



# MASTERFLEX<sup>®</sup>

## B/T<sup>®</sup> 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<sup>®</sup> tubing, these complete systems ensure reliable, continuous-duty pumping with unparalleled ease of use.



# MASTERFLEX® B/T® Process Pump Systems

## 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



# MASTERFLEX® PerfectPosition® Tubing

## 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

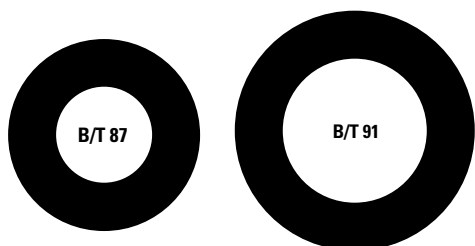


## PERFORMANCE DATA

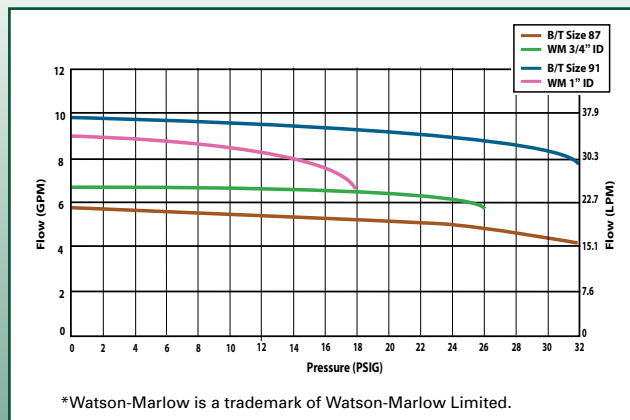
Pump tubing size	PerfectPosition pump tubing	
	B/T 87	B/T 91
Inside diameter (nominal)	0.5" (12.7 mm)	0.75" (19.0 mm)
Hose barb size	½" (12.7 mm)	¾" (19.0 mm)
Flow range (approximate)* with 12 to 321 rpm drive	0.67 to 18.9 LPM (0.17 to 5.0 GPM)	1.4 to 42 LPM (0.4 to 11.1 GPM)
Maximum pressure†	35 psi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



\*Watson-Marlow is a trademark of Watson-Marlow Limited.

## PUMP TUBING

Tubing formulation	Description	Tubing size	
		B/T 87	B/T 91
<b>Silicone</b> (platinum-cured)	<ul style="list-style-type: none"> <li>Smooth surface; low protein binding levels</li> <li>Fungus-resistant; phthalate- and latex-free</li> <li>Accommodates a wide temperature range</li> </ul>	<a href="#">MK-96510-87</a>	<a href="#">MK-96510-91</a>
<b>Silicone</b> (peroxide-cured)	<ul style="list-style-type: none"> <li>Smooth surface for minimal particle entrapment</li> <li>Very low extractables, with documented biocompatibility for sensitive applications</li> </ul>	<a href="#">MK-96400-87</a>	<a href="#">MK-96400-91</a>
<b>BioPharm Plus Silicone</b> (platinum-cured)	<ul style="list-style-type: none"> <li>Very low extractable; biocompatible for sensitive applications</li> <li>Longest tubing life of any silicone pump tubing</li> <li>Lower spallation than regular silicone</li> </ul>	<a href="#">MK-96445-87</a>	<a href="#">MK-96445-91</a>
<b>Puri-Flex™</b>	<ul style="list-style-type: none"> <li>Heat sealable, weldable, and economical</li> <li>Long pump life when compared to silicone or many other TPE tubings</li> </ul>	<a href="#">MK-96419-87</a>	<a href="#">MK-96419-91</a>
<b>C-Flex®</b>	<ul style="list-style-type: none"> <li>Heat sealable, weldable, economical</li> <li>Longest life of any C-Flex formulation</li> <li>Better resistance to pH fluctuations</li> </ul>	<a href="#">MK-06424-87</a>	<a href="#">MK-06424-91</a>
<b>PharMed® BPT</b>	<ul style="list-style-type: none"> <li>Over 10,000 hours of tubing life</li> <li>Resists ozone and UV radiation</li> <li>Ideal for tissue and cell culture work</li> </ul>	<a href="#">MK-06507-87</a>	<a href="#">MK-06507-91</a>
<b>PharmaPure®</b>	<ul style="list-style-type: none"> <li>Nontoxic and nonhemolytic</li> <li>Great for tissue and cell work</li> <li>Low extractables and gas permeability</li> </ul>	<a href="#">MK-06437-87</a>	<a href="#">MK-06437-91</a>
<b>Chem-Durance® Bio</b>	<ul style="list-style-type: none"> <li>Excellent chemical resistance</li> <li>Plasticizer-free inner liner</li> <li>Excellent biocompatibility</li> </ul>	<a href="#">MK-06443-87</a>	<a href="#">MK-06443-91</a>
<b>Tygon® E-LFL</b>	<ul style="list-style-type: none"> <li>Longest life of all Tygon formulations</li> <li>USP Class VI, EU Pharmacopoeia 3.2.9, FDA 21</li> </ul>	<a href="#">MK-06440-87</a>	<a href="#">MK-06440-91</a>
<b>Tygon® E-Food</b> (B-44-4X)	<ul style="list-style-type: none"> <li>Complies with FDA, NSF, 3A, and EU food regulations</li> <li>Smooth inner surface unaffected by common commercial sanitizers</li> </ul>	<a href="#">MK-06418-87</a>	<a href="#">MK-06418-91</a>
<b>Norprene® Food</b> (A-60-F)	<ul style="list-style-type: none"> <li>Ideal for high-temperature food applications</li> <li>Resists heat, ozone, acids, and alkalis</li> <li>Complies with FDA and NSF food regulations</li> </ul>	<a href="#">MK-06399-87</a>	<a href="#">MK-06399-91</a>

