

Why MASTERflex® Peristaltic Pumps?

1

Easy

- Quick installation
- Low maintenance
- Easy tubing changeover

2

Durable

- Trusted for over 60 years
- Broad chemical compatibility

3

Versatile

- From research to process scale
- Handle just about any fluid
- Multichannel capabilities

4

Customisable

- Configurable systems
- Many tubing options
- Easy scale-up

5

Accurate

- Flow ranges from 0.0006- mL/min to 42-L/min
- Rigorous design and testing standards
- Tubing is custom manufactured to precise tolerances



Selecting a Masterflex® Pump: *As-Easy-As*

Application Requirements

- What is my required flow rate?
- What chemical am I pumping?
- Do conditions such as viscosity or back pressure play an important role in my decision?

Base a Pump Series on Your Flow Rate

- Use the table below to find the pump series that best fits your flow rate needs

Complete Your System

- L/S and I/P pump series are divided into three components—pump head, tubing, and drive
- Select the three components from the same series or choose a complete preconfigured system

Masterflex pump series	Features	Flow range	Speed		Remote control capability	Multichannel capabilities	Page(s)
			Fixed	Variable			
C/L®	Compact, low-flow pump that easily fits on benchtop or mounts within a panel	0.002 to 43 mL/min		✓	Yes	Yes	137
L/S®	High-accuracy drives for precise flow control and dispensing	0.00001 to 3400 mL/min	✓	✓	Yes	Yes	121–133
I/P®	Powerful systems that provide better protection from possible hazards such as dust and water	0.0006 to 26 LPM	✓	✓	Yes	Yes	134–135
B/T®	Highest flow rates—ideal for large batch fluid transfer with excellent hazard protection	0.71 to 42 LPM	✓	✓	Yes	Yes	136

Custom **OEM** Pump Systems

When you need more than an off-the-shelf solution, you can look to Cole-Parmer as a trusted partner

With more than 100 years of combined experience, our design engineers will work directly with you to create the exact pump you need. Contact our Application Specialists to get started!

Masterflex® Cloud-Enabled Drives Featuring MasterflexLive™

Real-time remote pump control and monitoring

- Secure, cloud-enabled platform for control and monitoring of select L/S® and I/P® pumps
- Get real-time control of all pump parameters, including speed, flow rate, dispense volume, and more
- Push notifications alert you to operating conditions and error messages
- Monitor and adjust critical processes running 24/7—no need to be onsite
- “Hands-free” operation lets you control pumps operating inside cleanrooms, glove boxes or isolation chambers
- Access from your PC, tablet or smartphone (iOS™ and Android™ compatible)
- Internet connection via standard Ethernet (RJ45) jack on rear of drive



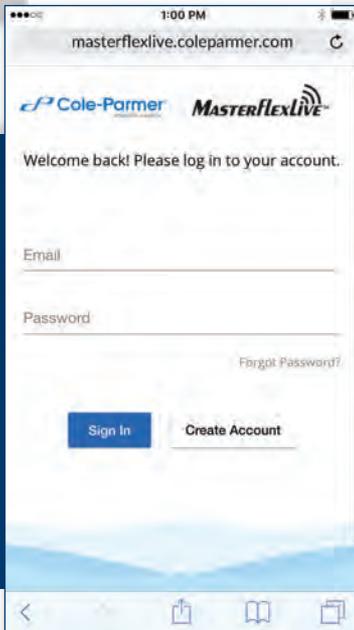
EU Annex 11
compliant



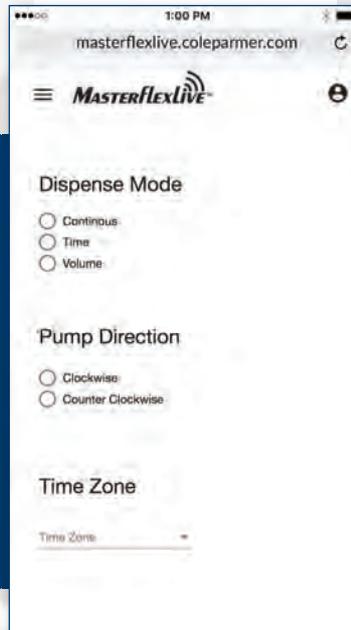
Monitor and control your pumps via the cloud.

24/7 remote access from anywhere

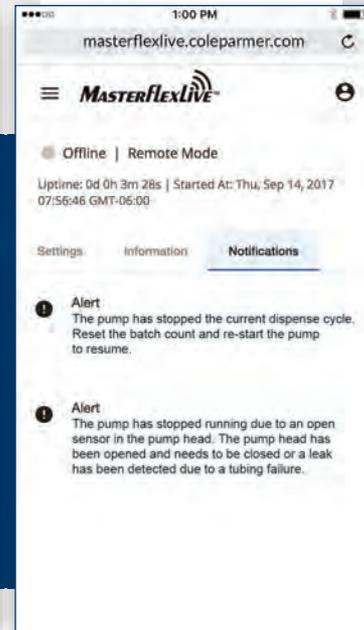
Create a free account



Manage & control pump parameters



Get alerts & notifications



rpm	Flow range (mL/min)	Speed control (resolution)	Open-head sensor	Pump heads accepted	Motor size	IP rating	Power (50/60 Hz)	Catalogue number
L/S cloud-enabled digital drive								
0.02 to 100	0.001 to 588	±0.1%	Yes	2	1/10 hp (75 W)	IP33	90 to 260 VAC	MY-07551-60
0.1 to 600	0.006 to 3400							MY-07551-50
L/S cloud-enabled digital process drive with 316 stainless steel housing								
0.1 to 600	0.006 to 3400	±0.1%	Yes	2	1/10 hp (75 W)	IP66	90 to 260 VAC	MY-07575-70
L/S cloud-enabled digital process drive with powder-coat steel housing								
0.1 to 600	0.006 to 3400	±0.1%	Yes	2	1/10 hp (75 W)	IP66	90 to 260 VAC	MY-07575-72
I/P cloud-enabled digital process drive with 316 stainless steel housing								
0.1 to 650	0.6 to 26,000	±0.1%	Yes	2	3/8 hp (280 W)	IP66	90 to 260 VAC	MY-77420-50
I/P cloud-enabled digital process drive with powder-coat steel housing								
0.1 to 650	0.6 to 26,000	±0.1%	Yes	2	3/8 hp (280 W)	IP66	90 to 260 VAC	MY-77420-60

Masterflex® L/S® Variable-Speed Console Drives

- Compact, cost-effective for general fluid transfer applications
- Flow range: 0.42 to 2900 mL/min
- Simple operation with single-turn speed control
- Separate power switch enables you to maintain speed setting when turning drive on/off; front-panel LED indicates power on
- Reversible motor lets you easily prime/purge tubing and pump in either direction
- Remote control of start/stop via DB9 connector on back of drive

Drives accept nine different pump head types: Standard, Easy-Load®, Easy-Load II, Easy-Load 3, Multichannel, High-Performance, Cartridge, PTFE tubing, and PTFE-diaphragm. Drive 07555-05 is not recommended for use with the PTFE-tubing and PTFE-diaphragm pump heads.

What's included: 1.8-m (6-ft) line cord with IEC 320/CEE22 socket. Shipped with country-specific cord/plug set; please specify ultimate destination when ordering.

FEATURES

- ✓ Compact and cost effective
- ✓ Reversible motor accepts up to two pump heads
- ✓ Remote start/stop



Shown with L/S Easy-Load II pump head 77200-60

Flow Rates in mL/min (flow rates in parentheses can only be obtained with the High-Performance pump head—see page 131)

rpm	Precision pump tubing						High-performance precision pump tubing			
	L/S 13	L/S 14	L/S 16	L/S 25	L/S 17	L/S 18	L/S 15	L/S 24	L/S 35	L/S 36
	Standard [†] , Easy-Load®, Easy-Load II, Easy-Load 3						Multichannel [‡] , Standard, Easy-Load II, Easy-Load 3, High-Performance			
	Cartridge, Multichannel			Cartridge			Easy-Load			
20 to 600	1.2 to 36	4.2 to 130	16 to 480	34 to 1000	56 to 1700	76 to 2300	34 to 1000	56 to 1700	76 to 2300	96 to 2900
7 to 200	0.42 to 12	1.4 to 43	5.6 to 160	12 to 330	20 to 570	27 to 770	12 to 330 (13 to 370)	20 to 570 (21 to 600)	27 to 770 (30 to 870)	34 to 970 (41 to 1130)

[†]The Standard pump head is not available for L/S 25. [‡]Multichannel head is not available for L/S 36.



rpm	Speed control (resolution)	Pump heads accepted	Motor size	IP rating	Dimensions (L x W x H)	Power (50/60 Hz)		Catalogue number
						VAC	Amps	
20 to 600	±5%	1	½ hp (37 W)	IP22	23 x 18.3 x 13.4 cm (9.1" x 7.2" x 5.3")	180 to 260	0.8	MY-07555-05
7 to 200		2				180 to 260	0.8	MY-07555-15

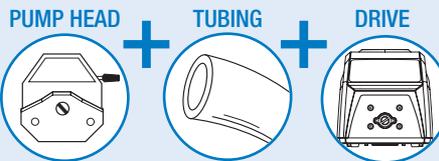
Accessories

MY-77595-35 Foot switch, DB9 male, 1.8-m (6-ft) cable
MY-07528-80 Handheld remote controller; for control of start/stop, route tubing through handle for dispensing into containers

MY-17050-01 ILAC MRA, NIST-traceable calibration for peristaltic pump drive

Choose a convenient Complete System

One catalogue number includes all 3!



System	Flow range	What's included			Power	Catalogue number
		Pump head	Tubing	Drive		
	16 to 480 mL/min	Easy-Load® II 77200-60	C-Flex® ULTRA L/S 16 tubing 06434-16 3 m (10 ft)	Console drive 07555-05 20 to 600 rpm	230 VAC, 50/60 Hz	MY-77910-45
	56 to 1700 mL/min	Easy-Load II 77200-62	C-Flex ULTRA L/S 24 tubing 06434-24 3 m (10 ft)	Console drive 07555-05 20 to 600 rpm	230 VAC, 50/60 Hz	MY-77910-55



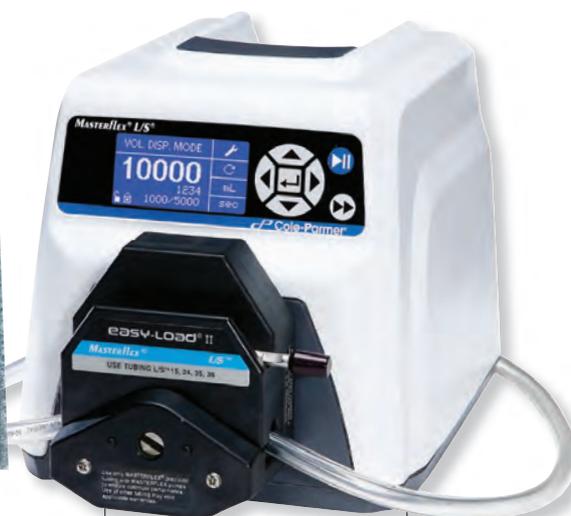
Masterflex® L/S® Computer-Compatible Digital Drives

Automate your process by interfacing drives with a computer

- Flow rate: 0.001 to 3400-mL/min with L/S tubing
- Interface drive to your PC via DB9 serial or USB connector
- Graphical LCD shows four operating modes: continuous run, time dispense, copy dispense, and volume dispense
- View pump performance continually
- Antidrip function ensures dispensing accuracy
- Remote control capabilities via DB25 female connector on drive

FEATURES

- ✓ Flow rates: 0.001 to 3400 mL/min
- ✓ Variable speed from 0.02 to 600 rpm
- ✓ Programmable, reversible motor accepts up to four pump heads
- ✓ Remote functionality



Drive 07551-20 shown with L/S Easy-Load II pump head 77200-62

Drives offer analogue remote control options and simple programming—ideal for automated process applications. Precise PWM speed control ($\pm 0.1\%$) maximises accuracy and efficiency while the brushless motor gives you quiet, maintenance-free reliability.

What's included: 1.8-m (6-ft) line cord with IEC 320/EE22 socket. Shipped with country-specific plug/cord set; please specify ultimate destination when ordering.

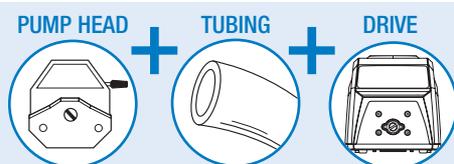


rpm	Speed control (resolution)	Open-head sensor	Pump heads accepted	Motor size	IP rating	Dimensions (L x W x H)	Power (50/60 Hz)		Catalogue number
							VAC	Amps	
0.1 to 600	$\pm 0.1\%$ (0.1 rpm at 600 rpm; 0.01 rpm at 100 rpm)	No	2	1/10 hp (75 W)	IP33	25.4 x 21.6 x 21.6 cm (10" x 8 1/2" x 8 1/2")	90 to 260 VAC	1.1 at 230 VAC	MY-07551-20
0.02 to 100		No	4						MY-07551-30

Accessories

- MY-07523-92 Foot switch**, momentary start/stop; 1.8-m (6-ft) cable
- MY-07523-94 DB25 male connector**. Use to create your own cable
- MY-07523-95 Cable assembly**, DB25 male connector and 7.9-m (25-ft) cable with stripped wire ends for remote control

- MY-07523-98 Tilt bail**, use to securely elevate front of drive
- MY-07523-97 Handheld remote controller**, DB9; for on/off control; route tubing through handle for filling and dispensing applications
- MY-17050-01 ILAC MRA, NIST-traceable calibration** with data for peristaltic pump drive



Choose a convenient Complete System
One catalogue number includes all 3!

System	Flow range	What's included			Power	Catalogue number
		Pump head	Tubing	Drive		
	0.08 to 480-mL/min	Easy-Load® 3 77800-60	C-Flex® ULTRA L/S 16 tubing 06434-16 3-m (10 ft)	Computer-compatible drive 07551-20 0.1 to 600 rpm	115/230 VAC, 50/60 Hz	MY-77924-55
	0.28 to 1700-mL/min	Easy-Load II 77200-62	C-Flex® ULTRA L/S 24 tubing 06434-24 3-m (10 ft)			MY-77924-65

Masterflex® L/S® Precision Variable-Speed Console Drives

Don't lose control of your metering applications—digital display gives you repeatable control

- Accurate and repeatable settings with 3-digit LED display of rpm
- Pump fluid in either direction with reversible motor—perfect for purging tubing
- Save space and increase productivity by stacking 2 or 4 pump heads on the same drive to create a multichannel pump system
- Maximise processes in a minimal footprint by stacking splash-resistant, IP33-rated drives
- Two ways to control speed, direction, and start/stop—use either the membrane keypad or remote control capabilities
- Customise for your application—drives accept nine pump head types: Standard, Easy-Load®, Easy-Load II, Easy-Load 3, Multichannel, High-Performance, Cartridge, PTFE-Tubing, and PTFE-Diaphragm

FEATURES

- ✓ Flow rates: 0.06 to 3400 mL/min
- ✓ Variable speed from 1 to 600 rpm
- ✓ Reversible motor accepts up to four pump heads



Stack up to 4 heads to maximise productivity in less space



Flow Rates in mL/min (flow rates in parentheses can only be obtained with the High-Performance pump head—see page 131)

rpm	Precision pump tubing						High-performance precision pump tubing			
	L/S 13	L/S 14	L/S 16	L/S 25	L/S 17	L/S 18	L/S 15	L/S 24	L/S 35	L/S 36
	Standard†, Easy-Load, Easy-Load II, Easy-Load 3						Multichannel†, Standard†, Easy-Load II, Easy-Load 3, High-Performance			
	Cartridge, Multichannel			Cartridge			Easy-Load			
6 to 600	0.36 to 36	1.3 to 130	4.8 to 480	10 to 1000	17 to 1700	23 to 2300	10 to 1000 (11 to 1100)	17 to 1700 (18 to 1800)	23 to 2300 (26 to 2600)	29 to 2900 (34 to 3400)
1 to 100	0.06 to 6	0.21 to 21	0.8 to 80	1.7 to 170	2.8 to 280	3.8 to 380	1.7 to 170 (1.8 to 180)	2.8 to 280 (3.0 to 300)	3.8 to 380 (4.3 to 430)	4.8 to 480 (5.8 to 580)

†The Standard pump head is not available for L/S 25. ‡Multichannel head is not available for L/S 36. Multichannel and Cartridge heads are available for microbore tubing.



rpm	Speed control (resolution)	Pump heads accepted	Motor size	IP rating	Dimensions (L x W x H)	Power (50/60 Hz)		Catalogue number
						VAC	Amps	
6 to 600	±0.25% (1 rpm at 600 rpm; 0.1 rpm at 100 rpm)	2	1/10 hp (75 W)	IP33	25.4 x 21.6 x 21.6 cm (10" x 8.5" x 8.5")	90 to 260	1.2 at 230 VAC	MY-07528-10
3 to 300		2						MY-07528-20
1 to 100		4						MY-07528-30

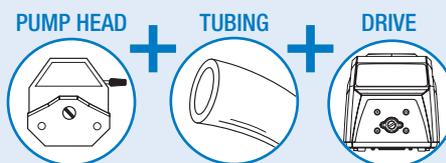
Accessories

- MY-07595-45 Connector**, DB9 male. Use for 4 to 20 mA remote control
- MY-07595-47 Cable assembly**, DB9 male connector and 7.9-m (25-ft) cable with stripped wire terminal ends. Use for remote control
- MY-77595-35 Foot switch**, DB9 male

- MY-07528-80 Handheld remote controller**; for remote control of start/stop, route tubing through handle for dispensing into containers
- MY-17050-01 ILAC MRA, NIST-traceable calibration** with data for peristaltic pump drive

Choose a convenient Complete System

One catalogue number includes all 3!



System	Flow range	What's included			Power	Catalogue number
		Pump head	Tubing	Drive		
	4.8- to 480-mL/min	Easy-Load® 3 77800-60	C-Flex® ULTRA L/S 16 tubing 06434-16 3 m (10 ft)	Precision console drive 07528-10 6 to 600 rpm	90 to 260 VAC, 50/60 Hz	MY-77916-10
	17- to 1700-mL/min	Easy-Load II 77200-62	C-Flex® ULTRA L/S 24 tubing 06434-24 3 m (10 ft)			MY-77916-20

Masterflex® L/S® Variable-Speed Digital Drives

Versatile, worry-free operation

- Brushless, maintenance-free motor provides ±0.1% speed control accuracy with 6000:1 turndown ratio
- Bright graphical LCD offers easy programming, four operating modes, and seven languages
- Get more accurate dispensing with preprogrammed calibration
- Drives accept all L/S pump heads for more pumping versatility
- Models equipped with open-head sensor stop drive motor when pump head is opened—pair with an open-head sensor equipped pump head (see pages 130–131)
- Operate remotely via DB25 female connector

FEATURES

- ✓ Flow rates: 0.001 to 3400 mL/min
- ✓ Variable speed from 0.02 to 600 rpm
- ✓ Programmable, reversible motor accepts up to four pump heads
- ✓ Ensure dispensing accuracy with antidrip function
- ✓ Hands-free dispensing via time interval dispense cycles

Four operating modes for more functionality: continuous run, time dispense, copy dispense, and volume dispense



rpm	Speed control (resolution)	Open-head sensor	Pump heads accepted	Motor size	IP rating	Dimensions (L x W x H)	Power	Catalogue number
0.1 to 600	±0.1% (0.1 rpm at 600 rpm; 0.01 rpm at 100 rpm)	No	2	1/10 hp (75 W)	IP33	25.4 x 21.6 x 21.6 cm (10" x 8.5" x 8.5")	90 to 260 VAC, 50/60 Hz	MY-07522-20
		Yes						MY-07522-28
0.02 to 100		No	4	1/10 hp (75 W)	IP33	25.4 x 21.6 x 21.6 cm (10" x 8.5" x 8.5")	90 to 260 VAC, 50/60 Hz	MY-07522-30
		Yes						MY-07522-38

MY-07523-92 Foot switch, momentary start/stop; 1.8-m (6-ft) cable
MY-07523-94 DB25 male connector. Use to create your own cable
MY-07523-95 Cable assembly for remote control; DB25 male connector and 7.9-m (25-ft) cable with stripped wire ends

MY-07523-97 Handheld remote controller; route tubing through handle for dispensing into containers
MY-17050-01 ILAC MRA, NIST-traceable calibration with data for peristaltic pump drive

PUMP HEAD

TUBING

DRIVE

Choose a convenient Complete System

One catalogue number includes all 3!

System	Flow range	What's included			Power	Catalogue number
		Pump head	Tubing	Drive		
	0.08 to 480-mL/min	Easy-Load® 3 77800-60	C-Flex® ULTRA L/S 16 tubing 06434-16 3-m (10 ft)	Digital drive 07522-20 0.1 to 600 rpm	90 to 260 VAC, 50/60 Hz	MY-77921-65
	0.28 to 1700-mL/min	Easy-Load II 77200-62	C-Flex ULTRA L/S 24 tubing 06434-24 3-m (10 ft)			MY-77921-75

Application Solution

Challenge

A manufacturer of safety glass and laminated glass was looking for a pump that could dispense coating resins for plate glass to provide protection and build shatter resistance. The resins used in the process could be polyurethane, epoxy, or other coatings, and in the past the resins ate through dispensing tubing. As a result, the manufacturer needed to find a pump system with tubing that had the appropriate chemical compatibility. Likewise, the pump system needed to offer quick maintenance for tube changes.

