

## MODEL : DHOV-N

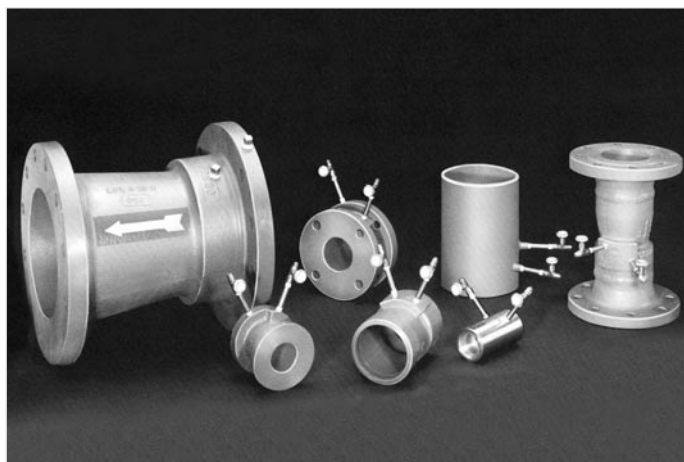
### DESCRIPTION

The profile of the Venturi nozzle is axisymmetric. It consists of a convergent section, with a rounded profile, a cylindrical throat and a divergent. The upstream face is identical with that of an ISA 1932 nozzle. The Throat consists of a part E of length  $0.3d$  which is the same as for the ISA 1932 nozzle and a part E' of a length  $0.4d$  to  $0.45d$

The value  $d$  of the diameter of the throat shall be taken as the mean of measurements of at least four diameters distributed in axial planes and at approximately equal angles to each other. The throat shall be cylindrical. No diameter of any cross-section shall differ by more than 0.05% from the value of the mean diameter. This requirement is considered as satisfied when the deviations in the length of any of the measured diameters comply with the said requirement in respect of deviation from the mean. The divergent section shall be connected with the part E of the throat without a rounded part, but any burrs shall be removed.

The included angle of the divergent section,  $\Phi$ , shall be less than or equal to  $30^\circ$ .

The Venturi nozzle may be truncated in the same way as the classical venturi tube.



### SPECIFICATIONS

#### VENTURI TUBE TYPE

- Threaded type : FIG 5
- Butt weld type : FIG 6
- Flanged type : FIG 7

#### FLOW CALCULATION STANDARDS

- ISO5167, JIS Z 8762, ASME, KS A 0612

#### FLANGE RATING

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

#### NOMINAL PIPE SIZES AVAILABLE

- 0.5 to 120B(15A to 3000A)

#### MATERIAL

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

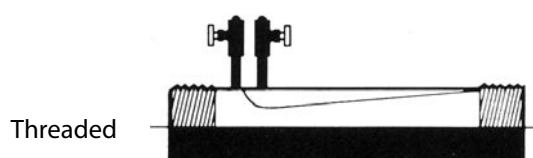


FIG 5

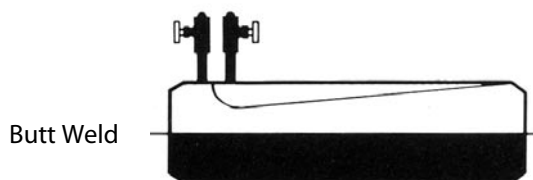


FIG 6

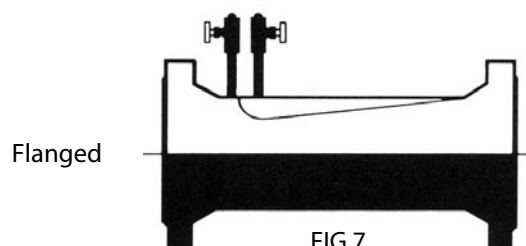


FIG 7

# VENTURI NOZZLE

## MODEL : DHOV-N

### Required straight lengths for venturi nozzles

Values expressed as multiples of D

Diameter ratio $\beta$	Upstream (inlet) side of the primary device										Downstream (outlet) side of the primary device
	Single 90° bend or tee (flow from one branch only)	Two or more 90° bends in the same plane	Two or more 90° bends in different planes	Reducer 2D to D over 2 length of 1.5D to 3D	Expander 0.5D to D over a length of D to 2D	Globe valve full open	Full bore ball or gate valve fully open	Abrupt symmetrical reduction having a diameter ratio $\geq 0.5$	Thermometer pocket or well of diameter $\leq 0.03D$	Thermometer pocket or well of diameter between 0.03D and 0.13D	Fittings (columns 2 to 8)
1	2	3	4	5	6	7	8	9	10	11	12
0.20	10 (6)	14 (7)	34 (17)	5	16 (8)	18 (9)	12 (6)				4 (2)
0.25	10 (6)	14 (7)	34 (17)	5	16 (8)	18 (9)	12 (6)				4 (2)
0.30	10 (6)	16 (8)	34 (17)	5	16 (8)	18 (9)	12 (6)				5 (2.5)
0.35	12 (6)	16 (8)	36 (18)	5	16 (8)	18 (9)	12 (6)				5 (2.5)
0.40	14 (7)	18 (9)	36 (18)	5	16 (8)	20 (10)	12 (6)				6 (3)
0.45	14 (7)	18 (9)	38 (17)	5	17 (9)	20 (10)	12 (6)				6 (3)
0.50	14 (7)	20 (10)	40 (20)	6 (5)	18 (9)	22 (11)	12 (6)	30 (15)	5 (3)	20 (10)	6 (3)
0.55	16 (8)	22 (11)	44 (22)	8 (5)	20 (10)	24 (12)	14 (7)				6 (3)
0.60	18 (9)	26 (13)	48 (24)	9 (5)	22 (11)	26 (13)	14 (7)				7 (3.5)
0.65	22 (11)	32 (16)	54 (27)	11 (6)	25 (13)	28 (14)	16 (8)				7 (3.5)
0.70	28 (14)	36 (18)	62 (31)	14 (7)	30 (15)	32 (16)	20 (10)				7 (3.5)
0.75	36 (18)	42 (21)	70 (35)	22 (11)	38 (19)	36 (18)	24 (12)				8 (4)
0.80	46 (23)	50 (25)	80 (40)	30 (15)	54 (27)	44 (22)	30 (15)				8 (4)

\*) The installation of thermometer pockets or wells will not alter the required minimum upstream straight lengths for the other fittings.

#### NOTES

1. The minimum straight lengths required are the lengths between various fittings located upstream or downstream of the primary device and the primary device itself. All straight lengths shall be measured from the upstream face of the primary device.
2. Values without parentheses are "zero additional uncertainty" values (see 7.2.3).
3. Values I parentheses are "0.5% additional uncertainty" values (see 7.2.4).





# VENTURI NOZZLE

③-3

## MODEL : DHOV-N

MODEL	SUFFIX CODES		DESCRIPTION
DHOV-N	TM -----		Threaded Male type
	TF -----		Threaded Female type
	BW -----		Butt weld type
	FL -----		Flanged 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
	12 -----		A182 F12
	51 -----		A182 F51
	91 -----		A182 F91
	OP -----		Option
Flange Connection	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
	NPT □□□ -----		Threaded
	000 -----		Option
Diff' Taps	0 -----		NPT 1/4
	1 -----		NPT 1/2
	2 -----		NPT 3/4
	3 -----		SW 1/2
	4 -----		SW 3/4
Option			/ □□□