

314 rapid load pumpheads, four rollers

300 series Watson-Marlow Pumps

FEATURES

- Rapid and simple tube loading flip-top pumphead
- Four roller rotor for higher performance and less pulsation
- Up to 1200 ml/min continuous flow
- Up to 2400 ml/min intermittent flow
- Accepts 2.4 mm wall tubing for higher pressure applications
- Snap-fit 314X extension pumpheads available
- One year comprehensive warranty
- Range of pumpheads available to be mounted on Watson-Marlow 300 series OEM drives or user's own drive



Watson-Marlow...Innovation in Full Flow

PERFORMANCE

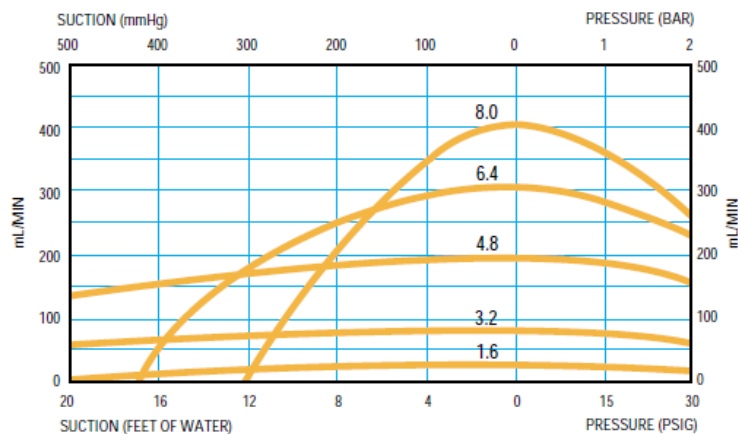
Flow rates 1.6mm wall tubing			
Tube bore	(ml/rev)	Max continuous flow (ml/min)	Max Intermittent flow (ml/min)
0.5	0.03	9.0	18
0.8	0.06	18	36
1.6	0.25	75	150
3.2	0.85	255	510
4.8	1.9	570	1140
6.4	3.0	900	1800
8.0	4.0	1200	2400

Conditions:

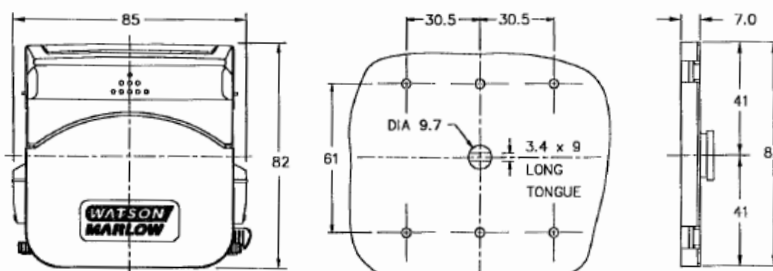
- Suction curves obtained with zero output pressure.
- Pressure curves obtained with zero lift.
- Pumphead speed 100 rpm

Conversion Factors:

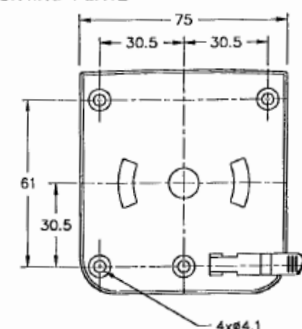
Suction pressure in Bar x 747.7 = mm Hg
 Suction pressure in Bar x 33.5 = Ft H₂O
 Back pressure in Bar x 14.5 = psi



