Section D: Valves and Accessor	ries	ccesso	Acc	and	lves	Val	D:	Section	9
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Effective Date: 01-01-2025

- D 1 Valves- Resilient Seat/ 2" (FIPT X FIPT)
- D 1.1 Valves AWWA C509/ Resilient Seat/ 2" Thru 12" (MJ X MJ)
- D 1.2 Tap Valves AWWA C509/ Resilient Seat/ 4" Thru 12" (FLG X MJ)
- D 1.3 Valves- Resilient Seat/ 2" Thru 12" (FLG X FLG)
- D 1.4 Valves- Resilient Seat/ 14" Thru 48" (MJ X MJ)
- D 1.5 Valves- Eccentric Plug/ 4" Thru 24" (FLG X FLG)
- D 1.6 Valves- Valves Direct Bury Sewer Force Main Eccentric Plug/ 14" thru 24" (MJ X MJ)
- D 2 Check Valve- Resilient Seat/ Potable Water 2" Thru 30" (FLG X FLG)
- D 3 Swing Check Valves Potable Water 2" Thru 16" (FLG X FLG)
- D 3.1 Swing Check Valves Sanitary Sewer 4" Thru 16" (FLG X FLG)
- D 3.2 Swing Check Valves/ Resilient Seat- Sanitary Sewer 3" Thru 12" (FLG X FLG)
- D 4 Combination Air Valves Stainless Steel/ Sanitary Sewer/ For 2" Thru 12" Mains
- D 4.1 Combination Air Valves- Stainless Steel/ Sanitary Sewer/ For 12" And Larger Mains
- D 5 Air Release Valves (UL/FM) Potable Water
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- D 7 Full Flange Pressure Sensor
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- D9 Reduced Pressure Detector Assembly / 2 ½" Thru 10"
- D10 Double Check Detector Assembly / 3" Thru 10"



D 1 - VALVES - RESILIENT SEAT/ 2" (FIPT X FIPT):

Effective Date: 01-01-2025

SPECIFICATION:

- Resilient seat or wedge (RW) line valves shall meet or exceed the performance specifications of AWWA C509 or C515 for resilient seat gate valves with nonrising stems (NRS).
- Both ends shall have Female Iron Pipe Threads (FIPT).
- ANSI/ AWWA C550, all interior and exterior body and bonnet surfaces shall be coated with a fusion bonded epoxy coating.
- Valves supplied must have ISO 9001 or later certification, or poured in a foundry located in the U.S.A.
- Shall comply with and be labeled as approved by the National Sanitation Foundation (NSF) for use in potable water lines meeting NSF 61.
- Affidavit of compliance to this specification shall be available upon request.

MATERIAL:

Body:

 Cast or ductile iron conforming to ASTM Standards A126 or A536.

Wedge:

 Ductile iron fully encapsulated (no exposed iron) or bronze vulcanized with EPDM (ethylene-propylene) rubber.

Seal & O-rings:

• Triple O-ring seals, Nitrile Buna-N or EPDM rubber.

Stuffing Box & Operating Nut:

 Cast or ductile iron conforming to ASTM Standards A126 or A536.

Stem:

• Bronze per ASTM Standards B584 or stainless steel per AISI 430F.

Hex Head Nuts and Bolts:

• 316 Stainless steel.

DESIGN:

- Resilient seat gate valve, NRS, open left (counterclockwise).
- Both ends shall have female iron pipe threads (FIPT).
- Pressure rated for 200 psi minimum.
- Two-inch (2") square operating nut.

