

The **INVALCO 3/4"-2" Cartridge Style Gas Turbine Meter** is a unique one-piece cartridge design which has been adapted to include a gas rotor and bearing assembly. Each meter has three separate rotor designs which overlap adjacent meter ranges and will conform to more pipe sizes without reduction or expansion requirements. Covering flow rates from 0.5 to 200 ACFM, these meters will work within pressures from vacuum to 2000 psi. Replacement cartridges are fully-calibrated and are ready for installation with no special tools required. INVALCO's Tungsten Carbide V-Cup bearing design provides excellent performance and unequalled service life in non-lubricating and solids containment gases.

Features/Benefits

- **Three Rotors, One Body** suits more applications without reduction or expansion fittings.
- **One Piece Cartridge Internals** with integral flow straighteners for ease of maintenance.
- **Tungsten Carbide Bearing System** for long service life.
- **Stainless Steel/Tungsten Carbide Construction** for corrosion-free service.

Options

- **Extended Temperature Range** from -200°F to 450°F (130°C to 218°C)

Capacity Table

	Linear Gas Flow Range (Nominal)			Nominal K-Factor	
	ACFM	ACFH	AM H	P/ACF	P/M
3/4" - L	.13 - 1.3	8 - 80	.22 - 22	44,000	1,570,800
3/4" - M	0.5 - 5.0	30 - 300	.85 - 8.5	12,200	435,540
3/4" - H	.75 - 7.5	45 - 450	1.25 - 12.5	8,000	285,600
1" - L	0.5 - 5.0	30 - 300	.85 - 8.5	13,000	464,100
1" - M	.65 - 6.5	40 - 400	1.1 - 11	9,000	321,300
1" - H	1.1 - 11	65 - 650	1.8 - 18	5,600	199,920
1-1/2" - L	0.6 - 6.0	36 - 360	2 - 10	10,000	357,000
1-1/2" - M	1.65 - 16.5	100 - 1000	2.8 - 28	3,600	128,520
1-1/2" - H	3.0 - 30	175 - 1750	5 - 50	2,100	74,970
2" - L	3.0 - 30	175 - 1750	5 - 50	2,100	74,970
2" - M	4.5 - 45	275 - 2750	7.7 - 77	1,300	46,410
2" - H	8.5 - 85	500 - 5000	14 - 140	720	25,704
2" - XH	20 - 200	1200 - 12000	33 - 330	300	10,700

Designations: L-Low Flow Rotor, M - Medium Flow Rotor, H - High Flow
XH - Extended High Flow Rotor

General Specifications

Linearity¹

±1.0%

¹ Based on specific weight of 1lb/ft³. If less - rangeability reduce contact factory for assistance.

² Maximum non-shock service pressure at 100°F.

³ GE 883 or equivalent 6% type.



Cartridge Style Gas Turbine Meter

Repeatability¹

±0.25%

Maximum Overrange

125% of flow rate for intermittent periods.

Frequency Output

100 to 1,100 Hz.

Voltage Output

Approximately 100 mV @ 100 Hz to 1.5 V (RMS) @ 1,000 Hz.

Pressure Drop

0.5 psi at 100% of flow range.

Pressure Rating² - PSI (kPa)

3/4"-2.0 NPT 5,000 (34,474)

ANSI Raised Face Flanges:

Class 150 275 (1,896)

Class 300 720 (4,964)

Class 600 1,440 (9,929)

**Other pressures available - Consult Factory

Installation

Vertical or horizontal (any direction)

Materials of Construction

Body: 316 L Stainless Steel

Flanges: 316 Stainless Steel

Rotor: 431 Stainless Steel

Rotor Shaft/Bearings:

Standard: Tungsten Carbide³/Tungsten Carbide V Cup

Cartridge Frame Retainer: 302 Stainless Steel

Cartridge Frame: 316 L Stainless Steel

Temperature Range

Meter with Bearing Structure of:

Standard: Tungsten Carbide -20°F to 300°F (-29°C to 149°C)

For other temperatures consult factory.

