

DESCRIPTION

The Preso Coin Butt Weld Wedge flow meter accommodates most flows, even the most abrasive. This butt weld DP flow meter is designed to be placed and welded within a pipe line for leak-free, long-lasting measurement. This type of wedge meter is effective with liquid, gas and steam applications. 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 by its rugged construction, practical design, and 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 $\pm 3.0\%$ (uncalibrated) and $\pm 0.5\%$ (calibrated) with a repeatability of $\pm 0.2\%$ 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

- Reduced pumping costs



- Abrasive and Erosive Slurries, Viscous and Dirty Fluids, Clean Fluids, Steam or Gasses
- Easily installed in any position with minimal straight pipe requirements
- Resists wear, maintenance free (no moving parts)
- Bi-Directional flow measurement

FEATURES

- Reduced pumping costs
- Turndown ratio: 10:1
- Mass flow output with multivariable transmitter (accuracy $\pm 0.5\%$ calibrated)
- Repeatability: $\pm 0.2\%$ of readings
- Reynolds number measurement down to 300
- High viscosity measurement to 3000 and higher
- Sizes 0.5... 16 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, other liquids.
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	$\pm 3.0\%$ uncalibrated; up to 0.5% calibrated
Repeatability	$\pm 0.2\%$
Turndown Ratio	10:1

PART NUMBERING CONSTRUCTION

Stainless Steel

PCO	-			2			
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STAINLESS STEEL - BUTT WELD

<u>PIPE SIZE</u>							
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						
<u>SCHEDULE</u>							
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)							
<u>BODY / WEDGE MATERIAL</u>							
316/316L Body / 316/316L Wedge				2			
Other				X			
<u>PROCESS CONNECTION</u>							
Butt Weld					E		
<u>INSTRUMENT CONNECTION</u>							
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	
<u>BETA</u>							
(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
<u>INSTRUMENT VALVE</u>							
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

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previous page

<u>CALIBRATION</u>					
Factory Calibration	1				
Special Factory Calibration	2				
External Calibration	3				
Not Required	Z				
<u>TRANSMITTER MOUNTING</u>					
Remote Mount	1				
Mounting Bracket Tee (only)	2				
Manifold Mounting Plate- Meter Mount (Does not include manifold)	3				
Other	X				
<u>CERTIFICATIONS</u>					
None		Z			
Tracable Material Certifications		1			
NACE MRO-103		2			
NACE MRO-175		3			
Items 1 and 2		4			
Items 1 and 3		5			
Other		X			
<u>STANDARD NDE TESTING</u>					
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					
<u>Weld Testing</u>					
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.					
<u>Hardcoating</u>					
None					Z
Tungsten Carbide (WC) on wedge					1
Tungsten Carbide (WC) on center 1/3 of meter					2
Chromium Carbide (CrC) on wedge					3
Chromium Carbide (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

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CARBON STEEL - BUTT WELD

PIPE SIZE		A						
1/2"		B						
3/4"		C						
1"		D						
1-1/4"		E						
1-1/2"		F						
2"		G						
2-1/2"		H						
3"		I						
4"		J						
5"		K						
6"		L						
8"		M						
10"		N						
12"		O						
14"		P						
16"		X						
Other		X						
SCHEDULE		A						
STD		B						
10		C						
20		D						
30		E						
40		F						
60		G						
80		H						
100		I						
120		J						
140		K						
160		L						
XH		M						
XXH		N						
5S		O						
10S		P						
40S		Q						
80S		X						
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								
Butt Weld								E
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
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

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previous page

<u>CALIBRATION</u>					
Factory Calibration	1				
Special Factory Calibration	2				
External Calibration	3				
Not Required	Z				
<u>TRANSMITTER MOUNTING</u>					
Remote Mount	1				
Mounting Bracket Tee (only)	2				
Manifold Mounting Plate- Meter Mount (Does not include manifold)	3				
Other	X				
<u>CERTIFICATIONS</u>					
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			
<u>STANDARD NDE TESTING</u>					
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					
<u>Other NDE Testing</u>					
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.					
<u>Hardcoating</u>					
None					Z
Tungsten Carbide (WC) on wedge					1
Tungsten Carbide (WC) on center 1/3 of meter					2
Chromium Carbide (CrC) on wedge					3
Chromium Carbide (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)

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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 $\pm 3.0\%$ (uncalibrated) and $\pm 0.5\%$ (calibrated) with a repeatability of $\pm 0.2\%$ 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
- Reduced pumping costs

FEATURES

- Reduced pumping costs
- Turndown ratio: 10:1
- Mass flow output with multivariable transmitter (accuracy $\pm 0.5\%$ calibrated)
- Repeatability: $\pm 0.2\%$ of readings
- Reynolds number measurement down to 300
- High viscosity measurement to 3000 and higher
- Sizes 0.5... 16 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, other liquids.
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	$\pm 3.0\%$ uncalibrated; up to 0.5% calibrated
Repeatability	$\pm 0.2\%$
Turndown Ratio	10:1

