

# Flow Measurement Solutions



### About Us

Macnaught, a family owned company, established in 1948, has been designing and manufacturing premium quality fluid measurement, fluid transfer and lubrication equipment for the agricultural, automotive, industrial, mining and transport industries across the globe for over six decades. Leaders in our field, we design and manufacture world-class products with a commitment to excellence as one of our main goals. We maintain our leading position in the market due to the Macnaught culture, which breeds a unique combination of innovative design, engineering know-how, quality workmanship and dedicated people. Today we are expanding beyond our traditional product base by offering our consultative expertise to companies, advising, developing and customising solutions to suit their specific needs.

### What Sets Us Apart

At Macnaught we understand what it takes to be and remain the leader in our field. We have uncompromising standards and are constantly seeking to innovate and forge new paths through product development. The key values that our founder Colin Macnaught instilled in the business proudly remain entrenched in our culture today and help set us apart from our competitors.

Amongst the most important are the four cornerstones of our enterprise:

### **Innovative design**

We have a passion for the design process. We listen to our customers and their ever expanding requirements. We have a team of dedicated engineers that think outside the square, meaning that our unique designs lead the field in design, quality and performance. We are constantly seeking innovative designs which will improve and enhance performance and durability in order to deliver outstanding product performance and reliability for peace of mind.

### Engineering precision and excellence

Our engineers have been designing and manufacturing world-class products for over 66 years. The experience we have gained over that time delivers again and again for our customers with products engineered to exacting specifications and tolerances. Our products are used in demanding situations and our commitment to engineering excellence ensures that they perform every day with enduring reliability.

### **Technical expertise**

Our technical expertise is second to none, allowing us to advise clients with authority and speed. Combined with our extensive industry's specific based knowledge, it means that we have an unmatched ability to manufacture or source and assess specialised products from all over the world.

### Great people

Our people are our greatest asset. They not only understand the products we offer, but can provide expert advice and support when using them in some of today's most demanding industrial environments. Throughout our business, we have dedicated and trustworthy people with a can-do attitude.

### **Approvals and Accrediations**





Quality ISO 9001 € saiglobal







# product overview

### Fuel and Oil F Series

### **Applications**

- Service and Fueling Trucks
- Fuel Depots
- Portable Fueling SystemsBio-Diesel Blending and
- ProductionLubricant 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

# Solvent S Series

### **Applications**

- Industrial paints and coatings
- Ink blending & dispensing
- Sealants & adhesives manufacturing
- Agrochemical production
- Cleaning chemical manufacturing & production
- High Temperature fuel oil measurement for industrial and marine applications

### Industrial P Series

### **Applications**

- Chemical batching
- Additive Injection
- Hydraulic test stands
- High temperature chemical processes
- High pressure chemical processes
- Food and beverage batch
  processes
- Ethanol blending and production
- Pulp and Paper

# Corrosive Chemical CR Series

### **Applications**

- Laundry Chemicals
- Additive Injection
- Water Treatment
- Corrosive Chemical
  Dispensing
- Chemical Batching
- Chemical Packaging and Blending

# High Pressure MH Series

### Applications

- Chemical batching
- Additive Injection
- Hydraulic test stands
- High temperature chemical processes
- High pressure chemical processes
- Food and beverage batch processes
- Ethanol blending and production
- Pulp and Paper

# Lube Oil IM Series

### **Applications**

- Oils up to SAE 140
- Automatic Transmission Fluid
- Engine oil
- Gear oil
- Hydraulic oil
- Coolant
- Diesel
- Kerosene