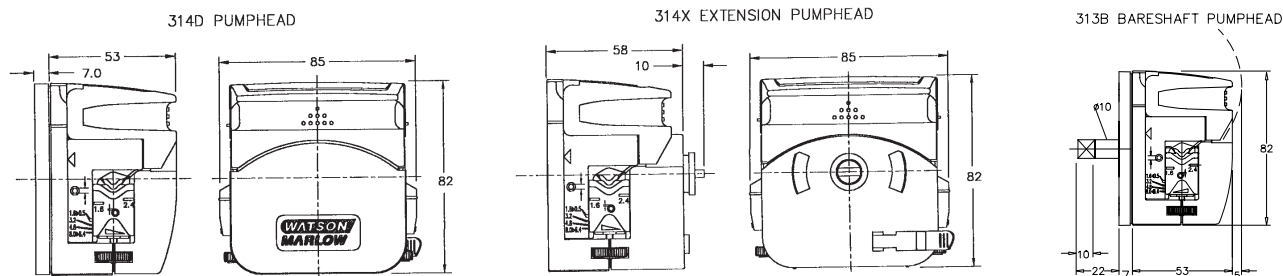
CUSTOMER DRIVE DETAILS



MOUNTING PLATE



DIMENSIONS



TECHNICAL SPECIFICATION

1.6mm wall thickness tubing							
Tube bore (mm)	0.5	0.8	1.6	3.2	4.8	6.4	8.0
Max continuous speed (rpm)	400	400	400	400	400	400	400
Max Intermittent speed (rpm)	600	600	600	600	600	600	600
With Marprene tubing							
Required torque up to 0.5bar;kgcm	1.4	1.4	2.0	2.8	4.2	4.8	6.3
Required torque up to 2.0bar;kgcm	1.5	1.5	2.1	4.0	6.1	6.8	7.8
Max continuous pressure; bar	2.0	2.0	2.0	2.0	1.3	1.3	1.3
Max intermittent pressure; bar	3.0	3.0	3.0	2.5	2.0	2.0	1.7
With Silicone tubing							
Required torque up to 0.5bar;kgcm	1.1	1.1	1.7	2.3	2.9	3.5	4.0
Required torque up to 2.0bar;kgcm	1.5	1.5	2.1	3.2	4.3	5.2	6.7
Max continuous pressure; bar	2.0	2.0	1.5	1.5	1.0	1.0	1.0
Max intermittent pressure; bar	2.5	2.5	2.0	2.0	1.3	1.3	1.3

MATERIALS OF CONSTRUCTION

Component	Material
Body rear	Glass filled polypropylene
Body front, body front extension, mounting plate, track & lever	IXEF
Rotor, tube clamps and mounting plate locking tab	Glass filled Nylon
Rollers	MoS2 filled Nylon 6 (Nylatron)
Spindles	Electroless nickel plated, hardened steel
Screws	Stainless steel
Sealed bearings	Carbon steel

ORDER INFORMATION

Four roller 1.6mm wall thickness tubing						
Description	Partcode					
Clamp setting	314D	314X	314B	314XB	314DW	314BW
Variable	033.4411.000	033.4431.000	033.4421.000	033.4441.000	033.4451.000	033.4461.000
0.5-1.6	033.4411.00C	033.4431.00C	033.4421.00C	033.4441.00C	033.4451.00C	033.4461.00C
3.2	033.4411.00F	033.4431.00F	033.4421.00F	033.4441.00F	033.4451.00F	033.4461.00F
4.8	033.4411.00K	033.4431.00K	033.4421.00K	033.4441.00K	033.4451.00K	033.4461.00K
6.4-8.0	033.4411.00N	033.4431.00N	033.4421.00N	033.4441.00N	033.4451.00N	033.4461.00N

Four roller 2.4mm wall thickness tubing						
Description	Partcode					
Clamp setting	314D2	314X2	314B2	314XB2	314DW2	314BW2
Variable	033.4511.000	033.4531.000	033.4521.000	033.4541.000	033.4551.000	033.4561.000
0.5-1.6	033.4511.00C	033.4531.00C	033.4521.00C	033.4541.00C	033.4551.00C	033.4561.00C
3.2	033.4511.00F	033.4531.00F	033.4521.00F	033.4541.00F	033.4551.00F	033.4561.00F
4.8	033.4511.00K	033.4531.00K	033.4521.00K	033.4541.00K	033.4551.00K	033.4561.00K
6.4	033.4511.00N	033.4531.00N	033.4521.00N	033.4541.00N	033.4551.00N	033.4561.00N

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
MARLOW**
Pumps

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