Positive Displacement Flow Meter
StaGear GF100 Series

Introduction

GF100 positive displacement flow meter measures the flow on the volumetric principle, in which gearwheels is moved proportional to the flow rate. The movement of the gearwheels is measured through the enclosing housing wall by a sensor.

Assembled with journal bearings, GF100 can measure low or non-lubricating fluids, such as paints, glues, resin, sealant etc.

The GF series of positive displacement flow meters have 9 measuring ranges from 0.0016...0.52gal/min through 0.93...119gal/min (from0.006 ... 2L/min through 3.5... 450L/min).
Optional pickoffs for pulse output, current analog output and analog output.

Characteristics

Measuring Range:
0.0016...0.52gal/min - 0.93...119gal/min
0.006 ... 2L/min - 3.5 ... 450L/min

Analog / Pulse output

Bi-directional flow measurement

High accuracy and repeatability

Higher trundown ratio

Immune to medium viscosity

Applications

Hydraulic oil / lubricating oil / grease

Cooling liquid

Fuel oil

Resin / glue / silica gel

Cylinder position

Braking fluid measurement

Specifications

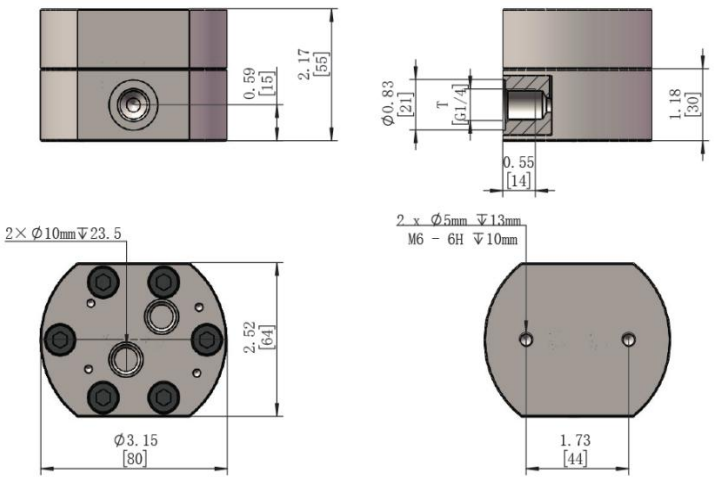
Applicable Medium	Liquids
Accuracy	±0.5% of reading (turndown ratio 1:10) ±1% of reading (measuring range)
Repeatability	±0.1% of reading
Pressure Rating	See measuring range below for details
Ambient Temperature	-40…85°C / -40…185°F
Medium Temperature	-40…100°C / -40…212°F (See order ocde for higher options)
Materials	Body: 316 stainless steel / aluminum Gear: 316 stainless steel Sealing: FPM (optional NBR, PTFE) Bearing: stainless steel ball bearing

Measuring range

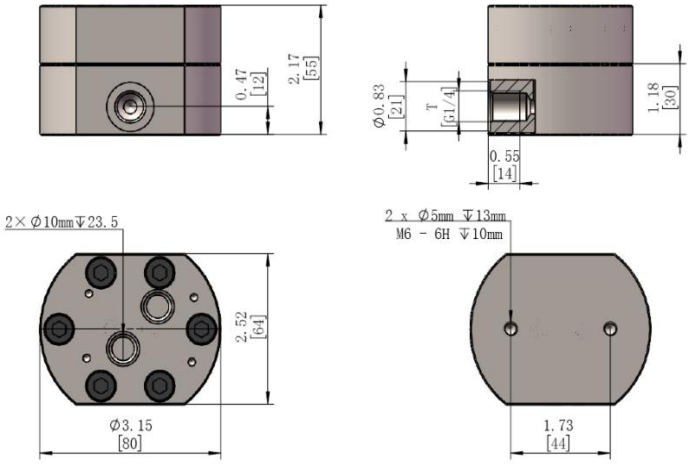
Part Code	End Fitting	Measuring Range (gal/min)	Measuring Range (L/min)	K Coefficient (IMPULSE/L)	Max. Filter Diameter (Micron)	Max. Pressure psi (bar)	
						Stainless Steel	Aluminum
R2	1/4" (NPT / G)	0.0016…0.53	0.006...2	40000	30	10000 (690)	3600 (250)
R3	1/4" (NPT / G)	0.006…0.8	0.02…3	13500	30		
R7	1/4" (NPT / G)	0.014…2	0.05…7.5	4200	30		
R25	1/2" (NPT / G)	0.06…6.6	0.2…25	1400	30		
R40	1/2" (NPT / G)	0.11…10.5	0.4…40	840	30		
R75	3/4" (NPT / G)	0.14…20	0.5…75	450	200		
R150	1" (NPT / G)	0.27…40	1…150	190	200	6000 (420)	2200 (150)
R225	1-1/4" (SAE Flange)	0.53…60	2…225	110	200		
R450	1-1/4" (SAE flange)	0.93…119	3.5…450	55	200		

