

Model MVR

Mueller SYSTEMS

Magnetic Drive Vertical Turbine Meters

Sizes 3/4"x1/2", 3/4", 3/4"x1", 1", 1-1/2", 2", 3", 4" and 6"

Features

APPLICATIONS: Measurement of water for residential, commercial, industrial and residential fire applications, where sensitivity to low flow is also important. Hersey® MVR meters are among the most sensitive vertical turbine meters available and may be used in place of compound meters in some applications. The compact design and integral strainer (separate external strainer is not needed) of Model MVR meters facilitate installation in tight spaces. They are ideal where flexibility is needed to meet wider flow ranges, where water temperatures are elevated between 80°F and 130°F, or where sand particles or other small debris may be encountered. May be installed vertically or horizontally for greater installation flexibility.

CONFORMANCE TO STANDARDS: Hersey Model MVR Water Meters comply with ANSI/AWWA Standard C701 Class I. Each meter is tested to ensure compliance. EnviroBrass® II options conform to the NSF 61 Standard.

CONSTRUCTION: Hersey Model MVR Water Meters consist of three basic parts: maincase; rotor assembly; and a permanently sealed register. Maincases are made of bronze for long life. Rotor assemblies are thermoplastic, which is dimensionally stable and will not corrode. Retro Thrust rotor design extends the life of the meter by dividing wear between two points: during low flow the tungsten carbide thrust bearing floats against a sapphire bearing surface; during high flow the stainless steel shaft gently contacts a second sapphire bearing. During medium flow, the rotor floats between the thrust bearings without contact. Optional test ports are available on all sizes 1-1/2" and larger. The measuring chamber is protected by an internal strainer. No external strainer is required.

REGISTER: Permanently sealed register has a unique seal and heat-treated glass to eliminate dirt, moisture infiltration and lens fogging. The totalizing register has a straight-reading odometer type display, a 360° test circle with center sweep hand and a low flow (leak) detector.

All Hersey Meter models have electronic meter reading systems available for increased reading efficiency (see Meter Reading Systems.)

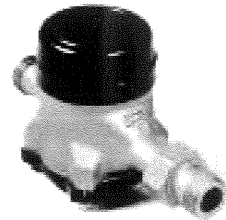
OPERATION: Water flows through the integral strainer and into the vertical turbine assembly. There the direction of the water flow is directed by the hub into the rotor at the precise angle necessary for accurate measurement over the full range of flow rates. No straight pipe requirements apply before or after the meter. The turbine turns freely and rotates in direct proportion to the volume of water passing through the meter. The Model MVR turbine operates more quietly than conventional disc or piston meters.

MAINTENANCE: The Hersey Model MVR Water Meters are designed and manufactured to provide long service life. The register on all sizes, and meter interior and strainer on sizes 3" and larger, can be replaced without removing the meter from the line. Modular design and economical internal parts allow for inexpensive, speedy rebuilds. Optional built-in test ports make field testing easy and convenient.

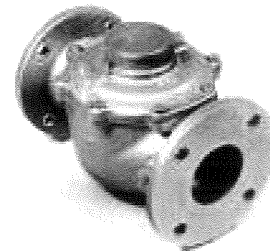
CONNECTIONS: Available with external (N.P.S.M.) straight pipe threads (ANSI B1.20.1) on 3/4" and 1" sizes; integral two-bolt oval flanges or internal (NPT) pipe threads (ANSI B1.20.1) on 1-1/2" and 2" sizes. ANSI class 150 flanges on 3" through 6" sizes (class 125 cast iron or class 150 bronze companion flanges available on request).



MVR 30



MVR 30 with adapter



MVR 350

Model MVR

Materials and Specifications

MODEL NUMBER	MVR 30, MVR 30A, MVR 30B, MVR 50, MVR 100, MVR 160, MVR 350, MVR 650, and MVR 1300.
SIZES	3/4"x1/2", 3/4", 3/4"x1", 1", 1-1/2", 2", 3", 4" and 6"
STANDARDS	Manufactured and tested to meet or exceed all applicable parts of ANSI/AWWA C701 Class I Standard.
SERVICE	Cold water measurement with flow in only one direction.
OPERATING FLOW RANGE	See Chart on following page
ACCURACY	See Chart on following page
PRESSURE LOSS	See Chart on following page
MAXIMUM WORKING PRESSURE	150 PSI
TEMPERATURE RANGE	33°F to 130°F water temperature Hot water up to 180° available upon request.
MEASURING ELEMENT	Rotor
REGISTER TYPE	Straight reading, permanently sealed, magnetic drive with low flow indicator. Remote reading units optional.
METER CONNECTIONS	1/2", 3/4" and 1" external (NPSM) straight pipe threads, 1-1/2" size and 2" size available with either two bolt flanged ends or internal thread (NPT) ends same nominal size as size of meter, 3" thru 6" ANSI class 150 flanges.
MATERIALS	Maincase – bronze UNSC84400; 3/4"- 1-1/2" Bottom cover – cast iron ASTM A126 CL. B enamel painted; 2" Bottom cover – bronze UNSC84400; Rotor assembly – thermoplastic; Strainer – thermoplastic std. in 3/4" thru 1-1/2"; or stainless steel (2" – 6"); Casing bolts – stainless steel ANSI B18.
OPTIONS	Meter case – EnviroBrass® II UNSC89520. Stainless steel ring strainer is available on 3/4", 1" and 1-1/2" meters. AMR Reading Systems.

Magnetic Drive Vertical Turbine Meters
 Sizes 3/4"x1/2", 3/4", 3/4"x1", 1", 1-1/2", 2", 3", 4" and 6"

Model MVR

Meter Registration

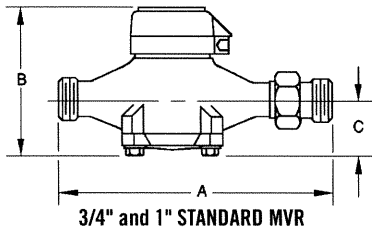
Meter Size	Initial Dial*	Capacity	Initial Dial *	Capacity
3/4"	10 Gallons	10 Million	1 Cubic Foot	1 Million
1"	10 Gallons	10 Million	1 Cubic Foot	1 Million
1-1/2"	100 Gallons	100 Million	10 Cubic Feet	10 Million
2"	100 Gallons	100 Million	10 Cubic Feet	10 Million
3"	100 Gallons	100 Million	10 Cubic Feet	10 Million
4"	100 Gallons	100 Million	10 Cubic Feet	10 Million
6"	1000 Gal	1 Billion	100 Cubic Ft	100 Mill.

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

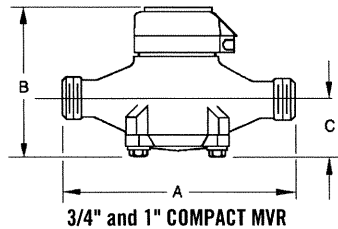
Flow Characteristics

Meter Size	Typical Low Flow (95% Min.)	Typical Operating Range (100% ± 2%)	Maximum Continuous Operation	Maximum Intermittent Flow
3/4"	1/2 GPM	1 to 30 GPM	25 GPM	35 GPM
1"	3/4 GPM	1-1/2 to 50 GPM	35 GPM	55 GPM
1-1/2"	1-1/2 GPM	2 to 100 GPM	70 GPM	110 GPM
2"	2 GPM	3 to 160 GPM	115 GPM	175 GPM
3"	2-1/2 GPM	4 to 350 GPM	240 GPM	390 GPM
4"	3-1/2 GPM	5 to 650 GPM	450 GPM	715 GPM
6"	5 GPM	15 to 1300 GPM	910 GPM	1430 GPM

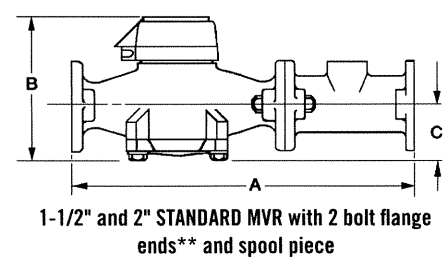
Dimensions and Weights



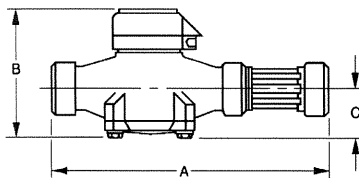
3/4" and 1" STANDARD MVR



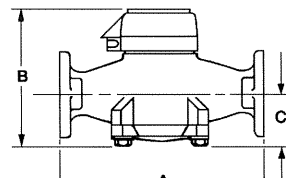
3/4" and 1" COMPACT MVR



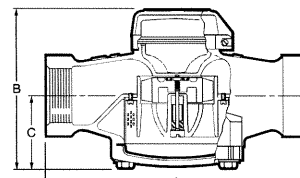
1-1/2" and 2" STANDARD MVR with 2 bolt flange ends** and spool piece



