

# Flowrox™ pumps

## Metering FXM tube pumps

Flowrox metering pump is ideal for especially to chemical dosing applications which require accurate metering. To optimise metering performance, we offer FXM2 and FXM3 series pumps with improved performance. They include expanded logic programming and functionality, but also higher capacity.

Flow rate is not affected by variation of the discharge pressure condition. Positive displacement of the tube bore with zero slip provides same output volume on every cycle. The compression point of the tube acts as self-cleaning check valve without clogging risk providing clear flow path with no possibility for vapour lock.

### Benefits

- Accurate and safe metering
- Versatile system connectivity
- Self-priming (up to 90 % of full vacuum)
- Only the tube and tube fittings are in contact with the process medium
- Serviceable rotor construction for ease of maintenance

### Features

- Fully reversible operation
- Dry run capability
- Field switchable power cord - no need to open pump housing
- Digital touchpad adjustment – precise and reliable
- Available display languages: English, Finnish, French, German, Russian and Spanish



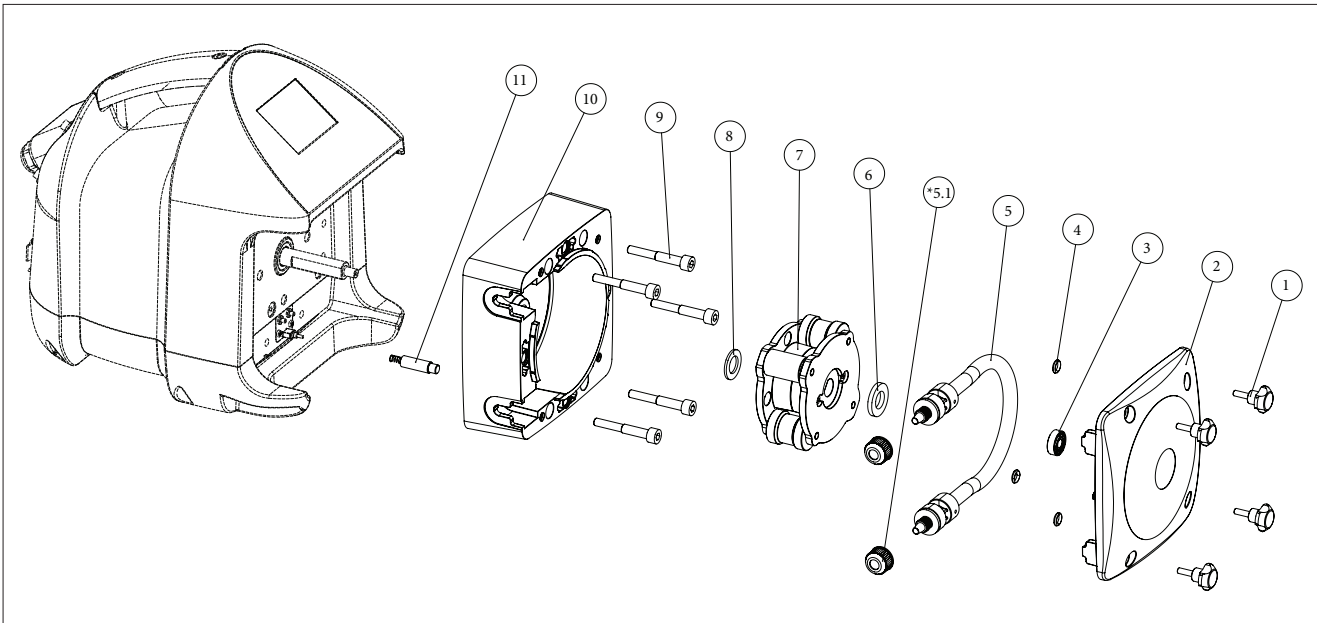
### Ideal applications:

- Waste water/water treatment chemicals
- Reagents for mining processes
- Pulp & paper chemical metering
- Various industrial chemical dosing duties

