

SD34 Series Wedge Flow Meter

Product Features

- Low Reynolds number measurement

When sensor is in a very low Reynold number ($Re=500$), the flow remains square relationship with differential pressure.

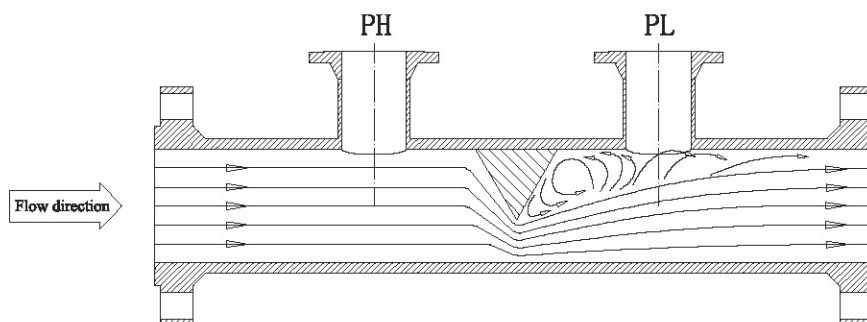
- Widely application

It can be used to measure liquid, gas, particularly suitable for the measurement of slurry, coal tar oil, asphalt, residual oil, heavy oil, coal water suspended solids and other high viscosity fluids.

- Bi-directional flow

Working Principle

A wedge-shaped block is hanged in the center of pipeline and it's one kind of the V-type throttling device. The V-type throttling device will block flow of the fluids, and then differential pressure ΔP is produced between upstream and downstream of the V-type throttling device. The flow rate is in linear with square root of difference pressure ΔP , and it's obtained through measuring the difference pressure produced around V-type cone.



Working principle diagram

Main Technical Parameters

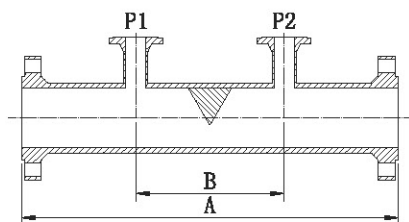
Medium	Gas/ Steam	Liquid
Accuracy	$\pm 1.0\%$	$\pm 0.5\%$
Repeatability	$\pm 0.5\%$	$\pm 0.2\%$
Nominal diameter	DN15~DN600	
Range ratio	3:1~10:1	
Operating pressure	$\leq 16\text{MPa}$	
Medium temperature	$\leq 500^{\circ}\text{C}$	
Straight pipe requirement	Upstream pipe 6-16 D, downstream pipe 3-6 D	

Dimensions of the Wedge Flow Meters

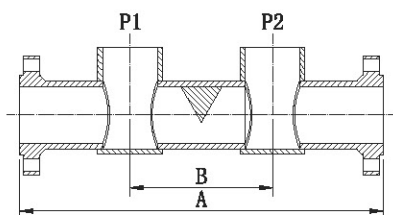
Diameter	Flange pressure tap		T-cock pressure tap		Screw-thread pressure tap	
DN (mm)	A (mm)	B (mm)	A (mm)	B (mm)	A (mm)	B (mm)
15			450	165		
20			450	165		
25			475	179		
32			475	179		
40	600	292	500	203	600	292
50	600	292	525	212	600	292
65	660	311	550	228	660	311
80	660	311	600	262	660	311
100	750	381	750	381	750	381
125	800	419	800	419	800	419
150	850	457	850	457	850	457
200	900	520	900	520	900	520
250	950	596	950	596	950	596
300	1100	673	1100	673	1100	673
350	1150	711	1150	711	1150	711
400	1225	774	1225	774	1225	774
450	1300	850	1300	850	1300	850
500	1400	939	1400	939	1400	939
600	1550	1066	1550	1066	1550	1066

Note:

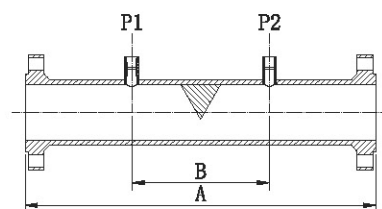
1. Flange pressure tap: when the pipe diameter is DN40~DN65, the tapping flange is DN50; when the pipe diameter is $DN \geq 80$, the tapping flange is DN50 or DN80.
2. Screw-thread pressure tap: Screw-thread specification is 1/2 NPT.



Flange pressure tap



T-cock pressure tap



Screw-thread pressure tap

Order Information

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Model	SD 34																		
2 " (DN50) flange	C																		
3 " (DN80) flange	D																		
T-cock	E																		
Others	Z																		
Tap flange pressure																			
No	0																		
PN40	1																		
PN63	2																		
PN100	3																		
PN160	4																		
PN250	5																		
CL150 (ANSI/ASME)	6																		
CL300 (ANSI/ASME)	7																		
CL600 (ANSI/ASME)	8																		
CL900 (ANSI/ASME)	9																		
CL1500 (ANSI/ASME)	10																		
Match transmitter																			
No	A																		
D/P transmitter	B																		
Multi-parameter	C																		
Match flanges (bolt, nut, gasket)																			
No	/0																		
CS	/1																		
304	/2																		
316L	/3																		
Others	/Z																		
Root valve																			
Globe valve	/A																		
Gate valve	/B																		
Ball valve	/C																		
Root valve material																			
CS	1																		
304	2																		
316L	3																		
304 Lining PTFE (ball valve)	4																		
Others	Z																		
Other accessories																			
3-valve manifold 304	/D																		
3-valve manifold 316L	/E																		
Reduced bore type																			
Body inner diameter reduces by one level	/R1																		
Body inner diameter reduces by two levels	/R2																		
Special requirement																			
NACE processing	/N																		
Oil-free degreasing	/O																		
Weld inspection report	/P																		
Third party calibration	/Q																		
Wedge material Tungsten Carbide	/Y1																		
All Tungsten Carbide	/Y2																		
Others	/Z																		

Note:

1. Anti-corrosion type include the inner part of the body and throttling element.
2. Pls choose T-cock when diameter is DN15-DN32.
3. For NPT (threaded type) ,DN50~DN600 thread standard is 1/2NPT, can also customized according to client's requirement.
4. Root valve: Refer to the data sheet by designing institute.
Normal liquid, gas, high pressure steam usually choose Globe valve;
Middle & low pressure steam usually choose Gate valve;
Mediums easy to sticky and crystallize will choose Gate valve and Ball valve;
Dirty and corrosive mediums will choose Ball valve, and Pressure tap will choose Flange.
5. Reduced bore type will be choose according to the instrument's operation condition. If flange pipeline standard is DN80, sensor inner diameter is DN65, then Diameter will choose "80", and Reduced bore type will choose "R1".