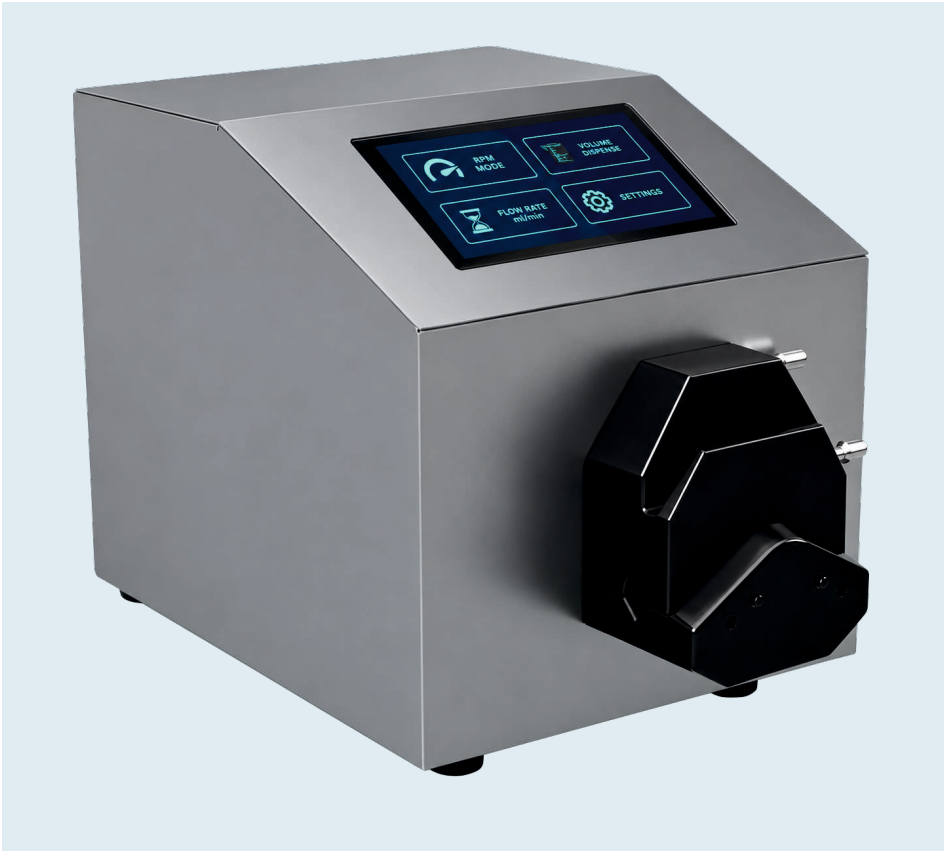
Tempo

Controlled Temperature Solution

Peritemp

PERISTALTIC PUMPS

Precision Flow • Intelligent dispensing • Flexible contol



PRODUCT BROCHURE

RPM | FLOW RATE | VOLUME DISPENSE
A configurable peristaltic pumping platform for controlled transfer, dosing and dispensing.

tempoinstruments.com

PT-100-1

Speed range : 0.1-600rpm
Flow range : 0.0033-560.04mL/min

Product Introduction

- The upper pressing block is opened by a turning method, and the operation is simple.
- The elastic upper block can reduce tubing wear.
- Quickly replace tubing with self-adaptive tube clamp.
- Suitable for 5 different sizes of hoses to meet different flow requirements.
- Exquisite appearance, small size.
- Optional lid-open stop function.





