

CATALYST™ FH100M Multichannel Pumps

Pump fluid in multiple channels, accurately

Catalyst FH100M series peristaltic pumps provide multichannel pumping with the accuracy of flow control and broad flow range to efficiently service most pumping applications, including bioassays, electrophoresis, chromatography, and pH control.

With flow ranges from 1.2 $\mu\text{L}/\text{min}$ to 760 mL/min and three modes of operation—flow, timed flow, and programmable cycle dispensing—FH100M multichannel pumps can save considerable time and resources while greatly improving process efficiency.

Featuring remote control of speed, pumping direction, and start/stop/purge, these pumps are available with a wide range of interchangeable multichannel pump heads, drives, and tubing and can deliver up to 12 channels simultaneously. A configured FH100M pump system consists of a pump head, drive, and cartridges.



Easy maintenance

- Cartridge design provides fast tubing changes, and eliminates hardware in other multichannel designs
- Rugged motor and controls ensure long-term reliable operation
- Contamination-free pumping—the fluid contacts only the tubing material

Simple to use

- Programmable in seven languages—provides easy set-up in almost any global location
- Universal voltage and frequency capability allows operation world-wide—IEC320 socket and cord/plug set provided
- Quick-start guide included for fast start-up



Diverse performance range

- Three modes of operation—flow, timed flow, and programmable cycle dispensing
- Lower pulsation flow and higher accuracy at low volumes and low flow rates
- High repeatability on all channels
- Cartridges provide defined and repeatable occlusion conditions
- Available in 4, 8, or 12 channel models (2, 4, and 6 channels when using the large cartridges)
- Capable of accurate, metered, parallel flows with difficult or multiphase fluids

Ergonomic design

- Digital display of pump speed or flow rate or number of dispense cycles
- Adjustable occlusion setting provides flow and pressure performance, and optimizes tubing life
- Valveless replacement alternative to diaphragm and piston pumps

Specifications & Ordering Information



Catalyst model	FH100M 4/6	FH100M 4/8	FH100M 8/3	FH100M 8/4	FH100M 12/6	FH100M 12/8
Catalog number	MK-77724-00	MK-77724-02	MK-77724-04	MK-77724-06	MK-77724-08	MK-77724-10
Max number of channels	4	4	8	8	12	12
Number of rollers	6	8	3	4	6	8
Number of cartridges included						
Small	—	4	—	8	—	12
Large	2	—	4	—	6	—
Performance						
Flow capacity (mL/min)	0.21 to 280	0.013 to 67.0	0.22 to 530	0.02 to 100	0.033 to 56	0.002 to 14.0
rpm	4 to 200				0.8 to 80	
Reversible	Yes				Yes	
External control – input	0 to 20 mA, 4 to 20 mA, or 0 to 10V (scalable); remote/local; direction (CW/CCW); start/stop; PRIME via contact closure					
External control – output	4 to 20 mA or 0 to 10 V					
Motor running logic	N.O. or N.C. (1 A @ 24 VAC)					
Tachometer output	5V, TTL pulse					
Electrical						
Voltage (50/60 Hz)	90 to 260 VAC; auto selected					
Current	1.6 A @ 115 VAC; 1.9 A @ 230 VAC					
Motor type	PMDC					
Motor size	1/10 hp (75 watts)					
Phase control	Phase controlled					
Display	Multiline LCD, displays all operational parameters					
Speed regulation (accuracy)	±0.25% full-scale					
Speed resolution (repeatability)	±0.1 rpm at 4 to 400 rpm					
Physical						
Operating temperature	0 to 40°C (32 to 104°F)					
Storage temperature	–25 to 65°C (–13 to 149°F)					
Materials of construction	Housing: ABS; Pump head: polysulfone, stainless steel, anodized aluminum, Rulon, Buna N; Cartridge: polycarbonate, GF nylon, anodized aluminum knob					
IP rating	IP31					
Controller dimensions (L × W × H)	31.7 x 27.9 x 15.2 cm (12½" x 11" x 6")					
Shipping weight	7 kg (15 lb)					

MK-77724-60 Cartridge, small; for FH100M 8/3 and 8/4
MK-77724-65 Cartridge, large; for FH100M 8/3 and 8/4

MK-77724-70 Cartridge, small; for FH100M 4/6, 4/8, 12/6 and 12/8
MK-77724-75 Cartridge, large; for FH100M 4/6, 4/8, 12/6 and 12/8

See pages 10–12 for tubing performance and selection.