

MEDIUM OVAL GEAR FLOW METERS



Fluidex series MOGF is a Positive Displacement Flow Meter with medium capacity. The meters have two rotating gears in oval-shape. A fixed amount of the liquid passes between the gear teeth and through the meter after each revolution. The flow rate is identified by the number of shaft rotations. MOGF are used in a wide range of applications where accurate measurement of liquid is required.

FEATURES AND BENIFITS:

- High accuracy & repeatability.
- Available in DN15 to DN50 ($\frac{1}{2}$ " to 2") lines sizes
- Flow range covered from 1~450 LPM (0.26~120 US GPM)
- No need for flow conditioning.
- Measure low & high viscosity liquids.
- Availability of wide range of mechanical and electronic registers
- Available in Aluminum and Stainless Steel to cover a wide range of applications
- Availability of explosion proof and Intrinsically Safe models
- Quadrature pulse output option & bi-directional flow.
- Availability of High pressure models

(See series SOGF and LOGF for smaller and larger sizes and capacities)

STANDARD OPTIONS:

- ✓ Flanged and hygienic process connections
- ✓ Explosion proof
- ✓ Mechanical registers
- ✓ Integral and remote LCD totalizer and batch totalizer
- ✓ Flow rate totalizers
- ✓ Scaled pulse
- ✓ 4~20mA & flow alarm outputs
- ✓ Electronic batch controllers and pulse processing modules

GENERAL SPECIFICATIONS

Model prefix:	MOGF015	MOGF025	MOGF040	MOGF050
Nominal size	DN15 (½")	DN25 (1")	DN40 (1½")	DN50 (2")
Flow range (LPH)*	60~2400	600~9000	900~15000	1800~27000
Flow range (LPM)*	1~40	10~150	15~250	30~450
Flow range (US GPH)*	16~636	156~2400	240~3960	480~7200
Flow range (US GPM)*	0.26~10.6	2.6~40	4~66	8~120
Accuracy @ 3cp	± 0.5% of reading (± 0.2% with optional NL correction)			
Repeatability	Typically ± 0.03%			
Temperature range	-20°C~+120°C (-4°F~+250°F)			
Protection class	IP66/67 (NEMA4X), optional Exd IIB T6 or I.S.			
Recommended filtering	150 microns (100 mesh) minimum			

Maximum pressure (Threaded meters):	Bar (PSI)			
Aluminum	68 (1000)	68 (1000)	30 (440)	20 (300)
316L Stainless Steel	100 (1500)	100 (1500)	100 (1500)	38 (560)
High pressure stainless	Consult Factory			

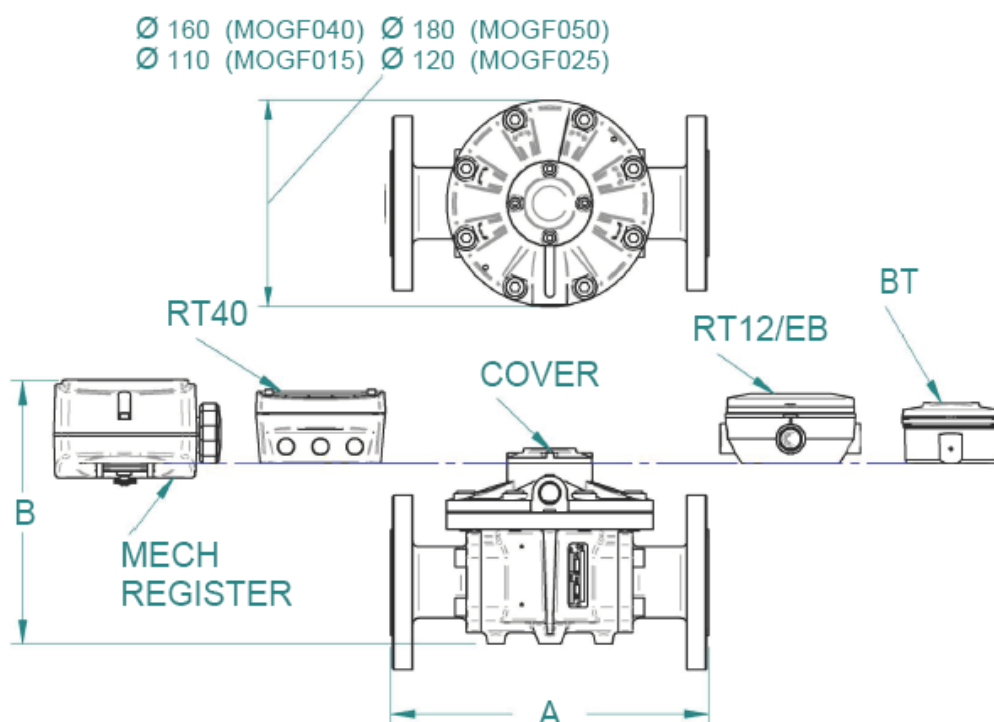
Electrical - for pulse meters (see also optional outputs)

