

# **G2 SERIES INTRINSICALLY SAFE**

A full line of FLOMEC® G2 Series Turbine Meters are available in a variety of housing materials. Rugged and dependable, the G2 Series offers:

- Stainless Steel for most water and chemical products
- · Aluminum for fuels and petroleum-based products
- PVDF for aggressive chemicals

- Meter is designed for thin fluids < 100 cP</li>
- · Modular design allows for use with Output Modules, Sensors and Remote Display Kits
- 2 Totals (Batch Total = Resettable, Total = Non-Resettable); Rate of Flow, Factory calibrated in gallons or litres. Field calibratable. Includes non-volatile totals.
- · High accuracy meter
- · Internal parts are simple to replace for easy maintenance
- AAA Alkaline battery life: 2 years

### PRODUCT CONFIGURATION

### 1 PRODUCT IDENTIFIER:

G2 = Industrial Grade Flowmeters

#### 2 TURBINE MATERIAL:

- S = Stainless Steel
- $\mathbf{A} = Aluminum$
- $\mathbf{P} = \text{PVDF} (1/2 \text{ in. y 1 in. only})$
- **X** = Electronics only (For metal meters)
- **Z** = Electronics only (For plastic meters)

#### 3 TURBINE SIZE:

 $05 = \frac{1}{2}$  in. **15** =  $1-\frac{1}{2}$  in.  $07 = \frac{3}{4}$  in. 20 = 2 in.

**10** = 1 in.

# 4 FITTING TYPE:

N = NPT (Female)

I = ISO (Female) BSPT (ISO 7 Designation is RC)

**F** = 150# ANSI Flange (Available on S10, S15 & S20 only)

T = Tri-Clamp Fitting (Available on S05, S07, S10, S15 & S20 only)

X = No Turbine Body

#### 5 ELECTRONIC CHOICE:

Computer Display, Meter Mounted

Q9 = Q9 2-Button Computer

Q1 = Q9 2-Button Computer, Vertical Mount (90° Adapter)

Retrofit Computer Kit (Display Only

R9 = Q9 2-Button Computer Retrofit Kit (Replaces 09 Display)

No Electronics - Turbine Only **XX** = No Electronics - Turbine Only

#### **6** CALIBRATION OF COMPUTER / DISPLAY:

**GM** = Gallons Per Minute (Gallons Default)

**LM** = Liters Per Minute (Litres Default)

GD = Gallons Per Minute (Gallons Default) with NIST Certificate

LD = Liters Per Minute (Litres Default) with NIST Certificate

**XX** = No Calibration

# **APPLICATIONS**

- Batching
- Blending
- Water
- Industrial fluids
- · Plating solutions
- Ammonium
- Food and beverage processing

- Fuel Products
- Monitoring clean
- · Plant process water
- Chemical feed lines
- · Harsh chemicals (sulfuric acid and bleach)

# 7 PACKAGING:

- A = 05 Thru 10 Turbines, Turbine Only or w/Q9 Electronics 05 Thru 20 Electronics Only (Q9 Replacement Kit or R9
- **B** = 15 & 20 Turbines, Turbine Only or w/Q9 Electronics 05 Thru 10 Turbines w/Q1 Electronics
- C = 15 Thru 20 Turbine w/Q1 Electronics
- **D** = 10 Turbines with ANSI Flange Turbine Only or w/Q9, Q1
- E = 15 & 20 Turbines with ANSI Flange Turbine Only or w/Q9, Q1 Electronics

