

WASTE WATER AIR VALVES WITH BACKWASH ACCESSORIES

OPERATION AND MAINTENANCE INSTRUCTIONS

INSTALLATION

Waste Water Air Valves with attachments for backflushing should be installed as shown on engineers plans.

The air valve is supplied with shut-off valves for isolating the air valve from the main for inspection and backflushing.

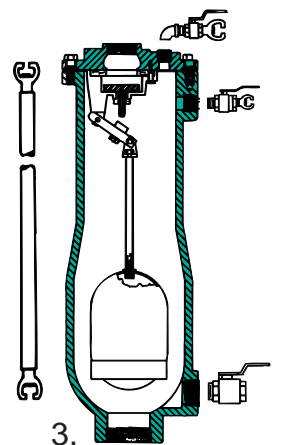
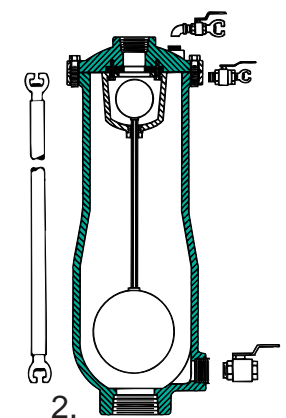
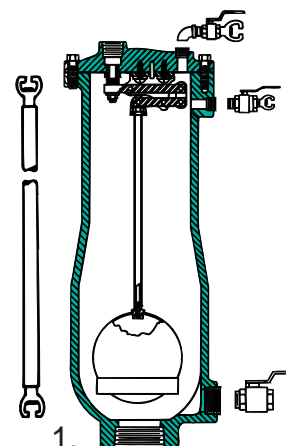
The valve vault should have adequate drainage and be sufficiently protected from possible freezing conditions. Where freezing conditions exist, the air valve should be insulated (particularly on a bridge crossing) or wrapped with electrical heat tape. It is recommended the air valve discharge ports piped to the drain; when installed inside a pump station or are to prevent flooding should a malfunction occur. Backflush attachments include three (3) quick disconnects, one (1) five foot length of hose with adapters and three (3) shut off valves for flushing.

AIR VALVE OPERATION

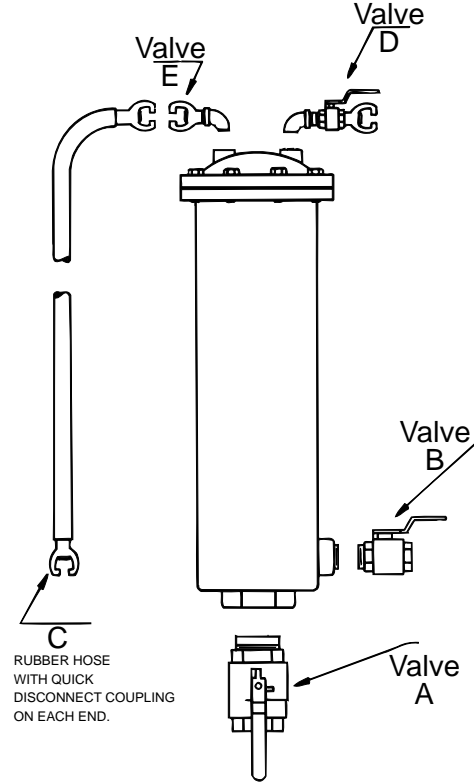
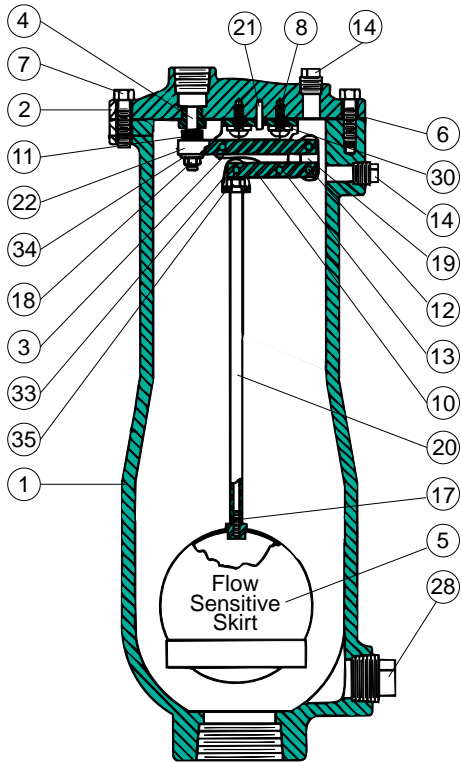
1. Wastewater Air Release Valves vent small pockets of air from the force main automatically and close on liquid level rise. This valve is designed to open under pressure.
2. Wastewater Air & Vacuum Valves vent large volumes of air when initially filling the line, and will close automatically with liquid level rise. As long as the line is under pressure, the valve will not open. Under vacuum conditions, the double float will drop, allowing air to re-enter the line, which prevents collapse of the pipeline, and damage due to water column separation within long downward slopes. This valve will close again, only when the line is refilled.
3. Combination Wastewater Air Valves perform both of the above functions