Solution

The customer tested silicone tubing for chemical resistance and found it to be suitable for the resins being dispensed. The customer then chose the L/S variable-speed digital drive 07522-20 for its precision pumping and speed control. The manufacturer also selected an Easy-Load II pump head for quick maintenance and reduced downtime during tubing changes.

Masterflex® L/S® Digital Modular Dispensing Drives

Three dispensing modes and precision low-maintenance motor

- Graphical LCD shows four operating modes: continuous run, timed dispense, copy dispense, volume dispense
- Dispense by mL—volume in mL of each dispense, 0.001 to 9999 mL; Copy—1 to 9999 dispense cycles; or SEC—time interval between each dispense cycle (1 to 9999 secs)
- Antidrip function ensures dispense accuracy
- Brushless, maintenance-free motor offers ±0.1% speed control accuracy and a 6000 to 1 turndown ratio

A. Modular Drive with Benchtop Controller features a stackable, splash-resistant ABS plastic controller housing and epoxy finished steel drive housing.

B. Washdown Modular Drive with Wall-Mount Controller has a powder-coated aluminum controller housing and powder-coated steel drive housing.

What's included: 1.8-m (6-ft) cable to connect drive and controller and 1.8-m (6-ft) line cord with IEC 320/CEE22 socket. Shipped with country-specific plug/cord set; please specify destination when ordering.



FEATURES

- ✓ Flow rates: 0.001 to 3400 mL/min depending on drive rpm and tubing size
- ✓ Variable speed
- ✓ Programmable, reversible motor accepts up to two pump heads and offers remote functionality



Models 77301-50 and -70 include wall-mount controller

MASTERFLEX®

ISO9001:2008
CERTIFIED SUPPLIER



rpm	Speed control	Pump heads accepted	Motor size	IP rating	Dimensions (L x W x H)	Power (50/60 Hz)		Catalogue number
						VAC	Amps	
A. Digital modular drive with benchtop controller								
0.1 to 600	±0.1%	2	1/10 hp (75 W)	IP33	Controller: 26.7 x 21 x 12.7 cm (10 1/2" x 8 1/4" x 5") Drive: 26.7 x 9.7 x 11.7 cm (10 1/2" x 3 13/16" x 4 5/8")	90 to 260	1.1 at 230 VAC	MY-77301-40
0.02 to 100		4						MY-77301-60
B. Digital washdown modular drive with washdown, wall-mount controller								
0.1 to 600	±0.1%	2	1/10 hp (75 W)	IP66/ NEMA 4X	Controller: 23 x 30 x 11.4 cm (9" x 11 3/4" x 4 1/2") Drive: 39.5 x 17.8 x 15.2 cm (15 9/16" x 7" x 6")	90 to 260	1.1 at 230 VAC	MY-77301-50
0.02 to 100		4						MY-77301-70

Masterflex® L/S® Digital Console Process Drives

Transfer, dispense, and meter in lab, process and washdown environments

- IP66 and NEMA 4X rated. Sealed housing and sealed keypad—simply hose down to clean
- Flow rate: 0.001 to 3400-mL/min with L/S tubing depending on drive rpm and tubing size
- Graphical LCD shows six different parameters: motor rpm, flow rate, dispense volume, cumulative volume, dispense interval time, and copy number.
- Dispense by: volume, copy, or time with programmable delay interval
- Remote control capabilities via waterproof connection
- Models equipped with open-head sensor stop drive motor when pump head is opened—pair with an open-head sensor equipped pump head

What's included: 1.8-m (6-ft) line cord—features IEC 320/CEE 22 connector coupler; watertight cord connection. Please specify destination country when ordering; drive is shipped with country-specific plug/cord set.

FEATURES

- ✓ Flow rates: 0.001 to 3400 mL/min
- ✓ IP66 and NEMA 4X rated
- ✓ Programmable, reversible motor accepts two or four pump heads and offers remote functionality



Drive 07575-38 shown with L/S Easy-Load II pump head 77200-32

MASTERFLEX®

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CERTIFIED SUPPLIER



rpm	Speed control (resolution)	Open-head sensor	Pump heads accepted	Motor size	IP rating	Dimensions (L x W x H)	Power	Catalogue number
Digital process drive with 316 stainless steel housing								
0.1 to 600	±0.1%	No	2	1/10 hp (75 W)	IP66	30.5 x 22.9 x 23.6 cm (12" x 9" x 9 5/16")	90 to 260 VAC, 50/60 Hz	MY-07575-30
0.02 to 100		Yes						4
Digital process drive with powder-coat steel housing								
0.1 to 600	±0.1%	No	2	1/10 hp (75 W)	IP66	30.5 x 22.9 x 23.6 cm (12" x 9" x 9 5/16")	90 to 260 VAC, 50/60 Hz	MY-07575-40
0.02 to 100		Yes						4
MY-07575-84 Washdown foot switch, momentary start/stop; 1.8-m (6-ft) cable								
MY-07575-80 Cable assembly for remote control; 31-pin round connector and 7.9-m (25-ft) cable with stripped wire ends								
MY-17050-01 ILAC MRA, NIST-traceable calibration with data for peristaltic pump drive								

Masterflex® L/S® Precision Variable-Speed Modular Drives

Ideal for limited spaces, hoods, or isolation chambers

- Three-digit LED display shows motor rpm—confirm speed setting at a glance
- Remote control capabilities: speed, direction, and start/stop
- ±0.25% speed control for precise flow regulation—ideal for metering

A. Modular Drives with Benchtop Controller

feature a stackable, splash-resistant ABS plastic controller housing and epoxy-finished steel drive housing. Remote control via a DB9 female connector on back of controller.

B. Washdown Modular Drives with Wall-Mount Controller

have a powder-coated aluminum controller housing and powder-coated steel drive housing. Remote control via weather-resistant connection on controller.

FEATURES

- ✓ Flow rates: 0.06 to 3400 mL/min
- ✓ Easy up-front control of speed, direction, and start/stop
- ✓ Reversible motor—purge tubing before or after pumping; pump fluid in either direction



B
Models 07557-60 and -70 include wall-mount controller

MASTERFLEX®

ISO9001:2008
CERTIFIED SUPPLIER



rpm	Speed control (resolution)	Pump heads accepted	Motor size	IP rating	Dimensions (L x W x H)	Power (50/60 Hz)		Catalogue number
						VAC	Amps	
A. Precision modular drives with benchtop controller								
6 to 600	±0.25% (1 rpm at 600 rpm; 0.1 rpm at 100 rpm)	2	1/10 hp (75 W)	IP33	Controller: 3.2 x 2.5 x 1.5 m Drive: 3.3 x 1.3 x 1.4 m	90 to 260	1.1 at 230 VAC	MY-07557-00
1 to 100		4						MY-07557-10
B. Precision washdown modular drives with washdown wall-mount controller								
6 to 600	±0.25% (1 rpm at 600 rpm; 0.1 rpm at 100 rpm)	2	1/10 hp (75 W)	IP66/ NEMA 4X	Controller: 2.7 x 3.6 x 1.4 m Drive: 4.7 x 2.1 x 1.8 m	90 to 260	1.1 at 230 VAC	MY-07557-60
1 to 100		4						MY-07557-70

MY-07557-51 Extension cable, 2.7-m (9-ft); extend distance between motor and controller

MY-07595-47 Cable assembly, for benchtop modular drives; DB9 male connector and 7.9-m (25-ft) cable with stripped wire terminal ends. Use for remote control

MY-77300-32 Cable assembly, for washdown modular drives; 18-pin round connector and 7.9-m (25-ft) cable with stripped wire terminal ends. Use for remote control

MY-17050-01 ILAC MRA, NIST-traceable calibration with data for peristaltic pump drive

Masterflex® L/S® Precision Console Process Drives

Stand up to process and washdown applications

- IP66 and NEMA 4X rated; sealed housing and sealed membrane keypad
- Three-digit LED display lets you confirm speed setting at a glance
- Open-head sensor stops drive motor when pump head is opened—pair with an open-head sensor equipped pump head
- Remote control capabilities via a watertight connector on back of drive

Accurate console drives have powerful motors, speed display, and ±0.25% speed control for precise flow regulation—ideal for metering applications. Separate speed and power (on/off) control lets you maintain speed setting while turning pump on/off. Remote speed control requires cable assembly 77300-32.

What's included: 1.8-m (6-ft) line cord with IEC 320/CEE22 socket. Shipped with country-specific plug/cord set; please specify ultimate destination when ordering.

FEATURES

- ✓ Flow rates: 0.06 to 3400 mL/min
- ✓ Variable speed from 1 to 600 rpm
- ✓ Stack up to four pump heads



Drive 07528-40 shown with L/S Easy-Load® II pump head 77200-32

MASTERFLEX®

ISO9001:2008
CERTIFIED SUPPLIER



rpm	Speed control (resolution)	Open-head sensor	Pump heads accepted	Motor size	IP rating	Dimensions (L x W x H)	Power	Catalogue number
Precision process drives with 316 stainless steel housing								
6 to 600	±0.25%	Yes	2	1/10 hp (75 W)	IP66/ NEMA 4X	30.5 x 22.9 x 23.6 cm (12" x 9" x 9 5/16")	90 to 260 VAC, 50/60 Hz	MY-07528-40
1 to 100			4					MY-07528-45
Precision process drives with powder-coat steel housing								
6 to 600	±0.25%	Yes	2	1/10 hp (75 W)	IP66/ NEMA 4X	30.5 x 22.9 x 23.6 cm (12" x 9" x 9 5/16")	90 to 260 VAC, 50/60 Hz	MY-07528-50
1 to 100			4					MY-07528-55

Accessories

MY-77300-32 Cable assembly, for precision process drives; 18-pin round connector and 7.9-m (25-ft) cable with stripped wire ends

MY-17050-01 ILAC MRA, NIST-traceable calibration for peristaltic pump drive

Masterflex® L/S® Variable-Speed Economy Modular Drives

Versatile with a wide flow range and simple controls

- Separate motor and controller are connected via a 1.9-m (6-ft) cable—place components where convenient or where space allows
- Single-turn speed control and on/off switch with green power indicator—maintain speed setting while turning pump on and off
- Painted steel housing is IP33 rated

A perfect upgrade from a fixed-speed drive, these variable-speed drives offer a wider rpm range, ±2% speed regulation, and ETL and CE listings. For added versatility, drives accept all L/S pump heads.



FEATURES

- ✓ Flow rates: 0.06 to 3400 mL/min
- ✓ Variable speed—1 to 100 or 6 to 600 rpm
- ✓ Convenient modular design

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Flow Rates in mL/min (flow rates in parentheses can only be obtained with the High-Performance pump head—see page 131)

rpm	Precision pump tubing						High-performance precision pump tubing			
	L/S 13	L/S 14	L/S 16	L/S 25	L/S 17	L/S 18	L/S 15	L/S 24	L/S 35	L/S 36
	Standard†, Easy-Load®, Easy-Load II, Easy-Load 3						Multichannel‡, Standard†, Easy-Load II, Easy-Load 3, High-Performance			
	Cartridge, Multichannel			Cartridge			Easy-Load			
6 to 600	0.36 to 36	1.3 to 130	4.8 to 480	10 to 1000	17 to 1700	23 to 2300	10 to 1000 (11 to 1100)	17 to 1700 (18 to 1800)	23 to 2300 (26 to 2600)	29 to 2900 (34 to 3400)
1 to 100	0.06 to 6	0.21 to 21	0.8 to 80	1.7 to 170	2.8 to 280	3.8 to 380	1.7 to 170 (1.8 to 180)	2.8 to 280 (3.0 to 300)	3.8 to 380 (4.3 to 430)	4.8 to 480 (5.8 to 580)

†The Standard pump head is not available for L/S 25.

‡Multichannel head is not available for L/S 36. Multichannel and Cartridge heads are available for microbore tubing.

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rpm	Speed control (resolution)	Pump heads accepted	Motor size	IP rating	Dimensions (L x W x H)	Power (50/60 Hz)		Catalogue number
						VAC	Amps	
6 to 600	±2%	2	1/10 hp (75 W)	Controller: IP33 Motor: IP21	Controller: 20.4 x 16.4 x 8.7 cm (8" x 6.4" x 3.4") Motor: 19.8 x 9.7 x 11.5 cm (7.8" x 3.8" x 4.5")	190 to 260	1.2 at 230 VAC	MY-07559-05
1 to 100	±2%	4	1/10 hp (75 W)	Controller: IP33 Motor: IP21	Controller: 20.4 x 16.4 x 8.7 cm (8" x 6.4" x 3.4") Motor: 19.8 x 9.7 x 11.5 cm (7.8" x 3.8" x 4.5")	190 to 260	1.2 at 230 VAC	MY-07559-15

MY-17050-01 ILAC MRA, NIST-traceable calibration with data for peristaltic pump

Masterflex® L/S® High-Pressure Pumps

Pump at pressures up to 125 psi (8.5 bar)

- Three-digit LED display shows motor rpm—confirm speed setting at a glance
- High-performance pump head offers automatic occlusion—optimised when pump head is closed and latched—load tubing in 15 seconds or less
- Pump at pressures up to 125 psi (8.5 bar) with included L/S 16HP tubing—ideal for feed, filtration, and metering applications
- Models equipped with open-head sensor stop the drive motor when pump head is opened



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77914-25, -27

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System	Flow range	What's included			Power	Catalogue number
		Pump head	Tubing	Drive		
	0.9 to 90 mL/min	High-Performance 77252-72		Precision console drive with ABS plastic housing 07528-30 1 to 100 rpm		MY-77914-20
	0.9 to 90 mL/min	High-Performance (open-head sensor) 77252-62	PharMed BPT L/S 16HP high-pressure tubing 05664-16 2.4-m (8 ft)	Precision process drive with powder-coat steel housing 07528-55 1 to 100 rpm	90 to 260 VAC, 50/60 Hz	MY-77914-25
	0.9 to 90 mL/min			Precision process drive with stainless steel housing 07528-45 1 to 100 rpm		MY-77914-27



Masterflex® L/S® Fixed-Speed Drives

Get consistent, repeatable flow rates

- Stackable drives are ideal for field or lab use
- Lighted power switch on front of drive indicates that pump is running
- Accept five different pump head types: Standard, Easy-Load®, Easy-Load II, Easy-Load 3, and Cartridge

What's included: 1.8-m (6-ft) line cord, European plug.

FEATURES

- ✓ Flow rates: 0.06 to 290 mL/min
- ✓ General, intermittent-duty fluid transfer applications



Drive 07540-01 shown with Easy-Load II pump head 77200-62

Flow Rates in mL/min^{††}

rpm	Precision pump tubing					
	L/S 13	L/S 14	L/S 16	L/S 25	L/S 17	L/S 18
	Standard [†] , Easy-Load, Easy-Load II, Easy-Load 3					
	Cartridge [‡]					
1	0.06	0.21	0.8	1.7	2.8	3.8
2	0.12	0.42	1.6	3.4	5.6	7.6
6	0.36	1.3	4.8	10	17	23
12	0.72	2.5	9.6	20	34	46
20	1.2	4.2	16	34	56	76
30	1.8	6.3	24	50	84	110
60	3.6	13	48	100	170	230

rpm	High-Performance Precision pump tubing			
	L/S 15	L/S 24	L/S 35	L/S 36
	Standard, Easy-Load II, Easy-Load 3			
	Easy-Load			
1	1.7	2.8	3.8	4.8
2	3.4	5.6	7.6	9.6
6	10	17	23	29
12	20	34	46	58
20	34	56	76	96
30	50	84	110	140
60	100	170	230	290

[†]Standard pump head is not available for L/S 25. [‡]Cartridge heads are available for microbore tubing. ^{††}Motor rpm and flow rates for the 230 VAC, 50 Hz economy drives are approximately 5% of values shown.

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rpm	Speed control	Pump heads accepted	Motor size	IP rating	Dimensions (L x W x H)	Catalogue number
230 VAC/50 Hz models						
1	None ^{††}	2	Sub-fractional (<1/25 hp) ^{†††}	IP22	15.2 x 13.4 x 11.9 cm (6" x 5 1/4" x 4 3/8")	MY-07542-01
2						MY-07542-02
5						MY-07542-06
10						MY-07542-12
17	None ^{††}	2				MY-07542-20
25						MY-07542-30
50						MY-07542-60

^{††}Drive speed may vary ±15%, subject to fluctuations in line voltage and frequency. ^{†††}Maximum power required is 70 W or less.

Masterflex® L/S® Digital Miniflex® Pumps

Small footprint, yet delivers accurate flow over a wide range

- Flow range of 0.005 to 381 mL/min (depending on tubing size)
- Tubing calibration function ensures accuracy
- Open-head sensor stops drive when pump head is opened
- Remote control via 25-pin connector on back of drive
- Automatic tubing retention makes tube loading quick and easy

Compact, stackable pump with durable ABS housing is easy to wipe down. The Miniflex pump head features a wide occlusion angle that prevents fluid backflow up to the rated pressure of the tubing. Self-lubricating thermoplastic polyester rollers are low friction and long wearing for smooth operation and long life.

Flow Rates (mL/min) at 0.1 to 300 rpm

Pump model	Precision pump tubing			
	L/S 13	L/S 14	L/S 16	L/S 25
07525-20	0.005 to 14	0.018 to 55	0.061 to 184	0.127 to 381
07525-40	0.005 to 14	0.018 to 55	0.061 to 184	—

Number of channels	rpm	Speed control (repeatability)	Reversible motor	IP rating	Dimensions (L x W x H)	Power (50/60 Hz)		Catalogue number
						VAC	Amps	
1	0.1 to 300	±0.1%	Yes	IP33	23.9 x 14.0 x 15.7 cm (9.4" x 5.5" x 6.2")	90 to 260	0.2 at 230 VAC	MY-07525-20
2								MY-07525-40

MY-07523-92 Foot switch, momentary start/stop; DB25 male; 1.8-m (6-ft) cable
MY-07523-95 Cable assembly, DB25 male connector and 7.9-m (25-ft) cable with stripped wire ends



FEATURES

- ✓ Flow rates: 0.005 to 381 mL/min
- ✓ Intuitive icon-driven programming
- ✓ Tubing calibration for accuracy
- ✓ Single- or dual-channel models

MASTERFLEX®

Power supplies are:

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MY-07523-97 Handheld remote controller, DB25 male, route tubing through handle for dispensing applications; 1.8-m (6-ft) cable
MY-17050-01 ILAC MRA, NIST-traceable calibration with data for peristaltic pump drive

Masterflex® Drives Powering Quattroflow™ Pumps

Move your delicate biological fluids

- Diaphragms enable soft, gentle pumping through the strokes generated by the eccentric shaft
- No mechanical seal or rotating parts that can fail—only the diaphragm and body come in contact with the fluid

Quattroflow Pumps offer a unique four diaphragm (chamber) design, providing the constant low-pulsation, low-shear pumping needed for your biological fluids. In addition, the quaternary diaphragm design enables risk-free dry-running, self-priming, and a high turn-down ratio. Both the single-use and multiple-use models safely and reliably pump plasma products, proteins, monoclonal antibodies, vaccines, and more.

Single-use pump heads have a disposable wetted chamber constructed of solid polypropylene (PP) that can be replaced as a complete unit—eliminating the cleaning validation, sterilisation process. You can quickly turn around equipment from one batch to the next, maximising production operations. Come pre-sterilised and double bagged.

Multiple-use pump systems ensure total product containment without abrasion and minimal particle creation. Stainless steel construction handles higher pressure applications including cross-flow filtration and chromatography columns.

Special Masterflex Drives were developed to best take advantage of the operating parameters of the Quattroflow pumps. Drives feature an intuitive interface, remote control functionality, and a brushless, maintenance-free motor with $\pm 0.1\%$ speed control accuracy. The graphical LCD shows six different parameters: motor rpm, flow rate, dispense volume, cumulative volume, dispense interval time, and copy number.

Plastic-enclosed drive has an IP33 rating for benchtop lab applications and has been combined with the lower flow QF150 series pump head.

Stainless steel drives have IP66 and NEMA 4X ratings and are designed for both the QF150 and QF1200 series. Sealed stainless steel housing and sealed keypad are protected from dust, water, and chemicals in the washdown environment—simply hose down to clean.