PART NUMBERING CONSTRUCTION

Stainless Steel

PCO	-			2		
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STAINLESS STEEL - FLANGED						
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						
316/316L Body / 316/316L Wedge				2		
Other				X		
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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<u>INSTRUMENT VALVE</u>							
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						
<u>CALIBRATION</u>							
Factory Calibration	1						
Special Factory Calibration	2						
External Calibration	3						
Not Required	Z						
<u>TRANSMITTER MOUNTING</u>							
Remote Mount	1						
Mounting Bracket Tee (only)	2						
Manifold Mounting Plate- Meter Mount (Does not include manifold)	3						
Other	X						
<u>CERTIFICATIONS</u>							
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		
<u>STANDARD NDE TESTING</u>							
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							
<u>Other NDE Testing</u>							
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.							
<u>Hardcoating</u>							
None						Z	
Tungsten Carbide (WC) on wedge					1		
Tungsten Carbide (WC) on center 1/3 of meter					2		
Chromium Carbide (CrC) on wedge					3		
Chromium Carbide (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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next page**

<u>PIPE SIZE</u>						
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					
<u>SCHEDULE</u>						
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)						
<u>BODY / WEDGE MATERIAL</u>						
CS Body / CS Wedge		1				
CS Body / 316/316L Wedge		3				
<u>PROCESS CONNECTION</u>						
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			
<u>INSTRUMENT CONNECTION</u>						
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			
<u>BETA</u>						
(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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<u>INSTRUMENT VALVE</u>						
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					
<u>CALIBRATION</u>						
Factory Calibration		1				
Special Factory Calibration		2				
External Calibration		3				
Not Required		Z				
<u>TRANSMITTER MOUNTING</u>						
Remote Mount			1			
Mounting Bracket Tee (only)			2			
Manifold Mounting Plate- Meter Mount (Does not include manifold)			3			
Other			X			
<u>CERTIFICATIONS</u>						
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		
<u>STANDARD NDE TESTING</u>						
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						
<u>Other NDE Testing</u>						
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.						
<u>Hardcoating</u>						
None						Z
Tungsten Carbide (WC) on wedge						1
Tungsten Carbide (WC) on center 1/3 of meter						2
Chromium Carbide (CrC) on wedge						3
Chromium Carbide (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

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DESCRIPTION

The Preso Coin Flanged flow meter with NPT Pressure Taps 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 $\pm 3.0\%$ (uncalibrated) and $\pm 0.5\%$ (calibrated) with a repeatability of $\pm 0.2\%$ 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

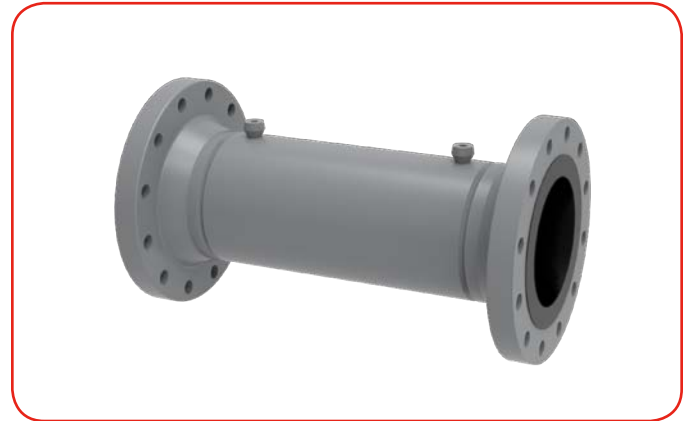
Typical core applications for Wedge meters include high-viscosity fluids, slurries, corrosive fluids, contaminated air/gas, and more.

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
- Reduced pumping costs

FEATURES

- Reduced pumping costs
- Turndown ratio: 10:1
- Mass flow output with multivariable transmitter (accuracy $\pm 0.5\%$ calibrated)
- Repeatability: $\pm 0.2\%$ of readings
- Reynolds number measurement down to 300
- High viscosity measurement to 3000 and higher
- Sizes 0.5... 16 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, other liquids.
Pipe Sizes	0.5... 16 in. (12.70...406.40 mm)
Temperature Range	Up to 800° F (426.67° C)
Pressure Range	Depends on flange rating
Accuracy	$\pm 3.0\%$ uncalibrated; up to 0.5% calibrated
Repeatability	$\pm 0.2\%$
Turndown Ratio	10:1

PART NUMBERING CONSTRUCTION

Stainless Steel

PCO - 2

Continued on next page

STAINLESS STEEL - FLANGED	
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	
316/316L Body / 316/316L Wedge	2
Other	X
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

