

## Fire Service Meter without Bypass

Sizes 3", 4", 6", 8", 10"

### Features

**APPLICATIONS:** The Hersey® Meters FM<sup>3</sup> fire service meter is designed for combined fire service and domestic water where a single supply line supports both fire and domestic or process needs and usage is consistently moderate to high. The meter may be utilized in automatic sprinkler systems and fire service, as a master meter for an entire water system, as a master meter for zoned systems, and for domestic or processed water where accuracy across a broad range of flows is critical. The FM<sup>3</sup> meter eliminates the need for secondary service lines, saving time and reducing installation expenses and is compliant for all UL®, FM®, NSF®-61 fire service meter applications.

**CONSTRUCTION:** Every Hersey FM<sup>3</sup> meter is manufactured with epoxy coated ductile iron construction which eliminates additional gaskets and fasteners, reducing ongoing maintenance costs. The unique, Hersey strainer design protects the horizontal turbine meter measuring element in a unibody construction that reduces meter vault and installation costs due to its compact size and reduced weight while providing the specified strainer surface area. The unitized turbine measuring element is easily accessed through the epoxy coated top case of the meter and o-ring seals simplify field service.

**REGISTER:** The permanently sealed registers use proven magnetic drive design and the exclusive Hersey triple seal provides clarity and error free meter reading. Internal gears are self lubricating, molded plastic for minimal friction and a long service life. Standard visual read and electronic Translator® registers offer odometer wheels with a totalizing display and 360° degree test circle with center sweep hand and a low flow indicator. All Hersey FM<sup>3</sup> models are available with electronic meter reading system components to meet any utility requirement and are protected by the unique Hersey locking pin.

**OPERATION:** During operation, all water flows through the sensitive horizontal turbine measuring element for accurate registration. The element employs Hersey's unique Retro-Thrust® feature to divide wear across multiple points, increasing accuracy, reducing friction and extending the life of the measuring element. Integral flow straightening vanes on the inlet and outlet sides of the measuring element contribute to the long term accuracy of the meter.

**INSTALLATION:** Hersey FM<sup>3</sup> meters are designed for horizontal installation with a minimum of five times the inlet pipe diameter of straight pipe prior to the meter and a minimum of three times the pipe diameter after the meter.

**MAINTENANCE:** All service components for the FM<sup>3</sup> are unitized for easy replacement. Access to components is accomplished through the top side of the meter for full in-line service. Drop In Measuring Elements (DIMEs) are available in pre-tested configurations which include a new measuring element, top case, register and o-ring for utilities that require quick field change outs. A calibration vane permits field adjustments to ensure accurate registration and extend the service life of the measuring element. The calibration vane is protected by the register and the locking pin for added security. For additional information regarding Mueller Systems' unitized replacement options, please contact the Mueller Systems Sales and Technical Support Group at 800-323-8584.



4" FM<sup>3</sup> Fire Meter

FM<sup>3</sup> without Bypass

### Materials and Specifications

MODEL	FM <sup>3</sup> Fire Service Meter
SIZES	3", 4", 6", 8", 10"
STANDARDS	Manufactured and tested to meet or exceed all applicable parts of AWWA C703, FM® approved; UL® listed, NSF®-61 compliant
INSTALLATION	Horizontal only with 5X pipe diameter of straight pipe (same size as meter) on inlet and 3X on outlet side of meter
OPERATING FLOW RANGE	See Chart on the following page
ACCURACY	See Chart on the following page
PRESSURE LOSS	See Chart on the following page
MAXIMUM WORKING PRESSURE	175 PSI
WATER TEMPERATURE RANGE	33°F to 100°F
MEASURING ELEMENT	Mainline: Horizontal Turbine Element Drop In Measuring Elements (DIME)
METER CONNECTIONS	ANSI class 125 standard end flanges
Options	All AMR/AMI Reading Systems

