



All valves shall be APCO ASU Combination Air Valves model SCAV 1-6" & CAV 1-4" as manufactured by DeZURIK or approved equal.

Combination Air Valves in sizes 1-6" shall be single body design and shall provide both Air Release and Air/Vacuum valve functions. Working pressures for ASU-SCAV is 150 psi (1030 kPa) and for ASU-CAV is 300 psi (2070 kPa).

Air release shall be accomplished by dual-range venting designed to automatically provide varied and predictable air flow over a wide range of conditions. Air release shall have a 5/16" self-adjusting orifice. The fractional air release orifice must be capable of releasing 140 scfm of air at 150 psi differential pressure.

Valves shall close tightly at any pressure between 2 and 150 psi for ASU-SCAV and 2 and 300 psi for ASU-CAV without leaking or spilling. The Air/Vacuum inlet and outlet areas shall meet the flow area requirements set forth in AWWA C512. In any case, the smallest cross-sectional area must define the size of the valve.

Valve shall have an upper body compression chamber to limit fluid level and solids interference. It shall also have a funnel shaped lower body to reduce solids buildup and allow for self-cleaning and maximum outflow.

A hydraulics-based float design shall be used to reduce the ballistic effect and instability of high speed fluid flow.

The guided float shaft shall provide smooth automatic Air Release and Air/Vacuum operation that will not foul and reduce performance on dirty service applications. To avoid loss of performance, the Air Release and Air/Vacuum seating action shall be direct driven by the shaft-mounted float. No linkages shall be used.

Flow deflector/splash reduction ring shall be used to restrict solids entry and minimize flow effect and splash that can cause float instability.

A 90 degree threaded side outlet shall be included with the valve with an extension pipe. Valves shall be capable of converting to optional vertical threaded outlet or mushroom cap without removing the valve from service and valve disassembly.

Materials of construction:

- Body, float, float shaft and hardware shall be 316 stainless steel
- Piston stem and seat shall be 17-4 PH stainless steel
- Elastomer seals shall be Acrylonitrile-butadiene (NBR)
- Piston stem guides shall be Acetal Polyoxymethylene (POM)

When specified, valves shall be NSF/ANSI 372 certified lead-free and NSF/ANSI 61 certified for drinking water.

When using standard side outlet, the overall valve height and weight shall not exceed:

| <u>Size</u> | <u>Threaded Inlet</u> | | <u>Flanged Inlet</u> | |
|-------------|-----------------------|---------------|----------------------|---------------|
| | <u>Height</u> | <u>Weight</u> | <u>Height</u> | <u>Weight</u> |
| 1", 2" | 22" | 42 lb. | 23" | 47 lb. |
| 3", 4" | 24" | 48 lb. | 26" | 62 lb. |
| 6" | - | - | 27" | 95 lb. |

End connections shall be NPT or ASME 125/150 flanged. Valves shall have two lifting lugs for ease of valve installation.

Warranty Valves and actuators shall be warranted by the manufacturer for defects in materials and workmanship for a period of two years (24 months) from date of shipment.