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

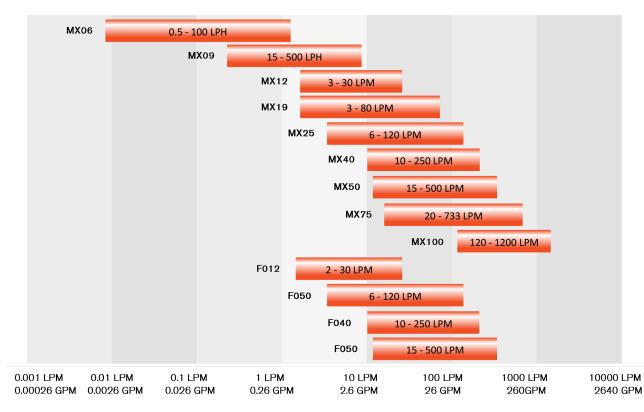
# fuel and oil flow meters

	Model	-	Flow	Range	Max Working	Max Working
Series	No.	Size	Litres	USG	Pressure (bar)	Pressure (PSI)
	06	1/4″	0.5 - 100 LPH	0.13 - 26.4 GPH	69	1000
	09	1/4″	15 - 500 LPH	4 - 132 GPH	69	1000
	12	1/2″	3 - 30 LPM	0.5 - 8 GPM	138	2000
	19	3/4″	3 - 80 LPM	0.8 - 21 GPM	138	2000
MX	25	1″	6 -120 LPM	1.6 - 32 GPM	138	2000
	40	1 1⁄2″	10 - 250 LPM	2.64 - 66 GPM	103	1500
	50	2″	15 -500 LPM	4 - 130 GPM	83	1200
	75	3″	20 - 733 LPM	5 - 194 GPM	12	175
	100	4″	120 - 1200 LPM	31.7 - 317 GPM	12	175

		Process Cor	nection			
		1	BSP (Rp)	Models 06	3 100	
		2	NPT	Iviodeis oc	) = 100	
		3	ANSI #150			
		4	JIS 10K	Models 25	5 - 100	
		5	DIN PN16			
			Rotor Type			
		1 1	S	Standard; <1000cj	ps, <80c F & P r	nodels, <120c S models
				Output Type		
				A	Standard pulse,	: 1 x Reed & 1 x Hall Effect Sensor
				D	PR; 12mm LCE	), rate & totals
				E	PRA; 12mm LC	D, rate & totals, outputs
				F	ER; 17mm LCD	), rate & totals
				G	ERA;17mm LCI	D, rate & totals, outputs
		1		Н	ERB; 17mm LC	D, batch controller
мх	25	F - 1	S		А	Example finished model number

### Mechanical

	Model		-	Flow	Range	Max Working	Max Working
Series	Series No. Size	Size	Litres	USG	Pressure (bar)	Pressure (PSI)	
	012		1⁄2″	2-30 LPM	0.5-8 GPM	35	500
F	025		1″	6-120 LPM	1.6-32 GPM	35	500
	040	1	1 1⁄2″	10-250 LPM	2.64-66 GPM	35	500
	050	1	2″	15-500 LPM	4-132 GPM	35	500
		F	<sup>-</sup> rocess C	onnection			
		Ĩ	1	BSP (Rp)			
			2	NPT			
			3	NPT-Litre Calibrati	on		]
				Rotor Type			
				S	Standard		
					Output Type		
					3	Standard Duty Mecha	anical Register
					4	Heavy Duty Mechanic	cal Register
F	025	-	1	S	3		-



The 'S' range from Macnaught are positive displacement oval gear flowmeters that are optimised for solvent and high temperature fuel and oil measurement applications.

Macnaught Solvent Flowmeters are constructed utilising a robust aluminium body suitable for use in the harshest environments. Solid construction and excellent dynamic response mean the 'S' series meters are well suited to the measurement of many solvents as well as other non-abrasive lubricating fluids. The 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.

With a range of display, output and process connection options, Macnaught MX Series solvent flowmeters are the perfect choice for a variety of applications.