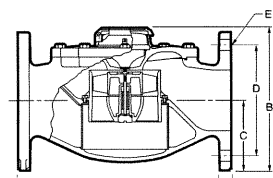
1-1/2" and 2" STANDARD MVR with Internal NPT ends



1-1/2" and 2" COMPACT MVR with integral 2 bolt flange ends**



1-1/2" and 2" COMPACT MVR with Internal NPT ends



3", 4" and 6" MVR

Meter Size	3/4"x1/2"	3/4"	3/4"x1"	1"	1-1/2"	2"	1-1/2"	2"	3"	4"	6"
Ends	Threaded (screwed)						Flanged				
Model	MVR30	MVR30A	MVR30B	MVR50	MVR100	MVR160	MVR100	MVR160	MVR350	MVR650	MVR1300
Dimensions											
A	9"	9"	9"	10-3/4"	12-5/8"	15-1/4"	13"	17"	12"	14"	18"
AA*	7-1/2"	7-1/2"	7-1/2"	9"	9"	10-1/2"	9"	10"	-	-	-
B	5"	5"	5"	5-1/2"	5-3/4"	6-1/4"	5-3/4"	6-1/4"	8-7/16"	9-3/8"	12-9/16"
C	1-13/16"	1-13/16"	1-13/16"	2-3/8"	2-3/8"	3"	2-3/8"	3"	3-7/8"	4-5/8"	6"
D	N/A	N/A	N/A	N/A	N/A	N/A	4"	4-1/2"	6"	7-1/2"	9-1/2"
E	N/A	N/A	N/A	N/A	N/A	N/A	5/8"	5/8"	3/4"	3/4"	7/8"
F	N/A	N/A	N/A	N/A	N/A	N/A	11/16"	15/16"	5/8"	11/16"	13/16"
Max. width	3-3/4"	3-3/4"	3-3/4"	4-1/4"	4-3/8"	5-3/8"	5-3/8"	5-15/16"	7-7/8"	9-3/4"	12-7/8"
Net weight	6 (5*)	6 (5*)	6 (5*)	8 (7*)	11 (9*)	15 (14*)	12 (9*)	20 (14*)	38	68	140

*Compact length

**1-1/2" and 2" Flanged meters have 2 bolt oval flange pattern.

NOTE: Meter couplings are optional and must be ordered separately. Weights are in pounds and are approximate.

Model MVR



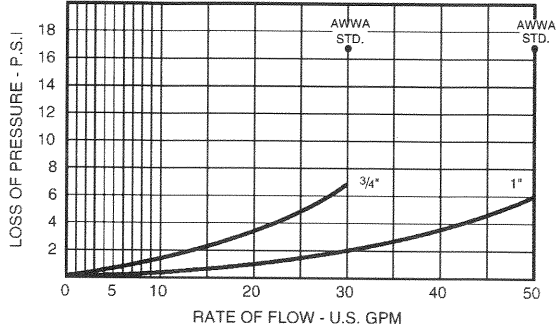
Magnetic Drive Vertical Turbine Meters

Sizes 3/4"x1/2", 3/4", 3/4"x1", 1", 1-1/2", 2", 3", 4" and 6"

Model MVR

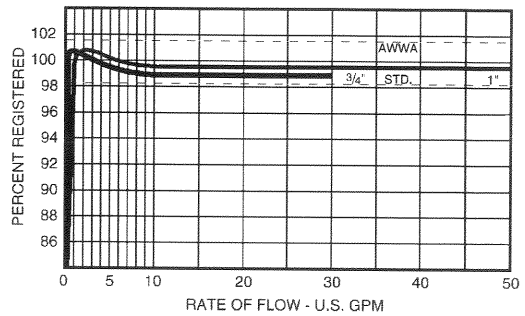
Performance

Head loss – 3/4" and 1"

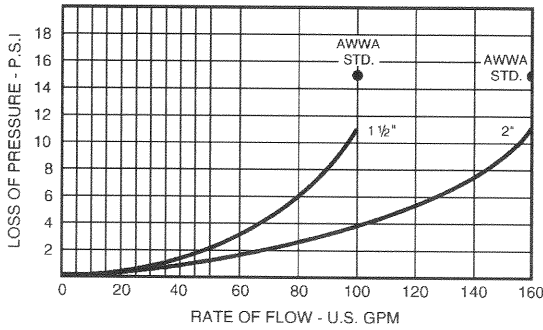


Performance

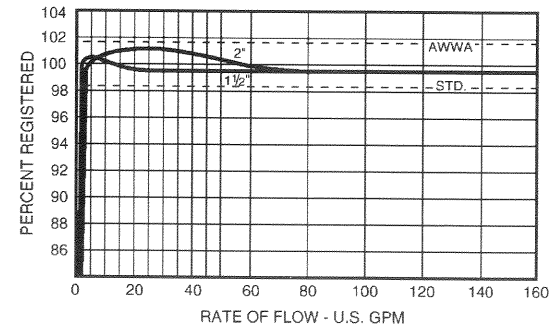
Accuracy – 3/4" and 1"



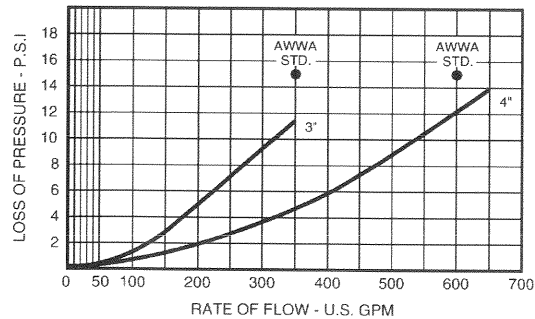
Head loss – 1-1/2" and 2"



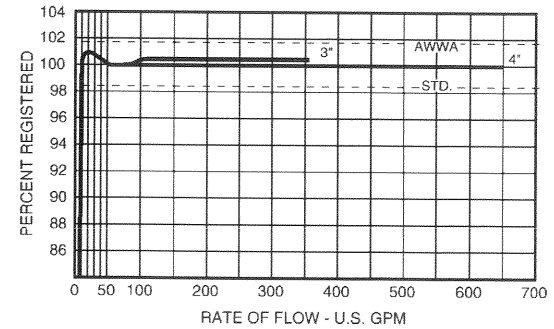
Accuracy – 1-1/2" and 2"



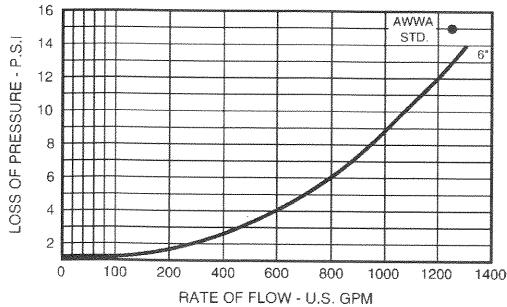
Head loss – 3" and 4"



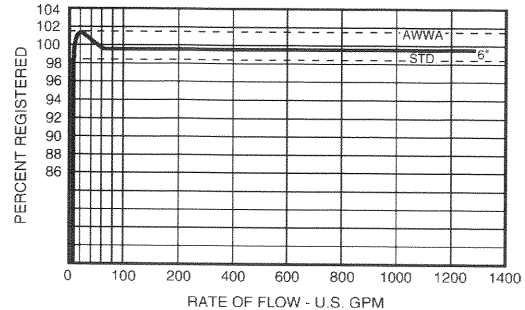
Accuracy – 3" and 4"



Head loss – 6"



Accuracy – 6"



*Performance curves are typical only and not a guarantee of performance.

