



ALL PLASTIC VORTEX FLOWMETER FOR CORROSIVE LIQUIDS

FV-200 Series
Starts at

\$895



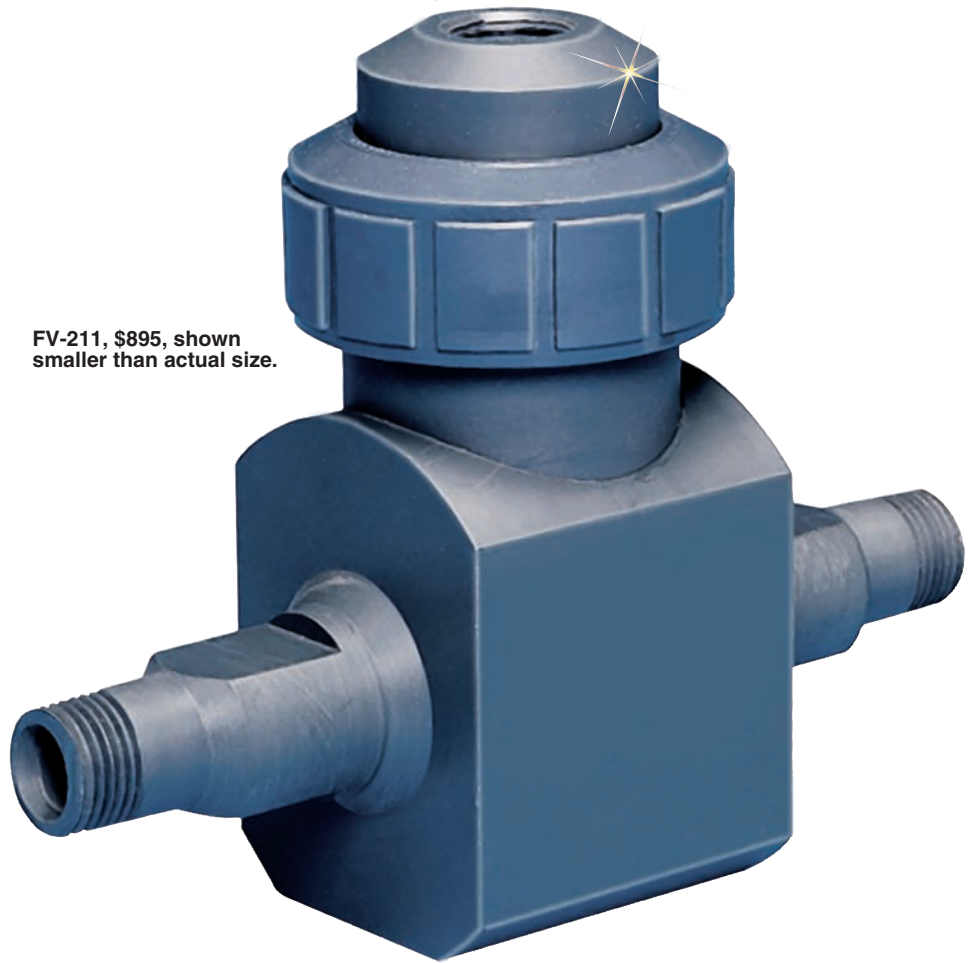
- ✓ No Moving Parts
- ✓ Corrosion Resistant
- ✓ 6 to 51 mm (¼ to 2") Sizes
- ✓ High Temperature [95°C (203°F)] Models Available

The FV-200 Series meter utilizes vortex-shedding technology to provide a repeatable flow measurement accurate to 1% of full scale. The meter has no moving parts, and any potential for fluid contamination is eliminated by the meter's corrosion-resistant all plastic construction. The meter includes a compact 2-wire (4 to 20 mA) or 3-wire pulse transmitter (optional), contained within a conveniently replaceable plug-in electronics module. All electronics are housed in a corrosion-resistant enclosure. Unlike meters containing metal or moving parts, the FV-200 is perfect for aggressive or easily contaminated fluids. Applications range from ultra-pure water to highly corrosive chemicals and slurries.

Operation of the FV-200 vortex flowmeter is based on the vortex shedding principle. As fluid moves around a body, vortices (eddies) are formed and move downstream. They form alternately, from one side to the other, causing pressure fluctuations. These are sensed by a piezoelectric crystal in the sensor tube, and are converted to a 4 to 20 mA, or pulse signal. The frequency of the vortices is directly proportional to the flow rate. This results in extremely accurate and repeatable measurements using no moving parts.

Another advantage of utilizing a FV-200 vortex flowmeter is that there are no gaskets or elastomers in the meter. Therefore, one need only be concerned with the

FV-211, \$895, shown smaller than actual size.



thermoplastic material used in body construction. In a thermoplastic piping system, the material chosen for the flowmeter should match that of the pipe wherever possible.

Many factors may affect the capability of a meter to measure the flow of specific fluids accurately. Different solutions have varying effects on meters. For instance, heavy particle suspension will wear down internal parts on some meters or cause sensing inaccuracies for non-obtrusive metering systems. For vortex flowmeters, high viscosities tend to dampen the formation of vortices and reduce the effective range. Particles and internal bubbles do not usually affect vortex meters. Slurries containing grit can wear down the bluff body over a period of time. Also, long fibers can catch and build up on the bluff, decreasing accuracy. Standard factory calibration is for tap water at 32 SSU (1 CST) viscosity and ambient temperature. Viscosity

above 1 CST will raise the minimum readable flow rate, reducing rangeability. The effect is linear to viscosity. No adjustments are required for specific gravities up to 2.0. Liquids with high specific gravities will adversely affect the permissible amount and duration of over range flow.

