

The 'F' range of oval gear fuel and oil meters from Macnaught are positive displacement oval gear flowmeters that are optimised for fuel and oil measurement applications.

Macnaught fuel and oil meters are constructed utilising a robust aluminium body suitable for use in the harshest environments. Our bearingless rotors provide exceptionally low pressure drop and can even be used in gravity fed applications. This unique rotor design ensures minimal wear resulting in many years of reliable service. This approach has proven over time to provide consistently accurate flow measurement that is not affected by variations in temperature, viscosity, or pressure.

Another benefit of our unique rotor design is simplicity of repair. With only 2 moving parts, our meters are simple to repair, require minimal repair parts stock, and can even be repaired inline, resulting in less downtime.

Oval Gear flowmeters are ideally suited to applications requiring accurate dispense quantities. Measurement of very low flow rates, pulsating flow, small batch sizes, viscous products, and non-conductive liquids are all ideal uses for oval gear meters. Because these meters don't require flow conditioning, no straight piping runs are required, so they can be used in installations where space is limited without affecting performance.

This range of meters has been specifically designed to provide reliable metering solutions for the fuel transfer, dispensing and blending style of applications.

## Applications

- Service and fueling trucks
- Fuel depots
- Portable fueling systems
- Bio-Diesel blending and production
- Lubricant blending and dispensing
- Hydraulic fluid dispensing and test stands
- Boiler and generator fuel consumption
- Fuel consumption for mining, construction and military vehicles
- Bitumen/ asphalt production

## Features

### Designed and Manufactured in Australia

- Quality is controlled from concept to completion by Macnaught
- Improved Availability
- 2 Year Warranty

### Electronic Displays

- All displays have resettable and non-resettable totals
- 4-20mA and pulse output versions
- Batch controllers
- Meter mounted and remote displays
- Compact version for use with small meters or where space is limited

### Aluminium Body

- Robust Design
- Suitable for use in the harshest outdoor environments

### Bearingless PPS Rotors (1/4" - 2" models)

- Minimise Wear
- Low Pressure Drop
- Quiet Operation
- Simple Repairs
- Reduced Friction

### Aluminium Rotors (3" & 4" models)

### Modular End Connections (3" & 4" models)

- Flexible Inventory for Faster Delivery
- Wide Variety of Connection Types
- Threaded Mounting Holes

Strainers and Air Eliminators Available

For pricing or any further information, please contact Omni Instruments Ltd.

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Series	Model No.	Size	Flow Range		Max Working Pressure (bar)	Max Working Pressure (PSI)
			Litres	USG		
MX	06	¼"	0.5 - 100 LPH	0.13 - 25.4 GPH	69	1000
	09	¼"	15 - 500 LPH	4 - 132 GPH	69	1000
	12	½"	3 - 30 LPM	0.5 - 8 GPM	138	2000
	19	¾"	3 - 80 LPM	0.8 - 21 GPM	138	2000
	25	1"	6 - 120 LPM	1.6 - 32 GPM	188	2000
	40	1½"	10 - 250 LPM	2.64 - 66 GPM	103	1500
	50	2"	15 - 500 LPM	4 - 130 GPM	33	1200
	75	3"	20 - 733 LPM	5 - 194 GPM	12	175
100	4"	120 - 1200 LPM	31.7 - 317 GPM	12	175	

Process Connection		
1	BSP (Rp)	Models 06 - 100
2	NPT	
3	ANSI #150	Models 25 - 100
4	JIS 10K	
5	DIN PN16	

Rotor Type	
S	Standard, <1000cps; ~80°F & P models, <120c S models

Output Type	
A	Standard pulse; 1 x Reed & 1 x Hall Effect Sensor
D	FR; 12mm LCD, rate & totals
E	PRA; 12mm LCD, rate & totals, outputs
F	ER; 17mm LCD, rate & totals
G	ERA; 17mm LCD, rate & totals, outputs
H	ERB; 17mm LCD, batch controller