Ref. No.	Description	Model MVR-30	Model MVR-50	Model MVR-100	Model MVR-160
1	Lid (Plastic)	50377	50377	50377	50377
	Lid (Bronze)	50390	50390	50390	50390
2	Black Clamp Band for Visual Register Blue Clamp Band for Translator Register	50379 B8602	50379 B8602	50379 B8602	50379 B8602
3	Lid Seal Screw	19945	19945	19945	19945
4	Lid Nut	19999	19999	19999	19999
5	Sealed Registers (Specify unit of measurement)	See pages 4.9-4.11			
6	MVR 30 Top Case (7-1/2" length): 1/2" M.I.P. Ends 3/4" M.I.P. Ends 1" M.I.P. Ends	50452 50466 (A) 50476 (B)	- - -	- - -	- - -
6	MVR 50 Top Case (9" length): 1" M.I.P. Ends 1-1/4" M.I.P. Ends	- -	50566 (C) 50576 (D)	- -	- -
6	MVR 100 Top Case (9" length): 1-1/2" F.I.P. Ends 1-1/2" Bronze 2-Bolt Flange Assembly	- -	- -	50776 (E) 50784 (F)	- -
6	MVR 160 Top Case (10-1/2" length): 2" F.I.P. Ends 2" Bronze 2-Bolt Flange Assembly (10" length)	- -	- -	- -	50866 (G) 50884 (H)
7	Rotor	50471	50571	50771	50871
8	Inlet Hub	50468	50568	50768	50867
9	Lower Bushing	50374 (2)	50574 (2)	50574 (2)	-
10	Interior Screw	98394 (4)	98394 (4)	98394 (4)	98394 (4)
11	Strainer (Plastic)	50469	50569	50769	-
12	Strainer (Metal Ring)**	50480	50580	50780	50880
13	Liner	50365	50565	50765	50865
14	Bottom (Bronze)	50363	50563	50763	50863
	Bottom (Cast Iron)	50364	50564	50764	-
15	Case Washer	AS7792 (4)	AS7792 (4)	98378 (4)	98378 (4)
16	Case Bolt	90026 (4)	90026 (4)	90073 (4)	90073 (4)
	Inlet Hub Assembly	-	-	-	50862
	Bushing Spacer	-	-	-	53114
	Bushing	-	-	-	54915 (2)
	Inlet Plug Assembly	50493	50493	50493	53105
	Sapphire Thrust Bearing (Case)	98371	98371	98371	98371
	Complete Interior	50477	50577	50777	50872
	Bearing Adhesive *	-	-	-	-
	Adapters:	95046	-	-	-
	3/4" Adapter	95014	-	-	-
	3/4" Adapter Washer	95011	95063	-	-
	1" Adapter	95064	95064	-	-
	1" Adapter Washer	-	95086	-	-
	1-1/4" Adapter	-	95007	-	-
	1-1/4" Adapter Washer	-	-	95095	-
	1-1/2" Female Adapter	-	-	-	95195
	2" Female Adapter	-	-	-	-

- A: Order 3/4" Adapter 95046 and Adapter Washer 95014 to replace standard 3/4" disc meter, 9" long.
 B: Order 1" Adapter 95011 and Adapter Washer 95064 with Top Case 50476 to replace 3/4" disc meter, 9" long, installed with 1" pipe connections.
 C: Order 1" Adapter 95063 and Adapter Washer 95064 with Top Case 50566 to replace standard 1" disc meter, 10-3/4" long.
 D: Order 1-1/4" Adapter 95086 and Adapter Washer 95007 with Top Case 50576 to replace 1" disc meter, 10-3/4" long, installed with 1-1/4" pipe connection.
 E: Order 1-1/2" Adapter 95095 with Top Case 50776 to replace 1-1/2" female end meter installed with union connections. Assemble to length of 12-5/8".
 F: Order 1-1/2" Bronze Spool Piece 50783 and gasket 95102 with Top Case 50784 to replace standard 1-1/2" disc meter, 13" long.
 G: Order 2" Adapter 95195 with Top Case 50866 to replace standard 2" Female End disc meter, 15-1/4" long.
 H: Order (2) Bronze Spool piece 50883 and gasket 95122 with Top Case 50884 for 17" length 2-90229 Bolt 2-90260 Nut.
 * Purchase locally. Use a cyanoacrylic adhesive, such as Loctite Super Bonder #30-13, Eastman #916, PermaBond or Aron Alpha.

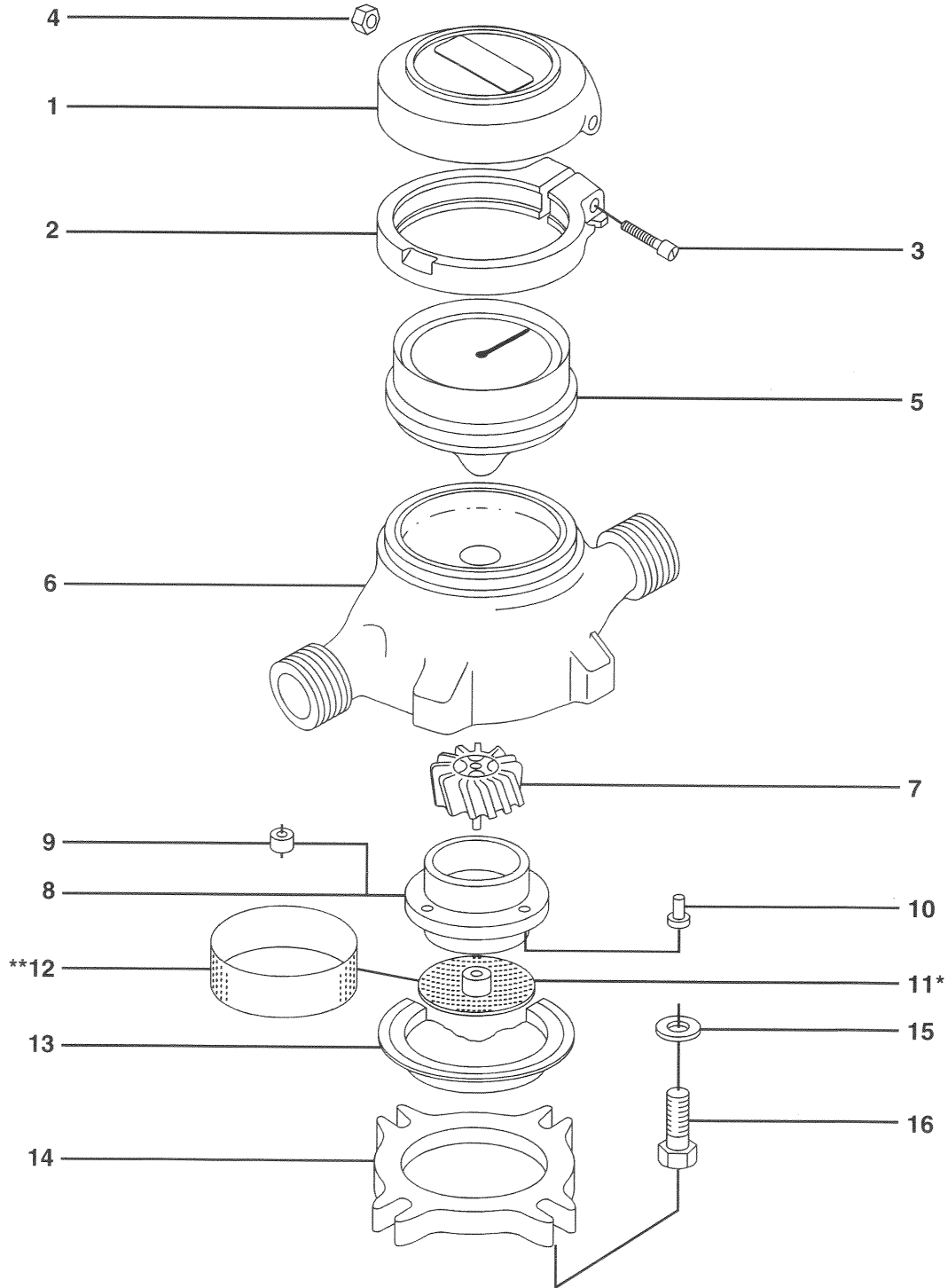
**Standard on MVR 160. Optional on MVR 30, 50 100 in place of standard plastic disc strainer.
 NOTE: If more than one part is required, quantity is noted after part number (in parenthesis).

Model MVR

Models MVR-30, MVR 50, MVR 100 and MVR 160

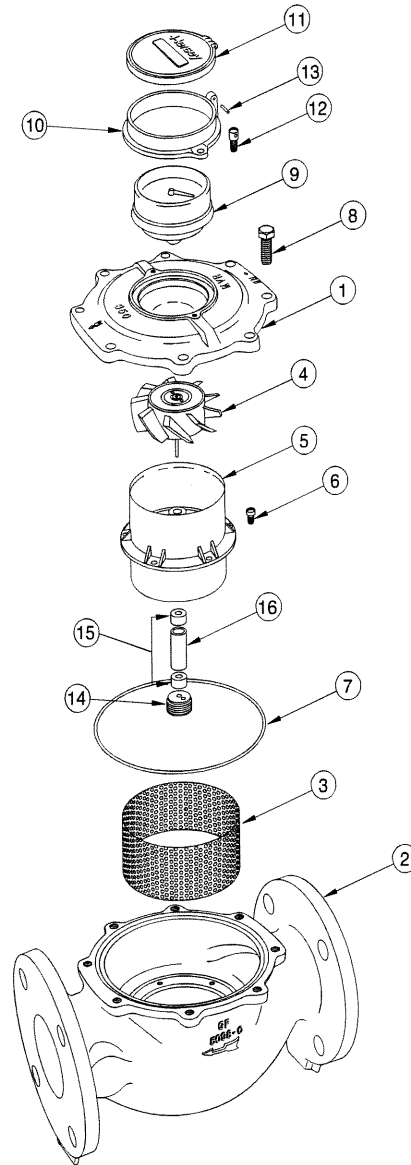
Mueller SYSTEMS

Model MVR



*Disc Strainer – standard on MVR 30, 50, 100.

