

TODA Fluid ODM Technical Solutions

Pump Model: B400K0FT1505

FT1505 pump head is a cutting-edge creation designed to meet precise market demands. It features an elegant and compact design, with user-friendly elements such as observation windows and cover open indicators, greatly enhancing operational convenience. Additionally, the FT1505 offers precise and consistent low-pulsation flow control, making it ideal for bio-fermentation and various OEM applications.

Function and Features

- **Compact and Exquisite, Ideal for OEM Integration**

The pump head boasts an elegant appearance and compact structure, making it easy to integrate into various instruments and devices, effectively saving space.

- **Single-Handed Operation for Enhanced Efficiency**

The flip-top design allows for quick one-handed tube installation. Tubes automatically position and lock without adjustment, significantly improving work efficiency

- **Observation window and cover indicator for clear user experience**

The observation window also serves as a cover opening indicator. The internal operation status is clearly visible, and the cover opening guide is straightforward, significantly enhancing the user experience.

- **Spring Block Design to Extend Tubing Life**

The spring block design extends the life of the tube, ensures stable flow output, reduces pulsation, and guarantees high-precision fluid control.

- **Low Pulsation**

The four-roller design provides precise and consistent low-pulsation flow control.

- **High Flow Rate**

The maximum continuous flow rate is 370 mL/min, and the maximum intermittent flow rate is 550 mL/min.

- **Flexible Compatibility with Various Tube Sizes**

Supports six tube sizes with a wall thickness of 1.6mm, accommodating diverse application scenarios.

- **Two Models: Standard and High Pressure**

The adjustable spring offers standard and high-pressure models to meet different usage needs.

- **Optional Cover Opening Stop and Speed Monitoring Features**

Optional features include cover opening stop and speed monitoring, ensuring safe operation and monitoring the running status.

Application fields: Biopharmaceuticals, Medical Equipment, Laboratory Instruments, and Various OEM Supply Needs

Typical applications: Biochemical Fermentation, Dentistry, Surgical Irrigation, etc.



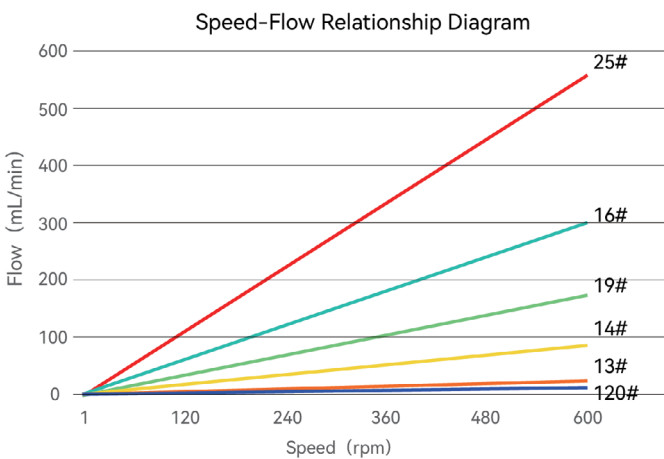
Pump Parameters

Motor Types	42 stepper motor
Control and Drive Methods	User-supplied
Speed Range	Continuous operation ≤400rpm; Intermittent operation ≤600rpm
Maximum Flow Rate in Continuous Operation	370mL/min (silicone tube)
Maximum Flow Rate in Intermittent Operation	550mL/min (silicone tube)
Channel Number	1 channel
Roller Number	4 rollers
Running Direction	Clockwise/Counterclockwise rotation
Suitable Tube Wall Thickness	1.6 mm
Suitable Tube Specifications	120#, 13#, 14#, 19#, 16#, 25#
Tube Material	Silicone, Pharmed
Tube Installation Method	Adaptive tube clamps
Types of Tube Pressure	Elastic gap
Material of Pump Head Shell	Enhancing Nylon
Material of Pump Head Roller	Roller: PET; Metal parts: 304;
Noise	≤60db (testing environment noise ≤40dB, horizontal distance between test product and noise meter is 1 meter)
Pump Head Weight	470g (without tube)
Dimensions	64mm×64mm×91mm
Working Environment	Temperature 0- 40°C, , Relative humidity < 85% RH
Storage Environment	In a clean and well-ventilated environment with ambient temperatures ranging from -40 to +50°C, and relative humidity not exceeding 95%, the air must not contain corrosive, flammable gases, oil mist, or dust.

Applicable Tube Model and Flow Reference Table

Tube Material	Tube No.	Flow Rate(mL/min)						
		1rpm	30rpm	60rpm	100rpm	200rpm	400rpm	600rpm
Pharmed	120#	0.02	0.6	1.2	2.1	4.3	8.7	12.9
	13#	0.04	1.2	2.5	4.1	8.3	16.5	25
	14#	0.14	4.2	8.5	14	28	57	85
	19#	0.29	8.7	17.5	29	58	115	175
	16#	0.5	15	30	50	100	200	300
	25#	0.92	27	55	92	184	370	550

Note: 600rpm is intermittent operation.



