Venturi tube
Model : F700

Spec. sheet no. FD07-01

Description

The venturi tube is characterized by its tapered inlet and diverging outlet. This design greatly reduces head loss to the system when compared to an orifice plate, in fact, the venturi can handle 25 ~ 50 % more flow, than an orifice for comparable larger line size and lower head loss.
The venturi is well suited for dirty fluids. There are no places for dirt to build up in the tube. Traditionally, the venturi tube has been used on low pressure gas flow, water and waste applications. Venturi tubes are generally constructed with the system of pressure taps which project radially into the pipe and feed into a common camber known as a piazometer ring. This multiple tap arrangement provides an average pressure reading over the entire circumference of the element. As a result, the need for a long pipe runs is eliminated. A general rule is that a venturi tube requires only half the upstream and downstream runs of an orifice plate. The discharge coefficient of the venturi is constant and predictable to ±1 % for pipe reynolds numbers greater than 100,000.
Venturi elements are not as reliable at lower reynolds numbers (Figure 10). The venturi tube is a relatively high cost device. However, low pumping costs and reduced piping requirements can make it cost effective.

Specification

Venturi type

Fabricated flange type
Fabricated weld-in type
Machined flange type
Machined weld-in type

Flow calculation standards

ISO 5167-4

Flange ratings

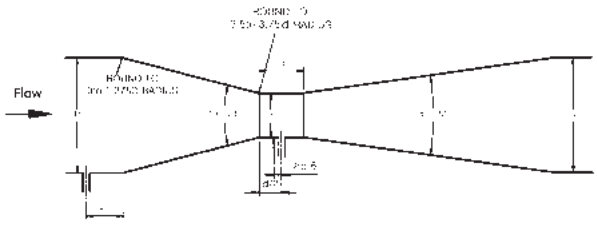
JIS 10, 16, 20, 30, 40 and 63K
ANSI class 150, 300, 600 and 900 Lb

Nominal pipe sizes available

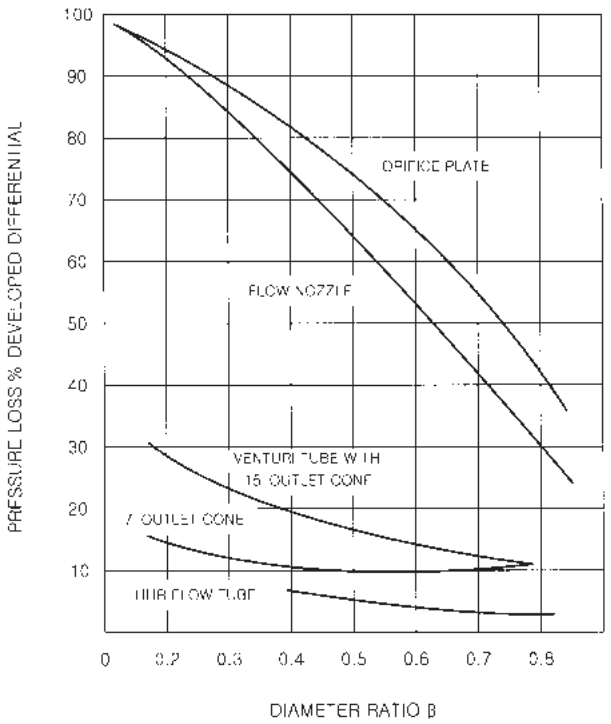
50 ~ 1,200 mm
2" ~ 48"

Material

Carbon steel
304SS, 316SS and 316L SS



The Critical Dimension of the Classical Venturi Tube



Main order — Ordering information

1. Base model

F700	Venturi tube

2. Line size

A01	½"	**J01**	15A
A02	¾"	**J02**	20A
A03	1"	**J03**	25A
A04	1½"	**J04**	40A
A05	2"	**J05**	50A
A06	3"	**J06**	80A
A07	4"	**J07**	100A
A08	6"	**J08**	150A
A09	8"	**J09**	200A
A10	10"	**J10**	250A
A11	12"	**J11**	300A
A12	14"	**J12**	350A
A13	16"	**J13**	400A
A14	18"	**J14**	450A
A15	20"	**J15**	500A
A16	24"	**J16**	600A
ZZZ	Other		