RESTRICTIONS:

SIZE:

• 2"



- AMERICAN AFC-2500 SERIES
- AMERICAN AVK 03-063-39
- CLOW VALVE 2639 & 2640
- KENNEDY VALVE KS-RW 8057 or 7057
- M & H VALVE COMPANY 4067-07
- MUELLER A-2360 SERIES
- U.S. PIPE A-USP0-8



D 1.1 - VALVES - AWWA C509/C515 RESILIENT SEAT/ 2" thru 12" (MJ X MJ):

Effective Date: 01-01-2025

SPECIFICATION:

Resilient seat or wedge (RW) line valves shall meet or exceed the performance specifications of AWWA C509 or C515 for resilient seat gate valves with non-rising stems (NRS) and meet the following specific provisions:

- Both ends shall be mechanical joint in accordance with ANSI/ AWWA C111/A21.11.
- ANSI/ AWWA C550, all interior and exterior body and bonnet surfaces shall be coated with a fusion bonded epoxy coating.
- Valves supplied must have ISO 9001 or later certification, or poured in a foundry located in the U.S.A.
- Shall comply with and be labeled as approved by the National Sanitation Foundation (NSF) for use in potable water lines meeting NSF 61.
- Factory Mutual Approved (FM) and Underwriter Laboratory Listed (UL) as noted by (UL/FM).
- Shall have UL, FM mark displayed visibly and permanently on the valve.
- Affidavit of compliance to this specification shall be available upon request.

MATERIAL:

Body:

 Ductile iron conforming to ASTM Standards A126 or A536.

Wedge:

• Cast or ductile iron fully encapsulated (no exposed iron) with EPDM (ethylene-propylene) rubber

Seal & O-rings:

Triple O-ring seals Nitrile Buna-N or EPDM rubber.
 Stuffing Box & Operating Nut:

Stuffing Box & Operating Nut:

 Cast or ductile iron conforming to ASTM Standards A126 or A536.

Stem:

Copper alloy/ bronze.

Hex Head Nuts and Bolts:

• 316 Stainless steel.

DESIGN:

- Resilient seat gate valve, NRS, open left (counterclockwise)
- Both ends shall be mechanical joint (MJ).
- · Pressure rated for 250 psi minimum.
- 2" square operating nut.

SIZE:

• 2" thru 12"

INCLUDE:

 Two– properly sized mechanical joint accessory kits.



MANUFACTURER:

- AMERICAN AFC 2500 SERIES
- AMERICAN AVK 25 or 45 SERIES
- CLOW VALVE 2638, 2639 & 2640 SERIES
- KENNEDY VALVE KS-RW 7571 & 8571 SERIES
- M & H VALVE COMPANY 4067 & 7000 SERIES
- MUELLER A-2361 SERIES
- US PIPE A-USPO-23 SERIES



D 1.2 – TAP VALVES - AWWA C509/C515 RESILIENT SEAT/ 4" THRU 12" (FLG X MJ):

Effective Date: 01-01-2025

SPECIFICATION:

- Resilient seat or wedge (RW) tap valves shall meet or exceed the performance specifications of AWWA C509 or C515 for resilient seat gate valves with nonrising stems (NRS).
- One end shall be mechanical joint in accordance with ANSI/AWWA C111/A21.11.
- One end shall be flange design with a raised tapping alignment centering ring and conform to MSS SP-60 standard.
- ANSI/AWWA C550, all interior and exterior body and bonnet surfaces shall be coated with a fusion bonded epoxy coating.
- Valves supplied must have ISO 9001 or later certification, or poured in a foundry located in the U.S.A.
- Shall comply with and be labeled as approved by the National Sanitation Foundation (NSF) for use in potable water lines meeting NSF 61.
- Factory Mutual Approved (FM) and Underwriter Laboratory Listed (UL) as noted by (UL/FM).
- Shall have UL, FM mark displayed visibly and permanently on the valve.
- Affidavit of compliance to this specification shall be available upon request.

MATERIAL:

Body:

 Cast or ductile iron conforming to ASTM Standards A126 or A536.

Wedge:

• Cast or ductile iron fully encapsulated (no exposed iron) with EPDM (ethylene-propylene) rubber.

Seal & O-rings:

- Triple O-ring seals Nitrile Buna-N or EPDM rubber.
 Stuffing Box & Operating Nut:
- Cast or ductile iron conforming to ASTM Standards A536.

Stem:

· Copper alloy/ bronze.

Hex Head Nuts and Bolts:

• 316 Stainless steel.

RESTRICTIONS:

SIZE:

• 4" thru 12"

INCLUDE:

- One
 – properly sized mechanical joint accessory kit.
- One
 properly sized flange joint accessory kit.