Flow Range

PUMP HEAD	Channel Number	Tubing	ID x Wall Thickness (mm)	mL/r	(0.1-600rpm) Flow Rate(mL/min)
PT-100-1	Single channel	13# 14# 19# 16# 25#	0.8x1.6 1.6x1.6 2.4x1.6 3.2x1.6 4.8x1.6	0.033 0.156 0.286 0.477 0.933	0.0033-19.97 0.0156-93.42 0.0286-171.6 0.0477-286.32 0.0933-560.04

Weight(kg) : 0.096

PT-100-2 Easy Load Peristaltic Pump Heads

Model: PT-100-2 Pump head
Maximum channel quantity: 1
Reference flow rate: ≤3365ml/min

Product Introduction

- Dust-proof back cover design, more hygienic and clean
- Easy-to-install peristaltic pump head, easy to disassemble and install tubes
- Available in PPS (black) and PESU (porcelain white)
- The pump head can be matched with various structures such as OEM bracket-type peristaltic pumps and complete pump products
- PT-100-2 pump head can be installed with 14#, 16#, 25#, 17#, 18# and other tubes with a wall thickness of 1.6mm, and the flow rate can reach 2135ml/min
- PT-100-2 can be connected in series with multiple pump heads. The number of series connections can reach 6, doubling the flow rate.



Flow Range

HOSE TYPE	IDxOD (mm)	ml/rpm	Rotating speed 0.1 - 600rpm	Tube pressure Mpa	
				intermittent	continuous
13#	0.8x1.6	0.07	0. 007-42		
14#	1.6x1.6	0.24	0.024-145		
19#	2.4x1. 6	0.575	0. 0575-345	0.27	0.17
16#	3.2x1. 6	0.85	0.085-515		
25#	4.8x1.6	18	0.18-1080	0.24	0.14
17#	6.4x1.6	2.95	0.295-1770	0.14	0.1
18#	7.9x1. 6	3.55	0. 355-2135	0.1	0.07

PT-200-1 Easy Load Peristaltic Pump Heads

Model : PT-200-1 Pump head
Maximum channel quantity: 6
Reference flow rate: ≤3365ml/min

Product Introduction

- Dust-proof back cover design, more hygienic and clean
- Easy-to-install peristaltic pump head, easy to disassemble and install tubes
- Available in PPS (black) and PESU (porcelain white)
- The pump head can be matched with various structures such as OEM bracket-type peristaltic pumps and complete pump products
- PT-200-1 pump head can be installed with 15#, 24#, 35#, 36# and other tubes with a wall thickness of 2.4mm, and the flow rate can reach 3365ml/min
- PT-200-1 can be connected in series with multiple pump heads. The number of series connections can reach 6, doubling the flow rate.



Flow Range

HOSE TYPE	IDxOD (mm)	ml/rpm	Rotating speed 0.1 - 600rpm	Tube pressure Mpa	
				intermittent	continuous
15#	4.8x2.4	1.8	0.18-1085	0.27	0.17
24#	6.4x2.4	2.825	0. 2825-1695		
35#	7.9x2.4	4.4	0. 44-2640		
36#	9.6x2.4	5.6	0.56-3365		

PT-200-2 OEM Pump and Pump Heads

Speed range: 0.1-600 rpm
Flow range: 0.3-6000mL/min

Product Introduction

- The casing is machined from aluminum alloy.
- The roller clamping gap supports concentric multi-level adjustment and has strong compatibility with multiple hose models.
- Optional electromagnetic sensor: Enables automatic pump stop when the cover is opened.
- Optimized tube-retention mechanism: It enables quick installation and removal of hoses.
- A new lever limiter has been added to effectively prevent the lever from becoming loose due to vibration.
- Magnetic protective cover, featuring a concealed strong magnetic adsorption design.
- Supports the use of multiple pump heads in series to meet diverse application needs.



Flow Range

PUMP HEAD	Material	Tube Clamp / Fitting Material	Tubing	ID x Wall thicknes (mm)	Flow rate(mL/min) (0.1-600rpm)
PT-200-2	Aluminum alloy	POM	15# 24# 35# 36#	4.8x2.4 6.4x2.4 7.0x2.4 9.6x2.4	0.3 - 1800 0.55 - 3300 0.8 - 4800 1-6000

Weight(kg) : 1.78

PT-300-1 Easy Load Peristaltic Pump Heads

Model : PT-300-1 Pump head
Maximum channel quantity: 2
Reference flow rate: ≤12L/min

Product Introduction

- Easy to install peristaltic pump head, easy to disassemble and install tube.
- Suitable for 73#, 82# tube
- Single and double pump heads are optional.



