



FLOW METERING EQUIPMENT

Model AS Ellipse[®] Annular Flow Meter

Preso's patented elliptical design outperforms and provides greater accuracy than traditional differential pressure flow measurement devices. This differential pressure flow meter is designed with a series of ports facing the upstream velocity pressures, as well as flow sensing ports strategically located ahead of the trailing edge flow separation.

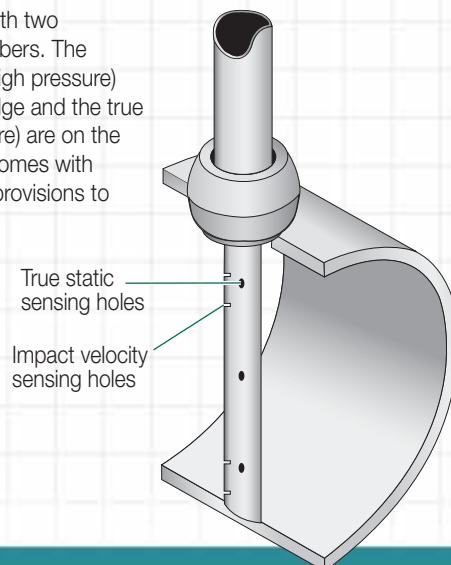
Features

- Patented elliptical design outperforms traditional devices
- Single point pipe entry for DP, temperature and static pressure
- No dampening software required
- Lowest pressure loss in industry (typically 3% of DP in a 12" line) due to its patented aerodynamic profile
- NIST traceable calibration: Optional independent labs

Benefits

- Accuracy: $\pm 0.75\%$ of reading, repeatability: $\pm 0.1\%$ of reading
- Turndown ratio: 17:1; no vacuum effects
- No moving parts equals long, trouble-free service life
- True static pressure measurement rather than a calculated value
- Overcomes loss of accuracy caused by fluid separation at the sensor body

The multi-ported, self averaging flow element consists of an elliptical shape with two independent flow sensing chambers. The impact velocity sensing holes (high pressure) are located along the leading edge and the true static sensing holes (low pressure) are on the exterior probe side. Model AS comes with instrument shut-off valves with provisions to accept a transmitter or direct indicating meter.



Specifications

Applications:	Steam
Pipe Sizes:	2 to 48 inches (50 to 1220 mm)
Pressure:	600 PSI (4100 kPa) max.
Temperature:	480 °F (250 °C) max.
Accuracy:	$\pm 0.75\%$ of reading
Turndown Ratio:	17:1 with no vacuum effect
Standard Components:	T-type head, 316 SS 1/2" FNPT connection CS compression fitting with SS ferrule CS 3000 lb. weld fitting – ASTM A105 316/316L SS Ellipse sensor 316 SS ID tag with wire
Reynolds Number:	Greater than 75,000 maintains most accurate flow measurements Less than 75,000 consult factory for estimated results
Resonance:	If greater than 0.8, use double support

1-800-632-7337

www.preso.com

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Part Number Construction

PAS (7/8")

PAS1 (1-1/4")

Pipe Size (PAS)

- A) 2 inch
- B) 2-1/2 inch
- C) 3 inch
- D) 3-1/2 inch
- E) 4 inch
- F) 5 inch
- G) 6 inch
- H) 8 inch
- I) 10 inch
- J) 12 inch
- K) 14 inch

Pipe Size (PAS1)

- A) 12 inch
- B) 14 inch
- C) 16 inch
- D) 18 inch
- E) 20 inch
- F) 24 inch
- G) 30 inch
- H) 36 inch
- I) 42 inch
- J) 48 inch

Pipe Orientation

- A) Horizontal
- B) Vertical

Probe Material

- 1) 316/316L-SS
- 2) Monel
- 3) Inconel®
- 4) Hastelloy®
- X) Other (consult factory for information)

Instrument Connection

- A) 1/2" NPT
- B) 1/2" Socket
- C) TT3 (Integral 3 Valve Trans-Mount)
- D) TT5 (Integral 5 Valve Trans-Mount)
- E) Transmitter Flange Connection

Connection

- A) CS Compression Fitting w/SS Ferrule
- B) SS Compression Fitting w/SS Ferrule

Instrument Valve*

- A) 1/2" Gate CS w/cross
- B) 1/2" Gate SS w/cross
- Z) Not required

*NOTE: Transmitter Flange Connection Options available when Option E under Instrument Connection is selected. (consult factory for information)

Pipe Mounting

- 1) A105 CS 3000#
- 2) 316/316L SS 3000#
- 3) A105 CS 3000# w/DbI Support (see below)
- 4) 316/316L SS 3000# w/DbI Support

RTD (Use with Instrument Connection option E only)

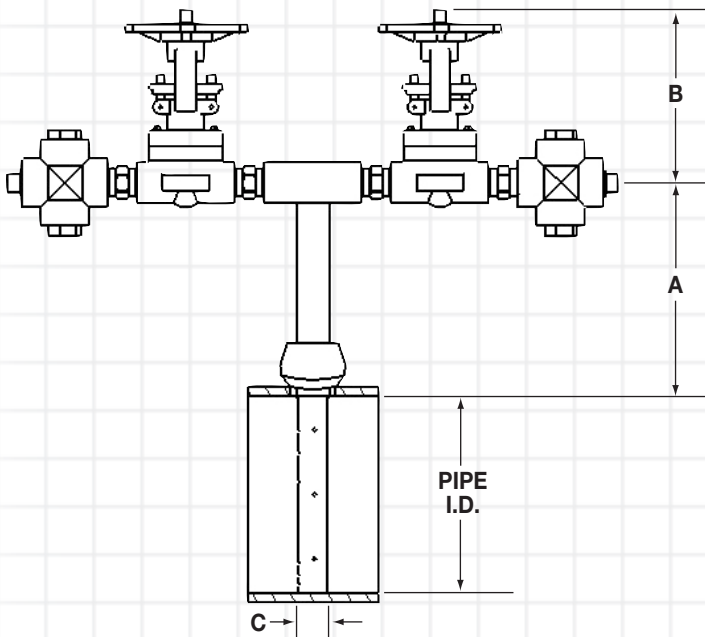
- 1) 100 Ohm RTD 3 wire w/Explosion Proof Head
- 2) 100 Ohm RTD 3 wire, Integral w/Aluminum Head
- Z) Not required

Schedule

- A) Std
- 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

Dimensions (inches)

	Probe Length		Probe Width
	A	B	C
AS	6.625	5.813	.875
AS1	6.750	5.813	1.25



Maximum Allowable DP (Inches of Water Column)

Pipe Size (inches)	Single Support Probe Size		Double Support Probe Size	
	7/8	1-1/4	7/8	1-1/4
2	880	—	2380	—
2-1/2	525	—	1568	—
3	396	—	1283	—
3-1/2	283	—	1117	—
4	197	—	980	—
5	153	—	757	—
6	126	—	689	—
8	114	360	512	—
10	100	240	315	960
12	87	175	250	700
14	53	147	195	585
16	—	113	—	450
18	—	90	—	360
20	—	74	—	295
24	—	68	—	270
26	—	50	—	215
30	—	34	—	155
32	—	—	—	—
36	—	—	—	—
42	—	—	—	—



FLOW METERING EQUIPMENT

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