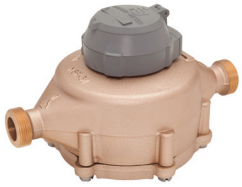
Recordall® Disc Meters

Lead-Free Bronze Alloy, Sizes 5/8, 5/8 x 3/4, 3/4 & 1 inch
NSF/ANSI Standards 61 and 372 Certified

Model 25—5/8 in., 5/8 × 3/4 in.

Model 35—3/4 in.

Model 55—1 in.



Model 70—1 in.

DESCRIPTION

The Recordall Disc Series meters meet or exceed the most recent revision of AWWA Standard C700 and are available in a lead-free bronze alloy. The meters comply with the lead-free provisions of the Safe Drinking Water Act, are certified to NSF/ANSI Standards 61 and 372 (Trade Designations: M25-LL, M35-LL, M55-LL, M70-LL) and carry the NSF-61 mark on the housing. All components of the lead-free bronze alloy meter (housing, measuring element, seals, and so on) comprise the certified system.

Applications: For use in measurement of potable cold water in residential, commercial and industrial services where flow is in one direction only.

Operation: Water flows through the meter's strainer and into the measuring chamber where it causes the disc to nutate. The disc, which moves freely, nutates on its own ball, guided by a thrust roller. A drive magnet transmits the motion of the disc to a follower magnet located within the permanently sealed register. The follower magnet is connected to the register gear train. The gear train reduces the disc nutations into volume totalization units displayed on the register or encoder face.

Operating Performance: The Recordall Disc Series meters meet or exceed registration accuracy for the low flow rates (95%), normal operating flow rates (100 ± 1.5%), and maximum continuous operation flow rates as specifically stated in AWWA Standard C700.

Construction: Recordall Disc meter construction, which complies with ANSI/AWWA standard C700, consists of three basic components: meter housing, measuring chamber and permanently sealed register or encoder. The meter is available in a lead-free bronze alloy with externally-threaded spuds. A corrosion-resistant engineered polymer material is used for the measuring chamber.

Magnetic Drive: Direct magnetic drive, through the use of high-strength magnets, provides positive, reliable and dependable register coupling for straight-reading or AMR/AMI meter reading options.

Tamper-Proof Features: Unauthorized removal of the register or encoder is inhibited by the option of a tamper detection seal wire screw, TORX® tamper-resistant seal screw or the proprietary tamper-resistant keyed seal screw. Each can be installed at the meter site or at the factory.

Maintenance: Badger Meter Recordall Disc Series meters are designed and manufactured to provide long-term service with minimal maintenance. When maintenance is required, it can be performed easily either at the meter installation or at any other convenient location.

To simplify maintenance, the register, measuring chamber, and strainer can be replaced without removing the meter housing from the installation. No change gears are required for accuracy calibration. Interchangeability of parts among like-sized meters and meter models also minimizes spare parts inventory investment. The built-in strainer has an effective straining area of twice the inlet size.

Connections: Tailpieces/Unions for installations of meters on various pipe types and sizes, including misaligned pipes, are available as an option.

Meter Spud and Connection Sizes

Model	Size Designation (in.)	×	"L" Laying Length (in.)	"B" Bore Dia. (in.)	Coupling Nut and Spud Thread (in.)	Tailpiece Pipe Thread (NPT) (in.)
25	5/8	×	7-1/2	5/8	3/4 (5/8)	1/2
	5/8 x 3/4	×	7-1/2	5/8, 3/4	1 (3/4)	3/4
35	3/4	×	7-1/2	3/4	1 (3/4)	3/4
	3/4	×	9	3/4	1 (3/4)	3/4
	3/4 x 1	×	9	3/4	1-1/4 (1)	1
55	1	×	10-3/4	1	1-1/4 (1)	1
70	1	×	10-3/4	1	1-1/4 (1)	1

