

# 102R low flow pumphead

# 102 series Watson-Marlow Pumps

## FEATURES AND BENEFITS

- Low-flow compact pumphead
- Sprung roller design for longer tube life and precise flow rates
- Easy continuous tube loading
- Up to 106 ml/min continuous flow
- Up to 212 ml/min intermittent flow
- Pumphead accepts five bore sizes of tubing for flow ranging 0.02 ml/min to 212 ml/min
- Synchronous motor

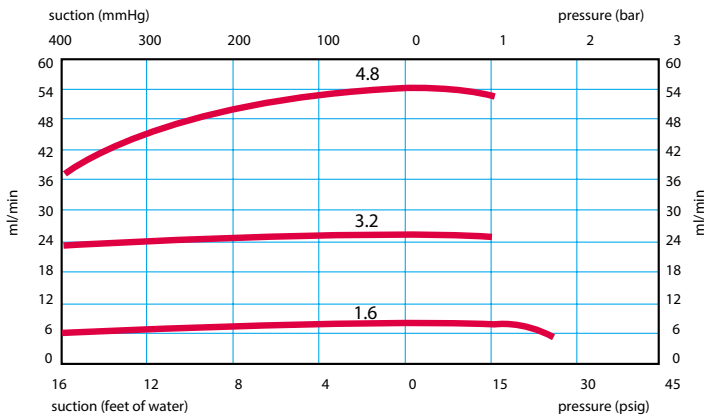


*Watson-Marlow... Innovation in Full Flow*

## PERFORMANCE

Flow rates (ml/min) Tubing 1.6mm wall

Tube bore (mm)	Speed (rpm)		
	(ml/rev)	65	130
0.5	0.02	1.38	2.76
0.8	0.05	3.22	6.44
1.6	0.22	14.0	28.0
3.2	0.81	52.0	104
4.8	1.66	106	212



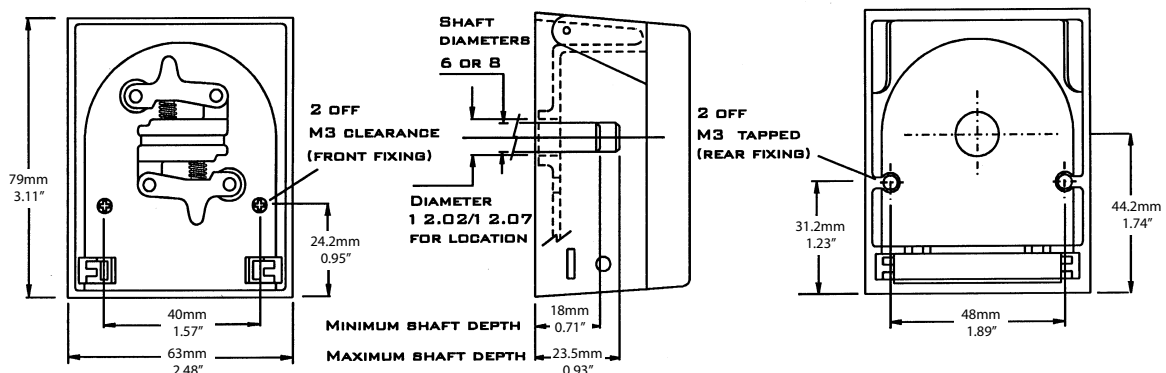
### Conditions:

- Suction curves obtained with zero output pressure.
- Pressure curves obtained with zero lift.
- Pumphead speed 32 rpm

### Conversion Factors:

Suction pressure in bar x 760 = mm Hg  
 Suction pressure in bar x 33.5 = Ft H<sub>2</sub>O  
 Back pressure in bar x 14.5 = psi

## DIMENSIONS



## TECHNICAL SPECIFICATION

## MATERIALS OF CONSTRUCTION

Bore mm	1.6mm wall tubing				
	0.5	0.8	1.6	3.2	4.8
Maximum continuous speed: rpm	65	65	65	65	65
Maximum intermittent speed: rpm	130	130	130	130	130
<b>With silicone tubing (standard springs, clockwise rotation)</b>					
Required torque up to 0.5bar: kg cm	1.1	1.1	1.2	1.5	1.8
Required torque up to 1bar: kg cm	1.2	1.2	1.25	1.8	2.1
Maximum pressure bar	3.0	3.0	3.0	1.0	1.0
<b>With Marprene tubing (hard springs, clockwise rotation)</b>					
Required torque up to 0.5bar: kg cm	3.5	3.5	3.6	4.2	4.6
Maximum pressure bar	1.6	1.6	1.6	1.6	1.6

Component	Material
Rotor	IXEF (polyarylamide)
Rollers	MOS2 filled nylon 6 (nylatron)
Track	Acetal copolymer (kematal) or PVDF
Tube clamps	Acetal copolymer (kematal)
Guard	Polycarbonate
Spindles, guard pins	Stainless steel

## ORDER INFORMATION

For 6mm drive shaft	Suitable for	Part code
Kematal track with standard springs	Platinum cured Silicone/Neoprene	013.2001.000
Kematal track with hard springs	Marprene/PVC	013.2011.000
PVDF track with standard springs	Platinum cured Silicone/Neoprene	013.3001.000
PVDF track with hard springs	Marprene/PVC	013.3011.000
For 8mm drive shaft	Suitable for	Part code
Kematal track with standard springs	Platinum cured Silicone/Neoprene	013.2101.000
Kematal track with hard springs	Marprene/PVC	013.2111.000
PVDF track with standard springs	Platinum cured Silicone/Neoprene	013.3101.000
PVDF track with hard springs	Marprene/PVC	013.3111.000

All flow rates shown were obtained pumping water at 20C (68F) with zero suction and delivery heads. Watson-Marlow, Bioprene and Marprene are trademarks of Watson-Marlow Limited. Disclaimer: The information contained in this document is believed to be correct but Watson-Marlow Limited accepts no liability for any errors it contains, and reserves the right to alter specifications without notice. LoadSure is a trademark of Watson-Marlow Limited. © STA-PURE PFL and © STA-PURE PCS are registered trademarks of W.L Gore & Associates Inc. Please state the product code when ordering pumps and tubing.

**WATSON  
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Pumps**

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