

## Air Release Clean Water Valves

Air Release Valves, sometimes referred to as “small orifice valves,” are often fitted at the highest point on a pipeline to continually release unwanted air during system operation to protect against unwanted surges and maintain system efficiency.

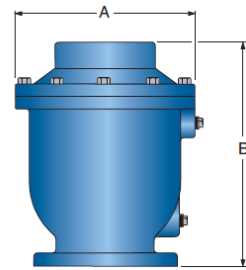
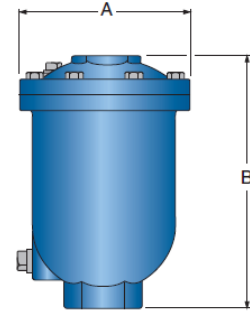
| Air Release Clean Water Valves |                           |
|--------------------------------|---------------------------|
| <b>Size</b>                    | 1/2” to 6”                |
| <b>Pressure</b>                | Upto 740 psig (5100 kPa). |
| <b>Material</b>                | ASTM A126 Class B cast    |

### Benefits and features

The valve body and cover shall be constructed of ASTM A126 Class B cast iron for working pressures up to 300 psig. Higher pressure rated valves shall be constructed of ASTM A536 Grade 65-45-12 ductile iron.

- **Unconditionally guaranteed T316 stainless steel floats**
- **Simple Lever and Compound Lever Models**
- **Stainless steel 316 internal trim**
- **Resilient seating for positive shutoff**
- **Performance proven for over 40 years**

All Air (Release, Vacuum, etc.) Valves installed in vaults or flood prone locations shall include an inflow preventer to prevent the introduction of contaminated water through the air valve outlet. The inflow preventer shall allow the admittance and exhausting of air while preventing contaminated water from entering during normal operating conditions. The inflow preventer shall be flow tested by an independent third party to certify performance. The third party shall be an approved testing lab of the American Society of Sanitary Engineers.



## Air Release Wastewater Valves

Air Release Valves, sometimes referred to as “small orifice valves,” are often fitted at the highest point on a pipeline to continually release unwanted air during system operation to protect against unwanted surges and maintain system efficiency.

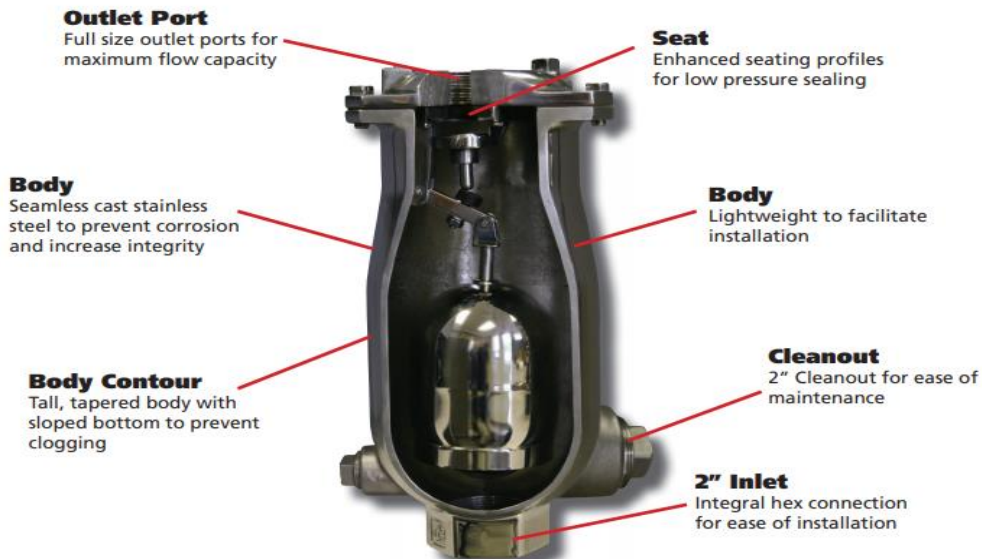
|                 |                             |
|-----------------|-----------------------------|
|                 | ARW-941                     |
| <b>Size</b>     | 2” to 4”                    |
| <b>Pressure</b> | up to 150 psig (1000 kPa)   |
| <b>Material</b> | ASTM A126 Class B Cast iron |



### Benefits and features

Wastewater Air Valves perform two important functions in a piping system: they maintain system design efficiency and provide system protection. Exhausting and admitting air keeps the system from restricted flow reducing pumping costs and reduces the potential for destructive surges and water hammer that can collapse a pipeline.