1 2 3 4 5 --->>> G2 S 15 N Q9



### **SPECIFICATIONS**

OI LOII IOAI	10110						
Fitting Type:	NPT or ISO (Female) BSPT (ISO 7 designation is RC)						
	150# ANSI (	150# ANSI (S10, S15 y S20 only)					
		Tri-Clamp (Stainless Steel only) - Fitting size is one size bigger than meter size					
Meter Sizes Available:		1/2"	3/4"	1"	1-1/2"	2"	
Corresponding Tri-Clamp Fitting:		3/4"	1"	1-1/2"	2"	2-1/2"	
Housing Materi	al:	316 Sta	inless Ste	el, Alum	inum, PV	DF	
Flow Range:	1/2" (05)	1 - 10 G	iPM		(3.8 - 38 L/min)		
	1/2" (05) <i>PVDF Only</i>	1.2 - 12 GPM		(4.5 - 45 L/min)			
	3/4" (07)	2 - 20 GPM		(7.6 - 76 L/min)			
	1" (10)	5 - 50 GPM			(19 - 19	0 L/min)	
	1-1/2" (15)	10 - 100 GPM		(38 - 380 L/min)			
	2" (20)	20 - 200	GPM		(76 - 760 L/min)		
Accuracy (% of	Reading):	Turbine Only			Turbine w/Computer		
	1/2" (05)	± 2.0%			± 1.5%		
	3/4" (07)	± 1.5%		± 1.0%			
	1" (10)	± 1.5%		± 1.0%			
	1-1/2" (15)	± 1.0%			± 0.75%		
	2" (20)	± 1.0%		± 0.75%			
Repeatability:		± 0.1% (PVDF is ± 0.3%)					

# **DIMENSIONS** NOTE: Q9 Display adds 0.72 in. (18 mm) to height

#### **Stainless Steel Models**

	S05, ½ in.	S07, ¾ in.	S10, 1 in.	S15, 1½ in.	S20, 2 in.
A =	1.4 in.	1.6 in.	1.9 in.	2.6 in.	3.1 in.
Height	(35.6 mm)	(40.6 mm)	(48.3 mm)	(66.0 mm)	(78.7 mm)
B =	2.0 in.	2.0 in.	2.0 in.	2.7 in.	3.4 in.
Width	(50.8 mm)	(50.8 mm)	(50.8 mm)	(68.6 mm)	(86.4 mm)
C =	4.2 in.	4.3 in.	4.5 in.	5.3 in.	6.3 in.
Length	(106.7 mm)	(109.2 mm)	(114.3 mm)	(134.6 mm)	(160.0 mm)

#### **Aluminum Models**

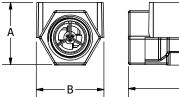
	A05, ½ in.	A07, ¾ in.	A10, 1 in.	A15, 1½ in.	A20, 2 in.
A =	1.8 in.	2.0 in.	2.2 in.	2.8 in.	3.2 in.
Height	(45.7 mm)	(50.8 mm)	(55.9 mm)	(71.1 mm)	(81.3 mm)
B =	2.0 in.	2.0 in.	2.0 in.	2.7 in.	3.3 in.
Width	(50.8 mm)	(50.8 mm)	(50.8 mm)	(68.6 mm)	(83.8 mm)
C =	4.2 in.	4.3 in.	4.5 in.	5.3 in.	6.3 in.
Length	(106.7 mm)	(109.2 mm)	(114.3 mm)	(134.6 mm)	(160.0 mm)

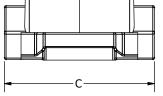
#### **PVDF Models**

	P05, ½ in.	P10, 1 in.
A =	3.2 in.	3.3 in.
Height	(81.3 mm)	(83.8 mm)
B =	2.1 in.	2.8 in.
Width	(53.3 mm)	(71.1 mm)
C =	7.3 in.	8.1 in.
Length	(185.4 mm)	(205.7 mm)

NOTE: For representation purpose only. Actual product models vary in shape, design, etc

ANSI Flange and Sanitary Flange dimensions not shown. For those dimensions, please refer to product manuals or our website FLOMECmeters.com.