### **Applications**

- Industrial paints and coatings
- Ink blending & dispensing
- Sealants & adhesives manufacturing
- Agrochemical production
- Cleaning chemical manufacturing & production
- High temperature fuel oil measurement for industrial and marine applications

### Features

Designed and Manufactured in Australia

- Quality is controlled from concept to completion by Macnaught
- Shorter lead times and improved flexibility
- 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
- Intrinsically safe for use in hazardous areas

### Aluminium Body

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

### 316SS Rotors (1/4" - 1")

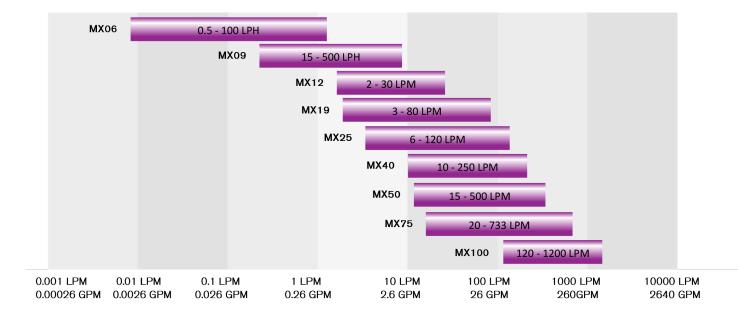
- Aluminum (1<sup>1</sup>/<sub>2</sub>" 4")
- Low Pressure Drop
- Quiet Operation
- Simple Repairs
- High Temp Operation (120ºC/248ºF)

Modular End Connections (3" & 4" models)

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

# solvent flow meters

-	Model	-	Flow	Range	Max Working	Max Working	
Series	No,	Size	Litres	USG	Pressure (bar)	Pressure (PSI)	
	06	1/4″	0.5 - 100 LPH	0.13 - 26.4 GPH	69	1000	
	09	1/4″	15 - 500 LPH	4 - 132 GPH	69	1000	
	12	1/2″	2 - 30 LPM	0.5 - 8 GPM	138	2000	
	19	3/4″	3 - 80 LPM	0.8 - 21 GPM	138	2000	
MX	25	1″	6 -120 LPM	1.6 - 32 GPM	138	2000	
	40	<b>1</b> ½″	10 - 250 LPM	2.64 - 66 GPM	103	1500	
	50	2″	15 -500 LPM	4 - 130 GPM	83	1200	
	75	3″	20 - 733 LPM	5 - 194 GPM	12	175	
	100	4″	120 - 1200 LPM	31.7 - 317 GPM	12	175	
			Process Connecti	on			
			1	BSP (Rp)			
			2	NPT		Models	; 06 - 100
			3	ANSI #150			
			4	JIS 10K	1	Model	s 25-100
			5	DIN PN16	1		
				Rotor Type	-		
				S	Standard	PPS Rotors	
				V	High Viscosity	Models 09-100	only
					Output Type		-
					A	Standard pulse: 1	x Reed & 1 x Hall Effect Sensor
					B	1 1	N Open collector (models 06-50 only)
					N	,	Namur coil (models 06-50 only)
					Т		ire; NPN open collector
					D	PR; 12mm LCD	
					E		D, rate & totals, outputs
					E	ER; 17mm LCD	
					G		rate & totals, outputs
					H		D, batch controller
мх	25	S -	3	S	E	•	Example finished model number



The 'P' range from Macnaught are positive displacement oval gear flowmeters that are designed to cover a broad range of industrial fluid measurement applications. With versions covering high temperature, as well as hazardous locations, there is a Macnaught Industrial flowmeter to fit virtually any industrial liquid measurement requirement.

Macnaught Industrial Flowmeters are constructed utilising a robust stainless steel 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.

Our unique rotor design allows for 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.

### **Applications**

- Chemical batching
- Additive injection
- Hydraulic test stands
- High temperature chemical processes
- High pressure chemical processes
- Food and beverage batch processes
- Ethanol blending and production
- Pulp and paper

### **Features**

Designed and Manufactured in Australia

- Quality is controlled from concept to completion by Macnaught
- Shorter lead times and improved flexibility
- 2 years 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
- Intrinsically safe for use in hazardous areas

### 316SS Body

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

### **Bearingless PPS Rotors**

- Standard (1/4" 2")/SS (3")
- Minimise Wear
- Low Pressure Drop
- Quiet Operation
- Simple Repairs
- Reduced Friction

