Preso®
Differential Pressure Flow Meters

Ellipse® Pitot Tube Meter

BHL Annular Hot Tap Dual Rod

DESCRIPTION

The Preso ELLIPSE® Model BHL (Annular Hot Tap Dual Rod) is a multi-ported, self averaging differential pressure 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 & REPEATABILITY

The accuracy of the flow element is within ±0.75% with a repeatability of ±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, threaded ball valve, threaded insert/retract mechanism with rods, and ID tag as standard equipment. Available options include: Integral 3-valve or 5-valve transmitter mount manifold and integral RTD temperature sensor.

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 ±0.75% uncalibrated
- Low drag coefficient

Badger Meter

PTT-DS-00789-EN-03 (September 2017)

Product Data Sheet

SPECIFICATIONS

Name	Specification
Probe Construction	316 Stainless steel
Head	"Y" type, brass 1/8 in. FNPT
Instrument Valves	1/4 in. SAE flare brass ball type
Packing Gland	Molythane with CS cage nipple & close nipple
Retract Assembly	CS rods, nuts & bolts
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

BHL Pipe Size (in.)	ELLIPSE size (in.)	Pipe Mounting	Isolating Valve
2…5	1/2	3/4 in. 3000# CS thread-o-let	3/4 in. Bronze ball valve
6…12	7/8	1-1/4 in. 3000# CS thread-o-let	1-1/4 in. Bronze ball valve
14…24	1-1/4	1-1/2 in. 3000# CS thread-o-let	1-1/2 in. Bronze ball valve

MODEL SELECTOR

PBHL □ □ □ □ □

Pipe Size

A - 2 in.
B - 2-1/2 in.
C - 3 in.
D - 3-1/2 in.
E - 4 in.
F - 5 in.
G - 6 in.
H - 8 in.
I - 10 in.
J - 12 in.
K - 14 in.
L - 16 in.
M - 18 in.
N - 20 in.
O - 24 in.

Schedule

A - STD
B - 40
C - 80
D - Type L (Copper)
E - Type K (Copper)
X - Other

Pipe Mounting / Connector Hardware

1 - Carbon steel/brass
2 - Copper/brass
3 - PVC/brass
4 - Carbon Steel with double support
5 - Copper with double support
6 - PVC with double support
x - Other

Instrument Connection

A - Brass ball valve 1/4 in. SAE
B - Brass Ball Valve with Quick Connect
X - Other

Tag *

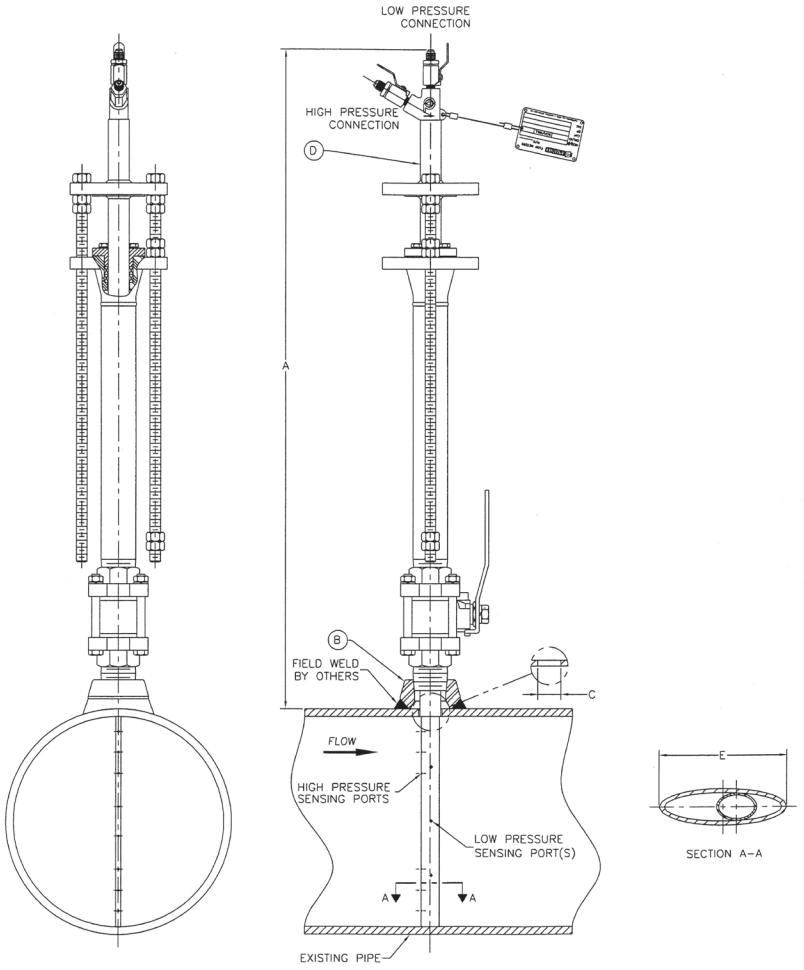
1 - Polycarbonate
2 - Stainless Steel

* Tag information must be included with order

Bold = Standard

SUBMITTAL DATA

SIZE	MODEL	A HEIGHT inch (mm)	B NPT inch (mm)	C DIA inch (mm)	D DIA inch (mm)	E ELLIPSE inch (mm)
2 in.	PBHLAXXXX	22.75 (577.9)	0.75 (19)	0.625 (15.8)	0.5 (12.7)	0.5 (12.7)
2-1/2 in.	PBHLBXXXX	24.25 (616)	0.75 (19)	0.625 (15.8)	0.5 (12.7)	0.5 (12.7)
3 in.	PBHLCXXXX	23.75 (603.2)	0.75 (19)	0.625 (15.8)	0.5 (12.7)	0.5 (12.7)
3-1/2 in.	PBHLDXXXX	24.25 (616)	0.75 (19)	0.625 (15.8)	0.5 (12.7)	0.5 (12.7)
4 in.	PBHLEXXXX	24.25 (616)	0.75 (19)	0.625 (15.8)	0.5 (12.7)	0.5 (12.7)
5 in.	PBHLFXXXX	25.75 (654)	0.75 (19)	0.625 (15.8)	0.5 (12.7)	0.5 (12.7)
6 in.	PBHLGXXXX	33 (838.2)	1.25 (31.7)	1.0 (25.4)	1.0 (25.4)	0.875 (22.2)
8 in.	PBHLHXXXX	35 (889)	1.25 (31.7)	1.0 (25.4)	1.0 (25.4)	0.875 (22.2)
10 in.	PBHLIXXXX	37 (939.8)	1.25 (31.7)	1.0 (25.4)	1.0 (25.4)	0.875 (22.2)
12 in.	PBHLJXXXX	39 (990.6)	1.25 (31.7)	1.0 (25.4)	1.0 (25.4)	0.875 (22.2)
14 in.	PBHLKXXXX	44 (1117.6)	1.5 (38.1)	1.25 (31.7)	1.25 (31.7)	1.25 (31.7)
16 in.	PBHLLXXXX	46 (1168.4)	1.5 (38.1)	1.25 (31.7)	1.25 (31.7)	1.25 (31.7)
18 in.	PBHLMXXXX	48 (1219.2)	1.5 (38.1)	1.25 (31.7)	1.25 (31.7)	1.25 (31.7)
20 in.	PBHLNXXXX	50 (1270)	1.5 (38.1)	1.25 (31.7)	1.25 (31.7)	1.25 (31.7)
24 in.	PBHLOXXXX	54 (1371.6)	1.5 (38.1)	1.25 (31.7)	1.25 (31.7)	1.25 (31.7)



Control. Manage. Optimize.

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