DESIGN:

- Resilient seat gate valve, NRS, open left counterclockwise).
- Pressure rated for 250 psi minimum.
- 2" square operating nut.



- AMERICAN AFC-2500 SERIES
- AMERICAN AVK 45 (DI) SERIES
- CLOW VALVE 2638, 2639 & 2640 SERIES
- KENNEDY VALVE KS-RW 7950 & 8950 SERIES
- M & H VALVE COMPANY 4751 & 7590 SERIES
- MUELLER A-2361 SERIES
- US PIPE T-USPO-19 SERIES



D 1.3 - VALVES - RESILIENT SEAT/ 2" thru 12" (FLG X FLG):

Effective Date: 01-01-2025

SPECIFICATION:

- Resilient seat or wedge (RW) control valves shall meet or exceed the performance specifications of AWWA C509 or C515 for resilient seat gate valves with non- rising stems (NRS).
- Both ends shall be flanged, faced and drilled in accordance with ANSI Class 125 B16.1.
- ANSI/ AWWA C550, all interior and exterior body and bonnet surfaces shall be coated with a fusion bonded epoxy coating.
- Valves supplied must have ISO 9001 or later certification, or poured in a foundry located in the U.S.A.
- Factory Mutual Approved (FM) and Underwrite Laboratory Listed (UL) as noted by *(UL/FM).
- Affidavit of compliance to this specification shall be available upon request.

MATERIAL:

Body:

 Cast or ductile iron conforming to ASTM Standards A126 or A536.

Wedge:

• Ductile iron fully encapsulated (no exposed iron) with EPDM (ethylene-propylene) rubber.

Seal & O-rings:

• Triple O-Ring seals Nitrile Buna-N or EPDM rubber.

Stuffing Box & Operating Nut:

 Ductile iron conforming to ASTM Standards A126 or A536.

Stem:

• Copper alloy/ bronze.

Hex Head Nuts and Bolts:

• 316 Stainless steel.

DESIGN:

- Resilient seat gate valve, NRS, open left (counterclockwise).
- Both ends shall be flange joint (FLG).
- Pressure rated for 250 psi minimum.
- · Operated by a ductile or cast iron hand wheel.

RESTRICTIONS:

Shall not be used in direct bury applications

SIZE:

- 2" thru 12"
- Two (2) properly sized flange joint accessory kit.



- AMERICAN AFC-2500 SERIES
- AMERICAN AVK 25 (CI) & 45 (DI) SERIES
- CLOW VALVE 2638, 2639 & 2640 SERIES
- KENNEDY VALVE KS-RW
- M & H VALVE COMPANY
- MUELLER A-2360 SERIES
- US PIPE A-USPO-6 SERIES



D 1.4 - VALVES- RESILIENT SEAT/ 14" thru 48" (MJ X MJ):

Effective Date: 01-01-2025

SPECIFICATION:

Resilient seat or wedge (RW) line valves shall meet or exceed the performance specifications of:

- Valves shall be ductile iron.
- AWWA C509 or C515 for resilient seat gate valves with non-rising stems (NRS).
- Both ends shall be mechanical joint in accordance with ANSI/AWWA C111/A21.11.
- ANSI/AWWA C550, all interior and exterior body and bonnet surfaces shall be coated with a fusion bonded epoxy coating.
- Valves supplied must have ISO 9001 or later certification, or poured in a foundry located in the U.S.A.
- Shall comply with and be labeled as approved by the National Sanitation Foundation (NSF) for use in potable water lines meeting NSF 61.
- Affidavit of compliance to this specification shall be available upon request.

MATERIAL:

Body:

• Ductile iron conforming to ASTM Standards A536.

Wedge

 Ductile iron fully encapsulated (no exposed iron) with EPDM (ethylene-propylene) rubber.

Seal & O-rings:

• Triple O-ring seals Nitrile Buna-N or EPDM rubber.

Stuffing Box & Operating Nut:

Ductile iron conforming to ASTM Standards A536.
 Stem:

 Copper alloy in accordance with AWWA C515 Standards.

Bonnet Hex Head Nuts and Bolts:

• 316 Stainless steel (no socket head bolts allowed).

