

Maxipulse Gear - Large Capacity

Positive Displacement Flowmeters



The Maxipulse 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. Maxipulse meters are suitable for use with a wide range of clean liquids including viscous lubricants, fuel oils and fuels or non-conductive low viscosity solvents either pumped or gravity fed.

FEATURES / BENEFITS

- Flows: 50~1500 litres/min (13 ~400 US gal/min)
- Size: 80mm and 100mm (3" & 4" process connections)*
- High accuracy & repeatability
- No requirement for flow conditioning (straight pipe runs etc)
- Simple to install, easy to service (low number of parts)
- Intrinsically safe & explosionproof models available
- Quadrature pulse output option & bi-directional flow

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

METER SELECTION

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

- **Maxipulse Gear meters** meters are ideal for bio-diesels and petroleum derivatives such as oils, grease, fuels and fuel oils.
- **Maxipulse** 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. The reed switch is used when external power is not available and can be used in intrinsically safe loops. The output from the hall sensor is an NPN open collector providing high speed solid state pulses ideal for precise dispensing and batch control.

APPLICATIONS INCLUDE

Fuels, oils, grease, lubricants, additives, alcohols, insecticide, solvents, inhibitors and some emulsions & oil based paints.



PED
97/23/EC



Patents applicable

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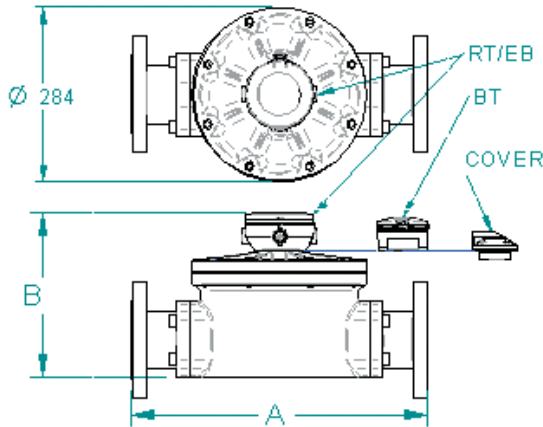
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Specifications

Model prefix :	MG80H	MG100
Nominal size (inches)	80mm (3")	100mm (4")
* Flow range (litres / min)	50 ~ 1000	75 ~ 1500
* Flow range (gal / min)	13 ~ 260	20 ~ 400
Accuracy @ 3cp	± 0.2% of reading (15:1 turndown) ± 0.5% for 20:1	
Repeatability	typically ± 0.03%	
Temperature range	-20°C ~ +120°C (-4°F ~ +250°F)	
Maximum pressure (threaded meters)		
aluminium	12 bar (180 psig)	10 bar (150 psig)
Ductile iron	12 bar (180 psig)	10 bar (150 psig)
Protection class	IP66/67 (NEMA4X), optional Exd IIB T6 or I.S.	
Recommended filtering	350 microns (40 mesh) minimum	
Electrical - for pulse meters (see also optional outputs)		
Output pulse resolution :	pulses / litre (pulses / US gallon) - nominal	
Reed switch	1.55 (5.87)	1.1 (4.15)
Hall effect	6.2 (23.5)	4.4 (16.6)
Quadrature Hall option	3.1 (11.8)	2.2 (8.3)
** Reed switch output	30Vdc x 200mA max. (max. temp. shock 10°C (50°F) / min)	
Hall effect output	3 wire NPN 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 (programmeable) , pulse amplifier	

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

DIMENSIONS



ALL DIMENSIONS IN MILLIMETERS +/-2

	A	A	Configuration	B	B
Modular Fitting	MG80H	MG100		MG80H	MG100
A.N.S.I. 150	482	482	RT/EB REGISTER	276	315
DIN16	482	482	BT REGISTER	268	306
JIS 10K	482	482	COVER	246	283
B.S.P.	394	394			
N.P.T.	394	394			

INTEGRAL AND REMOTE INSTRUMENTS



Integral Instruments



Panel Instruments



Dual Totaliser



Preset Batcher

Rate Totaliser

Model coding

MG80H	80mm
MG100	100mm (4")

Body material

A Aluminium

Rotor material

4 Aluminium

Bearing type

4 Hardened steel needle roller bearings

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 (RP) 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

MG100 A 4 4 1 - 5 4 2 R2

Integral options

glass reinforced nylon (GRN)	GRN terminal cover (std.)
	AL Aluminum 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 from 80~120°C (180-250°F)

Recommended strainers (air eliminators available)

ST080S	80mm (3") - 316SS
ST100S	100mm (4") - 316SS



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