

MASTERflex®

B/T®

B/T® Process Pump Systems

Efficient fluid transfer in high-volume applications

Masterflex B/T process pump systems offer rugged design and improved performance. They handle the toughest applications, from pumping slurries, abrasives, food additives, and media, to corrosive fluids and polymers. Designed to be used with the unique PerfectPosition® tubing, these complete systems ensure reliable, continuous-duty pumping with unparalleled ease of use.



1-800-637-3739

Masterflex.com

Rugged Design

- Cast-aluminum housing with epoxy-powder coating eliminates corrosion
- Robust gear reducer provides continuous-duty operation
- Simple latching mechanism allows easy opening and closing without the use of tools

Easy Tube Loading

- Enhanced tubing retention secures tubing firmly in place during loading process
- Revolutionary PerfectPosition® tubing features graduated markings for foolproof tubing alignment
- No need for extra fittings (potential sources of contamination)—use a single tube length from source to delivery point

Improved Performance

- Rotor and occlusion bed design prevents “tubing roll” during operation, extending tubing life
- Housing design eliminates any chance of over- or under-squeezing the tubing in the pump head
- PerfectPosition® tubing retention marks make it easy to determine exactly where to load the tubing to achieve optimal performance with minimal tubing wear

Enhanced Safety

- Integrated pump interlock shuts unit down when the head is opened
- Rugged housing with window protects user from moving internal components—yet shows operator pump is working



1-800-637-3739 | 1-847-381-7050
Masterflex.com

NO MORE GUESSING where to place your pump tubing in the pump head!

- PerfectPosition retention marks make it easy to load tubing to achieve optimal performance
- Tubing sizes ensure fully rated performance under higher pressure applications



Performance Data

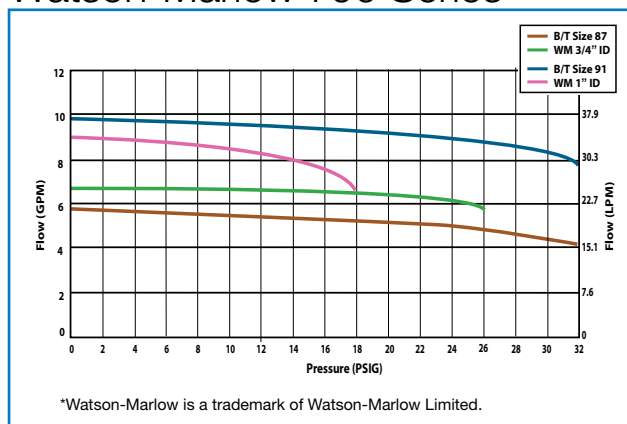
Pump tubing size	PerfectPosition pump tubing	
	B/T 87	B/T 91
Inside diameter (nominal)	0.5" (12.7 mm)	0.75" (19.0 mm)
Hose barb size	½" (12.7 mm)	¾" (19.0 mm)
Flow range (approximate)* with 12 to 321 rpm drive	0.67 to 18.9 LPM (0.17 to 5.0 GPM)	1.4 to 42 LPM (0.4 to 11.1 GPM)
Maximum pressure†	35 psi (2.4 bar)	30 psi (2.1 bar)
Maximum vacuum†	26" Hg (660 mm Hg)	
Suction lift†	29 ft H ₂ O (8.8 m H ₂ O)	

*Determined under the following conditions: 0 psi at inlet, 0.5 psi at outlet; water temperature at 72°F (22°C).