DESIGN:

- Resilient seat gate valve, NRS, open left (counterclockwise).
- Both ends shall be mechanical joint (MJ).
- Pressure rated for 150 psi minimum.
- 2" square operating nut.

SIZE:

• 14" thru 48"

ADDITIONAL REQUIREMENTS:

- · Valves 16" and larger require a gear operator.
- · Valves 30" and larger require a bypass valve.



MANUFACTURER:

- AMERICAN AFC-2500 SERIES
- CLOW VALVE CO.
- KENNEDY RW
- MUELLER A-2361 SERIES
- US PIPE A-USP1 SERIES

RESTRICTIONS:

For Sewer Force Main Installations 14" through 24" See MSM D 1.6



D 1.5 - VALVES- ECCENTRIC PLUG/ 4" thru 24" (FLG X FLG):

Effective Date: 01-01-2025

SPECIFICATION:

Eccentric plug valves shall meet or exceed the performance specifications of:

- Shall be designed and manufactured to have a minimum wall thickness per AWWA C 517-16.
- Interior ferrous metal surfaces shall be epoxy coated to comply with AWWA C550.
- Port area shall be a minimum 80% of full pipe area.
- Shall be non-lubricating type.
- Bearings shall be sintered, oil impregnated type 316 stainless steel.
- Stem packing seals shall be repackable while under pressure without removing the bonnet from the valve.
- Both ends shall be flanged, faced and drilled in accordance with ANSI Class 125 B16.1.
- Affidavit of compliance to this specification shall be available upon request.

MATERIAL:

Body:

 Cast iron or ductile iron conforming to ASTM Standards A126 or A536.

Plug:

• Cast iron or ductile iron encapsulated with Nitrile Buna-N or EPDM (ethylene-propylene) rubber.

Seal & O-rings:

· Nitrile Buna-N or EPDM rubber.

DESIGN:

- Both ends shall be flange joint (FLG).
- · Pressure rated for 150 psi minimum.
- Shall rotate 90 degrees (quarter turn) from fullopen to full-closed position.
- · Operated by a ductile or cast iron lever.
- Plug valves 6" and larger shall be gear operated.



MANUFACTURER:

- CLOW VALVE CO.
- DEZURIK
- HENRY PRATT CO.
- MILLIKEN VALVE CO.
- VAL-MATIC

RESTRICTIONS:

 Use of this product is limited to pumping station valve vaults.



D 1.6 - VALVES- DIRECT BURY SEWER FORCE MAIN ECCENTRIC PLUG/ 14" thru 24" (MJ X MJ):

Effective Date: 01-01-2025

SPECIFICATION:

Eccentric plug valves shall meet or exceed the performance specifications of:

- Both ends shall be mechanical joint.
- 14" to 24" Class 125 MJ, shall be a minimum of 150 PSI Rated.
- Eccentric plug valve shall be side actuated.
- Port area shall be 100% round port with full port flow.
- Shall be of the quarter-turn, non-lubricated eccentric type, designed, manufactured and tested in accordance with the latest revision of AWWA C517.
- Stem packing seals shall be repackable while under pressure without removing the bonnet from the valve.
- Affidavit of compliance to this specification shall be available upon request.

MATERIAL:

Body:

 Valve body shall be Ductile Iron, ASTM A536 Grade 65-45-12, Internal and External Epoxy Coated.

Plug:

 Ductile Iron, ASTM A536 Grade 65-45-12, Buna-N Rubber Coated

Seal & O-rings:

• Nitrile Buna-N or EPDM rubber.