Applications

- Cross-flow systems
- Tangential flow filtration
- Chromatography systems
- Reaction dosing
- Virus or sterile filtration
- Buffer mixing systems
- Virus cultures
- Bacterial and viral vaccines
- Cell cultures
- Cell culture supernatants
- Enzyme solutions
- Antibodies
- Virus inactivation

Systems			Replacement pump heads
Pump head model	Drive type	Catalogue number	Catalogue number
QF150SU (single use)	ABS plastic, IP33	MY-74000-35	MY-76000-00
	Stainless steel, IP66 and NEMA 4X	MY-74000-37	MY-76000-00
QF150S (multiple use)	ABS plastic, IP33	MY-74000-31	MY-76000-06
	Stainless steel, IP66 and NEMA 4X	MY-74000-33	MY-76000-06
QF1200SU (single use)	Stainless steel, IP66 and NEMA 4X	MY-74000-47	MY-76000-02
QF1200S (multiple use)	Stainless steel, IP66 and NEMA 4X	MY-74000-43	MY-76000-08

Specifications for Quattroflow Pumps

Model	QF150SU (single use)	QF150S (multiple use)	QF1200SU (single use)	QF1200S (multiple use)
Flow range	1 to 180 L/h (0.26 to 48 GPH)	1 to 180 L/h (0.26 to 48 GPH)	20 to 960 L/h (5.3 to 253 GPH)	20 to 960 L/h (5.3 to 253 GPH)
Max pressure	For fluid temp <40°C (104°F)	4 bar (58 psi)	4 bar (58 psi)	6 bar (87 psi)
	For fluid temp >40°C (104°F)	4 bar (58 psi)	4 bar (58 psi)	4 bar (58 psi)
Max fluid temperature	60°C (140°F)	80°C (176°F)	60°C (140°F)	80°C (176°F)
Suction lift at 300 rpm	2 to 3 m (6.6 to 9.8 ft)	2 to 3 m (6.6 to 9.8 ft)	2 to 3 m (6.6 to 9.8 ft)	2 to 3 m (6.6 to 9.8 ft)
Volume per revolution	At free output	1.2 mL	1.2 mL	9.6 mL
	Without connector	15 mL	15 mL	75 mL
Connection type	6.4 mm (¼") Tri-Clamp®	6.4 mm (¼") Tri-Clamp	19 mm (¾") Tri-Clamp	19 mm (¾") Tri-Clamp
Position of connectors	In-line	In-line	In-line	In-line
Connector direction options	4	4	4	4
Wetted materials	PP (housing, valve plate), TPE (diaphragm), EPDM (valves, O-rings)	316L SS (housing, valve plate), TPE (diaphragm), EPDM (valves, O-rings)	PP (housing, valve plate), TPE (diaphragm), EPDM (valves, O-rings)	316L SS (housing, valve plate), TPE (diaphragm), EPDM (valves, O-rings)

Specifications for Masterflex Drives

Description	ABS plastic drive for QF150	Stainless steel drive for QF150	Stainless steel drive for QF1200
Speed	3000 rpm	3000 rpm	1700 rpm
Speed control	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$
Motor size	1/16 hp (0.05 kW)	1/16 hp (0.05 kW)	3/8 hp (0.26 kW)
IP rating	IP33	IP66 and NEMA 4X	IP66 and NEMA 4X
Dispense modes	Motor rpm, flow rate, dispense volume, cumulative volume, dispense interval time, and copy number		
Input/output communications	Speed control: scalable 0 to 20 mA, 4 to 20 mA, 0 to 10 V; Pumping direction: requires open collector or contact enclosure; Start/stop/purge: requires open collector or contact closure; Tachometer output: scalable 0 to 20 mA, 4 to 20 mA, 0 to 10 V		
Power	90 to 260 VAC		

Masterflex® Drives Enhance Worker Protection

You take your safety seriously, and so do we.

You review every step of the process to take care of your staff and to benefit your business. We've added a new option to our Masterflex product line to help enhance protection in your workplace.

Open-Head Interlock Sensor Technology

Available integrated into select L/S® and I/P® drives or as a retrofit system, the open-head interlock sensors add an extra level of protection for operators who maintain pumps. When paired with an open-head sensor equipped pump head, the drive automatically shuts down when the pump head is opened, eliminating exposure to the moving rollers connected to the drive shaft.

Read the article *How Masterflex Pumps with Open Head Sensors Enhance Worker Protection*
[tech-article/enhanced-worker-safety-open-head-interlock-sensor](#)

Masterflex products with integrated open-head sensors

L/S Computer-Compatible Digital Drives [page 121](#)

L/S Variable-Speed Digital Drives [page 122](#)

L/S Digital Console Process Drives [page 124](#)

L/S Precision Console Process Drives [page 125](#)

L/S High-Pressure Pumps [page 126](#)

L/S Digital Miniflex® Pumps [page 127](#)

L/S Easy-Load® II Pump Heads [page 130](#)

L/S High-Performance Pump Heads [page 131](#)

L/S Easy-Load Pump Heads [page 132](#)

I/P Digital Console Process Drives [page 134](#)

I/P Easy-Load Pump Head [page 135](#)

Upgrade your Existing Drives

Use the retrofit system controller to incorporate open-head sensors into pump systems you already have. The system includes a control box that easily connects to your drive and an open-head sensor equipped pump head. If pump head is opened during operation, the interlock control box instantly shuts down the drive.

The retrofit system is compatible with select L/S and I/P drives. Controller 77097-00 includes power cables and a single extension cable to connect one sensor-equipped pump head. Order optional extension cable 77097-20 to connect a second pump head.

MY-77097-00 Open-head interlock sensor control box

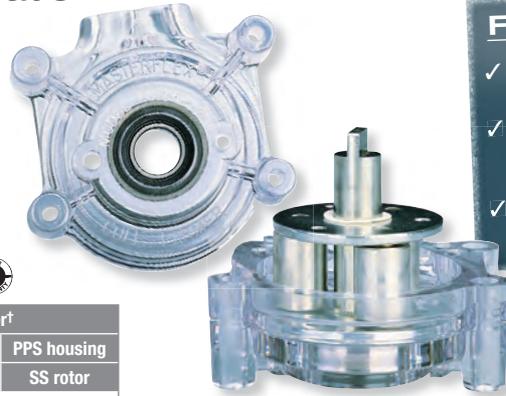
MY-77097-20 Optional extension cable, 1.8-m (6-ft)



Masterflex® L/S® Standard Pump Heads

Ideal for accurate and repeatable fluid transfer applications

- PC housing allows you to see pump in operation; PPS housing and SS rotors have excellent chemical resistance



FEATURES

- ✓ Best overall pump head performance
- ✓ Designed and optimised for one tubing size
- ✓ Stack up to four heads

Pump tubing size	mL per rev	Flow rates in mL/min			Max system pressure bar (psi)	Catalogue number†		
		0.02 to 100 rpm	6 to 600 rpm	PC housing		PPS housing		
				CRS rotor		SS rotor	SS rotor	
A. Standard pump heads for Precision pump tubing								
L/S 13	0.06	0.001 to 6	0.36 to 36	2.7 (40)	MY-07013-20	MY-07013-21	MY-07013-52	
L/S 14	0.21	0.004 to 21	1.3 to 130	2.7 (40)	MY-07014-20	MY-07014-21	MY-07014-52	
L/S 16	0.8	0.016 to 80	4.8 to 480	2.7 (40)	MY-07016-20	MY-07016-21	MY-07016-52	
L/S 17	2.8	0.059 to 280	17 to 1700	1.4 (20)	MY-07017-20	MY-07017-21	MY-07017-52	
L/S 18	3.8	0.077 to 380	23 to 2300	1.0 (15)	MY-07018-20	MY-07018-21	MY-07018-52	
B. Standard pump heads for High-Performance Precision pump tubing								
L/S 15	1.7	0.033 to 170	10 to 1000	2.7 (40)	MY-07015-20	MY-07015-21	MY-07015-52	
L/S 24	2.8	0.057 to 280	17 to 1700	2.7 (40)	MY-07024-20	MY-07024-21	MY-07024-52	
L/S 35	3.8	0.077 to 380	23 to 2300	2.4 (35)	MY-07035-20	MY-07035-21	—	
L/S 36	4.8	0.096 to 480	29 to 2900	1.4 (20)	MY-07036-30	MY-07036-31	—	

†PC = polycarbonate PPS = polyphenylene sulfide CRS = cold-rolled steel SS = stainless steel

Mounting Hardware

Stack up to four L/S Standard pump heads on one drive. Mounting hardware is stainless steel.

For tubing size	Heads to be mounted	Catalogue number
L/S 13 to L/S 35	One	MY-07013-04
	Two	MY-07013-05
	Three	MY-07013-08
	Four	MY-07013-09
L/S 36	One	MY-07036-01
	Two	MY-07036-02

Masterflex® L/S® Easy-Load® II Pump Heads

Automatic retention holds tubing securely in place

- Reduced pulsation and improved pressure performance and mechanical stability with standard four-roller rotor
- Choice of rotors—economical CRS rotors or SS rotors for better chemical resistance and durability
- Don't let pressure get to you. Choose models with adjustable occlusion—tighten for higher pressure, loosen for longer tubing life
- Models with open-head interlock sensor stop drive motor when pump head is open (when used with sensor-equipped drives)

FEATURES

- ✓ Load tubing easily
- ✓ Accepts several tubing sizes for a wide flow range
- ✓ Stack up to four heads
- ✓ Durable PPS housing



What's included: single-channel mounting hardware and a 38-cm (15") length of silicone pump tubing. Pump head comes ready to mount to drive.



Pump tubing size	mL per rev	Flow rates in mL/min			Max system pressure† bar (psi)	Fixed occlusion			Adjustable occlusion
		1 to 100 rpm	6 to 600 rpm	CRS‡ rotor		SS‡ rotor	SS‡ rotor and open-head sensor	SS‡ rotor	
				Cat. no.		Cat. no.	Cat. no.	Cat. no.	
A. Easy-Load II pump heads for Precision pump tubing (not shown)									
L/S 13	0.06	0.06 to 6	0.36 to 36	2.7 (40)	MY-77200-50	MY-77200-60	MY-77200-30	MY-77201-60	
L/S 14	0.21	0.21 to 21	1.3 to 130	2.7 (40)					
L/S 16	0.8	0.8 to 80	4.8 to 480	2.7 (40)					
L/S 25	1.7	1.7 to 170	10 to 1000	2.4 (35)					
L/S 17	2.8	2.8 to 280	17 to 1700	1.4 (20)					
L/S 18	3.8	3.8 to 380	23 to 2300	1.0 (15)					
B. Easy-Load II pump heads for High-Performance Precision pump tubing									
L/S 15	1.7	1.7 to 170	10 to 1000	2.7 (40)	MY-77200-52	MY-77200-62	MY-77200-32	MY-77201-62	
L/S 24	2.8	2.8 to 280	17 to 1700	2.7 (40)					
L/S 35	3.8	3.8 to 380	23 to 2300	2.4 (35)					
L/S 36	4.8	4.8 to 480	29 to 2900	1.4 (20)					
C. Two-channel Easy-Load II pump heads for Precision pump tubing									
L/S 13	0.06	0.06 to 6	0.36 to 36	2.7 (40)	MY-77202-50	MY-77202-60	—	—	
L/S 14	0.21	0.21 to 21	1.3 to 130	2.7 (40)					
L/S 16	0.8	0.8 to 80	4.8 to 480	2.7 (40)					
L/S 25	1.7	1.7 to 170	10 to 1000	2.4 (35)					

†Actual performance varies depending on pump tubing formulation—values shown are for firm pump tubing. ‡CRS = cold-rolled steel SS = stainless steel

Mounting Hardware. Mount up to four L/S Easy-Load II pump heads on a single drive. Mounting hardware is stainless steel.

Heads to be mounted	One	Two	Three	Four
Catalogue number	MY-77200-01	MY-77200-02	MY-77200-03	MY-77200-04



Masterflex® L/S® High-Performance Pump Heads

All-new design offers faster tubing changes and improved ergonomics

- Simply close the pump head and tubing occlusion is optimal and automatic
- Flow rates up to 3400-mL/min with L/S high-performance precision tubing
- Reinforced nylon housing and occlusion bed with stainless steel rotor/roller assembly
- Models with open-head interlock sensor stop drive motor when pump head is open (when used with sensor-equipped drives)
- Compatible with all L/S drives that accept two or more pump heads

FEATURES

- ✓ Pressures up to 150 psi with L/S high-pressure (HP) pump tubing
- ✓ Automatic tubing occlusion—no need to adjust
- ✓ ATEX Zone 2 rated models available



What's included: mounting hardware and 38 cm (15") of pump tubing.

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ATEX
Zone 2
77252-80, 82



Pump tubing size	mL per rev	Flow rates in mL/min		Max system pressure bar (psi)	Catalogue number		
		0.02 to 100 rpm	0.1 to 600 rpm		High-Performance pump head with open-head sensor	High-Performance pump head	ATEX-approved High-Performance pump head
High-performance pump heads for Precision pump tubing							
L/S 16	0.9	0.018 to 90	0.09 to 614	2.7 (40)	MY-77252-60	MY-77252-70	MY-77252-80
L/S 25	1.9	0.038 to 187	0.19 to 1278	2.7 (40)			
L/S 17	3.0	0.06 to 307	0.30 to 1883	1.4 (20)			
L/S 18	3.8	0.076 to 377	0.38 to 2812	2.7 (40)			
High-performance pump heads for High-Performance Precision pump tubing							
L/S 14HP†	0.3	0.006 to 30	Not recommended	10.3 (150)	MY-77252-62	MY-77252-72	MY-77252-82
L/S 16HP†	0.9	0.018 to 90	Not recommended	8.5 (125)			
L/S 15HP†	1.7	0.034 to 170	Not recommended	6.8 (100)			
L/S 24HP†	2.4	0.048 to 240	Not recommended	5.5 (80)			
L/S 15	1.8	0.036 to 180	0.18 to 1100	2.7 (40)			
L/S 24	3.0	0.06 to 300	0.30 to 1800	2.7 (40)			
L/S 35	4.3	0.086 to 430	0.43 to 2600	2.4 (35)			
L/S 36	5.8	0.116 to 580	0.58 to 3400	1.4 (20)			

†L/S 14HP, L/S 15HP, L/S 16HP and L/S 24HP pump tubing is for use only with the L/S High-Performance pump head mounted on any L/S 100 rpm drive capable of running two or more pump heads. **Note:** High-Performance pump heads are not stackable.

Masterflex® L/S® Easy-Load® 3 Pump Heads

No tools or hardware needed

- Mount and stack heads in seconds with twist-lock mounting feature
- CRS rotor is more economical while SS offers greater durability and chemical resistance
- Included mounting plate adapts Easy-Load 3 pump heads to L/S drives—mount up to four pump heads without tools or hardware

FEATURES

- ✓ Same side tubing entry/exit for space-limited applications
- ✓ Automatic tubing retention
- ✓ Stack up to four heads



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Pump tubing sizes	mL per rev	Flow rates in mL/min		Max system pressure† bar (psi)	Catalogue number‡	
		1 to 100 rpm	6 to 600 rpm		CRS rotor	SS rotor
Easy-Load 3 pump heads for Precision pump tubing						
L/S 13	0.06	0.06 to 6	0.36 to 36	2.7 (40)	MY-77800-50	MY-77800-60
L/S 14	0.22	0.22 to 22	1.3 to 130	2.7 (40)		
L/S 16	0.8	0.8 to 80	4.8 to 480	2.7 (40)		
L/S 25	1.7	1.7 to 170	10 to 1000	2.4 (35)		
L/S 17	2.8	2.8 to 280	17 to 1700	1.4 (20)		
L/S 18	3.8	3.8 to 380	23 to 2300	1.0 (15)		
Easy-Load 3 pump heads for High-Performance Precision pump tubing						
L/S 15	1.7	1.7 to 170	10 to 1000	2.0 (30)	MY-77800-52	MY-77800-62
L/S 24	2.8	2.8 to 280	17 to 1700	2.0 (30)		
L/S 35	3.8	3.8 to 380	23 to 2300	1.7 (25)		
L/S 36	4.8	4.8 to 480	29 to 2900	1.4 (20)		

†Actual performance varies depending on pump tubing formulation—values shown are for firm pump tubing.

‡CRS = cold-rolled steel SS = stainless steel

MY-77800-00 Replacement mounting kit, for mounting Easy-Load 3 pump head to Masterflex L/S pump drives. Includes mounting plate and four screws

Masterflex® L/S® Easy-Load® Pump Heads

New design, with smaller footprint, reduced pulsation and even faster tubing changes!

- No need to remove head to change tubing
- SS rotor offers durability and chemical resistance
- Polyarylamide (PARA) housing offers strength and durability
- Get four separate pumping channels by mounting up to four heads on one drive

What's included: single-channel mounting hardware.



MASTERFLEX®

Mounting Hardware. Stack up to four L/S Easy-Load pump heads on one drive. Hardware is stainless steel.

Pump tubing sizes	mL per rev	Flow rates in mL/min		Max system pressure bar (psi)	Catalogue number†	
		0.02 to 100 rpm	0.1 to 600 rpm		PARA housing	PARA housing with open head sensor
					SS rotor	SS rotor
Easy-Load pump heads for Precision pump tubing						
L/S 13	0.06	0.001 to 6	0.006 to 36	2.7 (40)	MY-07514-10	MY-07514-30
L/S 14	0.21	0.004 to 21	0.02 to 130	2.7 (40)		
L/S 16	0.8	0.016 to 80	0.08 to 480	2.7 (40)		
L/S 25	1.7	0.034 to 170	0.17 to 1000	2.4 (35)		
L/S 17	2.8	0.056 to 280	0.28 to 1700	1.4 (20)		
L/S 18	3.8	0.076 to 380	0.38 to 2300	1.0 (15)		
Easy-Load pump heads for High-Performance Precision pump tubing						
L/S 15	1.7	0.034 to 170	0.17 to 1000	2.7 (40)	MY-07514-12	MY-07514-32
L/S 24	2.8	0.056 to 280	0.28 to 1700	2.7 (40)		

†PARA = Polyarylamide SS = stainless steel

Heads to be mounted	Catalogue number
One	MY-07514-04
Two	MY-07013-05
Three	MY-07013-08
Four	MY-07013-09

Masterflex® L/S® PTFE-Tubing Pump Head

Ideal for high-purity fluids and aggressive organic solvents

- PTFE tubing is the only wetted part; anodised aluminum and acetal body; stainless steel rotor assembly
- Compatible with L/S drives that accept two or more pump heads (1/10 hp min); For best results, run at 1 to 300 rpm

Note: PTFE-tubing pump head accepts **only** the Masterflex L/S PTFE tubing sets sold below; ordinary PTFE tubing cannot be substituted.

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Flow rates (mL/min at 1 to 300 rpm)		Max continuous pressure	Max suction lift	Avg tubing life (100 rpm, 0 psi)	Number of rollers	Catalogue number
4-mm OD tubing	6-mm OD tubing					
0.06 to 17	0.25 to 65	6.9 bar (100 psi)	2.4 m (8 ft)	500 hours	Six	MY-77390-00

PTFE-Tubing Sets include two 38 cm (15") lengths, cannot be substituted with ordinary PTFE tubing.

MY-77390-50 PTFE-tubing set. 2-mm ID, 4-mm OD. Set of 2

MY-77390-60 PTFE-tubing set. 4-mm ID, 6-mm OD. Set of 2

Compression Fittings adapt tubing sets to your system.

For 4-mm OD PTFE-Tubing Sets

MY-31321-61 Straight connector, 2.8 bar (40 psi) max
MY-06605-53 PTFE extension tubing, 4-mm OD. Pack of 7.6 m (25 ft)

For 6-mm OD PTFE-Tubing Sets

MY-31321-64 Straight connector, 9.2 bar (135 psi) max
MY-06605-54 PTFE extension tubing, 6-mm OD. Pack of 7.6 m (25 ft)

Masterflex® L/S® Cytoflow™ Pump Heads

Gentler on live cells

- Low-speed pumping lets you maintain the consistency and characteristics of shear-sensitive fluids
- Choose 2 rollers for maximum flow rate, 3 rollers for less pulsation
- Compatible with all Masterflex L/S drives that accept two or more pump heads



MASTERFLEX®



Pump tubing size	mL per rev	Flow rates in mL/min		Max system pressure bar (psi)	Catalogue number
		0.02 to 100 rpm	0.1 to 600 rpm		
2-roller pump heads for High-Performance Precision pump tubing					
L/S 15	4.0	0.08 to 390	0.40 to 2300	1.5 (22)	MY-77253-02
L/S 24	6.2	0.12 to 600	0.62 to 3700	1.5 (22)	
L/S 35	9.5	0.19 to 930	0.95 to 5600	1.5 (22)	
L/S 36	12.8	0.26 to 1270	1.3 to 7600	1.5 (22)	
3-roller pump heads for High-Performance Precision pump tubing					
L/S 15	3.5	0.07 to 340	0.35 to 2000	1.5 (22)	MY-77253-12
L/S 24	5.7	0.11 to 570	0.57 to 3400	1.5 (22)	
L/S 35	7.8	0.16 to 780	0.78 to 4600	1.5 (22)	
L/S 36	9.6	0.19 to 950	0.96 to 5700	1.5 (22)	



Masterflex® L/S® Multichannel Pump Heads

Get low-pulsation synchronous flow in multiple channels without cartridges

- Load the tubing, latch the occlusion bed, and run the pump—two-stop tubing gives you optimal tension with no adjustment
- Stackable two, four, or eight-channel heads for up to 24 channels
- Six roller heads deliver low-pulsation flow; three-roller heads offer higher flow rates
- Heads for L/S Precision pump tubing accept two-stop tubing set sizes L/S 13, L/S 14, and L/S 16; heads for L/S High-Performance Precision pump tubing accept two-stop tubing set sizes L/S 15, L/S 24, and L/S 35
- Compatible with L/S drives that accept two or more pump heads; 1/10 hp min

MASTERFLEX®

FEATURES

- ✓ Stackable for up to 24 synchronous flow channels
- ✓ Models that accept L/S two-stop tubing sets available
- ✓ Durable stainless steel and anodised aluminum construction



Stack heads for even more channels!

What's included: mounting hardware and hex key tool.

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Number of channels	Number of rollers	Max channels with stacked heads†		Catalogue number
		100 rpm drive	600 rpm drive	
A. L/S Multichannel pump heads for Precision pump tubing, sizes L/S 13, L/S 14, L/S 16				
Four	Six	24	12	MY-07535-04
Eight				MY-07535-08
B. L/S Multichannel pump heads for High-Performance Precision pump tubing, sizes L/S 15, L/S 24, L/S 35				
Two	Three	12	Six	MY-07536-02
Four				MY-07536-04

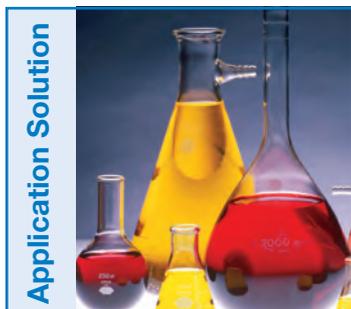
†Maximum channel capacity depends on drive torque capability and tubing formulation used.

