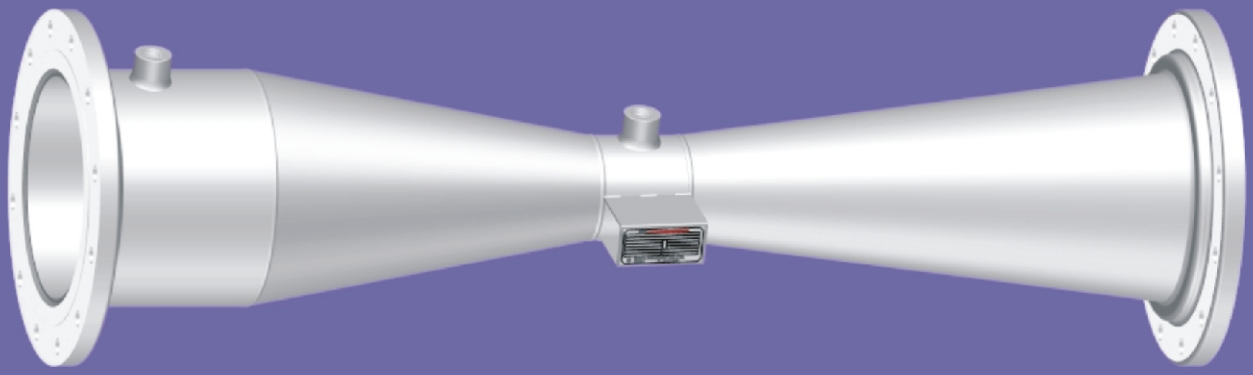
VENTURI TUBES - 4

IN THIS CHAPTER - 4

Here is introduce the measuring primary devices of fluid flow by means of the differential pressure that is venturi tube to use when is important to keep lower permanent pressure loss than other primary devices.

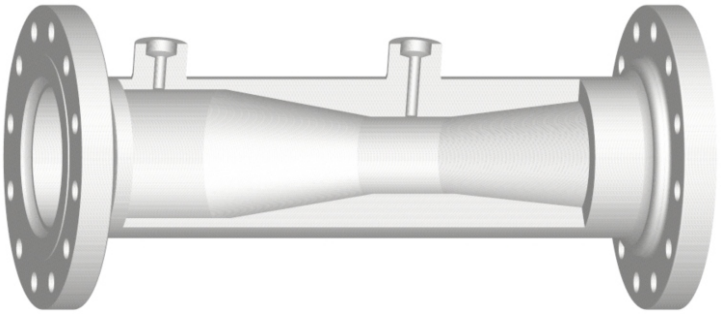


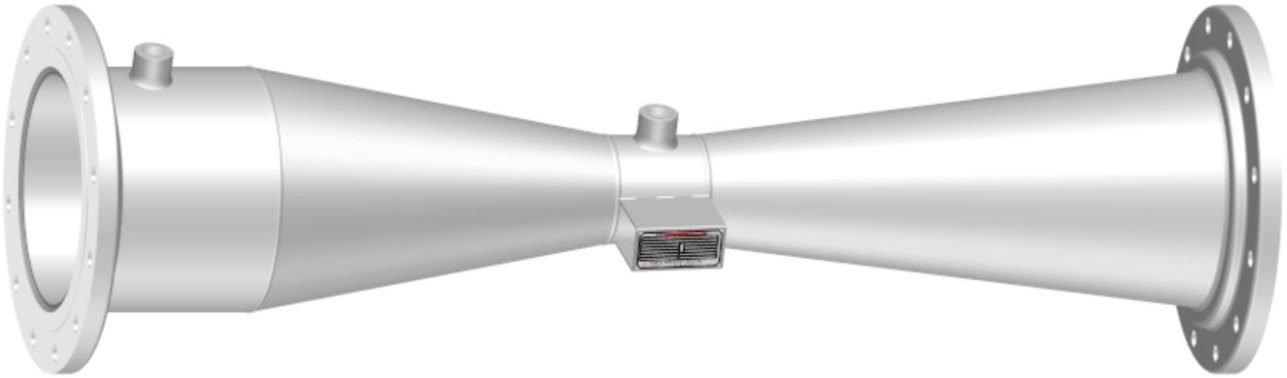
VENTURI TUBES

SAM IL INDUSTRY CO.,LTD.

GENERAL DESCRIPTION

Comparing with orifices and flow nozzles, the venturi tube generally have a little complicated structure, required higher material and costs, and tend to be larger in size. However, venturi tubes offer advantages including an extremely smaller pressure loss, a higher durability and a lower chance of catching a sludge media and sediment than other throttle elements.
The venturi tube mostly used for measurement of flow wherever is important to keep the net permanent pressure loss at a minimum.





■ **SAM IL** is designed and manufactured the venturi tube in full compliance with ISO-5167 and ASME MFC-3M standards.

