



DESCRIPTION

The SDI Flow Conditioner offers a simple method of reducing or eliminating flow swirl resulting from pipe bends and the location of valves, thermowells or pressure taps naturally found in piping systems. The Flow Conditioner produces less pressure drop compared to other flow conditioning methods and prevents false readings from fluid swirl effects inherent in process piping systems. SDI flow sensor performance is vastly improved.

APPLICATIONS

SDI Flow Conditioners are intended for use with Impeller SDI insert style flow sensors in general irrigation flow measurement applications.

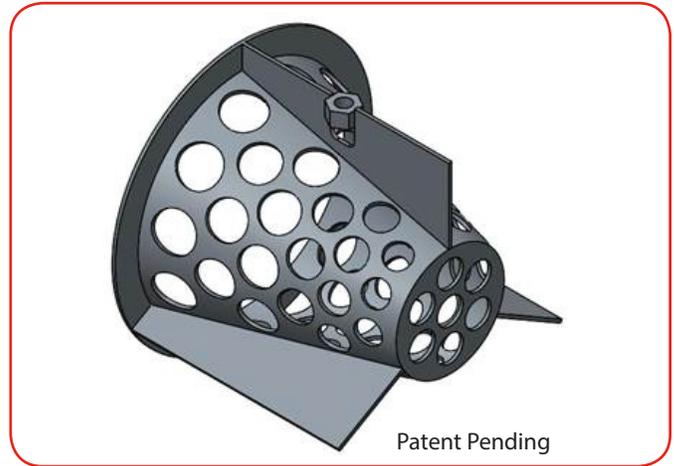
OPERATION

Impeller Flow Conditioners are attached upstream of the flow meter and are designed to reduce swirl and create a developed velocity profile that results in accurate measurement with the SDI sensor.

INSTALLATION

The flow conditioner is inserted into the open end of the pipe and secured with a bolt inserted through a hole in the pipe wall. The bolt has an O-ring that seals when used with the proper size hole.

- 6" and 8" conditioners use a 1/2"-13 bolt and require a hole diameter 0.530 +0.004/-0.0000
- 10" and 12" conditioners use a 5/8"-11 bolt and require a hole diameter 0.650 +0.005/-0.000



SPECIFICATIONS

Sizes	6 in., 8 in., 10 in., 12 in.
Minimum Upstream Straight Run	0.5 pipe diameter upstream of installation bolt and 3.5 pipe diameters from installation bolt to sensor. See <i>Figure 1</i> .
Installation Bolt	Stainless steel
Pressure Rating	1000 psi (69 bar)
Accuracy	± 2%
Flow Range	1...20 ft/s
Flow Conditioner Body	304 stainless steel
Open Area Ratio	0.95

NOTE: For sensor installation instructions, refer to the *SDI Sensor User Manual* that came with the sensor.

The illustration below shows the pipe diameter multipliers. For specific distances for each pipe size, see *"Pipe Size and Part Numbers"* on page 2.

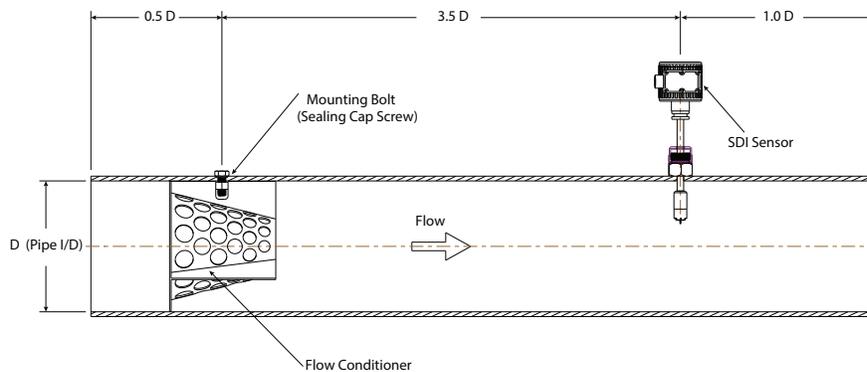
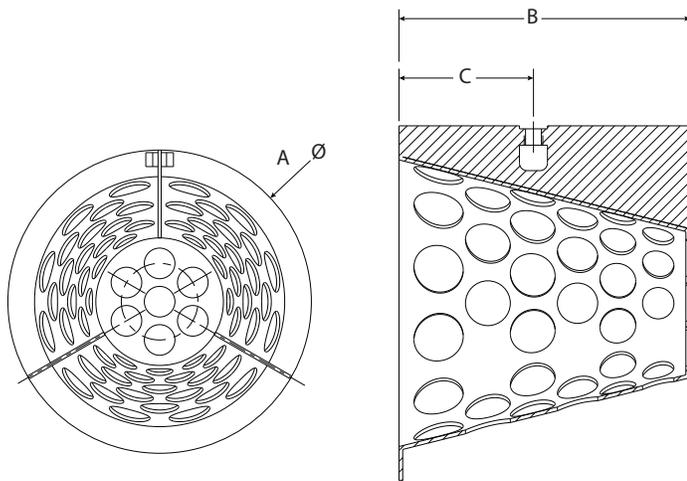