L/S Two-Stop Precision Tubing Sets Ordering Information for 07535- and 07536-series pump heads

Pump tubing formulation	L/S Precision pump tubing	L/S Precision pump tubing			L/S High-Performance Precision pump tubing		
		L/S 13	L/S 14	L/S 16	L/S 15	L/S 24	L/S 35
Tygon® E-FL		MY-06447-13 Pk of 8	MY-06447-14 Pk of 8	MY-06447-16 Pk of 8	MY-06447-15 Pk of 4	MY-06447-24 Pk of 4	MY-06447-35 Pk of 4
Silicone (platinum-cured)		MY-06421-13 Pk of 8	MY-06421-14 Pk of 8	MY-06421-16 Pk of 8	MY-06421-15 Pk of 4	MY-06421-24 Pk of 4	MY-06421-35 Pk of 4
BioPharm Plus Silicone (platinum-cured)		MY-96116-13 Pk of 8	MY-96116-14 Pk of 8	MY-96116-16 Pk of 8	MY-96116-15 Pk of 4	MY-96116-24 Pk of 4	MY-96116-35 Pk of 4
PharMed® BPT		MY-96114-13 Pk of 8	MY-96114-14 Pk of 8	MY-96114-16 Pk of 8	MY-96114-15 Pk of 4	MY-96114-24 Pk of 4	MY-96114-35 Pk of 4
Chem-Durance® Bio		MY-96117-13 Pk of 8	MY-96117-14 Pk of 8	MY-96117-16 Pk of 8	MY-96117-15 Pk of 4	MY-96117-24 Pk of 4	MY-96117-35 Pk of 4
Viton®		MY-96428-13 Pk of 8	MY-96428-14 Pk of 8	MY-96428-16 Pk of 8	MY-96428-15 Pk of 4	MY-96428-24 Pk of 4	MY-96428-35 Pk of 4

Flow Rates per Channel in mL/min with L/S Two-Stop Precision Pump Tubing Sets above

Drive rpm	Precision pump tubing			High-Performance Precision pump tubing		
	L/S 13	L/S 14	L/S 16	L/S 15	L/S 24	L/S 35
1 to 100	0.045 to 4.5	0.16 to 16	0.47 to 47	1.6 to 160	2.8 to 280	3.8 to 380
6 to 600	0.27 to 27	0.96 to 96	2.8 to 280	10 to 1000	17 to 1700	23 to 2300



Application Solution

Challenge

A pharmaceutical manufacturer needed to dispense volumes of 300-mL in 15 seconds or less repeating three times per minute; and 20-mL in 2 seconds or less repeating 20 times per minute. The desired accuracy target for both applications was ±1.5%. The efficiency of simultaneously pumping multiple channels was critical.

Solution

The manufacturer now uses a Masterflex L/S digital drive with an L/S four-channel pump head 07536-04. Size L/S 15 two-stop silicone tubing (06421-15) met the smaller flow requirement; while size L/S 35 two-stop silicone tubing (06421-35) met the larger flow requirement. Careful calibration of the drive, and the synchronous multichannel flow capability of the pump head enabled the manufacturer to meet the accuracy target.



Masterflex® I/P® Digital Console Process Drives

Maintenance-free drives built for process applications

- Graphical LCD shows four operating modes: continuous run, timed dispense, copy dispense, volume dispense
- Dispense by volume, copy, or time with programmable delay interval
- Models equipped with open-head sensor stop drive motor when pump head is opened—pair with an open-head sensor equipped pump head (see page 135)

Models 77420-10 and -18 feature a 316 stainless steel housing with an anodised aluminum base. Ideal for pharmaceutical, dairy, biotech, and food and beverage applications.

Models 77420-20 and -28 feature a powder-coated steel housing with anodised aluminum base. Use in process, manufacturing, and water-treatment applications where stainless steel is not a critical requirement.

What's included: 1.8-m (6-ft) line cord with IEC 320/CEE22 socket. Shipped with country-specific plug/cord set; please specify ultimate destination when ordering.



FEATURES

- ✓ Flow rates: 0.0006 to 19 LPM
- ✓ Accuracy of ±0.1% speed control
- ✓ Four-line graphical display
- ✓ Reversible motor
- ✓ IP66-rated for easy washdown
- ✓ Accept up to 2 pump heads

77420-10 shown with I/P High-Performance pump head 77600-62



rpm	Speed control (resolution)	Open-head sensor	Pump heads accepted	Motor size	IP rating	Dimensions (L x W x H)	Power	Catalogue number
Digital process drive with 316 stainless steel housing								
0.1 to 650	±0.1%	No	Two	¾ hp (280 W)	IP66	42.4 x 28.3 x 7.3 cm (16 ¹ / ₁₆ " x 11 ¹ / ₈ " x 12 ⁷ / ₈ "	90 to 260 VAC, 50/60 Hz	MY-77420-10
		Yes						MY-77420-18
Digital process drive with powder-coat steel housing								
0.1 to 650	±0.1%	No	Two	¾ hp (280 W)	IP66	42.4 x 28.3 x 7.3 cm (16 ¹ / ₁₆ " x 11 ¹ / ₈ " x 12 ⁷ / ₈ "	90 to 260 VAC, 50/60 Hz	MY-77420-20
		Yes						MY-77420-28

MY-07575-84 Washdown foot switch, momentary start/stop, 1.8-m (6-ft) cable
MY-07575-80 Cable assembly, 31-pin round connector and 7.9-m (26-ft) cable with stripped wire ends for remote control

MY-17050-01 ILAC MRA, NIST-traceable calibration for peristaltic pump drive

Masterflex® I/P® Precision Process Drives

Powerful, low-maintenance drives keep you pumping

- Don't worry about moisture, chemicals, or dust—IP55-rated nonchip epoxy-coated steel housing
- Goes where you need it—compact and light enough to carry with one hand, powerful enough to drive two pump heads
- Get up to speed quickly—easy to adjust speed knob and LED display for improved repeatability

FEATURES

- ✓ Flow rates: 0.2 to 19 LPM
- ✓ Accuracy of ±0.25% speed control
- ✓ LED display
- ✓ Reversible motor and remote control capabilities
- ✓ Accept up to 2 pump heads



Motor speed (rpm)	Speed control (repeatability)	Pump heads accepted	Motor size	Dimensions	Power (50/60 Hz)		Catalogue number
					VAC	Amps	
Variable-speed brushless process drive							
33 to 650	±0.25% (2% of max rpm)	Two	½ hp (0.25 kW)	35.6 x 25.4 x 22.9 cm (14"L x 10"W x 9"H)	90 to 260	2.6 at 230 VAC	MY-77410-10
Variable-speed brushless process drive with remote input/output							
33 to 650	±0.25% (2% of max rpm)	Two	½ hp (0.25 kW)	35.6 x 25.4 x 22.9 cm (14"L x 10"W x 9"H)	90 to 260	2.6 at 230 VAC	MY-77411-00

MY-07595-43 Washdown foot switch for model 77411-00

MY-77300-32 Remote cable kit. Required for model 77411-00 to operate the remote inputs and outputs



Masterflex® I/P® High-Performance Pump Heads

Get higher flow rates and pressure

- Easily transfer viscous fluids
- Pump up to 19-LPM for higher volume processing
- Durable design for longer life—made of stainless steel rollers, bearings, rotor plates, and rotor shaft. Occlusion bed is made of thermoset polyester
- Compatible with I/P drives that accept two or more pump heads; pump head is not stackable



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ATEX
Zone 2
77600-82



Pump tubing sizes accepted	mL per rev	Flow rates (LPM) at 20 to 650 rpm	Maximum system bar (psi)	Catalogue number†	
				Polyester and SS housing, SS rotor	ATEX-approved; polyester and SS housing, SS rotor
I/P 70	12.3	0.26 to 8	2.7 (40)	MY-77600-62	MY-77600-82
I/P 88	26.2	0.4 to 17	2.4 (35)		
I/P 89	29.2	0.52 to 19	1.4 (20)		

†SS = stainless steel

FEATURES

- ✓ Easy to load tubing
- ✓ Adjustable tubing retention
- ✓ “C”-shaped design—tubing enters/exits the same side
- ✓ ATEX Zone 2 rated model available

Masterflex® I/P® Easy-Load® Pump Heads

Minimise downtime with faster tubing changes

- Optimise pressure capabilities and tubing life with adjustable occlusion
- Less maintenance and quieter operation
- Adjust flow rate to your needs—can pump from 0.01 to 13-LPM
- PPS housing with CRS or SS rotor available. CRS rotors have sealed bearings; SS rotors have PTFE-sealed bearings
- Model with open-head interlock sensor stops drive motor when pump head is open (when used with sensor-equipped drives)

FEATURES

- ✓ Load tubing without removing pump head from drive
- ✓ Automatic tubing retention
- ✓ Stack up to two pump heads
- ✓ ATEX Zone 2 rated model available



MASTERFLEX®

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ATEX
Zone 2
77602-80



Pump tubing sizes accepted	mL per rev	Flow rates (LPM) at indicated rpm			Maximum system bar (psi)	Catalogue number†				
		100	540	20 to 650		White PPS housing			Black PPS housing	ATEX-approved; PPS housing
						CRS rotor	SS rotor	SS rotor and open-head sensor	SS rotor	SS rotor
I/P 26	6.15	0.6	3.2	0.12 to 4	2.7 (40)	MY-77602-00	MY-77602-10	MY-77602-30	MY-77601-60	MY-77602-80
I/P 73	12.3	1.2	6.8	0.2 to 8						
I/P 82	20.0	2.0	11.0	0.4 to 13	1.4 (20)					

†PPS = polyphenylene sulfide CRS = cold-rolled steel SS = stainless steel

MY-77601-96 Dual-channel mounting hardware for two pump heads, stainless steel

Masterflex® B/T® Fixed- and Variable-Speed Pumps

Achieve the highest flow rates of any Masterflex pump—up to 42-LPM

Fixed-Speed Pumps

- Economical and easy to operate
- Reversible motor: purge before or after pumping, pump fluid in either direction
- IP55-rated motor—wash off dirt and debris

Air-Powered Pump

- Use in locations where electricity is unsafe or impractical
- Includes pressure regulator—control your compressor air to match pump requirements
- 24-cfm (0.68 m³), 6.9 bar (100 psi) minimum air required, supply your own compressor to power pump
- IP56-rated motor protects against dust and strong water jets
- Rated for ATEX Zone 2 EEx II 3 G c IIC T6; NEC Class 1, Division 2, Groups A, B, C, D, T6

Variable-Speed Modular Pump

- Place washdown controller wherever it's convenient
- Controller with 4.9-m (16-ft) cord mounts on pump or wall
- IP56-rated motor protects against dust and strong water jets
- Reversible motor: purge before or after pumping, pump fluid in either direction

Variable-Speed Modular Digital Pump

- High-volume, high-accuracy dispensing
- Dispense by volume or time, or pump continuously
- Separate motor and controller by up to 1.8-meters (6-feet) for convenient operation
- IP56-rated controller and motor protect against dust and water

What's included: a Rapid-Load® pump head, 1 m (3 ft) of Tygon® E-LFL B/T 91 pump tubing, and a 1.8-m (6-ft) power cord 230 VAC: European plug.



Fixed-speed pump
77111-60



Variable-speed modular digital pump
77111-70

FEATURES

- ✓ Flow rates up to 42 LPM
- ✓ Interlock switch shuts off power when pump head is opened
- ✓ Washdown pumps handle the toughest process and production applications, then clean up with ease
- ✓ Gentle peristaltic action is ideal for pumping shear-sensitive or viscous fluids (up to 10,000 cps)
- ✓ Rotor and occlusion bed design allow easier tube loading and prevent "tubing roll" during operation

Flow Rates in LPM (GPM)

rpm	PerfectPosition® pump tubing	
	B/T 87	B/T 91
321	18.9 (5.0)	42 (11.1)
271	16.0 (4.2)	35 (9.4)
35 to 321	1.9 to 17.7 (0.5 to 4.7)	4.0 to 37 (1.06 to 9.8)
12 to 321	0.71 to 18.9 (0.19 to 5.0)	1.4 to 42 (0.4 to 11.1)



77111-37, -67, -77, -80 Zone 2 77111-80 77111-30, -37 Except 77111-30, -37

Motor type	Motor size	rpm	IP rating	Mounting type	Dimensions (L x W x H)	Power		Catalogue number
						VAC (Hz)	Amps	
Fixed-speed	1 hp (0.75 kW)	271	IP55	Direct-drive	68.6 x 40 x 38.4 cm (27" x 15.8" x 15.1")	220 (50)	6.3	MY-77111-37
Variable-speed, air powered	¾ hp (0.56 kW)	35 to 321	IP56	Direct-drive	68.6 x 40 x 38.4 cm (27" x 15.8" x 15.1")	Requires 24 cfm (0.68 m ³) 100 psi (6.9 bar) minimum		MY-77111-80
Variable-speed (±5%)	½ hp (0.37 kW)	12 to 321	Controller: IP56 Drive: IP56	Direct-drive	68.6 x 40 x 38.4 cm (27" x 15.8" x 15.1")	230 (50/60)	3.3	MY-77111-67
Variable-speed digital (±0.3%)	¾ hp (0.56 kW)	12 to 321		Direct-drive	Controller: 22.9 x 27.9 x 11.4 cm (9" x 11" x 4½") Drive: 68.6 x 40 x 38.4 cm (27" x 15.8" x 15.1")	190 to 260 (50/60)	5.7	MY-77111-77

MY-77300-32 Remote cable, required for remote control operation of models 77111-70 and -77; 7.9-m (25-ft)
MY-77111-90 Bracket for digital controller on models 77111-70 and -77

Masterflex® C/L® Variable-Speed Compact Pumps

Pump in even the tightest spaces!

- Pump fluids in either direction—easily switchable reversing motor
- Easy tubing changes—open cover and release occlusion bed in one motion

A. C/L Single-Channel Pumps

- Stop/start remotely via contact closure
- MAX button quickly primes or purges tubing
- Pump from 0.002- to 43-mL/min

B. C/L Digital Microflex® Pump

- Icon-driven menu allows quick programming and setup
- Flow range of 0.00013- to 43-mL/min
- Copy dispense function for filling and dispensing applications
- Remote control of speed, direction, and start/stop/prime via 25-pin connector on back of drive
- Microflex pump head accepts continuous lengths of tubing for clean flow paths
- Tubing calibration ensures accuracy



A



B

FEATURES

- ✓ Flow range: 0.00013 to 43 mL/min
- ✓ Reversible pumping
- ✓ Remote control capabilities



Power supplies are:



rpm	Speed control (repeatability)	Number of channels	Number of rollers	Reversible motor	IP rating	Dimensions—¼ DIN (L x W x H)	Power		Catalogue number
							VAC, Hz	Amps	
A. C/L single-channel compact pumps									
1.7 to 10	±5%	One	Four	Yes	IP22	17.8 x 9.5 x 8.9 cm (7" x 3¾" x 3½")	90 to 260, 50/60 12 VDC†	250 mA at 230 VAC	MY-77122-04
13 to 80			Three				90 to 260, 50/60 12 VDC†	250 mA at 230 VAC	MY-77122-14
50 to 300			90 to 260, 50/60 12 VDC†				250 mA at 230 VAC	MY-77122-24	
B. C/L digital Microflex pump									
0.1 to 300	±0.1%	One	Three	Yes	IP33	20.5 x 14 x 15.7 cm (8½" x 5½" x 6½")	90 to 260	0.34 at 115 VAC, 0.2 at 230 VAC	MY-77123-00

†Power supply not included with 12 VDC models.

MY-17050-01 ILAC MRA, NIST-traceable calibration with data for peristaltic pump drive

For A models:

MY-77120-03 Brackets for panel mounting. Set of 2

MY-77200-07 Replacement power supply, 100 to 240 VAC, for pump 77122-24

MY-77120-11 Replacement power supply, 100 to 240 VAC, for pumps 77122-04, -14

For B model:

MY-07523-92 Foot switch, momentary start/stop; DB25 male; 1.8-m (6-ft) cable

MY-07523-95 Cable assembly, DB25 male connector and 7.9-m (25-ft) cable with stripped wire ends

MY-07523-97 Handheld remote controller, DB25 male, route tubing through handle for dispensing applications; 1.8-m (6-ft) cable

MY-77123-80 Replacement single-channel Microflex pump head

MY-07525-90 Replacement power supply, 90 to 260 VAC

Tube ID (mm)	Tygon® E-Lab	Silicone (platinum-cured)	Silicone (peroxide-cured)	PharMed® BPT	Tygon E-LFL (long flex life)	Viton®	Puri-Flex™	C-Flex®	Solvent/hydrocarbon
0.19	MY-06460-10	—	MY-07625-10	MY-95809-10	MY-06449-10	—	MY-96418-10	MY-95718-10	MY-95712-10
0.25	MY-06460-12	—	MY-07625-12	MY-95809-12	MY-06449-12	—	MY-96418-12	MY-95718-12	MY-95712-12
0.51	MY-06460-18	MY-95590-18	MY-07625-18	MY-95809-18	MY-06449-18	MY-97632-18	MY-96418-18	MY-95718-18	MY-95712-18
0.89	MY-06460-26	MY-95590-26	MY-07625-26	MY-95809-26	MY-06449-26	MY-97632-26	MY-96418-26	MY-95718-26	MY-95712-26
1.14	MY-06460-30	MY-95590-30	MY-07625-30	MY-95809-30	MY-06449-30	MY-97632-30	MY-96418-30	MY-95718-30	MY-95712-30
1.42	MY-06460-34	MY-95590-34	MY-07625-34	MY-95809-34	MY-06449-34	MY-97632-34	MY-96418-34	MY-95718-34	MY-95712-34
2.06	MY-06460-42	MY-95590-42	MY-07625-42	MY-95809-42	MY-06449-42	MY-97632-42	MY-96418-42	MY-95718-42	MY-95712-42
2.79	MY-06460-48	MY-95590-48	MY-07625-48	MY-95809-48	MY-06449-48	MY-97632-48	MY-96418-48	MY-95718-48	MY-95712-48
Length/pk	30.4 m (100 ft)	15.2 m (50 ft)	15.2 m (50 ft)	30.4 m (100 ft)	30.4 m (100 ft)	15.2 m (50 ft)	15.2 m (50 ft)	15.2 m (50 ft)	15.2 m (50 ft)

Flow Rates in mL/min

rpm	Microbore pump tubing size (ID)								
	0.19 mm	0.25 mm	0.51 mm	0.89 mm	1.14 mm	1.42 mm	2.06 mm	2.79 mm	
1.7 to 10	0.002 to 0.013	0.004 to 0.022	0.015 to 0.087	0.041 to 0.25	0.064 to 0.39	0.09 to 0.57	0.18 to 1.05	0.28 to 1.65	
13 to 80	0.017 to 0.10	0.03 to 0.18	0.12 to 0.70	0.33 to 2.0	0.52 to 3.1	0.75 to 4.5	1.4 to 8.5	1.8 to 11.0	
50 to 300	0.06 to 0.39	0.11 to 0.66	0.43 to 2.6	1.2 to 7.5	1.9 to 11.4	2.8 to 17.1	5.3 to 32	7.2 to 43	
0.1 to 300	0.00013 to 0.39	0.0002 to 0.66	0.0009 to 2.6	0.003 to 7.5	0.004 to 11.4	0.006 to 17.1	0.011 to 32	0.014 to 43	



Masterflex® Pump Tubing

Ensure optimal performance from your Masterflex pump

Silicone (platinum-cured)

- Low protein binding, fungus resistant, phthalate and latex-free
- Accommodates a wide temperature range
- USP Class V, EP, FDA, REACH, RoHS, ADCF

Silicone (peroxide-cured)

- Greater physical compression capability
- Economical, longer tubing life
- USP Class VI, EP, FDA, 3A, REACH, RoHS, ADCF

BioPharm Silicone (platinum-cured)

- Low absorption; excellent biocompatibility
- Very low extractable; weather, ozone, corona, radiation resistant
- USP Class VI, EP, FDA, 3A, REACH, RoHS, ADCF

BioPharm Plus Silicone (platinum-cured)

- Ultra-smooth—minimises particle entrapment
- Very low extractable—ideal for lab, biotech, and pharmaceutical
- USP Class VI, EP, FDA, REACH, RoHS, ADCF

Puri-Flex™

- Heat sealable, weldable, and economical
- Long pump life when compared to silicone or many other TPE tubings
- USP Class VI, FDA, 3A, REACH, RoHS, ADCF

C-Flex®

- Heat sealable, weldable, economical
- Better resistance to pH fluctuations
- USP Class VI, EP, REACH, RoHS, ADCF

C-Flex® ULTRA

- Longest life of any C-Flex formulation
- Lowest spallation and reduced residue
- USP Class VI, EP, REACH, RoHS, ADCF

PharMed® BPT

- >10,000 hours of tubing life; sealable, weldable
- Ideal for tissue and cell culture work
- USP Class VI, EP, FDA, NSF, REACH, RoHS

PharmaPure®

- Non-toxic and non-hemolytic biocompatible
- Long life even under pressure with very low spallation
- USP Class VI, EP, FDA, REACH, RoHS

Gore® STA-PURE® Series PCS

- Long life—even in pressures up to 100 psi
- Excellent flow stability
- USP Class VI

Gore® STA-PURE® Series PFL

- Long life—even in pressures up to 100 psi
- Excellent biocompatibility and flow stability
- USP Class VI