SPECIFICATIONS

■ Venturi tube type : Machined Type
Welded Type
Tetragon Duct Type

■ End Connection : Butt-Weld
Flanged[Slip-On & Welding Neck]

■ β-Ratio Range : Machined Type is within
β Between 0.4 and 0.75 inclusive

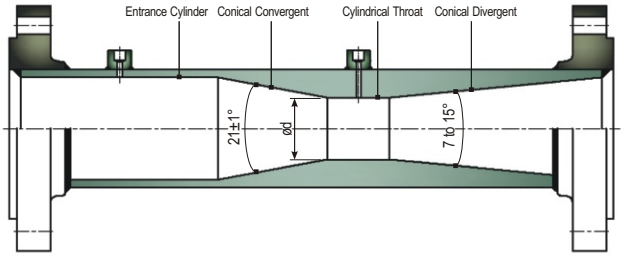
Welded Type is within
β Between 0.4 and 0.7 inclusive

■ Throat Calculation Codes : ISO-5167, ASME MFC-3M, L.K.SPINK., AGA NO.3.

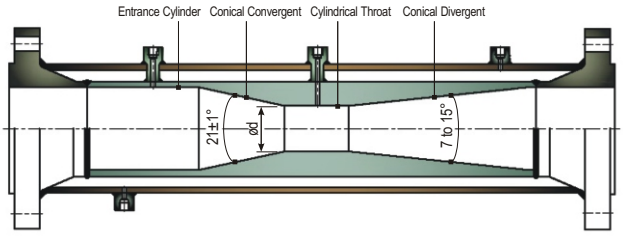
■ **OPTIONS-1** Pressure Tappings leading into Piezometer Ring.
■ **OPTIONS-2** Full Jacket or Semi Jacket for Heating or Cooling.

DRAWINGS

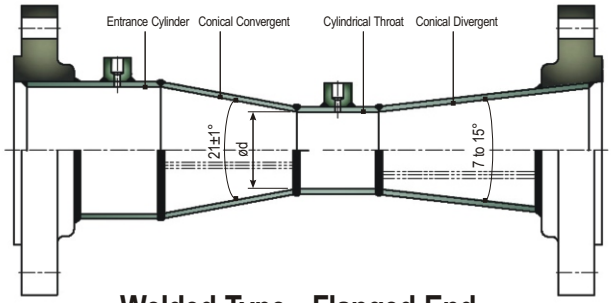
Generally, Venturi tube with a machined convergent section can be used in pipes of size between 2" and 10" However, in the case machined type is of large size of 8" and 10", they have disadvantages because of required higher costs due to huge materials consumed.



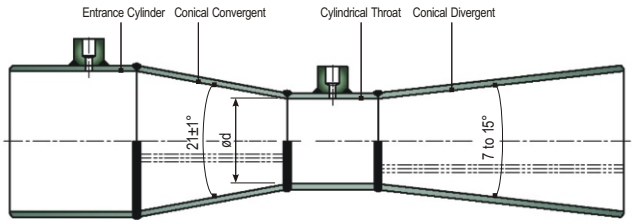
Machined Type - Flanged End



Construction of Jacket[Model : SVT-J]



Welded Type - Flanged End



Welded Type - Butt Welds End

SAM IL STANDARDS

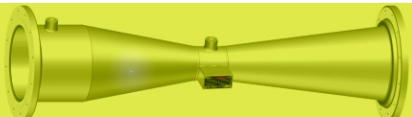
■ Conical Convergent Angle : 21° ±1°

■ Conical Divergent Angle : 14° ±1°

■ End Connection : Butt-Welds
Flanged Connection is available on request as Welding- Neck or Slip-On Type.

■ Tapping Adaptors : 1/2" NPT
Others are available on request [Example : 1/2" SW, 3/4" NPT or SW, etc.]

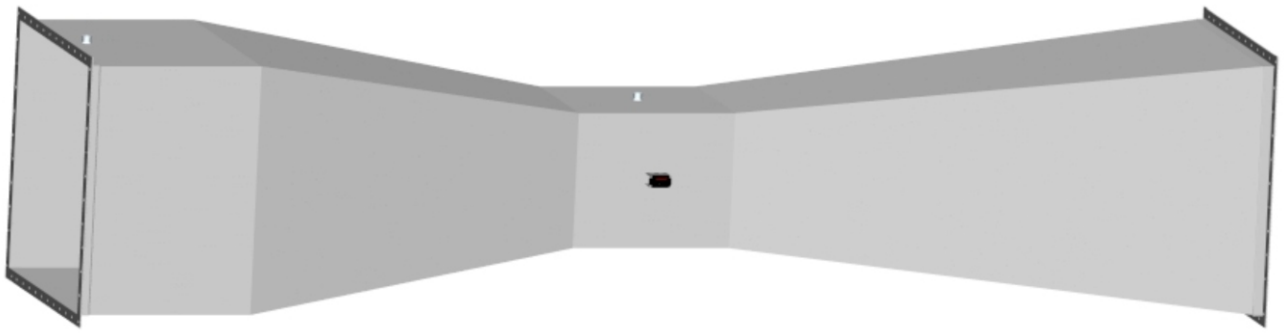
■ Tapping Nos. : 1[one] Upstream Pressure Tapping and 1[one] Downstream Pressure Tapping
There may be used with several sets of pressure tappings on request.



