COMBINATION AIR VALVE

Model C30-C

BERMAD C30 is a high quality combination air valve for a variety of water 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.
With its advanced aerodynamic design, double orifice and Surge Protection device (optional), this valve provides excellent protection against air accumulation and prevents vacuum formation, with improved sealing in low pressure conditions.

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).
- Surge Protection (code SP) as standard feature for 2"; DN50. The kinetic orifice is partially closed during the second stage of the air relief, preventing damage to the air valve and the system.
- Compact and simple structure with fully corrosion resistant internal parts: Lower maintenance and increased life span.
- WRAS (UK), EN-1074/4 (Europe), SAI AS4956 (Australia), WSAA (Australia), PUB SS 375 (Singapore). Designed in compliance with AWWA C512 (USA).
- Certified to functional standards: WRAS (UK), EN-1074/4 (Europe), SAI AS4956 (Australia), WSAA (Australia), PUB SS 375 (Singapore).
- Designed in compliance with AWWA C512 (USA).
- Certified to drinking water standards: WRAS (UK), ACS (France), NSF-ANSI-CAN 61 and NSF-ANSI 372 (USA), SAI AS4020 (Australia), PUB SS 375 and SS 270 (Singapore).
- Factory approval and Quality Control: Performance and specification tested and measured with specialized test bench, including vacuum pressure conditions.

Typical Applications

- Pipelines: Protection against air accumulation and vacuum formation at elevations, slope change points and road / river crossings.
- Water networks: Protection against air accumulation and vacuum formation.
- In proximity to control valves and water meters: Prevention of inaccurate pressure regulation and biased readings due to air existence in these devices.

Additional Features & Accessories

- Assisted Closing (code AC): the kinetic orifice is set to be partially closed during air relief.
- 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.
- Extension with downwards outlet, only for inlet size 2"; DN50.



C30-C Threaded 1"; DN25



C30-C Threaded 2"; DN50 with Surge Protection



C30-C Flanged 2"; DN50 with Surge Protection

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Inlet and Outlet Connections

- Inlets: Male threaded 1-2"; DN25-50, flanged 2"; DN50
- Outlets:
  - Inlet connection 1"; DN25: Sideway, Female threaded ¾"; DN20
  - Inlet connection 2"; DN50: Sideway, Female threaded 2"; DN50

Materials

- Body: Ductile Iron
- Coating: Fusion Bonded Epoxy
- Float: Polypropylene, Glass-reinforced Nylon
- Elastomers: EPDM. Optional - Viton, only for inlet sizes 2"; DN50

Operational Data

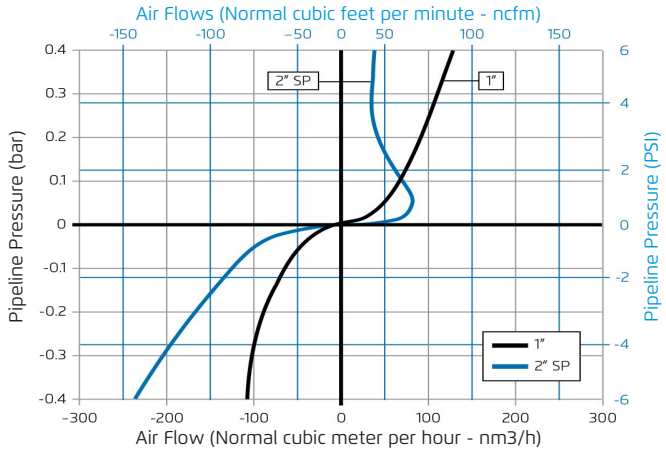
- Pressure Rating: ISO PN16
- Minimum operating pressure: 0.1 bar
- Maximum operating pressure: 16 bar
- Media and operating temperature: Water, 1-60°C

Orifice Specifications

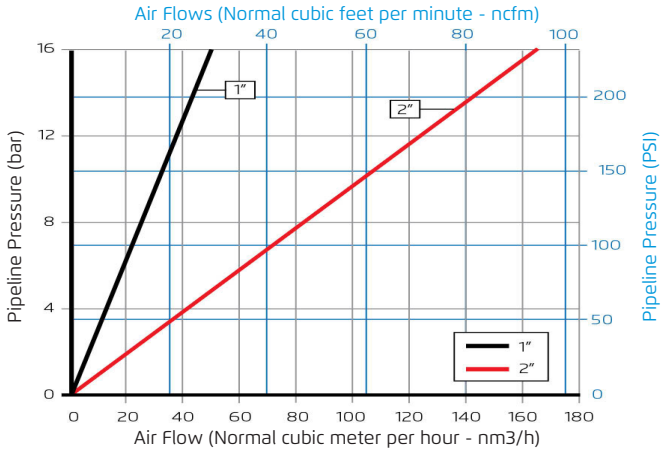
Inlet Sizes	Automatic Orifice	Kinetic Orifice		Surge Protection / Assisted Closing		
	Area	Diameter	Area	Number of holes	Hole Diameter	Total Area
Inch; mm	Sq mm	mm	Sq mm	--	mm	Sq mm
1"; DN25	5.4	20.2	320	---	---	---
2"; DN50	12.2	45.0	1,590	4	4	50

