



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:** 1~150 litres/min (0.26 ~40 US gal/min)
- **Sizes:** 15, 25 & 50mm (1/2", 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



SCHWING Verfahrenstechnik GmbH

Postfach 10 12 52
47497 Neukirchen-Vluyn
Oderstr. 7
47506 Neukirchen-Vluyn
Germany

Telefon: #49 (0) 2845 930-0
Telefax: #49 (0) 2845 930-100
<http://www.schwing-pmt.de>
E-Mail: mail@schwing-pmt.de

Based on the continuous improvement of the products and new developments all technical data in this brochure can change any time, prior to any further notification.

Specifications

Model prefix :	MG015	MG025	MG050
Nominal size (inches)	15mm (1/2")	25mm (1")	50mm (2")
* Flow range (litres / min)	1 ~ 40	10 ~ 150	30 ~ 450
* Flow range (USgal / min)	0.26 ~ 10.6	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)	Bar (psig)		
aluminium	68 bar (1000)	68 bar (1000)	20 bar (300)
316L stainless	68 bar (1000)	100 bar (1500)	38 bar (560)
high pressure stainless	400 bar (5580)		
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	83 (314)	27 (102)	6.5 (25)
Hall effect	166 (628)	107 (405)	26 (99)
Quadrature Hall option	166 (628)	53.5 (203)	13 (50)
Reed switch output	30Vdc x 200mA max. (max. temp. shock 10°C (18°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

MG015	15mm (1/2")
MG025	25mm (1")
MG050	50mm (2")

Body material

A	Aluminium
S	316 Stainless Steel
H	High pressure stainless

Rotor material

4	Aluminium
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

Model No. Example

MG025	A	4	4	1	5	1	1	R2
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Integral options

glass reinforced nylon (GRN)		GRN terminal cover (std.)
	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.)
Large backlite LCD digits	R4	RT20 Flow Rate Totaliser
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)

Recommended strainers (air eliminators available)

ST015S1	15mm (1/2") - 316SS
ST025S1	25mm (1") - 316SS
ST050S1	50mm (2") - 316SS



Integral and Remote Instruments



Preset Batcher

Rate Totaliser



Batch Totaliser



Integral Instruments



Panel Instruments