SPECIFICATIONS

Measured: Liquids

Connection: ¼ to 2 NPT thread
Wetted Material: PVC or CPVC depending on model number

Turndown Ratio: 12:1 (except ¼" meter size; 8:1)

Accuracy: ±1% of full scale, 4 to 20 mA or ±2% of full scale, frequency pulse ("P" option)

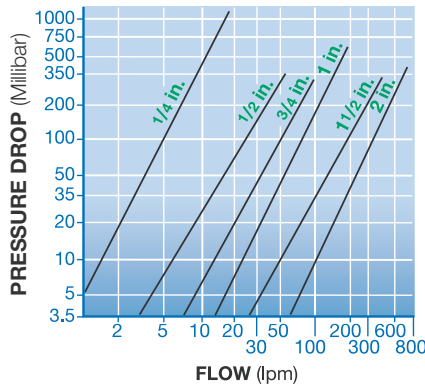
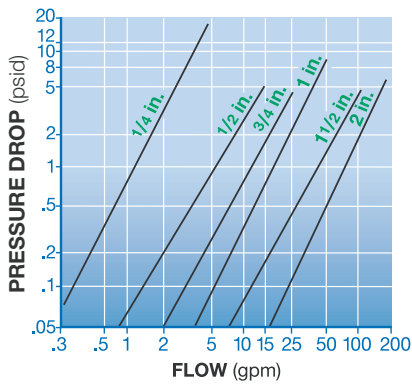
Repeatability: ±0.25% actual flow

Output Signal: 4 to 20 mA or frequency pulse (source-sink driver; 1A source/ 1.5A sink; typical output resistance 10 Ω)

Power Supply: 13 to 30 Vdc

Enclosure: NEMA 4X (IP 66)

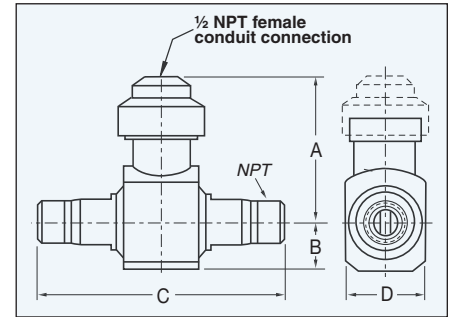
Response Time: 2 seconds minimum, step change in flow



Pressure—Temperature Ratings

Maximum Fluid Temperature °C (°F)	Maximum Operating Pressure bar (PSIG)	
	PVC	CPVC
*95 (203)	NR	1.6 (24)
66 (150)	NR	4.3 (63)
38 (100)	6.4 (93)	8.3 (120)
21 (70)	10.3 (150)	10.3 (150)

*(-HT) models only



DPI32, \$150, shown smaller than actual size. See page M-35 for more information.

Dimensions: mm (in)

Size, NPT	A	B	C	D
1/4	97 (3.81)	45 (1.75)	133 (5.25)	64 (2.50)
1/2	97 (3.81)	45 (1.75)	181 (7.13)	64 (2.50)
3/4	97 (3.81)	45 (1.75)	194 (7.63)	64 (2.50)
1	100 (3.92)	45 (1.75)	204 (8.03)	64 (2.50)
1 1/2	99 (3.90)	51 (2.00)	213 (8.37)	64 (2.50)
2	109 (4.31)	51 (2.00)	213 (8.37)	64 (2.50)

MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)

Model No.	Price	Connection, NPT Size	Construction	Flow	
				Minimum Flow LPM (GPM)	Maximum Flow LPM (GPM)
FV-211	\$895	1/4	PVC	2.3 (0.6)	18.9 (5)
FV-212	780	1/2	PVC	4.7 (1.3)	56.8 (15)
FV-213	780	3/4	PVC	7.9 (2.1)	94.6 (25)
FV-214	780	1	PVC	15.8 (4.2)	189.3 (50)
FV-215	895	1 1/2	PVC	31.5 (8.3)	378.5 (100)
FV-216	1015	2	PVC	63.1 (16.7)	757.1 (200)
FV-221	1125	1/4	CPVC	2.3 (0.6)	18.9 (5)
FV-222	1010	1/2	CPVC	4.7 (1.3)	56.8 (15)
FV-223	1010	3/4	CPVC	7.9 (2.1)	94.6 (25)
FV-224	1010	1	CPVC	15.8 (4.2)	189.3 (50)
FV-225	1125	1 1/2	CPVC	31.5 (8.3)	378.5 (100)
FV-226	1245	2	CPVC	63.1 (16.7)	757.1 (200)
FV-221-HT	1275	1/4	High temperature CPVC	2.3 (0.6)	18.9 (5)
FV-222-HT	1160	1/2	High temperature CPVC	4.7 (1.3)	56.8 (15)
FV-223-HT	1160	3/4	High temperature CPVC	7.9 (2.1)	94.6 (25)
FV-224-HT	1160	1	High temperature CPVC	15.8 (4.2)	189.3 (50)
FV-225-HT	1275	1 1/2	High temperature CPVC	31.5 (8.3)	378.5 (100)
FV-226-HT	1395	2	High temperature CPVC	63.1 (16.7)	757.1 (200)

Accessory

Model No.	Price	Description
PSU-93	\$40	Unregulated 24 Vdc power supply
FW-0121	80	Reference Book: A First Course in Fluid Dynamics

Comes complete with operator's manual.

For units with a pulse output add a "-P" to the model number, no additional charge.

Ordering Examples: FV-213, 3/4 NPT, PVC vortex flowmeter and DPI32, 1/2 DIN digital display, \$780 + 150 = \$930.

FV-226-P, 2 NPT, CPVC vortex with pulse output, \$1245.

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