

MASTERFLEX®



Masterflex® Pump Systems



Create Efficiency and Productivity
Durable • Customizable • Accurate

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Create Efficiency and Productivity with Masterflex® Bundled Pump Systems including Pump Heads

Durable

- Trusted for over 45 years
- Broad chemical compatibility

Customizable

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

Accurate

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

Masterflex® Compact Pump System

Offer enhanced and versatile performance in an ultra-compact, low-maintenance design.

- Space efficient—low profile, stackable design
- Microflex® pump head accepts continuous lengths of tubing for clean flow paths
- Remote capability—actuate unit with a foot switch or contact closure

These quality peristaltic pumps provide an ideal, cost-effective alternative to syringe pumps. A robust, fixed occlusion design allows for reliable, accurate pumping and dispensing with a wide variety of tubing materials and varying differential pressure applications.



Description	Flow Rate	Accommodates Tubing Sizes	Channels	rpm	Rollers	Power (VAC, Hz)	Cat. No.
Masterflex Ismatec Compact Drive with Single-Channel Microflex Pump Head	0.002 to 1.65 mL/min.	Ismatec Coils, 0.19 mm to 2.79 mm tubing ID	1	1.7 to 10	4	90-260, 50/60	13-200-000
Masterflex Ismatec Compact Drive with Single-Channel Microflex Pump Head	0.017 to 11 mL/min.	Ismatec Coils, 0.19 mm to 2.79 mm tubing ID	1	13 to 80	4	90-260, 50/60	13-200-001
Masterflex Ismatec Compact Drive with Single-Channel Microflex Pump Head	0.07 to 50 mL/min.	Ismatec Coils, 0.19 mm to 2.79 mm tubing ID	1	50 to 300	4	90-260, 50/60	13-200-002

Masterflex® L/S® Compact Pump System

Easy-to-use analog speed controller and reversing switch get you pumping quicker.

- No stress loading of tubing—easy-loading Miniflex® pump head with automatic tubing retention keeps tubing in place
- Easier on the budget—accepts continuous tubing, no need to buy special tubing sets
- Dual-channel model delivers synchronous flow from two separate channels; single-channel model delivers highest flow rate
- Stack for smaller overall footprint

These simple-to-operate pumps offer a wide occlusion angle, which prevents fluid backflow up to the rated pressure of the tubing. Prime or flush tubing quickly by depressing the MAX button. Self-lubricating thermoplastic polyester rollers are low friction and long wearing for smooth operation and long life. Remote start/stop via contact closure on back of pump.



Description	Flow Rate	Accommodates Tubing Sizes	Channels	rpm	Rollers	Power (VAC, Hz)	Cat. No.
Masterflex L/S Compact Variable-Speed Drive with Single-Channel Miniflex Pump Head	1.6 to 239 mL/min.	Masterflex L/S 13, 14, 16, 25	1	35 to 200	3	90-260, 50/60	13-200-003
Masterflex L/S Compact Variable-Speed Drive with Dual-Channel Miniflex Pump Head	1.6 to 124 mL/min.	Masterflex L/S 13, 14, 16	2	35 to 200	3	90-260, 50/60	13-200-004

Masterflex® L/S® Variable-Speed Analog Pump System with Handheld Controller

Compact, cost-effective for general fluid transfer applications.

- 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
- Easy-Load® pump head features a 4-roller design for reduced pulsation and smoother flow

Pump system comes with a Masterflex handheld controller designed to control basic pump drive operations including start/stop and direction. Route tubing through the handle for convenience in filling and dispensing applications.



Description	Flow Rate	Includes	Accommodates Tubing Sizes	Channels	rpm	Rollers	Enclosure	Power (VAC, Hz)	Cat. No.
Masterflex L/S Analog Pump System with Handheld Controller	56 to 1700 mL/min.	L/S Easy-Load, Thin Wall (Pump Head)	Masterflex L/S 13, 14, 16, 25, 17, 18	1	20 to 600	4	IP22	115, 50/60	13-200-005
Masterflex L/S Analog Pump System with Handheld Controller	56 to 1700 mL/min.	L/S Easy-Load, Thin Wall (Pump Head)	Masterflex L/S 13, 14, 16, 25, 17, 18	1	20 to 600	4	IP22	230, 50/60	13-200-006

Masterflex® L/S® Precision Pump System

Easy-to-use drives offer precise, repeatable speed control and digital display of rpm.

