

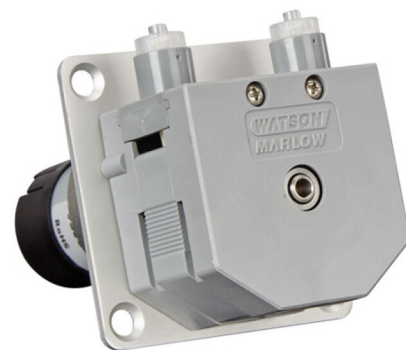
400FD/M1

400/M series panel mount pumps



Features and benefits

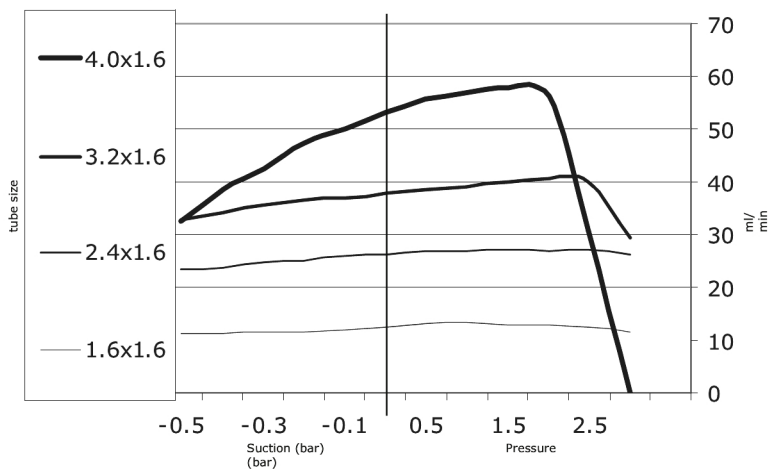
- 1 channel compact pump design
- 400/M works with 1.6 mm wall thickness tubing and Luer connectors
- 400/N works with 1.0 mm wall thickness tubing and barbed fittings
- Complete pump with motor, or as pumphead only
- Pumphead available in PVDF for greater chemical compatibility



400FD/M1 performance

Flow rates (ml/min) 1.6 mm wall Bioprene tubing														
Tube bore (mm)	Speed (rpm)													
	4	5	10	12	20	25	40	70	75	100	160	200	270	350
1.6	0.44	0.55	1.1	1.32	2.2	2.7	4.4	7.66	8.2	11	17.4	22	29	38
2.4	0.96	1.2	2.4	2.9	4.8	6.0	9.6	16.8	18	24	38.3	48	64.8	84
3.2	1.6	2.1	4.1	4.9	8.2	10	16	28.8	31	41	65.4	82	111.4	144
4.0	2.4	3.0	5.9	7.1	11	14	23	41	44	59	94.6	118	160	207

Suction/Pressure chart



Technical specifications

	400FD/M1
Motor types	Fixed speed DC motor
Pumphead options	M1
Pumphead number of channels	1
Max. operating speed	350 rpm
Supply voltage	24VDC
Power consumption	5W
Operating temperature range	-10 to 45 °C
Gearbox ratio	Spur; 30:1, 75:1, 250:1
Compatible tubing bore size	1.6, 2.4, 3.2, 4 mm
Compatible tubing wall thickness	1.6 mm

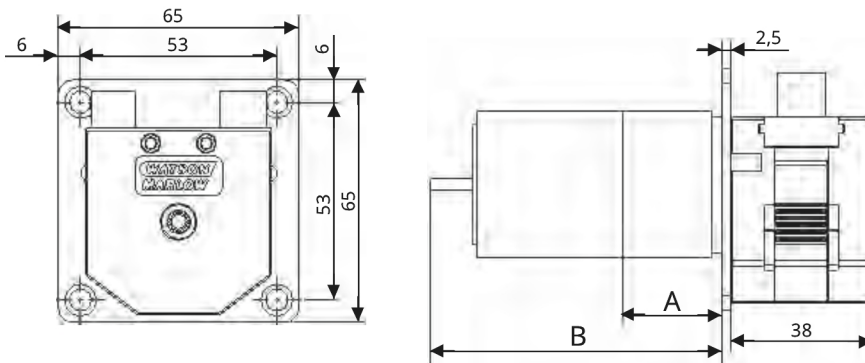
Materials of construction

	400FD/M1
Pumphead rotor assembly	Acetal (black), Stainless steel
Pumphead roller assembly	Acetal (black)
Pumphead track	Acetal (gray)
Face plate	Anodized aluminum
Drive shaft	Acid resistant stainless steel

Information listed covers the complete range.

For detailed specifications of individual models/components refer to user manual or contact WMFTS representative.

400FD/M1 dimensions



Motor type	400FD/M1 5 W
Dimension A	L=26.5 mm x \varnothing 9.6 mm
Dimension B	L=85.3 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	24-30 VDC	200	040.ES1M.E1C
Standard DC 5 W	24-30 VDC	100	040.EP1M.E1C
Standard DC 5 W	24-30 VDC	40	040.EH1M.E1C
Standard DC 5 W	24-30 VDC	12	040.E81M.E1C
Economy DC 5 W	24 VDC	350	040.BU1M.E1C
Economy DC 5 W	24 VDC	200	040.BS1M.E1C
Economy DC 5 W	24 VDC	75	040.BN1M.E1C
Economy DC 5 W	24 VDC	25	040.BC1M.E1C
Brushless DC 5 W	24 VDC	270	040.FT1M.E1C
Brushless DC 5 W	24 VDC	160	040.FQ1M.E1C
Brushless DC 5 W	24 VDC	70	040.FK1M.E1C
Brushless DC 5 W	24 VDC	20	040.F91M.E1C
SYNCHRONOUS AV 2 W	110 VAC (60 Hz)	25	040.HC1M.E1C
SYNCHRONOUS AV 2 W	220 VAC (50 Hz)	20	040.JA1M.E1C
SYNCHRONOUS AV 2 W	110 VAC (60 Hz)	12	040.H81M.E1C
SYNCHRONOUS AV 2 W	220 VAC (50 Hz)	10	040.J71M.E1C
SYNCHRONOUS AV 2 W	110 VAC (60 Hz)	5	040.H41M.E1C
SYNCHRONOUS AV 2 W	220 VAC (50 Hz)	4	040.J31M.E1C

Tubing product codes				
Bore/Wall	Bioprene	Tygon® E-3603	Peroxide cured Silicone	Connects to
1.6/1.6 mm	049.EF6M.E16	049.ET6M.E16	049.EH6M.E16	FTLL, see transfer connections below
2.4/1.6 mm	049.EF6M.E24	049.ET6M.E24	049.EH6M.E24	FTLL, see transfer connections below
3.2/1.6 mm	049.EF6M.E32	049.ET6M.E32	049.EH6M.E32	FTLL, see transfer connections below
4.0/1.6 mm	049.EF6M.E40	049.ET6M.E40	049.EH6M.E40	FTLL, see transfer connections below

Transfer connections	
Connects to	Ordering codes
Tube bore 1.6	FTLL210-6
Tube bore 2.4	FTLL220-6
Tube bore 3.2	FTLL230-6
Tube bore 4.0	FTLL240-6
Tube bore 4.8	FTLL250-6

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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