Pressure Rating	g:			
Stainless Steel	316 SS	1,500 psi (102 bar)		
Aluminum		300 psi (21 bar)		
ANSI Flange 31	6 SS	Flange Rule		
Sanitary Flange	316 SS	Limited by fitting, clamp size, & temperature		
PVDF		100 psi (6.9 bar)		
Operating Temp	oerature	-40° F to 250° F (-40° C to 121° C)		
Range:		(PVDF) -20° F to 180° F (-28° C to 82° C)		
with Intrinsicall Display:	y Safe	0° F to +129° F (-18° C to +54° C)		
Typical	1/2" (05)	2,500 PPG (660 Pulses/L)		
K-Factor:	3/4" (07)	1,100 PPG (291 Pulses/L)		
	1" (10)	565 PPG (149 Pulses/L)		
	1-1/2" (15)	215 PPG (57 Pulses/L)		
	2" (20)	100 PPG (26 Pulses/L)		
Wetted	Housing:	316 Stainless Steel or Aluminum		
Materials:	Bearings:	96% Alumina Oxide Ceramic		
	Shaft:	Tungsten Carbide		
	Rotor:	PVDF		
	Rings:	316 Stainless Steel		
Wetted	Housing:	PVDF (15% Carbon Fiber Filled)		
Materials PVDF:	Bearings & Shaft:	98% Alumina Ceramic		
	Rotor:	PVDF		
	Rings:	Fluorocarbon (Optional PTFE)		
Frequency Range:	1/2" (05)	42-420 Hz @ 1-10 GPM (3.8-38 L/min) / 45-450 Hz @ 1.2-12 GPM (4.5-45 L/min) (PVDF)		
	3/4" (07)	37-370 Hz @ 2-20 GPM (7.6-76 L/min)		
	1" (10)	47-470 Hz @ 5-50 GPM (19-190 L/min) / 45-475 Hz @ 5-50 GPM (19-190 L/min) (PVDF)		
	1-1/2" (15)	36-360 Hz @ 10-100 GPM (38-380 L/min)		
	2" (20)	33-330 Hz @ 20-200 GPM (76-760 L/min)		
Calibration	Comes stan	ndard with G2 Series meters.		
Report:	N.I.S.T. – Ce	ertification available.		

### **ACCESSORIES**

Part No.	Description
120077-01	FM Approved Sensor
120077-02	ATEX Approved Sensor
125260-02	90° Display Adaptor Kit

Part No.	Description
113275-10	FM Approved Remote Kit
125206-2	1/2 in. Teflon O-Ring for PVDF Meter (2)
125206-1	1 in. Teflon O-Ring for PVDF Meter (2)



















Wichita / Sydney

GREAT PLAINS INDUSTRIES



A full line of FLOMEC® G2 Series Turbine Meters are available in a variety of housing materials. Rugged and dependable, the G2 Series offers:

- · Stainless Steel for most non-volatile products
- · Aluminum for non-volatile petroleum-based products
- · PVDF for aggressive chemicals

**G2** = Industrial Grade Flowmeters

P = PVDF (1/2 in. & 1 in. only)

H = High Pressure Stainless Steel

**X** = Electronics only (For metal meters)

**Z** = Electronics only (For plastic meters)

PRODUCT CONFIGURATION

**G2 SERIES** 

SAFE AREA ONLY

1 PRODUCT IDENTIFIER:

**2 TURBINE MATERIAL:** 

S = Stainless Steel

 $\mathbf{A} = Aluminum$ 

## 5 ELECTRONIC CHOICE:

Computer Display, Meter Mounted

AAA Alkaline battery life: 2 years

meters only (185° F/85° C)

and Remote Display Kits

calibratable. Includes non-volatile totals.

Q9 = Q9 2-Button Computer

· High accuracy meter

Q1 = Q9 2-Button Computer, Vertical Mount (90° Adapter)

H9 = Q9 2-Button Computer with High Temp Riser (185° F/85° C) [Available on stainless steel bodies only]

2 Totals (Batch Total = Resettable, Total = Non-Resettable); Rate of Flow, Factory calibrated in gallons or litres. Field

• Internal parts are simple to replace for easy maintenance

High temperature local display option for Stainless Steel

Computer Display & Module, Meter Mounted

P9 = Q9 2-Button Computer w/Pulse Out Module, includes External Power and 10 ft. of Cable

42 = Q9 2-Button Computer w/4-20mA Module and 10 ft. of Cable

Module, Meter Mounted (No Display)

PO = Pulse Out (Unscaled) Conditioned Signal Module w/Cable

QSI Options, Meter Mounted (No Display)

