POSITIVE DISPLACEMENT FLOWMETERS
MX SERIES & M SERIES

AUSTRALIAN MADE

2 YEARS MACNAUGHT WARRANTY

The **MX-SERIES** innovation features:

- Modular design construction
- M-Lock™ quick release mechanism
- Versatile and user friendly
- Programmable digital display and pulse output options

MX Series

The **M-SERIES** is Macnaught's original range featuring:

- Established design and cast construction for proven performance
- Mechanical displays

M Series

FEATURE & BENEFITS

- **Precision Oval Gear:** Achieve high accuracy and repeatability through meticulously machined oval gear technology.
- **Versatile Viscosity Measurement:** Capable of measuring both high and low viscosity liquids, enhancing its usability across applications.
- **Low Maintenance:** Minimal maintenance requirements translate to a low lifetime cost of ownership. Frequent calibration is not required.
- **Space-Efficient Design:** The compact meter, without the need for flow conditioning, allows for installation in tight spaces and skids.
- **Material Versatility:** Offers a wide range of material choices, including Stainless Steel (SS), Aluminium (Al), and Polyphenylene Sulfide (PPS), catering to specific application needs.
- **ATEX, IECEx Approval:** Optional Exd I/IIB approval for ATEX and IECEx standards, ensuring safety and compliance.
- **Bi-Directional Flow:** Suitable for bi-directional flow, making it ideal for fuel consumption applications.
- **Specialized Options:** Additional options available for chemical resistance, high-pressure capability, and custody transfer applications, as well as high resolution outputs.

APPLICATIONS

- Fuel measurement & monitoring systems
- Bio diesel blending & production
- Diesel fuel additive blending
- Chemical dosing
- Centrifugal oil application
- Ethanol blends & production
- Heating oil measurement
- Boiler fuel measurement
- Bunker/vessel fuel measurement
- Solvent blending & dispensing
- Lubricant blending & dispensing
- Hydraulic fluid dispensing
- Test stands and transmission fluid/hydraulic oil

TECHNICAL SPECIFICATIONS

Flow Range	2 LPH to 2500 LPM in sizes 1/4" to 4"	Repeatability	±0.03%
Temperature	-40°C to 80°C (high temp meter up to 150°C)	Suitability	Viscous fluids
Accuracy	±0.5% (±1.0% for Mechanical) of reading	K-Factor	Single point calibration

MX Series Flowmeter Model Selection Guide

Part Number Configuration - Select Body & Output Type

1. Body

With the product configuration provided below, create the body part number. Add an output type if required.

Series	Size/Flow Range			Category/Body/Seal		-	Connection Type		Rotor Type		Output Type	
MX	25			F		-	1		S		X	
MX	06	1/4”	2-100 LPH	F	Aluminium / Viton Seal	-	1	BSP (G) Threads	S	Standard (PPS - F & P and SS - S)	X	No Output
	09	1/4”	0.5-16.5 LPM	P	Stainless Steel / PTFE Encapsulated Teflon Seal		2	NPT Threads	T	Stainless Steel (High Temperature 150°C)		
	12	1/2”	3-45 LPM	S	Aluminium / PTFE Encapsulated Teflon Seal		3	ANSI CL #150 Flanges	P	Polyether Ether Ketone (PEEK)		
	19	3/4”	8-70 LPM				4	JIS 10K Flanges	H	Standard (High Viscosity)		
	25	1”	10-160 LPM				5	DIN PN16 Flanges	V	Stainless Steel (High Viscosity)		
	40	1½”	15-350 LPM									
	50	2”	15-580 LPM									
	75	3”	60-1200 LPM									
	100	4”	120-2500 LPM									

Stock Available Made to Order

2. Output Type

Select the required output type from the options below to go with the body part number selected above.