## Fire Service Meter without Bypass Sizes 3", 4", 6", 8", 10"

FM<sup>3</sup> without Bypass

### Meter Registration

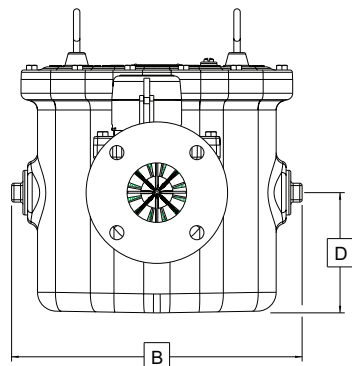
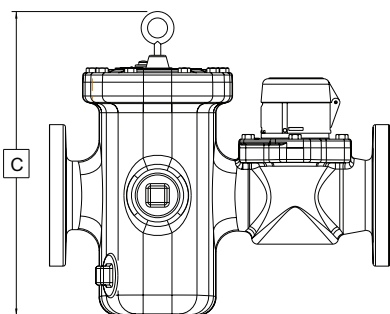
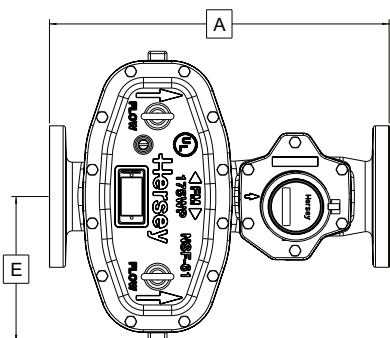
Meter Size	Initial Dial*	Capacity	Initial Dial*	Capacity
3"	100 Gallons	100 Million	10 Cubic Feet	10 Million
4"	100 Gallons	100 Million	10 Cubic Feet	10 Million
6"	1000 Gallons	1 Billion	100 Cubic Feet	100 Million
8"	1000 Gallons	1 Billion	100 Cubic Feet	100 Million
10"	1000 Gallons	1 Billion	100 Cubic Feet	100 Million

\*Registration equal to one full revolution of the sweep hand.

### Flow Characteristics

Meter Size	Typical Low Flow (95% Minimum)	Typical Operating Range (100% ± 1.5%)	Maximum Continuous Operation	Maximum Intermittent Flow
3"	3 GPM	6 to 600 GPM	600 GPM	750 GPM
4"	4 GPM	8 to 1000 GPM	1000 GPM	1250 GPM
6"	9 GPM	15 to 2000 GPM	2000 GPM	2600 GPM
8"	18 GPM	30 to 3500 GPM	3500 GPM	4400 GPM
10"	30 GPM	40 to 5500 GPM	5500 GPM	7000 GPM

### Dimensions and Weights

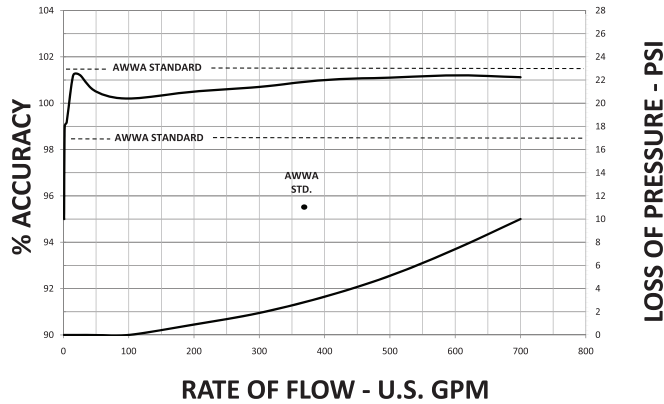


Meter Size	3"	4"	6"	8"	10"
Dimension					
A	18"	20"	24"	28"	39-1/4"
B	16"	15-15/16"	22"	26-1/4"	33-1/4"
C	16"	19"	24-1/4"	25-15/16"	31-7/16"
D	6-3/8"	9-3/8"	11-1/2"	11-9/16"	14"
E	8"	8"	11"	13-1/8"	16-5/8"
Weight	120	140	340	465	960

NOTE: Weights are in pounds and are approximate.