- Four digit LED display shows motor rpm—confirm speed setting at a glance
- Integrated open-head sensor (OHS) stops drive motor when pump head is opened; available on noted models
- Reversible motor—purge tubing before or after pumping; pump fluid in either direction
- ABS plastic housings resist splashes; stainless-steel NEMA 4X housings stand up to process and washdown applications
- Electrical: 90–260 VAC, 50/60 Hz, 1 phase

These accurate console drives have powerful motors, speed display, and $\pm 0.25\%$ speed control for precise flow regulation—ideal for metering applications.

Operation of the integrated open-head sensor (OHS) requires use of sensor-equipped L/S Easy-Load® II pump heads 76047-522 or 76047-524.



13-200-008



11-747-346

Description	Flow Rate	Includes	Accommodates Tubing Sizes	Channels	rpm	Rollers	Speed Turndown Ratio	Enclosure	Cat. No.
Masterflex L/S Console ABS Plastic Precision Pump System	17 to 1700 mL/min.	L/S Easy-Load II, Thin Wall (Pump Head)	Masterflex L/S 13, 14, 16, 25, 17, 18	1 (Max. 2)	6 to 600	4	100:1	IP33	13-200-007
Masterflex L/S Console ABS Plastic Precision Pump System	29 to 2900 mL/min.	L/S Easy-Load II, Thick Wall (Pump Head)	Masterflex L/S 15, 24, 35, 36	1 (Max. 2)	6 to 600	4	100:1	IP33	13-200-008
Masterflex L/S Stainless-steel Precision Pump System with OHS	0.36 to 2300 mL/min.	L/S Easy-Load II, Thin Wall (Pump Head), OHS	Masterflex L/S 13, 14, 16, 25, 17, 18	1 (Max. 2)	6 to 600	4	100:1	IP66	11-747-346
Masterflex L/S Stainless-steel Precision Pump System with OHS	10 to 2900 mL/min.	L/S Easy-Load II, Thick Wall (Pump Head), OHS	Masterflex L/S 15, 24, 35, 36	1 (Max. 2)	6 to 600	4	100:1	IP66	11-747-347
Masterflex L/S Stainless-steel Precision Pump System with OHS	0.06 to 380 mL/min.	L/S Easy-Load II, Thin Wall (Pump Head), OHS	Masterflex L/S 13, 14, 16, 25, 17, 18	1 (Max. 2)	2 to 100	4	100:1	IP66	11-747-348
Masterflex L/S Stainless-steel Precision Pump System with OHS	1.7 to 480 mL/min.	L/S Easy-Load II, Thick Wall (Pump Head), OHS	Masterflex L/S 15, 24, 35, 36	1 (Max. 2)	2 to 100	4	100:1	IP66	11-747-349

Masterflex® L/S® Digital Dispensing Systems with Easy-Load® II Pump Heads

Precision digital drive offers a maintenance-free high-accuracy motor and a graphical interface – makes setup and operation easier than ever.

- Available in an IP33-rated ABS plastic enclosure or IP66 (NEMA 4X)-rated stainless steel enclosure for washdown applications
- Anti-drip function ensures dispensing accuracy
- Integrated open-head sensor (OHS) stops drive motor when pump head is opened; available on all models
- Electrical: 90–260 VAC, 50/60 Hz, 1 phase

Graphical LCD shows four operating modes continuous run, timed dispense, copy dispense, volume dispense. View pump performance continually.

Dispense by Volume in mL (0.001 to 99999 mL), L, or gal.; Copy—1 to 9,999 dispense cycles; or Time—time interval of on/off cycles (1 sec to 99 hr, 59 min, 59 sec per cycle).