Chem-Durance® Bio

- Excellent chemical compatibility and biocompatibility
- Excellent life and durability under pressure
- USP Class VI, FDA, REACH, RoHS

Tygon® E-LFL

- Longest life of all Tygon formulations
- Broad chemical resistance
- USP Class VI, EP, FDA, EU Food, REACH, RoHS, ADCF

Tygon E-Food (B-44-4X)

- Smooth inner surface unaffected by commercial sanitisers
- Non-toxic; will not affect taste or odour
- FDA, EU Food, NSF, 3A, REACH, RoHS, ADCF

Tygon E-Lab (E-3603)

- Ideal for general transfer use
- Nonaging, nonoxidising, low gas permeability
- USP Class VI, FDA, EU Food, NSF, REACH, RoHS, ADCF

Tygon Fuel & Lubricant (F-4040-A)

- Formulated to transport hydrocarbons, petroleum products, and distillates
- Low gas permeability
- REACH, RoHS, ADCF

Tygon Chemical (2001)

- Excellent chemical resistance
- Plasticiser-free with low gas permeability
- FDA 21 CFR 175.300, REACH, RoHS, ADCF

Norprene® (A-60 G)

- Up to 10,000 hours of tubing life
- Excellent choice for pressure/vacuum applications
- NSF, REACH, RoHS

Norprene Food (A 60 F)

- Ideal for high-temperature food applications
- Resists heat, ozone, acids, and alkalis
- FDA, 3A, NSF, REACH, RoHS

Viton®

- Perfect for applications where FDA and chemical compatibility is needed
- Resists corrosives, solvents, and oils at elevated temperatures
- FDA, ADCF

MASTERFLEX®

Masterflex® Gamma Irradiated Tubing

Reduce the risk of microbial contamination

- Save time—many sizes of packaged and pretreated tubing available for quick shipment!
- Tubing is double bagged prior to gamma irradiation
- Irradiation at 32.5 kGy offers optimal microbial control for the tubing's critical fluid pathway
- Gamma-sensitive labeling confirms treatment
- Select from popular biocompatible tubing formulations

Formulation	Qty/pk	L/S 16	L/S 15	L/S 24	I/P 73	I/P 82
		Catalogue number				
Silicone (platinum-cured)	7.6 m (25 ft)	MY-96119-16	MY-96119-15	MY-96119-24	MY-96119-73	MY-96119-82
PharMed® BPT	7.6 m (25 ft)	MY-96122-16	MY-96122-15	MY-96122-24	MY-96122-73	MY-96122-82
C-Flex®	7.6 m (25 ft)	MY-96123-16	MY-96123-15	MY-96123-24	MY-96123-73	MY-96123-82

		L/S® Precision Pump Tubing						L/S® High-Performance Precision Pump Tubing			
		L/S 13	L/S 14	L/S 16	L/S 25	L/S 17	L/S 18	L/S 15	L/S 24	L/S 35	L/S 36
Qty/pk		0.06 to 36 mL/min	0.21 to 130 mL/min	0.8 to 480 mL/min	1.7 to 1000 mL/min	2.8 to 1700 mL/min	3.8 to 2300 mL/min	1.7 to 1000 mL/min (1.8 to 1100 mL/min)	2.8 to 1700 mL/min (3.0 to 1800 mL/min)	3.8 to 2300 mL/min (4.3 to 2600 mL/min)	4.8 to 2900 mL/min (5.8 to 3400 mL/min)
Silicone (platinum-cured)	7.6 m (25 ft)	MY-96410-13	MY-96410-14	MY-96410-16	MY-96410-25	MY-96410-17	MY-96410-18	MY-96410-15	MY-96410-24	MY-96410-35	MY-96410-36
Silicone (peroxide-cured)	7.6 m (25 ft)	MY-96400-13	MY-96400-14	MY-96400-16	MY-96400-25	MY-96400-17	MY-96400-18	MY-96400-15	MY-96400-24	MY-96400-35	MY-96400-36
BioPharm Silicone (platinum-cured)	7.6 m (25 ft)	MY-96420-13	MY-96420-14	MY-96420-16	MY-96420-25	MY-96420-17	MY-96420-18	MY-96420-15	MY-96420-24	MY-96420-35	MY-96420-36
BioPharm Plus Silicone (platinum-cured)	7.6 m (25 ft)	MY-96440-13	MY-96440-14	MY-96440-16	MY-96440-25	MY-96440-17	MY-96440-18	MY-96440-15	MY-96440-24	MY-96440-35	MY-96440-36
Puri-Flex™	7.6 m (25 ft)	MY-96419-13	MY-96419-14	MY-96419-16	MY-96419-25	MY-96419-17	MY-96419-18	MY-96419-15	MY-96419-24	MY-96419-35	MY-96419-36
C-Flex®	7.6 m (25 ft)	MY-06424-13	MY-06424-14	MY-06424-16	MY-06424-25	MY-06424-17	MY-06424-18	MY-06424-15	MY-06424-24	MY-06424-35	MY-06424-36
C-Flex® ULTRA	7.6 m (25 ft)	—	MY-06434-14	MY-06434-16	MY-06434-25	MY-06434-17	MY-06434-18	MY-06434-15	MY-06434-24	MY-06434-35	MY-06434-36
PharMed® BPT	7.6 m (25 ft)	MY-06508-13	MY-06508-14	MY-06508-16	MY-06508-25	MY-06508-17	MY-06508-18	MY-06508-15	MY-06508-24	MY-06508-35	MY-06508-36
PharmaPure®	7.6 m (25 ft)	MY-06435-13	MY-06435-14	MY-06435-16	MY-06435-25	MY-06435-17	MY-06435-18	MY-06435-15	MY-06435-24	—	—
GORE® STA-PURE® Series PCS	35.6 cm (14")	—	MY-96211-14	MY-96211-16	MY-96211-25	MY-96211-17	MY-96211-18	MY-96211-15	MY-96211-24	MY-96211-35	MY-96211-36
GORE® STA-PURE® Series PFL	35.6 cm (14")	—	MY-96212-24	MY-96212-35	MY-96212-36	MY-96212-17	MY-96212-18	MY-96212-15	MY-96212-24	MY-96212-35	MY-96212-36
Chem-Durance® Bio	15.2 m (50 ft)	MY-06442-13	MY-06442-14	MY-06442-16	MY-06442-25	MY-06442-17	MY-06442-18	MY-06442-15	MY-06442-24	MY-06442-35	MY-06442-36
Tygon® E-LFL	7.6 m (25 ft)	MY-06440-13	MY-06440-14	MY-06440-16	MY-06440-25	MY-06440-17	MY-06440-18	MY-06440-15	MY-06440-24	MY-06440-35	MY-06440-36
Tygon E-Food (B-44-4X)	15.2 m (50 ft)	MY-06418-13	MY-06418-14	MY-06418-16	MY-06418-25	MY-06418-17	MY-06418-18	MY-06418-15	MY-06418-24	MY-06418-35	MY-06418-36
Tygon E-Lab (E-3603)	15.2 m (50 ft)	MY-06509-13	MY-06509-14	MY-06509-16	MY-06509-25	MY-06509-17	MY-06509-18	MY-06509-15	MY-06509-24	MY-06509-35	MY-06509-36
Tygon Fuel & Lubricant (F-4040-A)	15.2 m (50 ft)	MY-06401-13	MY-06401-14	MY-06401-16	MY-06401-25	MY-06401-17	MY-06401-18	MY-06401-15	MY-06401-24	MY-06401-35	MY-06401-36
Tygon Chemical (2001)	15.2 m (50 ft)	MY-06475-13	MY-06475-14	MY-06475-16	MY-06475-25	MY-06475-17	MY-06475-18	MY-06475-15	MY-06475-24	—	—
Norprene® (A-60 G)	15.2 m (50 ft)	MY-06404-13	MY-06404-14	MY-06404-16	MY-06404-25	MY-06404-17	MY-06404-18	MY-06404-15	MY-06404-24	MY-06404-35	MY-06404-36
Norprene Food (A 60 F)	15.2 m (50 ft)	MY-06402-13	MY-06402-14	MY-06402-16	MY-06402-25	MY-06402-17	MY-06402-18	MY-06402-15	MY-06402-24	MY-06402-35	MY-06402-36
Viton®	7.6 m (25 ft)	MY-96412-13	MY-96412-14	MY-96412-16	MY-96412-25	MY-96412-17	MY-96412-18	MY-96412-15	MY-96412-24	MY-96412-35	MY-96412-36

		I/P® Precision Pump Tubing			I/P® High-Performance Precision Pump Tubing			B/T® PerfectPosition® Pump Tubing			
		I/P 26	I/P 73	I/P 82					B/T 87	B/T 91	
Qty/pk		0.01 to 4 LPM 0.002 to 1.1 GPM	0.01 to 8 LPM 0.002 to 2.1 GPM	0.02 to 13 LPM 0.005 to 3.5 GPM	Qty/pk		0.01 to 8 LPM 0.002 to 2.1 GPM	0.02 to 17 LPM 0.005 to 4.5 GPM	0.03 to 19 LPM 0.007 to 5.0 GPM	0.67 to 18.9 LPM 0.17 to 5.0 GPM	1.4 to 42 LPM 0.4 to 11.1 GPM
Silicone (platinum-cured)	7.6 m (25 ft)	MY-96410-26	MY-96410-73	MY-96410-82	3 m (10 ft)	MY-96510-70	MY-96510-88	MY-96510-89	3 m (10 ft)	MY-96510-87	MY-96510-91
Silicone (peroxide-cured)	7.6 m (25 ft)	MY-96400-26	MY-96400-73	MY-96400-82	—	—	—	—	3 m (10 ft)	MY-96400-87	MY-96400-91
BioPharm Silicone (platinum-cured)	7.6 m (25 ft)	MY-96420-26	MY-96420-73	MY-96420-82	3 m (10 ft)	MY-96421-70	MY-96421-88	MY-96421-89	—	—	—
BioPharm Plus Silicone (platinum-cured)	7.6 m (25 ft)	MY-96440-26	MY-96440-73	MY-96440-82	3 m (10 ft)	MY-96441-70	MY-96441-88	MY-96441-89	3 m (10 ft)	MY-96445-87	MY-96445-91
Puri-Flex™	7.6 m (25 ft)	MY-96419-26	MY-96419-73	MY-96419-82	3 m (10 ft)	MY-96419-70	MY-96419-88	MY-96419-89	3 m (10 ft)	MY-96419-87	MY-96419-91
C-Flex®	7.6 m (25 ft)	MY-06424-26	MY-06424-73	MY-06424-82	3 m (10 ft)	MY-06424-70	MY-06424-88	MY-06424-89	3 m (10 ft)	MY-06424-87	MY-06424-91
PharMed® BPT	7.6 m (25 ft)	MY-06508-26	MY-06508-73	MY-06508-82	7.6 m (25 ft)	MY-06508-70	MY-06508-88	—	3 m (10 ft)	MY-06507-87	MY-06507-91
PharmaPure®	7.6 m (25 ft)	MY-06435-26	MY-06435-73	MY-06435-82	—	—	—	—	3 m (10 ft)	MY-06437-87	MY-06437-91
GORE® STA-PURE® Series PCS	0.6 m (2 ft)	MY-96211-26	MY-96211-73	MY-96211-82	0.6 m (2 ft)	—	MY-96211-88	MY-96211-89	—	—	—
GORE® STA-PURE® Series PFL	0.6 m (2 ft)	MY-96212-26	MY-96212-73	MY-96212-82	0.6 m (2 ft)	—	MY-96212-88	MY-96212-89	—	—	—
Chem-Durance® Bio	15.2 m (50 ft)	MY-06442-26	MY-06442-73	MY-06442-82	15.2 m (50 ft)	MY-06442-70	MY-06442-88	MY-06442-89	3 m (10 ft)	MY-06443-87	MY-06443-91
Tygon® E-LFL	7.6 m (25 ft)	MY-06440-26	MY-06440-73	MY-06440-82	7.6 m (25 ft)	MY-06440-70	MY-06440-88	MY-06440-89	3 m (10 ft)	MY-06440-87	MY-06440-91
Tygon E-Food (B-44-4X)	15.2 m (50 ft)	MY-06418-26	MY-06418-73	MY-06418-82	15.2 m (50 ft)	MY-06418-70	MY-06418-88	MY-06418-89	3 m (10 ft)	MY-06418-87	MY-06418-91
Tygon E-Lab (E-3603)	15.2 m (50 ft)	MY-06509-26	MY-06509-73	MY-06509-82	15.2 m (50 ft)	MY-06509-70	MY-06509-88	MY-06509-89	15.2 m (50 ft)	—	—
Norprene® (A-60 G)	15.2 m (50 ft)	MY-06404-26	MY-06404-73	MY-06404-82	7.6 m (25 ft)	MY-06404-70	MY-06404-88	MY-06404-89	7.6 m (25 ft)	—	—
Norprene Food (A 60 F)	15.2 m (50 ft)	MY-06402-26	MY-06402-73	MY-06402-82	7.6 m (25 ft)	—	MY-06402-88	MY-06402-89	3 m (10 ft)	MY-06399-87	MY-06399-91

Masterflex® Pump Accessories

A. Pulse Dampener

Virtually eliminates pulsation in output flow. Five pairs of fittings and PTFE-pipe thread tape are included. Accepted tubing: all L/S® sizes, I/P® 26, nominal from 1.6 to 9.5 mm ID (1/16" to 3/8" ID). Fittings included (tubing ID x NPT(M) thread): 1/16" x 1/8", 1/8" x 1/8", 3/16" x 1/8", 1/4" x 1/8", and 3/8" x 1/8". Dampener connections: 1/8" NPT(F). Dead volume: 190-mL. Max pressure: 60 psi (4.3 bar). Polyethylene body.



Description	Catalogue number
Pulse dampener	MY-07596-20

B. On/Off Foot Switches

Foot switches allow for remote control of specific functions of your Masterflex drive. All units have a 1.8-m (6-ft) cord. Verify the connector type on your drive before ordering.



Description	Catalogue number
DB9 male connector; for 07528-, 07557-, and 07591-series Masterflex drives	MY-77595-35
DB25 male connector; for 07522-, 07523-, 07551-, 77301-, and 07594-series Masterflex drives	MY-07523-92
18-pin round water-tight connector; for 07557-, 07591-, and 77411-series Masterflex drives	MY-07595-43
31-pin round water-tight connector; for 07575-, 77301-, 07594-, and 77420-series Masterflex drives	MY-07575-84

C. DB9 Cable Assembly

Use these 9-pin interface cable assemblies with Masterflex L/S® drives (07550- and 07551-series). Cable measures 1.8-m (6-ft) long.



Description	Catalogue number
Interface cable with DB9 (M/F)	MY-22050-54

D. USB to DB9(M) RS-232 Serial Adapter Cable

Use this cable to connect the Masterflex 07550- and 07551-series Computer Compatible drives to a PC with USB port. Will also connect other peripheral devices equipped with RS-232 serial interface including balances, printers, scanners, and PDA's. Includes 0.6-m (2-ft) cable and driver software. Supports data transfer speeds up to 12 Mbps; compatible with Windows® 2000/XP/Vista/7.



Description	Catalogue number
USB to DB9(M) RS-232 serial adapter cable	MY-22050-58

E. Remote Control Connectors

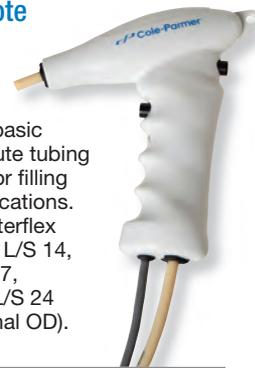
Combine these connectors with 20 to 22 gauge shielded wire to create your own interface cable. Maximum cable length is 300-m (1000 ft).



Description	Catalogue number
DB9 male connector. Wire only the pins needed	MY-07595-45
DB25 male connector. Wire only the pins needed	MY-07523-94

F. Handheld Remote Controllers

These handheld controllers are designed to control basic drive operations. Route tubing through the handle for filling and dispensing applications. Handles accept Masterflex tubing sizes L/S® 13, L/S 14, L/S 16, L/S 25, L/S 17, L/S 18, L/S 15, and L/S 24 (up to 11.1 cm nominal OD).



Description	Catalogue number
DB9 male connector; for 07528-series Masterflex L/S drives; control start/stop and direction	MY-07528-80
DB25 male connector; for 07523-series and 07551-series Masterflex L/S drives; control start/stop, direction, and prime	MY-07523-97
Stripped wire ends; control start/stop, direction, and prime	MY-07595-62

G. Remote Control Cable Assemblies

Cable assemblies include terminal connector and 7.9-m (25 ft) cable with stripped wire ends. Verify the connector type on your drive before ordering.



Description	Catalogue number
DB9 male connector; for 07528-, 07557-, and 07591-series Masterflex drives	MY-07595-47
DB25 male connector; for 07522-, 07523-, 07551-, 77301-, and 07594-series Masterflex drives	MY-07523-95
18-pin round water-tight connector; for 07557-, 07591-, and 77411-series Masterflex drives	MY-77300-32
31-pin round water-tight connector; for 07575-, 77301-, 07594-, and 77420-series Masterflex drives	MY-07575-80

Overlook Filler/Dispensing Nozzles

- Maximise the speed, precision, and accuracy of dispensing and filling applications
- Dimensional tolerances of ±0.05% for assured repeatability

Nozzles feature a 316L stainless steel needle and a polycarbonate base with hose barb adapter. Materials meet FDA, USDA and USP Class VI requirements. Sterilise by ethylene oxide, autoclaving, or gamma irradiation.



Tubing ID	Catalogue number
1/32"	MY-30619-06
1/16"	MY-30619-01
1/8"	MY-30619-07
3/16"	MY-30619-02
1/4"	MY-30619-08
5/16"	MY-30619-03
3/8"	MY-30619-09
1/2"	MY-30619-04
5/8"	MY-30619-10
3/4"	MY-30619-05

Ismatec® Reglo Independent Channel Control (ICC) Pumps

Pump each channel at different speeds and directions!

- Each pump performs the job of up to four separate pumps
- Additional options in channel and roller configurations allow balanced pulsation control at desired flow rate
- USB interface for quick computer connections using redesigned graphical user-interface

These two-, three- and four-channel peristaltic pumps let you individually control the flow and direction of each channel from the intuitive keypad or via your computer—expanding your benchtop pumping capabilities with a single compact unit! Pump delivers continuous pumping or precision dispensing up to 43-mL/min with the capability of bidirectional flow in each channel. Plus, independent channel calibration minimises tube-to-tube differences, resulting in high calibration accuracy.

Deliver or dispense at multiple flow rates—all from a single space-saving pump.

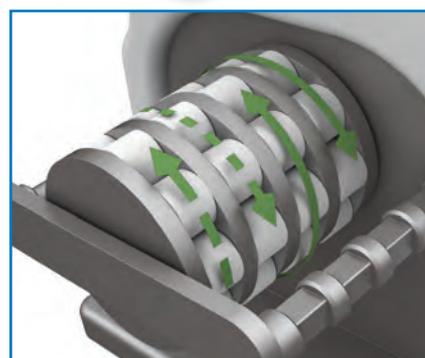


Specifications

Speed: 0.1 to 100 rpm **Pressure:** up to 1.0 bar (14.5 psi)
Accuracy: ±1%



Channels	Rollers	Tubing	Power (VAC, Hz)	Catalogue number
Benchtop pumps				
Two	Six	Three-stop	100 to 240, 50/60	MY-78001-58
	Eight			MY-78001-60
	12			MY-78001-62
Three	Six	Three-stop	100 to 240, 50/60	MY-78001-68
	Eight			MY-78001-70
	12			MY-78001-72
Four	Six	Three-stop	100 to 240, 50/60	MY-78001-78
	Eight			MY-78001-80
	12			MY-78001-82
Panel-mount pumps				
Two	Eight	Three-stop	100 to 240, 50/60	MY-78001-43
Three	Eight			MY-78001-45
Four	Eight			MY-78001-47
Four	12			MY-78001-49



Independent Channel Design

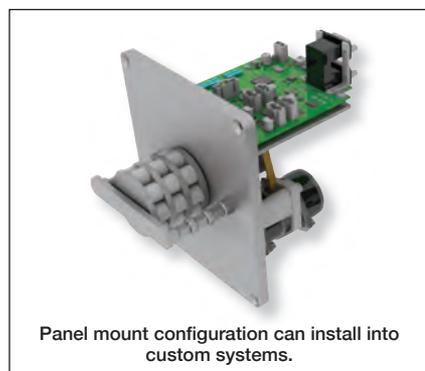
- ✓ Up to four independently controllable channels
- ✓ Flexibility of bidirectional flow in each channel
- ✓ Continuous pumping or precision dispensing
- ✓ Enhanced accuracy through separate channel calibration

Accessories

MY-78016-98 Replacement Click'n'go™ tubing cassette, POM-C
 MY-78016-96 Click'n'go™ tubing cassette, PVDF

Flow Ranges (mL/min per channel)

Tubing ID (mm)	6 rollers	8 rollers	12 rollers
0.13	0.0002 to 0.14	0.0002 to 0.11	0.0001 to 0.093
0.51	0.0019 to 1.9	0.0017 to 1.7	0.0016 to 1.6
0.57	0.0024 to 2.4	0.0021 to 2.1	0.0019 to 1.9
0.64	0.0030 to 3.0	0.0026 to 2.6	0.0024 to 2.4
0.95	0.0064 to 6.4	0.0056 to 5.6	0.0050 to 5.0
1.02	0.0073 to 7.3	0.0063 to 6.3	0.0056 to 5.6
1.42	0.013 to 13	0.011 to 11	0.0094 to 9.4
1.75	0.019 to 19	0.016 to 16	0.013 to 13
1.85	0.021 to 21	0.017 to 17	0.014 to 14
2.54	0.033 to 33	0.027 to 27	0.019 to 19
2.79	0.036 to 36	0.031 to 31	0.021 to 21
3.17	0.043 to 43	0.035 to 35	0.024 to 24



Panel mount configuration can install into custom systems.