**Ring Strainer – optional (in place of) disc strainer on MVR 30, 50 100.
Standard on MVR 160.



Ref. No.	Description	Model MVR-350	Model MVR-650	Model MVR-1300
1	Top Case/Thrust Bearing	50981	51181	51381
2	Bottom Case	50982	51182	51382
3	Ring Strainer	50985	51185	51383
4	Rotor Assembly	50984	51184	51384
5	Inlet Hub Assembly	50987	51187	51387
6	Inlet Hub Screws	98395 (6)	98395 (6)	98409 (12)
7	Top Case O-Ring	98361	98362	98408
8	Top Cast Screw	90073 (8)	90073 (10)	90180 (14)
9	Register	See page following pages	See page following pages	See page following pages
10	Register Box (Bronze)	50998	50998	50998
11	Lid (Bronze)	19201	19201	19201
12	Register Box Screw	51005P007 (2)	51005P007 (2)	51005P007 (2)
13	Lid Pin	AS41122	AS41122	AS41122
14	Inlet Plug/Thrust Bearing	50992	50992	-
15	Rotor Bushing	54915 (2)	56915 (2)	51392 (2)
16	Bushing Spacer	54914	51186	51391

NOTE: In order to retrofit translator registers on all 3"-6" MVR meters manufactured prior to 2003 a new top case (1) and top case o-ring (7) is required.

Model MVR

Registers



Model MVR

MVR Model	Cubic Feet			U.S. Gallons		
	Register Part Numbers	Internal Ratio	Relation to other Registers	Register Part Numbers	Internal Ratio	Relation to other Registers
MVR-30	B79821	551.99	-4% (in relation to B79825)	B79813	738.92	-4% (in relation to B79817)
MVR-30	B79822	546.34	-3% (in relation to B79825)	B79814	731.88	-3% (in relation to B79817)
MVR-30	B79823	540.85	-2% (in relation to B79825)	B79815	723.79	-2% (in relation to B79817)
MVR-30	B79824	536.22	-1% (in relation to B79825)	B79816	715.86	-1% (in relation to B79817)
MVR-30	B79825	530.07	-	B79817	709.01	-
MVR-30	B79826	523.96	+1% (in relation to B79825)	B79818	702.61	+1% (in relation to B79817)
MVR-30	B79827	519.6	+2% (in relation to B79825)	B79819	694.85	+2% (in relation to B79817)
MVR-30	B79828	514.2	+3% (in relation to B79825)	B79820	688.55	+3% (in relation to B79817)
MVR-50	B79861	269.44	-4% (in relation to B79865)	B79851	360.58	-3% (in relation to B79854)
MVR-50	B79862	266.44	-3% (in relation to B79865)	B79852	356.41	-2% (in relation to B79854)
MVR-50	B79863	264.51	-2% (in relation to B79865)	B79853	353.17	-1% (in relation to B79854)
MVR-50	B79864	262.07	-1% (in relation to B79865)	B79854	349.42	-
MVR-50	B79865	258.83	-	B79855	345.93	+1% (in relation to B79854)
MVR-50	B79866	256.52	+1% (in relation to B79865)	B79856	342.53	+2% (in relation to B79854)
MVR-50	B79867	254	+2% (in relation to B79865)	B79857	339.04	+3% (in relation to B79854)
MVR-100	B79901	1973.95	-3% (in relation to B79904)	B79891	2664.16	-3% (in relation to B79894)
MVR-100	B79902	1951.68	-2% (in relation to B79904)	B79892	2646.98	-2% (in relation to B79894)
MVR-100	B79903	1935.27	-1% (in relation to B79904)	B79893	2605.61	-1% (in relation to B79894)
MVR-100	B79904	1912.65	-	B79894	2586.61	-
MVR-100	B79905	1901.98	+1% (in relation to B79904)	B79895	2554.55	+1% (in relation to B79894)
MVR-100	B79906	1882.77	+2% (in relation to B79904)	B79896	2526.66	+2% (in relation to B79894)
MVR-100	B79907	1862.97	+3% (in relation to B79904)	B79897	2505.78	+3% (in relation to B79894)
MVR-160	B79941	604.34	-3% (in relation to B79944)	B79931	808.31	-3% (in relation to B79934)
MVR-160	B79942	598.37	-2% (in relation to B79944)	B79932	800.5	-2% (in relation to B79934)
MVR-160	B79943	592.81	-1% (in relation to B79944)	B79933	792.41	-1% (in relation to B79934)
MVR-160	B79944	587.03	-	B79934	784.64	-
MVR-160	B79945	580.58	+1% (in relation to B79944)	B79935	775.87	+1% (in relation to B79934)
MVR-160	B79946	575.56	+2% (in relation to B79944)	B79936	768.47	+2% (in relation to B79934)
MVR-350	B79981	294.32	-2% (in relation to B79983)	B79971	394.09	-2% (in relation to B79973)
MVR-350	B79982	291.49	-1% (in relation to B79983)	B79972	389.61	-1% (in relation to B79973)
MVR-350	B79983	288.55	-	B79973	385.91	-
MVR-350	B79984	285.72	+1% (in relation to B79983)	B79974	382.06	+1% (in relation to B79973)
MVR-350	B79985	283.03	+2% (in relation to B79983)	B79975	378.6	+2% (in relation to B79973)
MVR-350	B79986	280.7	+3% (in relation to B79983)	B79976	374.11	+3% (in relation to B79973)
MVR-650	B80021	182.28	-3% (in relation to B80024)	B80013	239.51	-1% (in relation to B80014)
MVR-650	B80022	180.35	-2% (in relation to B80024)	B80014	236.41	-
MVR-650	B80023	178.86	-1% (in relation to B80024)	B80015	234.58	+1% (in relation to B80014)
MVR-650	B80024	176.9	-	B80016	232.95	+2% (in relation to B80014)
MVR-650	B80025	175.04	+1% (in relation to B80024)	B80017	230.62	+3% (in relation to B80014)
MVR-650	B80026	173.77	+2% (in relation to B80024)	B80018	228.21	+4% (in relation to B80014)
MVR-650	B80027	171.53	+3% (in relation to B80024)	-	-	-
MVR-650	B80028	170.34	+4% (in relation to B80024)	-	-	-
MVR-1300	B80067	413.35	-1% (in relation to B80068)	B80056	551.99	1% (in relation to B80057)
MVR-1300	B80068	409.41	-	B80057	546.34	-
MVR-1300	B80069	405.25	+1% (in relation to B80068)	B80058	540.85	1% (in relation to B80057)