MAINTENANCE

To arrive at a reasonable schedule of preventive maintenance, wastewater Air valves should be backflushed six months after start-up date (not installation date). During this first backflushing, the operating engineer should observe the time and severity of waste that is flushed out of the air valve body. If clean flushing results in a few minutes the next period for backflushing can be set at twelve (12) months. If clean flushing is difficult and exceeds fifteen (15) minutes, the next backflushing should be scheduled in (4) months. A log should be kept and the valve tagged with latest flushing. Backflushing should be done at least once a year to insure efficient operation of the air valve. Otherwise grease and scum build up inside the body may prevent the air valve operating to release air and gas pockets.



SERIES 34-WWBK
Waste Water Air Release Valve with Backwash Kit



Part No.	Part Name	Material
1	Body	Cast Iron ASTM A126, Class B
2	Cover	Cast Iron ASTM A126, Class B
3	Leverage Frame	Stainless Steel T304, ASTM A240
4	Seat	Stainless Steel T303, ASTM A276
5	Float	Stainless Steel T304, ASTM 240
6	Gasket	Lexide NK-511 (non-Asbestos)
7	Cover Bolt	Alloy Steel ASTM A449, Grade 5
8	Retaining Screws	Stainless Steel T303, ASTM A276
10	Float Arm	Stainless Steel T303, ASTM A276
11	Orifice Button	Stainless Steel & Buna-N®
12	Pivot Pin	Stainless Steel T303, ASTM A276
13	Retaining Ring	Stainless Steel PH 15-7 Mo
14	Pipe Plug	Carbon Steel
17	Float Retainer	Stainless Steel, ASTM T18-8 A276
18	Lock Nut	Stainless Steel T304, ASTM A276
19	Link	Stainless Steel T304, ASTM A240
20	Guide Shaft	Stainless Steel T304, ASTM A269
21	Location Pin	Stainless Steel T420
22	Orifice Button	Stainless Steel T303, ASTM A276
28	Pipe Plug	Carbon Steel
30	Washer	Stainless Steel T18-8, ASTM A240
33	Clevis	Stainless Steel T304, ASTM A240
34	Lock Washer	Stainless Steel T304, ASTM A240
35	Retaining Screw	Stainless Steel T304, ASTM A240

BACKFLUSHING PROCEDURES

Backflushing steps are basically the same for all sizes and styles of wastewater Air Release, Air and Vacuum and Combination Valves and this can be accomplished in two ways.