Ismatec® IPC Low-Flow High-Accuracy Pumps

Fewer tubing changes

- Planetary drive for less pulsation and longer tubing life
- Smooth rotation and accurate liquid flow provided by eight SS rollers
- Easy repeatability with four-digit LED
- Simple to use
- Five modes for pumping or dispensing including flow rate, time, batches, drip-free, and volume
- Control via keypad, computer, or remote control
- IP and IP-N analogue pumps available online



Choose from 4, 8, 12, 16 and 24 channel configurations for application flexibility.

ISMATEC®



See pages 146–147.

4 channel



8 channel



12 channel



16 channel



24 channel



Specifications

Accuracy: better than $\pm 1\%$

Pressure

Click'n'go cassettes: up to 14.5 psi (1 bar)

Pressure lever cassettes: up to 22 psi (1.5 bar)

ISO 9001:2008
CERTIFIED SUPPLIER



Flow range per channel (mL/min)	Channels	Rollers	Speed (rpm)	Cassette style	Tubing	Power (VAC, Hz)	Catalogue number
IPC-N models							
0.0004 to 11	Four	Eight	0.11 to 11.25	Click'n'go	Two-stop	230, 50/60	MY-78001-06
	Eight					230, 50/60	MY-78001-16
	12					230, 50/60	MY-78001-26
	16					230, 50/60	MY-78001-36
0.0004 to 11	24	Eight	0.11 to 11.25	Pressure lever (adjustable occlusion)	Two-stop	230, 50/60	MY-78001-46
	Eight					230, 50/60	MY-78000-17
	16					230, 50/60	MY-78000-37
	24					230, 50/60	MY-78000-47
IPC models							
0.002 to 44	Four	Eight	0.4 to 45	Click'n'go	Two-stop	230, 50/60	MY-78001-08
	Eight					230, 50/60	MY-78001-18
	12					230, 50/60	MY-78001-28
	16					230, 50/60	MY-78001-38
0.002 to 44	24	Eight	0.4 to 45	Pressure lever (adjustable occlusion)	Two-stop	230, 50/60	MY-78001-48
	Four					230, 50/60	MY-78000-09
	Eight					230, 50/60	MY-78000-19
	12					230, 50/60	MY-78000-29
0.002 to 44	16	Eight	0.4 to 45	Pressure lever (adjustable occlusion)	Two-stop	230, 50/60	MY-78000-39
	24					230, 50/60	MY-78000-49

Order extra cartridges/adapters when fast tubing changes are crucial.

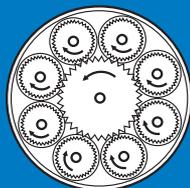
MY-78001-95 Replacement Click'n'go™ cartridge, POM-C

MY-78001-90 Repl. adjust. occlusion cartridge with pressure lever

MY-07618-71 Replacement adapters hold two-stop colour-coded tubing in cartridge. Two adapters required per cartridge. Pack of 12

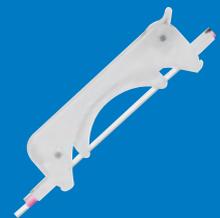
Planetary Drive System

With the planetary drive system, each roller is directly driven by the sun wheel. This mechanism prevents axial push-pull friction on the tubing—resulting in longer tubing life, lower pulsation, and high repeatability.



Pressure Lever Cassettes

These cassettes feature a pressure lever that allows you to set a different tubing pressure for each channel. Depending on the application, tubing material, and diameter, you can adjust to optimal tubing pressure for your requirements.



Ismatec® ecoline Pumps

Save space—pumps stack easily

- Durable stainless steel housing and four stabilising feet for easier stacking
- Simple setup and operation—start, stop, and reverse flow with a single switch
- Configurations available to support standard, Masterflex, and stopped tubing

Pumps are controllable remotely via an analog input signal (0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, or 4 to 20 mA); start/stop drive or reverse direction via contact closure (eight-pin DIN). Input signals from your existing instruments actuate drive functions.

A–C. Drive with Single-Channel Pump Head

- Minimise tubing wear and ensure automatic centering with convex roller

D. Drive with Masterflex® L/S® Easy-Load® Pump Head

- Change tubing quickly with easily accessible head
- Polysulfone housing and stainless steel rotor

E. Drive with Minicartridge Pump Head

- No adjustments needed—spring-loaded cassettes for optimal occlusion at all times Get consistent, low-pulse flow with 6 or 12 rollers

ISMATEC®

ISO9001:2008
CERTIFIED SUPPLIER

Key	Flow range per channel (mL/min)	Channels	Rollers	Speed	Tubing	Power (VAC, Hz)	Catalogue number
Drive with single-channel pump head							
A	1.7 to 5400	One	Two	3.5 to 350 rpm	Pump (pg 147)	230, 50/60	MY-78022-12
B	1.6 to 5000		Three			230, 50/60	MY-78022-22
C	0.25 to 1300		Three			230, 50/60	MY-78022-32
Drive with Easy-Load pump head							
D	0.23 to 1600	One	Three	3.5 to 350 rpm	Masterflex® (pgs 138–139)	230, 50/60	MY-78022-52
Drive with Minicartridge pump head and Click'n'go cassettes							
E	0.01 to 130	Eight	Six	3.5 to 350 rpm	Three-stop (pgs 146–147)	230, 50/60	MY-78022-42
	0.0075 to 75	Four	12			230, 50/60	MY-78022-62



Accessories

- MY-07624-64** Optional adjustable occlusion cassette with pressure lever, POM-C
- MY-78016-98** Replacement Click'n'go™ cassette, POM-C
- MY-07610-25** Foot switch, momentary contact
- MY-17050-01** ILAC MRA, NIST-traceable calibration with data for peristaltic pump drive

Ismatec® Reglo Compact Multichannel Pumps

No more inconsistent results

- Consistent flow and reduced tubing wear for improved results
- Very small footprint for a stand-alone “smart” pump
- Easy channel changes—Click'n'go™ minicartridges snap in place

A. Reglo Analog Pumps. Speed is adjustable in 1% steps (2 to 100%) via two-digit potentiometer. Control speed remotely. Start/stop pump or change direction via contact closure; monitor speed through frequency output.

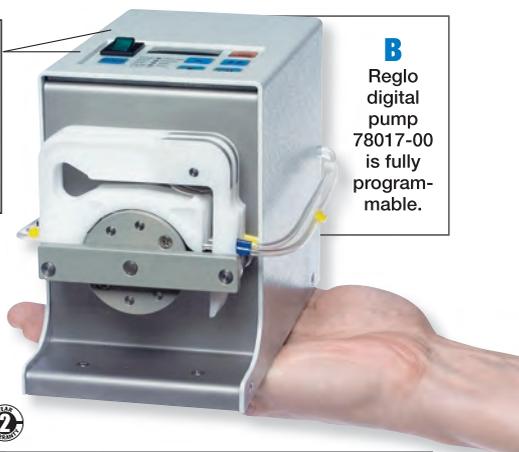
B. Reglo Digital Programmable Pumps. Continuously pump or dispense in any of four modes—flow rate, time, batches, or drip-free. Pumps feature analog input and output controls, as well as an RS-232 interface for control by a computer. Remote control capable.



ISMATEC®



ISO9001:2008
CERTIFIED SUPPLIER



B
Reglo digital pump 78017-00 is fully programmable.

Channels	Rollers	Speed (rpm)	Tubing	A. Reglo Analog pumps			B. Reglo Digital programmable pumps with calibrating function		
				Flow range per channel (mL/min)	Power (VAC, Hz)	Catalogue number	Flow range per channel (mL/min)	Power (VAC, Hz)	Catalogue number
Two	Six	3.2 to 160	Three-stop (pgs 146–147)	0.005 to 68	230, 50/60	MY-78016-02	0.003 to 68	115/230, 50/60	MY-78016-42
	Eight			0.004 to 57	230, 50/60	MY-78016-12	0.002 to 57	115/230, 50/60	MY-78017-02
	12			0.003 to 38	230, 50/60	MY-78017-27	0.002 to 38	115/230, 50/60	MY-78016-47
Four	Six	2.0 to 100	Three-stop (pgs 146–147)	0.003 to 43	230, 50/60	MY-78017-32	0.002 to 43	115/230, 50/60	MY-78017-42
	Eight			0.003 to 35	230, 50/60	MY-78016-32	0.002 to 35	115/230, 50/60	MY-78017-12
	12			0.002 to 24	230, 50/60	MY-78017-37	0.001 to 24	115/230, 50/60	MY-78017-22

Minicartridges

Optional adjustable-occlusion minicartridge to manually vary pressure on each channel.

MY-07624-64 Optional adjustable occlusion cassette with pressure lever, POM-C

MY-07624-96 Replacement Click'n'go cassette, PVDF

Ismatec® BVP and MCP Quick-Couple Drives

Create a custom system with interchangeable pump heads

- Mount pump heads quickly with turn-and-lock mounting system
- Select from interchangeable tubing pump heads to achieve flow rates from 0.003 to 3700-mL/min
- Remote control and programming options add versatility
- Process washdown drives are IP65 rated

BVP Standard and Process Drives

- Prime, flush, or prevent overflow with Max/Slow toggle switch

BVP Standard Drive features analog input that remote control of speed, start/stop or flow direction. **BVP Process Washdown Drive** is similar to the BVP Standard model, plus has a digital display for speed. The IP65-rated housing is ideal for dusty, humid, or corrosive environment and in cleanroom areas. The stainless steel housing is sealed for added durability.

MCP Standard and Process Programmable Digital Drives

- Save time—recall and store up to four programs
- Preprogrammed with tubing sizes and heads for faster setup
- Use the RS-232 interface to automate your lab or operate independently via the keypad—RS-232 in for remote operation; RS-232 out for cascading pumps

MCP Standard Drive is programmable to dispense by volume, time, flow rate, batches with variable pause time, stored programs, roller back steps, or number of dispensing cycles. Digital display shows speed, flow rate, dispensing volume, dispensing time, and pause time. **MCP Process Washdown Drive** adds an IP65-rated housing for washdown applications—ideal for dispensing and filling in dusty, humid, or corrosive environment and in cleanroom areas. The stainless steel housing is sealed for added durability.



BVP Standard drive 78002-10



MCP Standard programmable digital drive 78002-00 can store four programs downloaded from your computer.



BVP Process washdown drive 78003-10



REQUIRED System Components

- 1) Quick-couple drive . . . 144
- 2) Pump head 144-145
- 3) Tubing 146-147

Specifications

Duty cycle: continuous



Model	BVP Standard drive	BVP Process washdown drive	MCP Standard drive	MCP Process washdown drive
Catalogue number	MY-78002-12	MY-78003-10	MY-78002-02	MY-78003-08
Programmable	No	No	Yes	Yes
Speed	2.4 to 240 rpm (indicated as 1 to 99.9%)	1 to 240 rpm	1 to 240 rpm	1 to 240 rpm
Resolution	0.1% via 3-digit potentiometer	0.1 rpm	0.1 rpm	0.1 rpm
Flow range/channel	0.003 to 3700 mL/min	0.001 to 3700 mL/min	0.001 to 3700 mL/min	0.001 to 3700 mL/min
Flow rate settings	—	—	µL/min, mL/min, L/min	µL/min, mL/min, L/min
Remote control capabilities	Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 10 VDC or 0 to 12 kHz Start/stop, rotation direction	Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 10 VDC or 0 to 7.2 kHz Start/stop, rotation direction, autostart	RS-232 (1 in, 1 out), 1 analogue Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 10 VDC or 0 to 12 kHz Start/stop, rotation direction, autostart	RS-232 (1 in, 1 out), 1 analogue Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 10 VDC or 0 to 7.2 kHz Start/stop, rotation direction, autostart
IP rating	IP30	IP65	IP30	IP65
Power	230 VAC, 50/60 Hz	230 VAC, 50/60 Hz	230 VAC, 50/60 Hz	115 to 230 VAC, 50/60 Hz

Pump Heads for Quick-Couple Drives

A. Washdown Pump Heads

Dismantle for easy cleaning—ideal for hygienic applications. Convex rollers and concave tube-bed maintain the integrity of material being pumped. Coated aluminum with stainless steel rollers.

Flow range (mL/min)	Channels	Rollers	Tubing	Wall thickness	Max pressure	Catalogue number
0.49 to 3700	One	Two	Pump (page 147)	1.6 mm	1.5 bar (22 psi)	MY-78002-11
3.6 to 3100	One	Two		2.4 mm	2.5 bar (36 psi)	MY-78002-13
0.45 to 3400	One	Three		1.6 mm	1.5 bar (22 psi)	MY-78002-16
3.3 to 2900	One	Three		2.4 mm	2.5 bar (36 psi)	MY-78002-14



B. Minicartridge Pump Heads

Minimise pulsation with more rollers. Get up to 24 channels with 78002-50 and 07623-00 below. Get up to 16 channels of the smoothest flow with 78002-90 and 07623-30 below.

Flow range (mL/min)	Channels	Rollers	Tubing	Max pressure	Catalogue number
0.002 to 100	Eight (up to 24)	Six	Three-stop (pages 146–147)	1.0 bar (14.5 psi) [†]	MY-78002-50
0.001 to 57	Four (up to 16)	12			MY-78002-90

[†]22 psi (1.5 bar) achievable with pressure lever cassettes.

MY-07623-00 Eight-channel extension pump head. Use up to two with 78002-50 to get 24 channels

MY-07623-30 Four-channel extension pump head. Use up to three with 78002-90 to get 16 channels

C. Standard Cartridge Pump Heads

Ideal pump head for multichannel applications at higher flow rates. Click'n'go™ cartridges allow quick and easy tubing changes.

Flow range (mL/min)	Channels	Rollers	Tubing	Max pressure	Catalogue number
0.002 to 230	Eight	Eight	Two-stop (pages 146–147)	1.0 bar (14.5 psi) [†]	MY-78002-34
	12				MY-78002-36

[†]22 psi (1.5 bar) achievable with pressure lever cassettes.

D. Tubing Bed Pump Heads

Ideal for delicate substances which require gentle occlusion setting. Spring-loaded tubing bed adjusts occlusion for optimum pressure and tubing.

Flow range (mL/min)	Channels	Rollers	Tubing	Max pressure	Catalogue number
1.1 to 1110	Two	Six	Pump (page 147)	1.5 bar (22 psi)	MY-07611-10
0.09 to 530	Three				MY-07611-15

E. Quick-Change Pump Heads

Hinged tube-bed allows rapid tube change-over. Easily accessible pump head. Self-centering tube-track results in longer tubing-life. Stainless steel rollers.

Flow range (mL/min)	Channels	Rollers	Tubing	Max pressure	Catalogue number
0.08 to 880	One	Three	Pump (page 147)	1.5 bar (22 psi)	MY-78002-22
0.44 to 2800					MY-78002-20

F. High-Viscosity Pump Head

Ideal for media with high viscosity or with a certain level of solid content. Accepts tubing with 1.6-mm and 2.4-mm wall thickness (for elevated differential pressures). Stainless steel rollers. Pressure on tubing adjustable via rollers.

Flow range (mL/min)	Channels	Rollers	Tubing	Max pressure	Catalogue number
0.41 to 3600	One	Three	Pump (page 147)	36 psi	MY-78002-60

G. Masterflex® Easy-Load® Pump Heads

Allows for fast and easy tubing changes. Accepts Masterflex L/S® pump tubing (see pages 138–139). Requires mounting plate below.

Flow range (mL/min)	Channels	Rollers	Tubing	Max pressure	Catalogue number
3.4 to 672	One (up to two)	Three	L/S 15, L/S 24	20 psi	MY-07514-12
0.12 to 912			L/S 13, L/S 14, L/S 16, L/S 17, L/S 18, L/S 25		MY-07514-10

MY-78020-90 Mounting plate for Masterflex Easy-Load pump head

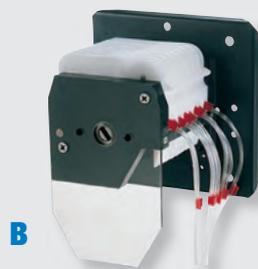
MY-07013-05 Mounting hardware to stack two Easy-Load pump heads

H. PTFE-Diaphragm Pump Heads

Pump almost any fluid with these chemically inert PTFE-diaphragm pump heads. Pump heads withstand temperatures up to 66°C (150°F). Requires adapter 78002-70 to mount to Quick-Couple drives.

Flow range (mL/min)	Ball check	Rollers	Tubing	Max pressure	Catalogue number
0.5 to 60	Glass	1/8" NPT(M)	Pump (page 147)	75 psi	MY-07090-62
4 to 480	PTFE	1/4" NPT(M)		50 psi	MY-07090-42

MY-78002-70 Adapter for mounting PTFE Diaphragm pump heads onto 78002- and 78003-series drives



B



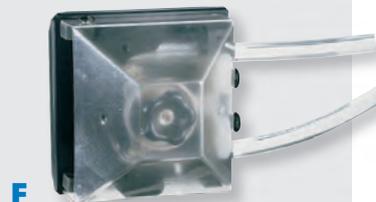
C



D



E



F



G



H

Two- and Three-Stop Colour-Coded Tubing for Ismatec® Pumps

Don't confuse your tubing— colour-coded stops for easy identification

STEP 1: Choose a tubing material & select the catalogue number prefix.

Make sure to choose two-stop or three-stop tubing based on what your pump uses!

STEP 3: Complete your system with extension tubing.

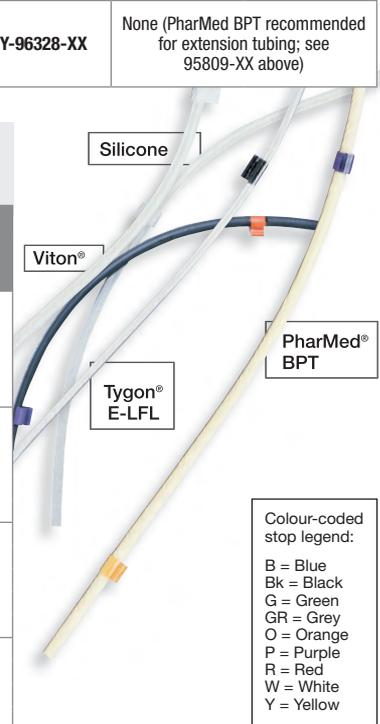
Connect stopped and extension tubing with barbed fittings or splicing.

Material	Description	Suffixes for the available sizes	No. of tubes per pack (length)	Two-Stop Tubing	Three-Stop Tubing	Extension Tubing	
				Cat. no. prefix	Cat. no. prefix	Length/pk	Cat. no. prefix
Tygon® E-LFL	<ul style="list-style-type: none"> Complies with USP Class VI, EP, FDA, EU food, REACH, RoHS, ADFC Longest life of all Tygon formulations Broad chemical resistance 	10, 12, 14, 18, 22, 24, 26, 28, 30, 31, 33, 34, 36, 37, 40, 42, 43, 47, 48	12 tubes (40.6 cm)	MY-96449-XX	MY-96450-XX	100 ft	MY-06449-XX
Tygon® E-Food	<ul style="list-style-type: none"> Complies with FDA, EU Food, NSF, 2A, REACH, RoHS, ADFC Smooth inner surface; non-toxic 	10, 12, 18, 26, 30, 34, 42, 48	12 tubes (40.6 cm)	MY-96457-XX	MY-96458-XX	100 ft	MY-06457-XX
Tygon® E-Lab	<ul style="list-style-type: none"> Complies with USP Class VI, FDA, EU Food, NSF, REACH, RoHS, ADFC Ideal for general transfer applications Non-ageing/non-oxidizing, low gas permeability 	09, 10, 12, 14, 16, 18, 19, 22, 24, 26, 27, 28, 29, 30, 31, 32, 34, 36, 38, 39, 40, 42, 44, 46, 48, 49	12 tubes (40.6 cm)	MY-96460-XX	MY-96461-XX	100 ft	MY-06460-XX
Silicone (peroxide cured)	<ul style="list-style-type: none"> Complies with USP Class VI, EP, FDA, 3A, REACH, RoHS, ADFC Greater physical compression capability Economical, long tubing life 	10, 12, 14, 18, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48	Six tubes (40.6 cm)	MY-07616-XX	MY-07624-XX	50 ft	MY-07625-XX
Silicone (platinum cured)	<ul style="list-style-type: none"> Complies with USP Class V, EP, FDA, REACH, RoHS, ADFC Low protein binding, fungus-resistant, phthalate and latex free 	22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48	Six tubes (40.6 cm)	MY-95602-XX	MY-95603-XX	50 ft	MY-95612-XX
Viton®	<ul style="list-style-type: none"> Complies with FDA, ADFC Resists corrosives, solvents, and oils at elevated temperatures 	18, 22, 24, 26, 30, 34, 38, 42, 46, 48	12 tubes (30.5 cm)	MY-97628-XX	MY-97629-XX	50 ft	MY-97632-XX
PharMed® BPT	<ul style="list-style-type: none"> Complies with USP Class VI, EP, FDA, NSF, REACH, RoHS Over 10,000 hours of tubing life, sealable, weldable Ideal for tissue and cell culture work 	10, 12, 14, 18, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48	12 tubes (40.6 cm)	MY-95723-XX	MY-95714-XX	100 ft	MY-95809-XX
Autoclavable PharMed® BPT		12, 32, 48	Six tubes (40.6 cm)	MY-95692-XX	MY-95693-XX		
PVC Solvent/hydrocarbon	<ul style="list-style-type: none"> Resistant to ozone and UV light Resists to cracking, swelling, hardening Ideal for fuels, distillates, lubricants, and glycol-based coolants 	10, 12, 14, 18, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48	12 tubes (40.6 cm)	MY-95606-XX	MY-95605-XX	50 ft	MY-95712-XX
Chem-Durance® Bio	<ul style="list-style-type: none"> Suitable for acetone, MEK, and other highly aggressive chemicals Long life and outstanding fatigue resistance 	14, 18, 24, 26, 30, 34, 36, 42, 48	Six tubes (40.6 cm)	MY-96327-XX	MY-96328-XX	None (PharMed BPT recommended for extension tubing; see 95809-XX above)	

STEP 2:

Find your desired flow rate and select the catalogue number suffix. See page 147 for more.

