COMBINATION AIR VALVE

Model C10

BERMAD C10 is a high quality combination air valve for a variety of irrigation networks and operating conditions.
It evacuates air during pipeline filling, allows efficient release of air pockets from pressurized pipes, and enables large volume air intake in the event of network draining.

Features & Benefits

- Straight flow body with nominal (equal) inlet and outlet size: Higher than usual flow rates.
- Dynamic Sealing: Prevents leakage under low pressure conditions (1.5 psi; 0.1 bar).
- Threaded Side outlet (2"; DN50) for connection of Surge Protection (SP) or Inflow prevention (IP) devices.
- Compact and simple structure, whose internal parts are fully corrosion, chemical and fertilizer resistant: Lower maintenance and increased life span.
- Field proven designed for use in irrigation applications with water quality such as river water, channel water, dam water or treated effluent with high reliability.
- Certified to functional standard: SAI AS4956 (Australia), WSAA (Australia).
- Factory approval and Quality Control: Performance and specification tested and measured with specialized test bench, including vacuum pressure conditions.

Typical Applications

- Main irrigation networks: Protection against air accumulation and vacuum formation downstream of pumps, along supply lines and at elevations in main irrigation networks.
- Irrigation and landscape control heads: Protection against air accumulation and vacuum formation at filtration and fertilization stations and downstream of main control valves.
- Infield Systems: Protection against air accumulation and vacuum formation in proximity to water meters and automatic regulators.

Additional Features & Accessories

- Surge Protection (code SP): the kinetic orifice is partially closed during the second stage of the air relief, preventing damage to the air valve and the system.
- Assisted Closing (code AC): the kinetic orifice is set to be partially closed during air relief.
- 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.
- Service Ports (code P) fitted with ⅛"; DN3 or ¼"; DN6 plug for pressure gauge connection, check point or test drain for air valve function.
- Test point (code T).
- Female threaded (code 077, 017) ¾"; DN20 outlet, only for inlet sizes ¾"-1"; DN20-25.
- 90 degrees elbow: Snapped to the outlet, for ¾"; DN20 connection to drainage pipeline, only for inlet sizes ¾"-1"; DN20-25.
- Extension with downwards outlet, only for inlet sizes 2-3"; DN50-80.

C10 Threaded ¾"-1"; DN20-25

C10 Threaded 2"; DN50

C10 Flanged 2"-3"; DN50-80

Inlet and Outlet Connections

- Inlets: Male threaded ¾-2"; DN20-50, flanged 2-3"; DN50-80
- Outlets: Sideways, female threaded 2"; DN50 only for inlet sizes 2-3"; DN50-80

Operational Data

- Pressure Rating: ISO PN10 or ISO PN12
- Minimum operating pressure: 0.1 bar
- Maximum operating pressure: 10 or 12 bar
- Media and operating temperature: Water, 1-60°C

Materials

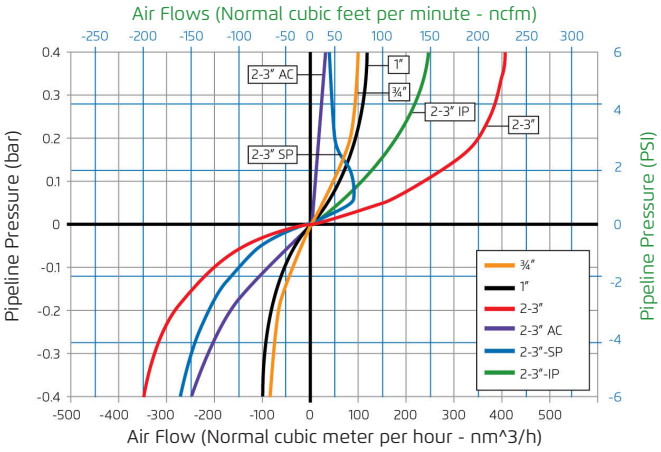
- Body: Glass-Reinforced Nylon
- Float: Polypropylene, Glass-reinforced Nylon
- Elastomers: EPDM. Optional – Viton, only for inlet sizes 2"-3"; DN50-80

Orifice Specifications

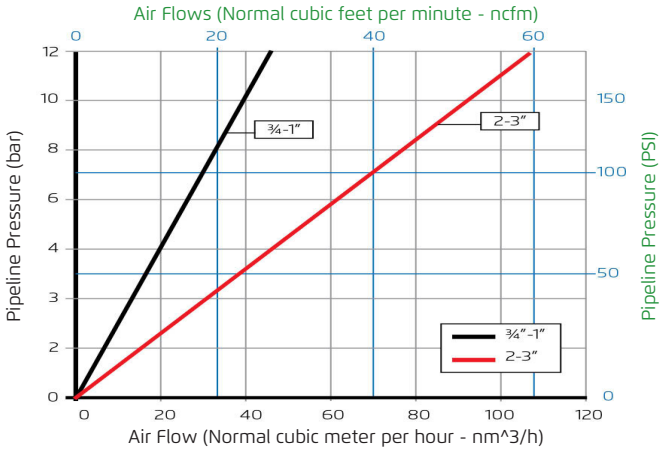
Inlet Sizes	Automatic Orifice	Kinetic Orifice		Surge Protection / Assisted Closing		
	Area	Diameter	Area	Number of holes	Hole Diameter	Total Area
Inch; mm	Sq mm	mm	Sq mm	--	mm	Sq mm
¾"-1"; DN20-25	5.4	20.2	320	---	---	---
2"-3"; DN50-80	12.2	45.0	1,590	4	4	50

