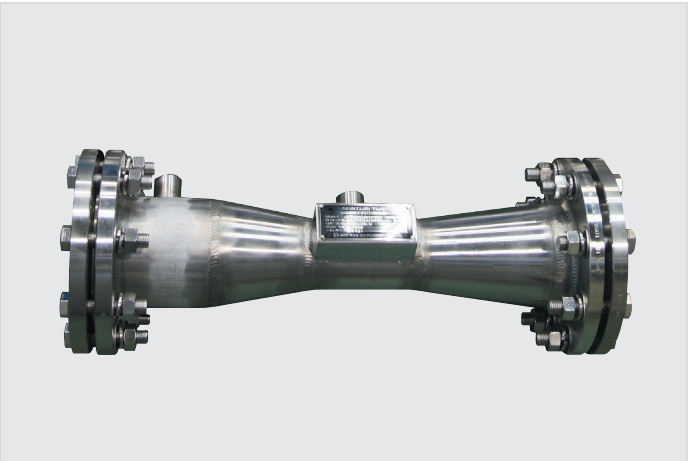
MODEL : DHOV

DESCRIPTION



The Venturi tube is streamlined at both entrance and exit. Standard designs are equipped with piezo meter rings (i.e., multiple tap holes around the periphery of inlet and throat, surrounded by an annular ring). For measurement of slurries and similar nonhomogenous liquids, the piezo meter rings are usually eliminated to permit efficient purging of the pressure tap holes. The Venturi tube is considered the best type of head meter primary device for measuring liquids containing large concentrations of solids.

as a standard measurement for acceptance tests on pumping and similar equipment, the individually calibrated Venturi tube has certain advantages. Like a calibrated orifice meter run, the calibration includes the effect o tap characteristics.

The standard deviation of the test data, on classical type Venturi tubes with piezo meter rings at inlet and throat connections, is between 0.3 and 0.4% The coefficients of properly constructed and installed Venturi tubes of this type should agree with the data.

within ±0.75% on any pipe Reynolds number down to 200,000 on 95% of the installations.

SPECIFICATIONS

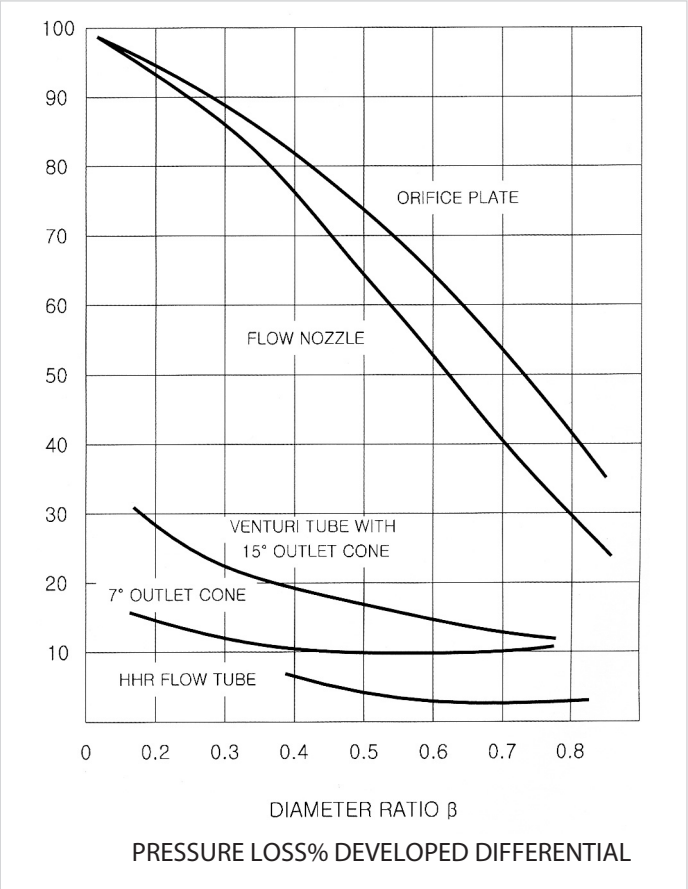
VENTURI TUBE TYPE
- Fabricated flange type : FIG 1
- Fabricated weld-on type : FIG 2
- Machined flange type : FIG 3
- Rectangular type : FIG 4