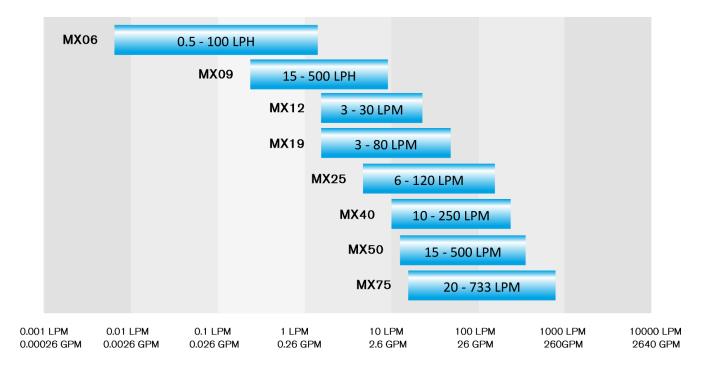
### Modular End Connections (3" model)

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

Strainers and Air Eliminators Available

# industrial flow meters

	Model	-	Flow	Range	Max Working	Max Working	
Series	No,	Size	Litres	USG	Pressure (bar)	Pressure (PSI)	
	06	1/4″	0.5 - 100 LPH	0.13 - 26.4 GPH	69	1000	
	09	1/4″	15 - 500 LPH	4 - 132 GPH	69	1000	
	12	1⁄2″	3 - 30 LPM	0.5 - 8 GPM	138	2000	
МХ	19	3⁄4″	3 - 80 LPM	0.8 - 21 GPM	138	2000	
	25	1″	6 -120 LPM	1.6 - 32 GPM	138	2000	
	40	<b>1</b> ½″	10 - 250 LPM	2.64 - 66 GPM	103	1500	
	50	2″	15 -500 LPM	4 - 130 GPM	83	1200	
	75	3″	20 - 733 LPM	5 - 194 GPM	12	175	
			Process Connecti	on			
			1	BSP (Rp)		N.4	00.75
			2	NPT	1	IVIOdel:	s 06 - 75
			3	ANSI #150			
			4	JIS 10K	1	Mode	ls 25-75
			5	DIN PN16			
				Rotor Type			
				S	Standard	PPS Rotors (mod	els 06 - 50)
				V	High Viscosity	Models 09-50 c	pnly
				Т	High Temp	Standard on 3"	
					Output Type		
					A	Standard pulse; 1	x Reed & 1 x Hall Effect Sensor
					В		NPN Open collector
					N	Intrinsically Safe	Namur coil
					Т	High Temperatu	re; NPN open collector
					D	PR; 12mm LCD	, rate & totals
					E	PRA; 12mm LC	D, rate & totals, outputs
					F	ER; 17mm LCD	, rate & totals
					G	ERA;17mm LCE	D, rate & totals, outputs
					Н	ERB; 17mm LC	D, batch controller
мх	25	P -	1	S	A		Example finished model number



## corrosive chemical flow meters

The 'CR' range from Macnaught are a family of positive displacement oval gear flowmeters that are optimised for corrosive chemical measurement applications.

Macnaught Corrosive Chemical meters are constructed utilising a PPS blend suitable for use in aggressive chemical environments.

Our unique bearingless Rotor design provides exceptionally low pressure drop and can even be used in gravity fed applications. This unique rotor design utilises PPS blended advanced material, ensuring minimal wear and 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.

The positive displacement meter technology provides excellent batch accuracy (0.03% repeatability) and is not affected by pulsating flow, high viscosity, or low conductivity. This technology is also ideal for dispensing and dosing at extremely low flow rates and small batch sizes.

Oval Gear flowmeters do not require any flow conditioning or straight piping runs before or after the meter, so they can be installed in tight spaces without any sacrifice in performance.

With 9 digital display options to choose from, Macnaught flowmeters are the perfect choice with outputs and displays to suit virtually any application requirement.

