

420 Series Bronze

420 Bronze PD Meter

Sizes 5/8" x 1/2" and 5/8" x 3/4"

Mueller SYSTEMS

Features

APPLICATIONS: The Hersey® 420 bronze is a nutating disc style, positive displacement meter designed for residential and small commercial applications where water volumes are low and low flow sensitivity is important.

CONFORMANCE TO STANDARDS: All Hersey 420 bronze meters meet or exceed the latest revision of the AWWA C-700 Standard for positive displacement meters. Every 420 bronze no lead meter is compliant with the latest initiatives of NSF, ANSI and EPA standards.

CONSTRUCTION: Hersey 420 water meters consist of three basic parts: maincase; measuring chamber; and permanently sealed register. The maincase is made of bronze for long life. Direction of flow arrows and model are cast into each maincase for ease of identification. The bottom cover is epoxy-coated cast iron with a molded plastic liner separating it from the waterway. Optional bronze and plastic bottom covers are available. The measuring chambers are designed for reduced wear during operation. The measuring chamber, integral strainer, nutating disc and thrust roller are thermoplastic, which is dimensionally stable and will not corrode. The register housing and lid are available in your choice of plastic or bronze for standard visual read registers. The meter is designed so that the register can be replaced easily without removing the meter from the service line.

REGISTER: The permanently sealed visual read register has a unique triple "L" seal and heat treated, glass lens to eliminate dirt, moisture infiltration and fogging. An integral tamper-proof locking feature is provided to resist tampering with the register. The totalizing register has a straight-reading odometer type display, a 360° test circle with center sweep hand and a low flow (leak) detector. Standard gearing is used, making registers interchangeable by size. The 420 bronze meter is available with all AMR and AMI options for increased reading efficiency.

OPERATION: Water flows through the meter's strainer where debris is screened out. The incoming water fills a known volume of the measuring chamber on one or the other side of a movable disc that separates the chamber into two sections. As water enters, it moves the disc (nutates), forcing a known volume of water out of the meter from the opposite side of the disc. The process repeats as the sections refill and empty in turn. The nutating action of the disc is coupled magnetically to the register to indicate the volume of water that passes through the meter.

MAINTENANCE: The Hersey 420 positive displacement meter is designed and manufactured to provide long service life with virtually no maintenance required. Repair components available include complete chamber assemblies and bottom plate gaskets. All components can be accessed without removing the meter body from the service line for simplified maintenance.

CONNECTIONS: Supplied with external straight pipe threads (NPSM) per ANSI B1.20.1



5/8" x 3/4" 420 Bronze PD Meter

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Materials and Specifications

MODEL	420 Bronze Meter
SIZES	5/8" X 1/2", 5/8" X 3/4"
STANDARDS	AWWA C-700, Most current NSF-61, ANSI, & EPA Initiatives
SERVICE	Measurement of flow in forward direction only
INSTALLATION	Horizontal or Vertical
OPERATING FLOW RANGE	See Charts on the following pages
ACCURACY	See Charts on the following pages
MAXIMUM WORKING PRESSURE	150 PSI
TEMPERATURE RANGE	33° F to 100° F water temperature
MEASURING ELEMENT	Nutating Disc PD Chamber
REGISTER TYPE	Straight reading, permanently sealed, magnetic drive with low flow indicator and remote reading capability
METER CONNECTIONS	External straight pipe threads (NPSM)
MATERIALS	Meter case – Bronze Bolts – Stainless Steel Measuring Element Chamber and Disc - Thermoplastic Disc Pin - SST Strainer - Thermoplastic
OPTIONS	AMR/AMI Reading Systems

Meter Registration

Meter Size	Initial Dial*	Capacity	Initial Dial*	Capacity
5/8"	10 Gallons	10 Million	1 Cubic Ft.	1 Million

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

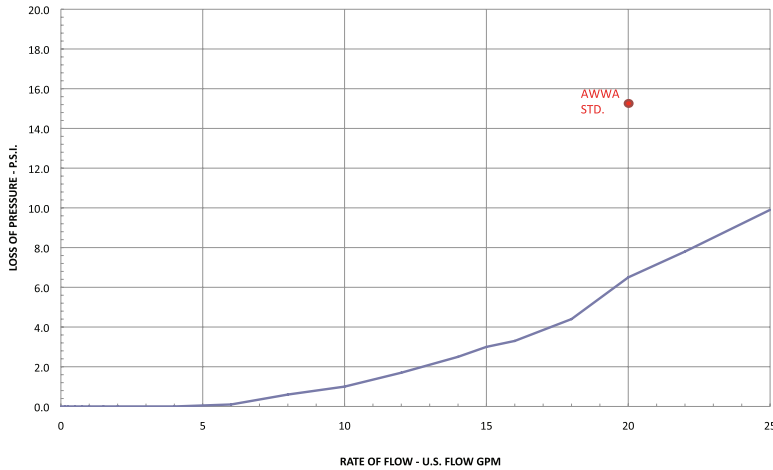
Flow Characteristics

Meter Size	Typical Low Flow (95% Minimum)	Typical Operating Range (100% ± 1.5%)	Maximum Continuous Operation
5/8"	1/8 GPM	1/2 to 20 GPM	15 GPM