Air Flow Performance Charts

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



Air Release (Pressurized Operation)



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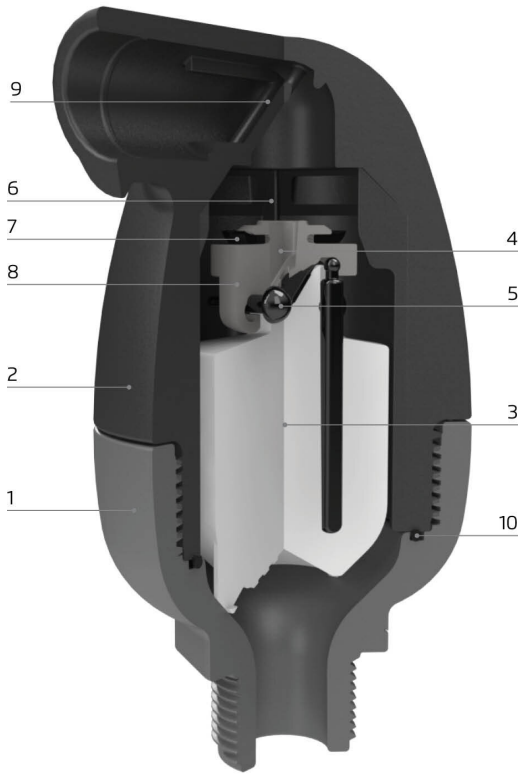
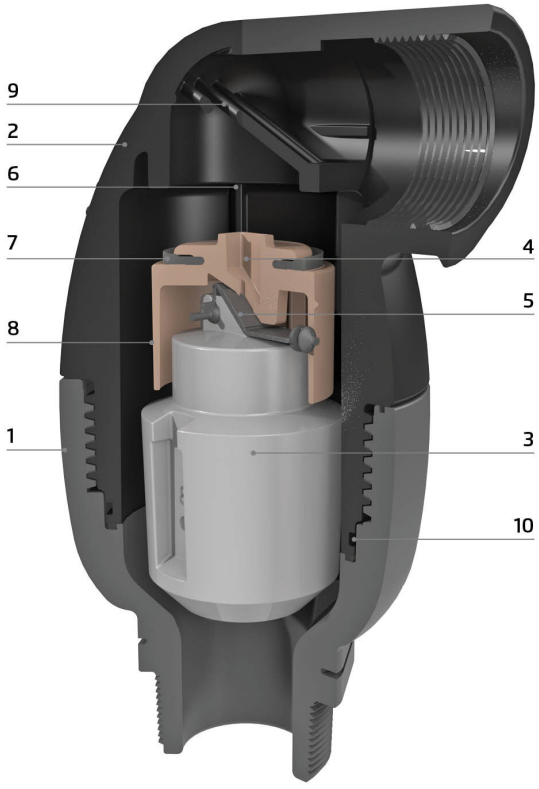
Cutaway - ¾"-1"; DN20-25

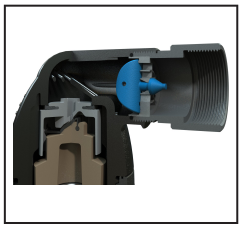


[1] Base
[2] Body
[3] Float
[4] Auto Orifice
[5] Auto Orifice Seal
[6] Kinetic Orifice
[7] Kinetic Orifice Seal
[8] Kinetic Plug
[9] Insect Screen
[10] O-Ring

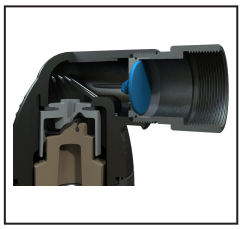
Cutaway - 2"-3"; DN50-80



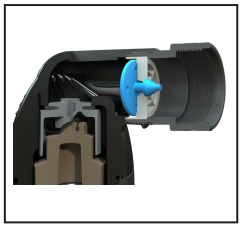
[1] Base
[2] Body
[3] Float
[4] Auto Orifice
[5] Auto Orifice Seal
[6] Kinetic Orifice
[7] Kinetic Orifice Seal
[8] Kinetic Plug
[9] Insect Screen
[10] O-Ring



Surge Protection (code SP), only for inlet sizes 2-3"; DN50-80



Inflow Prevention (code IP), only for inlet sizes 2-3"; DN50-80



Assisted Closing (code AC), only for inlet sizes 2-3"; DN50-80

Extension with downwards outlet, only for inlet sizes 2-3"; DN50-80

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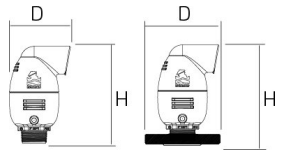
Dimensions & Weights



Threaded Connection ¾"-1"; DN20-25

Threaded Connection 2"; DN50

Flanged Connection 2"-3"; DN50-80

Inlet Sizes	Connection	Width (D)	Height (H)	Weight	Width (D)	Height (H)	Weight	Width (D)	Height (H)	Weight
in; mm		mm	mm	Kg	mm	mm	Kg	mm	mm	Kg
¾"-1"; DN20-25	Threaded	97	160	0.5	---	---	---	---	---	---
2"; DN50	Threaded	---	---	---	143	240	1.5	---	---	---
2"; DN50	Flanged	---	---	---	---	---	---	165	240	1.95
3"; DN80	Flanged	---	---	---	---	---	---	200	253	3.1

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