Output pulse resolution:	Pulses / liter (Pulses / US Gallon) – Nominal			
Reed switch	83 (314)	27 (102)	14 (53)	6.5 (25)
Hall effect	166 (628)	107 (405)	52.6 (200)	26 (99)
Quadrature Hall option	166 (628)	53.5 (203)	26.3 (100)	13 (50)
Reed switch output	30Vdc x 200mA max. (max. temperature shock 10°C (50°F) per minute)			
Hall effect output (NPN)	3 wire open collector, 5~24Vdc, 20mA max.			

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



DIMENSIONS



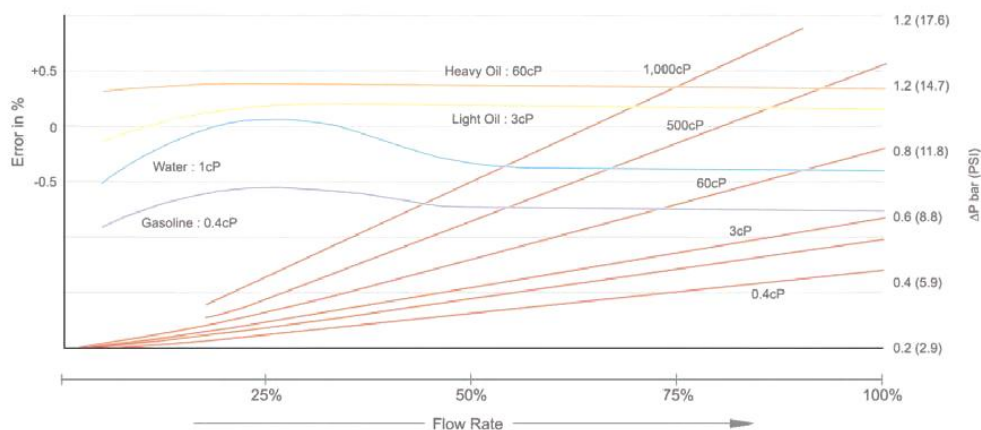
Process Connections		MOGF015	MOGF025A	MOGF025S	MOGF040	MOGF050	MOGF050E
ANSI 150 Flange		-	198	237	252	277	277
DIN 16 Flange	A	-	198	237	252	277	277
JIS 10K Flange		-	198	237	252	277	277
BSP Screwed		110	137	176	188	212	212
NPT Screwed		110	137	176	188	212	212

Register Options		MOGF015		MOGF025		MOGF040		MOGF050	
		A ¹	S ²	A	S	A	S		E ³
RT / EB Register		154	148	168	165	203	194	218	268
BT Register		145	139	160	157	195	186	210	260
RT40 Register	B	157	151	171	168	206	197	221	271
Cover		106	100	120	117	155	146	170	220
Mechanical Register		178	176	214	214	227	222	237	286