**81** = QSI Version 1 (Scaled Pulse, RS485 [Modbus or BACnet], BTU Calculator, Bluetooth®)

82 = QSI Version 2 (Scaled Pulse, BTU Calculator, Bluetooth®)

83 = QSI Version 3 (Scaled Pulse, 4-20 mA, Bluetooth®)

Retrofit Computer Kit (Display Only)

R9 = Q9 2-Button Computer Retrofit Kit (Replaces 09 Display)

No Electronics - Turbine Only

XX = No Electronics - Turbine Only

# 4 FITTING TYPE:

3 TURBINE SIZE:

 $05 = \frac{1}{2}$  in.

 $07 = \frac{3}{4}$  in.

10 = 1 in.

N = NPT (Female)

I = ISO (Female) BSPT (ISO 7 Designation is RC)

**F** = 150# ANSI Flange (Available on S10, S15 & S20 only)

**15** =  $1-\frac{1}{2}$  in.

20 = 2 in.

T = Tri-Clamp Fitting (Available on S05, S07, S10, S15 & S20 only)

X = No Turbine Body

# **APPLICATIONS**

- Batching
- Blending
- Water
- · Industrial fluids
- · Plating solutions
- Ammonium

- · Food and beverage processing
- Monitoring clean fluids
- Plant process water
- Chemical feed lines
- Harsh chemicals (sulfuric acid and bleach)

#### 6 CALIBRATION OF COMPUTER / DISPLAY:

GM = Gallons Per Minute (Gallons Default)

**LM** = Liters Per Minute (Litres Default)

GD = Gallons Per Minute (Gallons Default) with NIST Certificate

LD = Liters Per Minute (Litres Default) with NIST Certificate

**XX** = No Calibration

#### 7 PACKAGING:

**V** = 05 Thru 10 Turbines, Turbine Only or w/Q9 Electronics 05 Thru 20 Electronics Only (Q9 Replacement Kit or R9 Retrofit Kit)

W = 15 & 20 Turbines, Turbine Only or w/Q9 Electronics 05 Thru 10 Turbines w/Q1 Electronics

X = 15 Thru 20 Turbine w/Q1 Electronics 05 Thru 20 Turbines w/H9, P9, 42, PO Electronics 05 Thru 20 Electronics Only (H9, P9 or 42 Electronics)

Y = 10 Turbines with ANSI Flange Turbine Only or w/Q9, Q1, H9, P9, 42, PO Electronics

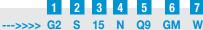
**Z** = 15 & 20 Turbines with ANSI Flange Turbine Only or w/Q9, Q1, H9, P9, 42, PO Electronics

