

WEDGE TYPE FLOW ELEMENT

WF SERIES

Wedge shaped orifice plate is detecting element for the wedge type flow meter. It is a V-Shaped of throttle, and the smooth vertex is facing down. This is conducive to liquid which contains suspended or viscous particles passing through, and the liquid won't be choked up at upstream in the throttle.

Feature

The wedge type flow meter is available for:

1. The liquid which viscous is higher than 500 mPa·s, such as fuel oil, residual oil and heavy oil.
2. Liquid-Solid mixture which contains suspended particles, such as slurry or sewage.
3. The Reynolds is available for $Re_D=300$ to 10^6 , therefore it can be used in the fluid of gases and steam.
4. The common technical parameters is $25\text{mm} \leq D \leq 300\text{mm}$, $PN \leq 6.4\text{MPa}$, $t \leq 200^\circ\text{C}$.

Technical Data

Style: Integral or Separate available

Service: Please refer to the *Feature* as above

Material: SS316 standard; option available

Accuracy: $<1.0 \pm 0.75\%$ of coefficient accuracy (wet calibrated);
 $\pm 0.5\%$ of actual flow rate over calibrated range

Repeatability: $\pm 0.2\%$

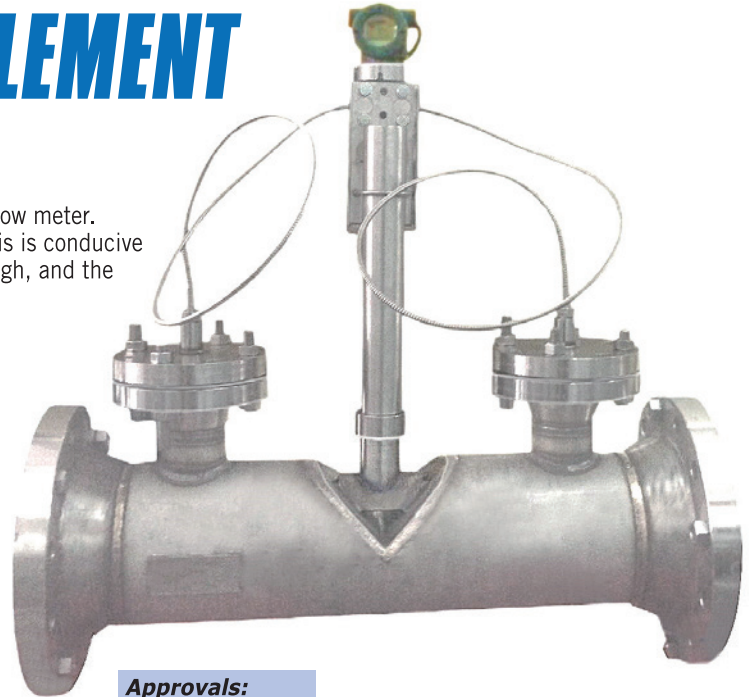
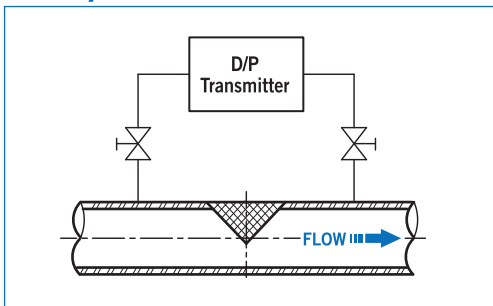
Line Size: Unlimited range, with examples from $\frac{1}{2}$ " to 36"

