BIF®

UVT - Cast FRP Insert

Model 20182

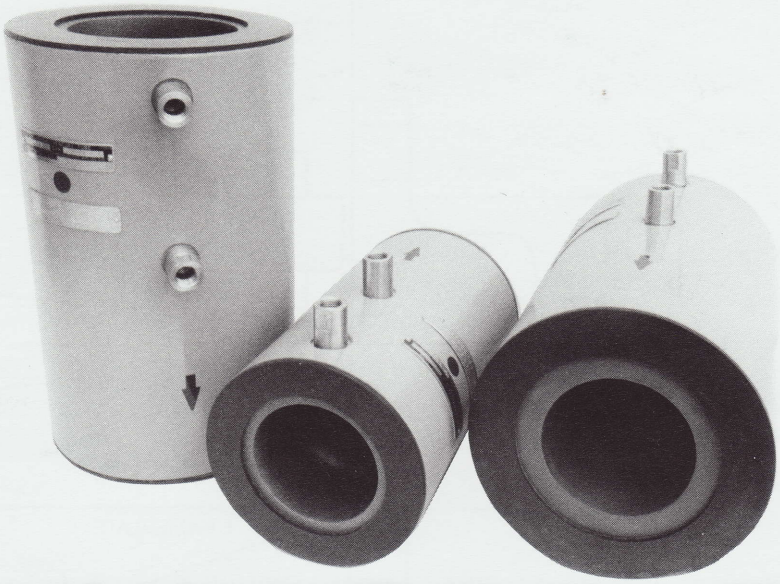
Specification Data

Description

The BIF 20182 cast fiberglass reinforced plastic (FRP) or fabricated insert Universal Venturi Tube is a differential producing, flow meter primary element to accurately measure liquids and gases, where low head loss with highest accuracy is desired. This corrosion-resistant, low-cost UVT is cast in plastic or machined in custom material. This configuration ensures long term accurate measurement of fluids such as water or air, as well as acids, alkalies, slurries, etc.

This insert design permits installation within the pipeline at a flanged pipe joint. All that is required are flange bolts or threaded rod long enough to accommodate the laying length of the insert itself.

The hydraulic shape is the time-tested, world-class leader in flow measurement. It is self scouring and ensures enduring accuracy. Rugged, durable construction maintains all critical surfaces for years of maintenance-free service in the toughest environments.



- Line Sizes 1" and Up
- High Accuracy ±0.75%
- FRP Cast Body
- 20-Year Warranty

Engineering Specifications

The entrance section has a cylindrical segment of similar diameter as the pipe in which the meter is installed. The high pressure tap is installed in this entrance section. The entrance section is followed by a sharply angled, conical section, followed by a 7 degree throat cone (these inlet cones help 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. The throat section is followed by a 10 degree, divergent included angle, truncated recovery cone section. The outlet cone design accounts for the efficient pressure recovery and helps give the meter its high recovery to laying length characteristic. Uncalibrated metering accuracy is obtained to ±0.75%.

Materials of Construction - The entire Venturi is made of Derakane*. All internal surfaces are vinyl ester gel-coat. Custom fabrications in other materials are also available.

Pressure Connections - 316 stainless steel, 3/8" NPT female high and low pressure connections. Connections are stamped "H" and "L".

Standard 1/8" thick neoprene ring gaskets are attached to the Venturi ends.

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

Mounting - (1) 125-150 psi flange, (2) 250-300 psi flanges.

Size - 1", 2", 3" and 4" line sizes are available, with three standard throats per line size. "Standard special" throats are also available.

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

Pressure - 150 or 300 psi maximum.

Temperature - 200° F maximum for standard resin. 300° F with high temperature resin is available on request.

Options - Metallic throats or other materials are also available.