10 Turbines with ANSI Flange w/81, 82, & 83 Electronics

F = 05 Thru 20 Turbines w/81, 82, & 83 Electronics

G = 15 & 20 Turbines with ANSI Flange w/81, 82, & 83 Electronics







### **SPECIFICATIONS**

	TIONS						
Fitting Type:	NPT or ISO	NPT or ISO (Female) BSPT (ISO 7 designation is RC)				RC)	
	150# ANSI (	S10, S15	& S20 or	nly)			
		Tri-Clamp (Stainless Steel only) - Fitting size is one size bigger than meter size					
Meter Sizes A	vailable:	1/2"	3/4"	1"	1-1/2"	2"	
Corresponding Tri-Clamp Fitting:		3/4"	1"	1-1/2"	2"	2-1/2"	
Housing Mate	rial:	316 Sta	inless Ste	el, Alumii	num, PVE	F	
Flow Range:	1/2" (05)	1 - 10 G	iPM	(3.8 - 38	3 L/min)		
	1/2" (05) <i>PVDF only</i>	1.2 - 12	GPM	(4.5 - 45	5 L/min)		
	3/4" (07)	2 - 20 G	iPM	(7.6 - 76	(7.6 - 76 L/min)		
	1" (10)	5 - 50 GPM		(19 - 190 L/min)			
	1-1/2" (15)	10 - 100 GPM (38 - 380 L/mii		0 L/min)			
	2" (20)	20 - 200	GPM	(76 - 76	0 L/min)		
Accuracy (% o	f Reading):	Turbine Only Turbine w/Co			w/Comp	uter	
	1/0" (05)	± 2.0%		± 1.5%			
	1/2" (05)		± 1.5%				
	3/4" (07)	± 1.5%		± 1.0%			
	. ,	± 1.5%		± 1.0% ± 1.0%			
	3/4" (07)				, D		
	3/4" (07) 1" (10)	± 1.5%		± 1.0%			
Repeatability:	3/4" (07) 1" (10) 1-1/2" (15) 2" (20)	± 1.5% ± 1.0% ± 1.0%	(PVDF is	± 1.0% ± 0.75% ± 0.75%			
Repeatability: Pressure Rati	3/4" (07) 1" (10) 1-1/2" (15) 2" (20)	± 1.5% ± 1.0% ± 1.0%	(PVDF is	± 1.0% ± 0.75% ± 0.75%			
	3/4" (07) 1" (10) 1-1/2" (15) 2" (20)	± 1.5% ± 1.0% ± 1.0% ± 0.1%	(PVDF is si (102 ba	± 1.0% ± 0.75% ± 0.75% ± 0.3%)			
Pressure Rati	3/4" (07) 1" (10) 1-1/2" (15) 2" (20)	± 1.5% ± 1.0% ± 1.0% ± 0.1%	si (102 ba	± 1.0% ± 0.75% ± 0.75% ± 0.3%)			
Pressure Ration Stainless Stee	3/4" (07) 1" (10) 1-1/2" (15) 2" (20) ng:	± 1.5% ± 1.0% ± 1.0% ± 0.1% 1,500 psi (	si (102 ba	± 1.0% ± 0.75% ± 0.75% ± 0.3%)			
Pressure Rational Stainless Stee Aluminum	3/4" (07) 1" (10) 1-1/2" (15) 2" (20) ng: el 316 SS	± 1.5% ± 1.0% ± 1.0% ± 0.1% 1,500 psi (	si (102 ba (21 bar) i (207 bar	± 1.0% ± 0.75% ± 0.75% ± 0.3%)			
Pressure Ration Stainless Stee Aluminum High Pressure	3/4" (07) 1" (10) 1-1/2" (15) 2" (20) 2" (20) 2" (316 SS 316 SS	± 1.5% ± 1.0% ± 1.0% ± 0.1% 1,500 ps 300 psi (3000 psi Flange F	si (102 ba (21 bar) i (207 bar Rule	± 1.0% ± 0.75% ± 0.75% ± 0.3%)		perature	

#### NOTE: Q9 Display adds 0.72 in. (18 mm) to height **DIMENSIONS** Stainless Steel (SS) and SS High Pressure Models

	S05 & H05	S07 & H07	S10 & H10	S15 & H15	S20 & H20
	½ in.	¾ in.	1 in.	1½ in.	2 in.
A =	1.4 in.	1.6 in.	1.9 in.	2.6 in.	3.1 in.
Height	(35.6 mm)	(40.6 mm)	(48.3 mm)	(66.0 mm)	(78.7 mm)
B =	2.0 in.	2.0 in.	2.0 in.	2.7 in.	3.4 in.
Width	(50.8 mm)	(50.8 mm)	(50.8 mm)	(68.6 mm)	(86.4 mm)
C =	4.2 in.	4.3 in.	4.5 in.	5.3 in.	6.3 in.
Length	(106.7 mm)	(109.2 mm)	(114.3 mm)	(134.6 mm)	(160.0 mm)

### **Aluminum Models**

	A05, ½ in.	A07, ¾ in.	A10, 1 in.	A15, 1½ in.	A20, 2 in.
A =	1.8 in.	2.0 in.	2.2 in.	2.8 in.	3.2 in.
Height	(45.7 mm)	(50.8 mm)	(55.9 mm)	(71.1 mm)	(81.3 mm)
B =	2.0 in.	2.0 in.	2.0 in.	2.7 in.	3.3 in.
Width	(50.8 mm)	(50.8 mm)	(50.8 mm)	(68.6 mm)	(83.8 mm)
C =	4.2 in.	4.3 in.	4.5 in.	5.3 in.	6.3 in.
Length	(106.7 mm)	(109.2 mm)	(114.3 mm)	(134.6 mm)	(160.0 mm)

