Datasheet
VortexFlowMeter_english
V1_rev0

FERTRON

VFM Series

Vortex Flow Meter

Vortex Flow Meter

DESCRIPTION

Vortex flow meter is one kind of velocity type flow meter, it's based on Karman vortex theory and adopts piezoelectric crystal to detect the burble frequency of the fluid caused by flowing through the triangular prism in the pipeline and then measure the flow of fluid. It is widely used in petrol, chemical industry, light industry and power heat supply and so on.

TECHNICAL DATA

Application:liquid,gas,steam
Pipe Size:DN15-DN300
LCD display
Output:4-20mA,Pluse,RS485Modbus,HART
Power Supply:24V DC,3.6V Lithium Battery
Product Material:stainless steel
Flow Range:liquid: >0.3m/s,gas: >3m/s
Temperature Range:-20 to 350 ℃
Pressure:1.6MPa,2.5MPa,4.0MPa,high pressure can be customized

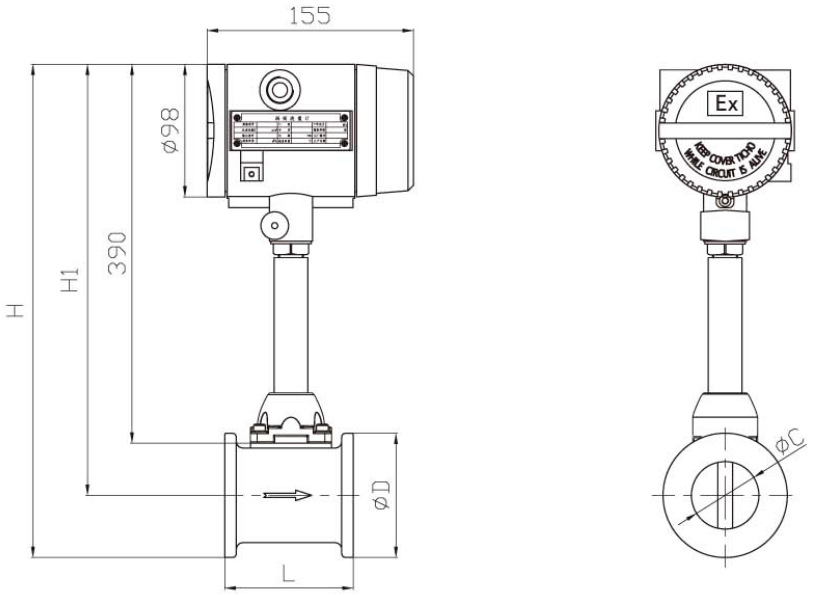
FLOW RATE

Diameter		Gas	Liquid
(mm)	(inch)	Flow(m^3/h)	Flow(m^3/h)
15	1/2''	2-20	0.2-2
20	3/4''	6-50	1.2-12
25	1''	8-60	1.6-16
32	1-1/4''	12-120	2-20
40	1-1/2''	20-200	2-30
50	2''	30-300	3-50
65	2-1/2''	50-500	18-180
80	3''	70-700	15-150
100	4''	100-1000	20-200
125	5''	150-1500	36-360
150	6''	200-2000	50-500
200	8''	400-4000	100-1000
250	10''	600-6000	150-1500
300	12''	1000-10000	200-2000

■ SATURATED STEAM MASS FLOW MEASUREMENT RANGE (FOR REFERENCE)

