

MUELLER

420 REMOTE DISCONNECT

Bronze PD Disconnect Meter - Sizes $\frac{5}{8}$ " x $\frac{3}{4}$ " and $\frac{5}{8}$ " x $\frac{1}{2}$ "

FEATURES

Applications: The Hersey® RDM is a nutating disk, positive displacement meter that incorporates a radio controlled valve in a 7 $\frac{1}{2}$ " laying length. The unique meter design allows utilities to retrofit $\frac{5}{8}$ " RDM meters in existing services where there is a high incidence of customer service call volume pertaining to transient or delinquent accounts, where employee safety may be a concern, or where it is difficult to gain access to meters. By accessing the account information through the Mi.Net™ AMI System User Interface screen, a radio frequency (RF) command can be initiated to turn on or off any service equipped with an RDM meter from any password protected computer authorized to access the utility site.

Conformance to Standards: All $\frac{5}{8}$ " x $\frac{3}{4}$ " Hersey Remote Disconnect Meters meet or exceed the latest revision of the AWWA C-700 Standard for positive displacement meters. Every 420 RDM no lead meter is compliant with the latest initiatives of NSF, ANSI and EPA standards. All electronic components utilized in the meter and RF transceiver design comply with applicable FCC, Part 15 standards and AWWA Standard C-707 for Encoded Remote Reading Systems.

Construction: Hersey 420 Residential Disconnect Meters consist of five basic parts: maincase; measuring chamber; permanently sealed register; pilot valve; and RF transceiver. The maincase is made of no lead bronze for long life. Direction of flow arrows, model, and NSF-61 designation are permanently cast into the body components. The RDM is available with a plastic bottom cover only. The measuring chambers are designed for reduced wear during operation. The top and bottom of the measuring chamber, strainer, nutating disc and thrust roller are dimensionally stable thermoplastic which will not corrode. The electronic register housing and lid, Mi.Node and pilot valve housing are all made from thermoplastic. The meter is designed so that the register and pilot valve replacement components can be serviced easily without removing the meter from the line and are protected by Hersey's unique tamper resistant locking pin and tamper resistant screw.

Register: The permanently sealed electronic register has a unique triple "L" seal and Grilimid 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 RDM is available with an integral or a remote mounted RF transceiver for optimal performance.

Operation: Water flows through dual strainers in the pilot valve assembly. Differential pressure provides the operating principal for the valve activation. 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.

The pilot valve can be actuated via the User Interface from any web enabled device with the proper log in and password. System screens indicate the position of the valve (open or closed) and record the date and time for all valve activations providing a permanent record of each account's history.



$\frac{5}{8}$ " x $\frac{3}{4}$ " REMOTE DISCONNECT METER

Maintenance: The Hersey RDM meter is designed and manufactured to provide long service life with virtually no maintenance required. Repair components available include complete chamber assemblies and pilot valve repair kits when required. All components can be accessed without removing the meter from the service line for simplified maintenance.

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

MATERIALS AND SPECIFICATIONS

Model	(RDM) or Remote Disconnect Meter
Sizes	$\frac{5}{8}$ " x $\frac{1}{2}$ ", $\frac{5}{8}$ " x $\frac{3}{4}$ "
Standards	AWWA C-700, Current NSF-61, ANSI, & EPA Initiatives
Service	Measurement of flow in forward direction only
Installation	Horizontal
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
Wire Length Options	Integral, 3', 15'
Register Type	Straight reading, permanently sealed, magnetic drive with low flow indicator and remote reading capability
Battery Life	20 Years
Meter Connections	External straight pipe threads (NPSM)
Materials	Meter case – Bronze Disconnect Valve – Pilot Type Bolts – Stainless Steel Measuring Element Chamber and Disc – Thermoplastic Disc Pin – SST Strainer – Thermoplastic

