



BANNING VORTEX FLOWMETER VF Series



BANNING

DESCRIPTION

The VF series vortex flowmeter is a new type of flowmeter based on Karman vortex principle, which is successfully developed with international advanced level technology. It is suitable for measuring superheated steam, saturated steam, general gas and liquid.

CHARACTERISTICS

- Simple structure, no moving and wearing parts
- High measurement accuracy, high reliability, no on-site debugging
- The flow signal can be transmitted remotely, and it can be connected to the computer to realize centralized management
- The signal amplifier board adopts a unique design, which is universal for gas and liquid

FIELD DISPLAY TYPE (Integrated Temperature and Pressure)

The on-site display vortex flowmeter has the characteristics of miniaturization, micro power consumption, and intelligence, which can realize the measurement, display and settlement of flow parameters.

The on-site display instrument is suitable for the environment with inconvenient power connection: the instrument is uniquely designed and adopts ultra-low power consumption chip, which is easy to operate, and is at the leading level among similar domestic products.



- Double-row LCD display, 8-digit digital display
- 4~20mA current output (according to user order requirements)
- Online temperature, pressure compensation, artificial fixed value density compensation
- 12V-24V or 3.6V lithium battery power supply

- Temperature and pressure integrated vortex flowmeter comes with temperature and pressure compensation, making installation more convenient

PERFORMANCE

Electrical performance index	VF series vortex flowmeter
Accuracy	1%、1.5%
Nominal pressure	1.6MPa, 2.5MPa, 4.0MPa and above
Measured medium temperature	-40°C~350°C
Pressure loss	Resistance coefficient $cd \leq 2.4$
Power supply	12~24V DC
output signal	Pulse voltage (low level $\leq 1V$, high level $\geq 6V$), Pulse output 4~20mA current, RS485, HART protocol