Product Data Sheet

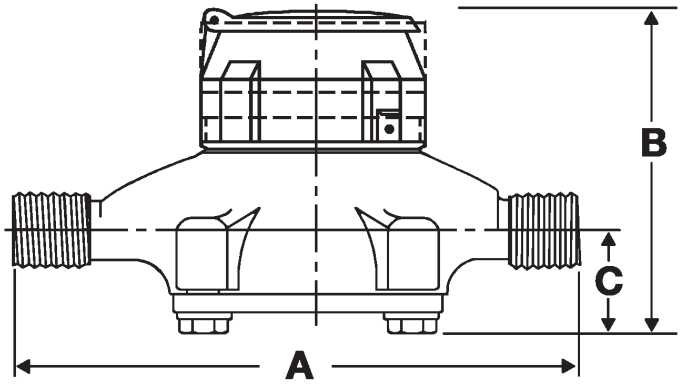
SPECIFICATIONS

	Model 25 (5/8 in. & 5/8 × 3/4 in.)	**Model 35 (3/4 in.)**	**Model 55 (1 in.)**	**Model 70 (1 in.)**
Typical Operating Range (100% ± 1.5%)	0.5…25 gpm (0.11…5.7 m^3/hr)	0.75…35 gpm (0.17…7.9 m^3/hr)	1…55 gpm (0.23…12.5 m^3/hr)	1.25…70 gpm (0.28…16 m^3/hr)
Low Flow	0.25 gpm (0.057 m^3/hr) Min. 98.5%	0.375 gpm (0.085 m^3/hr) Min. 97%	0.5 gpm (0.11 m^3/hr) Min. 95%	0.75 gpm (0.17 m^3/hr) Min. 95%
Maximum Continuous Operation	15 gpm (3.4 m^3/hr)	25 gpm (5.7 m^3/hr)	40 gpm (9.1 m^3/hr)	50 gpm (11.3 m^3/hr)
Pressure Loss at Maximum Continuous Operation	**5/8 in. size**: 3.5 psi @ 15 gpm (0.24 bar @ 3.4 m^3/hr) **5/8 × 3/4 in. size**: 2.8 psi @ 15 gpm (0.19 bar @ 3.4 m^3/hr)	5 psi @ 25 gpm (0.37 bar @ 5.7 m^3/hr)	3.4 psi @ 40 gpm (0.23 bar @ 9.1 m^3/hr)	6.5 psi @ 50 gpm (0.45 bar @ 11.3 m^3/hr)
Maximum Operating Temperature	80° F (26° C)			
Maximum Operating Pressure	150 psi (10 bar)			
Measuring Element	Nutating disc, positive displacement			
Meter Connections	*Available in NL bronze and engineered polymer to fit spud thread bore diameter sizes:*			
	5/8 in. size: 5/8 in. (DN 15 mm) **5/8 × 3/4 in. size**: 3/4 in. (DN 15 mm)	3/4 in. (DN 20 mm)	1 in. (DN 25 mm)	1 in. (DN 25 mm)

MATERIALS

	Model 25 (5/8 in. & 5/8 × 3/4 in.)	**Model 35 (3/4 in.)**	**Model 55 (1 in.)**	**Model 70 (1 in.)**
Meter Housing	Lead-free bronze alloy			
Housing Bottom Plates	Lead-free bronze alloy, cast iron, engineered polymer		Cast iron, lead-free bronze alloy	
Measuring Chamber	Engineered polymer			
Disc	Engineered polymer			
Trim	Stainless steel			
Strainer	Engineered polymer			
Disc Spindle	Stainless steel	Stainless steel	Engineered polymer	Stainless steel
Magnet	Ceramic	Ceramic	Polymer bonded	Ceramic
Magnet Spindle	Stainless steel	Stainless steel	Engineered polymer	Stainless steel
Register Lid and Shroud	Engineered polymer, bronze			