Dimension in Inch (mm)

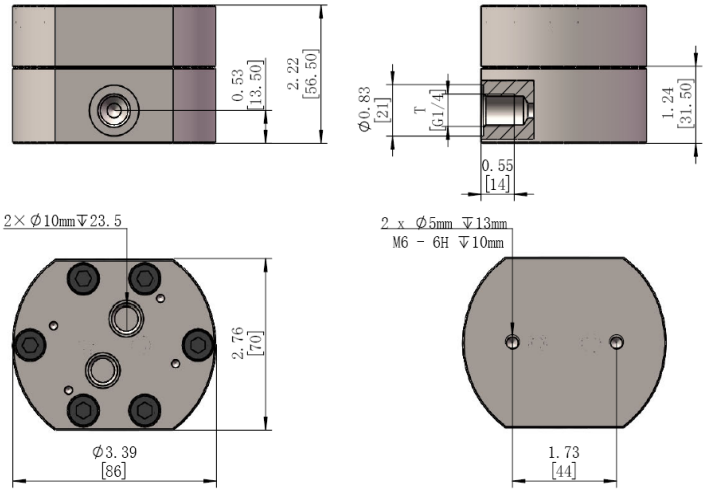
Measuring range: R2



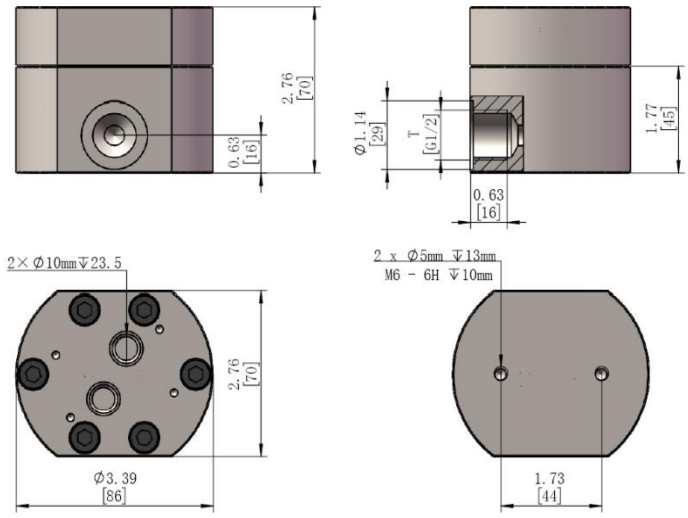
Measuring range: R3



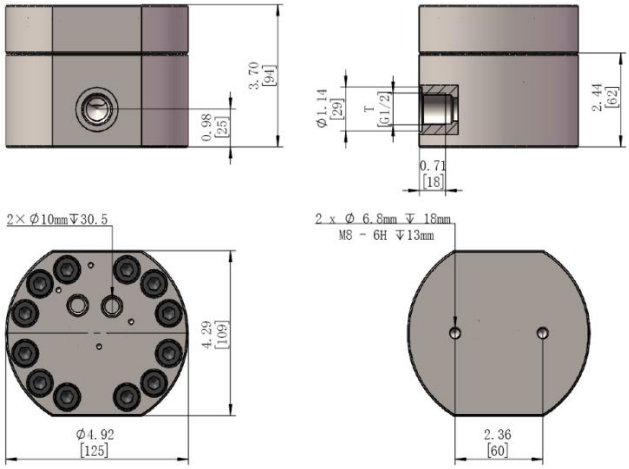
Measuring range: R7



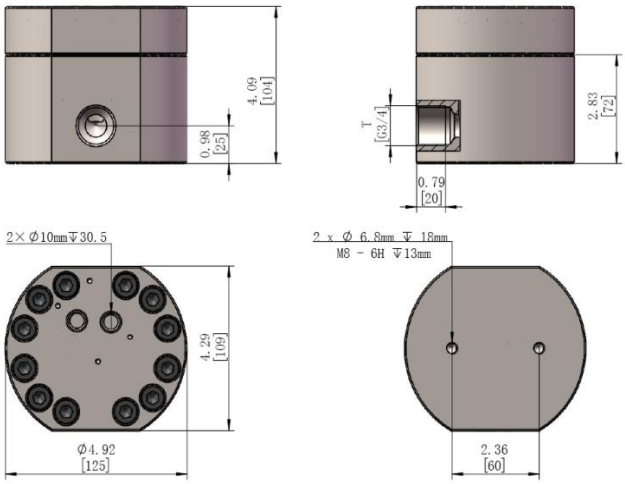
Measuring range: R25



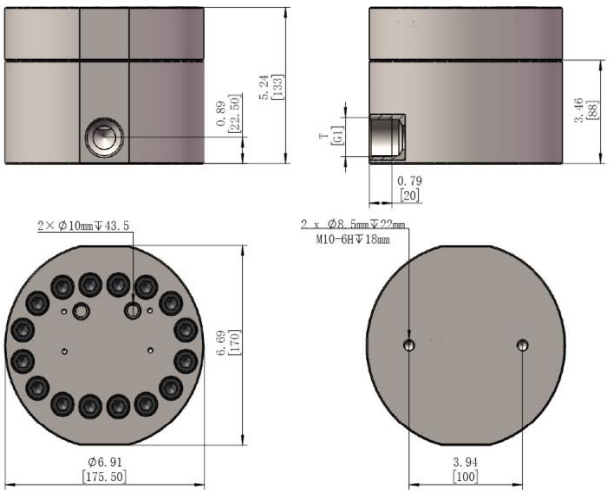
Measuring range: R40



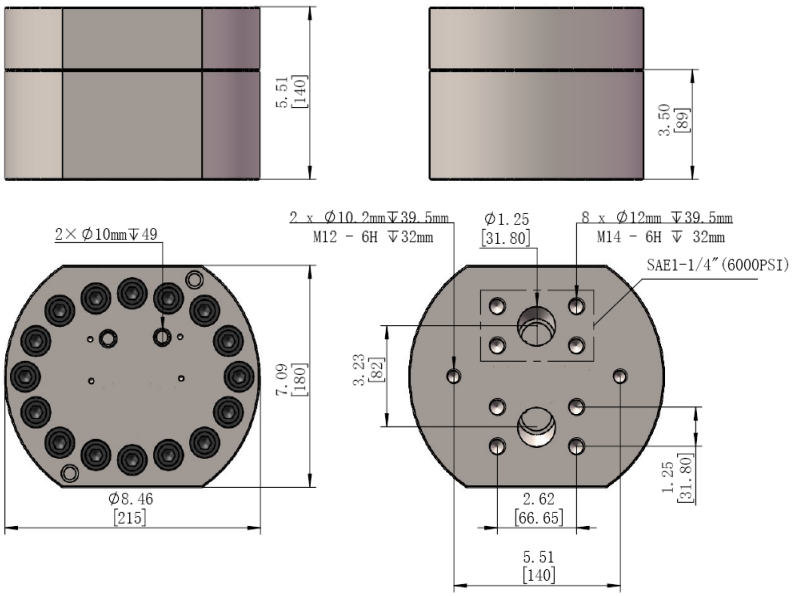
Measuring range: R75



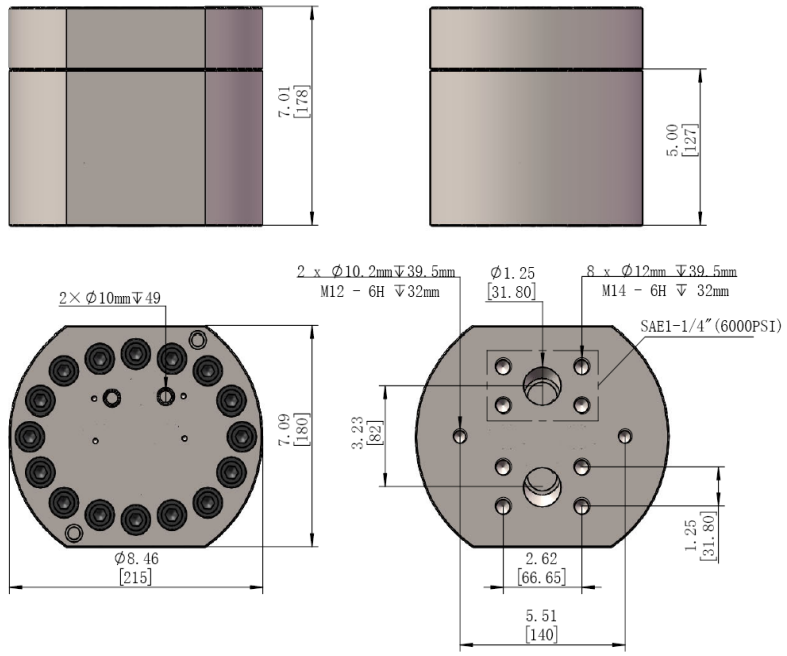
Measuring range: R150



Measuring range: R225



Measuring range: R450



Order Code

Example: GF100-R7GFFS