Performance

Head loss

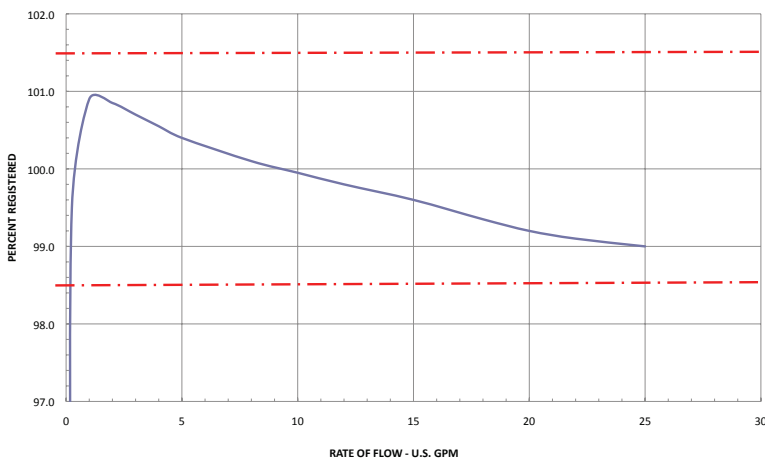
Head Loss on 5/8" 420 Bronze



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

Accuracy

Accuracy on 5/8" 420 Bronze



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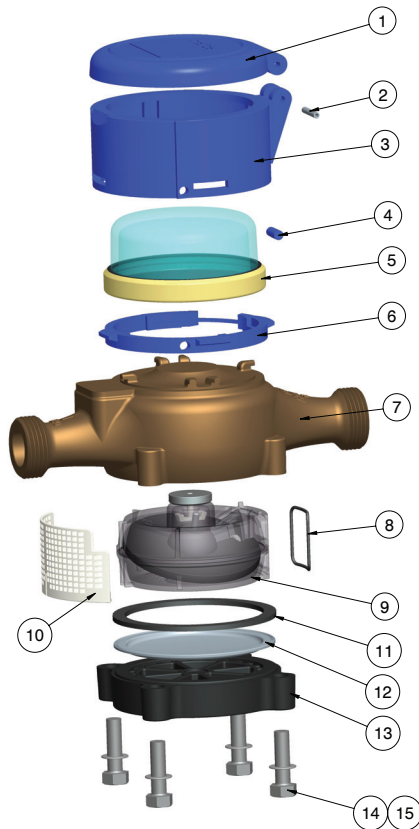
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MODEL 420 BRONZE METER ASSEMBLY COMPONENTS			
ITEM	PART #	DESCRIPTION	QTY
1	C5768	PLASTIC REGISTER COVER	1
	C5774	BRONZE REGISTER COVER	
2	C5769	PLASTIC REGISTER HOUSING BASE	1
	C5772	BRONZE REGISTER HOUSING BASE	
3	AS41122	PLASTIC LID SPIROL PIN	1
	AS41123	BRONZE LID SPIROL PIN	
4	AS12658	BLUE COLOR REGISTER LOCKING PIN	1
	AS126581	BRONZE COLOR REGISTER LOCKING PIN	
5	D36981	MODEL 420 VISUAL REGISTER SG	1
	D36982	MODEL 420 VISUAL REGISTER CF	
	D36983	MODEL 420 VISUAL REGISTER CM	
	D36991XX	MODEL 420 TRANSLATOR REGISTER SG	
	D36992XX	MODEL 420 TRANSLATOR REGISTER CF	
6	D36993XX	MODEL 420 TRANSLATOR REGISTER CM	1
	C5770	REGISTER HOUSING INSERT	
7	D3680SI	5/8" X 3/4" MODEL 420 MAIN CASE	1
	D3681-1SI	5/8" X 1/2" MODEL 420 MAIN CASE	
8	A13120	MODEL 420 CHAMBER O-RING	1
9	D3635PO	MODEL 420 CHAMBER ASSEMBLY	1
10	C6681	MODEL 420 BRONZE STRAINER RETAINER	1
11	B8664	MODEL 420 BRONZE GASKET	1
12	B8665	MODEL 420 LINER (IRON/BRZ ONLY)	1
	B8663	MODEL 420 IRON BOTTOM PLATE	
	B8662	MODEL 420 BRONZE BOTTOM PLATE	
	C6682	MODEL 420 PLASTIC BOTTOM PLATE	
14	90026	5/16-18 X 7/8" HEX BOLT SS (IRON/BRZ BTM)	4
	90010	5/16-18 X 1-1/8" HEX BOLT SS (PLASTIC BTM)	
15	90018	5/16 FLAT WASHER SS (PLASTIC BTM)	4

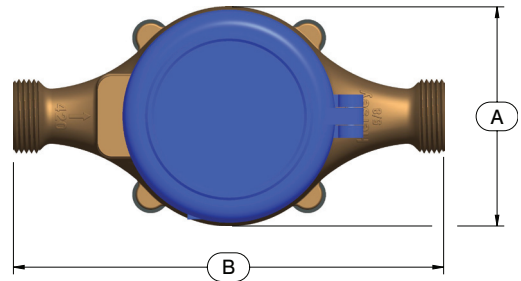


Dimensions, Weights and Parts

Meter Size	5/8"	
Model	420 Bronze Standard Register	420 Bronze Translator Register
Dimension		
A	3.8125"	3.8125"
B	7.5"	7.5"
C	3.3125	4.25
D	1.375"	1.375"
Weight	3.7	3.7

Weights are in pounds and are approximate.
Inlet and outlet 1/2" or 3/4"

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