

313D/A three roller pumphead

300 series

Watson-Marlow Pumps

FEATURES

- Rapid and simple tube loading flip-top pumphead
- Three roller design for high flow performance
- Flow rates from 0.01 ml/min to 1750 ml/min
- Four roller design option for higher accuracy
- Snap-fit 313X or 314X extension pumpheads available
- Accepts 2.4mm wall tubing for higher pressure applications
- One year comprehensive warranty

314D/A four roller pumphead attaches to any 500 series cased drive. Single channel pumphead supplied with adapter and bayonet mounting plate. 314D2 pumpheads for 2.4 mm wall tubing cannot be extended.

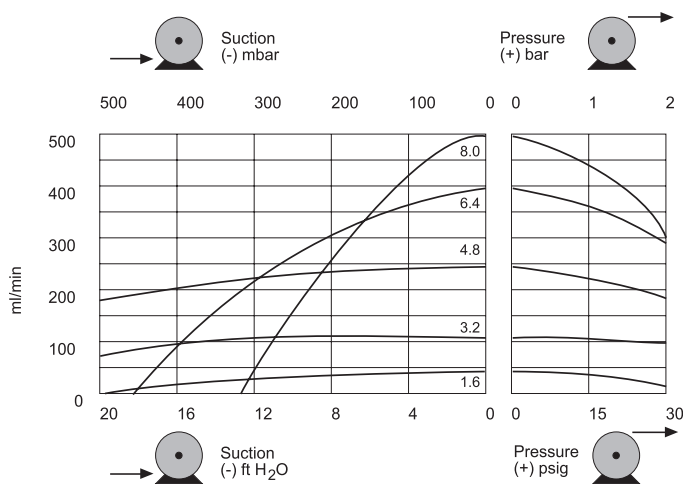
314X four roller extension pumphead attaches to 314D/A or 313D2/A channels depending on drive torque.



Watson-Marlow... Innovation in Full Flow

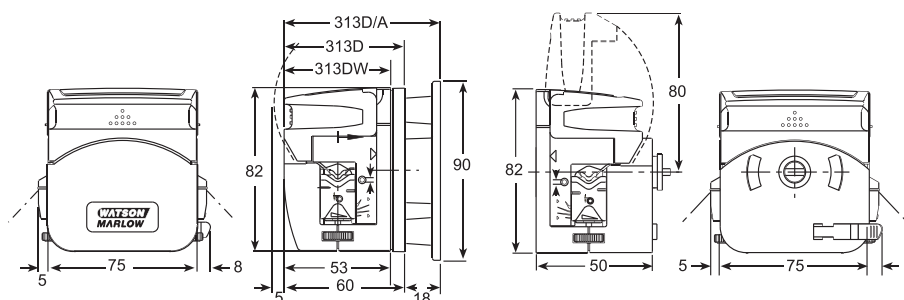
PERFORMANCE

Tube bore and flow rates (ml/min)						
	Speed rpm	1.6mm	3.2mm	4.8mm	6.4mm	8.0mm
520S, 520U and 520Du	2.0 - 220	0.55-60	2-220	4.4-484	7.2-792	10-1100
520Di	1.0 - 220	0.27-60	1.0-220	2.2-484	3.6-792	5-1100
520Di	2.0 - 350	0.55-95.5	2.0-350	4.4-770	7.2-1260	10-1750



313 pumphead (3 roller)
Use these graphs as a guideline only, the figures and axis are approximate
Flow rates obtained running at 100rpm
suction curves obtained with zero output pressure,
pressure curves obtained with zero lift

TECHNICAL DRAWINGS



313D, 313D/A, 313D/A

313X (Place between 313D and drive)

All dimensions in millimetres

TECHNICAL SPECIFICATION

Weight	313D/A 475g 313D2/A 475g 313X 345g 313X2 325g
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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

Product codes		
Description	Partcode	
313D/A	Single channel three roller pumphead for 1.6mm wall tube	033.3401.000
313D2/A	Single channel three roller pumphead for 2.4mm wall tube	033.3501.000
314X	Extension three roller pumphead for 1.6mm wall tube	033.3431.000

Tubing				
Bore/wall(mm)	Bioprene	Marprene	Pumpsil	
0.5 / 1.6	933.0005.016	902.0005.016	913.A005.016	
0.8 / 1.6	933.0008.016	902.0008.016	913.A008.016	
1.6 / 1.6	933.0016.016	902.0016.016	913.A016.016	
3.2 / 1.6	933.0032.016	902.0032.016	913.A032.016	
4.8 / 1.6	933.0048.016	902.0048.016	913.A048.016	
6.4 / 1.6	933.0064.016	902.0064.016	913.A064.016	
8.0 / 1.6	933.0080.016	902.0080.016	913.A080.016	
1.6 / 2.4	933.0016.024	902.0016.024	913.A016.024	
3.2 / 2.4	933.0032.024	902.0032.024	913.A032.024	
4.8 / 2.4	933.0048.024	902.0048.024	913.A048.024	
6.4 / 2.4	933.0064.024	902.0064.024	913.A064.024	
Bore/wall(mm)	Neoprene	STA-PURE®	PVC	Fluorel®
0.8 / 1.6	920.0008.016			970.0008.016
1.6 / 1.6	920.0016.016	960.0016.016	950.0016.016	970.0016.016
3.2 / 1.6	920.0032.016	960.0032.016	950.0032.016	970.0032.016
4.8 / 1.6	920.0048.016	960.0048.016	950.0048.016	970.0048.016
6.4 / 1.6	920.0064.016	960.0064.016	950.0064.016	970.0064.016
8.0 / 1.6	920.0080.016	960.0080.016	950.0080.016	970.0080.016

Maximum number of 313/314 pumpheads for 520 series drives											
Pumpsil											
		0.5bar					2bar				
Tubing number		14	16	25	17	18	14	16	25	17	18
Tubing bore (mm)		1.6	3.2	4.8	6.4	8.0	1.6	3.2	4.8	6.4	8.0
Drive	Speed										
520S, 520U, 520Du	220rpm	6	6	6	4	3	6	6	5	3	3
505Di	350rpm	5	5	3	2	2	6	5	3	2	2
Bioprene, Marprene, PVC, Neoprene, Fluorel											
		0.5bar					2bar				
Tubing number		14	16	25	17	18	14	16	25	17	18
Tubing bore (mm)		1.6	3.2	4.8	6.4	8.0	1.6	3.2	4.8	6.4	8.0
Drive	Speed										
520S, 520U, 520Du	220rpm	6	6	5	3	3	6	6	4	3	3
505Di	350rpm	5	4	3	2	2	6	4	2	2	1

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.



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