DIMENSIONS



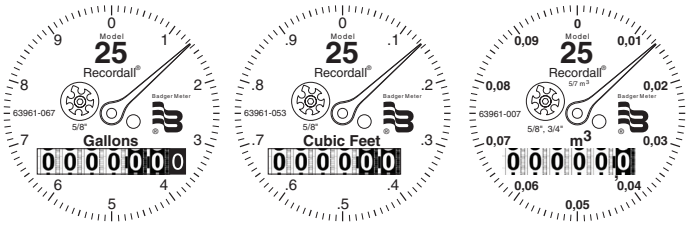
Meter Size	Model	A Laying Length	B Height Reg.	C Centerline Base	Width	Approx. Shipping Weight
5/8 in. (15 mm)	25	7-1/2 in. (190 mm)	4-15/16 in. (125 mm)	1-11/16 in. (42 mm)	4-1/4 in. (108 mm)	4-1/2 lb (2 kg)
5/8 in. × 3/4 in. (15 mm)		7-1/2 in. (190 mm)	4-15/16 in. (125 mm)	1-11/16 in. (42 mm)	4-1/4 in. (108 mm)	4-1/2 lb (2 kg)
3/4 in. (20 mm)	35	7-1/2 in. (190 mm)	5-1/4 in. (133 mm)	1-5/8 in. (41 mm)	5 in. (127 mm)	5-1/2 lb (2.5 kg)
3/4 in. (20 mm)		9 in. (229 mm)	5-1/4 in. (133 mm)	1-5/8 in. (41 mm)	5 in. (127 mm)	5-3/4 lb (2.6 kg)
3/4 in. × 1 in. (20 mm)		9 in. (229 mm)	5-1/4 in. (133 mm)	1-5/8 in. (41 mm)	5 in. (127 mm)	6 lb (2.7 kg)
1 in. (25 mm)	55	10-3/4 in. (273 mm)	6 in. (152 mm)	2-1/32 in. (52 mm)	6-1/4 in. (159 mm)	8-3/4 lb (3.9 kg)
1 in. (25 mm)	70	10-3/4 in. (273 mm)	6-1/2 in. (165 mm)	2-5/16 in. (59 mm)	7-3/4 in. (197 mm)	11-1/2 lb (5.2 kg)

REGISTERS / ENCODERS

Standard—Sweep-Hand Registration

The standard register is a straight-reading, permanently sealed magnetic drive register. Dirt, moisture, tampering and lens fogging problems are eliminated. The register has a six-odometer wheel totalization display, 360° test circle with center sweep hand, and flow finder to detect leaks. Register gearing is made of self-lubricating engineered polymer, which minimizes friction and provides long life. The multi-position register simplifies meter installation and reading. The register capacity is 10,000,000 gallons (1,000,000 ft³, 100,000 m³).

A Model 25 register is used in the following example:



Model	Gallon	Cubic Feet	Cubic Meter
25 (5/8 in.)	10	1	0.1/0.01
25 (5/8 × 3/4 in.)	10	1	0.1/0.01
35	10	1	0.1
55	10	1	0.1
70	10	1	0.1

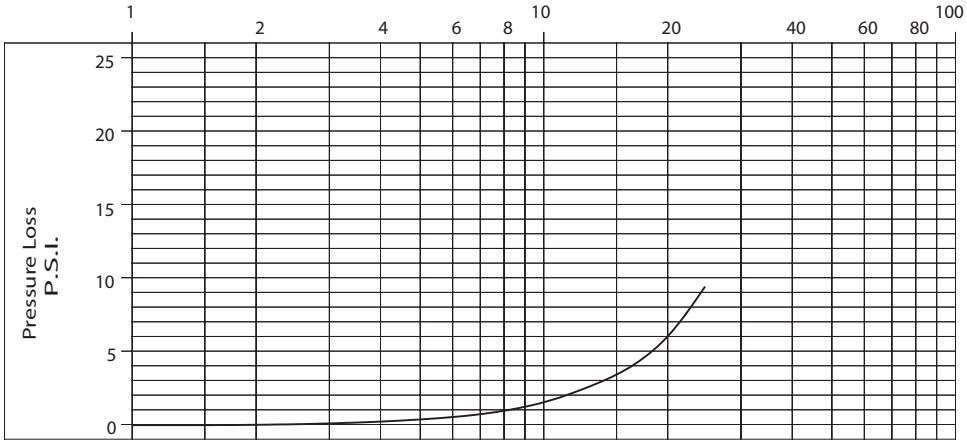
Optional—Encoders for AMR/AMI Reading Solutions

AMR/AMI solutions are available for all Recordall Disc Series meters. All reading options can be removed from the meter without disrupting water service. Badger Meter encoders provide years of reliable, accurate readings for a variety of applications and are also available pre-wired to Badger Meter approved AMR/AMI solutions. See details at ***www.badgermeter.com***.

