

400 FD M2 pump

400/M series panel mount pumps

Features and benefits

- 2 channel compact pump design
- Works with 1.6 mm wall thickness tubing and Luer connectors
- Complete pump with motor, or as pumphead only
- Pumphead available in PVDF for greater chemical compatibility



400 FD M2 pump performance

Tube bore and flow rates (ml/min)										
Speed rpm	0.13 mm	0.19 mm	0.25 mm	0.38 mm	0.50 mm	0.63 mm	0.76 mm	0.88 mm	1.02 mm	1.14 mm
4	0.004	0.008	0.016	0.032	0.06	0.09	0.12	0.17	0.22	0.28
5	0.005	0.010	0.020	0.040	0.07	0.11	0.16	0.22	0.28	0.35
10	0.010	0.020	0.040	0.08	0.14	0.22	0.31	0.43	0.55	0.70
12	0.012	0.024	0.048	0.10	0.17	0.26	0.37	0.52	0.66	0.84
15	0.015	0.030	0.06	0.12	0.21	0.33	0.47	0.65	0.83	1.1
20	0.020	0.040	0.08	0.16	0.28	0.44	0.62	0.86	1.1	1.4
25	0.025	0.050	0.10	0.20	0.35	0.55	0.78	1.1	1.4	1.8
40	0.040	0.08	0.16	0.32	0.56	0.88	1.2	1.7	2.2	2.8
50	0.050	0.10	0.20	0.40	0.70	1.1	1.6	2.2	2.8	3.5
75	0.08	0.15	0.30	0.60	1.1	1.7	2.3	3.2	4.1	5.3
100	0.10	0.20	0.40	0.80	1.4	2.2	3.1	4.3	5.5	7.0
Speed rpm	1.29 mm	1.42 mm	1.52 mm	1.65 mm	1.85 mm	2.05 mm	2.29 mm	2.54 mm	2.79 mm	
4	0.36	0.44	0.48	0.56	0.72	0.84	1.04	1.24	1.44	
5	0.45	0.55	0.60	0.70	0.90	1.05	1.30	1.55	1.80	
10	0.89	1.10	1.20	1.40	1.80	2.1	2.6	3.1	3.6	
12	1.07	1.32	1.44	1.68	2.2	2.5	3.1	3.7	4.3	
15	1.34	1.65	1.80	2.1	2.7	3.2	3.9	4.7	5.4	
20	1.78	2.2	2.4	2.8	3.6	4.2	5.2	6.2	7.2	
25	2.2	2.8	3.0	3.5	4.5	5.3	6.5	7.8	9.0	
40	3.6	4.4	4.8	5.6	7.2	8.4	10	12	14	
50	4.5	5.5	6.0	7.0	9.0	11	13	16	18	
75	6.7	8.3	9.0	11	14	16	20	23	27	
100	8.9	11	12	14	18	21	26	31	36	