Air Flow Performance Charts

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



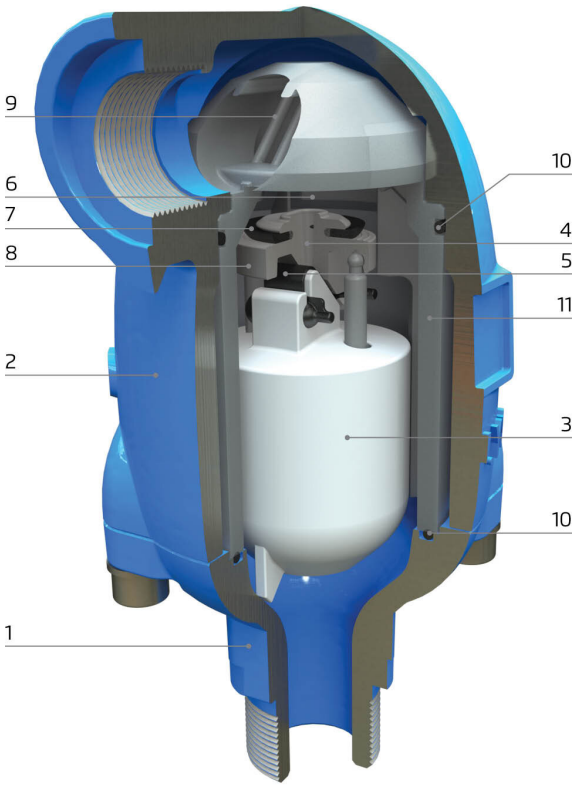
Air Release (Pressurized Operation)



- For higher automatic air release capacity, Please consult with BERMAD.
- Air relief and intake charts are based on actual measurements, measured in Bermad Air Flow test bench, according to EN-1074/4 and AS4883 standard and refer to side outlet. Use Bermad Air software for optimized Sizing & Positioning of Air Valves.

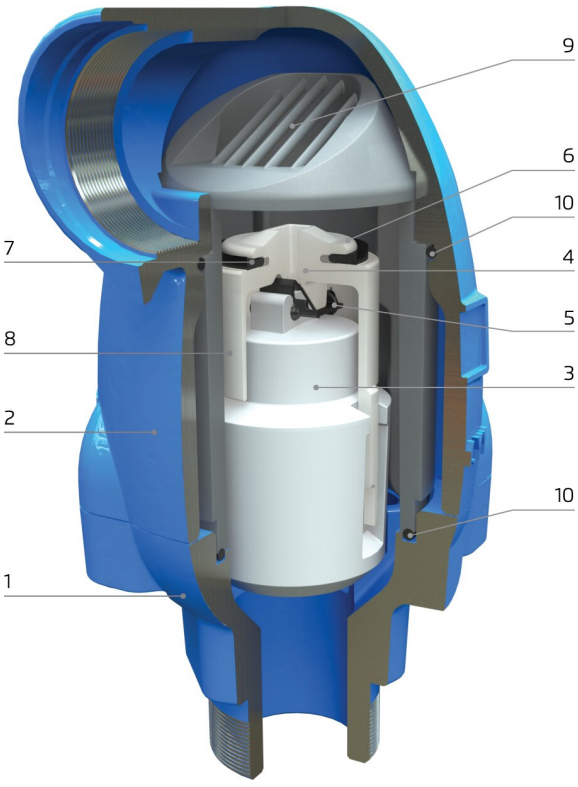
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Cutaway - 1"; DN25

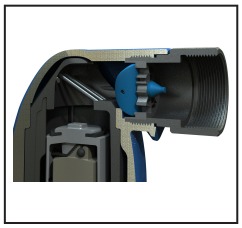


[1] Base
[2] Body
[3] Float
[4] Auto Orifice
[5] Auto Orifice Seal
[6] Kinetic Orifice
[7] Kinetic Orifice Seal
[8] Kinetic Plug
[9] Insect Screen
[10] O-Ring

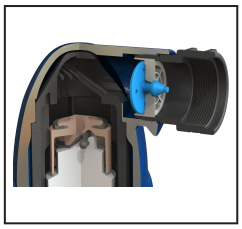
Cutaway - 2"; DN50



[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"; DN50



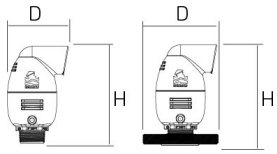
Assisted Closing (code AC), only for inlet sizes 2"; DN50



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

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Dimensions & Weights





Threaded Connection 1"; DN25



Threaded Connection 2"; DN50 with Surge Protection



Flanged Connection 2"; DN50 with Surge Protection

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
1"; DN25	Threaded	110	180	2.2	---	---	---	---	---	---
2"; DN50	Threaded	---	---	---	190	248	5.9	---	---	---
2"; DN50	Flanged	---	---	---	---	---	---	215	265	8.1

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