- Specifically designed for grit and sewage service without the need for backwashing when combined with fusion bonded epoxy slick coatings
- Bodies are extended in length with a sloped bottom to prevent solid material from reaching the operating mechanism
- Floats are equipped with a specially shaped bottom to accelerate the closure to reduce leakage and clogging of the valve
- Available in lightweight all stainless steel construction to eliminate corrosion
- Unconditionally guaranteed T316 stainless steel floats
- Stainless steel 316 internal trim
- Resilient seating for positive shutoff



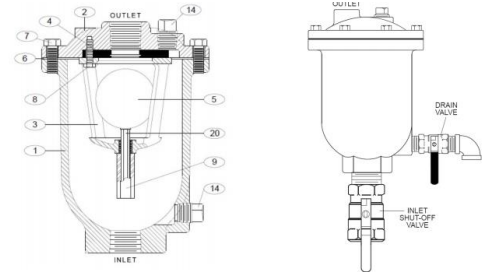
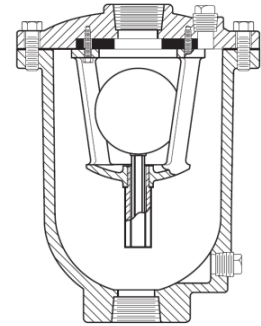
## Air/Vacuum Clean Water Valves

Air/Vacuum Valves, often referred to as “large orifice valves”, are used to allow large volumes of air to be exhausted from or admitted into a water pipeline as it is being filled or drained. When draining the pipeline, the float drops, allowing air to enter, preventing loss of pressure, possible pipeline collapse and damaging water column separation.

|                 |   |
|-----------------|---|
|                 | EVC-WV  |
| <b>Size</b>     | 1/2” to 20”   |
| <b>Pressure</b> | up to 740 psig (5100 kPa)   |
| <b>Material</b> | ASTM A126 Class B cast iron for Class 125 and Class 250 valves.<br>Class 300 ductile iron valves shall be constructed of ASTM A536 Grade 65-45-12 ductile iron. Class 300 steel valves shall be constructed of ASTM A216 Grade WCB cast steel |

### Benefits and features

- Unconditionally guaranteed T316 stainless steel floats
- Stainless steel 316 internal trim
- Exclusive high/low pressure resilient seating
- Full pipe size inlets and outlets provide maximum protection



The Air/Vacuum Valve is designed to exhaust large quantities of air upon system start-up and allow air to re-enter the line upon system shutdown or line break. As water enters the valve during start-up, the float will rise, closing the outlet port. The valve will remain closed until system pressure drops to near zero pressure. It will open during shut-down to perform a dual purpose. First, it eliminates the possibility of a vacuum forming and a potential pipeline collapse. Second it allows rapid drainage of the line when system maintenance is required.

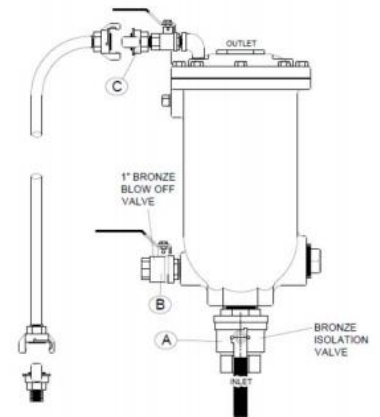
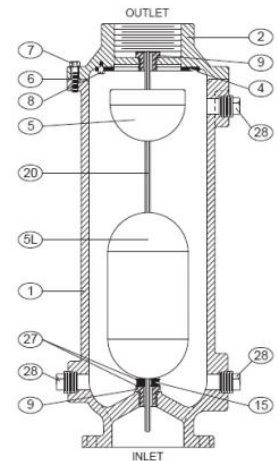
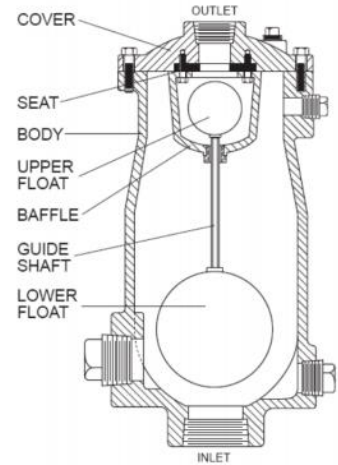
## Air/Vacuum Wastewater Valves

Air/Vacuum Valves, often referred to as "large orifice valves", are used to allow large volumes of air to be exhausted from or admitted into a water pipeline as it is being filled or drained. When draining the pipeline, the float drops, allowing air to enter, preventing loss of pressure, possible pipeline collapse and damaging water column separation.