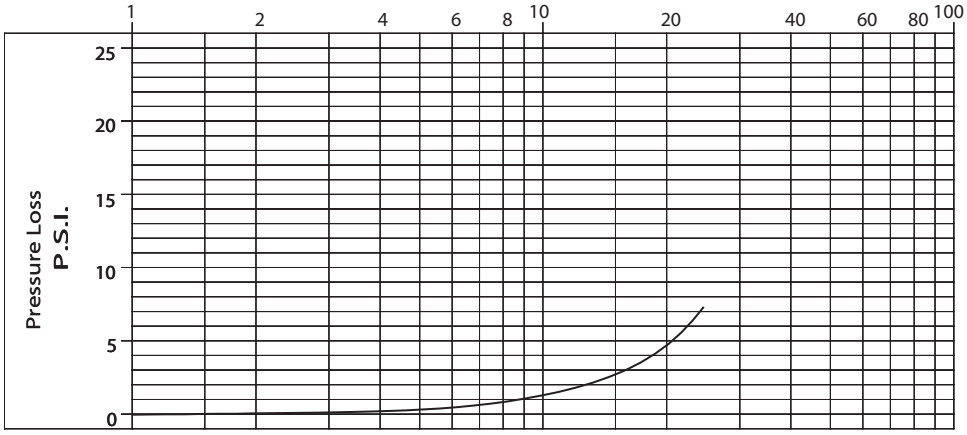
PRESSURE LOSS CHARTS

Rate of Flow in Gallons per Minute

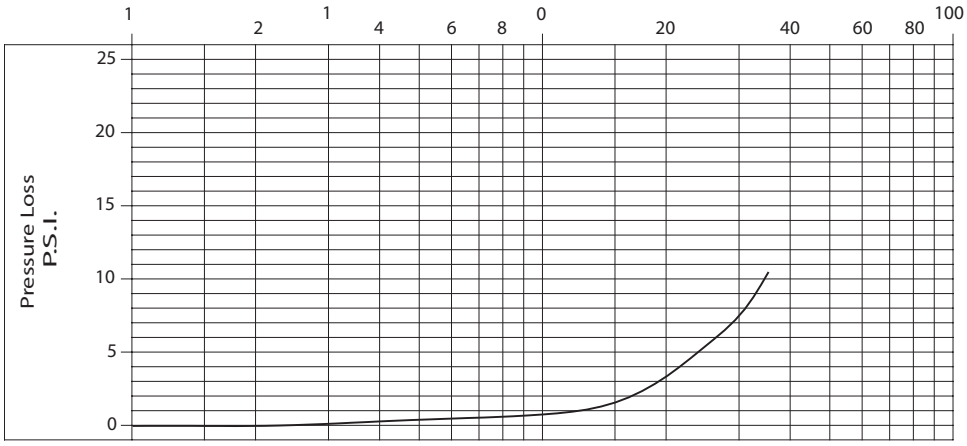
Model 25 5/8 in.



Model 25 5/8 × 3/4 in.



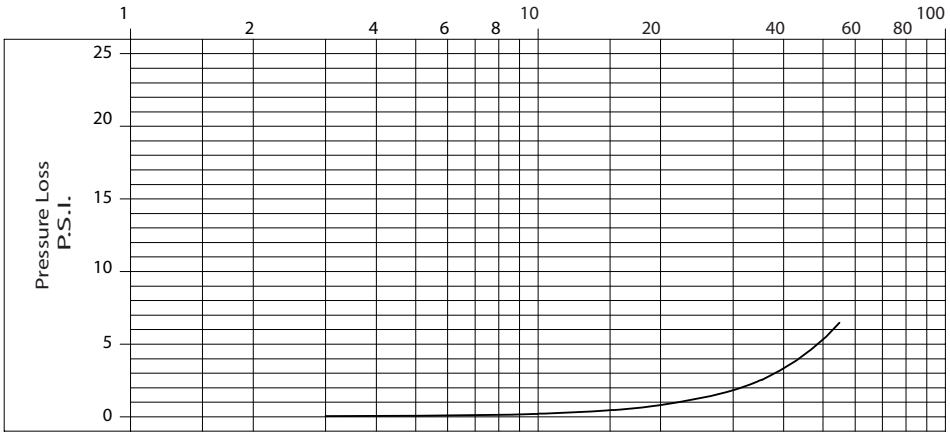
Model 35 3/4 in.