### **Applications**

- Laundry chemicals
- Additive injection
- Water treatment
- Corrosive chemical dispensing
- Chemical batching
- Chemical packaging and blending

### **Technical Specifications**

Materials of construction

- Meter Body
  - PPS Blend (Type CR)
- Rotor Materials
  - PPS Blend (Type CF
- Seal Material
  - Perfluoro Elastomer

### Compliance (as applicable)

- Meters
  - CE (Certificate of Conformity)
- Displays (remote mount only)
  - ATEX
  - IECEx

### **Display Options**

- 12mm LCD digital display
- 17mm LCD digital display

#### Outputs options

- 4-20mA
- Transistor
- Pulse Output
- Alarn

### **Total Flow Range**

- 0.008 80 L/min
- 0.002 21 USG/min

# corrosive chemical flow meters

Cardan		Nominal	Flow Range		Max Working	Max Working
Series	Model	Size	LPH	GPH	Pressure (bar)	Pressure (PSI)
	006	1/4″	0.5 - 100 LPH	0.13 - 26.4 GPH	5	75
CR	009	1/4″	15 - 500 LPH	4 - 132 GPH	5	75
	025	1″	3 - 80 LPM	0.8 - 21 GPM	10	150
		Port Type				
		2	NPT			
		4	BSP (Rc)			
			Rotor Type			
			S	Standard		
				Display Type		
				1	Electronic Pulse N	leter (Reed & Hall Effect)
				2	Reed Switch Only	(Hazardous Locations)
CR	009 -	4	S	1	CR009-4S1	Example model





The 'MH' range from Macnaught are positive displacement oval gear flowmeters that are designed to cover high pressure industrial fluid measurement applications. With versions covering high temperature and hazardous locations, there is a Macnaught high pressure flowmeter to fit virtually any requirement.

Macnaught High Pressure Industrial Flowmeters are constructed utilising a robust stainless steel body suitable for use in the harshest environments. Our 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.

### **Applications**

- Chemical batching
- Additive injection
- Hydraulic test stands
- High temperature chemical processes
- High pressure chemical processes
- Food and beverage batch processes
- Ethanol blending and production
- Pulp and paper

### Features

### Designed and Manufactured in Australia

- Quality is controlled from concept to completion by Macnaught
- Shorter lead times and improved flexibility
- 2 years 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

### 316SS Body

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

### Bearingless PPS Rotors

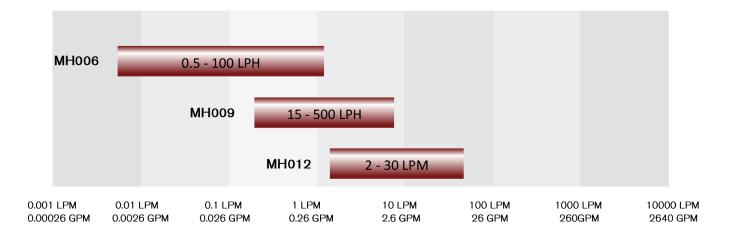
- Standard (1/2")/SSteel (1/4")
- Minimise Wear
- Low Pressure Drop
- Quiet Operation
- Simple Repairs
- Reduced Friction

#### Strainers Available

# high pressure flow meters

		Nominal	Flow	Range	Max Working	Max Working
Series	Model	Size	Litres	USG	Pressure (bar)	Pressure (PSI)
	006	1/4″	0.5 - 100 LPH	0.13 - 26.4 GPH	550	8000
MH	009	1/4″	15 - 500 LPH	4 - 132 GPH	550	8000
	012	1/2″	2 - 30 LPM	0.5 - 8 GPM	200	3000
		Port Type				
		1	NPT			
		2	BSP (Rc)			
			Rotor Type			
			V	High Viscosity (009	9 & 012 only)	
			Т	High Temperature (st	andard 006 & 009)	
				Display Type		
				1	Hall-Effe	ct Output
				2	Reed Switch Only	(Hazardous Locations)
МН	009 -	1	v	1	MH009-1V1	Example model





# lube oil flow meters

Incorporating Macnaught's oval gear technology, robust construction and quality register designs. This range of 1/2 and 3/4 inch in-line oil meters offers clean and accurate fluid measurement for most oil handling applications.