|                 |                             |
|-----------------|-----------------------------|
|                 | EVW-0381                    |
| <b>Size</b>     | 1" to 8"                    |
| <b>Pressure</b> | 150 psig (1000 kPa)         |
| <b>Material</b> | ASTM A126 Class B Cast Iron |

### Benefits and features

- Extended body with sloped bottom
- Fusion Bonded Epoxy slick coat available - to prevent clogging
- Available in light weight all stainless steel construction to eliminate corrosion
- Dual float assembly - for positive seating
- Unconditionally guaranteed T316 stainless steel floats
- Stainless steel 316 internal trim
- Exclusive high/low pressure resilient seating
- Full pipe size inlets and outlets provide maximum protection





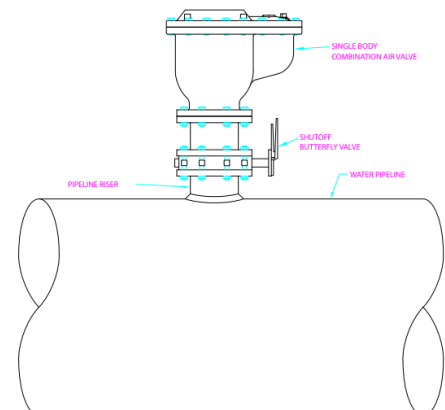
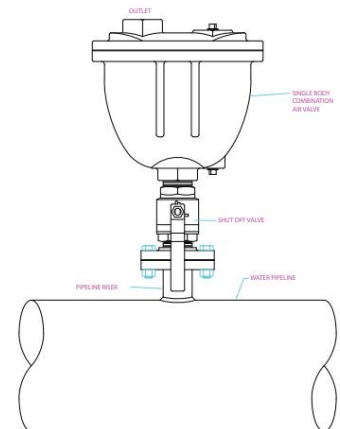
## Combination Clean Water Valves

Combination Air Valves perform the functions of an Air/Vacuum Valve (exhaust large quantities of air on start-up, admits air on shut-down) and Air Release Valves (release air continuously during operation) to maintain system efficiency and prevent pipeline surges.

|                 |   |
|-----------------|---|
|                 | <b>ECC-W0191</b>  |
| <b>Size</b>     | 1" to 20"   |
| <b>Pressure</b> | Upto 740 psig (5100 kPa)  |
| <b>Material</b> | ASTM A126 Class B cast iron for Class 125 and Class 250 valves. Class 300 ductile iron valves shall be constructed of ASTM A536 Grade 65-45-12 ductile iron. Dual Body Class 300 steel valves shall be constructed of ASTM A216 Grade WCB cast steel. |

### Benefits and features

- Extended body with sloped bottom
- Fusion Bonded Epoxy slick coat available - to prevent clogging
- Available in light weight all stainless steel construction to eliminate corrosion
- Dual float assembly - for positive seating
- Unconditionally guaranteed T316 stainless steel floats
- Stainless steel 316 internal trim
- Exclusive high/low pressure resilient seating
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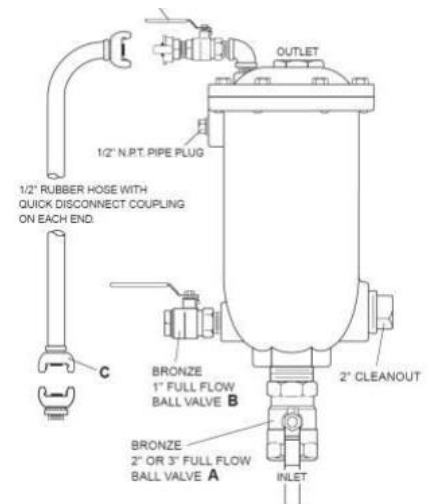
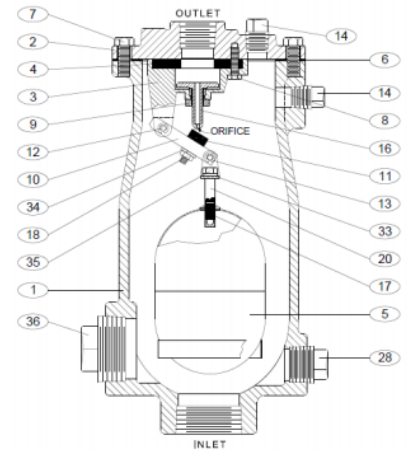
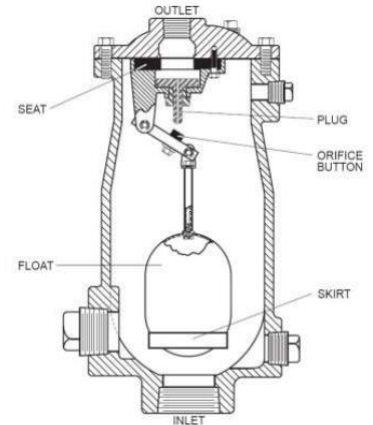
## Combination Wastewater Valves