End Connection: Flange end, thread end or Weld end available

Limited Temperature: Integral Style: max. 150°C ; Separate Style: max. 370°C

Limited Pressure: Integral Style: 10~21 MPa; Separate Style: 2 MPa

Principle



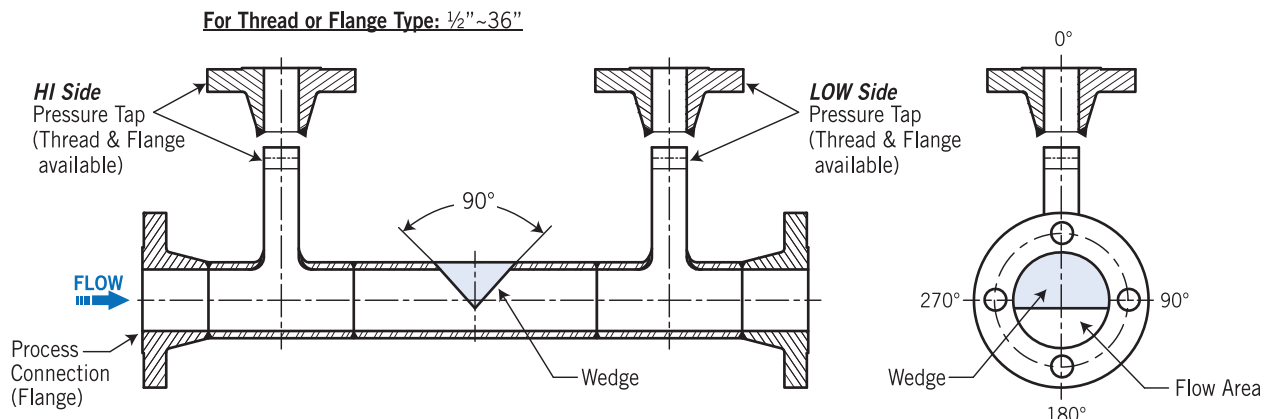
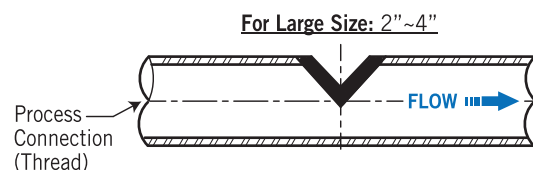
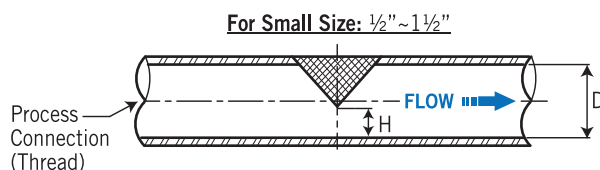
Approvals:



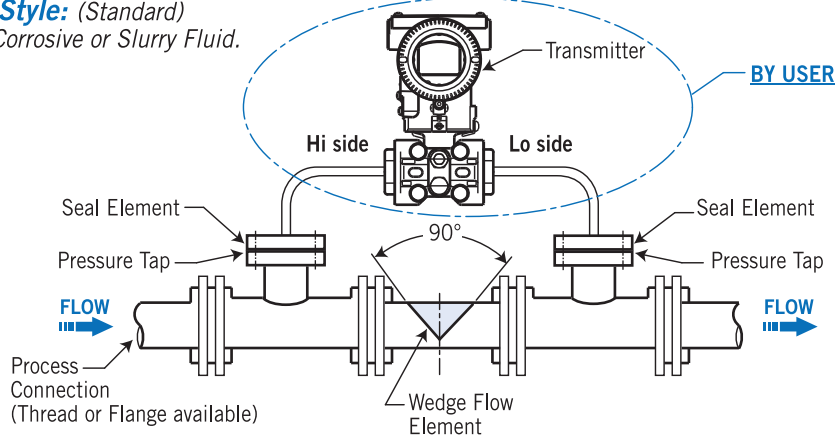
Parts List

(A) Integral Style:

Service for Clean Fluid.

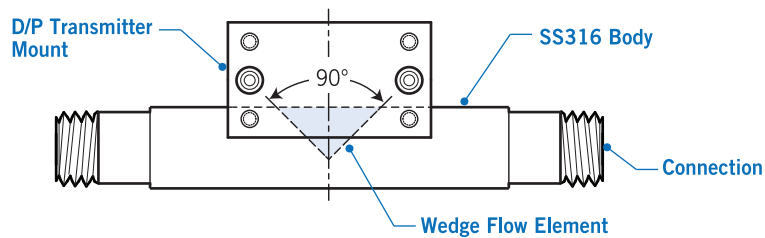


(B) Separate Style: (Standard)
Service for Corrosive or Slurry Fluid.



Configuration Style

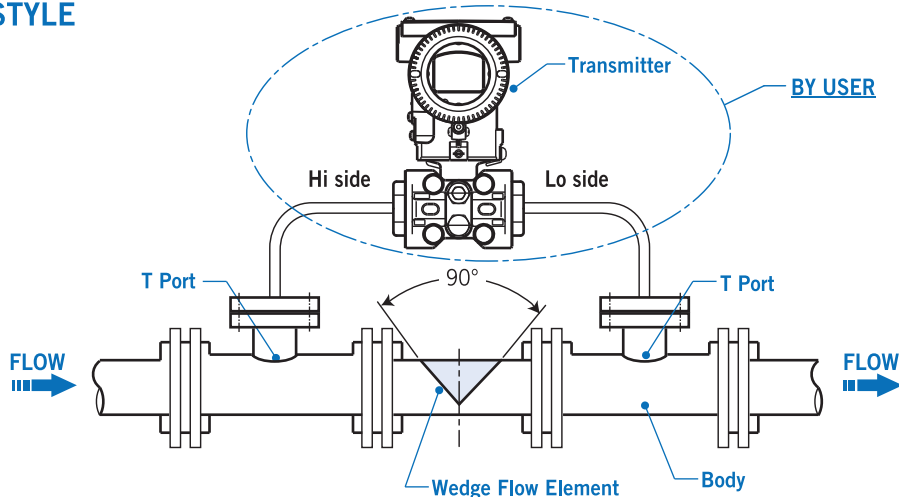
INTEGRAL STYLE



Integral Style:

1. Wedge type combines with D/P transmitter for the integral style.
2. Connection type can be thread or flange available.

