Preso®
Differential Pressure Flow Meters

Coin® Segmented Wedge

Flanged Flow Meter

DESCRIPTION

The Preso Coin Flanged wedge flow meter accommodates most flows, even the most abrasive. This type of differential technology is a proven, consistent measuring technology for media in upstream, midstream and downstream applications. Accuracy and reliability are achieved with rugged construction, practical design, and a simple principle of operation. The Coin wedge flow meter stands alone in its ability to maintain the necessary square root relationship between flow rate and differential pressure for almost any type of flow.

CONFIGURATION

The inlet section is the same diameter as the incoming pipe section and followed by a precise, segmented, angled section equal on both sides for bidirectional flow measurement. The H/ID ratio is determined by the manufacturer according to recognized standards and formulas. The discharge coefficient (Cd) is linear and stable in the operating flow range.

ACCURACY AND REPEATABILITY

The accuracy of the Coin meter is within ±3.0% (uncalibrated) and ±0.5% (calibrated) with a repeatability of ±0.2% and turndown of 10:1 in the corresponding range of Reynolds' Numbers. For custody transfer applications the Coin meter is flow tested by an independent NIST certified laboratory under the design operating conditions and piping configurations.

APPLICATIONS

Typical core applications for Wedge meters include high-viscosity fluids, slurries, corrosive fluids, contaminated air/gas, and more.

DIFFERENTIATOR

The wedge meter functions similarly to a segmental orifice. A segmental orifice still has a small restriction in the line around the opening. The wedge design allows solids and particulates to be swept through the opening. It also enables measurements with Reynolds Numbers down in the laminar range to 500 as a minimum. Wedge meters generally have a higher turndown ratio than segmental orifice plates.

BENEFITS

- Abrasive and erosive slurries, viscous and dirty fluids, clean fluids, steam or gasses
- Bi-Directional flow measurement

- Easily installed in any position with minimal straight pipe requirements

FEATURES

- Turndown ratio: 10:1
- Mass flow output with multivariable transmitter (accuracy ±0.5% calibrated)
- Repeatability: ±0.2% of readings
- Reynolds number measurement down to 300
- High viscosity measurement to 3000 and higher
- Sizes 0.5…40 in.
- Manufactured to ASME, ANSI B31.1, NACE MR-0175, CSA-Z299.3
- ISO-9001 certified design and fabrication

SPECIFICATIONS

Applications	Water, oil, steam, air/gas, sludge/slurries, molten rubber, molten sulfur, asphalt, crude oil, polymers, phenol resin, ammonia gas, hot tar, pulp stock, wet gases, other liquids.
Pipe Sizes	0.5…40 in. (13…406.40 mm)
Temperature Range	Up to 800° F (426.67° C)
Pressure Range	Depends on flange rating
Accuracy	±3.0% uncalibrated; up to 0.5% calibrated
Repeatability	±0.2%
Turndown Ratio	10:1