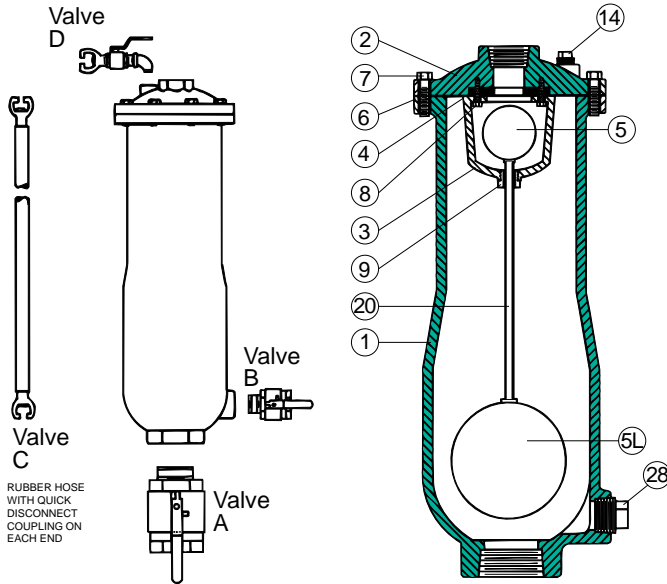
1. With clean water, that must be 15 PSI higher than the pressure in the force main, the valve may be flushed clean back into the force main. Flush back into the force main by connecting hose C to valve D. Next open valve A and flush for 2-3 minutes thru D. Next close D and switch hose C to E and flush for one minute. After flushing close valve A. Disconnect hose C and vent pressure inside the Air Valve thru valve D. Next remove cover bolts (det 7.) remove top cover (det 2) for visual inspection and scrape out any grease. Use care to remove the cover and the cover gasket (det 3) may be re-used many times. Reinstall cover (det. 2) and slowly open valve A.

2. With clean water that is not 15 psi higher pressure than the force main, backflush thru valve B into an atmospheric collection tank. Follow the same procedure as above except close valve A and open valve B. After flushing remove cover to inspect interior and replace cover same as above. Then close valve B, open valve A and the waste water valve is back in service.

WASTE WATER AIR VALVE INTRUCTIONS AND PARTS LIST

SERIES 35-WWBK

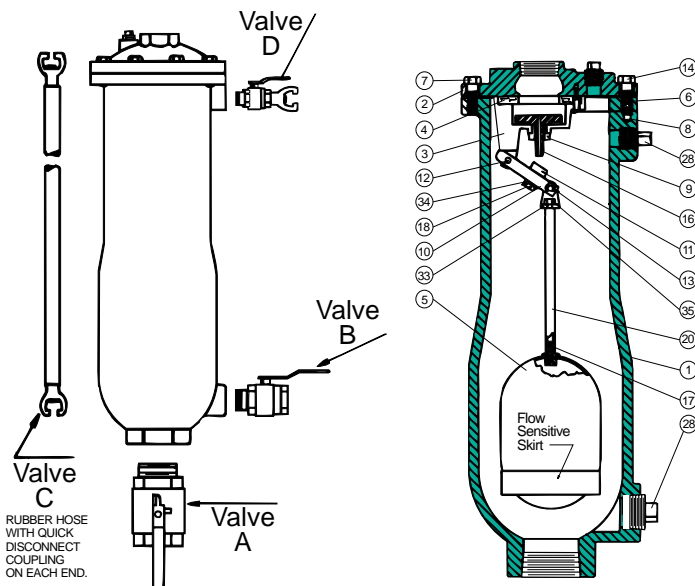
Waste Water and Vacuum Valve with Backwash Kit



Part No.	Part Name	Material
1	Body	Cast ASTM A126, Class B
2	Cover	Cast ASTM A126, Class B
3	Baffle	Ductile Iron ASTM A536
4	Seat	Buna-N
5	Float	Stainless Steel ASTM A-240, T304
5-L	Float	Stainless Steel ASTM A-240, T304
6	Gasket	Lexide Nk-511 (Non-Asbestos)
7	Cover Bolt	Alloy Steel ASTM ASTM A449 Grade 5
8	Retaining Screw	Stainless Steel ASTM A-276, T304
9	Guide Bushing	Stainless Steel ASTM A-276, T3043
14	Cover Pipe Plug	Malleable Iron
20	Guide Shaft	Stainless Steel ASTM A-276, T304
28	Body Pipe Plug	Malleable Iron

