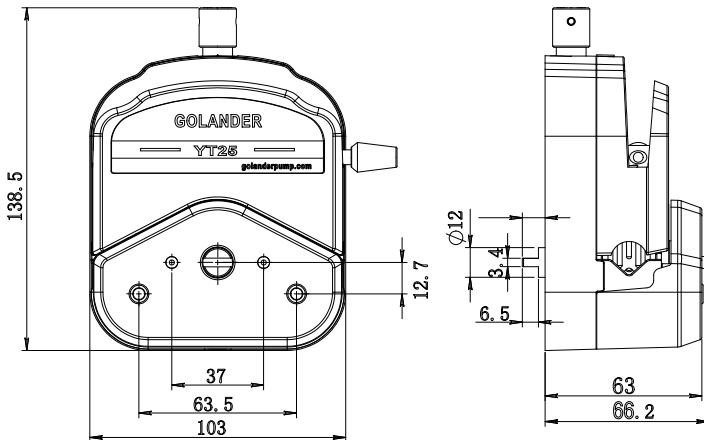


Figure 5. Dimensions (mm)

6 Warranty

The product comes with one-year labor and parts warranty. The limited warranty does not cover any damage that is caused by improper usage

and handling.

7 Regular Maintenance

- 1) Always check the tubing and connections to make sure there is no leakage. Keep the pump head dry. Do not use chemical solvents to clean the head.
- 2) Do not immerse nor use excessive fluid.
- 3) The occlusion adjustment knob is designed for occlusion adjustment, it will not affect flow rate. As time goes on, the flow rate will slightly change. Please adjust the drive speed or calibrate the flow rate when necessary.
- 4) There would be 3-5% difference among the channels for multiple pump heads setup. For higher precision application, we recommend only use one channel pump head for each pump.

8 Typical Flow, Pressure Data

The rated flow rate below is for 75 °F water at standard atmospheric pressure. The tubing length is 1 meter, 0.5m for inlet and 0.5m for outlet.

Table 1. YT15 Flow Rate (mL/min)

Speed (rpm)	Tubing						
	13#	14#	19#	16#	25#	17#	18#
0.1	0.0060	0.0217	0.048	0.0800	0.1667	0.2833	0.38
30	1.8	7	14	24	50	85	115
50	3.0	11	24	40	83	142	192
100	6.0	22	48	80	167	283	383
150	9.0	33	73	120	250	425	575
350	21	76	181	280	583	992	1342
600	36	130	286	480	1000	1700	2300

Table 2. YT25 Flow Rate (mL/min)

Speed (rpm)	Tubing			
	15#	24#	35#	36#
0.1	0.17	0.28	0.38	0.48
30	50	85	115	145
50	83	142	192	242
100	167	283	383	483
150	250	425	575	725
350	583	992	1342	1692
600	1000	1700	2300	2900