

Vortex Flowmeter

Vortex flow meter is a new type of flow meter with international advanced level, which is successfully developed based on the principle of Karman vortex street. It is suitable for measuring superheated steam and saturated steam, general gas and liquid.

Characteristic

1. Simple structure, no moving wear parts.
2. High measurement accuracy, high reliability, no on-site debugging.
3. It can transmit flow signals remotely, and can be networked with computers to achieve centralized management.
4. The magnifying plate adopts a unique design, which is universal for gas and liquid.

Technical Indicators

1. Accuracy class: 1.0 1.5
2. Nominal pressure: 1.6MPa, 2.5MPa, 4.0MPa and above
3. Temperature of measured medium: - 40 ° C~350 ° C
4. Pressure loss: resistance coefficient $cd < 2.4$
5. Power supply: 12~24VDC
6. Explosion proof level: IalICT6 (intrinsically safe explosion-proof)
7. Output signal: voltage pulse low level MIV, high level 26V, standard current signal 4-20mA



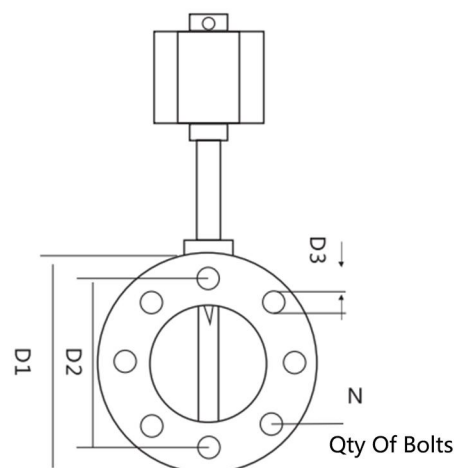
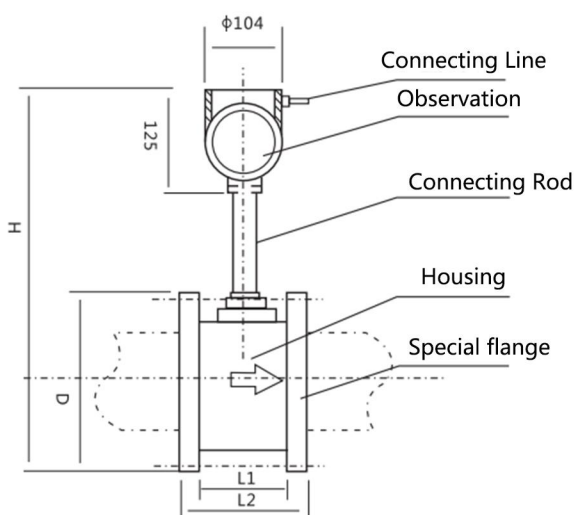
Flow Range

Sensor diameter	Normal temperature water medium		Atmospheric air	
	Standard	Extended	Standard	Extended
15	0.8~6	0.5~8	6~40	5~50
20	1~8	0.6~12	8~50	6~60
25	1.5~12	0.8~16	10~80	8~120
40	2.5~30	2~40	25~200	20~300
50	3~50	2.5~60	30~300	25~500
65	5~80	4~100	50~500	40~800
80	8~120	6~160	80~800	60~1200
100	12~200	8~250	120~1200	100~2000
125	20~300	12~400	160~1600	150~3000
150	30~400	18~600	250~2500	200~4000
200	50~800	30~1200	400~4000	350~8000
250	80~1200	40~1600	600~6000	500~12000
300	100~1600	60~2500	1000~10000	600~16000
400	200~3000	120~5000	1600~16000	1000~25000
500	300~5000	200~8000	2500~25000	1600~40000
600	500~6000	300~10000	4000~40000	2500~60000

Installation Conditions

The sensor shall be installed on a horizontal, vertical, inclined (liquid flow from bottom to top) pipe with the same diameter. Upstream and downstream of the sensor a certain length of straight pipe section shall be configured, and its length shall meet the requirements of 15-20D for the front straight pipe section and 5-10D for the rear straight pipe section.

1. The pipeline near the liquid sensor shall be filled with the measured liquid.
2. The sensor shall not be installed on the pipeline with strong mechanical vibration.
3. The inner diameter of the straight pipe section shall be consistent with the sensor diameter as much as possible. If not, the pipe error slightly larger than the sensor diameter shall be $\leq 3\%$ not more than 5 mm.
4. If the measured medium contains many impurities, a filter shall be installed beyond the required length of the straight pipe upstream of the sensor.
5. The sensor shall not be installed in places with strong electromagnetic interference, small space and inconvenient maintenance.