P(MPa) T(°C) ρ(kg/m³)		0.2 120.23 1.129	0.3 133.54 1.651	0.4 143.62 2.163	0.5 151.84 2.669	0.6 158.84 3.17	0.7 164.96 3.667	0.8 170.41 4.162	0.9 175.36 4.655	1.0 179.88 5.147	1.2 187.96 6.127	1.4 195.04 7.106	1.6 201.37 8.085	1.8 207.11 9.065	2.0 212.37 10.05
DN20	kg														
Qmax		7	10	12	14	18	20	24	28	30	36	42	48	54	60
Qmin		70	100	120	140	180	200	240	280	300	360	420	480	540	600
DN25	kg														
Qmax		9	13	16	20	25	30	32	37	40	48	56	64	72	80
Qmin		90	130	160	200	250	300	320	370	400	480	560	640	720	800
DN32	kg														
Qmax		13	20	25	32	36	44	48	56	60	73	84	96	110	120
Qmin		130	200	250	320	360	440	480	560	600	730	840	960	1100	1200
DN40	kg														
Qmax		22	33	40	50	60	75	80	94	100	120	140	160	18	200
Qmin		220	330	400	500	600	750	800	940	1000	1200	1400	1600	1800	2000
DN50	kg														
Qmax		30	50	60	80	90	110	120	140	150	180	210	240	270	300
Qmin		300	500	600	800	900	1100	1200	1400	1500	1800	2100	2400	2700	3000
DN65	kg														
Qmax		50	80	100	130	150	180	200	240	250	300	350	400	450	500
Qmin		500	800	1000	1300	1500	1800	2000	2400	2500	3000	3500	4000	4500	5000
DN80	kg														
Qmax		80	120	140	180	210	250	300	320	360	420	500	560	630	700
Qmin		800	1200	1400	1800	2100	2500	3000	3200	3600	4200	5000	5600	6300	7000
DN100	kg														
Qmax		110	170	210	270	320	370	420	470	510	610	700	800	900	1000
Qmin		1100	1700	2100	2700	3200	3700	4200	4700	5100	6100	7000	8000	9000	10000
DN125	t														
Qmax		0.17	0.24	0.33	0.40	0.48	0.56	0.64	0.7	0.78	0.9	1.0	1.2	1.4	1.5
Qmin		1.7	2.4	3.3	4.0	4.8	5.6	6.4	7.0	7.8	9.0	10	12	14	15
DN150	t														
Qmax		0.24	0.31	0.44	0.55	0.65	0.75	0.84	0.95	1.10	1.4	1.6	1.8	2.0	2.4
Qmin		2.4	3.1	4.4	5.5	6.5	7.5	8.4	9.5	11.0	14	16	18	20	24
DN200	t														
Qmax		0.5	0.7	0.85	1.05	1.3	1.5	1.6	1.9	2.1	2.5	2.9	3.2	3.6	4.0
Qmin		50	70	85	10.5	13	15	16	19	21	25	29	32	36	40
DN250	t														
Qmax		0.7	1.0	1.3	1.5	1.9	2.1	2.5	2.8	3.1	3.7	4.5	5.0	5.5	6.1
Qmin		7.0	10	13	15	19	21	25	28	31	37	45	50	55	61
DN300	t														
Qmax		1.10	1.7	2.2	2.7	3.2	3.7	4.2	4.7	5.2	6.2	7.2	8.1	9.1	10.0
Qmin		11	17	22	27	32	37	42	47	52	62	72	81	91	100
DN350	t														
Qmax		1.7	2.4	3.3	4.0	4.8	5.6	6.4	7.0	7.8	9.0	10	12	14	15
Qmin		17	24	33	40	48	56	64	70	78	90	100	120	140	150
DN400	t														
Qmax		2.0	3.0	3.7	4.9	5.5	6.7	7.3	8.5	9.2	11.0	14	15.6	17.2	18.5
Qmin		20	30	37	49	55	67	73	85	92	110	140	156	172	185
DN500	t														
Qmax		2.4	3.1	4.4	5.5	6.5	7.5	8.4	9.5	11	14	16	18	20	24
Qmin		24	31	44	55	65	75	84	95	110	140	160	180	200	240
DN600	t														
Qmax		3.5	5.1	6.7	8.4	9.8	11.5	12.9	15.0	16.2	19.3	22.4	25.6	28.8	32.1
Qmin		35	51	67	84	98	115	129	150	162	193	224	256	288	321

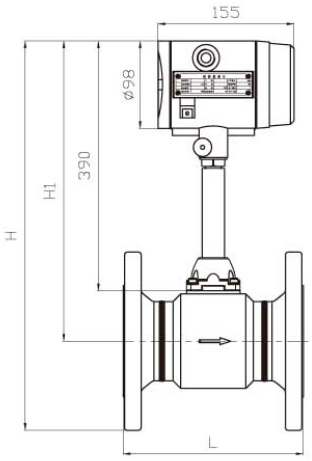
■ DIMENSIONS

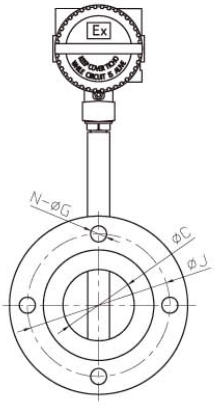


Wafer Type

Size	H1	H	L	D	C
15	431	448	70	35.1	15
20	431	452	70	43	20
25	431	456	70	50.8	25
32	431	463	70	64	32
40	428	464	70	73	40
50	431	477	75	92	50
65	440	492	75	105	65
80	448	511	100	127	80
100	459	537	120	157.2	100
125	471	564	103	186	125
150	484	592	120	216	150
200	504	624	98	240	200
250	535	684	114	298	250
300	560	734	130	348	300