Bolts / Nuts:

316 Stainless Steel

RESTRICTIONS:

 Sewer force main direct bury installations for force mains 14" through 24"

SIZE:

14" through 24"



- CLOW VALVE CO.
- GA INDUSTRIES
- Dezurik
- Kennedy Valve



D 2 - Check Valve- Resilient Seat/ Potable Water 2" Thru 30" (FLG X FLG):

Effective Date: 01-01-2025

SPECIFICATION:

- Check valves shall meet or exceed the performance specifications of ANSI/AWWA C508 standards.
- Shall have resilient seat.
- Shall be manufactured from ductile iron per ASTM Standards A536 65-45-12.
- Shall be pressure rated for 250 psi (minimum) working pressure.
- Both ends shall be flanged, faced and drilled in accordance with ANSI B16.1, Class 125.
- All ferrous interior and exterior body and bonnet surfaces shall be coated with a fusion bonded epoxy coating in compliance with ANSI/AWWA C550.
- Valves supplied must have ISO 9001 or later certification, or poured in a foundry located in the U.S.A.
- Shall comply with and be labeled as approved by the National Sanitation Foundation (NSF) for use in potable water lines meeting NSF 61.
- A mechanical indicator shall be provided to provide disc position.
- Affidavit of compliance to this specification shall be available upon request.



Body:

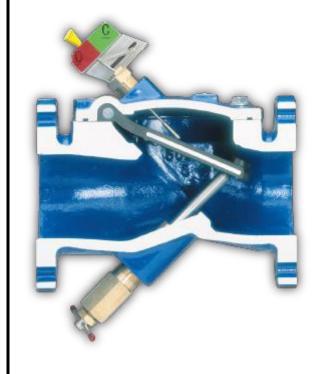
• Ductile iron, ASTM Standards A536 grade 65-45-12.

Disc:

- Ductile iron, encapsulated with:
 - EPDM (ethylene-propylene) rubber
 - Buna- N rubber

Shaft:

· Stainless steel.



MANUFACTURER:

- AMERICAN FLOW CONTROL
- DEZURIK-APCO
- VAL-MATIC VALVE & MFG. CORP.



D 3 – SWING CHECK VALVES - POTABLE WATER 2" THRU 16" (FLG X FLG):

Effective Date: <u>01-01-2025</u>

SPECIFICATION:

- Check valves shall meet or exceed the performance specifications of AWWA C508, swing check valves.
- Shall be manufactured from ductile iron per ASTM Standards A536 65-45-12.
- Shall be pressure rated for 175 psi (minimum) working pressure.
- Both ends shall be flanged, faced and drilled in accordance with ANSI B16.1, Class 125.
- All ferrous interior and exterior body and bonnet surfaces shall be coated with a fusion bonded epoxy coating in compliance with ANSI/AWWA C550.
- Valves supplied must have ISO 9001 or later certification, or poured in a foundry located in the U.S.A.
- Shall comply with and be labeled as approved by the National Sanitation Foundation (NSF) for use in potable water lines meeting NSF 61.
- Factory Mutual Approved (FM) and Underwriter Laboratory Listed (UL) as noted by *(UL/FM).
- Affidavit of compliance to this specification shall be available upon request.

MATERIAL:

Body:

- Ductile iron, ASTM Standards A536 grade 65 45-12. **Disc:**
- Bronze with EPDM (ethylene-propylene) rubber facing and a stainless steel shaft.



MANUFACTURER:

- AMERICAN FLOW CONTROL
- DEZURIK-APCO
- GA INDUSTRIES
- KENNEDY VALVE
- M&H VALVE
- MUELLER



D 3.1 – SWING CHECK VALVES- SANITARY SEWER 4" THRU 16" (FLG X FLG):

Effective Date: <u>01-01-2025</u>

SPECIFICATION:

- Check valves shall meet or exceed the performance specifications of AWWA C508, swing check valves.
- · Horizontal swing type with bolted bonnets.
- Shall be manufactured from ductile iron per ASTM Standards A536 65-45-12 (cast iron per ASTM Standards A126 Class B).
- Shall be pressure rated for 175 psi. (minimum) working pressure.
- Both ends shall be flanged, faced and drilled in accordance with ANSI B16.1, Class 125.
- Valves supplied must have ISO 9001 or later certification, or poured in a foundry located in the U.S.A.
- Shall be furnished with an outside lever and weight.
- Affidavit of compliance to this specification shall be available upon request.

MATERIAL:

Body:

- Ductile iron, ASTM Standards A536 grade 65 45-12. **Disc:**
- Cast or ductile iron with bronze seat and a 316 stainless steel shaft.