Technical Data	FXM2-S Metering Pump	FXM3-S Metering Pump
Weight (shipping weight)	13 kg (14 kg) / 28.6 lb (30.8 lb)	20 kg (21 kg) / 44 lb (46 lb)
Maximum flow *	176 l/h / 46.5 GPH	840 l/h / 221.9 GPH
Maximum pressure *	8,6 bar / 125 psi	4,5 bar / 65 psi
Maximum viscosity	5000 cp	
Maximum fluid temperature	54° C / 130° F	
Motor power	0,19 kW / 0.25 hp	

\*See page 4 for tube specific maximum flow rates and pressures

## Exploded view of pump head FXM2-S

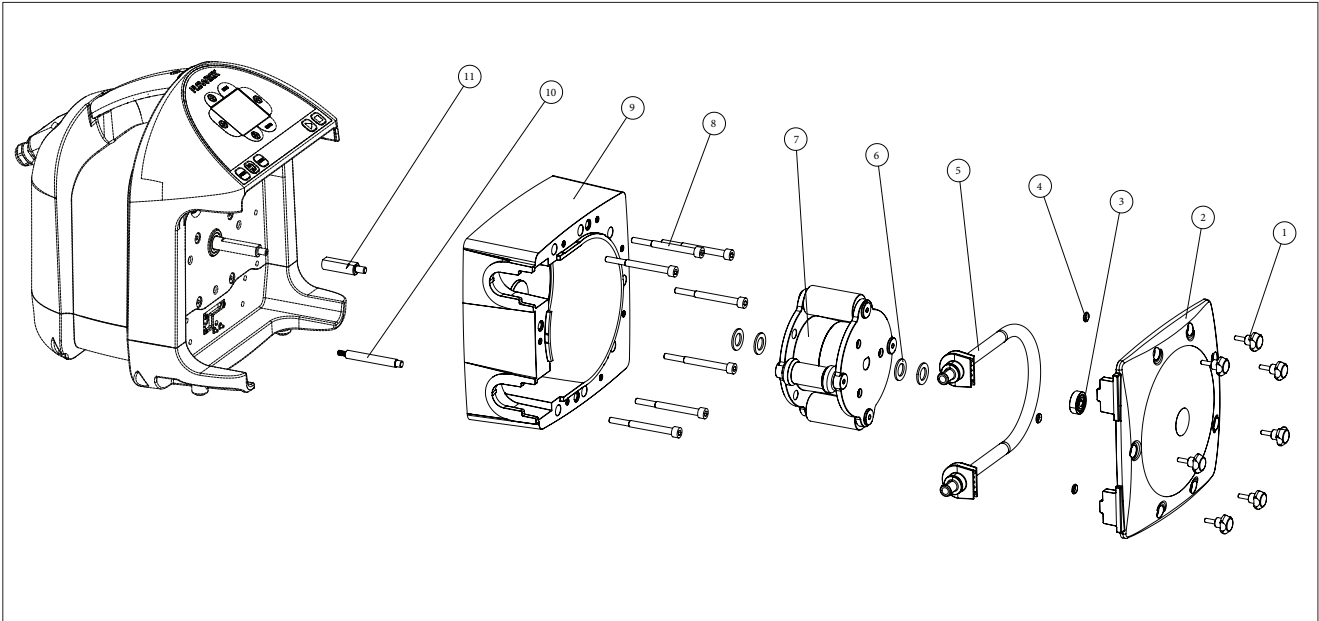


ITEM NO.	DESCRIPTION	QTY.
1	SCREW	4
2	COVER	1
3	BEARING	1
4	O-RING	3
5	TUBE ASSEMBLY	1
6	WASHER	1
7	ROTOR ASSEMBLY	1
8	WASHER	1
9	HEX SOCKET SCREW	5
10	BODY	1
11	PLUNGER ASSEMBLY	1

Parts 5 and 7 are modular and order specific.

5.1: Only with 3/8" tube nut connectors.

### Exploded view of pump head FXM3-S



ITEM NO.	DESCRIPTION	QTY.
1	SCREW	7
2	COVER	1
3	BEARING	1
4	O-RING	3
5	TUBE ASSEMBLY	1
6	WASHER	4
7	ROTOR ASSEMBLY	1
8	HEX SOCKET SCREW	7
9	BODY	1
10	PLUNGER ASSEMBLY	1
11	SHAFT EXTENSION	1

Parts 5 and 7 are modular and order specific.