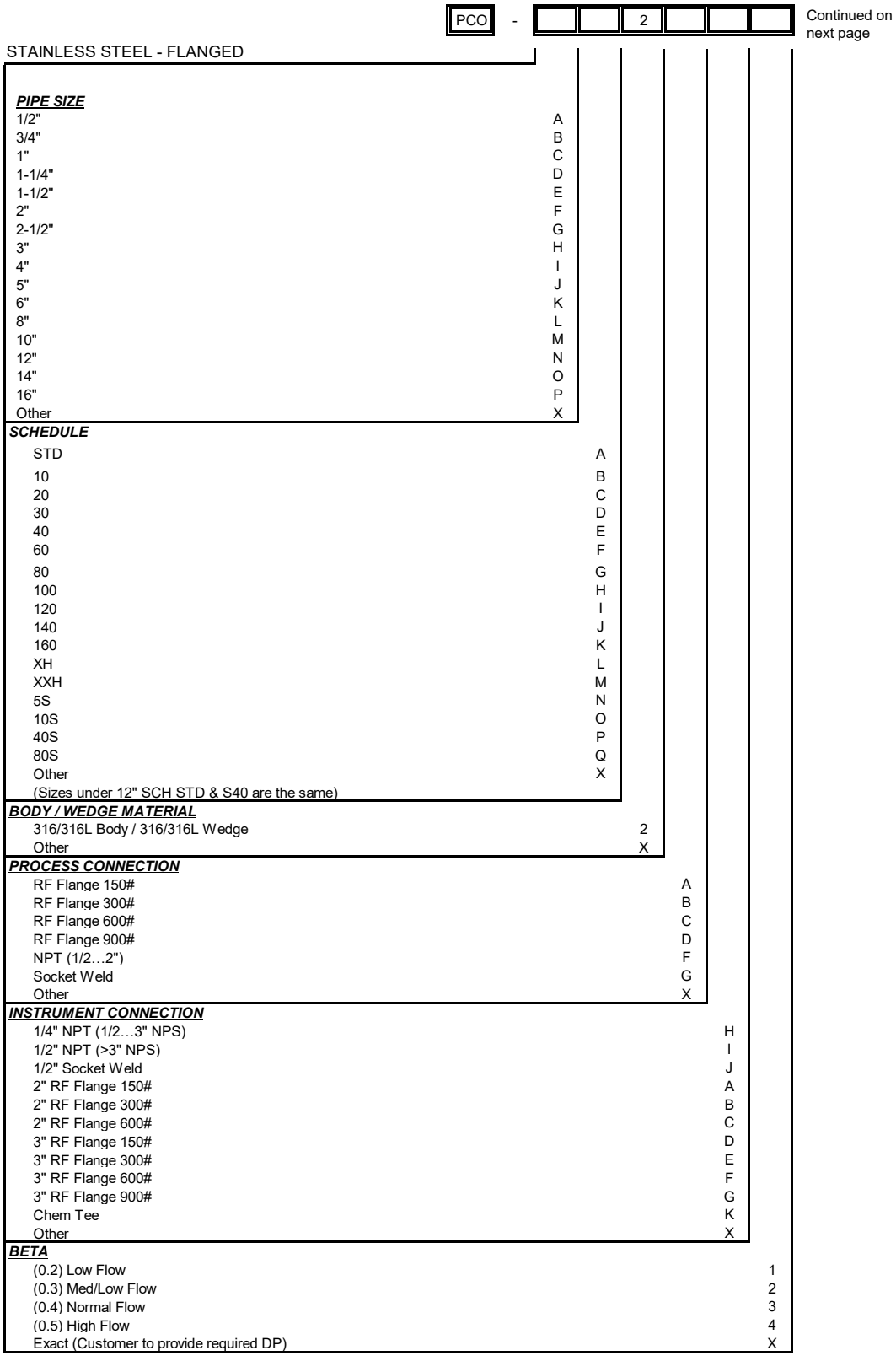
Badger Meter

DPM-DS-02614-EN-04 (August 2021)

Product Data Sheet

PART NUMBERING CONSTRUCTION

Stainless Steel



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INSTRUMENT VALVE

1/4" Needle CS	A
1/2" Needle CS	B
1/4" Needle SS	C
1/2" Needle SS	D
1/2" Gate w/Cross CS (Steam)	E
1/2" Gate w/Cross SS (Steam)	F
Other	X
Not Required	Z

CALIBRATION

Factory Calibration	1
Special Factory Calibration	2
External Calibration	3
Not Required	Z

TRANSMITTER MOUNTING

Remote Mount	1
Mounting Bracket Tee (only)	2
Manifold Mounting Plate- Meter Mount (Does not include manifold)	3
Other	X

CERTIFICATIONS

None	Z
Tracable Material Certifications	1
NACE MR0-103	2
NACE MR0-175	3
Items 1 and 2	4
Items 1 and 3	5
Other	X

STANDARD NDE TESTING

None	Z
Hydrostatic Test Only (1/2…12" NPS 150# to 900# flange - Others CF)	1
5% Radiography of Butt Welds	2
100% Radiography of Butt Welds	3
5% Magnetic particle/dye penetrant	4
100% magnetic particle/dye penetrant	5
Items 2 and 4 (1/2…12" NPS - Others CF)	6
Items 3 and 4 (1/2…12" NPS - Others CF)	7
Items 3 and 5 (1/2…12" NPS - Others CF)	8
Other	X

Note: Items 2-8 also include hydrostatic testing

Other NDE Testing

None	Z
100% visual inspection with report	1
PMI	2
Post-Weld Hardness testing	3
Items 1 and 2	4
Items 1 and 3	5
Other	X

Note on Item 1: 100% visual inspection occurs on all product.
This is a request for the report.

Hardcoating

None	Z
Tungsten Carbide (WC) on wedge	1
Tungsten Carbide (WC) on center 1/3 of meter	2
Chromium Carbode (CrC) on wedge	3
Chromium Carbode (CrC) on center 1/3 of meter	4
Other	X

NOTE: Applications requiring piping to conform to ASME B31.1, B31.3, or require non-destructive examination please contact Preso for pricing)

Carbon Steel

Preso Meter Industrial Products

COIN® Segmented Wedge
CARBON STEEL - FLANGED

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PIPE SIZE						
1/2"	A					
3/4"	B					
1"	C					
1-1/4"	D					
1-1/2"	E					
2"	F					
2-1/2"	G					
3"	H					
4"	I					
5"	J					
6"	K					
8"	L					
10"	M					
12"	N					
14"	O					
16"	P					
Other	X					
SCHEDULE						
STD		A				
10		B				
20		C				
30		D				
40		E				
60		F				
80		G				
100		H				
120		I				
140		J				
160		K				
XH		L				
XXH		M				
5S		N				
10S		O				
40S		P				
80S		Q				
Other		X				
(Sizes under 12" SCH STD & S40 are the same)						
BODY / WEDGE MATERIAL						
CS Body / CS Wedge			1			
CS Body / 316/316L Wedge			3			
PROCESS CONNECTION						
RF Flange 150#				A		
RF Flange 300#				B		
RF Flange 600#				C		
RF Flange 900#				D		
NPT (1/2…2")				F		
Socket Weld				G		
Other				X		
INSTRUMENT CONNECTION						
1/4" NPT (1/2…3" NPS)					H	
1/2" NPT (>3" NPS)					I	
1/2" Socket Weld					J	
2" RF Flange 150#					A	
2" RF Flange 300#					B	
2" RF Flange 600#					C	
3" RF Flange 150#					D	
3" RF Flange 300#					E	
3" RF Flange 600#					F	
3" RF Flange 900#					G	
Chem Tee					K	
Other					X	
BETA						
(0.2) Low Flow						1
(0.3) Med/Low Flow						2
(0.4) Normal Flow						3
(0.5) High Flow						4
Exact (Customer to provide required DP)						X

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Control. Manage. Optimize.

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