** Derakane is a trademark of Dow Chemical*

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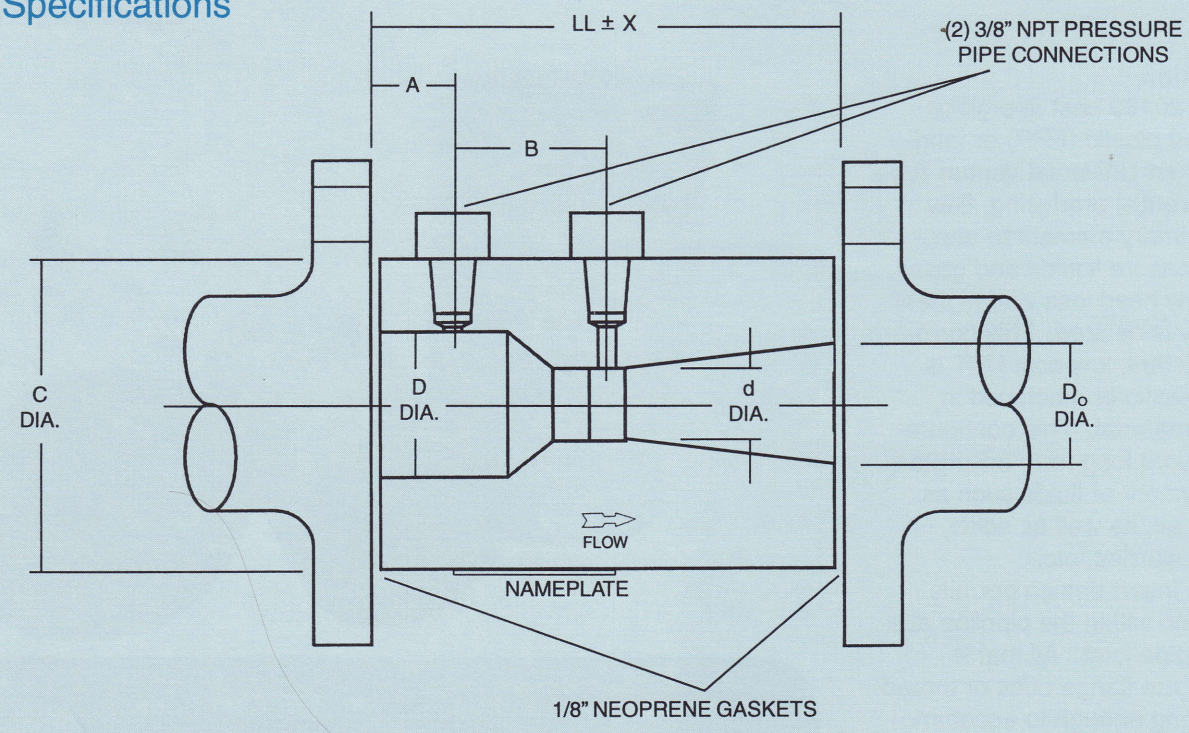
Specifications



For mounting between 125# ANSI flanges. Epoxy material is reinforced with fiberglass and has a natural finish.

PIPE DIA. D NOMINAL	THROAT d		MODEL	Do	A	B	C	LL	X
1"	A	.450	20182-01-01C	0.679	1.6"	1.000	2.562	5	1/16
	B	.600	20182-01-02C	0.608					
	C	.725	20182-01-03C	0.881					
2"	A	.900	20182-02-01C	1.366	1"	2.063	4.125	6 1/16	1/16
	B	1.200	20182-02-02C	1.659					
	C	1.450	20182-02-03C	1.909					
3"	A	1.450	20182-03-01C	2.161	1"	2.875	5.375	8 5/16	1/16
	B	1.800	20182-03-02C	2.498					
	C	2.175	20182-03-03C	2.856					
4"	A	1.800	20182-04-01C	2.771	1"	3.875	6.875	10 7/8	1/16
	B	2.400	20182-04-02C	3.345					
	C	2.900	20182-04-03C	3.823					

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