



Dorot Air Release Valves Models DAV-MP-1A

Design features and test procedure

The Applications features, design, development and manufacture of Dorot Air / Vacuum Valves (DAV) were outlined according to AWWA C512 standard. Based on its fundamentals, other applicable standards were in use for the valves components.

The herein standards and specs are followed for the DAV development and manufacture:

1. Metal components: Base- Brass to EN12164, Cover- Cast Iron to ASTM A126 standards
2. Rubber components: Seal- EPDM, O-ring- NBR standards
3. Internal body: PA6+30GF
4. Threads – NPT, BSP standards
5. Minimum working pressure 0.2bar (3psi)
6. Shell test – 150% of max. working pressure
7. Leakage Test, AWWA C512 – from minimal pressure of 0.2bar (3psi) to 150% of pressure rating.
8. Main orifice size: 12.85mm² (0.02in²)

All valves are tested as follows (considering AWWA C512 as minimal requirement):

1. Shell Test:
Application of internal hydrostatic pressure, 150% of the maximal rated pressure. Visual examination is performed for leakages/dripping, distortion or other anomaly.
2. Seat Leakage Test:
 - 2.1 Minimal test pressure – 0.2bar (3psi). Maximal test pressure – 150% of the maximal pressure rating.
The valve outlet is exposed to atmospheric pressure, performing a drop-tight (zero leakage) sealing for minimal period of 30 seconds.
 - 2.2 Dynamic test – the valve is opened and drop-tight closed, at 0.2bar (3psi) pressure, inspecting its sealing and mechanical reliability at the varying low pressure conditions.
3. Air release under pressure:
The valve is tested for its performance in automatic purging of small quantities of air, while the pipeline is pressurized.
Air is injected to the valve inlet, while in closed, pressurized position. Air release and re-sealing are inspected.

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