These precision drives offer analog remote control options and simple programming—ideal for automated process applications. Drives feature a programmable dispense interval that lets you set the delay between dispense cycles for convenient, automated dispensing. Programmed calibration ensures dispense and display accuracy—drive stores one calibration value per tubing size.

Program the drive via the simple membrane keypad; keypad lock/unlock feature protects settings. Motor is reversible so you can purge tubing before or after pumping and pump fluid in either direction.



11-747-340



11-747-344

Description	Flow Rate	Includes	Accommodates Tubing Sizes	Channels	rpm	Rollers	Speed Turndown Ratio	Enclosure	Cat. No.
Masterflex L/S Console ABS Plastic Digital Dispensing Pump System with OHS	0.006 to 2300 mL/min.	L/S Easy Load II, Thin Wall (Pump Head), OHS	Masterflex L/S 13, 14, 16, 25, 17, 18	1 (Max. 2)	0.1 to 600	4	6000:1	IP33	11-747-340
Masterflex L/S Console ABS Plastic Digital Dispensing Pump System with OHS	0.17 to 2900 mL/min.	L/S Easy Load II, Thick Wall (Pump Head), OHS	Masterflex L/S 15, 24, 35, 36	1 (Max. 2)	0.1 to 600	4	6000:1	IP33	11-747-341
Masterflex L/S Console ABS Plastic Digital Dispensing Pump System with OHS	0.001 to 380 mL/min.	L/S Easy Load II, Thin Wall (Pump Head), OHS	Masterflex L/S 13, 14, 16, 25, 17, 18	1 (Max. 4)	0.02 to 100	4	5000:1	IP33	11-747-342
Masterflex L/S Console ABS Plastic Digital Dispensing Pump System with OHS	0.033 to 480 mL/min.	L/S Easy Load II, Thick Wall (Pump Head), OHS	Masterflex L/S 15, 24, 35, 36	1 (Max. 4)	0.02 to 100	4	5000:1	IP33	11-747-343
Masterflex L/S Stainless-steel Digital Dispensing Pump System with OHS	0.006 to 2300 mL/min.	L/S Easy Load II, Thin Wall (Pump Head), OHS	Masterflex L/S 13, 14, 16, 25, 17, 18	1 (Max. 2)	0.1 to 600	4	6000:1	IP66	11-747-344
Masterflex L/S Stainless-steel Digital Dispensing Pump System with OHS	0.17 to 2900 mL/min.	L/S Easy Load II, Thick Wall (Pump Head), OHS	Masterflex L/S 15, 24, 35, 36	1 (Max. 2)	0.1 to 600	4	6000:1	IP66	11-747-345

Ordering Tubing Separately On Reverse Side

Masterflex® Ismatec® IPC Low-Flow Multichannel Peristaltic Pump System

Planetary drives for less pulsation and longer tubing life.

- Smooth rotation and accurate liquid flow provided by eight stainless-steel rotors
- High accuracy of better than $\pm 1\%$
- Easy repeatability with four-digit LED
- Click'n'go™ cartridges feature automatic occlusion for simplified use, fewer tubing changes, and reproducible results
- Control via keypad, computer, or remote control
- Choose from 4, 8, 12, 16 and 24 channel configurations for application flexibility



Tubing is not included; order separately on the next page.

These multichannel programmable pumps feature planetary gears that drive eight stainless steel rollers in unison for smooth rotation and accurate liquid flow. The four-digit LED display shows flow rate or rpm when pump is running. Use the MAX button to instantly increase speed for priming or flushing without disturbing your programmed settings. Five modes for pumping or dispensing including flow rate, time, batches, drip-free, and volume.