FLOW CALCULATION STANDARDS
- ISO5167, JIS Z 8762, ASME, KS A 0612

FLANGE RATING
- ANSI 150, 300, 600, 900, 1500LB

NOMINAL PIPE SIZES AVAILABLE
- 4 to 72B(100A to 1800A)

MATERIAL
- Carbon Steel
- 304SS, 304L SS, 316SS, 316L SS
- Ni, Cr, Mo Alloy Steel(A182 F11 to 91)



MODEL : DHOV

Fabricated flange type
Available in size 4" and larger

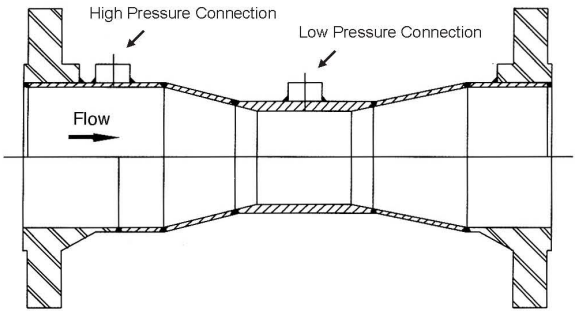


FIG 1

Fabricated weld-on type
Available in size 4" and larger

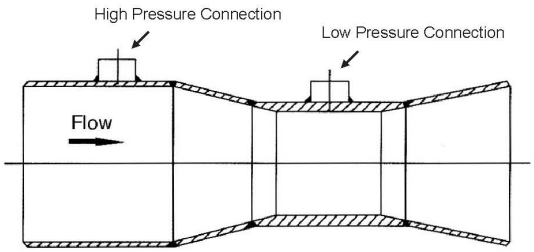


FIG 2

Machined flange type
Available in size 2" and larger

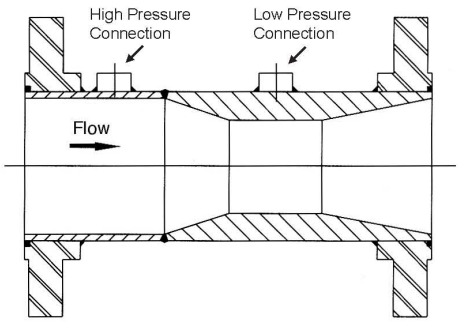


FIG 3

Rectangular type
Available in size 6" and larger

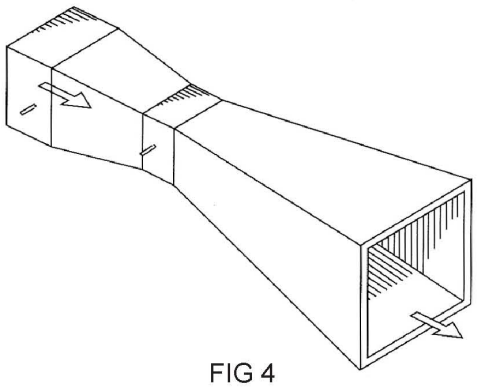
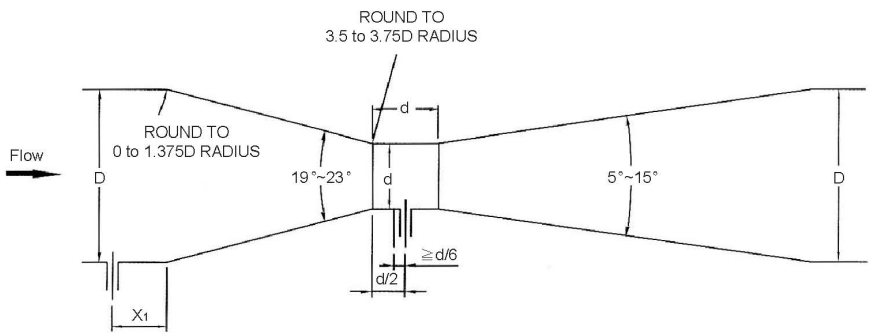