Air/Vacuum Valves, often referred to as “large orifice valves”, are used to allow large volumes of air to be exhausted from or admitted into a water pipeline as it is being filled or drained. When draining the pipeline, the float drops, allowing air to enter, preventing loss of pressure, possible pipeline collapse and damaging water column separation.

|                     |                             |
|---------------------|-----------------------------|
|                     | <b>ECW-V0282</b>            |
| <b>Size</b>         | 1" – 8"                     |
| <b>Set Pressure</b> | up to 150 psig (1000 kPa).  |
| <b>Connection</b>   | ASTM A126 Class B cast iron |

### Benefits and features

- Single body incorporates both features within one valve
  - More compact and economical
- Dual body consists of two independent valves
  - Allows individual maintenance while still protecting pipeline
  - Wider range of sizing options
- Inlets and outlets are equal to full nominal size
- Available in light weight all stainless steel construction to eliminate corrosion
- Unconditionally guaranteed T316 stainless steel floats
- Stainless steel 316 internal trim
- Exclusive high/low pressure resilient seating



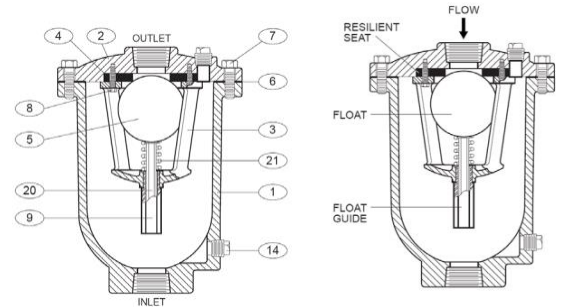
## Vacuum Breaker Air Valves

For critical applications where vacuum protection is a must or where column separation is predicated, a vacuum breaker is used. The Vacuum Breaker is mounted at critical pipeline high points, penstocks, or tanks and allows for rapid inflow of atmospheric air to reduce vacuum conditions in piping systems.

|                 |  |
|-----------------|--|
|                 | EVB-BAV01  |
| <b>Size</b>     | 1/2" - 42"   |
| <b>Pressure</b> | 400 psig (2760 kPa)  |
| <b>Material</b> | ASTM A126 Class B cast iron for Class 125 and Class 250 valves |

### Benefits and features

- Full flow areas provide maximum vacuum protection for pipelines and tanks
- Resilient seals provide drop tight seating
- Connections for optional air release valve - to vent entrained air
- Available with optional inflow preventer
- Available with optional screened hood



The Vacuum Breaker is designed to prevent vacuum conditions from occurring in pipes or tanks. After a power failure or rapid draining of the system, a vacuum condition often occurs in a pipe or tank. The pressure difference between the inside vacuum and outside air will cause a downward force on the float. At vacuum pressures greater than  $-0.25$  psig, the float will compress the spring and move downward allowing free flow of outside air into the pipe or tank to eliminate the vacuum.

When positive pressure is restored in the pipe or tank, the vacuum breaker will automatically close and seal tightly against the resilient seat. Optional valves can be piped to the vacuum breaker to vent trapped air in the pipeline if needed. The valve may be supplied with an optional threaded hood for insertion into the top of the valve.

The only moving parts in the valve are the float and the spring. The float guide controls the movement of the float and assures that the float contacts the seat evenly.



