

DESCRIPTION

The Preso ELLIPSE[®] Model BAR (Annular Commercial) is a multi-ported, self averaging differential pressure type ELLIPSE[®] flow element.

CONFIGURATION

The flow element has a two-piece construction: an elliptical shape and two 100% independent flow sensing chambers. This construction prevents signal degradation and mixing, and does not require dampening hardware or software. The impact velocity sensing holes are located along the leading edge and the true static sensing holes are on the exterior probe side. This does not generate any vortices or vacuum effects that impinge on the static pressure measurement sensing area and has a drag coefficient of 0.32 or less. Each flow sensor is complete with instrument shutoff valves with provisions to accept a transmitter or direct indicating meter. An identification tag is supplied with specific flow station measurement information, as required.

ACCURACY AND REPEATABILITY

The accuracy of the flow element is within $\pm 0.75\%$ with a repeatability of $\pm 0.1\%$ and turndown ratio of 17:1 in the corresponding and appropriate range of Reynolds' Numbers. Certified, independent test data is available from NIST laboratories in similar line sizes as well as in liquids and gases.

APPLICABLE FLUIDS

Liquids and gases.

COMPONENTS

All sensors are furnished with 1/4 in. instrument ball valves, threaded weld fitting, compression fitting, and ID tag as standard equipment. Quick connect fittings are available as an option.



FEATURES

- No separation effects on the low (static) pressure
- Turndown ratio of 17:1
- No vacuum effects
- No vortex generation
- Very high repeatability
- Accuracy of $\pm 0.75\%$ uncalibrated
- Low drag coefficient

METER SPECIFICATIONS

Name	Specification
Probe Construction	316 Stainless steel
Head	"Y" type, brass 1/8 in. FNPT
Pipe Mounting	3000# CS thread-o-let
Instrument Valves	1/4 in. SAE flare brass ball type
ID Tag	Polycarbonate
Temperature Maximum *	250° F (120° C)
Pressure Maximum *	400 PSIG (2760 kPa)

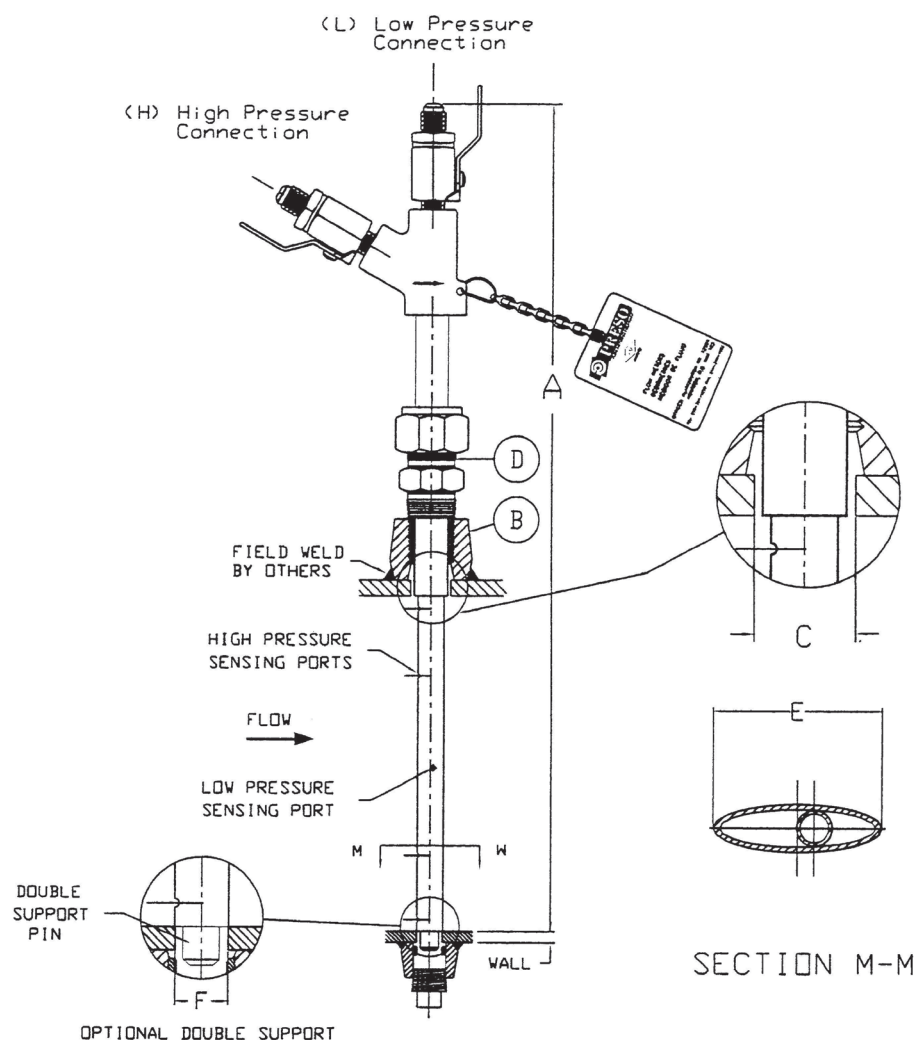
* For higher pressure and temperature application please consult factory