#### Range: 45-450 Hz @ 1.2-12 GPM (4.5-45 L/min) (PVDF) 3/4" (07) 37-370 Hz @ 2-20 GPM (7.6-76 L/min) 1" (10) 47-470 Hz @ 5-50 GPM (19-190 L/min) / 45-475 Hz @ 5-50 GPM (19-190 L/min) (PVDF) 1-1/2" (15) 36-360 Hz @ 10-100 GPM (38-380 L/min) 2" (20) 33-330 Hz @ 20-200 GPM (76-760 L/min) Calibration Comes standard with G2 Series meters. Report: N.I.S.T. - Certification available. **ACCESSORIES** Part No. Description Conditioned Signa 113435-10 Module Pulse Out. Externa 125060-10 Power, Scaled Pu Module 125100-10 4-20 mA Module

90° Display

Adaptor Kit

Operating Temperature

with Hi-Temp. Riser (H9):

1/2" (05)

3/4" (07)

1-1/2" (15)

1" (10)

2" (20)

Shaft:

Rotor: Rings:

Housing:

Bearings

& Shaft:

Rotor: Rings:

1/2" (05)

Housing:

Bearings:

Range:

Typical

Wetted

Wetted

PVDF:

Materials

Frequency

**Materials:** 

K-Factor:

with Display:

	Part No.	Description
al	113275-10	FM Approved* Remote Kit
al Ise	125206-2	1/2 in. Teflon O-Ring for PVDF Meter (2)
	125206-1	1 in. Teflon O-Ring for PVDF Meter (2)
	125527-01	Q9 Hi-Temp Riser Kit

-40° F to 250° F (-40° C to 121° C)

0° F to 140° F (-18° C to 60° C)

Chart in Q9 Non-Agency Manual

316 Stainless Steel or Aluminum

PVDF (15% Carbon Fiber Filled)

Fluorocarbon (Optional PTFE)

42-420 Hz @ 1-10 GPM (3.8-38 L/min) /

96% Alumina Oxide Ceramic

2,500 PPG (660 Pulses/L)

1,100 PPG (291 Pulses/L)

565 PPG (149 Pulses/L)

215 PPG (57 Pulses/L)

100 PPG (26 Pulses/L)

Tungsten Carbide

316 Stainless Steel

98% Alumina Ceramic

**PVDF** 

**PVDF** 

(PVDF) -20° F to 180° F (-28° C to 82° C)

 $0^{\circ}$  F to 185° F (-18° C to 85° C) See Temp.

\*Does not make Non-FM Approved meters FM Approved

# **APPROVALS**

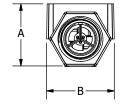
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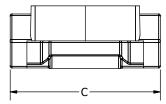
**NEMA** 4

**IP65** 

### **PVDF Models**

	P05, ½ in.	P10, 1 in.
A =	3.2 in.	3.3 in.
Height	(81.3 mm)	(83.8 mm)
B =	2.1 in.	2.8 in.
Width	(53.3 mm)	(71.1 mm)
C =	7.3 in.	8.1 in.
Length	(185.4 mm)	(205.7 mm)





125260-02

NOTE: For representation purpose only. Actual product models vary in shape, design, etc.

ANSI Flange and Sanitary Flange dimensions not shown. For those dimensions, please refer to product manuals or our website FLOMECmeters.com.

GREAT PLAINS INDUSTRIES / // Wichita / Sydney

Service & Warranty: For technical assistance, warranty replacement or repair contact your FLOMEC® or GPI® distributor: In North or South America: 888-996-3837 / FLOMECmeters.com Outside North or South America: +61 2 9540 4433 / FLOMECmeters.com IND-1043-G2 Non-Approved Rev A 09/2021