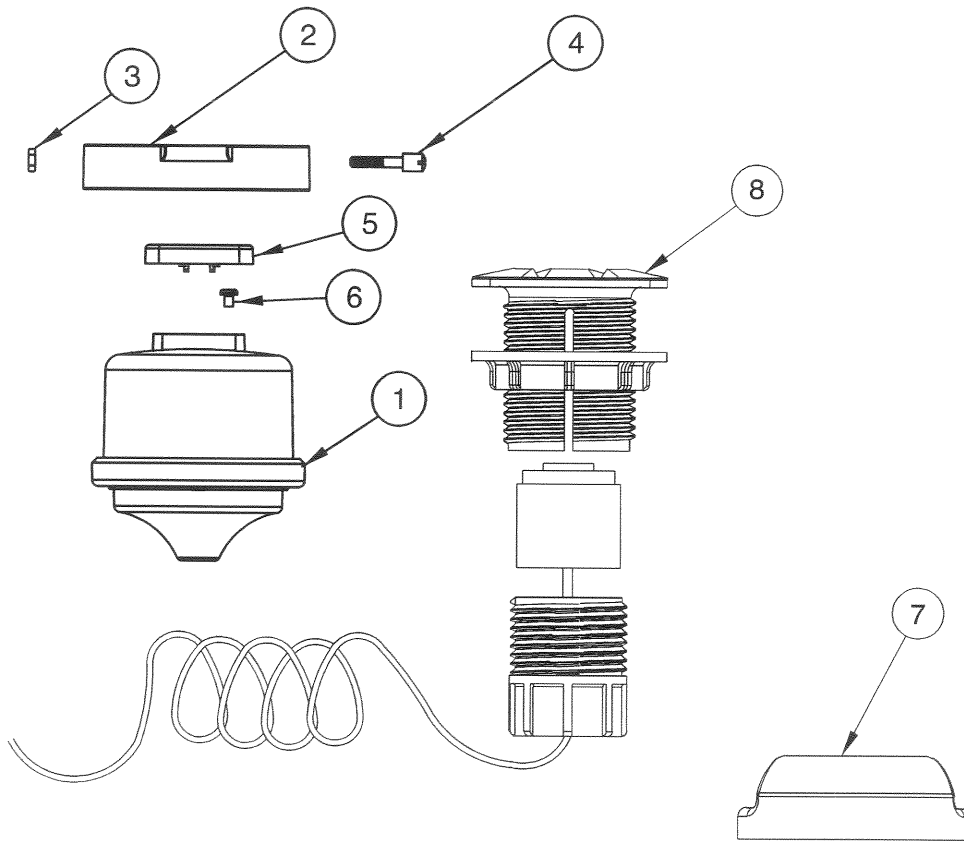
MVR Model	Cubic Feet	US Gallons
	Standard Register	Standard Register
MVR-30	B79821	B79813
MVR-30	B79822	B79814
MVR-30	B79823	B79815
MVR-30	B79824	B79816
MVR-30	B79825	B79817
MVR-30	B79826	B79818
MVR-30	B79827	B79819
MVR-30	B79828	B79820
MVR-50	B79861	B79851
MVR-50	B79862	B79852
MVR-50	B79863	B79853
MVR-50	B79864	B79854
MVR-50	B79865	B79855
MVR-50	B79866	B79856
MVR-50	B79867	B79857
MVR-100	B79901	B79891
MVR-100	B79902	B79892
MVR-100	B79903	B79893
MVR-100	B79904	B79894
MVR-100	B79905	B79895
MVR-100	B79906	B79896
MVR-100	B79907	B79897
MVR-160	B79941	B79931
MVR-160	B79942	B79932
MVR-160	B79943	B79933
MVR-160	B79944	B79934
MVR-160	B79945	B79935
MVR-160	B79946	B79936
MVR-350	B79981	B79971
MVR-350	B79982	B79972
MVR-350	B79983	B79973
MVR-350	B79984	B79974
MVR-350	B79985	B79975
MVR-350	B79986	B79976
MVR-650	B80021	B80013
MVR-650	B80022	B80014
MVR-650	B80023	B80015
MVR-650	B80024	B80016
MVR-650	B80025	B80017
MVR-650	B80026	B80018
MVR-650	B80027	B80019
MVR-650	B80028	B80020
MVR-1300	B80067	B80053
MVR-1300	B80068	B80054
MVR-1300	B80069	B80055

Model MVR

Translator Register Options for MVR 30 to 160

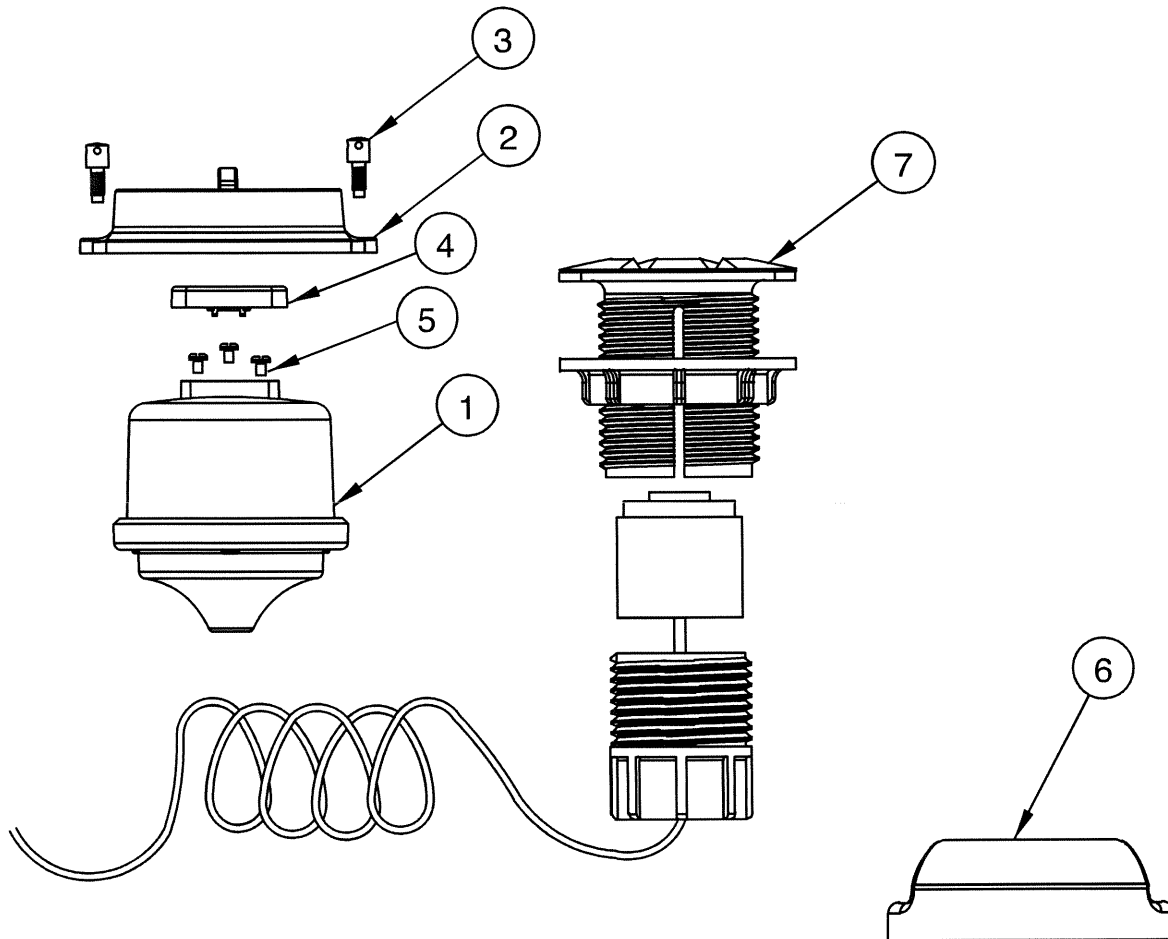
Mueller SYSTEMS

Model MVR



Ref	Description	MVR-30	MVR-50	MVR-100	MVR-160
1	Translator Register* Gallons Cubic Feet Specify Electronic Reading Value 4, 5, or 6 Wheel	D35231xxx D35232xxx	D35241xxx D35242xxx	D35251xxx D35252xxx	D35261xxx D35262xxx
2	Clamp Band (Plastic) Translator Only	B8602	B8602	B8602	B8602
3	Clamp Band Seal Nut	19999	19999	19999	19999
4	Clamp Band Seal Screw	19945	19945	19945	19945
5	Lens Terminal Cover	B8447	B8447	B8447	B8447
6	Terminal Lug Screw	98197 (3)	98197 (3)	98197 (3)	98197 (3)
7	Wall Pad	T1234	T1234	T1234	T1234
8	Pit Pad	T1240	T1240	T1240	T1240
9	TrueRead (not shown)	C6551G	C6551G	C6551G	C6551G
10	1,000' Spool of Wire (not shown)	AS755	AS755	AS755	AS755

*Call Mueller Systems Customer Service for appropriate Translator Register and AMR device part number.



Ref	Description	MVR-350	MVR-650	MVR-1300
1	Translator Register Gallons* Cubic Feet*	D35271xxx D35272xxx	D35281xxx D35282xxx	D35291xxx D35292xxx
2	Register Box (Bronze) Translator Only	C6525	C6525	C6525
3	Register Box Screw	51005P007 (2)	51005P007 (2)	51005P007 (2)
4	Lens Terminal Cover	B8447	B8447	B8447
5	Terminal Lug Screw	98197 (3)	98197 (3)	98197 (3)
6	Wall Pad	T1234	T1234	T1234
7	Pit Pad	T1240	T1240	T1240
8	TrueRead (not shown)	C6551G	C6551G	C6551G
9	1,000' Spool of Wire (not shown)	AS755	AS755	AS755

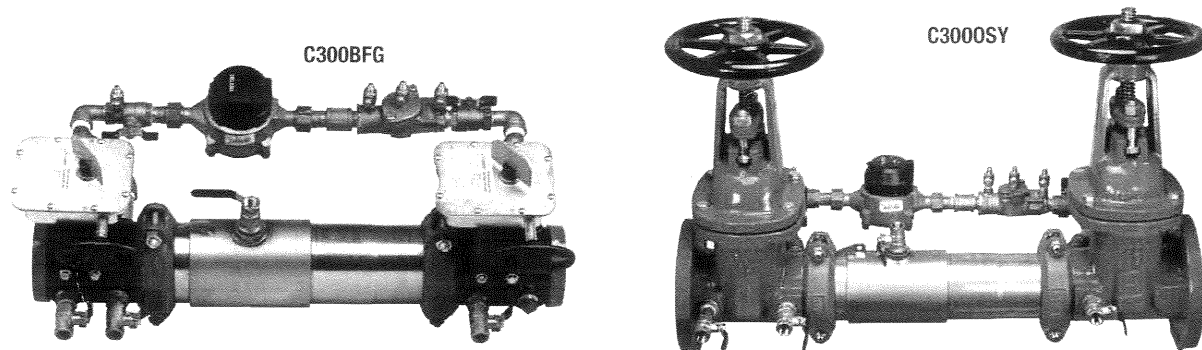
*Call Mueller Systems Customer Service for appropriate Translator Register and AMR device part number.