Reference Flow of Single Pump head (unit: Limin)

Tube Type	Silicone tube	Silicone tube	Silicone tube	Silicone tube
Tube No.	75# (ID 9.6*OD 14.4)	82# (ID 12.7*0D 19.3)	73# (ID 9.6*0D 14.4)	82# (ID 12.7*0D 19.3)
Max Flow Rate	8	13.2	7.8	11.8

Weight(kg) : 1.78

PT-300-2 Pump and Pump Heads

Speed range : 0.1-600 rpm
Flow range : 0.69-12000 mL/min

Product Introduction

- PT-300-2 pump head housing is produced with high-pressure die-casting aluminum, ensuring high strength and good consistency.
- Equipped with a standard electromagnetic sensor that outputs a cover-open to stop signal to enable the cover-open to stop function.
- The optimized tubing clamp structure allows for easy installation and removal of the tubing, preventing abnormal damage to the tubing.
- Added a lever limiter to securely fix the lever, preventing loosening due to vibrations.
- 304 stainless steel roller assembly, resistant to liquid leakage and corrosion.



Flow Range

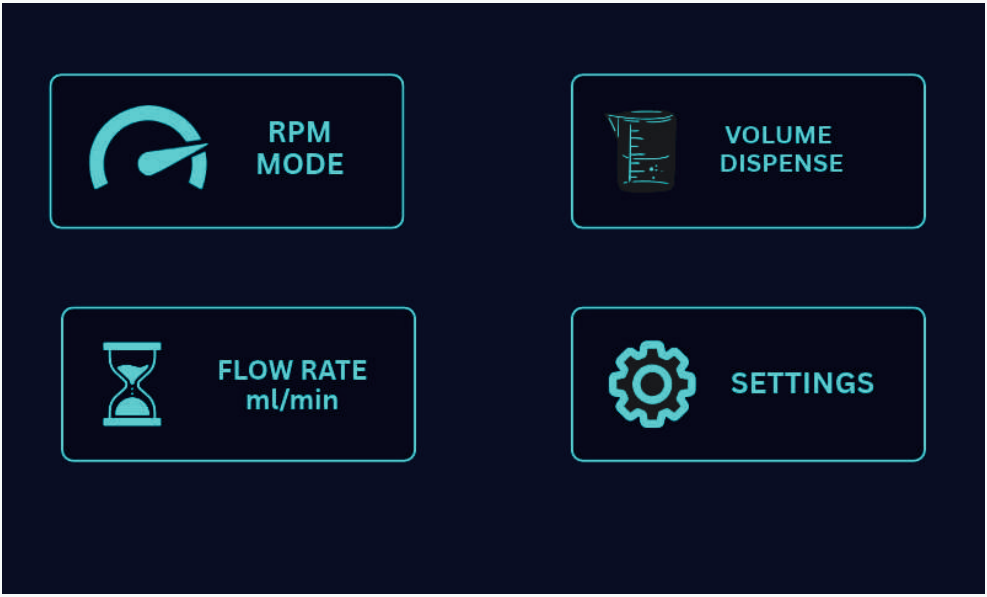
PUMP HEAD	Material	Tubing	ID x Wall thicknes (mm)	mL/r	Flow rate(mL/min) (0.1-600rpm)
YZ35-II	Cast aluminum alloy	26# 73# 82#	6.4×3.3 9.6×3.3 12.7×3.3	6.9 12.3 20	0.69-4200 1.23-7400 2-12000

Weight(kg) : 1.78

PRODUCT OVERVIEW

A control-focused peristaltic pump platform built around repeatable operation and flexible dispensing.