MANUFACTURER:

- AMERICAN FLOW CONTROL
- DEZURIK-APCO
- GA INDUSTRIES
- KENNEDY VALVE
- M&H VALVE
- MUELLER



D 3.2 – SWING CHECK VALVES/ RESILIENT SEAT– SANITARY SEWER (3" THRU 12") (FLG X FLG):

Effective Date: 01-01-2025

SPECIFICATION:

- Check valves shall meet or exceed the performance specifications of AWWA C508, swing check valves.
- Shall be manufactured from ductile iron per ASTM Standards A536 65-45-12.
- Body and bonnet shall have fusion bonded epoxy coating on interior and exterior complying with AWWA C550.
- Shall be pressure rated for 175 psi (minimum) working pressure.
- Both ends shall be flanged, faced and drilled in accordance with ANSI B16.1, Class 125.
- Shall have a resilient seat that is drop tight, even at low pressure.
- Shall have no obstructions in the flow path for a 100% clear waterway.
- Valves supplied must have ISO 9001 or later certification, or poured in a foundry located in the U.S.A.
- Shall be furnished with an outside lever and spring.
- Affidavit of compliance to this specification shall be available upon request.

MATERIAL:

Body:

- Ductile iron, ASTM Standards A536 grade 65-45-12. **Disc:**
- Shall be a carbon steel core completely encapsulated with EPDM.

Bonnet Bolts:

• 316 stainless steel.

Hinge and Hinge Pin:

• 316 stainless steel, hinge on 10"-12" is ductile iron.

O-Rings:

· Acrylonitrile-butadiene rubber (NBR).

DESIGN:

- Shall be designed such that the disc, hinge, and bonnet can be removed as one assembly.
- · Can be mounted vertically or horizontally.
- All internal exposed metal is stainless steel.



MANUFACTURER:

AMERICAN AVK SERIES 41/42-43X



D 4 – COMBINATION AIR VALVES– STAINLESS STEEL/ SANITARY SEWER/ 2" thru 12" FORCE MAINS:

Effective Date: 01-01-2025

SPECIFICATION:

- Combination air valves for sewage shall meet or exceed the performance specifications of AWWA C512-15.
- Shall be specially designed to operate with liquids carrying solid particles such as sewage and effluent.
- Shall release accumulated air from the system while the system is under pressure.
- The valve must discharge air at high velocity during the filling of the system and admit air during its drainage.
- The valve shall be a double or triple float design.
- Shall be pressure rated for at least 75 psi.
- Shall be test pressure rated for at least 1.5 times working pressure.
- Threaded connection shall be National Pipe Thread (NPT).
- Shall be equipped with a gauge or relief port.
- Valves supplied must have ISO 9001 or later certification, or manufactured in the U.S.A.
- Affidavit of compliance to this specification shall be available upon request.

MATERIAL:

Body:

Reinforced Nylon/316 Stainless Steel.

Outer Metal Parts:

304, 316 Stainless Steel and epoxy coated ductile iron.

Inner Metal Parts:

• 316 Stainless Steel.

Floats:

• Plastic materials/ Foamed Polypropylene or High Density Polyethylene.

O-Rings & Seals:

• Nitrile Buna-N or EPDM (ethylene-propylene) rubber.

RESTRICTIONS:

For force main sizes up and including twelve (12") inch.

CONNECTIONS:

Inlet:

• 2" Standard Male Iron Pipe Threads (MNPT).

Outlet:

- · Stainless Steel screen mesh & cover.
- Flushing connection.





- ARI USA, INC.- MODEL D-020 and D-025
- GA INDUSTRICS
- APCO VALVES
- VAL-MATIC



D 4.1 – COMBINATION AIR VALVES– STAINLESS STEEL/ SANITARY SEWER/ 12" AND LARGER FORCE MAINS:

Effective Date: 01-01-2025

SPECIFICATION:

- Combination air valves for sewage shall meet or exceed the performance specifications of AWWA C512-15.
- Shall be specially designed to operate with liquids carrying solid particles such as sewage and effluent.
- Shall release accumulated air from the system while the system is under pressure.
- The valve must discharge air at high velocity during the filling of the system and admit air during its drainage.
- The valve shall be a double or triple float design.
- Shall be pressure rated for at least 150 psi.
- Shall be test pressure rated for at least 1.5 times working pressure.
- Flange surface shall be faced and drilled in accordance with ANSI Class 125 B16.1.
- Valves supplied must have ISO 9001 or later certification, or manufactured in the U.S.A.
- Affidavit of compliance to this specification shall be available upon request.