Description	Flow Rate (per Channel)	Accommodates Tubing Sizes	Channels	rpm	Rollers	115 VAC Cat. No.	230 VAC Cat. No.
Masterflex Ismatec IPC Digital Low-Flow Pump System, 4 channels	0.002 to 44 mL/min.	Ismatec 2-Stop, 0.19 mm to 2.79 mm	4	0.4 to 45	8	13-200-010	13-200-016
Masterflex Ismatec IPC Digital Low-Flow Pump System, 8 channels	0.002 to 44 mL/min.	Ismatec 2-Stop, 0.19 mm to 2.79 mm	8	0.4 to 45	8	13-200-011	13-200-017
Masterflex Ismatec IPC Digital Low-Flow Pump System, 12 channels	0.002 to 44 mL/min.	Ismatec 2-Stop, 0.19 mm to 2.79 mm	12	0.4 to 45	8	13-200-012	13-200-018
Masterflex Ismatec IPC Digital Low-Flow Pump System, 16 channels	0.002 to 44 mL/min.	Ismatec 2-Stop, 0.19 mm to 2.79 mm	16	0.4 to 45	8	13-200-013	13-200-019
Masterflex Ismatec IPC Digital Low-Flow Pump System, 24 channels	0.002 to 44 mL/min.	Ismatec 2-Stop, 0.19 mm to 2.79 mm	24	0.4 to 45	8	13-200-014	13-200-020

13-200-015 Replacement Click'n'go™ cartridge, POM-C

Masterflex® I/P® Stainless-steel IP66 Digital Dispensing Pump System with Easy-Load® Pump Head

Graphical LCD shows four operating modes continuous run, timed dispense, copy dispense, volume dispense.

- View pump performance continually
- Rugged housing is NEMA 4X (IP66) rated for washdown
- Designed with open-head sensor (OHS) for enhanced user safety
- Electrical: 90–260 VAC, 50/60 Hz

Dispense by Volume in mL (0.001 to 99999 mL), L, or gal; Copy—1 to 9,999 dispense cycles; or Time—time interval of on/off cycles (1 sec to 99 hr, 59 min, 59 sec per cycle).

These precision drives offer analog remote control options and simple programming—ideal for automated process applications. Drives feature a programmable dispense interval that lets you set the delay between dispense cycles for convenient, automated dispensing. Programmed calibration ensures dispense and display accuracy—drive stores one calibration value per tubing size.

Program the drive via the simple membrane keypad; keypad lock/unlock feature protects settings. Motor is reversible so you can purge tubing before or after pumping and pump fluid in either direction.



Description	Flow Rate	Includes	Accommodates Tubing Sizes	Channels	rpm	Rollers	Speed Turndown Ratio	Enclosure	Cat. No.
Masterflex I/P Stainless-steel IP66 Digital Dispensing Pump System with OHS	1 to 13,000 mL/min.	I/P Easy-Load Pump Head, OHS	Masterflex I/P 26, 73, 82	1 (Max. 2)	0.1 to 650	3	6500:1	IP66	11-747-350

Pump Tubing

Platinum-Cured Silicone Tubing

- Applications: pharmaceutical, biotech, peristaltic pumping, and food industries
- Smooth surfaces; lower protein binding levels
- Temperature range is -40 to 212°F (-40 to 100°C)

Puri-Flex™ Tubing

- Applications: cell and tissue work, biotech, and pharmaceutical
- Heat sealable, weldable, and economical
- Long pump life when compared to silicone or many other TPE tubings

PharMed® BPT Tubing

- Applications: cell and tissue culture work and pharmaceutical
- Resists acids, alkalies, oxidizing agents, and animal and vegetable oils
- Good for light-sensitive samples

Tygon® E-Food (B-44-4X) Tubing

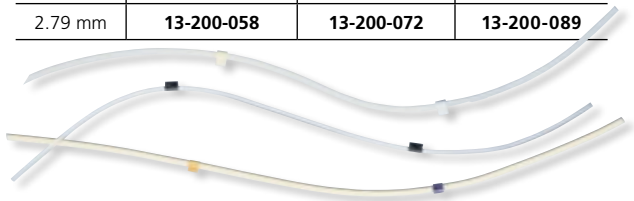
- Smooth inner surface unaffected by commercial sanitizers
- Nontoxic; will not affect taste or odor
- Complies with FDA, NSF, 3A, and EU food regulations