### Performance

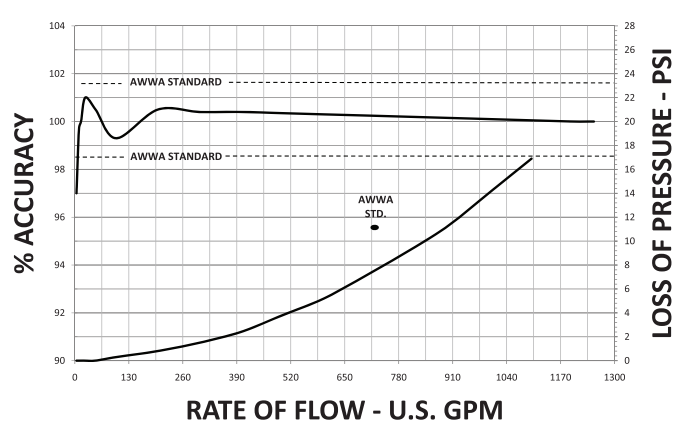
#### Head Loss and cy – 3"



NOTE: Performance curves are typical only and NOT a guarantee of performance.

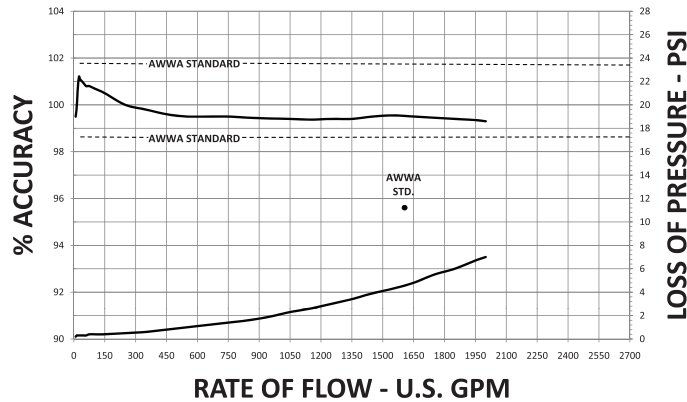
### Performance

#### Head Loss and Accuracy – 4"



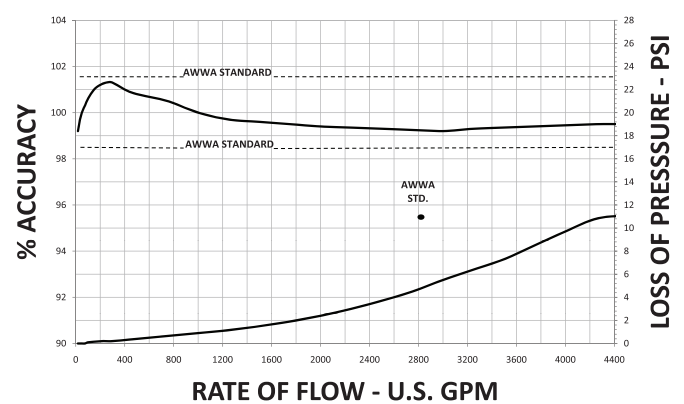
NOTE: Performance curves are typical only and NOT a guarantee of performance.

#### Head Loss and Accuracy – 6"



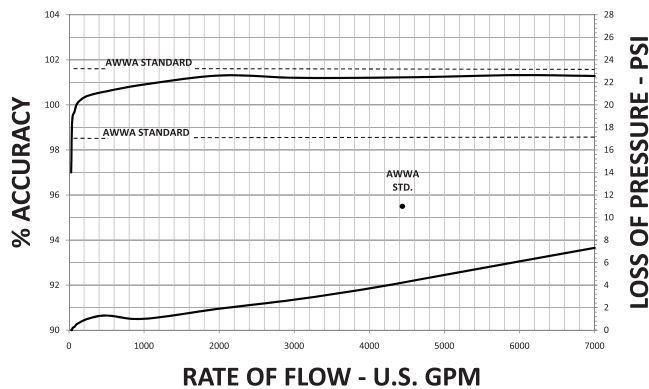
NOTE: Performance curves are typical only and NOT a guarantee of performance.

