

TFMV Vortex Flow Meter Series Cut Sheet:


The TFMV series Vortex Flow Meters are best in class and powerful flow meters utilizing the “Von Karman Vortex” effect. The TFMV series Vortex Flow Meters are ideally suited for measuring the flow rate of fluids such as gas, steam, and liquid. The TFMV series Vortex Flow Meters utilize sophisticated signal processing methods that advances vortex metering technology to a new level, which allows much lower measuring limit compared to conventional Vortex meters. As well, this technology results in better stability and accuracy. The unique dual-sensor design and special signal processing circuitry ensures better vibration immunity by eliminating external vibration signals to provide more reliable performance and results in the very low velocity measuring capability.

TFMV series Vortex Mass Flow Meters measure the flow velocity, temperature, and pressure measurements. With these real time measurements we calculate the fluid’s density and Reynolds number in real time. This is critical in real-world applications. For example, even a small 10% change in steam pressure (thus affecting density) will introduce a 10% error in mass flow measurement without the multivariable measurements.

Benefits

- Maintenance free Sensor design.
- DIN, DN, ANSI, and JIS flange options available, as well as wafer sizes.
- 304SS and 316SS construction available.

VORTEX METER SPECIFICATIONS.

- Wetted Materials all 304 SS
- Velocity Range: See detail below.
- Velocity Accuracy: +/- 1% of reading
- Repeatability of +/- 0.05% of reading
- 1/2" to 4" 150# ANSI Flange Connections, up to 12" available custom.
- LCD Display
- Temperature Accuracy +/- 1 Deg C
- Temperature:
 - Gas: -40°F (-40°C) to 662°F (350°C)
 - Ambient: -40°F (-40°C) to 131°F (55°C)
- Power Requirement: 24 VDC, 15 Watts maximum;
- 3.6 VDC Lithium C Size battery for intrinsic safety mode. Has LCD Display but no 4-20 or ModBus
- Output signals: Modbus RTU, 4–20 mA, and 0-1.0 KHz for flow rate indication
- Digital communications: Modbus RTU
- Max Pressure 1.6 MPa, 230 PSIG. (Custom up to 4.0 MPa 580 PSIG)
- Display: Flow rate, Total flow, Temperature, and Pressure
- Wiring connection to enclosure size: M20 x 1.5
- Factory Final QC Test Certificate
- Integral Electronics
- Electronics Enclosure NEMA 4X / IP67

VORTEX METER Velocity Ranges:

The Vortex meter has different minimum and maximum flow velocities it can measure based on the fluid type and meter size. Please note the values below for proper sizing of your meter.

- **Steam:**

1/2" ANSI Flange: 4-70m/s or 787-13,800 f/m or 13-230 f/s

1" ANSI Flange: 3-70m/s or 590- 13,800 f/m or 9.8-230 f/s

2" to 12" ANSI Flange: 1.5-70m/s or 30.2-13,800 f/m or 4.92-230 f/s

- **Gas:**

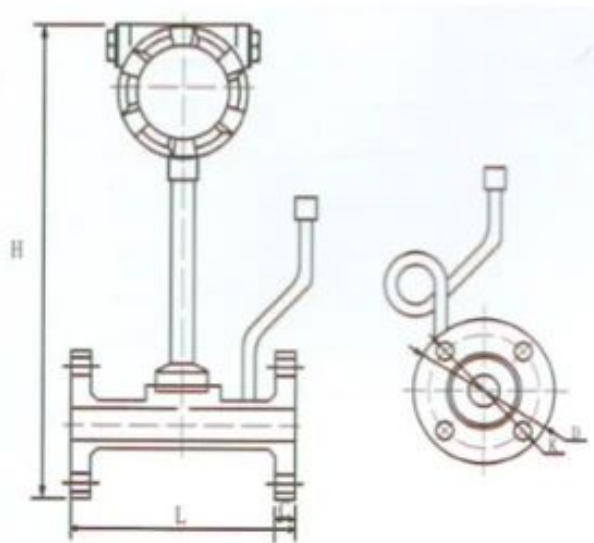
1/2" ANSI Flange: 4-65m/s or 787-12,790 f/m or 13- 213 f/s

1" ANSI Flange: 3-65m/s or 590-12, 790 f/m or 9.8- 213 f/s

2" to 12" ANSI Flange: 1.5-65m/s or 300- 12,790 f/m or 4.9-213 f/s

- Liquid:
 1/2" to 12" ANSI Flange: 0.2-10m/s or 40- 1,968 f/m or .66-32.8 f/s

VORTEX METER Dimensions



ANSI 150# Flange Size		Flange to Flange (L)		Total height (H)		Flange OD (D)		Flange Thickness(C)		Flange Bolt Circle (K)		Flange Bolt Dia	
mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
15	½"	180	7.09	415	16.34	95	3.74	14	0.55	65	2.56	14	0.55
20	¾"	180	7.09	420	16.54	105	4.13	16	0.63	75	2.95	14	0.55
25	1"	180	7.09	425	16.73	115	4.53	16	0.63	85	3.35	14	0.55
32	1¼"	180	7.09	435	17.13	140	5.51	18	0.71	100	3.94	18	0.71
40	1½"	180	7.09	435	17.13	150	5.91	18	0.71	110	4.33	18	0.71
50	2"	200	7.87	440	17.32	165	6.50	20	0.79	125	4.92	18	0.71
65	2½"	200	7.87	460	18.11	185	7.28	20	0.79	145	5.71	18	0.71
80	3"	200	7.87	490	19.29	200	7.87	20	0.79	160	6.30	18	0.71
100	4"	200	7.87	510	20.08	220	8.66	22	0.87	180	7.09	18	0.71
125	5"	220	8.66	535	21.06	250	9.84	22	0.87	210	8.27	18	0.71
150	6"	220	8.66	570	22.44	285	11.22	24	0.94	240	9.45	22	0.87
200	8"	220	8.66	625	24.61	340	13.39	24	0.94	295	11.61	22	0.87
250	10"	250	9.84	685	26.97	405	15.94	26	1.02	355	13.98	26	1.02
300	12"	300	11.81	710	27.95	460	18.11	28	1.10	410	16.14	26	1.02