SERIES 36-WW21BW

Waste Water Combination Air Valve with Backwash Kit

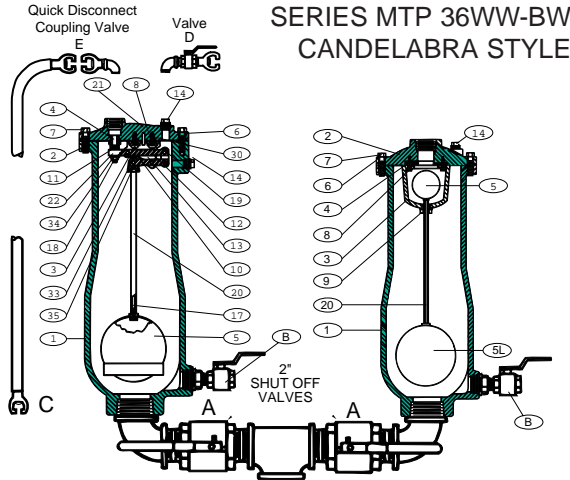


Part No.	Part Name	Material
1	Body	Cast Iron ASTM A126, Class B
2	Cover	Cast Iron ASTM A126, Class B
3	Baffle	Cast Iron ASTM A126, Class B
4	Seat	Stainless Steel T303, ASTM A276
5	Float	Stainless Steel T304, ASTM 240
6	Gasket	Lexide NK-511 (non-Asbestos)
7	Cover Bolt	Carbon Steel ASTM A449, Grade 5
8	Retaining Screws	Stainless Steel T304, ASTM A276
9	Guide Bushing	Stainless Steel T304, ASTM A276
10	Float Arm	Stainless Steel T304, ASTM A276
11	Orifice Button	Stainless Steel & Buna-N®
12	Pivot Pin	Stainless Steel T304, ASTM A240
13	Retaining Ring	Stainless Steel PH 15-7 Mo
16	Plug	Stainless Steel T304, ASTM A240
17	Float Retainer	Stainless Steel T304, ASTM A240
18	Lock Nut	Stainless Steel T304, ASTM A276
20	Guide Shaft	Stainless Steel T304, ASTM A289
28	Body Pipe Plug	Malleable Iron
33	Clevis	Stainless Steel T304, ASTM A240
34	Lock Washer	Stainless Steel T304, ASTM A240

CUSTOM COMBINATION WASTE WATER AIR VALVES INSTRUCTIONS AND PARTS LIST

Air Release Valve

Detail No.	Part Name	Material
1	Body	Cast Iron ASTM A126, Class B
2	Cover	Cast Iron ASTM A126, Class B
3	Leverage Frame	Stainless Steel T304, ASTM A240
4	Seat	Stainless Steel T303, ASTM A276
5	Float	Stainless Steel T304, ASTM 240
6	Gasket	Lexide NK-511 (non-Asbestos)
7	Cover Bolt	Alloy Steel ASTM A449, Grade 5
8	Retaining Screws	Stainless Steel T303, ASTM A276
10	Float Arm	Stainless Steel T303, ASTM A276
11	Orifice Button	Stainless Steel & Buna-N®
12	Pivot Pin	Stainless Steel T303, ASTM A276a
13	Retaining Ring	Stainless Steel PH 15-7 Mo
14	Pipe Plug	Carbon Steel
17	Float Retainer	Stainless Steel, ASTM T18-8 A276
18	Lock Nut	Stainless Steel T304, ASTM A276
19	Link	Stainless Steel T304, ASTM A240
20	Guide Shaft	Stainless Steel T304, ASTM A269
21	Location Pin	Stainless Steel T420
22	Orifice Button	Stainless Steel T303, ASTM A276
30	Washer	Stainless Steel T18-8, ASTM A240
33	Clevis	Stainless Steel T304, ASTM A240
34	Lock Washer	Stainless Steel T304, ASTM A240
35	Retaining Screw	Stainless Steel T304, ASTM A240