#### Head Loss and Accuracy – 8"



NOTE: Performance curves are typical only and NOT a guarantee of performance.

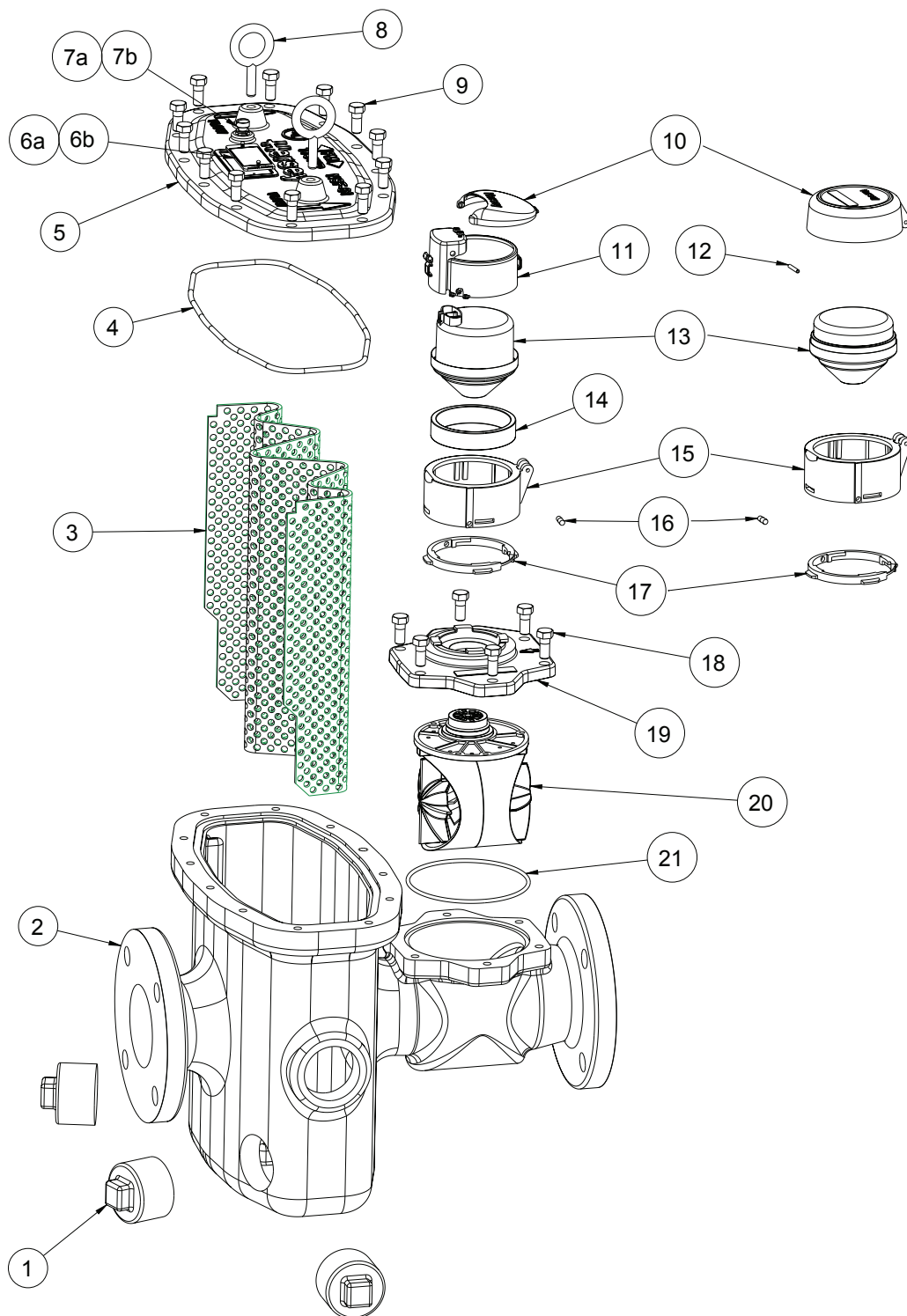
#### Head Loss and Accuracy – 10"