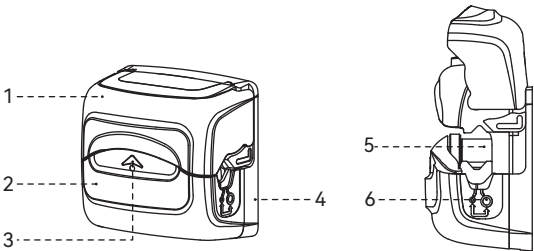
- The above flow data were all tested using a Lead Fluid silicone tube to pump pure water under laboratory conditions with normal temperature and pressure. This data is for reference only.
- Due to pressure in actual use , temperature, medium characteristics, tube material and other specific factors, the specific situation needs to consult our engineers.

Head Pump Structure

Component name and function:

- 1.Active front cover:** Flipping open or closing the active front cover allows access to the pump head tube compartment;
- 2.Observation window:** For viewing the rotation state of the pump head;
- 3.The main body:** used for motor installation and providing overall machine installation positions;
- 4.Support:** used to support the pump head core;
- 5.Pump head core:** As the working part of the squeeze tube;
- 6.Position of tube clamp:** Indicates the current position of the tube clamp;
- 7.Motors:** Provide power.

Figure 1 Products Structure



Usage Method

Step 1: According to the direction shown in the figure, embed the motor into the device, and use 2 M4 pan head screws or hexagon socket screws to fix the pump head onto the device at the mounting hole position.

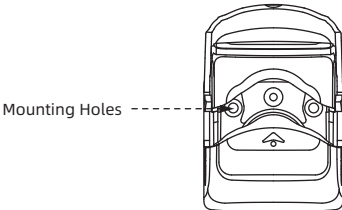


Figure2 Pump Head Installation Diagram

Usage Method

Step 2: Open the front cover of the activity until it is fully open;

Step 3: Form a tube installation space between the active front cover and the pump head core, and place the tube in this space;straighten the tube inside the pump head, ensuring that it is naturally extended, without twisting or misalignment;

Step 4: Snap the moveable front shell downward until you hear a click. This indicates that the front shell is locked in place, the track has automatically closed, and the tube has been stretched and secured during this .

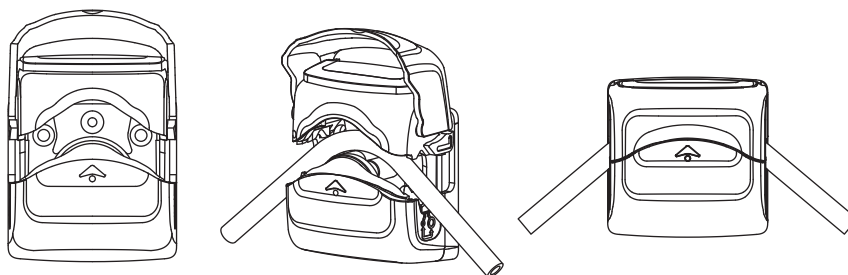
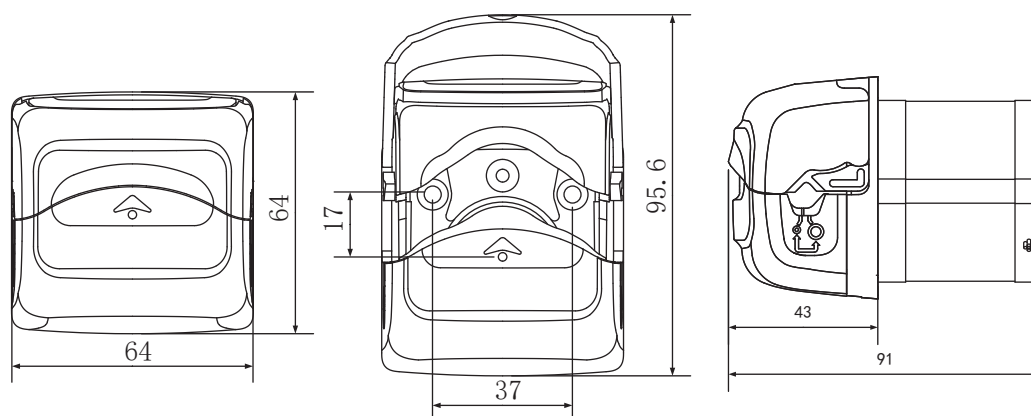


Figure 3 Tubes Installation Process Diagram

Dimension Drawing of Exterior and Opening(mm)



Ordering Information

Product No.	Model
5010300801020	B400K0FT1505

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