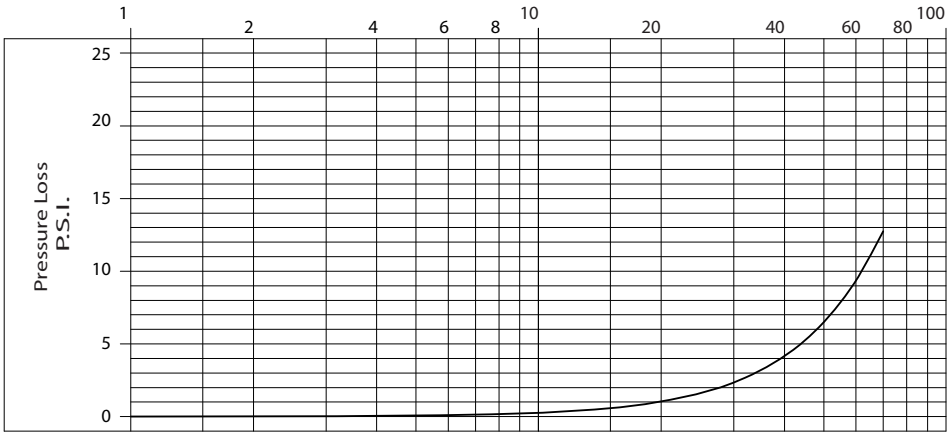
PRESSURE LOSS CHARTS (CONTINUED)

Rate of Flow in Gallons per Minute

Model 55 1 in.

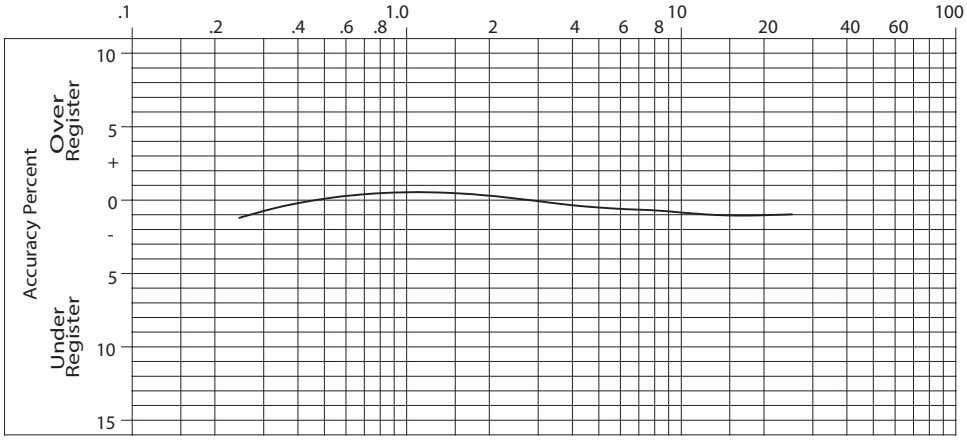


Model 70 1 in.