These meters have been designed specifically to dispense lubricating oils, diesel and kerosene. These high pressure, positive displacement-type meters are suitable for all in-line and end-of-line applications and feature a rugged and robust register.

These Flow Meters have incorporated the oval rotor principal into its design. This has proven to be a reliable and highly accurate method of measuring flow.

Exceptional repeatability and high accuracy over a wide range of fluid viscosities and flow rates are features of the oval rotor design. With a low pressure drop and high pressure rating oval rotor flow meters are suitable for both gravity and pump (in line) applications.

In-line oval gear flow meters offer fast and accurate fluid measurements for most oil applications. Mechanical and digital displays showing both cumulative and push-button reset batch totals and the pulse output version are also available if remote data is required.

### **Applications**

- Oils up to SAE 140
- Automatic Transmission Fluid
- Engine oil
- Gear oil
- Hydraulic oil
- Coolant
- Diesel
- Kerosene

### **Features**

### Mechanical

- Easy to read 4 digit batch total display
- 7 digit accumulative totalizer
- Protective shroud included

### Electronic

- Sleep mode to conserve battery life and EEPROM retention to save accumulated information
- Switch between resettable batch total, non-resettable total or cumulative display options
- Face can be fitted at 90° increments
- Easy to read 6 digit LC display
- Protective shroud included

### Pulse

Pulse for remote connection

In-Line Oil Meters	IM012M	IM012E or IM012P	IM019E or IM019P
Flow Bongo	½″ NPT	½″ NPT	¾″ NPT
Flow Range	1-30 LPM	1-30 LPM	3-80 LPM
Pressure	0.26-8 GPM	0.26-8 GPM	0.8-21 GPM
Flessule	1000 PSI	1000 PSI	1500 PSI
	Mechanical	Digital or Pulse	Digital or Pulse
Display or Outputs	4 Digit Reset	6 Digit Batch	6 Digit Batch
	7 Digit Cumulative	& Cumulative Totals	& Cumulative Totals
Accuracy	±1%	±0.5%	±0.5%
Temperature °C	-14°C - 55°C	-14°C - 55°C	-14°C - 55°C
۴F	6.8°F - 131°F	6.8°F - 131°F	6.8°F - 131°F
Weight	0.5kg/1.1lb	1kg/2.2lb	1kg/2.2lb
Fluids	Oils up to SAE 140, A	utomatic Transmission	Fluid, engine oil, gear
Fiulas	oil, hydrau	ulic oil, coolant, diesel &	kerosene





	TYPE A	TYPE B	TYPE N	TYPE T
Pulser	the second secon			
Туре	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	120ºC/248ºF	85ºC/185ºF	85ºC/185ºF	150ºC/302ºF
Intrinsically Safe (Ex ia)	x	$\checkmark$	$\checkmark$	x
Approvals		ATEX, CSA, FM II I G Ex ia IIC T6	ATEX, IECEx II G Ex ia IIC T4T6 Ga II 1 D E x ia IIIC T115ºC Da	

# digital displays

	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	60ºC/140ºF	60ºC/140ºF	80ºC/176ºF	80ºC/176ºF	80ºC/176ºF
Accumulated Total	$\checkmark$	~	$\checkmark$	$\checkmark$	$\checkmark$
Resettable Total	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Flow Rate	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
4-20 mA (passive)	x	$\checkmark$	Х	$\checkmark$	x
Pulse Output	x	$\checkmark$	Х	$\checkmark$	x
Hi/Low Flow Alarm	x	$\checkmark$	Х	x	x
Batch Control	х	x	Х	x	$\checkmark$
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	х	$\checkmark$	$\checkmark$	$\checkmark$
Approvals			ATEX, IECEx	ATEX, IECEx	ATEX, IECEx

### **PRECISION ADDITIVE INJECTOR**

The Macnaught Precision Additive Injector is designed to facilitate the accurate blending of fluids within a variety of mainstream industrial processes.

The modular design, consisting of an Oval Gear Flowmeter, solenoid valve and inline filter, acts as primary element to the blending process, with a focus on ease of both installation and serviceability.