CONNECTIONS:

Inlet:

- 4" Flange for mains up to and including 24" mains.
- 6" Flange for mains larger than 24".

Outlet

- Stainless Steel screen mesh & cover.
- Flushing connection.

MATERIAL:

Body:

• 316 Stainless Steel.

Outer Metal Parts:

• 316 Stainless Steel

Inner Metal Parts:

• 316 Stainless Steel.

Floats:

 Plastic materials/ Foamed Polypropylene, High Density Polyethylene or 316 Stainless Steel.

O-Ring:

 Nitrile Buna-N or EPDM (ethylene epropylene) rubber.



MANUFACTURER:

 ARI USA, INC.— Model D -020 and D- 025

RESTRICTIONS:

• For force main sizes 12" and larger.



D 5 - AIR RELEASE VALVES (UL/FM)- POTABLE WATER:

Effective Date: 01-01-2025

SPECIFICATION:

Air release valves for potable water shall meet or exceed the performance specifications of:

- Shall be automatic float operated designed to release accumulated air from the piping system while the system is in operation and under pressure.
- AWWA C512.
- Shall be Underwriters Laboratories Listed (UL) and Factory Mutual Approved (FM) as noted by (UL/FM).
- Shall have a screened hood.
- The valve body shall be threaded with National Pipe Thread (NPT) inlets and outlets.
- Shall be pressure rated for at least 175 psi.
- Shall be test pressure rated for at least 1.5 times working pressure.
- Valves supplied must have ISO 9001 or later certification, or manufactured in the U.S.A.
- Affidavit of compliance to this specification shall be available upon request.

CONNECTIONS:

Inlet:

1" Standard Female Iron Pipe Threads (FNPT).

MATERIAL:

Body & Cover:

 Cast iron or ductile iron conforming to ASTM Standards A126 or A536.

Coating:

· Fusion bonded epoxy.

Outer trim:

Stainless Steel.

Inner metal parts:

• 316 Stainless Steel.

Inner rubber parts:

 Nitrile Buna-N, EPDM (ethylene propylene) or Viton rubber.



MANUFACTURER:

- VALVE MATIC MFG. CORP.- VM-15AH
- VALVE MATIC MFG. CORP.- VM-22H
- OPEN

RESTRICTIONS/ OPTIONAL USE:

 UL/FM is required on valves installed on potable mains in sizes 12" and smaller.



D 6 - AIR RELEASE VALVES (2") - POTABLE WATER:

Effective Date: 01-01-2025

SPECIFICATION:

Air release valves for potable water shall meet or exceed the performance specifications of:

- Shall be automatic float operated designed to release accumulated air from the piping system while the system is in operation and under pressure.
- AWWA C512.
- Shall have a screened hood (not shown in detail).
- The valve body shall be threaded with National Pipe Thread (NPT) inlets and outlets.
- Shall be pressure rated for at least 150 psi.
- Shall be test pressure rated for at least 1.5 times working pressure.
- Valves supplied must have ISO 9001 or later certification, or manufactured in the U.S.A.
- Affidavit of compliance to this specification shall be available upon request.

CONNECTIONS:

Inlet:

• 2" Standard Female National Pipe Threads (FNPT).

MATERIAL:

Body & Cover:

 Cast iron or ductile iron conforming to ASTM Standards A126 or A536.

Coating:

· Exterior shall have universal alkyd primer.

Outer Trim:

· Stainless Steel.

Inner Metal Parts:

• 316 Stainless Steel.

Inner Rubber Parts:

Nitrile Buna-N, EPDM (ethylene propylene) or Viton rubber.

RESTRICTIONS/OPTIONAL USE:

 Acceptable for use on potable main sizes over 12" only.