SEPARATE STYLE



Separate Style:

1. The tapping is T port, and the pressure taps of positive and negative are separately at the each side of wedge plate.
2. Positive tap is to the Hi side (upstream); Negative is to the Lo side (downstream).
3. The length of Hi side to the wedge plate is equal to the length of Lo side to the wedge plate.
4. To change the flow rate, please replace the measuring tube of throttle. And, if using the diaphragm seal D/P transmitter, it will separate the medium from the piping, so this type is suitable for using to measure in the dirty medium.

Length of Straight Pipe

TYPICAL PIPE LENGTH REQUIREMENTS	PREFERRED		MINIMUM	
	Up	Down	Up	Down
Partially Opened Gate Valve	10D	5D	10D	3D
Concentric Increaser	10D	5D	5D	3D
Concentric Reducer	10D	5D	5D	3D
1 Elbow	10D	5D	5D	3D
2 Elbows Close Coupled In-Plane	10D	5D	5D	3D
3 Elbows Close Coupled Out-Of-Plane	10D	5D	10D	3D

Ordering Data Sheet

Individual Specification		Requirement		Requirement	
GENERAL					
01	Tag No.				
02	P & I.D No.				
03	Service				
04	Line No.				
05	Line Size & Schedule				
06	Calculatoin Standard				
07	NACE Requirement				
08	Service Condition Case				
PRIMARY ELEMENT					
09	Sensor Type				
10	Wetted Parts Material				
11	H Dimensions (mm)				
12	H/D Ratio (mm)				
13	Calcu. Diff. Pressure (mmH ₂ O)				
14	Design Diff. Pressure (mmH ₂ O)				
15	Body Process Connection (Size Rating)				
16	Body & Flange Material				
17	Pressure Taps Type				
18	Pressure Taps Connection (Size Rating)				
19	Flange Type (Body & Taps)				
METER					
20	Type of Meter				
21	Scale Range				
22	Scale Unit				
FLUID DATA					
23	Fluid				
24	Fluid State				
25	Flow Unit				
26	Maximum Flow for Sizing				
27	Maximum Flow				
28	Normal Flow				
29	Oper. Pressure (Kg/Cm ² G)				
30	Oper. Temperature (°C)				
31	Sp. Gr. @FTP				
32	Sp. Gr. @Base Condition				
33	Compress Factor				
34	Mol. Wt.				
35	C _p / C _v				
36	Oper. Viscosity (Cp)				
37	Oper. Density @FTP (Kg/M ³)				
38	Steam Superheat (°C)				
39	Static Pressure Range (Kg/Cm ² G)				
40	Max. Allowable DP (Kg/Cm ²)				
41	Base Condition				
42	Manufacturer				
43	Model				

* Please fill in above block on request.

Ordering Information

WF	Code	Style
	A	Integral style
	B	Seperate style
	Code	Body Material
	S	SS316
	Code	Option
	O	Option
	Code	Line Size
		Please directly fill out the request size ½" to 36" (option)
	Code	Process Connection Size
	T	Thread (1) ½" (2) ¾" (3) 1" (4) 1½" (5) Option
	F	Flange (6) ½" (7) ¾" (8) 1" (9) 1½" (10) 2" (0) Please directly fill out the request size (maximum 36").
	Code	Process Connection Rating
		(1) NPT, female (2) BSP, female (3) ANSI 150#RF (4) ANSI 300#RF (0) option
	Code	Pressure Tap Size
	T	<u>Thread Type: (For Integral Style only)</u> (1) ½"NPT(F) (2) ¾"NPT(F) (3) 1"NPT(F) (4) option
	F	<u>Flange Type: (For both of Integral Style or Seperate Style)</u> (5) 2" ANSI 150#RF (6) 3" ANSI 150#RF (7) 2" ANSI 300#RF (8) 3" ANSI 300#RF (9) option

WF								Complete Ordering Code
----	--	--	--	--	--	--	--	------------------------

Ordering code example:

WF-A-S-1"-T(3)-1-T(1)

- WF = Model
- A = Style: Integral style
- S = Body Material: SS316
- 1" = Line Size: 1"
- T(3) = Process Connection Size: Thread 1"
- 1 = Process Connection Rating: NPT, female
- T(1) = Pressure Tap Size: Thrad type, ½"NPT(F)