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METER REGISTRATION

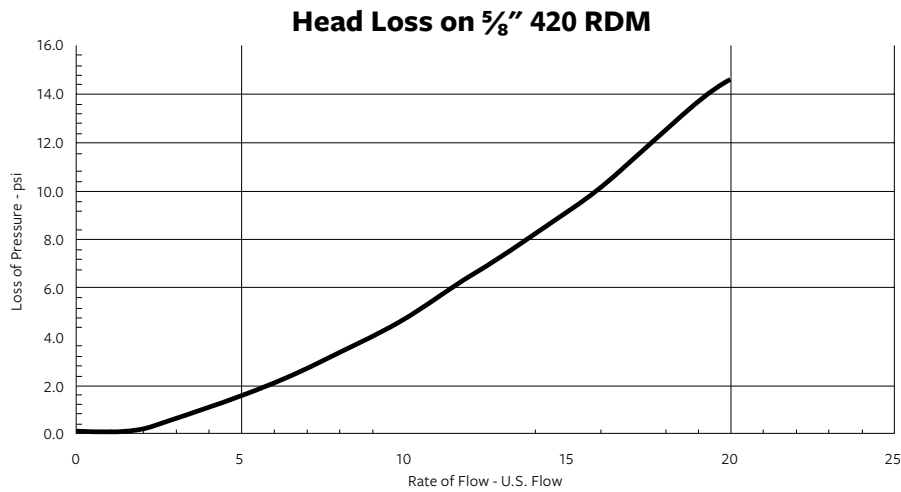
METER SIZE	INITIAL DIAL*	CAPACITY	INITIAL DIAL*	CAPACITY
$\frac{5}{8}$ "	10 Gallons	10 Million	1 Cubic Feet	1 Million

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

FLOW CHARACTERISTICS

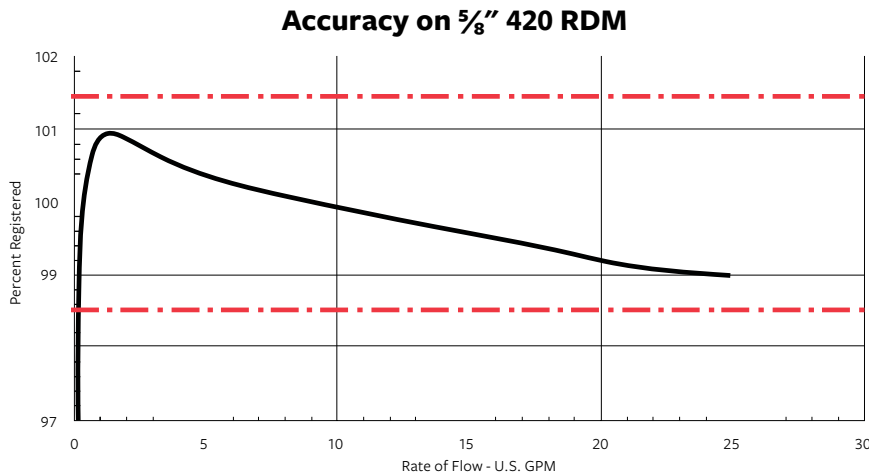
METER SIZE	TYPICAL LOW FLOW (95% MINIMUM)	TYPICAL OPERATING RANGE (100% ± 1.5%)	MAXIMUM CONTINUOUS OPERATION
$\frac{5}{8}$ "	$\frac{1}{8}$ GPM	$\frac{1}{2}$ to 20 GPM	15 GPM

HEAD LOSS



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

ACCURACY



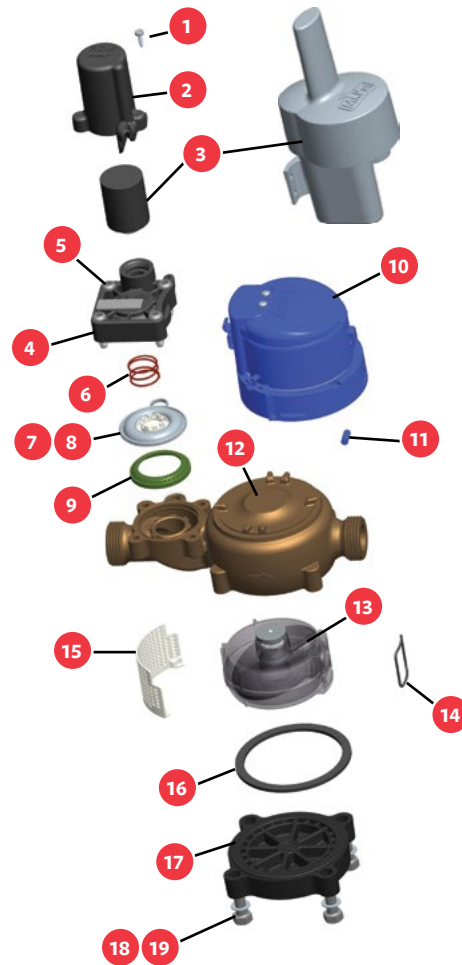
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MODEL 420 RDM BRONZE METER ASSEMBLY COMPONENTS