TETRAGON DUCT & TAPLESS TYPE VENTURI

SAM IL INDUSTRY CO.,LTD.

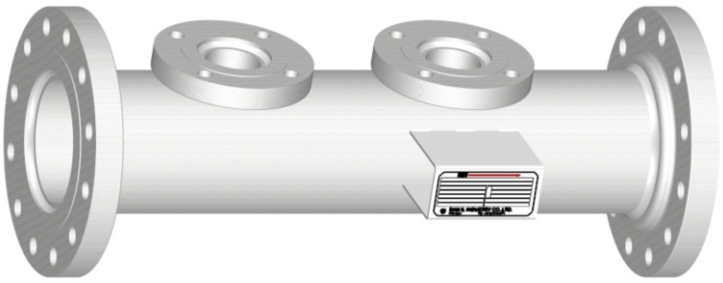
MODEL : SVT

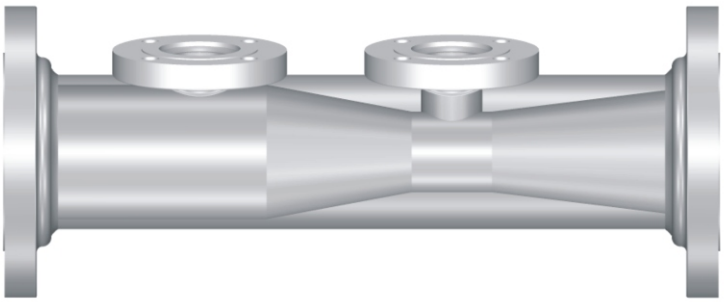


The tetragon is designed and manufactured in order to fit in with tetragon duct type piping and the throat have the same area with its throat diameter calculated by ISO 5167, ASME MFC-3M or L.K.SPINK. Standards.

MODEL : STV

The tapless venturi tube, Which is no need pressure tappings for differential pressure measurement, can be effectively used [with less pressure drop] for flow measurement of a slurry fluid, a fluid with suspensions, or a corrosive fluid, It also can measure a liquid in which solidifies at low temperatures, or a liquid which vaporizes at high temperatures.





- Max. Temperature : -40°C to 280°C
- Pressure Rating : up to JIS 20K RF
  up to ANSI 300LB.

SINCE 1979
SAM IL INDUSTRY CO.,LTD.

VENTURI TUBES

NO.	BY	DATE	REVISION
1			
2			
3			
4			

SHEET	OF
CONTRACT	DATE
REQ. P.O	
BY / CHK'D / APPR.	

VENTURI TUBES

1. TYPE : WELD-IN ■ OTHER :
2. STANDARD : ISO-5167 ☐ OTHER :
3. BORE : MAX. RATE ■ NEAREST 1/8" ☐
4. MATERIAL : 304SS ☐ 316SS ■ OTHER :
5. RING MATERIAL & TYPE :
6. MODEL NO. & MFR. : SEE BELOW NO. 41 & 42

FLANGES

7. TAPS : THROAT ■ TAPLESS ☐ OTHER :
8. TAP SIZE : 1/2" SW ■ OTHER :
9. TYPE : WELD NECK ☐ SLIP ON ☐ THERADED ☐
10. MATERIAL : STEEL ■ OTHER :
11. FLANGE INCLUDED ☐ OTHER : BUTT-WELD
12. FLANGE RATING : ANSI 150# RF OTHER :

FLUID DATA	★	13	Tag No.				
		14	Service				
		15	Line No.				
	★	16	Fluid Name				
	★	17	Fluid State				
	★	18	Maximum Flow [m^3/hr]				
	★	19	Normar Flow [m^3/hr				
	★	20	Press. @ Max. / Nor. [Kg/cm^2 g]				
	★	21	Temp. @ Max. / Nor. [°C]				
	★	22	Sp. Gr. / Density at Base				
	★	23	Sp. Gr. / Density at Oper.				
	★	24	Super Comp. Factor [Z]				
	★	25	Mol. W.T. Cp / Cv				
	★	26	Operating Viscosity [cp]				
		27	Base Press. Base Temp.				
METER	★	28	Type of Meter				
	★	29	Diff. Range [mmH2O]				
		30	Static Press. Range				
	★	31	Full Scale Range [m^3/hr]				
		32	Chart Multiplier				
VENTURI & FLANGE OR PIPE	★	33	Flange Rating				
	★	34	Line Size Sch.				
	★	35	Line Material				
	★	36	Pair[s] of Tapping				
	★	37	End Connection				
		38	Divergent Angle				
ACCESSORY		39	Nipple				
		40	Block Valve				
MANU'ER DATA		41	Model				
		42	Manufacture	SAM IL	SAM IL	SAM IL	SAM IL
	★	43	Q'ty				

REMARK : "★" MARKED COLUMNS SHALL BE FILLED UP BY CUSTOMER, IF POSSIBLE.
NOTE :