Touchscreen control experience



CORE OPERATING CAPABILITIES

RPM MODE	FLOW RATE MODE	VOLUME DISPENSE
Timed or continuous operation Direct speed setting Optional run time	Timed or continuous operation µL/min • mL/min • L/min Calibration supported	Automatic time calculation µL • mL • L Tube selection + calibration

Design intent: give operators direct control over speed, flow and dose while keeping tube selection, calibration and repeat operations accessible from the HMI.

OPERATING MODES

Choose the control variable that matches the process requirement.

Three Operating Modes

RPM MODE	FLOW RATE MODE	VOLUME DISPENSE
Timed or continuous	Timed or continuous	Automatic time calculation
Set speed directly with optional run time	µL/min • mL/min • L/min with calibration	µL • mL • L Tube selection batch interval

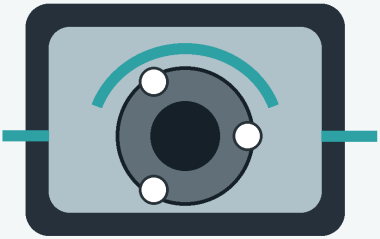
DISPENSING & REPEATABILITY

- Volume dispense can automatically calculate operating time from the selected volume and configured conditions.
- Flow and volume modes support tube selection and unit selection; flow units are µL/min, mL/min and L/min.
- Volume units are µL, mL and L.
- Calibration is available for flow and volume modes when measured output differs from the target.
- Batch and interval operation are available for both flow and volume dispensing.
- A fixed RPM can be selected for volume dispensing.

PUMP HEAD & TUBING SELECTION

Current design options for performance, precision and demanding liquid-handling applications.

Pump head & tubing concept



Tubing options in the current design

PT-100-1	1.6mm	Precision
PT-100-2	1.6mm	Performance
PT-200-1	2.4mm	Precision
PT-200-2	2.4mm	Performance
PT-300-1	3.2mm	Concentrated liquids / long-life head
PT-300-2	3.2mm	High chemical-resistance option

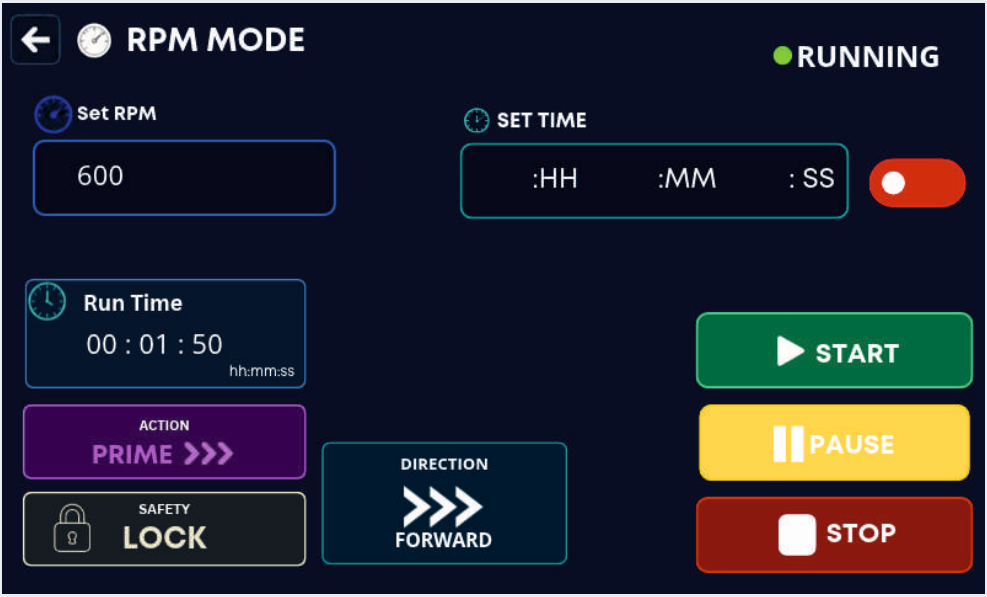
Selection note: tube/head selection should be matched to the required performance, tubing dimensions, liquid characteristics and process conditions.