- VALVEMATIC MFG. CORP VM-45
- OPEN



D7-FULL FLANGE PRESSURE SENSOR:

Effective Date: 01-01-2025

SPECIFICATION:

Full flange sensors shall meet or exceed the performance specifications of:

- Protect and isolate pressure gauge.
- Full 360-deg pressure reading.
- · Self-cleaning flex action, non-clogging.
- 2-1/2" diameter companion pressure gauge, ±1% accuracy, pressure range as indicated on drawings.
- Affidavit of compliance to this specification shall be available upon request.

CONNECTIONS:

ANSI B16.5 Class 150 flanges, carbon steel or PVC

MATERIAL:

Body:

· Carbon steel or PVC.

Lining:

- Sleeve lining material recommended for raw sewage. Fill Fluid:
- Ethylene glycol and water, vegetable oil, silicon oil.



MANUFACTURER:

- RED VALVE SERIES 40
- ONYX

RESTRICTIONS/OPTIONAL USE:

 Pressure gauge installations for valve vaults and meter vaults at wastewater pumping stations.



D 8 - POST TYPE HYDRANTS:

Effective Date: 01-01-2025

SPECIFICATION:

Post type hydrants shall meet or exceed the performance specifications of:

- ANSI/AWWA C502.
- Post type dry barrel design.

MATERIAL:

Hydrant Shoe/Elbow:

• Cast iron, ASTM A0126 Class B

Stand Pipe:

• Ductile iron ASTM A-126

Main Valve Rod:

• Steel C1117 HFS

Operating Nut:

• Bronze alloy CDA 84400, ASTM B-584

Lubricating Nut:

• Brass

INLET SIZE AND TYPE:

• 1" mechanical joint.

OUTLET SIZE AND TYPE:

• 1" hose nozzle.



RESTIRCTIONS:

 Not for fire protection. For use only at pump station sites.

MANUFACTURER:

• Total Eclipse Model 1



D 9 - REDUCED PRESSURE DETECTOR ASSEMBLY / 2 ½" thru 10"

Effective Date: <u>01-01-2025</u>

SPECIFICATION:

Reduced Pressure Detector Assembly shall meet or exceed the performance specification of:

- AWWA C511-92
- Shall be installed on fire protection systems when connected to a public water supply.
- The unit shall be a complete assembly including UL listed and FM approved OSY shutoff valves.
- Shall be coated with approved AWWA epoxy coating.
- Assemblies supplied must have ISO 9001 or later certification, or poured in a foundry located in the U.S.A.
- Temperature Range: 33°F 140°F
- Maximum Working Pressure: 175 psi
- Affidavit of compliance to this specification shall be available upon request.



MATERIALS

Body:

· Epoxy coated cast iron

Discs:

Rubber

Seat and Disc Holder:

• Bronze

Trim:

Stainless Steel

<u>SIZE</u>

• 2 ½" – 10"

MANUFACTURER:

- WATTS Model Series 909 RPDA
- OPEN



D 10 - DOUBLE CHECK DETECTOR ASSEMBLY / 3" thru 10"

Effective Date: 01-01-2025

SPECIFICATION:

Reduced Pressure Detector Assembly shall meet or exceed the performance specification of:

- AWWA C510
- The assembly shall meet the basic requirements of ASSE 1048
- Shall be installed on fire protection systems when connected to a public water supply.
- The unit shall be a complete assembly including UL listed resilient seated OSY shutoff valves and test cocks
- The auxiliary line shall consist of an approved backflow preventer and water meter.
- Shall be coated with approved AWWA epoxy coating.
- Assemblies supplied must have ISO 9001 or later certification, or poured in a foundry located in the U.S.A.
- Temperature Range: 33°F 110°F continuous,
- 140°F intermittent
- Maximum Working Pressure: 175 psi
- Affidavit of compliance to this specification shall be available upon request.



MATERIALS

Body:

· Epoxy coated cast iron

Discs:

Rubber

Seat and Disc Holder:

Bronze

Trim:

· Stainless Steel

SIZE

• 3" – 10"

MANUFACTURER:

- WATTS Model Series 709 DCDA
- OPEN