MX 25 F - 1 S A Example finished model number

### Mechanical

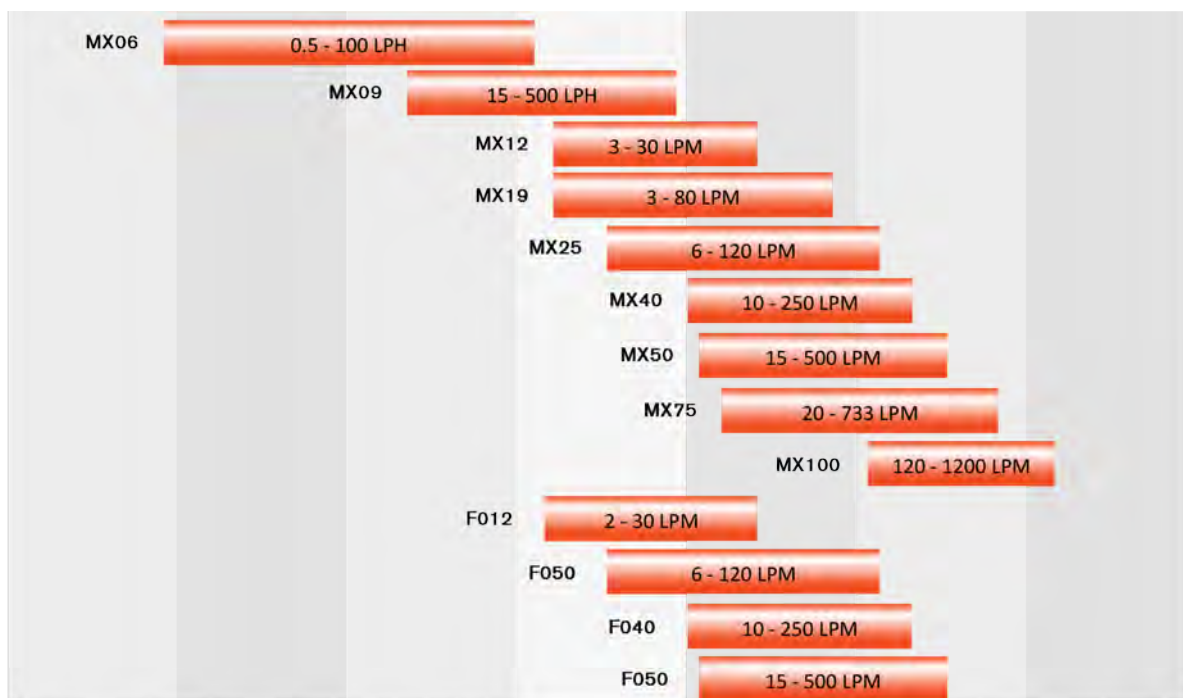
Series	Model No.	Size	Flow Range		Max Working Pressure (bar)	Max Working Pressure (PSI)
			Litres	USG		
F	012	¼"	2-30 LPM	0.5-8 GPM	35	500
	025	1"	6-120 LPM	1.6-32 GPM	35	500
	040	1½"	10-250 LPM	2.64-66 GPM	35	500
	050	2"	15-500 LPM	4-132 GPM	35	500

Process Connection	
1	BSP (Rp)
2	NPT
3	NPT-Litre Calibration

Rotor Type	
S	Standard

Output Type	
3	Standard Duty Mechanical Register
4	Heavy Duty Mechanical Register

F 025 - 1 S 3 Example finished model number



0.001 LPM    0.01 LPM    0.1 LPM    1 LPM    10 LPM    100 LPM    1000 LPM    10000 LPM  
0.00026 GPM    0.0026 GPM    0.026 GPM    0.26 GPM    2.6 GPM    26 GPM    260 GPM    2640 GPM

# Flow Measurement Solutions

## M-LOCK™ MOUNTING SYSTEM

Choice of 9 digital LCD display modules or blind pulse output modules

Remote mount digital display (optional)



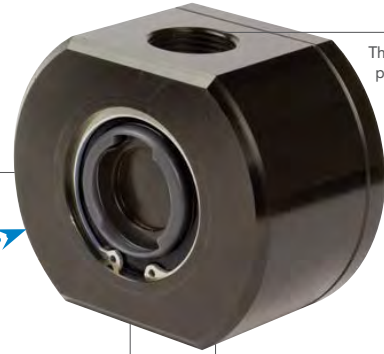
Available with Ex approvals for use in Hazardous Environments

'Bayonet style' M-Lock Mounting System for easy installation

Available in both stainless steel and anodised aluminum



Corrosion resistant anodized aluminum body, suitable for metering fluids with high water content



Threaded and flanged process connections

Manufactured from solid Billet offering a greater degree of protection against wearing parts



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	TYPE A	TYPE B	TYPE N	TYPE T
Pulser				
Type	STANDARD PULSE	INTRINSICALLY SAFE	INTRINSICALLY SAFE	HIGH TEMP
Output Type	Pulser	Pulser	Pulser	Pulser
Switch Type	Reed/Hall Effect	NPN open collector	NAMUR	NPN open collector
Construction	PP (polypropylene)	Stainless Steel	CuZn, Chrome Plated	Stainless Steel
IP rating	IP 67	IP 67	IP 67	IP 67
Max Temp	120°C/248°F	85°C/185°F	85°C/185°F	150°C/302°F
Intrinsically Safe (Ex ia)	x	√	√	x
Approvals		ATEX, CSA, FM II G Ex ia IIC T6	ATEX, IECEx II G Ex ia IIC T4..T6 Ga II 1 D E x ia IIIC T115°C Da	

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	TYPE D	TYPE E	TYPE F	TYPE G	TYPE H
Meter Mount					
Model	PR	PRA	ER	ERA	ERB
Construction	PP (polypropylene)	PP (polypropylene)	Aluminium	Aluminium	Aluminium
Digits Size	12mm	12mm	17mm	17mm	17mm
IP Rating	IP 67	IP 67	IP 67	IP 67	IP 67
Max Temp	60°C/140°F	60°C/140°F	80°C/176°F	80°C/176°F	80°C/176°F
Accumulated Total	✓	✓	✓	✓	✓
Resettable Total	✓	✓	✓	✓	✓
Flow Rate	✓	✓	✓	✓	✓
4-20 mA (passive)	x	✓	x	✓	x
Pulse Output	x	✓	x	✓	x
Hi/Low Flow Alarm	x	✓	x	x	x
Batch Control	x	x	x	x	✓
Remote Mount					
Model	PR-WM	PRA-WM	ERX-RMP (RMA)	ERAX-RMP (RMA)	ERBX-RMP (RMA)
Construction	PP (polypropylene)	PP (polypropylene)	Aluminium or PP	Aluminium or PP	Aluminium or PP
IP Rating	IP 67	IP 67	IP 67	IP 67	IP 67
Intrinsically Safe (Ex ia)	x	x	✓	✓	✓
Approvals			ATEX, IECEx	ATEX, IECEx	ATEX, IECEx

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