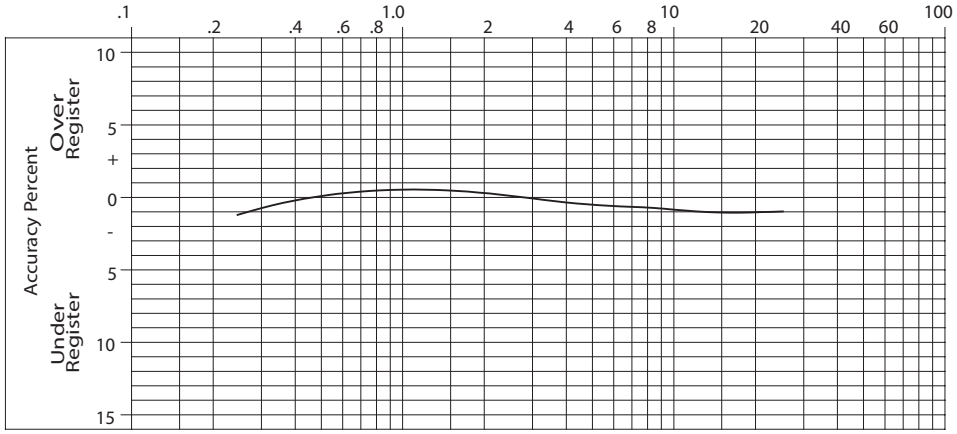


ACCURACY CHARTS

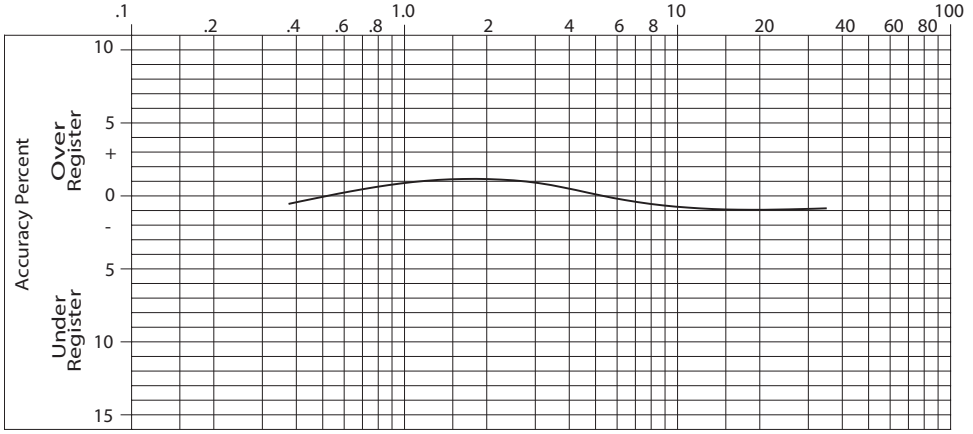
Model 25 5/8 in.



Model 25 5/8 × 3/4 in.

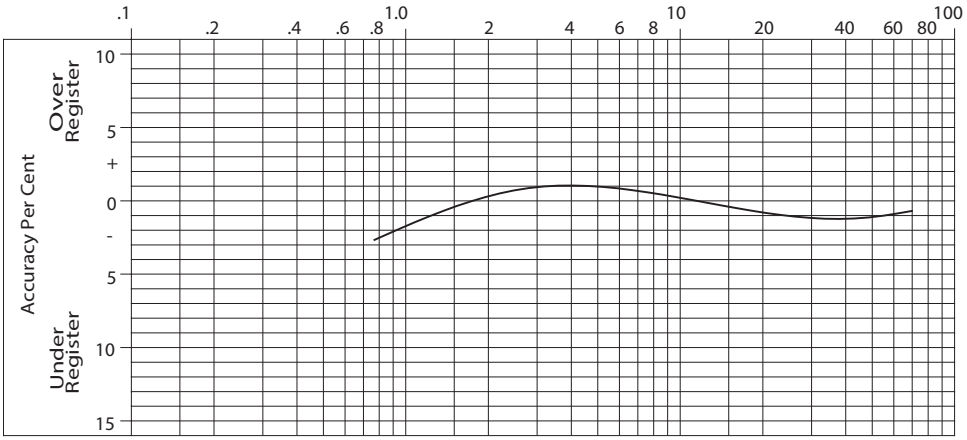


Model 35 3/4 in.

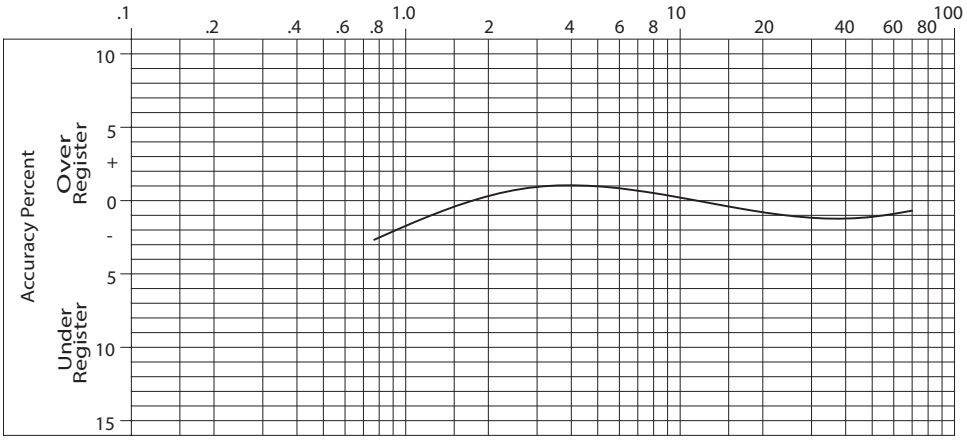


ACCURACY CHARTS (CONTINUED)

Model 55 1 in.



Model 70 1 in.



Making Water Visible®

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