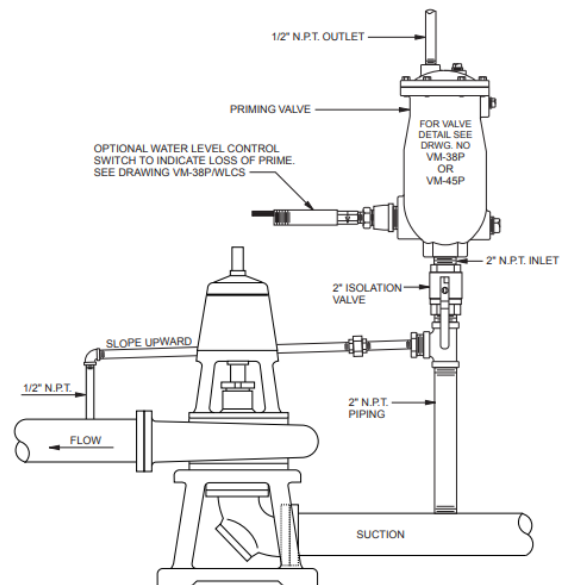
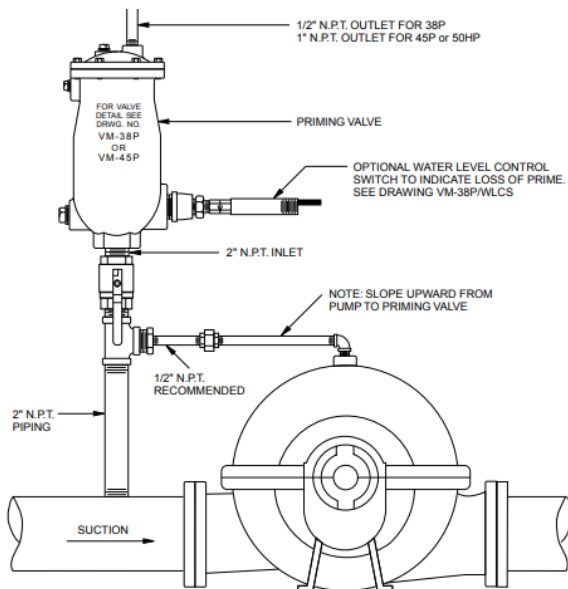
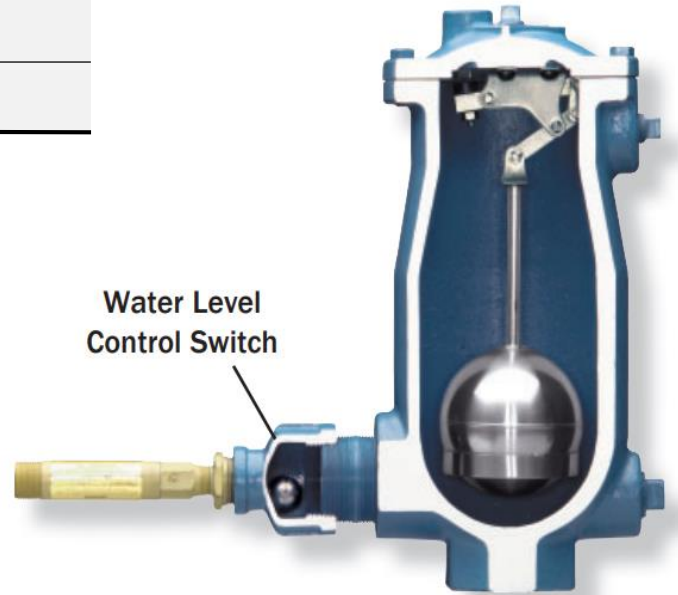
## Vacuum Priming Air Valves

The purpose of a Vacuum Priming Valve is to automatically allow air to be drawn out of the pumping system until the pump fills with water. Then, when the water reaches the priming valve, the float rises and closes the priming valve to prevent fluid from flowing to the vacuum priming system. The priming valve will continue to release air while the pump is running.

|                 |                             |
|-----------------|-----------------------------|
|                 | EVP-PAV031                  |
| <b>Size</b>     | 2"                          |
| <b>Pressure</b> | 150 psig (1000 kPa).        |
| <b>Material</b> | ASTM A126 Class B cast iron |

### Benefits and features

- Specifically designed to prevent fluid leakage
- Flow sensitive float
- Stainless steel 316 internal trim and float
- Available with optional water level control switch
- Compatible with any vacuum priming system





## Well Service Air Valves

Well Service Air Valves are a member of the Air/Vacuum family and are used with vertical pumps. Well Service Valves are specifically designed to vent the air from the pump column during pump start-up in a controlled manner before the check valve opens to reduce pressure surges that result from the accelerating water column.

|                 |                             |
|-----------------|-----------------------------|
|                 | EWA-W0281                   |
| <b>Size</b>     | 1/2" – 12"                  |
| <b>Pressure</b> | 150 psig (1000 kPa).        |
| <b>Material</b> | ASTM A126 Class B cast iron |

### Benefits and features

- Unconditionally guaranteed 316 stainless steel floats
- Inlets and outlets are equal to full nominal pipe area
- Dual Port Throttling Device
  - Adjustable discharge outlet provides regulated air exhaust
  - Allows air to enter the system on pump shut down through an unrestricted independent vacuum port
- Regulated-Exhaust Device
  - Restrictor disc provides regulated exhaust to limit pump column surges
  - Ability to adjust air exhaust for greater surge suppression
  - Provides full vacuum flow port