Technical specifications

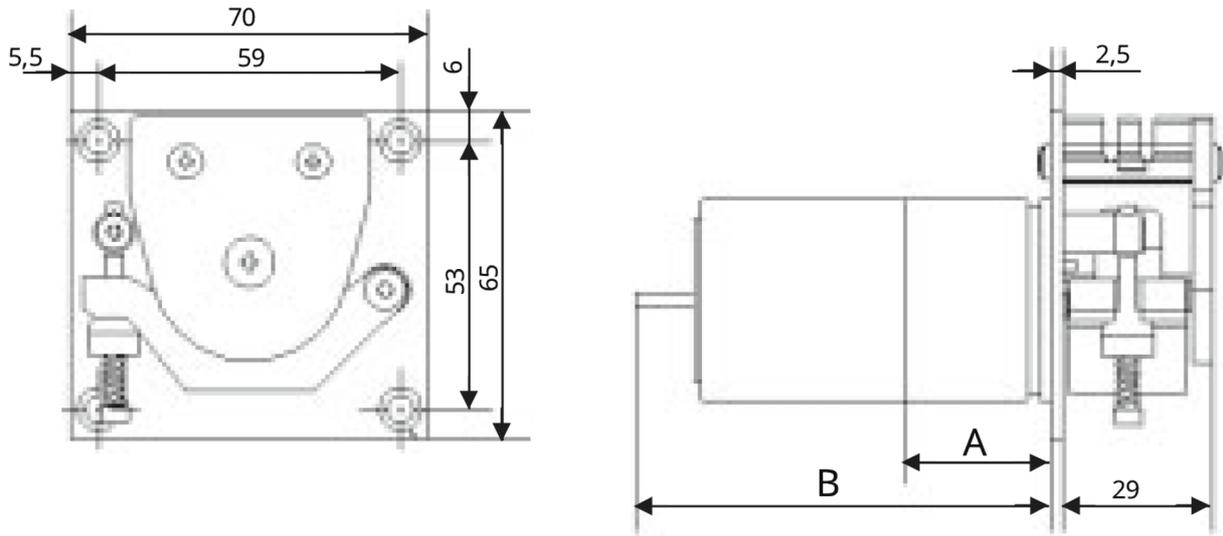
	400 FD M2 pump
Motor types	Fixed speed DC motor
Pumphead options	M2
Pumphead number of channels	2
Supply voltage	24 V DC
Operating temperature	-10 °C to 45 °C (14 °F to 113 °F)
Power consumption	5 W
Gearbox ratio	Spur; 250:1, Spur; 75:1
Compatible tubing wall thickness	1.6 mm

Materials of construction

	400 FD M2 pump
Pumphead body assembly	Acetal (grey)
Pumphead rotor assembly	Acetal (black), Stainless steel
Pumphead roller assembly	Acetal (black)
Face plate	Anodised aluminium
Driveshaft	Acid resistant stainless steel
Tube clamp assembly	Acetal (grey)

Information listed covers the complete range. For detailed specifications of individual models/components refer to product reference manual or contact WMFTS representative.

400 FD M2 pump dimensions



Motor type	Standard DC 5 W	Economy DC 5 W	Brushless DC 5 W
Dimension A	L=26.5 mm x \varnothing 39.6 mm	L=26.5 mm x \varnothing 39.6 mm	L=26.5 mm x \varnothing 39.6 mm
Dimension B	L=87.3 mm* x \varnothing 39.6 mm	L=81.0 mm* x \varnothing 39.6 mm	L=77.0 mm* x \varnothing 39.6 mm

*=maximum length behind mounting plate

Product codes

Pump product codes				
Motor type	Voltage	Speed (rpm)	Product code	
Standard DC 5 W	12-15 VDC	40	040.DH1D.M3M	
Economy DC 5 W	12 VDC	75	040.AN1D.M3M	
Economy DC 5 W	24 VDC	75	040.BN1D.M3M	
Economy DC 5 W	12 VDC	25	040.AC1D.M3M	
Economy DC 5 W	24 VDC	25	040.BC1D.M3M	
Brushless DC 5 W	24 VDC	50	040.FK1D.M3M	
Brushless DC 5 W	24 VDC	15	040.F91D.M3M	
Synchronous AC 2 W	110 VAC (60 HZ)	25	040.HC1D.M2M	
Synchronous AC 2 W	220 VAC (50 HZ)	20	040.JA1D.M2M	
Synchronous AC 2 W	110 VAC (60 HZ)	12	040.H81D.M2M	
Synchronous AC 2 W	220 VAC (50 HZ)	10	040.J71D.M2M	
Synchronous AC 2 W	110 VAC (60 HZ)	5	040.H41D.M2M	
Synchronous AC 2 W	220 VAC (60 HZ)	4	040.J31D.M2M	

Disclaimer: All flow rates shown were obtained pumping water at 20 °C (68 °F) with zero suction and delivery heads. Watson-Marlow, Pumpsil, PureWeld XL, 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. GORE and STA-PURE are trademarks of W. L. Gore & Associates. Please state the product code when ordering pumps and tubing.



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10 July 2025