FLOW RANGE

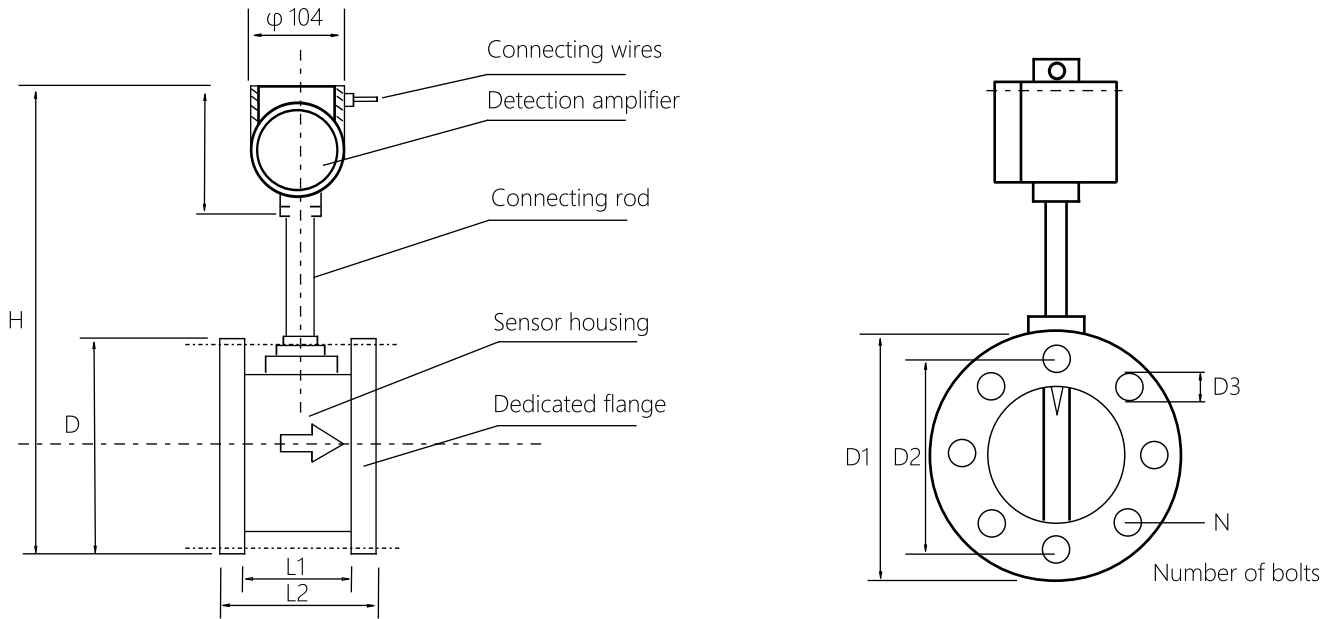
unit: m³/h

Sensor diameter (mm)	Liquid (room temperature water)		Gas (air at 20°C 101325Pa)	
	Standard	Expanded	Standard	Expanded
15	0.8~6	0.5~8	6~40	5~50
20	1~8	0.6~12	8~50	6~60
25	1.5~1.2	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	5~500	40~800
80	8~120	6~160	6~160	60~1200
100	12~200	8~250	8~250	100~2000
125	20~300	12~400	12~400	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	500~8000	300~10000	4000~40000	2500~60000

INSTALLATION CONDITIONS

- The sensor should be installed on a horizontal, vertical, inclined (liquid flow from bottom to top) pipeline with the same diameter. The upstream and downstream of the sensor should be equipped with a certain length of straight pipe section, and its length should meet the requirements of the front straight pipe section 15~20D length, and the rear straight pipe section 5~10D length.
- The pipeline near where the liquid sensor is installed should be filled with the liquid to be measured. The sensor should avoid installing on the pipeline with strong mechanical vibration.

- The inner diameter of the straight pipe section should be as consistent as possible with the sensor diameter. If it is not consistent, the pipe with a slightly larger sensor diameter should be used, and the error should be $\leq 3\%$ and no more than 5mm
- When the measured medium contains more impurities, a filter should be installed beyond the length required by the upstream straight pipe section of the sensor.
- The sensor should avoid installation in places with strong electromagnetic field interference, small space and inconvenient maintenance.



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

NOMENCLATURE

Series	VF series —	
Nominal diameter	DN15	15mm
	DN20	20mm
	DN25	25mm
	DN32	32mm
	DN40	40mm
	DN50	50mm
	DN65	65mm
	DN80	65mm
	DN100	100mm
	DN125	125mm
	DN150	150mm
	DN200	200mm
	DN250	250mm
	DN300	300mm
	DN350	350mm
DN400	400mm	
Accuracy	P1	1%
	P2	1.5%
Measured medium	L	liquid
	G	General gas
	S	Saturated vapor
	H	Superheated steam
Connection method	1	Flange connection
	2	Flange-mounted
	3	Plug-in
Special mark	M	Pulse signal
	C	4~20mA
	R	RS485
	H	HART protocol
	X	Field display
	G	High temperature (350)
	W	Temperature compensation
	Y	Pressure compensation
	Z	Temperature and pressure integrated compensation

- The nominal diameter mark number of the plug-in vortex flow meter is the diameter value.

For example: VF-DN15P1L1C

It indicates that the series is VF series, the accuracy is 1%, the nominal diameter is 15mm, the measured medium is liquid, the connection method is flange connection, and the output signal is standard signal output 4~20mA..

DISCLAIMER

⚠ Warning

LIFE OR PROPERTY RISK

- Please ensure that this product has been designed as part of whole system and already considered related risks, make sure the product has the correct ratings and is designed based on the entire system. It must not be used when applications related to serious life or property damage risks.

Failure to follow this instruction can result in death or serious injury.

⚠ Warning

PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to follow this instruction can result in death or serious injury.

⚠ Warning

MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to follow this instruction can result in death or serious injury.

Warranty/Remedy

Banning warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. Banning's standard product warranty applies unless agreed to otherwise by Banning in writing; please refer to your order acknowledgment or consult your local sales office for specific warranty details. If warranted goods are returned to Banning during the period of coverage, Banning will repair or replace, at its option, without charge those items that Banning, in its sole discretion, finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Banning be liable for consequential special, or indirect damages.**

While Banning may provide application assistance personally, through our literature and the Banning web site, it is buyer's sole responsibility to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this writing. However, Banning assumes no responsibility for its use.

SALES & SERVICE

Banning serves its clients through a worldwide network of sales offices, agents and distributors. For application assistance specifications, prices or names with the nearest authorized dealer, please contact your sales specialist or contact us directly:

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