DIMENSIONS





Pressure and Temperature Compensation Type

SIZE	L	H1	DIN 1.6Mpa			DIN 2.5Mpa			DIN 4.0Mpa			ANSI 150RF			ANSI 300RF			C
			H	J	N-ΦG	H	J	N-ΦG	H	J	N-ΦG	H	J	N-ΦG	H	J	N-ΦG	
15	220	431	478	65	4-Φ14	478	65	4-Φ14	478	65	4-Φ14	/			/			15
20	220	431	483	75	4-Φ14	483	75	4-Φ14	483	75	4-Φ14	480	70	4-Φ15	489	82.5	4-Φ19	20
25	220	431	488	85	4-Φ14	488	85	4-Φ14	488	85	4-Φ14	485	79.5	4-Φ15	493	89	4-Φ19	25
32	220	431	501	100	4-Φ18	501	100	4-Φ18	501	100	4-Φ18	490	89	4-Φ15	497	98.4	4-Φ19	32
40	170	428	503	110	4-Φ18	503	110	4-Φ18	503	110	4-Φ18	491	98.5	4-Φ15	506	114.5	4-Φ23	40
50	170	431	513	125	4-Φ18	513	125	4-Φ18	513	125	4-Φ18	507	120.5	4-Φ19	513	127	8-Φ19	50
65	170	440	532	145	4-Φ18	532	145	8-Φ18	532	145	8-Φ18	529	139.5	4-Φ19	535	149	8-Φ23	65
80	200	448	548	160	8-Φ18	548	160	8-Φ18	548	160	8-Φ18	543	152.5	4-Φ19	553	168	8-Φ23	80
100	220	459	569	180	8-Φ18	574	190	8-Φ22	574	190	8-Φ22	573	190.5	8-Φ19	586	200	8-Φ23	100
125	220	471	596	210	8-Φ18	606	220	8-Φ26	H	220	8-Φ26	598	216	8-Φ23	610	235	8-Φ23	125
150	270	484	626	240	8-Φ22	634	250	8-Φ26	478	250	8-Φ26	623	241.5	8-Φ23	643	270	12-Φ23	150
200	310	504	674	295	12-Φ22	684	310	12-Φ26	483	320	12-Φ30	675	298.5	8-Φ23	694	330	12-Φ25	200
250	370	535	737	355	12-Φ26	747	370	12-Φ30	488	385	12-Φ33	738	362	12-Φ25	757	387.5	16-Φ30	250
300	400	560	790	410	12-Φ26	802	430	16-Φ30	501	450	16-Φ33	801	432	12-Φ25	820	451	16-Φ33	300

Flange Type

SIZE	L	H1	DIN 1.6MPa			DIN 2.5MPa			DIN 4.0MPa			ANSI 150RF			ANSI 300RF			C
			H	J	N-ΦG	H	J	N-ΦG	H	J	N-ΦG	H	J	N-ΦG	H	J	N-ΦG	
15	170	431	478	65	4-Φ14	478	65	4-Φ14	478	65	4-Φ14	/			/			15
20	170	431	483	75	4-Φ14	483	75	4-Φ14	483	75	4-Φ14	480	70	4-Φ15	489	82.5	4-Φ19	20
25	170	431	488	85	4-Φ14	488	85	4-Φ14	488	85	4-Φ14	485	79.5	4-Φ15	493	89	4-Φ19	25
32	170	431	501	100	4-Φ18	501	100	4-Φ18	501	100	4-Φ18	490	89	4-Φ15	497	98.4	4-Φ19	32
40	170	428	503	110	4-Φ18	503	110	4-Φ18	503	110	4-Φ18	491	98.5	4-Φ15	506	114.5	4-Φ23	40
50	170	431	513	125	4-Φ18	513	125	4-Φ18	513	125	4-Φ18	507	120.5	4-Φ19	513	127	8-Φ19	50
65	170	440	532	145	4-Φ18	532	145	8-Φ18	532	145	8-Φ18	529	139.5	4-Φ19	535	149	8-Φ23	65
80	200	448	548	160	8-Φ18	548	160	8-Φ18	548	160	8-Φ18	543	152.5	4-Φ19	553	168	8-Φ23	80
100	220	459	569	180	8-Φ18	574	190	8-Φ22	574	190	8-Φ22	573	190.5	8-Φ19	586	200	8-Φ23	100
125	220	471	596	210	8-Φ18	606	220	8-Φ26	H	220	8-Φ26	598	216	8-Φ23	610	235	8-Φ23	125
150	270	484	626	240	8-Φ22	634	250	8-Φ26	478	250	8-Φ26	623	241.5	8-Φ23	643	270	12-Φ23	150
200	310	504	674	295	12-Φ22	684	310	12-Φ26	483	320	12-Φ30	675	298.5	8-Φ23	694	330	12-Φ25	200
250	370	535	737	355	12-Φ26	747	370	12-Φ30	488	385	12-Φ33	738	362	12-Φ25	757	387.5	16-Φ30	250
300	400	560	790	410	12-Φ26	802	430	16-Φ30	501	450	16-Φ33	801	432	12-Φ25	820	451	16-Φ33	300

■ MODEL SELECTION

Model	Code								Specification
VFM									Vortex Flow Meter
Diameter									DN15-DN300
Connection	Pipeline	FL							Flange Connection
		JZ							Wafer Clamp
		Z							Customized
Accuracy			Pipeline	10					1.0%R
				15					1.5%R
Temperature and Pressure Compensation					S				With
					Z				Without
Communication Protocol						N			No Communication Interface
						H			HART Protocol
						M			MODBUS Protocol
Output							1		No Output
							2		Two-wire 4-20mA Output
							3		Pulse Output
Power Supply								DD	24VDC
								B	Battery 3.6V
Body Material								S	Stainless Steel
Measuring Medium									1 Gas
									2 Liquid
									3 Saturated Steam
									4 Superheated Steam