Colt™ Series C300, C300N



Double Check Detector Assemblies

Sizes: 2½" – 10" (65 – 250mm)



Features

- Extremely Compact Design
- 70% Lighter than Traditional Designs
- 304 (Schedule 40) Stainless Steel Housing & Sleeve
- Groove Fittings Allow Integral Pipeline Adjustment
- Patented Tri-Link Check Provides Lowest Pressure Loss
- Unmatched Ease of Serviceability
- Available with Grooved Butterfly Valve Shutoffs
- May be Used for Horizontal, Vertical or N Pattern Installations
- Replaceable Check Disc Rubber

The Colt C300, C300N Double Check Detector Assemblies are used to prevent backflow of pollutants, that are objectionable but not toxic, from entering the potable water supply system. The Colt C300, C300N may be installed under continuous pressure service and may be subjected to backpressure. The Colt C300, C300N is used primarily on fire line sprinkler systems when it is necessary to monitor unauthorized use of water. For use in non-health hazard applications.

Specifications

The Colt C300, C300N Double Check Detector Assemblies shall consist of two independent Tri-Link Check modules within a single housing, sleeve access port, four test cocks and two drip tight shutoff valves. Tri-Link Check shall be removable and serviceable, without the use of special tools. The housing shall be constructed of 304 (Schedule 40) stainless steel pipe with groove end connections. Tri-Link Checks shall have reversible elastomer discs and in operation shall produce drip tight closure against the reverse flow of liquid caused by backpressure or backsiphonage. The bypass assembly shall consist of a meter, which registers in either gallon or cubic measurement, a double check valve assembly and required test cocks. Assembly shall be a Colt C300, C300N as manufactured by the Ames Company.

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

Ames product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Ames Technical Service. Ames reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Ames products previously or subsequently sold.

Configurations

- Horizontal
- Vertical up
- "N" pattern horizontal

Materials

- Housing & Sleeve: 304 (Schedule 40) Stainless Steel
- Elastomers: EPDM, Silicone and Buna 'N'
- Tri-Link Checks: Noryl®, Stainless Steel
- Check Discs: Reversible Silicone or EPDM
- Test Cocks: Bronze Body Nickel Plated
- Pins & Fasteners: 300 Series Stainless Steel
- Springs: Stainless Steel

Available Models

Suffix:

OSY - UL/FM outside stem and yoke resilient seated gate valves

BFG - UL/FM grooved gear operated butterfly valves with tamper switch

*OSY FxG - Flanged inlet gate connection and grooved outlet gate connection

*OSY GxF - Grooved inlet gate connection and flanged outlet gate connection

*OSY GxG - Grooved inlet gate connection and grooved outlet gate connection

Available with grooved NRS gate valves - consult factory*

Post indicator plate and operating nut available - consult factory*

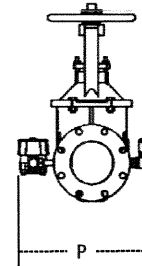
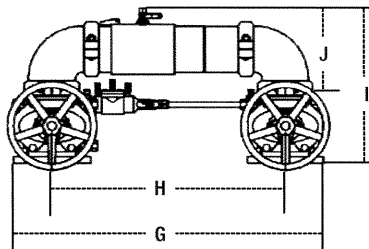
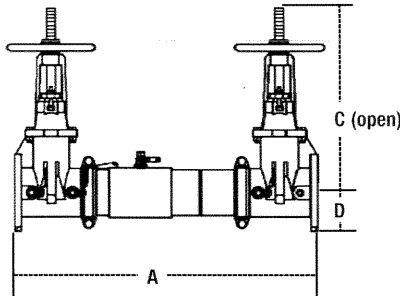
*Consult factory for dimensions

Dimensions — Weights

Pressure — Temperature

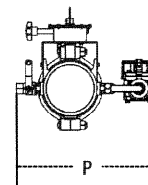
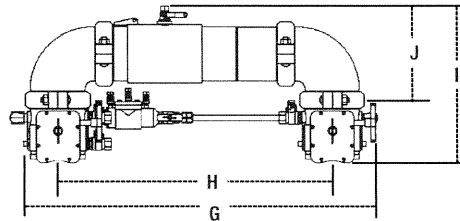
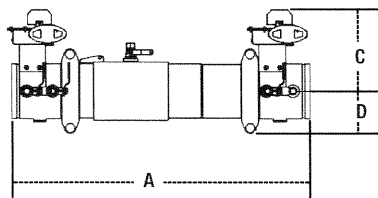
Temperature Range: 33°F – 140°F (0.5°C – 60°C)

Maximum Working Pressure: 175psi (12.1 bar)



C300, C300N

SIZE (DN)		DIMENSIONS										WEIGHT									
		A		C (OSY)		D		G		H		I		J		P		C300		C300N	
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
2½	65	31	787	16¾	416	3½	89	29⅛	738	21½	546	15½	393	8⅜	223	13⅜	335	139	63	147	67
3	80	31⅛	805	18⅞	479	3⅞	94	30¼	768	22¼	565	17⅞	435	9⅞	233	14½	368	159	72	172	78
4	100	33½	851	22¾	578	4	102	33	838	23½	597	18½	470	9⅞	252	15⅞	386	175	79	198	90
6	150	44	1118	30⅞	765	5½	140	44¾	1137	33¾	857	23⅞	589	13⅞	332	19	483	309	140	350	159
8	200	50	1270	37¾	959	6⅞	170	54⅞	1375	40⅞	1032	27⅞	697	15⅞	399	21⅞	538	494	224	569	258
10	250	57½	1461	45¾	1162	8⅞	208	66	1676	50	1270	32½	826	17⅞	440	24	610	795	361	965	438



C300BFG, C300NBFG

SIZE (DN)		DIMENSIONS										WEIGHT									
		A		C		D		G		H		I		J		P		C300BFG		C300NBFG	
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
2½	65	27½	698	8	203	3½	89	29⅞	759	21½	546	14⅞	379	8⅜	223	13	330	70	32	78	35
3	80	28	711	8⅞	211	3⅞	94	30⅞	779	22¼	565	15⅞	392	9⅞	233	13½	343	68	31	81	37
4	100	28¾	730	8⅞	227	3⅞	94	31⅞	811	23½	597	16¼	412	9⅞	252	14	356	75	34	98	44
6	150	37	940	10	254	5	127	43⅞	1097	33¾	857	19⅞	500	13⅞	332	14½	368	131	59	171	78
8	200	43½	1105	12¼	311	6½	165	51⅞	1297	40⅞	1032	23⅞	592	15⅞	399	18⅞	462	275	125	351	159

Approvals



For additional approval information please contact the factory or visit our website at www.amesfirewater.com

