

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 chamber 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 $\pm 1\%$ 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-on type
Machined flange type
Machined weld on type

Flow calculation standards

ISO 5167-4

Flange ratings

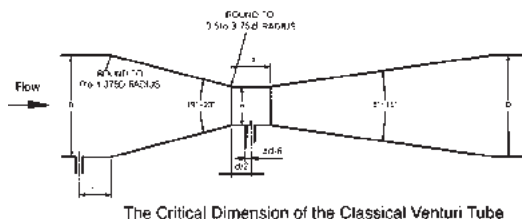
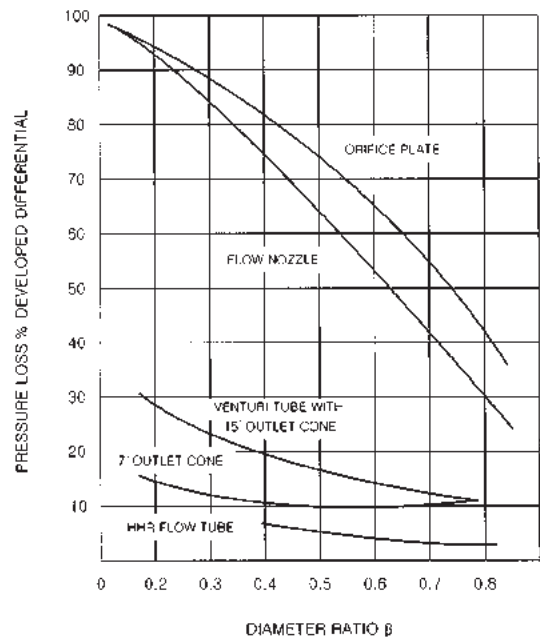
JIS 10, 16, 20, 30, 40 and 63K
ANSI class 150, 300, 600 and 900 Lb

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. Type

FF Fabricated flanged
FW Fabricated weld-on
MF Machined flanged
MW Machined weld-on

3. Line size

JIS	mm	ANSI	inch	DIN	mm
J015	15A	A001	½B	D015	15A
J020	20A	A002	¾B	D020	20A
J025	25A	A003	1B	D025	25A
J040	40A	A004	1½B	D040	40A
J050	50A	A005	2B	D050	50A
J065	65A	A006	2½B	D065	65A
J080	80A	A007	3B	D080	80A
J100	100A	A008	4B	D100	100A
J125	125A	A009	5B	D125	125A
J150	150A	A010	6B	D150	150A
J200	200A	A011	8B	D200	200A
J250	250A	A012	10B	D250	250A
J300	300A	A013	12B	D300	300A
J350	350A	A014	14B	D350	350A
J400	400A	A015	16B	D400	400A
J450	450A	A016	18B	D450	450A
J500	500A	A017	20B	D500	500A
J600	600A	A018	24B	D600	600A
J700	700A	A019	28B	D700	700A
J800	800A	A020	32B	D800	800A
J000	1,000A	A021	40B	D000	1,000A
XXXX	Other				

4. Body material

C Carbon steel
4 304SS
5 316SS
6 316L SS
O Other

5. Flange rating

JIS	ANSI	DIN
J010 JIS 10K	A010 ANSI 150 Lb	P010 PN 10
J016 JIS 16K	A020 ANSI 300 Lb	P016 PN 16
J020 JIS 20K	A030 ANSI 600 Lb	P025 PN 25
J030 JIS 30K	A040 ANSI 900 Lb	P040 PN 40
J040 JIS 40K	A050 ANSI 1,500 Lb	
J063 JIS 63K	A060 ANSI 2,500 Lb	
XXXX Other		

6. Flange material

A A105
S A182 F304
O Other
N None

7. Boss material

CS A105
S4 A182 F304
OH Other
NO None

8. Option

O Other
N None

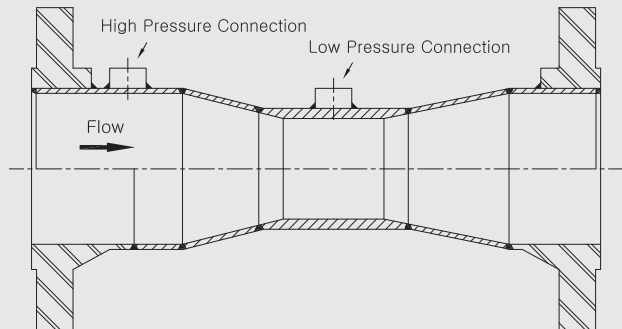
1	2	3	4	5	6	7	8	Sample ordering code
F700	FF	A016	4	A020	S	S4	N	



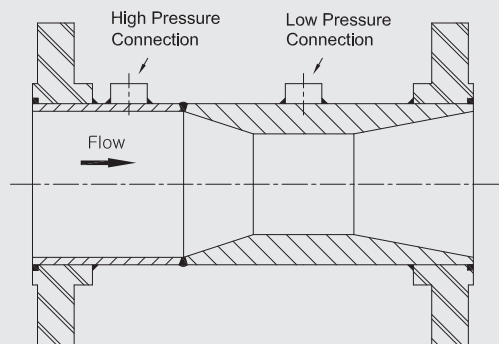
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Dimension

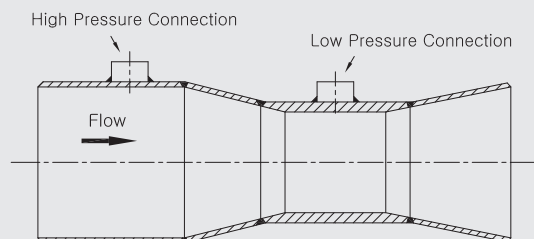
Fabricated flange type
Available in size 6" and larger
Model : F700-FF



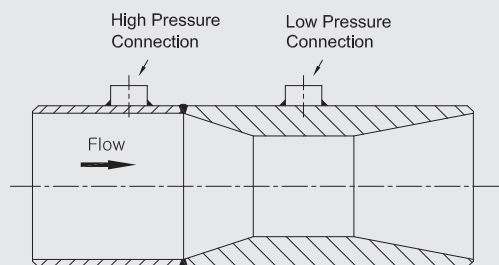
Machined flange type
Available in size 6" and smaller
Model : F700-MF



Fabricated weld-on type
Available in size 6" and larger
Model : F700-FW



Machined weld-on type
Model : F700-MW



Memo