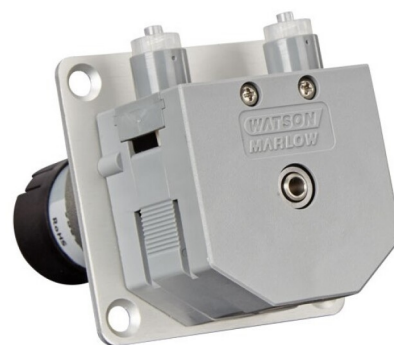


# 400 FD M1 pump

400/M series panel mount pumps

## Features and benefits

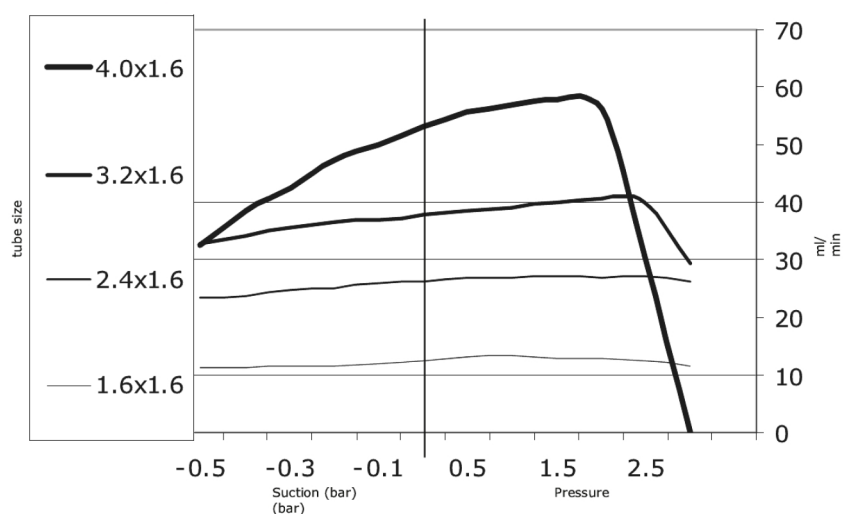
- 1 channel compact pump design
- Works with 1.6 mm wall thickness tubing and Luer connectors
- Complete pump with motor, or as pumphead only
- Pumphead available in PVDF for greater chemical compatibility



## 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                    |
|----------------------------------|-----------------------------------|
| Pumphead options                 | M1                                |
| Pumphead number of channels      | 1                                 |
| Supply voltage                   | 12 VDC, 24 VDC                    |
| Operating temperature            | 14 °F to 113 °F (-10 °C to 45 °C) |
| Power consumption                | 5 W                               |
| 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                            |

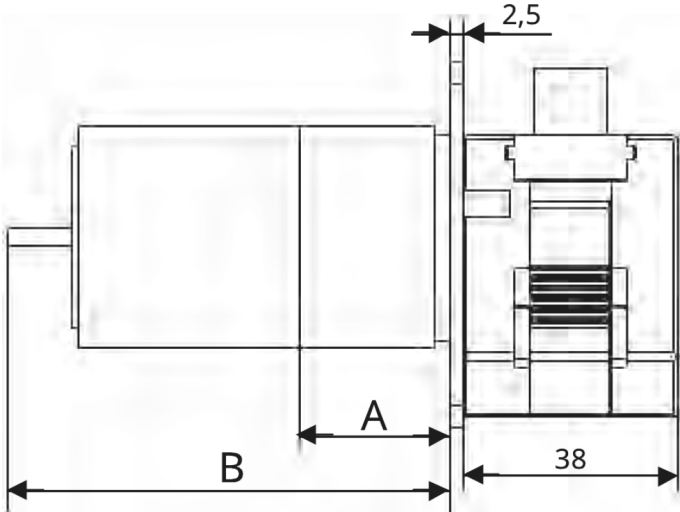
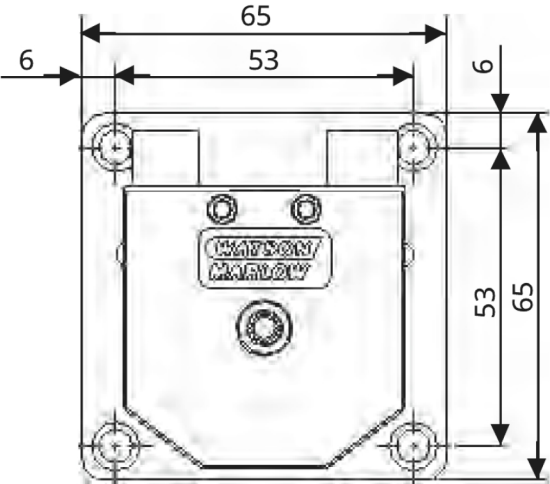
Materials of construction

|                          | 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  
26 May 2026