Diameter	L1	L2	D1	D2	D3	H	N
20	65	95	125	100	13	460	4
25	65	95	125	100	13	460	4
40	75	109	145	110	13	470	4
50	75	109	160	125	17	481	4
65	75	117	180	145	17	497	6
80	80	122	195	160	17	510	6
100	90	132	230	190	17	544	8
125	100	146	245	210	17	564	8
150	120	170	280	240	21	594	8
200	150	200	335	295	21	646	12
250	160	214	405	355	21	708	12
300	170	224	460	410	21	760	12

Field Display Vortex Flowmeter

The on-site display vortex flowmeter has the characteristics of miniaturization, micro power consumption, intelligence, etc., realizing the measurement, display and integration of flow parameters. Field display instrument is used for inconvenient environment of power supply: the instrument is designed uniquely with ultra-low power consumption chip, which is easy to operate, and is in the leading level among similar products in China.

Liquid Crystal Type (Figure 1)

1. Double row LCD, 8-digit digital display
2. User can set small signal cutoff
3. 4-20mA two-wire current output (equipped according to user's order requirements)
4. Online temperature compensation and manual constant value density compensation
3. 12V-24V or 3.6V lithium battery power supply

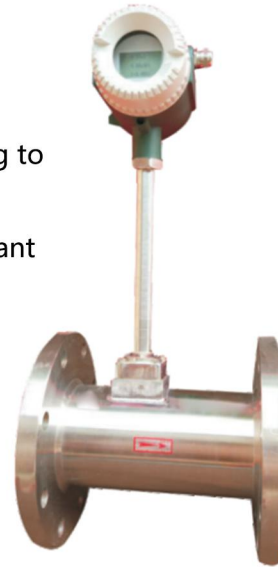


Figure 1



Figure 2

Plug in Vortex Flowmeter (Figure 2)

The plug-in vortex flow sensor is applicable to the measurement of superheated steam, saturated steam, general gas and liquid above DN200 pipes; Field display or remote output; It is easy to install and cheap; Accuracy: $\pm 1.5\%$, $\pm 2.5\%$

Diameter	200	250	300	350	400	450	500
Liquid m ³ /h	55~570	88~885	125~1275	170~1735	225~2265	286~2670	350~3540
Gas m ³ /h	560~4530	880~7070	1270~10180	1730~13860	2260~18100	2860~22905	3530~28275
Diameter	600	700	800	900	1000	1100	1200
Liquid m ³ /h	505~5090	690~6930	900~9050	1145~11450	1410~14140	1710~17110	2035~20360
Gas m ³ /h	5080~40715	6925~55420	9045~72380	11450~91605	14135~113095	17100~136840	20235~162850
Diameter	1300	1400	1500	1600	1800	2000	
Liquid m ³ /h	2385~23895	2770~27710	3170~31800	3610~36200	4580~45850	5650~56550	
Gas m ³ /h	23890~191125	27705~221160	31700~254455	36105~289510	45750~366410	56545~452365	

Sensor Selection

The model of stress vortex flow sensor is shown as WF-WJ X X XXX-X

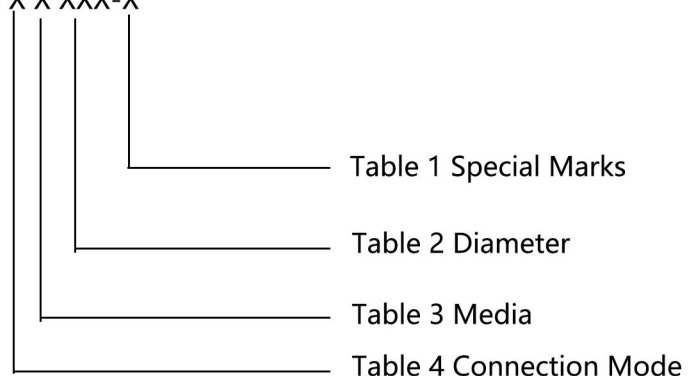


Table 1 Special Marks

Form	Routine	Signal output	Explosion-Proof	On site digital display	High Temperature
Sign	No	S	EX	X	T

Table 2 Diameter

Dia	15	20	25	32	40	50	65	80	100	125	150	200	250	300	400
Sign	15	20	25	32	40	50	65	80	100	125	150	200	250	300	400

Table 3 Media

Medium	Liquid	Gas	Steam	Hot Steam
Sign	1	2	3	4

Table 4 Connection Mode

Connection Mode	Flange Connection	Card Type	Plug In
Sign	A	B	C

Functional features

1. Geographical graphic display and intuitive operation interface.
2. Conduct operation analysis of the whole heat supply network system, with powerful statistics and inquiry functions, and grasp the pipe loss of the pipe network in real time.
3. Real time collection of temperature, pressure, flow and operation parameters of each user substation to monitor the operation of each measuring instrument in real time.
4. Query the steam consumption of any user in any period of time.
5. Generate fault records for AC power failure, temperature, pressure, flow and other abnormal parameters of the substation, summarize the faults, and send them to the manager via SMS.
6. Automatically generate settlement statements, daily reports, monthly reports, annual reports, etc. as required, and can print them directly.
7. User sub station and dispatching terminal can communicate with each other.
8. Uninterruptible power supply design ensures that monitoring points are always online.
9. It can grasp the information of measuring instruments anytime and anywhere.
10. Database management, configuration design.
11. Network design, supporting remote access function.
12. Support analog screen or projector display.