## Technical specifications

### Sizes:

FXM2 and FXM3

### Temperature range:

Maximum fluid temperature: 54°C / 130 °F

### Minimum & maximum

ambient operating temperature: 0°C to 46°C / 32 °F to 115 °F

### Construction materials:

- Pump tube elements
- Norprene® (for chemicals)
  - Tygothane® (for oils and fats)
  - Tygon lined Norprene® (acids).
  - Adapter fittings: PVDF

### Accessories wetted components:

- Suction tubing: Clear PVC
- Suction strainer: Natural polypropylene
- Discharge tubing: Natural polyethylene (LLDPE)
- Injection fitting with check valve: Body & insert: PVDF

### Non-wetted components:

- Pump head: PBT GF30  
 Housing: Powder coated aluminium  
 Pump head cover: Clear acrylic  
 Cover screws: 300 SS, polypropylene caps  
 Roller assembly: Rotor: PBT GF30  
 Rollers: POM  
 Roller bearings: ball bearing  
 Motor shaft: Chrome plated steel  
 Leak detection: Capacitive non-contact

### Technical data:

- Maximum suction lift: 9 m water, 0.1 bar (Abs) / 30 ft. water, 1.5 psi (Abs)  
 Remote adjustment: 4-20 mA, 0-10 VDC or pulse  
 Inputs: 2 remote inputs, 1 assignable input  
 Feedbacks: 4-20 mA, pulse and 4 alarm contacts  
 Voltage (max amp): Automatic identification 96-264 VAC 50/60 Hz (2 amp)  
 Accuracy: ± 0.5 %  
 Repeatability: ± 0.5 %  
 Output speed control range: 1-100 % in 0.1 % increment 0.02-1 % in 0.01 % increment. 5000:1 turndown.  
 Enclosure: NEMA 4X / IP66  
 Plug type: 125V AC, NEMA 5/15 (US) 230V AC, NEMA 6/15 (US) 230V AC, CEE7/VII (Europe) 230V, BS 1363 (UK) 230V AC, AS/NZS3112 (AUS)

