Preso®
Differential Pressure Flow Meters

Coin® Segmented Wedge

Back to Back Flow Meter

DESCRIPTION

The Preso Coin Back-to-Back wedge flow meter accommodates most flows, even the most abrasive. This compact DP flow meter has taps built into the flanges to read the instrument taps. This type of wedge meter is effective with abrasive slurries, viscous or dirty fluids. This type of differential technology is a proven, consistent measuring technology for media in the upstream, midstream and downstream applications. Accuracy and reliability are achieved with rugged construction, practical design, and a simple principle of operation. It 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.

APPLICABLE FLUIDS

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

BENEFITS

- Reynolds Number: as low as 300
- Abrasive & Erosive Slurries, Multi-Phase Fluids, Viscous & Dirty Fluids, Clean Fluids, Steam or Gasses
- Easily installed in any position with minimal straight pip requirements.
- Resists wear, maintenance free (no moving parts)
- Bi-Directional flow measurement

FEATURES

- Smaller profile to fit in tighter configurations
- 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…10 in. (call for extended sizes)
- 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, other liquids, sludge/slurries, molten rubber, molten sulfur, asphalt, crude oil, polymers, phenol resin, ammonia gas, hot tar, pulp stock, wet gases.
Pipe Sizes	0.5…16 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-02617-EN-04 (August 2021)

Product Data Sheet

PART NUMBERING CONSTRUCTION

COIN® Back to Back Wedge
316SS - SCH STD
Flanged WNRF

PCB - [ ][ ] 2 [ ][ ][ ]

Continued on next page

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

SCHEDULE

STD	A
Call for extended Schedules	

BODY / WEDGE MATERIAL

316/316L Body / 316/316L Wedge	2

PROCESS CONNECTION

RF flange 150# WN	A
RF flange 300# WN	B

INSTRUMENT CONNECTION

1/4" NPT (1/2…3" NPS)	H
1/2" NPT (>3" NPS)	I
1/2" Socket Weld	J

BETA

(0.2) Low Flow	1
(0.3) Med/Low Flow	2
(0.4) Normal Flow	3
(0.5) High Flow	4

COIN® Back to Back Wedge
316SS - SCH XS
Flanged WNRF

PCB - [ ][ ] 2 [ ][ ][ ]

Continued on next page

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

SCHEDULE

XS	L
Call for extended Schedules	

BODY / WEDGE MATERIAL

316/316L Body / 316/316L Wedge	2

PROCESS CONNECTION

RF flange 150# WN	A
RF flange 300# WN	B

INSTRUMENT CONNECTION

1/4" NPT (1/2…3" NPS)	H
1/2" NPT (>3" NPS)	I
1/2" Socket Weld	J

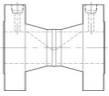
BETA

(0.2) Low Flow	1
(0.3) Med/Low Flow	2
(0.4) Normal Flow	3
(0.5) High Flow	4

Continued from previous page

INSTRUMENT VALVE	
Not Required	Z
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
CALIBRATION	
Not Required	Z
Factory Calibration (6 point)	1
Special Factory Calibration	2
External Calibration	3
TRANSMITTER MOUNTING	
Remote Mount	Z
Mounting Bracket Tee (only)	2
Manifold Mounting Plate- Meter Mount (Does not include manifold)	3
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 (Positive Material Identification)	2
Post-Weld Harness Testing	3
Items 1 and 2	4
Items 3 and 4	5
Items 1, 2 and 3	6
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
TERTIARY TAP	
None	Z
3/4" Standard RTD Temperature with Thermowell (-200… 450° F)	A
3/4" High Temperature RTD Temperature (-200…1000° F)	B
1/2" Pressure Tap w/o transmitter	C
1/2" Pressure Absolute with transmitter	D
1/2" Pressure Gauge with transmitter	E

COIN® Back to Back Wedge
316SS - SCH 160
Flanged WNRF



PCB	-			2			

Continued on next page

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

SCHEDULE

STD	A
Call for extended Schedules	

BODY / WEDGE MATERIAL

316/316L Body / 316/316L Wedge	2

PROCESS CONNECTION

RF flange 150# WN	A
RF flange 300# WN	B

INSTRUMENT CONNECTION

1/4" NPT (1/2…3" NPS)	H
1/2" NPT (>3" NPS)	I
1/2" Socket Weld	J

BETA

(0.2) Low Flow	1
(0.3) Med/Low Flow	2
(0.4) Normal Flow	3
(0.5) High Flow	4

Continued from previous page

INSTRUMENT VALVE	
Not Required	Z
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
CALIBRATION	
Not Required	Z
Factory Calibration (6 point)	1
Special Factory Calibration	2
External Calibration	3
TRANSMITTER MOUNTING	
Remote Mount	Z
Mounting Bracket Tee (only)	2
Manifold Mounting Plate- Meter Mount (Does not include manifold)	3
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 (Positive Material Identification)	2
Post-Weld Harness Testing	3
Items 1 and 2	4
Items 3 and 4	5
Items 1, 2 and 3	6
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
TERTIARY TAP	
None	Z
3/4" Standard RTD Temperature with Thermowell (-200… 450° F)	A
3/4" High Temperature RTD Temperature (-200…1000° F)	B
1/2" Pressure Tap w/o transmitter	C
1/2" Pressure Absolute with transmitter	D
1/2" Pressure Gauge with transmitter	E

INTENTIONAL BLANK PAGE

INTENTIONAL BLANK PAGE

Control. Manage. Optimize.

Preso and Coin are registered trademarks of Badger Meter, Inc. Other trademarks appearing in this document are the property of their respective entities. Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists. © 2021 Badger Meter, Inc. All rights reserved.

www.badgermeter.com