Continued from previous page

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<u>INSTRUMENT VALVE</u>							
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						
<u>CALIBRATION</u>							
Factory Calibration		1					
Special Factory Calibration		2					
External Calibration		3					
Not Required		Z					
<u>TRANSMITTER MOUNTING</u>							
Remote Mount			1				
Mounting Bracket Tee (only)			2				
Manifold Mounting Plate- Meter Mount (Does not include manifold)			3				
Other			X				
<u>CERTIFICATIONS</u>							
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			
<u>STANDARD NDE TESTING</u>							
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							
<u>Other NDE Testing</u>							
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.							
<u>Hardcoating</u>							
None						Z	
Tungsten Carbide (WC) on wedge						1	
Tungsten Carbide (WC) on center 1/3 of meter						2	
Chromium Carbide (CrC) on wedge						3	
Chromium Carbide (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

PCO - - - - - -

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					
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

Continued from
previous page

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<u>INSTRUMENT VALVE</u>							
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						
<u>CALIBRATION</u>							
Factory Calibration		1					
Special Factory Calibration		2					
External Calibration		3					
Not Required		Z					
<u>TRANSMITTER MOUNTING</u>							
Remote Mount			1				
Mounting Bracket Tee (only)			2				
Manifold Mounting Plate- Meter Mount (Does not include manifold)			3				
Other			X				
<u>CERTIFICATIONS</u>							
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			
<u>STANDARD NDE TESTING</u>							
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							
<u>Other NDE Testing</u>							
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.							
<u>Hardcoating</u>							
None							Z
Tungsten Carbide (WC) on wedge							1
Tungsten Carbide (WC) on center 1/3 of meter							2
Chromium Carbide (CrC) on wedge							3
Chromium Carbide (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

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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 clean fluids, gas and steam applications. 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 $\pm 3.0\%$ (uncalibrated) and $\pm 0.5\%$ (calibrated) with a repeatability of $\pm 0.2\%$ 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

Water, oil, steam, air/gas, other liquids.

BENEFITS

- Reduced pumping costs
- Abrasive & Erosive Slurries, Multi-Phase Fluids, Viscous & Dirty Fluids, Clean Fluids, Steam or Gasses
- Easily installed in any position with minimal straight pipe requirements
- Resists wear, maintenance free (no moving parts)
- Bi-Directional flow measurement



FEATURES

- Reduced pumping costs
- Turndown ratio: 10:1
- Mass flow output with multivariable transmitter (accuracy $\pm 0.5\%$ calibrated)
- Repeatability: $\pm 0.2\%$ of readings
- Reynolds number measurement down to 300
- High viscosity measurement to 3000 and higher
- Sizes 0.5... 16 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, other liquids.
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	$\pm 3.0\%$ uncalibrated; up to 0.5% calibrated
Repeatability	$\pm 0.2\%$
Turndown Ratio	10:1

PART NUMBERING CONSTRUCTION

Preso Meter Industrial Products

COIN® Segmented Wedge
STAINLESS STEEL - Back to Back

PCB	-			2			
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Continued on next page

<u>PIPE SIZE</u>						
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					
<u>SCHEDULE</u>						
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)						
<u>BODY / WEDGE MATERIAL</u>						
316/316L Body / 316/316L Wedge				2		
Other				X		
<u>PROCESS CONNECTION</u>						
RF Flange 150#					A	
RF Flange 300#					B	
RF Flange 600#					C	
RF Flange 900#					D	
<u>INSTRUMENT CONNECTION</u>						
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	
<u>BETA</u>						
(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

Continued from
previous page

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<u>INSTRUMENT VALVE</u>						
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					
<u>CALIBRATION</u>						
Factory Calibration	1					
Special Factory Calibration	2					
External Calibration	3					
Not Required	Z					
<u>TRANSMITTER MOUNTING</u>						
Remote Mount	1					
Mounting Bracket Tee (only)	2					
Manifold Mounting Plate- Meter Mount (Does not include manifold)	3					
Other	X					
<u>CERTIFICATIONS</u>						
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				
<u>STANDARD NDE TESTING</u>						
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						
<u>Other NDE Testing</u>						
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.						
<u>Hardcoating</u>						
None					Z	
Tungsten Carbide (WC) on wedge					1	
Tungsten Carbide (WC) on center 1/3 of meter					2	
Chromium Carbide (CrC) on wedge					3	
Chromium Carbide (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)

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DESCRIPTION

The Preso[®] Coin Wafer Wedge Flow Meter is a wedge meter with rugged construction. Wedge meters were originally developed for the mining industry to measure slurry flows and were quickly adopted for use where other contaminants caused either wear or plugging of ports and geometry on other DP devices. The Wedge meter also benefits from a partial redirection of the flow that protects the edge of the restriction to some degree. When coupled with a hard facing compound on the wedge portion of the meter, it is extremely resistant to wear.

