Peristaltic Pump 0.0063-1460 mL/min, 0.1-400 rpm Dispensing Pump with 3.5 in LCD and Stepper Drive

Model **MSPP-Z400SWISS,MSPH-Z1460SWISS** | Brand **Master Science**





The Master Science Dispensing Peristaltic Pump pairs a stepper-motor drive with a four-roller pump head to move and dose liquid through tubing. Flow runs from 0.0063 mL/min up to 1460 mL/min, and the liquid never touches anything except the tube, so changing products means changing tubing.

KEY HIGHLIGHTS

- Repeatable fills
- Contamination-free transfer
- Drip control
- Easy to automate

AT A GLANCE

0.0063-1460 mL/min
FLOW RANGE

0.1-400 rpm
SPEED

0.1 rpm (≤100 rpm), 1 rpm (>100 rpm)
SPEED RESOLUTION

Request a Quotation
Contact us for pricing, configuration options and delivery details.

support@themsci.com
www.themsci.com

Scan to view online

Overview

A 3.5 inch LCD shows all settings at once. Three dispensing modes are built in: timed, copy and volume. Separate CPUs handle drive and control, which helps one-key filling hold a repeat error of ±0.5%. Suck-back can be set up to 720°, and the drive can be run from sensors, a foot switch or a PLC.

For bottle-mounted reagent dosing at smaller volumes, see our electronic bottle top dispenser, a bench partner to the Master Science Dispensing Peristaltic Pump.

The Master Science Dispensing Peristaltic Pump is used for precise filling and transfer of small and medium doses in:

Gravity feeds and simple pumps struggle with accurate, clean dosing. The Master Science Dispensing Peristaltic Pump fixes the common issues:

Overview

- Timed, copy and volume dispense modes
- Flow calibration; start, stop and reverse
- Full-speed purge for fast tube filling

Key Benefits

Repeatable fills
The Master Science Dispensing Peristaltic Pump holds a ±0.5% repeat error for one-key dosing.

Contamination-free transfer
Liquid stays inside the tubing, so the pump never touches the product.

Drip control
Adjustable suck-back up to 720° pulls liquid back after each dose.

Easy to automate
Analog, TTL and RS232/RS485 inputs let a sensor, foot switch or controller run the pump.

Technical Specifications

GENERAL	
General	Drive and pump head data for the Master Science Dispensing Peristaltic Pump:
Brand	Master Science
Model Number	MSPP-Z400SWISS,MSPH-Z1460SWISS
SKU	MSPP-Z400SWISS,MSPH-Z1460SWISS
Brand	Master Science
Model	MSPP-Z400SWISS (drive), MSPH-Z1460SWISS (pump head)
SKU	MSPP-Z400SWISS, MSPH-Z1460SWISS
Speed	0.1-400 rpm
Speed resolution	0.1 rpm (≤100 rpm), 1 rpm (>100 rpm)
Flow range	**0.0063-1460 mL/min**
Dispensing volume	15 µL-9999 L
Filling volume resolution	0.001-0.01 mL (depends on tubing)
Dispensing time	0.1-999.9 s
Intervals	0.1-999.9 s
Times	0-9999 (0 = infinite loop)
Repeat error	±0.5%
Retention error	1% within 68 h at 100 rpm (special filling tube)
Suck-back angle	0-720°
Tubing sizes	13#, 14#, 19#, 16#, 25#, 17#, 18#
Tubing wall	1.6 mm
Rollers	4, stainless steel
Shell material	PPS
Operation	Membrane keypad and digital control knob
External speed control	4-20 mA and 0-10K standard; 0-5 V, 0-10 V optional
External start/stop and direction	TTL 5 V standard; TTL 12 V, 24 V optional
Communication	RS232, RS485
Protection level	IP31

GENERAL	
Working environment	0-40°C, RH <80%
Display	3.5 inch LCD
Power	≤45 W; AC 220 V ±10%, 50/60 Hz standard

DIMENSIONS & WEIGHT	
Weight	6.8 kg

LIQUID HANDLING PROBLEMS THE MASTER SCIENCE DISPENSING PERISTALTIC PUMP SOLVES	
Inconsistent fill volumes	Stepper drive and calibrated flow keep each dose within ±0.5%.
Cross-contamination	Only the tube touches the liquid, and tubes are quick to swap.
Drips after dispensing	Suck-back control pulls the last drop back into the line.
Manual start and stop	Foot switch, sensors and serial control let the pump run on cue.

Applications

- **Pharmaceutical filling and dosing**
- **Food and beverage liquid transfer**
- **Chemical dosing and sampling**
- **Biological media and buffer transfer**
- **Laboratory and environmental engineering set-ups**

Drive and control

- Stepper motor speed control, unaffected by load
- Double CPU design separating drive and control
- Power-off memory

Interfaces and build

- Foot switch, liquid level, capacitive and photoelectric sensor options
- Conformal-coated circuit board and wide voltage design
- Carry handle; accepts multiple pump heads

Standard Accessories Included

- Peristaltic pump drive with 3.5 inch LCD
- Pump head (4 stainless steel rollers)

Optional Accessories

- External control at 0-5 V or 0-10 V
- TTL 12 V or 24 V control input
- DC 5 V TTL output
- Foot switch and sensors (capacitive, liquid level, photoelectric)