RF Nonmagnetic Pickup (Order Separately)

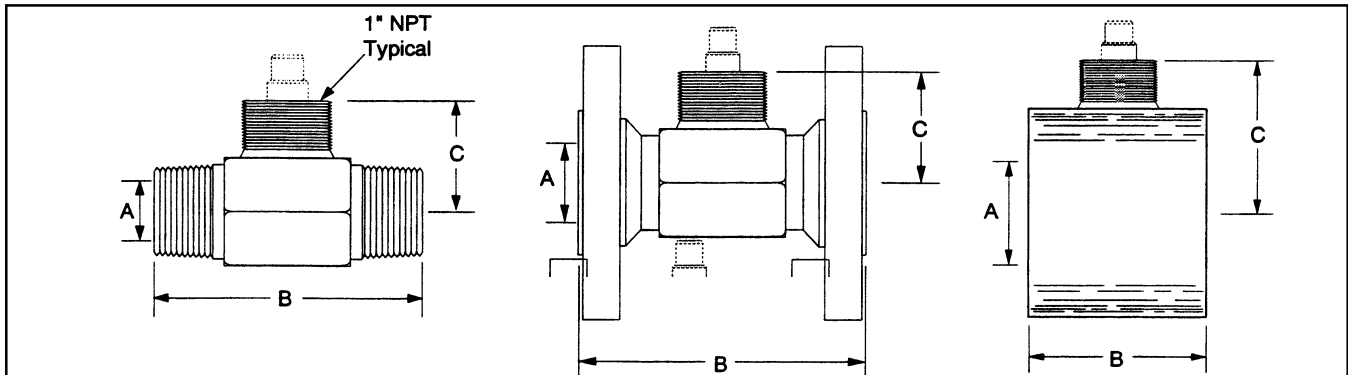
Consult Factory for Details.

Dimensions

						ANSI Flanged - Class				
	Bore		NPT		Wafer		150	300	600	
	A	B	C	B	C	B	B	B	C	
3/4" & 3/4" E	0.6" (16)	3.4" (83)	1.8" (46)	CF	CF	3.8" (99)	4.5" (114)	5.0" (127)	1.8" (46)	
1"	0.9" (22)	3.6" (93)	1.9" (48)	CF	CF	4.1" (105)	4.8" (121)	5.3" (133)	1.9" (48)	
1.5"	1.3" (33)	4.7" (117)	2.1" (53)	CF	CF	5.3" (133)	5.9" (149)	6.5" (165)	2.1" (53)	
2"	1.8" (45)	6.0" (154)	2.3" (61)	CF	CF	6.8" (171)	7.4" (187)	8.1" (207)	2.3" (61)	

Inches (mm)

CF - Consult Factory



Note: Dimensions - Inches to the nearest tenth (millimeters to the nearest whole mm), each independently dimensioned from respective engineering drawings.

Ordering Information

The following guide defines the correct turbine meter for a given application and the respective catalog code. This code is part of the ordering information and should be included on the Request for Quote or Purchase Order.

GT		Tungsten Carbide V-Cup Bearing Gas Turbine Meters	
Code	Body Style		
3	Male NPT		
4	Flanged - ANSI Raised Face		
4R	Flanged - ANSI RTJ		
9	Wafer (Flangeless) all bore sizes = 2" Connection size		
Code	Meter Size		
075	3/4"		
1	1"		
15	1.5"		
2	2"		
Code	Specific Connection		
0	3/4" NPT or Wafer Connections		
00	1/2" & 1.5" NPT or Wafer Connections		
000	1" & 2" NPT or Wafer Connections		
02	150# Flanges		
07	300# Flanges		
14	600# Flanges		
Code	Flow Range/Rotor Selection		
L	Low Flow Range (see spec. for details)		
N	Normal Flow Range (see spec. for details)		
H	High Flow Range (see spec. for details)		
XH	Extended High Range - 2" only (see spec.)		
Exmpl			
GT	3	2	000 XH GT3/2000/XH

Choose one code from each group to build model number and pricing.

Notes:

- Order pick-up, cable and electronics separately.
- Use low drag (sine wave output) or RF (square wave output) pick-up for GT Series Cartridge Meter.

For special requests not covered under this modeling system, please contact factory for quote.



www.fmcinvalco.com

The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.

FMC Energy Systems Fluid Control Stephenville, TX 76401, Phone: 254/968-2181, FAX: 254/968-5709, Toll Free: 800/468-2526

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