1. Model	
GF100-	Positive Displacement Flow Meter

2. Measuring range	
R2	0.0016…0.53 gal/min (0.006...2.0 L/min)
R3	0.006…0.8 gal/min (0.02…3 L/min)
R7	0.014…2 gal/min (0.05…7.5 L/min)
R25	0.06…6.6 gal/min (0.2…25 L/min)
R40	0.11…10.5 gal/min (0.4…40 L/min)
R75	0.14…20 gal/min (0.5…75 L/min)
R150	0.27…40 gal/min (1.0…150 L/min)
R225	0.53…60 gal/min (2.0…225 L/min)
R450	0.93…119 gal/min (3.5…450 L/min)

3. End Fitting	
GF	G female thread
NF	NPT female thread
S	Other connections on request

4. Sealing Material	
F	FPM (standard)
B	NBR
P	PTFE

5. Body Material	
S	Stainless steel
A	Aluminum

Sensor Options

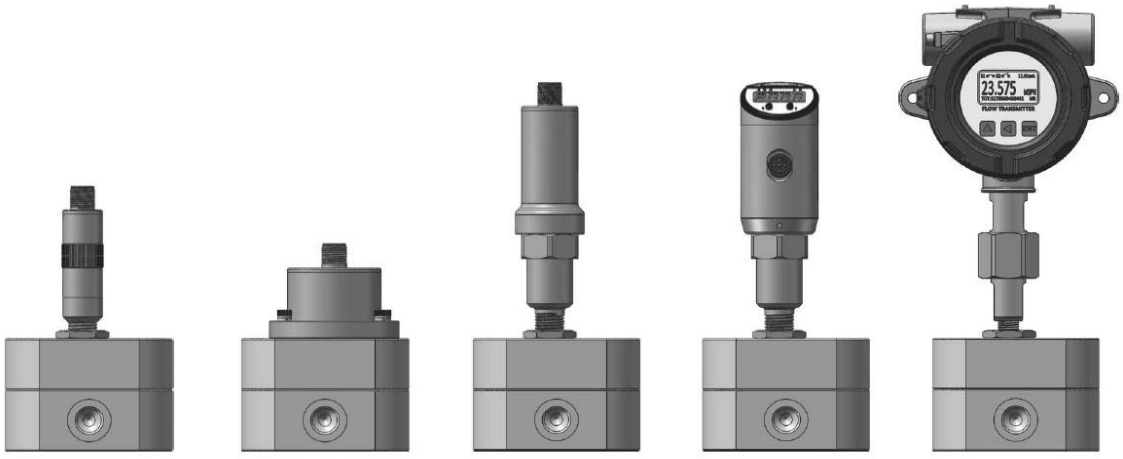
1. Model	
S2000-	For positive displacement flow meter

2. Sensor	
N	Non-magnetic sensor

3. Output	
P1	Pulse output
P2	Linearized pulse output
P3	Dual-pulse output (90° phase shift)
A	Analog output
D	Digital transmitter
E	Ex-proof transmitter

4. Temperature	
T1	-40…212°F (-40…100°C)
T2	-40…302°F (-40…150°C)
T3	-40…446°F (-40...230°C)

See sensor's datasheet for details



Pulse output | Dual pulse output | Analog output | Digital display | Ex-proof digital display