

CVC-300-Series

Description

Operating Principle

The Cone Venturi is a differential pressure type flow meter primary device. It operates on the same principle as other differential pressure producing flow meters, using the theorem for the conservation of the energy in fluid flow through a pipe. A cone, positioned in the corner of the precision meter tube, interacts with the flowing fluid, reshaping the fluid's velocity profile and creating a region of the lower pressure immediately downstream of itself. This pressure difference, between the static line pressure and the lower pressure created just the cone, can be measured via two pressure sensing taps, one placed slightly upstream of the cone and the other in the downstream face of the cone itself. The pressure difference can then be incorporated into a derivation of the Bernoulli equation to determine the fluid flow rate.



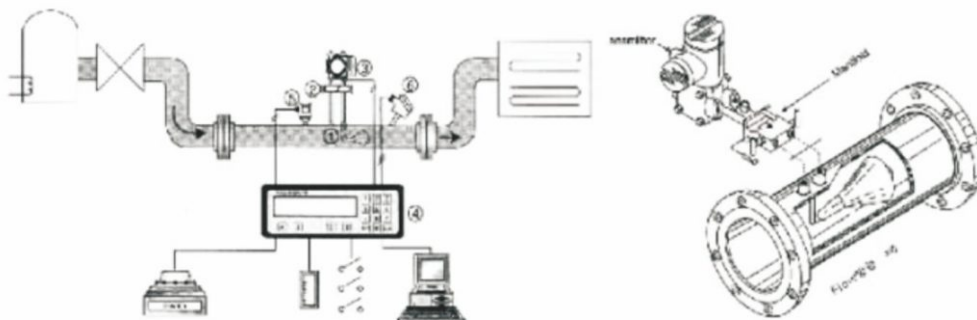
Application

In case of measuring non-condensate fluid.

1. Cone Venturi
2. 3-way or 5-way Valve
3. Differential Pressure Transmitter
4. Flow Computer

In case of measuring condensate fluid.

1. Cone Venturi
2. 3-way or 5-way Valve
3. Differential Pressure Transmitter
4. Flow Computer
5. Pressure Sensor
6. Temperature Sensor

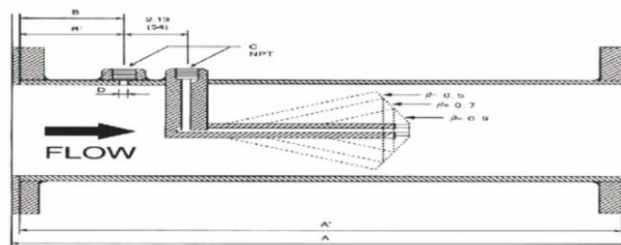


Cone Venturi

Specification

Accuracy	up to $\pm 0,5\%$ of rate
Repeatability	$\pm 0,1\%$
Turndown	10:1
Standard Betas	0,45 through 0,85
Headloss	Percentage of differential pressure produced with beta ratio.
Installation	Typically 0-5 diameters upstream and 3 diameters downstream.
Flange Rating	Ansi 150#RF, 300#RF

Drawing & Dimension



CVC

Model	Size	A(mm)	B(mm)	C(PT)
CVC-300	15A	200	65	1/4
	20A	200	65	1/4
	25A	200	65	1/4
	40A	260	75	1/4
	50A	300	90	1/2
	65A	300	90	1/2
	80A	360	90	1/2
	100A	400	100	1/2
	125A	560	110	1/2
	150A	560	110	1/2
	200A	660	130	1/2
	250A	710	130	1/2
	300A	760	130	1/2
	350A	760	150	1/2
	400A	760	150	1/2
	450A	920	150	1/2
	500A	920	150	1/2
	600A	1,220	150	1/2
	700A	1,220	150	1/2
	800A	1,525	150	1/2
1,000A	1,525	150	1/2	

Ordering Code

Model	Specification	Description			
CVC-300	Cone Venturi				
<ul style="list-style-type: none"> Type 					
BE	Beveled End	FE	Flanged End		
<ul style="list-style-type: none"> Meter Size 					
01	15A (1/2")	09	125A (5")	17	500A (20")
02	20A (3/4")	10	150A (6")	18	600A (24")
03	25A (1")	11	200A (8")	19	700A (28")
04	40A (1-1/2")	12	250A (10")	20	800A (32")
05	50A (2")	13	300A (12")	21	1,000A (40")
06	65A (2-1/2")	14	350A (14")	O	Others
07	80A (3")	15	400A (16")		
08	100A (4")	16	450A (18")		
<ul style="list-style-type: none"> Tap Nipple 					
S	Carbon Steel	B	SUS 316	O	Others
A	SUS 304	C	SUS 316L		
<ul style="list-style-type: none"> Connection 					
J1	JIS 10K	A1	ANSI 150#	D1	DIN PN10
J2	JIS 16K	A2	ANSI 300#	D2	DIN PN16
J3	JIS 20K	A3	ANSI 600#	D3	DIN PN25
J4	JIS 30K	A4	ANSI 900#	D4	DIN PN40
J5	JIS 40K	A5	ANSI 1500#	O	Others
J6	JIS 63K	A6	ANSI 2500#		
<ul style="list-style-type: none"> Flange Material 					
S	A105	O	Others		
A	SUS 304	N	None		
<ul style="list-style-type: none"> Boss Material 					
S	A105	O	Others		
A	SUS 304	N	None		
<ul style="list-style-type: none"> Option 					
O	Others	N	None		

[Example]

CVC-300-BE-01-S-J1-S-S-O