Figure 1: Installation configuration



DIMENSIONS

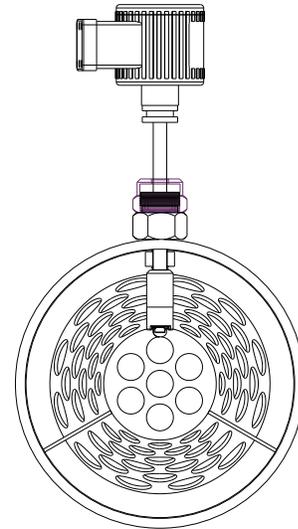


Size	Dim. A *	Dim. B	Dim. C	Bolt Size	Recommended Drill Hole Size
12 in.	11.32...12.33 in.	9.73 in.	4.5 in.	5/8"-11	21/32"
10 in.	9.5...10.06 in.	8.12 in.	4.0 in.		
8 in.	7.56...8.27 in.	6.51 in.	3.25 in.	1/2"-13	17/32"
6 in.	5.7...6.3 in.	4.91 in.	2.5 in.		

* The diameter (dimension A) varies depending on part number.

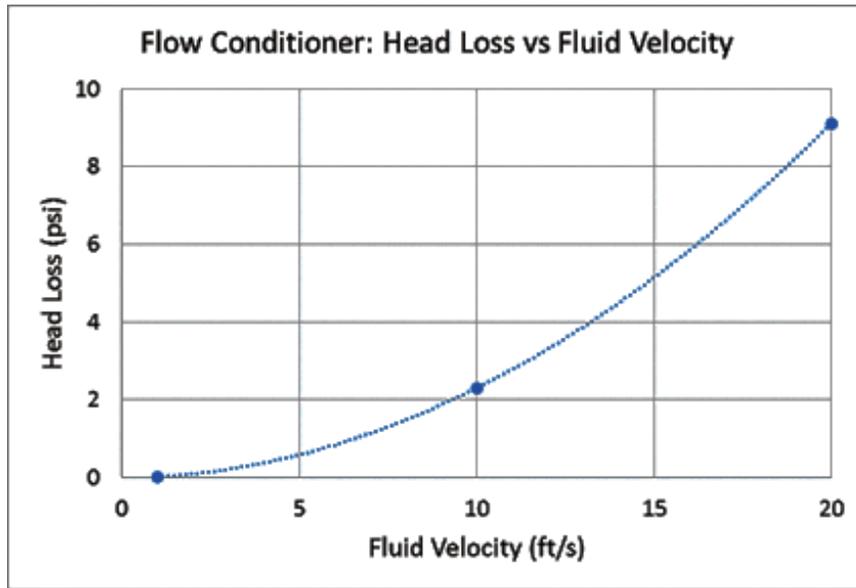
PIPE SIZE AND PART NUMBERS

Nominal Pipe	Pipe O/D	Pipe SCH	Pipe I/D	Distance from Bolt to Sensor	Flow Conditioner Kit Part Number
12"	12.75 in.	10	12.39 in.	43.37 in.	890032-0001
		40	11.94 in.	41.79 in.	890032-0002
		80	11.38 in.	39.83 in.	890032-0003
10"	10.75 in.	10	10.12 in.	35.42 in.	890032-0004
		40	10.02 in.	35.07 in.	890032-0005
		80	9.564 in.	33.47 in.	890032-0006
8"	8.625 in.	10	8.329 in.	19.15 in.	890032-0007
		40	7.981 in.	27.93 in.	890032-0008
		80	7.625 in.	26.69 in.	890032-0009
6"	6.625 in.	10	6.357 in.	22.25 in.	890032-0010
		40	6.109 in.	21.38 in.	890032-0011
		80	5.761 in.	20.16 in.	890032-0012



Flow conditioner with SDI sensor

HEAD LOSS CHART



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