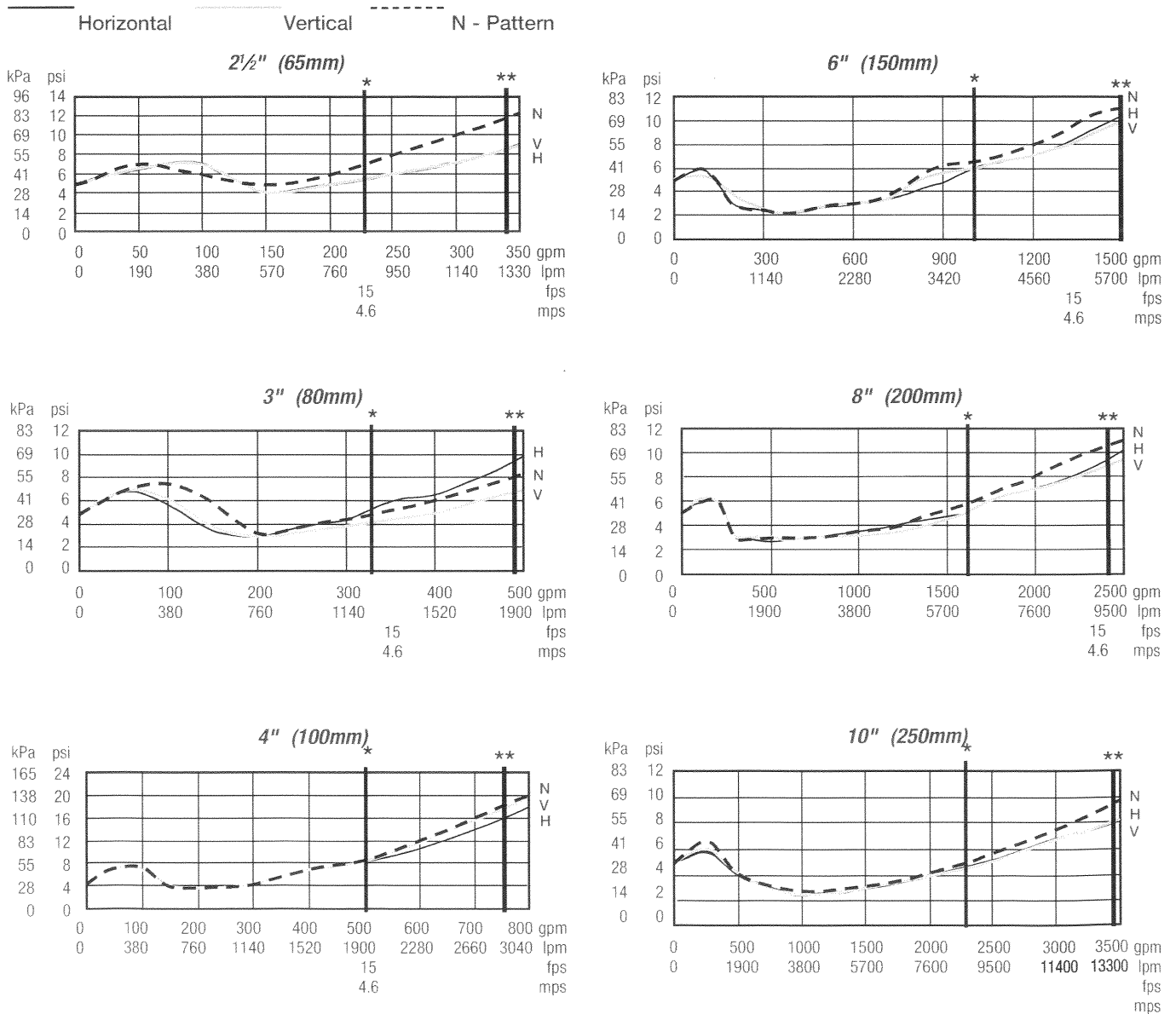
Capacity

UL/FM Certified Flow Characteristics

Flow characteristics collected using butterfly shutoff valves.

See literature S-Colt-200/300 for gate valve flow characteristics

* = Rated Flow ** = UL Tested



IMPORTANT: INQUIRE WITH GOVERNING AUTHORITIES FOR LOCAL INSTALLATION REQUIREMENTS

For additional information, visit our web site at: www.amesfirewater.com



www.amesfirewater.com



A Watts Water Technologies Company

USA: Backflow- Tel: (916) 928-0123 • Fax: (916) 928-9333
Control Valves- Tel: (713) 943-0688 • Fax: (713) 944-9445
Canada: Tel: (905) 332-4090 • Fax: (905) 332-7068

ES-A-C300/C300N 1151

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662 Stainless Steel Tapping Sleeve

4" - 24" Pipe Sizes with Outlets thru 12"

Product Specifications

Gasket and Bridge Plates:
NSF 61, 1/4" thick, gridded Nitrile (Buna-N), compounded to resist water, oil, acids, alkalis, most (aliphatic) hydrocarbon fluids and many chemicals.
Temperature Range: -20°F to +180°F.
The gasket provides 360° pipe coverage with the neck gasket molded in place in the one-piece top half.
The bridge plates are heavy gauge 302 Stainless Steel, recessed and molded into the gasket. This provides a continuous smooth surface to bridge the gap between body halves.

Pusher Ring:
Ductile iron and Flexi-Coat epoxy coating.

Flange:
Carbon steel per A36. Drilling per AWWA C111 Ductile Iron Pressure Fitting. Flexi-Coat, fusion bonded epoxy.

Test Plug:
3/4" bronze with square head.

Studs and Nuts:
5/8" 18-8 Type 304 Stainless Steel with NC threads, epoxy coated. *Nuts are fluoropolymer coated to prevent galling.*

Washers:
Type 304 Stainless Steel and nylon, one of each per bolt.

Body, lugs and neck:
18-8 Type 304 Stainless Steel.

Features:

- NSF 61 listed.
- Easy to install.
- Range helps reduce inventory.
- Meets applicable AWWA C223 Standards.
- Molded-in ring in the gasket to ensure effective sealing.
- Nylon washers provide to improve bolt torque capability.
- Heavy gauge, all-stainless steel body for rugged performance.
- Fully chemically passivated for maximum corrosion protection.
- 3/4" test outlet to allow hydrostatic pressure test before tapping the pipe.
- 360° seal provides maximum support and reinforcement around the pipe in case of pipe break.
- Body drawn out to accept the outlet neck adding to the overall strength of the area under the most stress.
- Reduces inventory by using standard MJ valves to make a tap. No special tapping valve required.

Nominal Pipe Size	Working Pressure	Test Pressure
4"-12"	200 PSI	300 PSI
14"-20"	150 PSI	225 PSI
24"	100 PSI	150 PSI

Product Specifications

SPECIFICATION:

The tapping sleeve body and neck shall be made of heavy 18-8 Type 304 stainless steel.

The flange shall be carbon steel per A36 with drilling per AWWA C111 ductile iron pressure fitting. The flange shall be fusion-bonded Flexi-Coat epoxy coated.

A pusher ring made of ductile iron and fusion bonded Flexi-Coat epoxy coated shall be furnished on the outlet. The top half of the body shall be drawn open to accept the outlet neck.

The studs shall be 5/8" 18-8 type 304 stainless steel with NC threads and fusion-bonded epoxy coated. The nuts shall be 304 stainless steel, fluoropolymer coated to prevent galling. One 304 stainless steel washer and one nylon washer shall be furnished with each bolt.

A 3/4" test outlet and plug shall be provided.

The plug shall be 3/4" bronze with a square head.

The gaskets shall be 1/4" thick and grid-
ded. The top half gasket shall be one-piece with a molded outlet ring to ensure effective sealing. It shall be NSF 61 Nitrile (Buna N) compounded to resist: water, oil acids, alkalis, most (aliphatic) hydrocarbon fluids and many other chemicals. The gasket shall have a temperature range of -20°F to +180°F.

The gasket shall have bridge plates made of heavy 302 stainless steel. The bridge plates shall be recessed and bonded into the gasket.

All welded stainless steel surface areas shall be fully passivated for maximum corrosion protection. The tapping sleeve shall meet applicable AWWA C223 standards and be NSF 61 listed.

The tapping sleeve shall be a Smith-Blair, Inc. style 662 or approved equal.

Approved By
Name:
Title:
Date:

THESE PRODUCT SPECIFICATIONS WERE CORRECT AT TIME OF PUBLICATION.

MATERIAL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

SEE CATALOG BROCHURE CC-620 FOR MORE DETAILS. VISIT SMITH-BLAIR'S WEBSITE AT WWW.SMITH-BLAIR.COM TO DOWNLOAD THE MOST CURRENT INFORMATION.



