

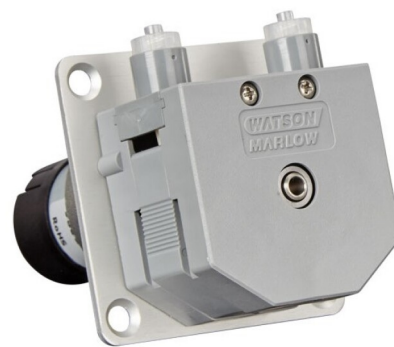
400 FD M1 pump

400/M series panel mount pumps

**WATSON
MARLOW**
Pumps

Features and benefits

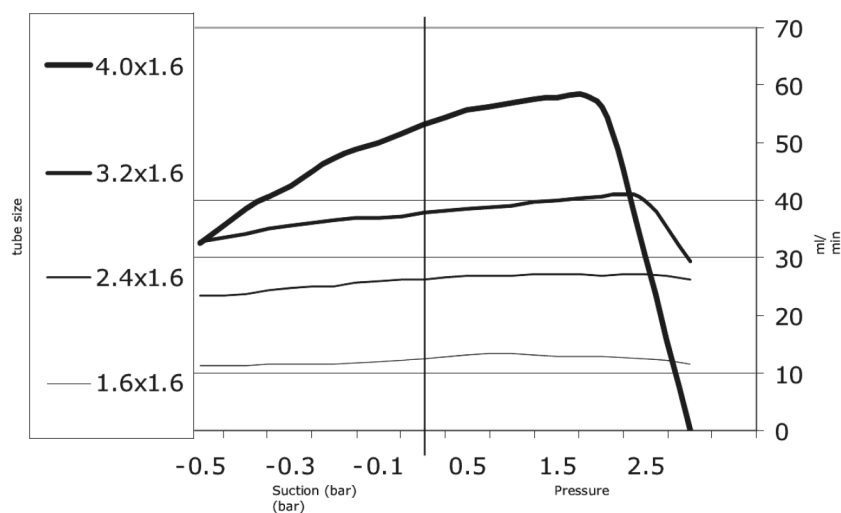
- 1 channel compact pump design
- Works with 1.6 mm wall thickness tubing and Luer connectors
- Complete pump with motor, or as pumphead only
- Pumphead available in PVDF for greater chemical compatibility



400 FD M1 pump 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

	400 FD M1 pump
Motor types	Fixed speed DC motor
Pumphead options	M1
Pumphead number of channels	1
Supply voltage	24VDC
Operating temperature	14 °F to 113 °F (-10 °C to 45 °C)
Power consumption	5 W
Weight	lbs (kg)
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

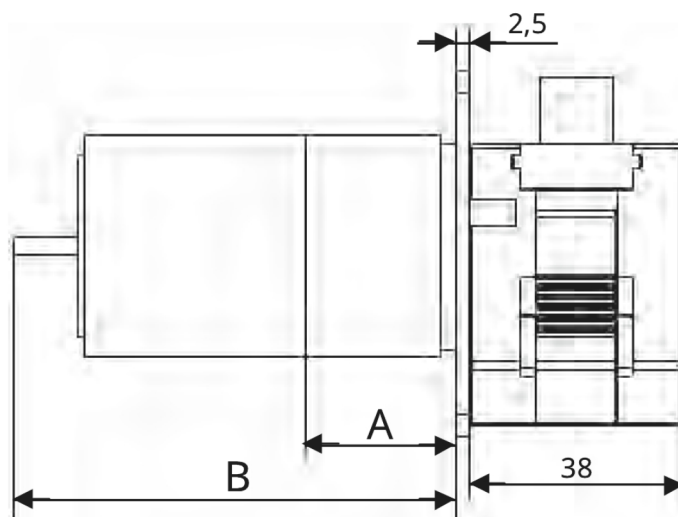
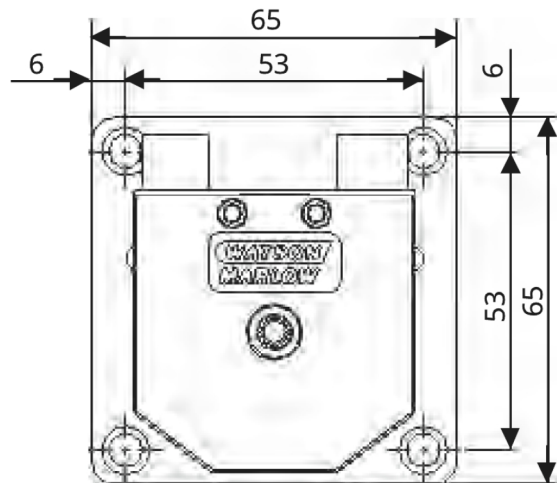
Materials of construction

	400 FD M1 pump
Pumphead body assembly	Acetal (gray), Acetal (grey)
Pumphead rotor assembly	Acetal (black), Stainless steel
Pumphead roller assembly	Acetal (black)
Face plate	Anodized aluminum
Driveshaft	Acid resistant stainless steel
Tube clamp assembly	Acetal (gray)

Information listed covers the complete range.

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

400 FD M1 pump dimensions



Motor type	400FD/M1 5 W
Dimension A	L=26.5 mm x Ø 9.6 mm
Dimension B	L=85.3 mm* x Ø 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.



wmfts.com/global
10 July 2025