PPS option: the supplied feature sheet identifies PPS as an option for strong chemical-corrosion resistance and states resistance up to 200°C; final material compatibility and temperature limits should be validated for the intended liquid and assembly.

OPERATOR EXPERIENCE & CONTROL

Straightforward controls for everyday operation, repeat dispensing and process protection.

Touchscreen control experience



STANDARD OPERATOR FUNCTIONS

Forward / Reverse	Change pumping direction directly from the HMI.
Start / Pause / Resume / Stop	Control the process without leaving the operating screen.
Prime	Quickly prime the tubing before the process.
Anti-Drip / Suck-Back	Available for both volume and flow operation.
Touchscreen Lock	Disables touch controls to reduce accidental operation.
Auto Resume	Supports resumption after an interruption according to configured operation.

MODEL ARCHITECTURE

A scalable product family for standard operation, integration and regulated workflows.

FEATURE	BASIC	ADVANCE	PRO
Touchscreen HMI	✓	✓	✓
RPM / Flow / Volume modes	✓	✓	✓
Tube selection & calibration	✓	✓	✓
Batch / interval operation	✓	✓	✓
Forward / Reverse / Prime	✓	✓	✓
Anti-drip / Suck-back	✓	✓	✓
Screen lock / Auto resume	✓	✓	✓
Rs232	—	✓	✓
RS485 / 4–20 mA	Variant	Variant	Variant
Profile / recipe saving	—	—	✓
21 CFR Part 11	—	—	✓
User personalization	—	—	✓
Recipe/profile capacity	—	—	Up to 100

Variant note: the Basic / Advance / Pro structure reflects the current product-planning direction. Communication and regulatory features should be assigned to the final hardware/software configuration before release.

APPLICATIONS

Flexible pumping and dispensing for laboratory, process and OEM environments.

Designed for controlled liquid handling

LABORATORY : Transfer • dosing • filling
PHARMA & BIO : Controlled media handling
CHEMICAL : Corrosion-aware tubing selection
FOOD & PROCESS : Repeatable liquid transfer
OEM INTEGRATION : External control options
R&D / PILOT : Flexible flow and dispensing

WHY A PERISTALTIC PLATFORM

- Controlled transfer using replaceable tubing as the fluid-contact path.
- Flexible operating modes for direct RPM control, defined flow rate and volume-based dispensing.
- Calibration workflow helps compensate for differences between commanded and measured output.
- Tube and head options allow the pump configuration to be adapted to performance and liquid-handling requirements.
- Repeatable batches and intervals support repetitive dispensing workflows.

Typical use areas: laboratory liquid handling, pharmaceutical and biotechnology processes, chemical handling, food/process applications, R&D and OEM equipment integration.

TECHNICAL SUMMARY & CONFIGURATION GUIDE

A concise reference for selecting the appropriate pump configuration.

PARAMETER	CURRENT DESIGN INFORMATION
Operating modes	RPM • Flow Rate • Volume Dispense
RPM operation	Timed and continuous
Flow rate operation	Timed and continuous
Flow units	µL/min • mL/min • L/min
Volume units	µL • mL • L
Volume timing	Automatic time calculation
Calibration	Flow and volume modes
Batch / interval	Available in flow and volume modes
Volume RPM	Fixed RPM selection available
Anti-drip	Suck-back available in flow and volume modes
Direction	Forward / Reverse
Controls	Start • Pause • Resume • Stop • Prime
Safety / convenience	Touchscreen lock • Auto Resume
Tubing / heads	135 Yx • 253 Yx • KT15 • YZ25-6L • YZ35-II • PPS
Advanced integration	RS232 / RS485 / 4–20 mA — variant dependent
Advanced software	Profiles • personalization • 21 CFR Part 11 — Pro planning



APPLICATION SECTOR



LABORATORY & RESEARCH



BIOTECHNOLOGY & BIOPHARMA



FOOD & BEVERAGE



WATER & WASTEWATER TREATMENT



COSMETICS & PERSONAL CARE



CHEMICAL & PROCESS INDUSTRY

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