Ph: 870-773-5127 • Fax: 870-773-5212 • www.smith-blair.com

Toll-Free Numbers: Ph: 800-643-9705 • Fax: 800-648-6792

30 Globe Ave, Texarkana, AR 71854 • PO Box 5337, Texarkana, TX 75505

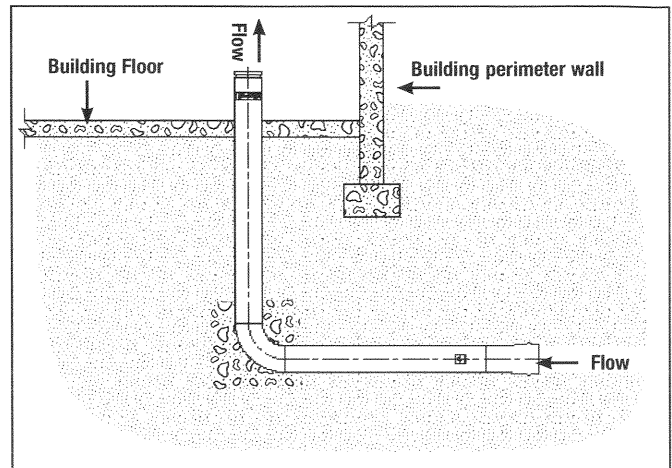


Series IBR

In-Building Risers

Sizes: 4" - 10" (100 - 250mm)

LEAD FREE*



Features

- Cost savings
- Corrosion resistant stainless steel construction, type 304
- Ease of installation and light weight allows one person to position and handle the riser
- Minimal site preparation; joint restraint one-piece construction reduces time and labor; no missing parts, no leaks; easily identifiable for approvals
- Includes Test Cap and Coupler
- UL/FM approved
- Sizes: available in 4" - 10" (100-250mm) with various lengths to meet all local requirements
- Designed to meet NFPA 24-2007 Section 10.6.5
- AWWA C900 Inlet/DIP
- AWWA C606 Outlet

Series IBR In-Building Risers are used to connect the main fire supply to the building overhead fire system. The fitting passes under the foundation without joints and extends up through the floor. Provided with installation tabs, the unit has a CIPS (Cast Iron Pipe Size) coupler for easy connection to the underground supply (AWWA C900 PVC and Ductile Iron Pipe) and industry standard grooved-end connection (AWWA C606) on the building side for easy connection to the overhead fire sprinkler system.

Ames In-Building Risers are precision engineered and manufactured to provide exceptional reliability and reduce installation time & labor costs associated with field assembly. In accordance with NFPA 24-2007, the UL/FM approved In-Building Risers replace numerous fittings, elbows & spools and reduces the possibility of leaks or failure in comparison to traditional installation methods and materials. Factory tested integrity ensures the highest quality installation. The use of stainless steel significantly increases the reliability and life of the riser.

*The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight.

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

Ames product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Ames Technical Service. Ames reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Ames products previously or subsequently sold.

Specifications

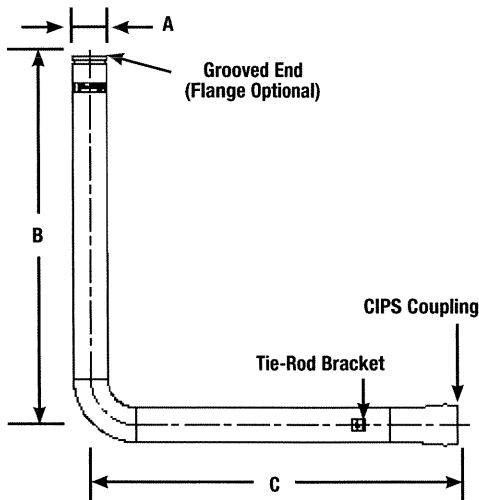
In-Building Riser shall be installed as indicated on the plans. Riser shall be composed of a single extended 90 degree fitting of fabricated 304 stainless steel tubing, maximum working pressure 200psi (14 bar). The fitting shall have a grooved-end connection on the outlet (building) side and a CIPS coupler on the inlet (underground) side. The grooved end shall include a coupler and cap to facilitate testing of the underground piping. The In-Building Riser shall be an Ames Fire & Waterworks Series IBR.

Approvals

Fittings FM class 1920
UL HKQA (4"-10")



Dimensions – Weights



in.		mm		A (OD)		B		C		lbs.	kg
in.	mm	in.	mm	ft.	cm	ft.	cm	ft.	cm		
4	100	4½	114	6	183	6	183	6	183	71	32
6	150	6⅝	168	6	183	6	183	6	183	98	44
8	200	8⅝	219	6	183	6	183	6	183	129	59
10	250	10¾	273	6	183	6	183	6	183	202	92

Consult factory for custom leg dimensions.

Standards

NFPA — Designed to allow the contractor to conform to NFPA 24-2007 Section 10.6.5:

Where a riser is close to building foundations, underground fittings of proper design and type shall be used to avoid pipe joints being located under the foundations.

NFPA 24-2007, 10.1.1, 10.6.7

End Connections

Horizontal End: Mates with Ductile Iron Pipe and AWWA C900 Pipe (PVC Pipe with Ductile Iron Pipe Equivalent OD's)

Utilizes Gasket conforming to UL 157 with "Lock in" gasket configuration

SIZE (DN)		MATING PIPE OD	
in.	mm	in.	mm
4	100	4.8	122
6	150	6.9	175
8	200	9.1	230
10	250	11.1	282

Vertical End:

Meets AWWA C-606 dimensions for roll grooved pipe
Meets AWWA C-207 class D for flanges

Ratings

Meets AWWA C-900 pressure class 200, DR 14 Pipe

Testing

Welds are 100% leak tested at the factory

SIZE		DESIGN PROOF PRESSURE	
in.	mm	psi	bar
4	100	1000	70
6	150	1000	70
8	200	800	56
10	250	800	56

IMPORTANT: Inquire with governing authorities for local installation requirements.



A Watts Water Technologies Company

www.amesfirewater.com



ISO 9001-2008
CERTIFIED

USA: Backflow- Tel: (916) 928-0123 • Fax: (916) 928-9333

Control Valves- Tel: (713) 943-0688 • Fax: (713) 944-9445

Canada: Tel: (905) 332-4090 • Fax: (905) 332-7068



BLUE BRUTE™

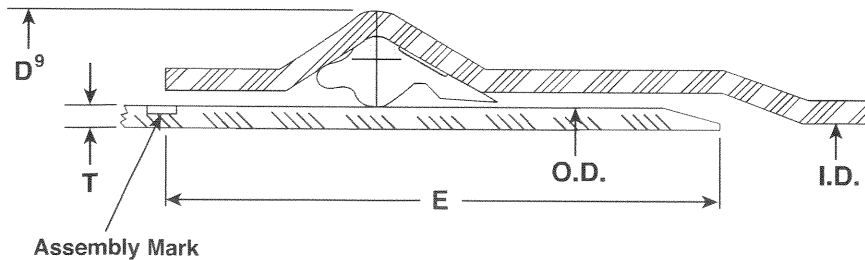
SUBMITTAL AND DATA SHEET

PIPE SIZE (IN)	AVERAGE O.D. (IN)	NOM. I.D. (IN)	MIN. T. (IN)	MIN. E (IN)	APPROX. D ⁹ (IN)	APPROX. WEIGHT (LBS/FT)
PRESSURE CLASS 165 psi (DR 25)						
4	4.80	4.39	0.192	5.25	5.57	1.9
6	6.90	6.31	0.276	6.40	8.00	3.9
8	9.05	8.28	0.362	7.05	10.50	6.7
10	11.10	10.16	0.444	8.20	12.88	10.1
12	13.20	12.08	0.528	8.80	15.31	14.4
PRESSURE CLASS 235 psi (DR 18)*						
4	4.80	4.23	0.267	5.25	5.87	2.6
6	6.90	6.09	0.383	6.40	8.43	5.3
8	9.05	7.98	0.503	7.05	11.06	9.2
10	11.10	9.79	0.617	8.20	13.57	13.9
12	13.20	11.65	0.733	8.80	16.13	19.7
PRESSURE CLASS 305 psi (DR 14)*						
4	4.80	4.07	0.343	5.25	6.17	3.2
6	6.90	5.86	0.493	6.40	8.87	6.7
8	9.05	7.68	0.646	7.05	11.63	11.6
10	11.10	9.42	0.793	8.20	14.27	17.6
12	13.20	11.20	0.943	8.80	16.97	25.1

Consult JM Eagle™ for CSA and other listing availability prior to shipment.

Note: *FM Approvals Pressure Class 150 psi for DR 18 and 200 psi for DR 14.

* Contact your JM eagle™ sales representative for location availability.



I.D. : Inside Diameter
O.D. : Outside Diameter
T. : Wall Thickness
D⁹ : Bell Outside Diameter
E : Distance between Assembly Mark to the end of spigot.

Product Standard: ANSI/AWWA C900
Pipe Compound: ASTM D1784 Cells Class 12454
Gasket: ASTM F477
Integral Bell Joint: ASTM D3139
Certifications: ANSI/NSF Standard 61
UL Standard 1285
Pipe Length: 20 feet laying length
Installation: AWWA C605
JM Eagle™ Installation Guide

JM Eagle™ also manufactures this pipe in green for sewer force main applications and purple, specifically for reclaimed water systems. This pipe is made to the same requirements as our standard products. The only difference is that the pigment used is green or purple. These products will not be marked with UL or NSF listing marks. Additionally, the green pipe will be marked "Forced Sewer" and the purple pipe will be marked: "Reclaimed Water... Do Not Drink."

