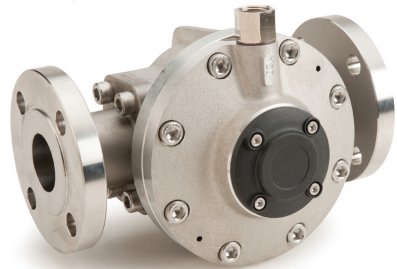


**Trimec** medium capacity flowmeters provide precise volumetric flow measurement of clean liquids found in a broad range of industries including automotive, aviation, mining, power, chemical, pharmaceutical, food, paint & petroleum. Applications include the distribution of fuels, fuel oils, lubricants, alcohols, solvents, blending of bio & ethanol fuels, metering of chemicals, grease, adhesives, ink, insecticides & non-conductive liquids either pumped or gravity fed.

## Features / Benefits

- High accuracy & repeatability, direct reading flowmeter
- No requirement for flow conditioning (*straight pipe runs*)
- Measures high & low viscosity liquids
- Quadrature pulse output option & bi-directional flow
- Optional Exd I/IIIB approval (ATEX, IECEx)
- Only two moving parts



## General specification

Flow rates: 1 - 500 litres/min. (0.26 - 130 US gal/min) \*

Sizes: 15 - 50mm (1/2" - 2")

Materials: Aluminum, 316 Stainless steel, PPS (MG025P)

\* see also *small & large capacity data sheets for other size meters*

## Meter selection

- **Aluminum** meters are used for petroleum products including oils and grease, fuels and fuel oils.
- **Stainless steel** meters are for chemicals, cosmetic, food and pharmaceutical industries, water base liquids or where aluminum is not suited or permitted.
- **Blind pulse** meters are available with reed switch & Hall Effect outputs. Quadrature pulse outputs and Integral 4-20mA are optional.



## Integral instruments

**Trimec** meter options include integral LCD totalisers, flow rate totalisers & batch controllers. These instruments provide monitoring & control outputs including 4~20mA, scaled pulse, alarms & batch control:

- FRT LCD 7 digits flow rate, total, accumulated total, alarm values and preset totalisers
- RT12 LCD 8 digit reset, cumulative totaliser, analogue and pulse outputs.
- RT40 LCD 6 digit reset, cumulative totaliser & flow rate. Backlit display.
- EB10 LCD 6 digit 2 stage batcher & cumulative totaliser.

(Instruments also available for remote mounting and with I.S. approvals)

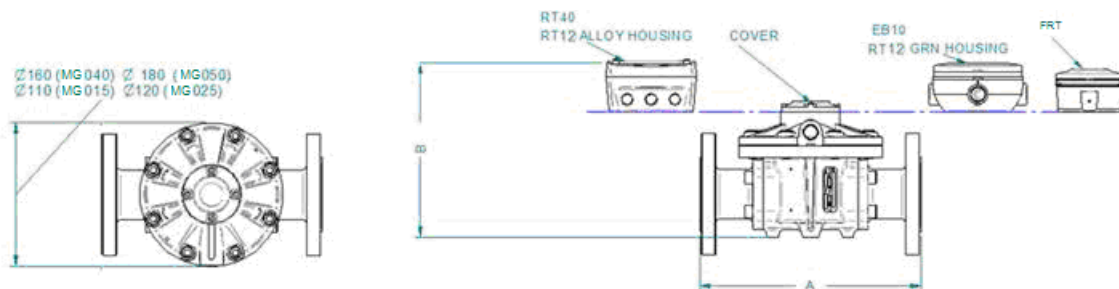
## Specifications

Model prefix :	MG015	MG025	MG040	MG050
Nominal size ( inches )	15mm (1/2")	25mm (1")	40mm (1.5")	50mm (2")
*Flow range - (LPM) litres/min	1 - 40	10 - 150	15 - 250	30 - 500 <sup>^</sup>
- (GPM) US gal/min	0.26 - 10.6	2.6 - 40	4 - 66	8 - 130 <sup>^</sup>
Accuracy @ 3cp	± 0.5% of reading (± 0.2% of reading with optional RT12 with non-linearity correction)			
Repeatability	typically ± 0.03% of reading			
Temperature range - AL, S/S meters	-30°C - +120°C (-22°F - +250°F)			
Temperature range - PPS meter	-30°C - +80°C			
Maximum pressure	(Threaded meters) bar (PSI)			
Aluminium meters	68 (990)	68 (990)	30 (435)	20 (285)
316 stainless steel meters	68 (990)	68 (990)	30 (435)	38 (550)
PPS meters	-	5 (70)	-	-
Intermediate pressure S/S meter	100 (1450)	100 (1450)	50 (725)	50 (725)
High pressure S/S meter	400 (5800)	400 (5800)	400 (5800)	300 (4350)
Electrical - for pulse meters (see below for optional outputs)				
Output pulse resolution	pulses/litre (pulses/US gallon) - nominal			
Reed Switch	84 (318)	27 (102)	14 (53)	6.5 (25)
Hall Effect	168 (636)	107 (405)	56 (212)	26 (99)
Quadrature Hall option	168 (636)	54 (204)	28 (106)	13 (49)
Reed Switch output	30Vdc x 200mA max. (maximum thermal shock 10°C (18°F)/minute)			
Hall Effect output (NPN)	3 wire open collector, 5~24Vdc max., 20mA max.			
Optional outputs	4~20mA, scaled pulse, quadrature pulse, flow alarms or two stage batch control			
Physical				
Protection class	IP66/67 (NEMA4X), optional Exd I/ IIB T4/T6, integral ancillaries can be supplied I.S. (intrinsically safe)			
Overall dimensions	Refer Below			
Recommended filtration	150 microns (100 mesh)			

\* Maximum flow is to be reduced as viscosity increases, see flow de-rating guide. Max. recommended pressure drop is 1 Bar (14.5 psi).