## Maximum Flow Rate and Pressure Capabilities:

### FXM2

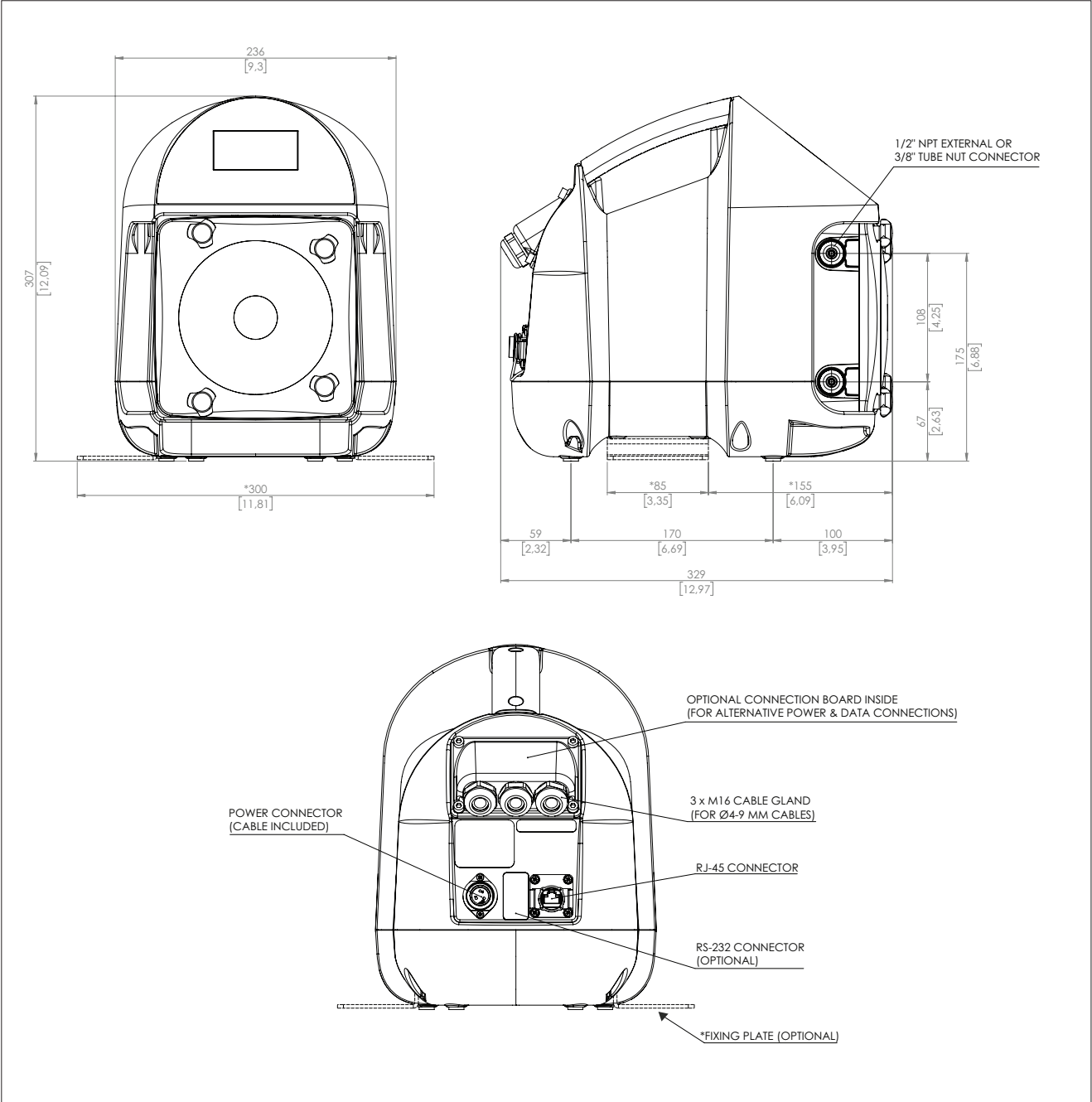
Tube number	Tubing material	Bar/PSI	Liters/Gallons per hour
N011	Norprene	8,6/125	11/2.9
N092	Norprene	8,6/125	92/24.3
N176	Norprene	2,1/30	176/46.5
G162	Tygothane	4,5/65	162/42.8
T165	Tygon lined Norprene	3,5/50	165/43.6