**In the U.S.**

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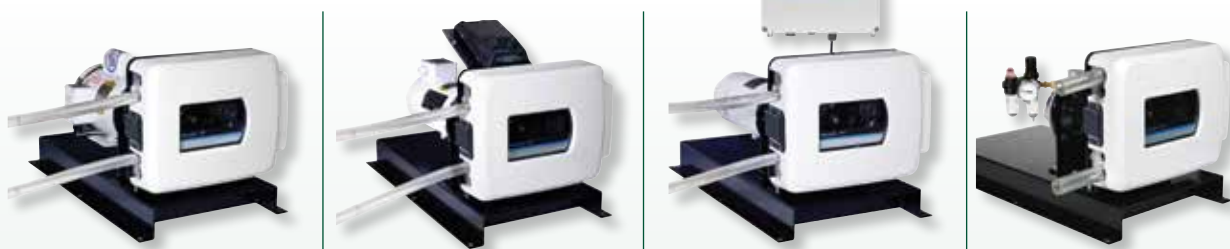
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International Sales Department  
or contact your local dealer.



**FREE TECHNICAL  
APPLICATIONS ASSISTANCE!**

**B/T® PUMP SYSTEMS**



	Analog				Digital		Specialty
Description	Fixed-speed		Variable-speed		Modular dispensing		Air-powered
Flow range	18.9 or 42 LPM	16 or 35 LPM	0.71 to 42 LPM		0.71 to 42 LPM		2.1 to 42 LPM
Motor size	1 hp (0.75 kW)		½ hp (0.37 kW)		¾ hp (0.56 kW)		¾ hp (0.56 kW)
rpm	321	271	12 to 321		12 to 321		35 to 321
IP rating	IP55		IP56		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)	Requires 24 cfm (0.68 m³) 100 psi (6.9 bar) minimum
Amps	12.6	6.3	5	2.5	10.5	5.7	—
Catalog number	<a href="#">MK-77111-30</a>	<a href="#">MK-77111-37</a>	<a href="#">MK-77111-60</a>	<a href="#">MK-77111-67</a>	<a href="#">MK-77111-70</a>	<a href="#">MK-77111-77</a>	<a href="#">MK-77111-80</a>

**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	<a href="#">MK-77111-50</a>	<a href="#">MK-77111-55</a>

