

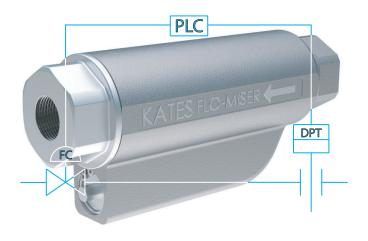
## **OVERVIEW**

Model FM Flo-Misers are a versatile, efficient selection for a broad range of applications that require accuracy. These units are robust and cover large flow range and high temperature and pressure ratings. It is completely selfcontained, requires no outside source of power, no straight piping runs, and is as simple to install as an ordinary ball valve. The Kates FM Controller has only one moving element that adjusts to pressure changes, and is designed so that there are no complex linkages, delicate bearings, or any failure-prone components. Since the control portion is immersed in fluid, response time due to pressure variations is immediate. Hunting and oscillation is insignificant. Due to its outlet port geometry, it is capable of taking large pressure drops. These products have been applied successfully throughout the industry for a wide variety of liquid applications.









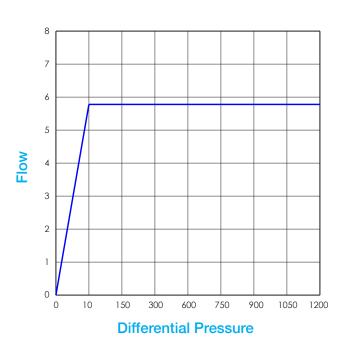
## THREE CONTROL ELEMENTS IN ONE UNIT





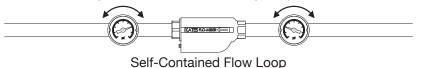


KATES FM SPECIFICATIONS		
Materials of Construction	316 Stainless Steel	
Body Seals	PTFE	
Maximum Working Pressure	1200 PSI	
Maximum Working Temperature	400°F	
Process Connections	FNPT	
Accuracy	± 5%	
Repeatibility	± 1%	
Turndown Ratio	13:1	
Response Time	1-2 Seconds	
Media	Liquids	



Maintains Flow Regardless of Pressure Changes Upstream or Downstream



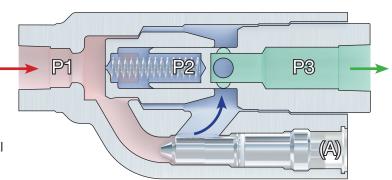




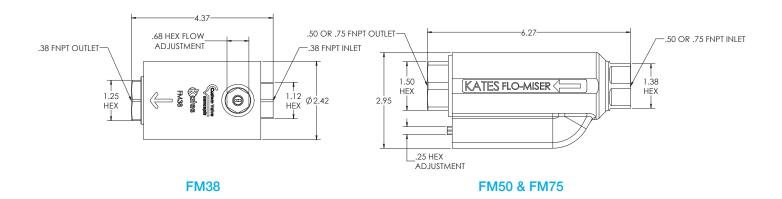
## PRINCIPLE OF OPERATION

The Kates Flo-Miser combines an adjustable orifice and an internal regulating valve to automatically control flow rate regardless of upstream or downstream pressure variations.

The Kates unit consists of three chambers, an inlet chamber (P1), the center control chamber (P2), and the outlet chamber (P3). The spring maintains a constant differential across the adjustable orifice, which is set by the hex adjustment (A). The flow rate is dictated to the constant differential (P1:P2) and the amount of opening of the orifice. Flow rate out of the unit (P3) must be equal to the set flow across the internal needle value. Greater or lesser flow out of the unit will be corrected within 1-2 seconds by the internal regulating valve.



MODEL VARIATIONS			
Part	FM38	FM50	FM75
Weight (lbs)	4	4	4
Flow Rate (GPM H <sub>2</sub> O)	0.3-3	1.5-20	1.5-20
Line Size (FNPT)	3⁄8"	1/2"	3/4"
Straining Recommendation (Mesh) ((Micron))	1600 (14)	200 (75)	200 (75)



## Just Set It & Forget It!

For Additional Information Refer to www.customvalveconcepts.com or Contact Us at:

Custom Valve Concepts 31651 Research Park Drive Madison Heights, MI 48071