The flow meter accommodates most flows, even the most abrasive. 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 by its rugged construction, practical design, and 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.

FEATURES

- Narrow face-to-face creates low installed cost
- Turndown ratio: 10:1
- Mass flow output with multivariable transmitter (accuracy \pm 0.5% calibrated)
- Repeatability: \pm 0.2% of readings
- Reynolds number measurement down to 300
- High viscosity measurement to 3000 and higher
- Sizes 0.5...4 in.
- Bi-directional flow measurement
- ISO-9001 certified design and fabrication

OPTIONS

- RTD

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.



APPLICATIONS

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

BENEFITS

- Reduced pumping costs
- Abrasive and Erosive Slurries, Viscous and Dirty Fluids, Clean Fluids, Steam or Gasses
- Easily installed in any position with minimal straight pipe requirements
- Resists wear, no moving parts
- Bi-Directional flow measurement

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

SPECIFICATIONS

Applications	High-viscosity fluids, slurries, corrosive fluids, contaminated air/gas, multiphase flow, and more
Pipe Sizes	0.5...4 in. (12.70...101.60 mm)
Temperature Range	Up to 800° F (26.67° C)
Pressure Range	Dependant of flange rating
Accuracy	±3.0% uncalibrated; up to 0.5% calibrated
Repeatability	±0.2%
Turndown Ratio	10:1

PART NUMBERING CONSTRUCTION



Continued on next page

WAFER - NPT STAINLESS STEEL

<u>PIPE SIZE / FLANGE RATING</u>					
1/2" / 150#	A	1			
1/2" / 300#	A	2			
1/2" / 600#	A	3			
1/2" / 900/1500#	A	4			
3/4" / 150#	B	1			
3/4" / 300#	B	2			
3/4" / 600#	B	3			
3/4" / 900/1500#	B	4			
1" / 150#	C	1			
1" / 300#	C	2			
1" / 600#	C	3			
1" / 900#	C	4			
1-1/4" / 150#	D	1			
1-1/4" / 300#	D	2			
1-1/4" / 600#	D	3			
1-1/4" / 900#	D	4			
1-1/2" 150#	E	1			
1-1/2" 300#	E	2			
1-1/2" 600#	E	3			
1-1/2" 900#	E	4			
2" / 150#	F	1			
2" / 300#	F	2			
2" / 600#	F	3			
2" / 900/1500#	F	4			
3" / 150#	G	1			
3" / 300#	G	2			
3" / 600#	G	3			
3" / 900#	G	4			
3" / 1500#	G	5			
4" / 150#	H	1			
4" / 300#	H	2			
4" / 600#	H	3			
4" / 900#	H	4			
4" / 1500#	H	5			
<u>SCHEDULE</u>					
STD	A				
5S	B				
10S	C				
40S	D				
40	E				
60	F				
80	G				
100	H				
120	I				
140	J				
160	K				
XH/XS	L				
XXH/XXS	M				
Other	X				
<u>BODY / WEDGE MATERIAL</u>					
All 316/316L					2
All 316/316L w/Coplanar Transmitter Bracket					3
Other					X
<u>INSTRUMENT CONNECTION</u>					
1/4" NPT ¹					A
1/2" NPT ²					B
<u>COIN RATIO</u>					
(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



<u>INSTRUMENT VALVE</u>						
1/4" Needle CS	A					
1/2" Needle CS	B					
1/4" Needle SS	C					
1/2" Needle SS	D					
Other	X					
Not Required	Z					
<u>CALIBRATION</u>						
Factory Calibration	1					
Special Factory Calibration	2					
External Calibration	3					
Not Required	Z					
<u>TRANSMITTER MOUNTING</u>						
Remote Mount	1					
Mounting Bracket Tee (only)	2					
Manifold Mounting Plate- Meter Mount (Does not include manifold)	3					
Other	X					
<u>CERTIFICATIONS</u>						
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	
<u>STANDARD NDE TESTING</u>						
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						
<u>Other NDE Testing</u>						
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.						
<u>Hardcoating</u>						
None						Z
Tungsten Carbide (WC) on wedge					1	
Tungsten Carbide (WC) on center 1/3 of meter					2	
Chromium Carbide (CrC) on wedge					3	
Chromium Carbide (CrC) on center 1/3 of meter					4	
Other					X	

¹For sizes 1/2" 150# & 3/4" 150#, 1/8" NPT taps with 1/4" adapters will be provided.

²Available for the following sizes:

150#	4" and larger
300#	3" and larger
600#	2" and larger
900/1500#	2" and larger

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

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