PIPE SIZE SPECIFICATIONS

BAR Pipe Size (in.)	ELLIPSE size (in.)	Sensor Connection
2...5	1/2	1/2 in. Brass compression with SS ferrule
6...12	7/8	1 in. CS compression with SS ferrule
14...24	1-1/4	1-1/4 in. Brass compression with SS ferrule

DIMENSIONS

Size	Model	B in. (mm)	C in. (mm)	D in. (mm)	E Ellipse in. (mm)	F in. (mm)	App. Weight lbs (kg)
2 in.	PBARAXXX	0.5 (12.70)	0.625 (15.875)	0.5 (12.70)	0.5 (12.70)	0.375 (9.525)	2 (0.91)
2-1/2 in.	PBARBXXX	0.5 (12.70)	0.625 (15.875)	0.5 (12.70)	0.5 (12.70)	0.375 (9.525)	3 (1.36)
3 in.	PBARCXXX	0.5 (12.70)	0.625 (15.875)	0.5 (12.70)	0.5 (12.70)	0.375 (9.525)	3 (1.36)
3-1/2 in.	PBARDXXX	0.5 (12.70)	0.625 (15.875)	0.5 (12.70)	0.5 (12.70)	0.375 (9.525)	3.5 (1.59)
4 in.	PBAREXXX	0.5 (12.70)	0.625 (15.875)	0.5 (12.70)	0.5 (12.70)	0.375 (9.525)	3.5 (1.59)
5 in.	PBARFXXX	0.5 (12.70)	0.625 (15.875)	0.5 (12.70)	0.5 (12.70)	0.375 (9.525)	4 (1.81)
6 in.	PBARGXXX	1 (25.40)	1.125 (28.575)	1 (25.40)	0.875 (22.225)	0.5 (12.70)	4.5 (2.04)
8 in.	PBARHXXX	1 (25.40)	1.125 (28.575)	1 (25.40)	0.875 (22.225)	0.5 (12.70)	4.5 (2.04)
10 in.	PBARIXXX	1 (25.40)	1.125 (28.575)	1 (25.40)	0.875 (22.225)	0.5 (12.70)	5 (2.27)
12 in.	PBARJXXX	1 (25.40)	1.125 (28.575)	1 (25.40)	0.875 (22.225)	0.5 (12.70)	5.5 (2.49)
14 in.	PBARKXXX	1.25 (31.75)	1.375 (34.925)	1.25 (31.75)	1.25 (31.75)	0.875 (22.225)	6.5 (2.95)
16 in.	PBARLXXX	1.25 (31.75)	1.375 (34.925)	1.25 (31.75)	1.25 (31.75)	0.875 (22.225)	7 (3.18)
18 in.	PBARMXXX	1.25 (31.75)	1.375 (34.925)	1.25 (31.75)	1.25 (31.75)	0.875 (22.225)	7.5 (3.40)
20 in.	PBARNXXX	1.25 (31.75)	1.375 (34.925)	1.25 (31.75)	1.25 (31.75)	0.875 (22.225)	8 (3.63)
24 in.	PBAROXXX	1.25 (31.75)	1.375 (34.925)	1.25 (31.75)	1.25 (31.75)	0.875 (22.225)	9 (4.08)



PART NUMBER MATRIX

PBAR 				
<u>Pipe Size</u>	<u>Schedule</u>	<u>Pipe Mounting / Connector</u>	<u>Instrument Connection</u>	<u>Tag *</u>
A - 2 in.	A - STD	<u>Hardware</u>	A - Brass ball valve 1/4 in. SAE	1 - Polycarbonate
B - 2-1/2 in.	B - 40	1 - Carbon steel/brass	B - Brass Ball Valve with Quick Connect	2 - Stainless Steel
C - 3 in.	C - 80	2 - Copper/brass	X - Other	
D - 3-1/2 in.	D - Type L (Copper)	3 - PVC/brass		
E - 4 in.	E - Type K (Copper)	4 - Carbon Steel with double support		
F - 5 in.	X - Other	5 - Copper with double support		
G - 6 in.		6 - PVC with double support		
H - 8 in.		x - Other		
I - 10 in.				
J - 12 in.				
K - 14 in.				
L - 16 in.				
M - 18 in.				
N - 20 in.				
O - 24 in.				

Bold = Standard

* Tag information must be included with order

Control. Manage. Optimize.

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