Flow rate ¹ (mL/min) with Fixed-Speed Pumps (order online)								Cat. no. suffix	ID (mm)	Colour-coded stops
78012-00, 78012-05	78012-20, 78012-25	78012-30, 78012-35	78012-40, 78012-45	78012-50, 78012-55	78012-60, 78012-65	78012-80, 78012-85	78012-90, 78012-95			
0.047	0.14	0.047	0.093	0.056	0.11	0.17	0.056	-10	0.19	O/R
0.081	0.24	0.08	0.16	0.1	0.19	0.29	0.1	-12	0.25	O/B
0.19	0.56	0.19	0.37	0.22	0.43	0.65	0.22	-14	0.38	O/G
0.25	0.75	0.25	0.5	0.29	0.58	0.86	0.29	-16	0.44	G/Y
0.34	1	0.34	0.67	0.38	0.77	1.2	0.38	-18	0.51	O/Y
0.52	1.6	0.52	1	0.6	1.2	1.8	0.6	-22	0.64	O/W
0.73	2.2	0.73	1.5	0.84	1.7	2.5	0.84	-24	0.76	Bk/Bk
1	2.9	1	2	1.1	2.3	3.4	1.1	-26	0.89	O/O
1.3	3.8	1.3	2.5	1.5	2.9	4.4	1.5	-28	1.02	W/W
1.6	4.7	1.6	3.1	1.8	3.6	5.4	1.8	-30	1.14	R/R
2	5.9	2	3.9	2.3	4.6	6.9	2.3	-32	1.3	GR/GR
2.3	6.8	2.3	4.6	2.7	5.4	8	2.7	-34	1.42	Y/Y
2.6	7.7	2.6	5.1	3	6	9.1	3	-36	1.52	Y/B
2.9	8.8	2.9	5.8	3.5	6.9	10	3.5	-38	1.65	B/B
3.5	10	3.5	7	4.2	8.4	13	4.2	-40	1.85	G/G
4.1	12	4.1	8.2	5	10	15	5	-42	2.06	P/P
4.8	14	4.8	9.5	5.8	12	17	5.8	-44	2.29	P/Bk
5.5	16	5.5	11	6.6	13	20	6.6	-46	2.54	P/O
6.2	19	6.2	12	7.4	15	22	7.4	-48	2.79	P/W



STEP 2 (continued): Find your desired flow rate and select the catalogue number suffix.

Flow ranges [†] (mL/min) with indicated pump system (page 143 and online)													Cat. no. suffix	ID (mm)	Colour-coded stops
78016-00, 78016-02	78016-10, 78016-12	78016-30, 78016-32	78016-42	78017-02	78017-10, 78017-12	78017-20, 78017-22	78017-25, 78017-27	78017-30, 78017-32	78017-35, 78017-37	78017-45, 78017-47	78022-40, 78022-42	78022-60, 78022-62			
0.009-0.45	0.008-0.37	0.005-0.23	0.005-0.45	0.004-0.37	0.003-0.23	0.003-0.21	0.007-0.34	0.006-0.28	0.005-0.21	0.004-0.34	0.01-0.98	0.0075-0.75	-10	0.19	O/R
0.015-0.76	0.013-0.65	0.009-0.41	0.008-0.76	0.007-0.65	0.005-0.41	0.004-0.38	0.012-0.61	0.01-0.48	0.008-0.38	0.007-0.61	0.017-1.7	0.013-1.3	-12	0.25	O/B
0.035-1.7	0.03-1.5	0.019-0.94	0.017-1.7	0.015-1.5	0.01-0.94	0.009-0.88	0.028-1.4	0.022-1.1	0.018-0.88	0.014-1.4	0.038-3.8	0.031-3.1	-14	0.38	O/G
0.046-2.3	0.04-2	0.025-1.3	0.023-2.3	0.02-2	0.013-1.3	0.012-1.2	0.038-1.9	0.029-1.4	0.024-1.2	0.019-1.9	0.05-5	0.041-4.1	-16	0.44	G/Y
0.061-3.1	0.054-2.7	0.034-1.7	0.031-3.1	0.027-2.7	0.017-1.7	0.016-1.6	0.05-2.5	0.038-1.9	0.031-1.6	0.025-2.5	0.067-6.7	0.055-5.5	-18	0.51	O/Y
0.096-4.8	0.084-4.2	0.052-2.6	0.048-4.8	0.042-4.2	0.026-2.6	0.024-2.4	0.077-3.9	0.06-3	0.048-2.4	0.039-3.9	0.1-10	0.085-8.5	-22	0.64	O/W
0.13-6.7	0.12-5.8	0.073-3.6	0.067-6.7	0.058-5.8	0.036-3.6	0.33-3.3	0.11-5.3	0.084-4.2	0.067-3.3	0.053-5.3	0.15-15	0.12-12	-24	0.76	Bk/Bk
0.18-9	0.16-7.9	0.098-4.9	0.09-9	0.079-7.9	0.049-4.9	0.044-4.4	0.14-7.1	0.11-5.7	0.088-4.4	0.071-7.1	0.2-20	0.15-15	-26	0.89	O/O
0.23-12	0.2-10	0.13-6.3	0.12-12	0.1-10	0.063-6.3	0.056-5.6	0.18-9	0.15-7.3	0.11-5.6	0.09-9	0.26-26	0.2-20	-28	1.02	W/W
0.29-14	0.25-12	0.16-7.8	0.14-14	0.12-12	0.078-7.8	0.067-6.7	0.22-11	0.18-9	0.13-6.7	0.11-11	0.32-32	0.24-24	-30	1.14	R/R
0.37-18	0.31-16	0.2-10	0.18-18	0.16-16	0.1-10	0.083-8.3	0.26-13	0.23-11	0.17-8.3	0.13-13	0.4-40	0.29-29	-32	1.3	GR/GR
0.43-21	0.37-18	0.23-11	0.21-21	0.18-18	0.11-11	0.094-9.4	0.3-15	0.27-13	0.19-9.4	0.15-15	0.47-47	0.33-33	-34	1.42	Y/Y
0.48-24	0.41-20	0.26-13	0.24-24	0.2-20	0.13-13	0.1-10	0.33-17	0.3-15	0.21-10	0.17-17	0.53-53	0.36-36	-36	1.52	Y/B
0.56-28	0.47-23	0.29-15	0.28-28	0.23-23	0.15-15	0.12-12	0.37-19	0.35-17	0.23-12	0.19-19	0.61-61	0.41-41	-38	1.65	B/B
0.67-34	0.56-28	0.35-17	0.34-34	0.28-28	0.17-17	0.13-13	0.43-21	0.42-21	0.27-13	0.21-21	0.73-73	0.47-47	-40	1.85	G/G
0.79-40	0.66-33	0.41-20	0.4-40	0.33-33	0.2-20	0.15-15	0.49-24	0.5-25	0.3-15	0.24-24	0.87-87	0.53-53	-42	2.06	P/P
0.92-46	0.76-38	0.48-24	0.46-46	0.38-38	0.24-24	0.17-17	0.55-27	0.58-29	0.34-17	0.27-27	1-100	0.6-60	-44	2.29	P/Bk
1.1-53	0.88-44	0.55-27	0.53-53	0.44-44	0.27-27	0.19-19	0.62-31	0.66-33	0.39-19	0.31-31	1.2-120	0.68-68	-46	2.54	P/O
1.2-59	0.99-50	0.62-31	0.59-59	0.5-50	0.31-31	0.21-21	0.69-34	0.74-37	0.43-21	0.34-34	1.3-130	0.75-75	-48	2.79	P/W

Flow ranges [†] (mL/min) with indicated pump (pages 142, 145, and online)						Cat. no. suffix	ID (mm)	Colour-coded stops
IPC-N models	IPC models	78002-34	78002-36	78002-50	78002-90			
0.0007-0.066	0.003-0.26	0.004-0.94	0.004-0.94	0.003-0.67	0.003-0.51	-10	0.19	O/R
0.001-0.1	0.005-0.41	0.008-1.8	0.008-1.8	0.005-1.1	0.004-0.91	-12	0.25	O/B
0.003-0.22	0.009-0.86	0.019-4.5	0.019-4.5	0.011-2.6	0.009-2.1	-14	0.38	O/G
0.003-0.28	0.011-1.1	0.025-6.1	0.025-6.1	0.014-3.5	0.012-2.8	-16	0.44	G/Y
0.004-0.38	0.015-1.5	0.034-8.2	0.034-8.2	0.019-4.6	0.016-3.8	-18	0.51	O/Y
0.006-0.58	0.023-2.3	0.053-13	0.053-13	0.03-7.2	0.024-5.8	-22	0.64	O/W
0.009-0.81	0.032-3.2	0.074-18	0.074-18	0.042-10	0.033-8	-24	0.76	Bk/Bk
0.011-1.1	0.044-4.4	0.1-24	0.1-24	0.057-14	0.044-11	-26	0.89	O/O
0.014-1.4	0.057-5.7	0.13-31	0.13-31	0.073-18	0.056-13	-28	1.02	W/W
0.017-1.7	0.07-7	0.16-38	0.16-38	0.09-22	0.067-16	-30	1.14	R/R
0.022-2.2	0.089-8.9	0.2-47	0.2-47	0.11-27	0.083-20	-32	1.3	GR/GR
0.026-2.6	0.11-11	0.23-55	0.23-55	0.13-32	0.094-23	-34	1.42	Y/Y
0.03-3	0.12-12	0.26-62	0.26-62	0.15-36	0.1-25	-36	1.52	Y/B
0.035-3.5	0.14-14	0.3-71	0.3-71	0.17-42	0.12-28	-38	1.65	B/B
0.43-4.3	0.17-17	0.36-86	0.36-86	0.21-50	0.13-32	-40	1.85	G/G
0.52-5.2	0.21-21	0.43-100	0.43-100	0.25-59	0.15-37	-42	2.06	P/P
0.062-6.2	0.25-25	0.51-120	0.51-120	0.29-69	0.17-41	-44	2.29	P/Bk
0.075-7.5	0.3-30	0.63-150	0.62-150	0.33-79	0.19-46	-46	2.54	P/O
0.088-8.8	0.35-35	0.74-180	0.74-180	0.37-89	0.21-52	-48	2.79	P/W

[†]Flow ranges (mL/min) are nominal. Actual flow depends on factors such as occlusion, fluid viscosity, temperature, and pressure.

How to order two- and three-stop tubing

Step 1: Choose a tubing material and select the corresponding catalogue number prefix from the table on page 146. Make sure to choose two-stop or three-stop tubing based on what your pump uses!

Step 2: Find your pump system and desired flow rate and select the catalogue number suffix from the tables on pages 146–147.

Step 3: Complete your system with extension tubing from page 146. You can connect stopped tubing and extension tubing with hose barb fittings or by splicing together.

Pump Tubing for Ismatec® Pumps

ID (mm)	OD (mm)	Wall (mm)	Tygon® E-Lab		Silicone (peroxide cured)		Silicone (platinum cured)		Norpren®		Viton®	
			Ft/pk	Cat. no.	Ft/pk	Cat. no.	Ft/pk	Cat. no.	Ft/pk	Cat. no.	Ft/pk	Cat. no.
0.8	4.0	1.6	50	MY-06509-13	25	MY-96400-13	25	MY-95802-01	50	MY-06404-13	25	MY-96412-13
1.6	4.8	1.6	50	MY-06407-72	25	MY-96400-14	25	MY-96410-14	50	MY-06410-01	25	MY-96412-14
3.2	6.4	1.6	50	MY-06407-76	25	MY-06411-67	25	MY-95802-05	50	MY-06410-02	—	—
4.8	8.0	1.6	50	MY-06407-78	25	MY-06411-03	25	MY-95802-09	50	MY-06410-04	25	MY-96412-25
6.4	9.5	1.6	50	MY-06407-80	25	MY-06411-71	25	MY-95802-12	50	MY-06410-05	25	MY-96412-18
6.4	11.1	2.4	50	MY-06509-24	25	MY-06411-72	25	MY-95802-13	50	MY-06410-06	25	MY-96412-24
8.0	11.2	1.6	50	MY-06407-83	25	MY-06411-75	25	MY-95802-15	50	MY-06410-08	25	MY-06434-05
9.5	12.7	1.6	50	MY-06407-86	25	MY-06411-12	25	MY-95802-18	50	MY-06410-10	25	MY-06434-06
11.1	14.3	1.6	50	MY-06407-87	—	—	—	—	50	MY-06410-13	—	—
12.8	16.0	1.6	25	MY-06407-90	25	MY-06411-80	25	MY-95802-21	50	MY-06410-14	25	MY-06434-07
16.0	22.4	3.2	—	—	25	MY-06411-58	25	MY-95802-25	50	MY-06410-17	25	MY-06434-08

ID (mm)	Flow ranges (mL/min) with indicated pump system ^{††} (pages 143,145, and online)								
	78025-00, -05	78022-10, -12	78022-20, -22	78022-30, -32	07611-10 [‡]	07611-15 [‡]	78002-20 [‡]	78002-22 [‡]	78002-60 [‡]
0.8	—	—	—	0.25 to 25	—	0.22 to 22	—	0.072 to 17	—
1.6	—	1.7 to 170	1.6 to 160	0.9 to 90	—	0.63 to 63	0.44 to 100	0.026 to 62	0.41 to 99
3.2	—	6.6 to 660	5.9 to 590	3.5 to 350	2.6 to 260	2.4 to 240	1.7 to 400	1.0 to 240	1.5 to 370
4.8	—	15.0 to 1500	13.0 to 1300	7.7 to 770	5.5 to 550	5.3 to 530	3.6 to 860	2.2 to 530	3.4 to 830
6.4	37 to 3700	25.0 to 2500	23.0 to 2300	13.0 to 1300	8.9 to 890	—	6.0 to 1400	3.7 to 880	6.2 to 1500
8.0	—	37.0 to 3700	34.0 to 3400	—	11.1 to 1110	—	8.8 to 2100	—	9.5 to 2300
9.5	80 to 8000	48.0 to 4800	44.0 to 4400	—	—	—	12 to 2800	—	13 to 3000
11.1	—	54.0 to 5400	50.0 to 5000	—	—	—	—	—	15 to 3600
12.8	—	—	—	—	—	—	—	—	—
16.0	130 to 13000	—	—	—	—	—	—	—	—

^{††}Note: Lower flow rates achievable with digital drives. [‡]Flow rate with Digital Drive 78002-10; lower flow rate achievable with Programmable Drive 78002-00.

Ismatec® Gear Pumps

High-performance drives with numerous features

- Magnetically driven pump heads provide smooth, accurate, pulseless fluid delivery
- Remote control and programming options add versatility
- Adapter plate to accept either A or B Mount gear pump heads is included

Reglo-Z/ZS Analogue Drives

- Two-digit potentiometer provides a 100:1 turndown
- Four analogue signal plus relay contact permit remote control from a variety of instruments
- **Reglo-Z Analogue:** compact enough to fit in the palm of your hand
- **Reglo-ZS Analogue:** modular design has drive and controller separated by a 2-m long cable

Reglo-Z/ZS Digital Drives

- Program pump for dispensing fluids by flow rate, volume, time or number of dispensing cycles
- Drip-free dispensing—program pump to draw back fluid (only compatible with certain heads)
- RS-232 interface allows control via a PC
- **Reglo-Z Digital:** compact yet lets you operate in multiple modes
- **Reglo-ZS Digital:** modular design has drive and controller separated by a 2-m long cable

BVP-Z Standard Drive

- Economical yet versatile drive lets you adjust speed in 0.1% steps
- Press the MAX button for extra rpm and quick pump priming
- Electronic feedback system compensates for changes in load to maintain ±1% speed accuracy

MCP-Z Series Drives

- Dispense by time, volume, flow rate, batches with variable pause time, stored programs, roller backsteps, or number of dispensing cycles
- Use the RS-232 interface to automate your lab or operate independently via the keypad
- Digital display shows speed, flow rate, dispensing volume, dispensing time, and pause time
- Store and recall up to four programs
- **MCP-Z Process:** IP65-rated stainless steel housing is ideal for dusty, humid, or corrosive environments and cleanroom areas



BVP-Z Standard



Reglo-Z Digital



MCP-Z Process



Reglo-ZS Analogue



REQUIRED System Components

- 1) Drive **below**
- 2) Pump head **150**
- 3) Tubing **online**

Specifications

Duty cycle: continuous



Model	Reglo-Z Analogue	Reglo-ZS Analogue	Reglo-Z Digital	Reglo-ZS Digital	BVP-Z Standard	MCP-Z Standard	MCP-Z Process
Catalogue number	MY-78008-05	MY-78008-25	MY-78008-15	MY-78008-35	MY-78004-17	MY-78004-37	MY-78004-47
Programmable	No		Yes		No	Yes	
Speed	50 to 5000 rpm (indicated as 1 to 99%)		50 to 5000 rpm		60 to 6000 rpm (indicated as 1 to 99.9%)	60 to 6000 rpm	
Resolution	0.1% via 2-digit potentiometer		1 rpm		0.1% via 3-digit potentiometer	0.1 rpm	
Flow rate settings	—		mL/min (flow), mL (dispensing)		—	µL/min, mL/min, L/min	
Remote control capabilities	Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 10 kHz Start/stop		RS-232 Speed output: 0 to 12 kHz Start/stop, autostart		Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 10 VDC or 0 to 12 kHz Start/stop	RS-232 (1 in, 1 out), 1 analogue Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 10 VDC or 0 to 12 kHz Start/stop, autostart	
IP rating	IP30		IP30		IP30	IP30	IP65
Power	230 VAC, 50 Hz		230 VAC, 50 Hz		230 VAC, 50 Hz	230 VAC, 50 Hz	

Accessories

MY-78016-91 Foot switch for Reglo-Z/ZS Analogue drives. On/off control, 1.8-m cable
MY-78016-93 Foot switch for Reglo-Z/ZS Digital drives. On/off control, 1.8-m cable

MY-78016-91 Foot switch for BVP-Z drive. Start/stop operation, 1.8-m cable
MY-78003-07 Foot switch for MCP-Z drives. Start/stop operation, 1.8-m cable

Ismatec® Piston Pumps

No valves to clog or wear out

- Get high pressure, accurate dispensing, and great repeatability—all with one pump system
- Only one moving part—the piston
- Remotely control speed, start/stop flow, or change fluid direction
- Differential pressure up to 6.9 bar (100 psi)
- Applications include dispensing of organic solvents, acids/bases, and highly corrosive acids including HF

Reglo-CPF Analogue Drive

- Two-digit potentiometer provides a 100:1 turndown
- Four analogue signal plus relay contact permit remote control from a variety of instruments
- Compatible with RH pump heads for flow rates up to 180-mL/min



Reglo-CPF Analogue

Reglo-CPF Digital

Reglo-CPF Digital Drive

- Program pump for dispensing fluids by flow rate, volume, time, or number of dispensing cycles
- Drip-free dispensing—program pump to draw back fluid
- RS-232 interface allows control via a PC
- Compatible with RH pump heads for flow rates up to 180-mL/min

MCP-CPF Process Drive

- IP65 rated, stainless steel housing—ideal for pumping in dusty, humid, or corrosive environment and in cleanroom areas
- Dispense by time, volume, flow rate, batches with variable pause time, stored programs, roller backsteps, or number of dispensing cycles
- Use the RS-232 interface to automate your lab or operate independently via the keypad
- Digital display shows speed, flow rate, dispensing volume, dispensing time, and pause time
- Store and recall up to four programs
- Compatible with the full range of RH and Q series of pump heads for higher overall flow rates to 2300-mL/min



MCP-CPF Process



REQUIRED System Components

- 1) Drive below
- 2) Pump head 150
- 3) Tubing below

Specifications

Duty cycle: continuous



Model	Reglo-CPF Analogue	Reglo-CPF Digital	MCP-CPF Process
Catalogue number	MY-78020-47	MY-78020-52	MY-78020-30
Programmable	No	Yes	Yes
Speed	18 to 1800 rpm (indicated as 1 to 99%)	40 to 1800 rpm	10.0 to 1800 rpm
Resolution	1% via 2-step potentiometer	0.1 rpm	0.1 rpm
Flow rate settings	—	µL/min, mL/min	µL/min, mL/min, L/min
Remote control capabilities	Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 9 kHz Start/stop, rotation direction	RS-232 Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 9 kHz Start/stop, autostart, rotation direction	RS-232 (1 in, 1 out), 1 analogue Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 10 VDC or 0 to 12 kHz Start/stop, autostart, rotation direction
IP rating	IP30	IP30	IP65
Power	230 VAC, 50 Hz	230 VAC, 50 Hz	115 to 230 VAC, 50/60 Hz

Accessories

- MY-78016-91 Foot switch** for Reglo-CPF Analogue drive. On/off control, 1.8-m cable
- MY-78016-93 Foot switch** for Reglo-CPF Digital drive. On/off control, 1.8-m cable
- MY-78003-07 Foot switch** for MCP-CPF Process drive. Start/stop operation, 1.8-m cable

Tubing

Description	Length	Catalogue number
PTFE tubing coil, 4.48 mm ID x 6 mm OD	7.5 m	MY-06605-54
Lab tubing coil, 3.2 mm ID	15 m	MY-06507-05
Lab tubing coil, 6.4 mm ID	15 m	MY-06507-11
Lab tubing coil, 9.5 mm ID	15 m	MY-06507-15

Micropump® B-Mount Gear Pump Heads for Ismatec® Drives on page 148

- Compact and easy to service
- Hermetically sealed and magnetically coupled pump heads offer leak- and contamination-free pumping

Suction Shoe Pump Heads provide enhanced pumping performance at elevated differential pressures and are well-suited for higher temperature ranges. Not recommended for applications requiring suction lift.