Norprene® Food (A 60 F) Tubing

- Ideal for high-temperature food applications
- Resists heat, ozone, acids, and alkalis
- Complies with FDA, NSF, and 3A food regulations

Ismatec® Pump Tubing Lengths, 2-Stop

Tubing ID	Platinum-Cured Silicone, 6/pk	PharMed BPT, 12/pk	Tygon E-Food, 12/pk
0.19 mm	—	—	—
0.25 mm	—	13-200-065	13-200-084
0.38 mm	—	13-200-066	—
0.44 mm	—	—	—
0.51 mm	—	—	—
0.89 mm	13-200-053	13-200-067	13-200-085
1.02 mm	13-200-054	13-200-068	—
1.14 mm	13-200-055	13-200-069	13-200-086
1.42 mm	13-200-056	13-200-070	13-200-087
2.06 mm	13-200-057	13-200-071	13-200-088
2.79 mm	13-200-058	13-200-072	13-200-089

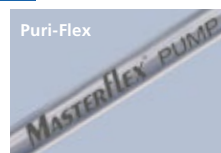


Masterflex® Pump Tubing

Tubing ID	Platinum-Cured Silicone, 25 ft (7.6 m)	Puri-Flex, 25 ft (7.6m)	PharMed BPT, 25 ft (7.6 m)	Tygon E-Food, 25 ft (7.6 m)	Norprene Food, 50 ft (15.2 m)
L/S 13 mm	13-310-114	13-200-109	13-200-302	13-200-034	13-200-027
L/S 14 mm	13-200-285	13-200-110	13-310-160	13-200-035	13-200-028
L/S 16 mm	13-310-282	13-200-111	13-310-161	13-200-037	—
L/S 25 mm	13-200-286	—	13-310-162	13-200-041	13-200-031
L/S 17 mm	13-310-117	13-200-112	13-310-163	13-200-038	—
L/S 18 mm	13-310-113	13-200-113	13-310-164	13-200-039	13-200-029
L/S 15 mm	13-310-110	13-200-114	13-310-165	13-200-036	—
L/S 24 mm	13-310-78	—	13-310-166	13-200-040	13-200-030
L/S 35 mm	13-200-287	13-200-115	13-200-303	13-200-042	13-200-032
L/S 36 mm	13-200-288	13-200-116	13-200-304	13-200-043	13-200-033
I/P 26 mm	13-310-296	13-200-117	13-200-305	—	—
I/P 73 mm	13-310-118	13-200-118	13-310-148	—	—
I/P 82 mm	13-310-158	13-200-119	13-310-155	—	—

Ismatec® Pump Tubing Coils

Tubing ID	Platinum-Cured Silicone, 50 ft (15.2 m)	Puri-Flex, 50 ft (15.2m)	PharMed BPT, 50 ft (15.2 m)	Tygon E-Food, 100 ft (30.4 m)
0.19 mm	—	13-200-090	—	13-200-044
0.25 mm	—	13-200-091	13-200-073	13-200-045
0.38 mm	—	13-200-092	13-200-074	—
0.44 mm	—	13-200-093	—	—
0.51 mm	—	13-200-094	—	—
0.64 mm	—	13-200-095	—	—
0.76 mm	—	13-200-096	—	—
0.89 mm	13-200-059	13-200-097	13-200-075	13-200-046
1.02 mm	13-200-060	13-200-098	13-200-076	—
1.14 mm	13-200-061	13-200-099	13-200-077	13-200-047
1.30 mm	—	13-200-100	—	—
1.42 mm	13-200-062	13-200-101	13-200-078	13-200-048
1.52 mm	—	13-200-102	—	—
1.65 mm	—	13-200-103	—	—
1.85 mm	—	13-200-104	—	—
2.06 mm	13-200-063	13-200-105	13-200-079	13-200-049
2.29 mm	—	13-200-106	—	—
2.54 mm	—	13-200-107	—	—
2.79 mm	13-200-064	13-200-108	13-200-080	13-200-050



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