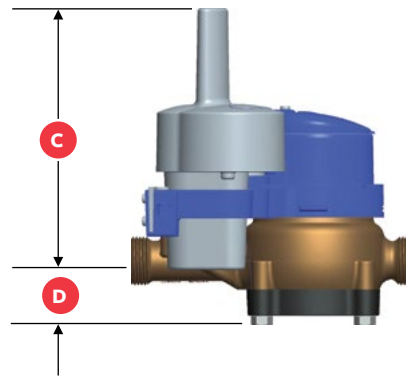
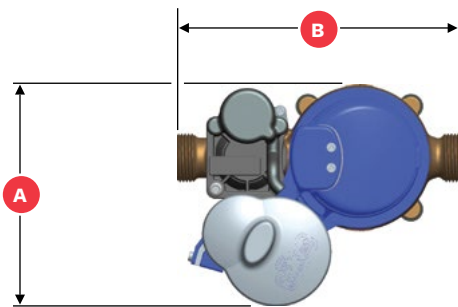
ITEM	PART #	DESCRIPTION	QTY
1	BKPLTSCREW	#6 x $\frac{1}{2}$ " Self Tapping Tri-Wing Head SS	1
2	C6680	Solenoid Tamper Cover	1
3	MSW-RDM-XX	Mi.Node Radio with Solenoid	1
4	C6679A	Model 420 RDM Valve Cover with Orifice	1
5	98411	$\frac{1}{4}$ -20 x 1" BHCS SS	4
6	A13099	Model 420 RDM Valve Spring SS	1
7	B8676	Model 420 RDM Support Ring	1
8	B8676KIT	Diaphragm Replacement Kit (Parts 6, 7, & 9)	-
9	B8684	Model 420 RDM Support Ring	1
10	D36991XX	Model 420 Translator Register SG	1
	D36992XX	Model 420 Translator Register CF	
	D36993XX	Model 420 Translator Register CM	
11	A12658	Register Locking Pin	1
12	D3688SI	$\frac{5}{8}$ " x $\frac{3}{4}$ " Model 420 RDM Main Case	1
	D2688-1 SI	$\frac{5}{8}$ " x $\frac{1}{2}$ " Model 420 RDM Main Case	
13	D3635PO	Model 420 Chamber Assembly	1
14	A13120	Model 420 Chamber O-Ring	1
15	C6681	Model 420 Bronze Strainer Retainer	1
16	B8664	Model 420 Bronze Gasket	1
17	C6682	Model 420 Plastic Bottom Plate	1
18	90010	$\frac{5}{16}$ -18 x 1 $\frac{1}{8}$ " Hex Bolt SS	4
19	90018	$\frac{5}{16}$ Flat Washer SS	4



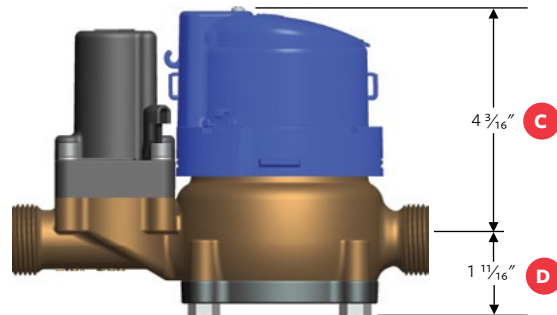
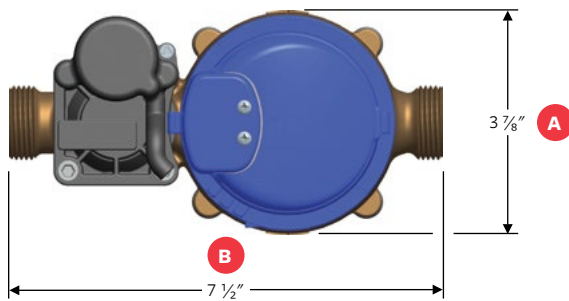
DIMENSIONS, WEIGHTS AND PARTS

METER SIZE	5/8"	
MODEL	RDM INTEGRAL	RDM REMOTE
DIMENSION		
A	5.875"	3.875"
B	7.5"	7.5"
C	6.6875"	4.1875"
D	1.6875"	1.6875"
Weight	5.0	5.0

420 RDM WITH INTEGRAL MI.NODE



420 RDM WITH REMOTE MI.NODE



Approximate Weight: 5 lbs.

For more information about Mueller or to view our full line of water products, please visit muellersystems.com or call Mueller customer service at 1.800.423.1323.

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