BIF®

UVT - FRP With Steel Flange

Model 20182

Specification Data

Description

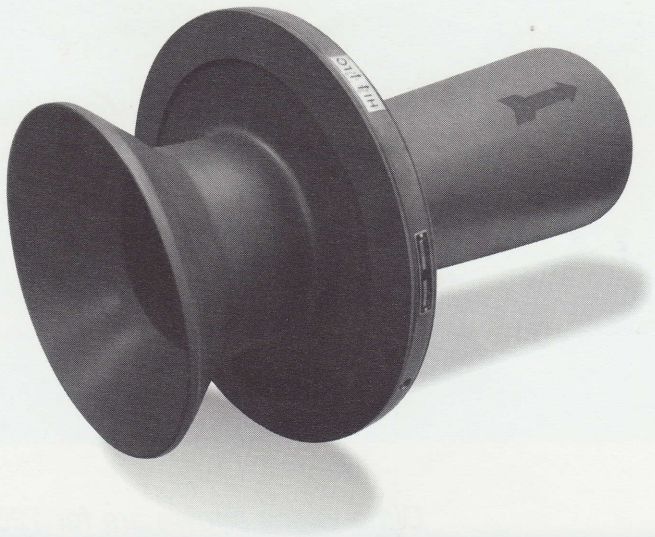
The BIF Model 20182 Fiberglass Reinforced Plastic (FRP) Insert Steel Flange Universal Venturi Tube is a differential-producing, primary-flow, metering element to accurately measure water, air, gas, acids, alkalies, slurries, etc., where low head loss with highest accuracy is desired.

Standard tubes are built for basic line sizes from 30" to 48". Specials are available for any line and throat size.

This corrosion-resistant, low-cost UVT is made of fiberglass reinforced vinyl ester resin Derakane*. It is cast in a hydraulic shape with a completely protected steel center mounting flange.

The insert design permits installation within the pipeline at the flanged pipe joint - no special equipment or foundations are required.

Self-scouring design ensures enduring accuracy. Rugged, durable construction maintains all critical dimensions and surfaces at optimum condition for years of maintenance-free operation.



- Line Sizes 30" to 48" (Standard)
- High Accuracy ± .75%
- FRP Insert - Steel Flange
- Corrosion Resistant
- 20-Year Warranty

Engineering Specifications

The 20182 UVT has three sections: A sharply angled, conical section, followed by a 7° throat cone (these inlet cones give the UVT its short laying length). These cones are followed by a cylindrical throat section with the low pressure tap located in the middle of the throat section where full pipe flow occurs. The last section is a 10° divergent included angle, truncated recovery section that accounts for the UVT's low head loss.

High metering accuracy is obtainable to within ±.75% of actual flow rate (uncalibrated) or to within ±.25% on calibrated tubes.

Materials of Construction - Inlet, throat and outlet cone are constructed of epoxy vinyl ester resin reinforced with high strength fiberglass matting material, not less than 30% by weight, and with a vinyl ester gel coat. Vinyl ester material shall be Derakane*. The mounting flange is made of carbon steel, with exposed areas protected with an epoxy coating. Pressure connection passages are lined with stainless steel tubing.

Pressure Connections - 1/4" N.P.T. female connections for 6" through 24"; 3/8" for 30" through 36"; and 1/2" for 42" through 48". Stamped "H" for high pressure and "L" for low pressure.

Standard ring gaskets should be used. Inlet tap is located to prevent gasket from interfering with port, causing errors.

A stainless steel nameplate with data and direction of flow arrow is located adjacent to pressure connection.

Mountings - (1) 125-150 psi flange, (2) 250-300 psi flange

Size - 4" to 48" available with 150 psi or 300 psi flanges - three standard throats per line size, "standard special" throats are also available. Over 48" available on request.

Loss - Typical - not to exceed 10% of differential. Specific data on request

Pressure - 150 or 300 psi standard maximum. Higher pressure on request

Temperature - 200°F maximum for standard resin, 300°F high temperature resin available

Options - Special throat and flange materials (i.e. stainless steel, titanium, etc.), other sizes. Bidirectional and premounting in spool pieces, etc.

**Derakane is a trademark of Dow Chemical*

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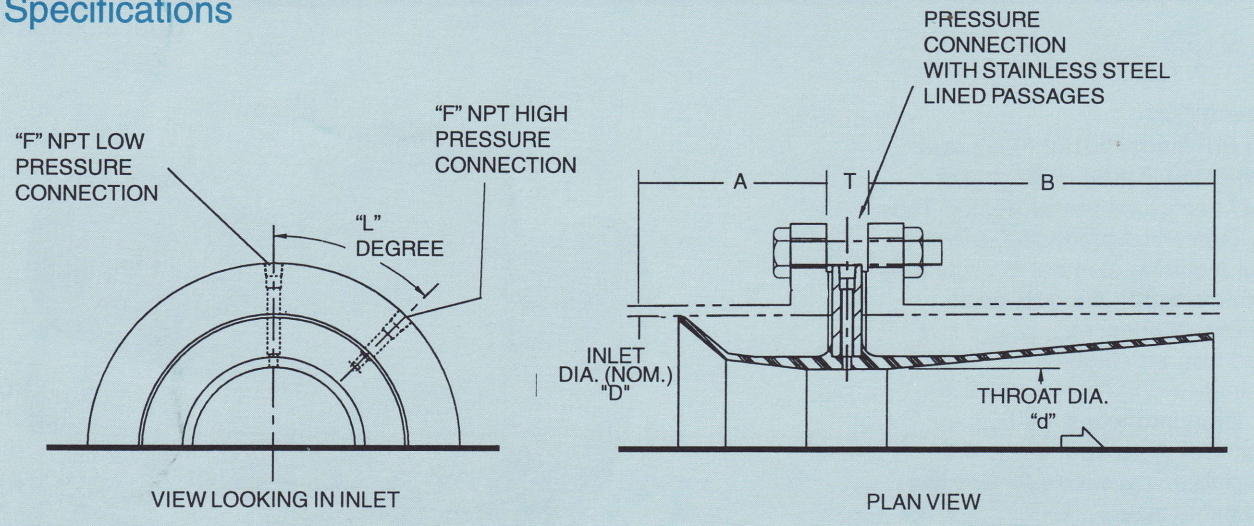
Specifications



Dimensions shown are for 125-150 LB flange mounting.

INLET PIPE DIA "D"		THROAT DIA "d"		MODEL	CLEARANCE		T	F	L° APART
NOM	MIN I.D.				A	B			
30	29.062	A	13.050	20182-30	20.00	44.00	1.250	3/8 NPT	12° - 51' - 25"
		B	17.400						
		C	21.750						
36	35.062	A	17.400	20182-36	26.00	56.00			11° - 15'
		B	21.750						
		C	26.100						
42	41.062	A	18.900	20182-42	29.00	64.00	1.500	1/2 NPT	10°
		B	26.100						
		C	30.450						
48	47.062	A	21.750	20182-48	34.00	72.00			8° - 10' - 54"
		B	30.450						
		C	34.800						

For material, refer to order sheet. For I.D. under minimum pipe I.D. listed, consult BIF. Dimensions in inches.

INSTALLATION NOTE:
Install with one pressure connection on horizontal axis and the other pressure connection above it.

FINISH - DERAKANE GEL-COAT, MEDIUM GREY

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