The Macnaught module delivers two distinct advantages: bridging performance and flexibility.

The first being high accuracy and reliability, ensuring consistent end-product quality and precise inventory management.

In addition Macnaught offers a tailored solution specific to the end-user requirements. These may span the dispensing of chemicals, high viscosity fluids, through to those applications requiring 'Ex' approvals.

### **Typical Applications**

- Fuel additives
- Fuel blending
- Chemical dosing
- Dye and ink injectors

### **ERB-PM BATCH CONTROLLER**

The ERB-PM is a high speed batch controller offering both single stage and two stage batching capabilities.

With an easy to read LC display, a clear and precise programming structure accessed via a numerical keypad, the ERB-PM presents the operator with a device that is simple to use and specifically designed to endure the rigours of industrial use.

### Features

- DIN Panel mount enclosure with a robust Aluminium front cover (IP67)
- Remote control inputs START, HOLD and RESUME
- Universal AC/DC power supply 24vdc / 110-230vac
- Sensor supply 8, 12 and 24vdc
- Automatic overrun protection
- Outputs include 2x field replaceable mechanical relay and 1x transistor output
- 7 digit (14mm) display for actual value, flow rate, and total
- 10 digit (8mm) display for pre-set value, measurement units





Balana kanangkuman (dat in Tahyi (BBC (B) (d)) ann ghannagkuman	• F 0 🖄	
macnaught	Burch.	
abour Un ME Fire bleve Serves. Doglay & Polen Hild die.	Tash Setteral Decommune Coston (In	
Interactive Web Based Tools		
Assist the user in selecting the most suitable flow meter fo These tools include the Automated Flow Merer Selection To	e their particular application pol. Technical Specification. Tool and the Conversion Tool.	
ΨΨ		
Selection Took	Specification Tool	
The Automatic Paper New Section T and is a web (seek analysis that any other war with straining a subarts from more excepting in the general approxima- regularities).	The laps/hotes "last subject a competencies document instance (in factors) for factors (percharations for any 10x flow mean mean, including the service into available for the satisfied reads).	
	<b>*</b>	
Conversion Tool	Serial Number Search Tool	
The Conversion Floot will asset the varies to bandloom given the provide single of transmapped the State Assets to the Aser sample of the study (CTS). Since Table Tables trades	The facts runner face has been as and the car is dentifying the mode runner of their home particles.	
L		

Macnaught has a number of interactive web based tools available to assist users in selecting the most suitable flowmeter for their particular application. At www.macnaughtflowmeasurement.com.au you will find a wealth of information at your disposal.

Our web based tools assist the user in selecting the most suitable flow meter for their particular application. These tools include the Automated Flow Meter Selection Tool, Technical Specification Tool and the Conversion Tool.

### **Selection Tool**

The Automated Flow Meter Selection Tool is a web based selection tool that assists the user with selecting a suitable flowmeter model according to the specific application requirements.

### **Specification Tool**

The Specification Tool outputs a comprehensive document detailing the technical specifications for any MX Flowmeter model, including the service kits available for the selected model.

### **Conversion Tool**

The Conversion Tool will assist the user in transitioning from the previous range of Macnaught Flowmeter models to the new range of Macnaught MX Series Flowmeter Models.

### **Serial Number Search Tool**

The Serial Number Search Tool will assist the user in identifying the model number and K-Factor of their Macnaught Flowmeter.



Macnaught Pty Ltd 41-49 Henderson Street Turrella NSW 2205

Macnaught USA Inc 614 South Ware Boulevard Tampa, Florida, 33619, USA

Macnaught Europe Kloosterstraat 55, 6004KM Weert, The Netherlands Ph: +61 2 9567 0401 Fax: +61 2 9597 7773 E-mail: sales@macnaught.com.au

Ph: +1813 628 5506 Fax: +1509 694 8495 E-mail: info@macnaughtusa.com

Ph: +31 (0) 495 763 972 E-mail: info@macnaughteurope.com



### www.macnaughtflowmeasurement.com.au