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



Masterflex® B/T® vs Watson-Marlow 700 Series*



Pump Tubing

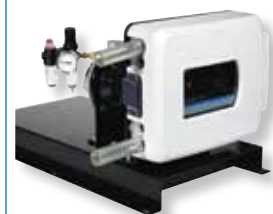
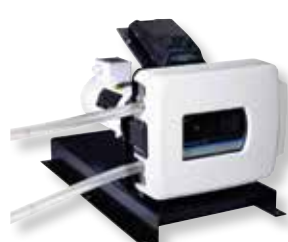
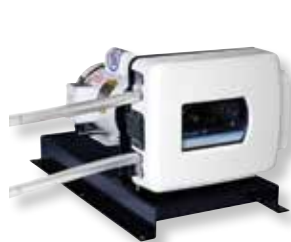
Tubing formulation	Description	Tubing size	
		B/T 87	B/T 91
Silicone (platinum-cured)	• Smooth surface; low protein binding levels • Fungus-resistant; phthalate- and latex-free • Accommodates a wide temperature range	MK-96510-87	MK-96510-91
Silicone (peroxide-cured)	• Smooth surface for minimal particle entrapment • Very low extractables, with documented biocompatibility for sensitive applications	MK-96400-87	MK-96400-91
BioPharm Plus Silicone (platinum-cured)	• Very low extractable; biocompatible for sensitive applications • Longest tubing life of any silicone pump tubing • Lower spallation than regular silicone	MK-96445-87	MK-96445-91
Puri-Flex™	• Heat sealable, weldable, and economical • Long pump life when compared to silicone or many other TPE tubings	MK-96419-87	MK-96419-91
C-Flex®	• Heat sealable, weldable, economical • Longest life of any C-Flex formulation • Better resistance to pH fluctuations	MK-06424-87	MK-06424-91
PharMed® BPT	• Over 10,000 hours of tubing life • Resists ozone and UV radiation • Ideal for tissue and cell culture work	MK-06507-87	MK-06507-91
PharmaPure®	• Nontoxic and nonhemolytic • Great for tissue and cell work • Low extractables and gas permeability	MK-06437-87	MK-06437-91
Chem-Durance® Bio	• Excellent chemical resistance • Plasticizer-free inner liner • Excellent biocompatibility	MK-06443-87	MK-06443-91
Tygon® E-LFL	• Longest life of all Tygon formulations • USP Class VI, EU Pharmacopoeia 3.2.9, FDA 21	MK-06440-87	MK-06440-91
Tygon® E-Food (B-44-4X)	• Complies with FDA, NSF, 3A, and EU food regulations • Smooth inner surface unaffected by common commercial sanitizers	MK-06418-87	MK-06418-91
Norprene® Food (A-60-F)	• Ideal for high-temperature food applications • Resists heat, ozone, acids, and alkalis • Complies with FDA and NSF food regulations	MK-06399-87	MK-06399-91

B/T® Pump Heads

Motor mount	NEMA Type 56C	IEC 72/ISO 71 with B5 flange
Mounting type	Direct-coupled	
Motor size	Depends on specifications of type of motor selected (requires minimum 0.5 hp; 1800 rpm maximum)	
rpm		
IP rating		
Power		
Catalog number	MK-77111-50	MK-77111-55



B/T® Pump Systems



ISO9001:2008
CERTIFIED SUPPLIER



77111-37,
-67, -77, -80

Zone 2
77111-80

77111-30,
-37

Except
77111-30,
-37

Description	Analog		Digital		Specialty	
	Fixed-speed		Variable-speed		Modular dispensing	
Flow range	18.9 or 42 LPM	16 or 35 LPM	0.71 to 42 LPM		0.71 to 42 LPM	
Motor size	1 hp (0.75 kW)		½ hp (0.37 kW)		¾ hp (0.56 kW)	
rpm	321	271	12 to 321		12 to 321	
IP rating	IP55		IP56		IP56	
Power (VAC, Hz)	115 (60)	230 (50)	115 (50/60)	230 (50/60)	90 to 130 (50/60)	190 to 260 (50/60)
Amps	12.6	6.3	5	2.5	10.5	5.7
Catalog number	MK-77111-30	MK-77111-37	MK-77111-60	MK-77111-67	MK-77111-70	MK-77111-77
						MK-77111-80

1-800-637-3739 | 1-847-381-7050

Masterflex.com