3. Connection

A01	150Lb RF	**J01**	10K RF
A02	300Lb RF	**J02**	16K RF
A03	600Lb RF	**J03**	20K RF
A04	900Lb RF	**J04**	30K RF
A05	1500Lb RF	**J05**	40K RF
A06	2500Lb RF	**J06**	63K RF
A11	150Lb FF	**J11**	10K FF
A12	300Lb FF	**J12**	16K FF
A13	600Lb FF	**J13**	20K FF
A14	900Lb FF	**J14**	30K FF
A15	1500Lb FF	**J15**	40K FF
A16	2500Lb FF	**J16**	63K FF
A21	150Lb RTJ	**J21**	10K RTJ
A22	300Lb RTJ	**J22**	16K RTJ
A23	600Lb RTJ	**J23**	20K RTJ
A24	900Lb RTJ	**J24**	30K RTJ
A25	1500Lb RTJ	**J25**	40K RTJ
A26	2500Lb RTJ	**J26**	63K RTJ
ZZZ	Other	**B00**	B.W

4. Body type

M	Machined
W	Welded

5. Tap type

1	½" S.W, 1 Pair
3	¾" S.W, 1 Pair
O	Other

6. Body material

CS	Carbon steel
4S	304SS
6S	316SS
6L	316L SS
ZZ	Other
11	A182 F11
22	A182 F22
91	A182 F91
92	A182 F92

7. Option

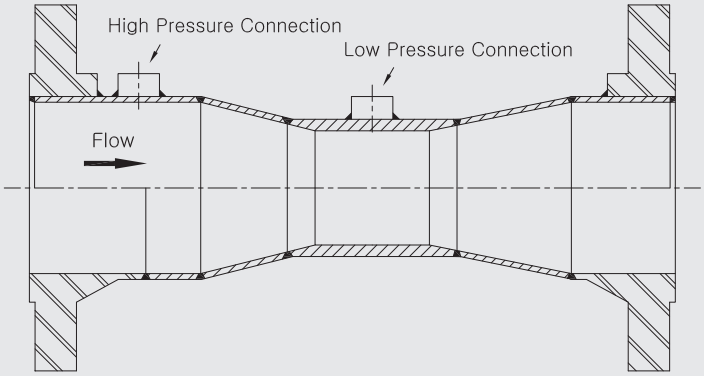
C	Calibration test
O	Other
N	None

Sample ordering code

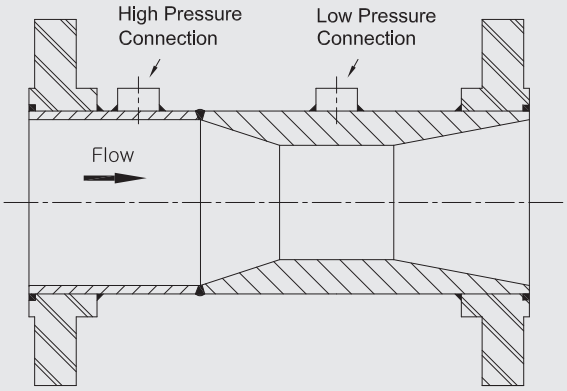
1	2	3	4	5	6	7
F700	**A01**	**A01**	**M**	**1**	**CS**	**C**

Dimension

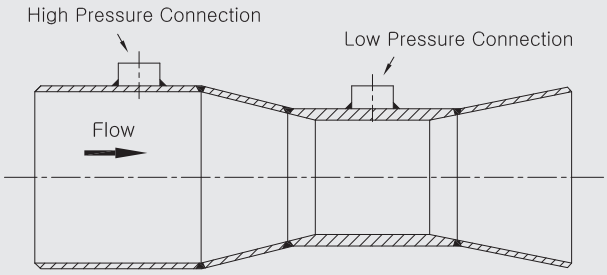
Fabricated flange type
Available in size 10" and larger
Model : F700-FF



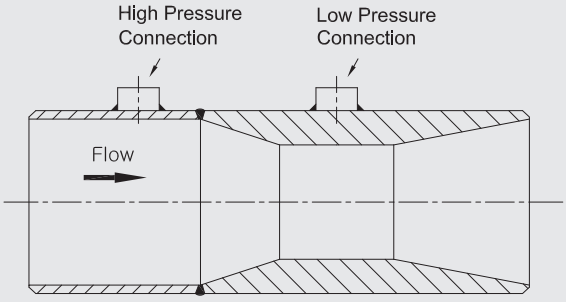
Machined flange type
Available in size 8" and smaller
Model : F700-MF



Fabricated weld-in type
Available in size 10" and larger
Model : F700-FW



Machined weld-in type
Available in size 10" and larger
Model : F700-MW



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