

Multipulse Gear - Medium Capacity

Positive Displacement Flowmeters



The Multipulse range of positive displacement flowmeters offer a high level of accuracy and repeatability. These precision meters are used for flowrate measurement in flow monitoring and control applications and for totalising in dispensing and batching. Multipulse meters are suitable for use with a wide range of clean liquids including viscous lubricants, chemicals, food bases and non-conductive low viscosity solvents either pumped or gravity fed.

FEATURES / BENEFITS

- Flows: 10~450 litres/min (2.6 ~120 US gal/min)
- Size: 25 & 50mm (1" & 2" process connections)*
- High accuracy & repeatability
- No requirement for flow conditioning (straight pipe runs etc)
- Stainless steel or aluminum models
- Intrinsically safe & explosionproof models available
- Quadrature pulse output option & bi-directional flow

* see also Micropulse & Maxipulse data sheets for other size meters & flow ranges

METER SELECTION

Meters are selected based on flow range, pressure, temperature, material compatibility and functionality.

- **Aluminum** Multipulse meters are ideal for petroleum products including oils and grease, fuels and fuel oils.
- **Stainless steel** meters are suited for chemicals, water based products and the food, cosmetic and pharmaceutical industries.
- **Multipulse** meters are available as blind meters with pulse output or with integral or remote totalisers, flow rate displays or preset batch controllers.
- **Pulse meter** outputs can be interfaced to most electronic displays or instrumentation.

APPLICATIONS INCLUDE

chemicals, additives, resins, acids, alcohols, essences, edible oils, flavourings, food bases, perfumes, adhesives, emulsions, insecticide, paints, inks, oils, fuels, grease, solvents, lubricants



Patents applicable

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Specifications

Model prefix :	MG025	MG050
Nominal size (inches)	25mm (1")	50mm (2")
* Flow range (litres / min)	10 ~ 150	30 ~ 450
* Flow range (USgal / min)	2.6 ~ 40	8 ~ 120
Accuracy @ 3cp	± 0.5% of reading (± 0.2% with optional RT12)	
Repeatability	typically ± 0.03%	
Temperature range	-20°C ~ +120°C (-4°F ~ +250°F)	
Maximum pressure (threaded meters)		
aluminium	68 bar (1000 psig)	20 bar (300 psig)
316L stainless	100 bar (1500 psig)	38 bar (560 psig)
high pressure stainless	refer factory for options	
Protection class	IP66/67 (NEMA4X), optional Exd IIB T6 or I.S.	
Recommended filtering	150 microns (100 mesh) minimum	
Electrical - for pulse meters (see also optional outputs)		
Output pulse resolution :	pulses / litre (pulses / US gallon) - nominal	
Reed switch	27 (102)	6.5 (25)
Hall effect	107 (405)	26 (99)
Quadrature Hall option	53.5 (203)	13 (50)
Reed switch output	30Vdc x 200mA max. (max. temp. shock 10°C (50°F) / min)	
Hall effect output (NPN)	3 wire open collector, 5-24Vdc max., 20mA max.	
Optional functions		
Display	flowrate, total (accumulative & resettable)	
Preset batching	1 & 2 stage high speed batch control	
Optional outputs		
Flow	4 ~ 20mA, high & low flow rate alarms	
Pulse	scaled pulse (programmable) , pulse amplifier	

* Maximum flow is to be reduced as viscosity increases, max. pressure drop 100Kpa (15psi)

Model coding

MG025	25mm (1")
MG050	50mm (2")

Body material

A	Aluminum
S	316 Stainless Steel
H	High pressure stainless

Rotor material

4	Aluminum
5	Stainless steel
9	Application specific

Bearing type

1	Ceramic (SS rotors)
4	Hardened steel roller bearings (Alum. rotors)

O-ring material

1	Viton (standard) -15~+200°C (-5~+400°F)
2	Ethylene Propylene Rubber -150°C (300°F) max.
3	Teflon encapsulated viton -150°C (300°F) max.
4	Buna-N (Nitrile) -65~+100°C (-53~+212°F)

Temperature limits

2	120°C (250°F) - see note 1
5	120°C (250°F) - see note 2

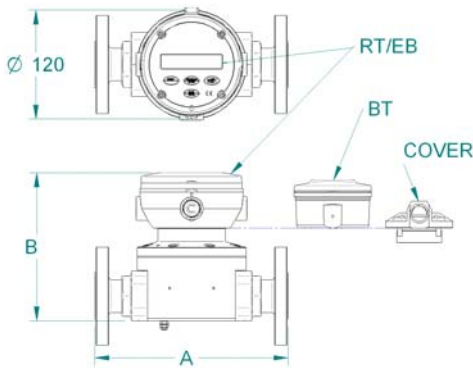
Process connections

1	BSP female threaded
2	NPT female threaded
4	ANSI-150 RF flanges
5	ANSI-300 RF flanges
6	PN16 DIN flanges
9	Customer nominated

Cable entries

with B2/B3 options only	
0	3-6mm cable gland
1	M20 x 1.5mm
2	1/2" NPT

DIMENSIONS



ALL DIMENSIONS IN MILLIMETERS +/- 2

Modular Fitting	A		Configuration	B	
	MG025	MG050		MG025	MG050
A.N.S.I. 150	213	300	RT/EB REGISTER	164	208
DIN 16	213	300	BT REGISTER	155	200
JIS 10K	213	300	COVER	132	177
B.S.P.	152	236			
N.P.T.	152	236			

INTEGRAL AND REMOTE INSTRUMENTS



Integral Instruments



Dual Totaliser



Panel Instruments



Preset
Batcher

Rate
Totaliser

Model No. Example

MG025 A 4 4 1 - 5 1 1 R2

glass reinforced nylon (GRN)	GRN terminal cover (std.)
	AL Aluminum terminal cover
	SS Stainless terminal cover
2 NPN open collector phased outputs	QP Quadrature pulse output
IECEX & ATEX approved	E1 Explosion proof ~ Exd
IECEX & ATEX approved	Q1 Exd with Quadrature pulse
accum. & reset totals, pulse output	B2 BT11 dual totaliser
IECEX & ATEX approved	B3 Intrinsically safe BT11 (I.S.)
flow rate, totals & all outputs	R2 RT12 Flow Rate Totaliser
IECEX & ATEX approved	R3 Intrinsically safe RT12 (I.S.)
dc 2 stage batch controller	E0 EB10 batch controller
consult factory	SB Specific build requirement

(1) 120°C (250°F) rating of the pulse meter, 80°C (180°F) rating with BT, RT & EB options.

See temperature code 5 for higher temperature with BT, RT, & EB

(2) Cooling fin is fitted with integral instruments for operation between 80-120°C (180-250°F)

Recommended strainers (air eliminators available)

ST025S1	25mm (1") - 316SS
ST050S1	50mm (2") - 316SS



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