All dimensions in millimeters ± 2 mm

(¹) Aluminum, (²) Stainless Steel, (³) Extended

ACCURACY CURVES & PRESSURE DROP



METER SELECTION MATRIX AND ORDER CODE

		Size	Flow	LPM	US GPM	MOGF				
MOGF015	DN15	½"		1~40	0.26~10.6	015	025	040	050	050E
MOGF025	DN25	1"		10~150	2.6~40					
MOGF040	DN40	1½"		15~250	4~66					
MOGF050	DN50	2"		30~450	8~120					
MOGF050E	DN50	2"		35~580	9~150					
		Body material								
	A	Aluminum			●	●	●	●		
	E	Aluminum version Extended flow							●	
	M	Intermediate pressure Aluminum (138 bar (2000 PSI) max.)				138	Bar			
	S	316 Stainless Steel								
	N	Intermediate pressure 316L SS			100	100	50	50	Bar	
	H	High pressure 316SS			400	400	400	300	Bar	
		Rotor materials								
	0	TF-PPS rotors (Teflon Filled Polyphenylene)			●	●	●	●		
	1	Keishi cutting of TF-PPS rotors (for high viscosity liquids)			●	●	●	●		
	4	Aluminum (Applicable in Aluminum meters only)			●	●	●	●	●	
	5	Stainless steel			●	●	●	●		
	6	Aluminum - keishi cut (for high viscosity liquids)			●	●	●	●	●	
	7	Stainless steel - keishi cut (for high viscosity liquids)			●	●	●	●		
		Bearing type								
	0	No bearing (PPS rotors only)			●	●	●	●		
	1	Carbon Ceramic (standard with stainless steel rotors)			●	●	●	●	●	
	4	Hardened steel roller bearings (standard with Aluminum)			●	●	●	●	●	
		O-ring materials								
	1	Viton (Standard)		Temperature	-15~+120°C					
	2	Ethylene Propylene Rubber			Up to 150°C (300°F)					
	3	Teflon encapsulated Viton			Up to 150°C (300°F)					
	4	Buna-N (Nitrile)			-40~+120°C (-					
		Temperature limits								
	-	2	120°C (250°) - see note ¹			●	●	●	●	●
	-	3	150°C (300°F) – Hall Effect output only –			●	●	●	●	●
	-	5	120°C (250°F) - see note ³			●	●	●	●	●
	-	8	80°C (176°F) – see note ⁴			●	●	●	●	●
		Process connections								
	1	BSPP (G) female threaded			●	●	●	●	●	
	2	NPT female threaded			●	●	●	●	●	
	3	Tri-clamp hygienic ferrules (½" larger)			●	●	●	●	●	
	4	ANSI-150 RF flanges			●	●	●	●	●	
	5	ANSI-300 RF flanges			●	●	●	●	●	
	6	PN16 DIN flanges			●	●	●	●	●	
	7	JIS 10kg/cm² flanges			●	●	●	●	●	
	9	Customer nominated (Consult Factory)								
		Cable entries								
	M	No cable entry								
	0	3~6 mm cable gland								
	1	M20 x 1.5 mm								
	2	½" NPT								
Order Code Example										
MOGF015	S	4	4	1	-	2	1	1	REG	

(¹) Temperature rating in case of PPS or when fitted with integral instruments is limited to 80°C (180°F), (²) Not available for High Pressure Meters, (³) Instruments include integral cooling fan to increase the temperature rating to 120°C (250°F), (⁴) This is the maximum temperature in meters with mechanical registers, (P) Pulse Meters, (M) Mechanical Register

REGISTER - PULSE METERS

Order Code Example

MOGF015	S	4	4	1	-	2	1	1	R2		
										Integral options	Remarks
										00	Nil
										RS	Reed Switch only
										E1	Exd IIB T4/T6
										E2	Exd I/IIB T4/T6
										QP	Quadrant pulse
										Q1	Exd with Quadrature pulse
										PF	Pulsating Flow option
										P1	Exd with PF option
										B2	BT11 Dual Totalizer
										B3	BT11 Intrinsically Safe (I.S.)
										R0	RT12 Flow Rate Totalizer
										R2	RT12 Flow Rate Totalizer
										R3	RT12 Intrinsically Safe (I.S.)
										R4	RT40 Flow Rate Totalizer
										FI	Loop powered 4~20mA
										E0	EB10 Batch Controller
										SB	Specific build requirement

REGISTER - MECHANICAL METERS

Order Code Example

MOGF015	S	4	4	1	-	2	1	M	M1	V								
015~025	040	Unit	Small Mechanical Registers															
9999.9	99999	LITERS	④ Digit totalizer						M3									
9999.9	99999	US GAL	④ Digit totalizer						M4									
	050		Large Mechanical Registers															
	999999	LITERS	⑤ Digit Reset Register						V1									
	999999	LITERS	⑤ Digit Reg+Ticket Printer						V3									
	999999	LITERS	⑤ Digit Reg+Preset Batch Reg						V5									
	999999	LITERS	⑤ Digit Reg+Preset+Printer						V7									
Specific Build requirement									SB									
Control Valve options (close coupled)																		
Mechanical control valve + linkages coupled to meter										V								

Consult factory for US Gallons V-series Mechanical Registers and for the available range of strainer-air eliminator