Cavity-Style Pump Heads produce smooth, precise flow with low friction and offer excellent chemical resistance. Recommended for applications requiring a modest suction lift.



Specifications

Max viscosity: 0.2 to 1500 cp	Suction lift: Suction shoe: 30.5 cm H ₂ O at 3450 rpm Cavity shoe: 61 cm H ₂ O at 1750 rpm	Duty cycle: continuous
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mL/rev	Flow rate† (mL/min)		Max differential pressure	Max system pressure	Gear material	Seals	Housing	Temperature range	Internal bypass	Port size	Catalogue number
	Min	Max									
Suction shoe pump heads											
0.017	0.85	102‡	20.3 psi	304.6 psi	Graphite	PTFE	316 SS	-46 to 177°C	—	1/8" NPT(F)	MY-74004-23
0.042	2.1	252‡	40.6 psi	304.6 psi	Graphite	PTFE	316 SS	-46 to 177°C	—	1/8" NPT(F)	MY-74004-29
0.084	4.2	504‡	40.6 psi	304.6 psi	Graphite	PTFE	316 SS	-46 to 177°C	—	1/8" NPT(F)	MY-74004-31
0.092	4.6	552‡	75.4 psi	304.6 psi	PPS	PTFE	316 SS	-46 to 177°C	—	1/8" NPT(F)	MY-74004-33
0.084	4.2	504‡	75.4 psi	304.6 psi	PEEK	PTFE	316 SS	-46 to 177°C	—	1/8" NPT(F)	MY-74004-73
0.58	29	3190††	50.8 psi	304.6 psi	PPS	Viton®	316 SS	-29 to 177°C	Yes	1/8" NPT(F)	MY-74004-19
0.58	29	3190††	50.8 psi	304.6 psi	PEEK	Viton	316 SS	-29 to 177°C	—	1/8" NPT(F)	MY-74004-77
1.17	58.5	6435††	50.8 psi	304.6 psi	PPS	Viton	316 SS	-29 to 177°C	Yes	1/8" NPT(F)	MY-74004-21
Cavity style pump heads											
0.64	32	3520††	50.8 psi	304.6 psi	PTFE	PTFE	316 SS	-50 to 130°F	Yes	1/8" NPT(F)	MY-74004-01
0.64	32	3520††	50.8 psi	304.6 psi	PTFE	PTFE	316 SS	-50 to 130°F	—	1/8" NPT(F)	MY-74004-09
0.64	32	3520††	81.2 psi	304.6 psi	PEEK	PTFE	316 SS	-50 to 130°F	—	1/8" NPT(F)	MY-74004-75
0.91	45.5	5005††	50.8 psi	304.6 psi	PTFE	PTFE	316 SS	-50 to 130°F	—	1/8" NPT(F)	MY-74004-11
0.64	32	3520††	75.4 psi	304.6 psi	PPS	PTFE	316 SS	-50 to 130°F	Yes	1/8" NPT(F)	MY-74004-05
0.64	32	3520††	75.4 psi	319.1 psi	PPS	PTFE	316 SS	-50 to 130°F	—	1/8" NPT(F)	MY-74004-17

†Flow rates without differential pressure.

‡Based on max rpm of 6000.

††Based on max rpm of 5500.

RH-Series Piston Pump Heads for All Ismatec® Drives on page 149

- Small displacement provides excellent precision
- Fully adjustable from zero to maximum

Type	RH0		RH1		
Catalogue number	MY-07117-59*	MY-07117-55	MY-07117-69*	MY-07117-65	MY-07117-63
Stroke volume	5 to 50 µL		10 to 100 µL		
Flow range, Reglo-CPF Analogue	0.09 to 90 mL/min		0.18 to 180 mL/min		
Flow range, Reglo-CPF Digital	0.2 to 90 mL/min		0.4 to 180 mL/min		
Flow range, MCP-CPF Process	0.050 to 90 mL/min		0.1 to 180 mL/min		
Piston	Ceramic	Ceramic	Ceramic	Ceramic	Ceramic
Cylinder case	PVDF	PVDF	PVDF	PVDF	ETFE
Cylinder liner	Ceramic	Ceramic	Ceramic	Ceramic	Ceramic
Lip seals	Rulon® AR	Rulon AR	Rulon AR	Rulon AR	Rulon AR
Gland washers	PTFE	PTFE	PTFE	PTFE	PTFE
Max temperature	100°C	100°C	100°C	100°C	100°C
Max differential pressure	100 psi	100 psi	100 psi	100 psi	100 psi
Flow ports	1/4" NPT(F)†	Two compression fittings for 6 to 6.4 mm OD tubing	1/4" NPT(F)†	Two compression fittings for 6 to 6.4 mm OD tubing	Two compression fittings for 6 to 6.4 mm OD tubing

*For low flow rates, 1/4"-28 (female) adapters are recommended.

†Tubing adapters are sold separately online.



Go online for our comprehensive selection of Piston Pump Heads for Ismatec Drives.

Q-Series Piston Pump Heads for Ismatec® MCP-CPF Process Drive on page 149

Type	Q0	Q1		Q2		Q3
Catalogue number	MY-07104-50	MY-07104-56	MY-07104-54	MY-07104-66	MY-07104-64	MY-07104-53
Stroke volume	3.2 to 80 µL	12.8 to 320 µL		28.8 to 720 µL		51.2 to 1280 µL
Flow range	0.04 to 144 mL/min	0.04 to 144 mL/min		0.29 to 1300 mL/min		0.51 to 2300 mL/min
Piston	316 SS	Ceramic	Ceramic	Ceramic	Ceramic	Ceramic
Cylinder case	316 SS	316 SS	PVDF	316 SS	PVDF	PVDF
Cylinder liner	Carbon	Ceramic	Ceramic	Ceramic	Ceramic	Ceramic
Lip seals	Rulon® J	Rulon AR	Rulon AR	Rulon AR	Rulon AR	Rulon AR
Gland washers	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
Cylinder head seal	PTFE	PTFE	None	PTFE	None	None
Max temperature	100°C	177°C	100°C	177°C	100°C	100°C
Max differential pressure	100 psi	100 psi	60 psi	100 psi	60 psi	24.6 psi <1600 rpm, 7.3 psi >1600 rpm)
Flow ports	1/4" NPT(F)†	1/4" NPT(F)†	1/4" NPT(F)†	1/4" NPT(F)†	1/4" NPT(F)†	1/4" NPT(F)†

†Tubing adapters are sold separately online.



Magnetic Drive Centrifugal Pumps with Enclosed Motors

Handles thrust loads easily

- Quiet, energy efficient, and compact
- Internal cooling circuit reduces bearing temperature
- Enclosed motor for use in harsh environments

These moderate-flow polypropylene centrifugal pumps are ideal for process, recirculation, or transfer applications where continuous flow and excellent chemical resistance are needed.

High-head polypropylene pumps with a closed impeller design to significantly increase output pressure are available online.



Specifications

Wetted parts:

Front/rear casings and impeller/magnet capsule: glass fiber-reinforced polypropylene
Spindle and thrust ring: alumina ceramic 99.5%
Casing O-ring: Viton®
Bearing: PTFE

Duty cycle: continuous

Max flow		Max head		Max pressure		Max temp		Connections		Motor		Power		Dimensions (L x W x H)		Catalogue number
LPM	GPM	m	ft	bar	psi	°C	°F	Hose barb	NPT(M)	hp	rpm	VAC	Amps	cm	in.	
11.7	3.1	2.1	6.8	0.3	4.3	80	176	½	—	1/125	3400	220	0.20	10.5 x 7.6 x 9.5	4 1/8 x 3 x 3 3/4	MY-72010-15
18.9	5	3.4	11.1	0.5	7.2	80	176	½	—	1/75	3400	220	0.15	18.1 x 9.5 x 11.4	7 1/8 x 3 3/4 x 4 1/2	MY-72010-25
37.9	10	5.4	17.7	0.8	11.6	80	176	—	¾	1/16	3400	220	0.55	25.7 x 12.1 x 10.5	10 1/8 x 4 3/4 x 4 1/8	MY-72010-45
134.8	35.6	11.9	39	1.8	25.6	80	176	—	1	1/3	3400	220	1.70	32.4 x 15.9 x 17.8	12 3/4 x 6 1/4 x 7	MY-72010-85

Plastic Hand-Operated Drum Pumps

No need for electricity

A. Siphon/Lift Pail Pump

- Suitable for pumping petroleum or water
- Cut inlet tube to fit your container
- Maximum suction lift is 3.0-m (10 ft)

B. Threaded Hand Pump

- Pump detergents, water, dilute alkalis, and waxes from drums or pails—¾" NPT(M) intake threads permit semi-permanent attachment
- Optional adapters securely attach pump to a variety of containers—order online

C. Water and Chemical Siphons

- Portable and self-priming
- Water siphon (70607-00) includes 152 cm (60") outlet hose—cut to fit your application
- Chemical siphons (70607-10, -12) are suitable for acid and alkali transfer

D. HDPE Hand Pump

- Pump acids, alcohols, and alkalis from carboys, drums, or tanks
- Self-cleaning ball valve ensures free flow and long pump life
- Order optional LDPE adapter to securely mount pump on drums (order online)

E. Heavy-Duty Acid-Transfer Pumps

- Withstand temperatures up to 49°C (120°F)
- Self-priming, will not siphon



A



B



C



D



06433-20



06433-30

Key	Strokes/ L (gal.)	Wetted materials	Container adapter	Inlet tube		Outlet hose		Dimensions		Catalogue number
				L cm (in.)	OD cm (in.)	L cm (in.)	OD cm (in.)	L cm (in.)	Dia in. (cm)	
A	9 (32)	PVC barrel/hose, urethane-buna valves/seals	—	182.9 (72")	1.3 (½")	91.4 (36")	1.3 (½")	22.9 (9")	3.2 (1¼")	MY-06437-00
B	7 (26)	PVC body/hose, Hypalon® valves/seals, LDPE tube	¾" NPT(M)	45.7 (18")	1.4 (9/16")	22.9 (9")	1.4 (9/16")	30.5 (12")	3.2 (1¼")	MY-06433-60
C	9 (32)	PVC barrel, shaft, and hose	—	—	—	152.4 (60")	1.4 (9/16")	22.9 (9")	3.2 (1¼")	MY-70607-00
	7 (26)	PVC barrel/hose, LDPE tube	50.8 mm (2") IPS	45.7 (18")	1.4 (9/16")	121.9 (48")	1.4 (9/16")	30.5 (12")	3.2 (1¼")	MY-70607-10
	4 (12)	PVC barrel/hose, PVC tube		—	—	121.9 (48")	1.4 (9/16")	91.4 (36")	3.2 (1¼")	MY-70607-12
D	2 (6)	All HDPE parts	None	86.4 (34")	3.8 (1½")	35.6 (14")	3.8 (1½")	96.5 (38")	4.6 (1 13/16")	MY-06425-05
E	2 (6)	Solvent-welded PVC body and shaft, Viton valves and seals	—	—	—	91.4 (36")	3.2 (1¼")	96.5 (38")	3.8 (1½")	MY-06433-10
			50.8 mm (2") IPS							MY-06433-20
			Buttress Dell drum (M)							MY-06433-30

Cole-Parmer® Digital Gear Drive with Remote Control

Easier setup and operation

- Graphical LCD shows four operating modes: continuous run, timed dispense, copy dispense, volume dispense
- Get pulse-free flow in combination with Micropump® A-mount head
- Maximise bench space by stacking up to three drives
- Control speed, direction, and more remotely via DB25 female connector on drive

Analogue remote control options and simple programming make this drive ideal for automated process applications. Drive features set time interval between dispense cycles for hands-free dispensing. Batch count function counts down and displays batches completed. Cumulative volume function enables you to track total volume dispensed over multiple cycles.

What's included: 1.8-m (6-ft) line cord with IEC 320/CEE22 socket. These models are shipped with country specific plug/cord set; please specify ultimate destination when ordering.



Motor rpm	Motor hp	Motor type	Power VAC	Power Hz	Catalogue number
36 to 3600	1/10	PMDC	90 to 260	50/60	MY-75211-70

MY-07523-92 Foot switch for momentary start/stop; 1.8-m (6-ft) cable

MY-07523-94 Male connector, DB25. Use to create your own cable



Micropump® A-Mount Gear Pump Heads

Achieve leak-free, pulseless flow

Magnetic drive and static seals keep fluids securely inside and potential contaminants out. Chemical resistant materials handle a wide range of materials (due to wetted parts). Pump heads are compact and easy to service. Modular design offers flexibility—configure to your specific needs.

Cavity-style pump heads are designed to handle higher inlet pressures. Models without internal bypass are reversible.

Suction shoe pump heads provide higher delivery pressures and temperatures, plus increased efficiency.

Specifications

Port size: 1/8" NPT(F)

Max viscosity: 0.2 to 1500 cp

Duty cycle: continuous

Suction lift

Cavity style: 60.9 mm (24") of H₂O (at 1750 rpm)

Suction shoe: 30.4 mm (12") of H₂O (at 3450 rpm)



73011-00

73004-00

Go online to search more than 100,000 products.

Flow rates (mL/min) [†]			Max pressure psi (bar)		Wetted parts			Temperature range	Internal bypass	Max speed (rpm)	Catalogue number	Service kits Catalogue number			
mL/rev	at 50 rpm	at 5000 rpm	Diff	System	Body	Gears	Seals								
Cavity-style pump heads reversible units without internal bypass															
0.32	16	1600	80 (5.5)	300 (20.7)	316 SS	PEEK	PTFE	-43 to 77°C (-45 to 170°F)	No	10,000	MY-73011-00	—			
			80 (5.5)			PEEK			Yes				MY-73011-02	—	
			50 (3.4)			PTFE			Yes				MY-07002-17	MY-07144-38	
0.64	32	3200	50 (3.4)	300 (20.7)	316 SS	PTFE	PTFE	-43 to 54°C (-45 to 130°F)	Yes	10,000	MY-07002-23	—			
			80 (5.5)			PPS							Yes	MY-07001-80	MY-07001-89
			75 (5.2)			PPS							Yes	MY-73011-08	MY-73011-84
0.64	32	3200	80 (5.5)	300 (20.7)	316 SS	PEEK	PTFE	-43 to 77°C (-45 to 170°F)	No	10,000	MY-73011-10	—			
			80 (5.5)			PEEK			Yes				MY-73011-16	MY-73011-84	
			50 (3.4)			PTFE			Yes				MY-73011-18	—	
0.91	45.5	4550	80 (5.5)	300 (20.7)	316 SS	PEEK	PTFE	-43 to 77°C (-45 to 170°F)	No	10,000	MY-73011-18	—			
			80 (5.5)			PEEK			Yes				MY-07001-40	MY-07001-41	
			50 (3.4)			PTFE			Yes				MY-07001-40	MY-07001-41	
Suction shoe pump heads provide higher delivery pressures and superior priming performance															
0.017	0.85	85	20 (1.4)	300 (20.7)	316 SS	Graphite	PTFE	-46 to 120°C (-50 to 250°F)	No	8000	MY-07002-25	MY-07144-42			
0.042	2.10	210	40 (2.8)						No	8000	MY-07002-26	—			
0.084	4.20	420	40 (2.8)						No	8000	MY-07002-27	MY-07144-47			
0.092	4.60	460	75 (5.2)	300 (20.7)	316 SS	PEEK	PTFE	-46 to 120°C (-50 to 250°F)	No	8000	MY-73003-14	—			
				PPS	Yes	10,000							MY-07002-14	MY-07144-34	
0.261	13.05	1305	125 (8.6)	300 (20.7)	316 SS	PEEK	Viton®	-46 to 120°C (-50 to 250°F)	Yes	10,000	MY-73004-00	—			
0.58	29.00	2900	125 (8.6)	300 (20.7)	316 SS	PEEK	Viton	-46 to 120°C (-50 to 250°F)	Yes	10,000	MY-73004-02	—			
			75 (5.2)			PPS							Yes	MY-07003-02	MY-07003-12
			75 (5.2)			PEEK							Yes	MY-73004-04	—
1.17	58.50	5850	60 (4.1)	300 (20.7)	316 SS	PPS	Viton	-46 to 120°C (-50 to 250°F)	Yes	10,000	MY-07003-04	MY-07003-14			

Note: Viscosity for all models is dependent on the parameters (flow rate, pressures, etc.) of the specific application.

[†]Flow rates based on water at room temperature and no back pressure.

Cole-Parmer® Console Gear Pump Drive

Optimise performance of long-term applications

- 100:1 speed-control range controls flow over a wide range for applications from filtration to chemical injection
- Easy operation with single-turn speed control
- Separate on-off switch maintains speed (flow) setting when drive is powered down
- Maximum continuous-duty flow rates possible with Micropump® A-mount pump heads (order on page 152)

What's included: 1.8-m (6-ft) modular line power cord with IEC 320/CEE 22 connector (specify country to obtain correct plug).



Micropump pump head is not included; order on page 152



Specifications

Duty cycle: continuous **Max system temperature:** 40°C (104°F)
Remote control: (input/output) none

Motor			Power		Catalogue number
rpm	hp	Type	VAC	Hz	
50 to 5000	0.07	PMDC	230	50/60	MY-75211-17

Cole-Parmer® Digital Gear Pump Benchtop Systems

Ready to use—drive and pump head included!

- Operate in continuous run, volume dispense, copy dispense, and timed dispense modes with precise, pulseless batching and dispensing
- IP33-rated enclosure protects the internal components from dust and splashes



Specifications

Remote control: (input) on/off by contact closure (0 to 10 VDC, 0 to 20 mA, 4 to 20 mA), and remote output
Speed: 36 to 3600 rpm
Power: 90 to 260 VAC

mL/rev	Flow rates (mL/min) [†]		Max pressure		Wetted parts			Catalogue number
	at 50 rpm	at 3600 rpm	Diff (psi)	System (psi)	Body	Gears	Seals	
0.017	0.85	85	20	300	316 SS	Graphite	PTFE	MY-74014-72
0.092	4.60	331.2	75	300	316 SS	PPS	PTFE	MY-74014-02
0.092	4.60	331.2	75	300	316 SS	PPS	PPS	MY-74014-62
0.261	13.05	939.6	125	300	316 SS	PEEK	Viton®	MY-74014-52
0.316	15.8	1137.6	75	300	316 SS	PPS	PTFE	MY-74014-12
0.64	32.0	2304	75	300	316 SS	PPS	PTFE	MY-74014-22
0.91	45.5	3276	75	300	316 SS	PPS	PTFE	MY-74014-32
1.17	58.5	4212	60	300	316 SS	PPS	Viton	MY-74014-42

[†]Flow rates in mL/min are based on water at room temperature and no back pressure.

- MY-07523-92 Foot switch, momentary start/stop, 1.8-m cable
- MY-06385-10 Male pipe adapter (straight); PP, ¼" OD x 3/8" NPT(M). Pk of 10
- MY-40610-36 Male pipe adapter; natural PP, 1/8" NPT(M) x 1/4" ID. Pk of 10

Ismatec® Compact Programmable Digital Gear Pump Drive

Dispense by flow rate, volume, time, or number of cycles

- No more dripping—program pump to draw back fluid
- Control via a PC with RS-232 interface
- Get more accuracy with calibration of flow rate and dispensing volume

Multiple operating modes allow for continuous pumping by drive speed, flow rate, volume, time, volume within a preset time or interval dispensing by volume with a pause or time with a pause. The number of dispensing cycles may also be programmed into the pump. Pump is capable of reversible rotation (only with cavity style pump heads that indicate reversible operation). Both dispensing and pause time settings are from 0.1 seconds up to 999 hours.



Specifications

Duty cycle: continuous from 50 to 5000 rpm
Remote control (input): Speed control: RS-232 (DB9F) for pump control via PC. 9600 baud, 8 bit, 1 stopbit, no parity
 On/off control: TTL contact (for footswitch) 0 to 10 kHz for speed monitoring
Remote control (output): RS-232 (DB9M) for cascading of up to 8 pumps
Max temperature: 40°C (104°F)
IP rating: IP30



Motor rpm	Power	Catalogue number
50 to 5000	90 to 264 VAC, 47 to 63 Hz	MY-78008-15

MY-70738-94 Replacement adapter plate; for mounting Micropump A-mount pump heads (except models 07003-02, 07003-04, 73004-00, 73004-02, 73004-04)



Programmable digital drive 78008-15 with Micropump pump head 07002-14 (head not included; order on page 152)

What's included: an adapter plate for mounting Micropump® A pump heads (except 07003-02, 07003-04, 73004-00, 73004-02, and 73004-04), a driving magnet and a 1.8-m (6-ft) power cord with plug.