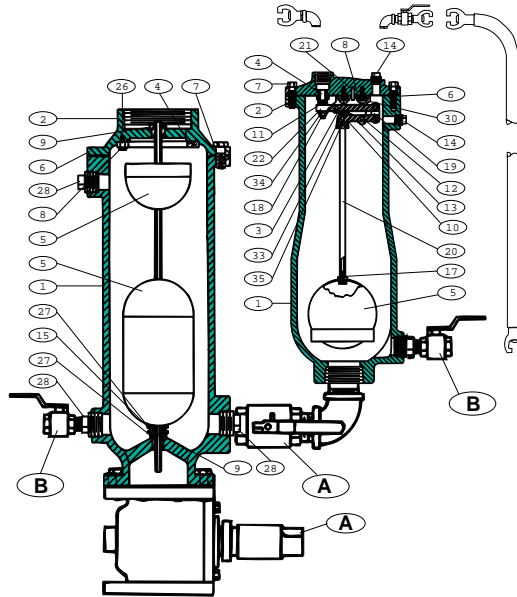
Air and Vacuum Valve

Detail No.	Part Name	Material
1	Body	Cast ASTM A126, Class B
2	Cover	Cast ASTM A126, Class B
3	Baffle	Ductile Iron ASTM A536
4	Seat	Buna-N
5	Float	Stainless Steel ASTM A-240, T304
5-L	Float	Stainless Steel ASTM A-276, T304
6	Gasket	Lexide NK-511 (Non-Asbestos)
7	Cover Bolt	Alloy Steel ASTM ASTM A449 Grade 5
8	Retaining Screw	Stainless Steel ASTM A-276, T304
9	Guide Bushing	Stainless Steel ASTM A-276, T3043
14	Cover Pipe Plug	Malleable Iron
20	Guide Shaft	Stainless Steel ASTM A-276, T304

SERIES MTP 36WW-BW SIDE MOUNTED STYLE

Air and Vacuum Valve

Detail No.	Part Name	Material
1	Body	Cast Iron ASTM A126, Class B
2	Cover	Cast Iron ASTM A126, Class B
4	Seat	Buna-N®
5	Float	Stainless Steel, T304 ASTM 240
6	Gasket	Lexide NK-511 (Non-Asbestos)
7	Cover Bolt	Alloy Steel
8	Retaining Screws	Stainless Steel ASTM A-276, T304
9	Guide Bushing	Stainless Steel ASTM A-276, T303
15	Cushion	Buna-N®
26	Seat Retaining Sleeve	Stainless Steel ASTM A-276, T304



Air Release Valve

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12	Pivot Pin	Stainless Steel T303, ASTM A276a
13	Retaining Ring	Stainless Steel PH 15-7 Mo
14	Pipe Plug	Carbon Steel
17	Float Retainer	Stainless Steel, ASTM T18-8 A276
18	Lock Nut	Stainless Steel T304, ASTM A276
19	Link	Stainless Steel T304, ASTM A240
20	Guide Shaft	Stainless Steel T304, ASTM A269
21	Location Pin	Stainless Steel T420
22	Orifice Button	Stainless Steel T303, ASTM A276
30	Washer	Stainless Steel T18-8, ASTM A240
33	Clevis	Stainless Steel T304, ASTM A240
34	Lock Washer	Stainless Steel T304, ASTM A240
35	Retaining Screw	Stainless Steel T304, ASTM A240

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Backflushing steps are basically the same for all sizes and styles of wastewater Air Release, Air and Vacuum and Combination Valves but there are two ways to accomplish backflushing.

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- 4.