FIG 4



The Critical Dimensions of Classical Venturi Tube

VENTURI TUBE

MODEL : DHOV

Required straight lengths for classical Venturi tubes

Values expressed as multiples of D

Diameter β	Single 90° bend*)	Two or more 90° bends in the same plane*)	Two or more 90° bends in different planes*)**)	Reducer 3D to D over a length of 3,5D	Expander 0,75D to D over a length of D	Full bore ball or gate valve fully open
0.30	0.5***)	1.5 (0,5)	(0,5)	0.5***)	1.5 (0,5)	1.5 (0,5)
0.35	0.5***)	1.5 (0,5)	(0,5)	1.5 (0,5)	1.5 (0,5)	2.5 (0,5)
0.40	0.5***)	1.5 (0,5)	(0,5)	2.5 (0,5)	1.5 (0,5)	2.5 (1,5)
0.45	1.0 (0,5)	1.5 (0,5)	(0,5)	4.5 (0,5)	2.5 (1)	3.5 (1,5)
0.50	1.5 (0,5)	2.5 (1,5)	(8.5)	5.5 (0,5)	2.5 (1,5)	3.5 (1,5)
0.55	2.5 (0,5)	2.5 (1,5)	(12.5)	6.5 (0,5)	3.5 (1,5)	4.5 (2,5)
0.60	3.0 (1,0)	3.5 (2,5)	(17.5)	8.5 (0,5)	3.5 (1,5)	4.5 (2,5)
0.65	4.0 (1,5)	4.5 (2,5)	(23.5)	9.5 (1.5)	4.5 (2,5)	4.5 (2,5)
0.70	4.0 (2,0)	4.5 (2,5)	(27.5)	10.5 (2,5)	5.5 (3,5)	5.5 (3,5)
0.75	4.5 (3,0)	4.5 (3,5)	(29.5)	11.5 (3,5)	6.5 (4,5)	5.5 (3,5)

*) The radius of curvature of the bend shall be greater than or equal to the pipe diameter.

**) As the effect of these fittings may still be present after 40D, no values without parentheses can be given.

***) Since no fitting can be placed closer than 0.5D to the upstream pressure tapping in the Venturi tube, the "zero additional uncertainty" values are the only ones applicable in this case.

NOTES

1. The minimum straight lengths required are the lengths between various fittings located upstream of the classical Venturi tube and the classical Venturi tube itself. All straight lengths shall be measured from the upstream pressure tapping plane of the classical Venturi tube. The pipe roughness, at least over the length indicated in this table, shall not exceed that of a smooth, commercially available pipe (approximately k/D ≤ 10-3).
2. Values without parentheses are "zero additional uncertainty" values
3. Values in parentheses are "0.5% additional uncertainty" values
4. For downstream straight lengths, fittings or other disturbances (as indicated in this table) situated at least four throat diameters downstream of the throat pressure tapping plane do not affect the accuracy of the measurement.

MODEL : DHOV

MODEL	SUFFIX CODES		DESCRIPTION
DHOV	FF		Fabricated flange type
	FW		Fabricated weld-on type
	MF		Machined flange type
	MW		Machined weld-on type
	RE		Rectangular type
Nominal Pipe Size	□□□		Pipe size in inch or mm
Material	CS		Carbon Steel
	4S		304SS
	4L		304L SS
	6S		316SS
	6L		316L SS
	11		A182 F11
	22		A182 F22
	51		A182 F51
	91		A182 F91
	OP		Option
Flange Rating	015		ANSI Class 150 LB
	030		ANSI Class 300 LB
	060		ANSI Class 600 LB
	090		ANSI Class 900 LB
	150		ANSI Class 1500 LB
	250		ANSI Class 2500 LB
	000		Option
Diff' Taps	1		NPT 1/2
	2		NPT 3/4
	3		SW 1/2
	4		SW 3/4
Option			/□□□