<sup>^</sup> PPS rotors (max. flow rate for SS rotors is 450 l/min (120 USgal/min)).

## Over all Dimensions:



Dimensions (±2mm)

Modular Fitting	A					Configuration	B						
	MG015	MG025	MG025	MG040	MG050		MG015	MG015	MG025	MG025	MG040	MG040	MG050
		A	S				A	S	A/P	S	A	S	
Flanged	189	198	237	252	277	EB10 / RT14 GRN Housing	154	148	168	165	203	194	218
						FRT	145	139	160	157	198	186	210
Threaded	110	137	176	188	212	RT40	157	151	171	168	206	197	221
						Cover	106	100	123	117	155	146	170

## Model Coding

Meter size			
<b>M G015</b>	15mm (1/2")	1-40 L/min	0.26-10.6 GPM
<b>M G025</b>	25mm (1")	10-150 L/min	2.6-40 GPM
<b>M G040</b>	40mm (1 1/2")	15-250 L/min	4-66 GPM
<b>M G050</b>	50mm (2")	30-500 L/min	8-130 GPM

Body material	
<b>A</b>	Aluminum
<b>S</b>	316 stainless steel
<b>P</b>	PPS (M G025) -only available with PPS rotors
<b>N</b>	Intermediate press. 316 SS meter (M G015N - 025N = 100bar (1450 PSI), M G040N - 050N = 50bar (725 PSI) max.)
<b>H</b>	High pressure 316 SS (M G025H - 040H = 400bar (5580 PSI) max., M G050H = 300bar (4350 PSI) max.)

Rotor material / Bearing type	
<b>0 0</b>	PPS (not available for 150 °C meters) / No bearing
<b>1 0</b>	Keishi cutting of PPS (for high viscosity liquids)(not available for 150 °C meters) / No bearing
<b>5 1</b>	Stainless Steel / Carbon Ceramic
<b>7 1</b>	Keishi cutting of stainless steel (for high viscosity liquids) / Carbon Ceramic

O-ring material	
<b>1</b>	Viton (standard) -15 - +200°C (-5 - +400°F)
<b>3</b>	Teflon encapsulated viton - application specific, -15 °C min
<b>4</b>	Buna-N (Nitrile) -40 - +100°C (-53 - +212°F)

Temperature limits	
<b>2</b>	120°C (250°F) - max.
<b>3</b>	150 °C (300°F) max. - (Hall Effect output only, (Includes SS terminal cover)
<b>5</b>	*120 °C (250°F) max. (Includes integral cooling fin)
<b>8</b>	^80°C (176°F) max. (Meters with integral instruments and M G025P)

Process connections	
<b>0</b>	No fittings (025-050)
<b>1</b>	BSPP Female threaded
<b>2</b>	NPT female threaded
<b>3</b>	Tri-clamp ferrules (1/2" larger than meter size)
<b>4</b>	ANSI-150 RF flanges
<b>5</b>	ANSI-300 RF flanges
<b>6</b>	PN16 DIN flanges
<b>9</b>	Customer nominated

Cable entries	
<b>0</b>	M 16 x 1.5mm (exclusive to FRT Rate Totaliser) or no cable entry (025P)
<b>1</b>	M 20 x 1.5mm (M 16 x 1.5mm for R4 option)
<b>2</b>	1/2" NPT Adaptor

Integral options	
<b>00</b>	Nil
<b>SS</b>	Stainless steel terminal cover
<b>RS</b>	Reed Switch only - to suit Intrinsically Safe installations
<b>E1</b>	Explosion proof ~ Exd IIB T4/T6 (aluminium & stainless meters)
<b>E2</b>	Explosion proof ~ Exd I IIB T4/T6 (stainless meters only)
<b>QP</b>	Quadrature pulse (2NPN phased outputs)
<b>Q1</b>	Explosionproof Exd (with quadrature pulse but n/a with HP meter)
<b>F1</b>	*^AFRT-00 Flow Rate Totaliser
<b>F2</b>	*^AFRT-AP Flow Rate Totaliser
<b>F3</b>	*^AFRT-ALP Flow Rate Totaliser
<b>F4</b>	*^AFRT-BC Flow Rate Totaliser
<b>R2</b>	*^ART12 Flow Rate Totaliser with all outputs (GRN housing)
<b>R3</b>	*^Intrinsically safe RT12 (I.S.)(GRN housing)
<b>R4</b>	*^ART140 backlit rate totaliser (Alloy housing with facia protector)
<b>R5</b>	*^ART14 backlit rate totaliser with all outputs (GRN housing)
<b>E0</b>	*^EB10 batch controller
<b>420</b>	Loop powered 4 ~ 20mA analog output
<b>SB</b>	Specific build requirement

IECEx & ATEX approved
IECEx & ATEX mines approved
IECEx & ATEX approved
No output - display only
4-20mA output proportional to flowrate & scaled pulse output
Alarm and/or scaled pulse output
2 stage batch control
Scaled pulse, alarm, 4 ~ 20mA
IECEx & ATEX approved
Scaled pulse + backlighting
2 stage DC batcher and totaliser

Model No. Example

<b>M G025</b>	<b>S</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>R2</b>
---------------	----------	----------	----------	----------	----------	----------	----------	-----------

(refer factory for model availability)

\* Temp code 5 required when operating temperature is between 80 °C (180 F) and 120 °C (250 F).

^ Temp code 8 required for all integral instruments.

DSMG – 1803

Unit 2, The Old Grain Store, Ditchling Common Industrial Estate, Ditchling, East Sussex, BN6 8SG, United Kingdom  
Tel: 01444 248777, Fax: 01444 243750, sales@trimec-europe.com