NON CLEAN, SEWAGE & WASTEWATER COMBINATION AIR VALVE

Model C50

BERMAD C50 is a high quality combination air valve for a variety of sewage and wastewater networks and operating conditions. It evacuates air during pipeline filling, allows efficient release of air and gas pockets from pressurized pipes, and enables large volume air intake in the event of network draining.

The elongated body and lower float prevent the fluid to be in contact with the upper mechanism.

With its advanced aerodynamic design, double orifice and Surge Protection device (optional), this valve provides excellent protection against air and gas accumulation and vacuum formation with improved sealing under low pressure conditions.

Features & Benefits

- Straight flow body with large diameter automatic orifice: Higher than usual air flow.
- Aerodynamic, full-body kinetic shield: Prevents premature closing without disturbing air intake or discharge.
- Dynamic Sealing: Prevents leakage under low pressure conditions (0.8 psi; 0.05 bar).
- Elongated body design: Prevents solids from making contact with valve’s operating parts.
- Compact, simple and reliable structure with fully corrosion-resistant internal parts: Lower maintenance and increased life span.
- Two service ports: Enabling back flushing and drainage.
- Threaded Side outlet (2”; DN50) for connection of Surge Protection (SP) or Inflow prevention (IP) devices.
- Factory approval and Quality Control: Performance and specification tested and measured with specialized test bench, including vacuum pressure conditions.

Additional Features & Accessories

- Surge Protection (code SP): Smoother operation, preventing damage to the valve and the system.
- Inflow Prevention (code IP): Prevents intake of atmospheric air in cases where this could lead to damaged pumps, required re-priming, or disruption of siphon.
- Drainage Valve (code Z).

Typical Applications

- Pumping stations: Air relief and vacuum prevention.
- Non Clean Water pipelines: Protection against air and gas accumulation and vacuum formation at elevations, slope change points and at road/river crossings.
- Wastewater Treatment plants: Air relief, protection against air and gas accumulation and vacuum formation.

All images in this catalog are for illustration only
Inlet and Outlet Connections

- **Inlets:**
  - Glass-reinforced Nylon Body (C50-P): male threaded 2-3"; DN50-80, flanged 2-4"; DN50-100
  - Ductile Iron Body (C50-C, C50-J): male threaded 2"; DN50, flanged 2-3"; DN50-80
  - Stainless Steel Body (C50-G, C50-N): male threaded 2-3"; DN50-80, flanged 2-3"; DN50-80
- **Outlets:** Sideways, female threaded 2"; DN50

Operational Data

- **Pressure Rating:** 150 psi; ISO PN10 (C50-P), 230 psi; ISO PN16 (C50-C, C50-J, C50-G, C50-N)
- **Minimum operating pressure:** 0.8 psi; 0.05 bar
- **Maximum operating pressure:** 150 psi; 10 bar (C50-P), 230 psi; 16 bar (C50-C, C50-J, C50-G, C50-N)
- **Media and operating temperature:** Water, 33-140°F; 1-60°C

Materials

- **Body, Neck and Cover:**
  - Glass-Reinforced Nylon (C50-P)
  - Ductile Iron (C50-C)
  - Stainless Steel (C50-N)
- **Ductile Iron body with Glass-reinforced Nylon neck and cover (C50-J)
- **Stainless Steel body with Glass-reinforced Nylon neck and cover (C50-G)
- **Upper Float Assembly:** Polypropylene, Glass-Reinforced Nylon.
- **Lower Float Assembly:** Polypropylene, Optional – Stainless Steel.
- **Float Rod:** Stainless Steel
- **Elastomers:** EPDM, NBR. Optional – Viton.
- **Coating of Ductile Iron:** Fusion Bonded Epoxy

Orifice Specifications

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<th>Kinetic Orifice</th>
<th>Surge Protection</th>
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Air Flow Performance Charts

**Air Relief and Intake** (Pipeline Filling, Draining and Vacuum Conditions)

**Air Release** (Pressurized Operation)

Air relief and intake charts are based on actual measurements, made in Bermad Air Flow test bench, according to EN-1074/4 standard and refer to Side outlet. Use Bermad Air software for optimized Sizing & Positioning of Air Valves.

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### Waterworks

**Model C50**

**Air Valve Series**

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**Cutaway - Glass-reinforced Nylon Body (C50-P)**

- Insect Screen
- Kinetic Orifice
- Kinetic Plug
- Top Float
- Cover
- Shock Absorber
- Float Rod
- Main Float
- Male Threaded
- Female Threaded for retrofitting
- Surge Protection (Code SP) or Inflow Prevention (Code IP) functions or drain lines

**Cutaway - Stainless Steel Body (C50-N)**

- Insect Screen
- Kinetic Orifice
- Automatic Orifice
- Kinetic Plug
- Top Float
- Cover
- Shock Absorber
- Float Rod
- Main Float
- Male Threaded
- Female Threaded for retrofitting
- Surge Protection (code C50-SP) or Inflow Prevention (code C50-IP) functions or drain lines

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## Dimensions & Weights

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