NOTE: Performance curves are typical only and NOT a guarantee of performance.

## Fire Service Meter without Bypass Sizes 3", 4", 6", 8", 10"

### FM3 WITHOUT BYPASS EXPLODED ASSEMBLY (See parts listing, next page)



## Fire Service Meter without Bypass Sizes 3", 4", 6", 8", 10"

### 3" - 10" FM3 WITHOUT BYPASS PARTS LIST (See exploded assembly diagram for reference)

3" - 10" FM3 WITHOUT BYPASS PARTS LIST						
#	DESCRIPTION	3"	4"	6"	8"	10"
1	2" SS NPT PLUG	59010PLA (4)	59010PLA (4)	59010PLA (4)	59010PLA (4)	59010PLA (4)
2	FM3 BODY	D3624	D3603	D3608	D3614	D3618
3	STRAINER SCREEN	B8634	C6628	C6615	C6614	C6616
4	STRAINER COVER O-RING	A13077	A13077	A13078	A13079	A13080
5	STRAINER COVER	C6620	C6620	D3616	D3610	D3620
6a	NAME TAG	A13054	A13054	A13054	A13054	A13054
6b	DRIVE SCREW	7199070109 (2)	7199070109 (2)	7199070109 (2)	7199070109 (2)	7199070109 (2)
7a	VENT SCREW	59003	59003	59003	59003	59003
7b	VENT SCREW WASHER	59073	59073	59073	59073	59073
8	EYE BOLT	AS7733 (2)	AS7733 (2)	AS7731 (2)	AS7732 (2)	AS7732 (2)
9	STRAINER COVER BOLT	90065 (12)	90065 (12)	90180 (20)	90243 (20)	90264 (24)
10	TRANSLATOR LID VISUAL READ LID	B8638 50381	B8638 50381	B8638 50381	B8638 50381	B8638 50381
11	WIRE EXIT HOUSING	C6624	C6624	C6624	C6624	C6624
12	LID HINGE PIN	AS41122	AS41122	AS41122	AS41122	AS41122
13	TRANSLATOR REGISTER VISUAL READ REGISTER	D3655XXXX D3663X	D3656XXXX D3663X	D3657XXXX D3663X	D3658XXXX D3663X	D3659XXXX D3663X
14	REGISTER SPACER	50382	50382	50382	50382	50382
15	TRANSLATOR HOUSING BASE VISUAL READ HOUSING BASE	C6637 50380	C6637 50380	C6637 50380	C6637 50380	C6637 50380
16	LOCKING PIN	A12658	A12658	A12658	A12658	A12658
17	REGISTER HOUSING INSERT	C5770	C5770	C5770	C5770	C5770
18	ELEMENT COVER BOLT	90065 (6)	90065 (6)	90264 (8)	90264 (8)	90264 (8)
19	ELEMENT COVER	C6618	C6618	C6612	C6612	C6630
20	MEASURING ELEMENT ASSEMBLY	C6598	C6598	54700	54700	54700
21	ELEMENT COVER O-RING	54602	54602	B8657	B8657	B8636
22	D.I.M.E. Includes #'s (10-17) & (19-21)	CALL M.S. CUSTOMER CARE	CALL M.S. CUSTOMER CARE	CALL M.S. CUSTOMER CARE	CALL M.S. CUSTOMER CARE	CALL M.S. CUSTOMER CARE