### FXM3

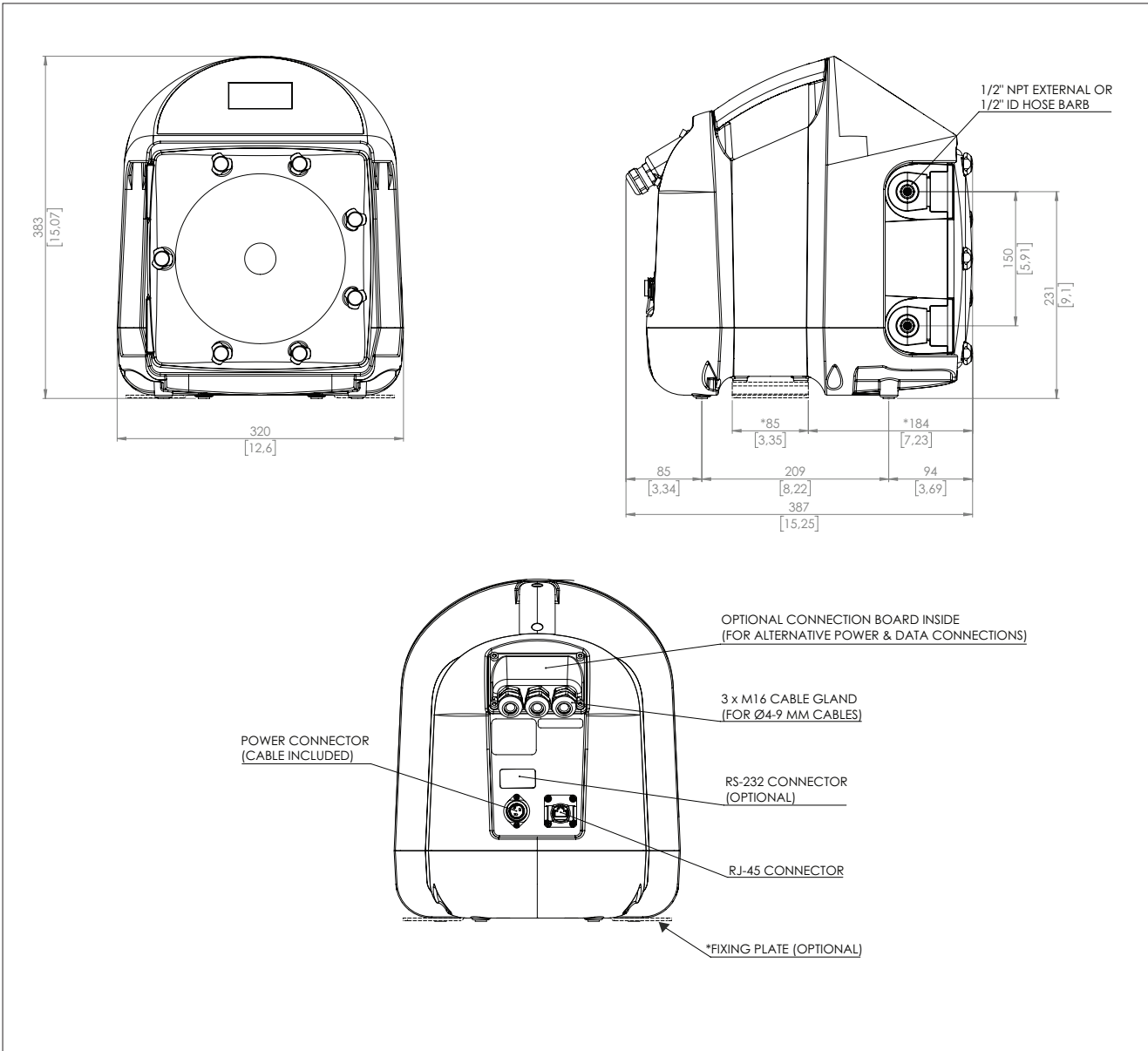
Tube number	Tubing material	Bar/PSI	Liters/Gallons per hour
N269	Norprene	2,1/30	268/70
N529	Norprene	3,4/50	529/139.7
N840	Norprene	2,1/30	840/221.9
G350	Tygothane	4,5/65	350/94.5
T300	Tygon lined Norprene	2,1/30	300/81.2

# Dimensions

FXM2:



FXM3:



## Pump model selection guide

### Metering Pumps FXM

1.	2.	3.	4.	5.	6.	7.	8.	.
FXM	2	S	3	4	P	N269	D	

1.	TYPE
FXM	Metering

2.	FRAME
2	Frame size: 2
3	Frame size: 3

3.	MODEL
S	SMART

4.	MOTOR SPEED
3	175 RPM

5.	PLUG TYPE:
4	125V AC, NEMA 5/15 (US)
5	230V AC, NEMA 6/15 (US)
6	230V AC, CEE 7/VII (EU)
7	230V, BS 1363 (UK)
8	230V AC, AS/NZS3112 (AUS)

6.	CONNECTION TYPE FXM2
Blank	3/8" tube compression fittings
P	1/2" NPT external

6.	CONNECTION TYPE FXM3
B	1/2" hose barb
P	1/2" NPT external

7.	TUBE MATERIAL FXM2
N092	Norprene
N176	Norprene
G162	Tygothane
T165	Tygon lined Norprene

7.	TUBE MATERIAL FXM3
N269	Norprene
N529	Norprene
N840	Norprene
G350	Tygothane
T300	Tygon lined Norprene

8.	OPTIONAL AUXILIARIES:
A	Flow switch

**Valmet Flow Control Oy**

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[www.valmet.com/flowcontrol](http://www.valmet.com/flowcontrol)

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