Part Number	Description
Standard Pulse	
MXD-AS	Standard Pulser (Reed/Hall)
MXD-IS	Standard Pulser (Reed/Reed)
MXD-JS	Standard Pulser (Hall/Hall)
MXD-TS	High Temperature Pulse (NPN)
MXD-ACM-RH	Industrial Pulse cap M20x1.5 (Reed/Hall/RTD PT100)
MXD-FCMX	6 PIN DIN Pulse RTD PT100 Sensor (NPN)
Standard Display	
MXD-DS	PR 12 mm Display - Total, Flowrate
MXD-ES	PRA 12 mm Display - Total, Flowrate, Scaled Pulse, 4-20 mA outputs
MXD-MS	PRM 12 mm Display - 4-20 mA output
MXD-FS	ER 17mm Display - Total, Flowrate
MXD-GS	ERA 17 mm Display - Total, Flowrate, Scaled Pulse, 4-20 mA outputs
MXD-HS	ERB 17 mm Display - Batch Controller, Total, Flowrate

Part Number	Description
Simple Apparatus Display	
MXD-FXS	ER 17mm Display - Total, Flowrate - Intrinsically Safe
MXD-GXS	ERA 17 mm Display - Total, Flowrate, Scaled Pulse, 4-20 mA outputs - Intrinsically Safe
MXD-HXS	ERB 17 mm Display - Batch Controller, Total, Flowrate - Intrinsically Safe
Intrinsically Safe Pulse Output (Consult Technical Team)	
MXD-BS	NPN open collector ATEX, IECEx, CSA, FM II I G Ex ia IIC T6
MXD-CS	NPN open collector ATEX, IECEx, US & CAN II 2 G Ex db IIC T6
MXD-NS	Namur ATEX & IECEx, CSA, FM, II 1G Ex ia IIC T4
Remote Mount Display	
ER-RMA	ER 17 mm Display - Total, Flowrate
ERA-RMA	ERA 17 mm Display - Total, Flowrate, Scaled Pulse, 4-20 mA outputs
ERAC-RMA	ERA 17 mm Display - Total, Flowrate, Scaled Pulse, 4-20 mA outputs, Modbus RS485 Protocol
ERB-RMA	ERB 17 mm Display - Preset Value, Batch Total, Accumulated Total, Transistor Switch Output
ERST-RMA	ERS 17 mm Display - Differential Total, Differential Flowrate, Scaled Pulse, 4-20 mA outputs, Temperature output

*MX06 & MX09 require additional adaptor for MXD-FXS, GXS and HXS output type.
*Simple Apparatus and Intrinsically safe output not applicable for model with PPS rotor material.
*MX75 & MX100 are only available in F and S category with Aluminium body and rotors.
*Temperature limit for units with integral display and PPS rotors is 176°F/80°C (140°F/60°C)**
*Temperature limit for units with SS or PEEK rotors without high temperature sensor (MXD-TS) is 248°F/120°C
*Pressure ratings as follows:
MX06 & MX09 = 69 bar MX40 = 103 bar MX75 & MX100 = 12 bar
MX12 to MX25 = 138 bar MX50 = 82 bar

Stock Available Made to Order

Intrinsically Safe & Explosion proof models available - consult technical team

M Series Flowmeter Model Selection Guide

Part Number Configuration - Select Body & Output Type

With the product configuration provided below, create the flowmeter part number.

Body Material		Size/Flow Range			-	Connection Type		Rotor Type		Output Type	
F		025			-	1		S		3	
F	Aluminium / Viton Seal	012	1/2”	3-45 LPM		1	BSP (G) Threads (Litre)	S	Standard (PPS)	3	Standard Mechanical Register
M	Stainless Steel / PTFE Encapsulated Teflon Seal	025	1”	10-160 LPM		2	NPT F Threads (US Gallons)	T	Stainless Steel	4	Heavy Duty Mechanical Register
S	Aluminium / PTFE Encapsulated Teflon Seal	040	1½”	15-350 LPM	-	3	NPT F Threads (Litre)				
		050	2”	15-580 LPM							
		075	3”	60-1200 LPM							
		100	4”	120-1200 LPM							

*Note:
Size 2”, 3” and 4” requires additional flange (FKIT) for any connection type.
Size 3” and 4” comes with Aluminium Rotor as standard.
ANSI CL #150 flange kit is available for 1” and above.

Stock Available Made to Order

SCAN FOR MORE INFORMATION

UK CA CE

Intrinsically Safe & Explosion proof models available - consult technical team