

COMBINATION AIR VALVE

Ductile Iron

Model C72-VB-C

BERMAD C72-VB is a high quality dual body combination air valve with vacuum breaker feature for water networks. It allows efficient release of air pockets from pressurized pipes, and enables large volume air intake in the event of network draining. The valve designed for protection against vacuum formation, while preventing water hammer during pipeline filling. It provides also protection against air accumulation.

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 (3.0 psi; 0.2 bar).
- Vacuum Breaker features - the kinetic orifice is set to be closed during air relief and to be open at vacuum conditions
- Compact and simple structure with fully corrosion resistant internal parts: Lower maintenance and increased life span.
- Two optional outlets (sideways, downwards) that can swivel 360°: Easy to install in a variety of site conditions.
- Factory approval and Quality Control: Performance and specification tested and measured with specialized test bench, including vacuum pressure conditions.
- Designed in compliance with functional standards and water service standards.

Typical Applications

- Pipelines: Protection against air accumulation and vacuum formation at elevations, slope change points and road / river crossings.
- Pumping stations and deep well pumps: Protection against air accumulation and vacuum formation.

Additional Features & Accessories

- Service port (code P) fitted with 1/4"; DN6 plug for pressure gauge connection, check point or test drain for air valve function.
- Drainage Valve (code Z).
- Extension with downwards outlet, only for inlet sizes 2-3"; DN50-80.
- Insect Screen (code S).



C72 Side Outlet



C72 Down Outlet



Inlet and Outlet Connections

- Inlets: Female threaded 2"; DN50, flanged 2-8"; DN50-200
- Outlets:
 - Downwards, 2-8", DN50-200 without a connection to drainage pipeline
 - Sideways, female threaded 2-3"; DN50-80, grooved 4-8", DN100-200. Optional addition of extension with 90 degrees for 2-3"; DN50-80

Materials

- Body: Ductile Iron
- Kinetic Orifice (Top plate): Stainless Steel, Ductile Iron
- Coating: Fusion Bonded Epoxy
- Automatic Orifice: Stainless Steel
- Float: Polypropylene, Glass-reinforced Nylon
- Elastomers: EPDM, NBR

Operational Data

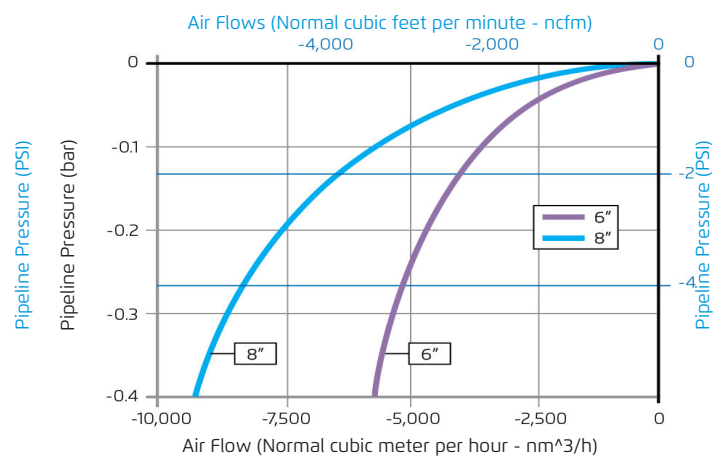
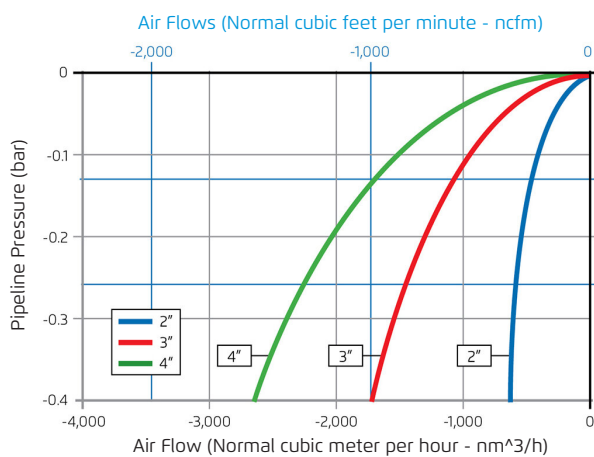
- Pressure Rating: 230 psi, 360 psi, 580 psi
- Minimum operating pressure: 3.0 psi
- Maximum operating pressure: 230 psi, 360 psi, 580 psi
- Media and operating temperature: Water, 33-140°F

Orifice Specifications

Inlet Sizes	Automatic Orifice Area (A72)			Kinetic Orifice		Surge Protection		
	230 psi	360 psi	580 psi	Diameter	Area	Number of holes	Hole Diameter	Total Area
Inch; mm	Sq inch	Sq inch	Sq inch	Diameter	Area	--	inch	Sq inch
2"; DN50	0.005	0.004	0.003	2.0	3.142	4	0.197	0.122
3"; DN80	0.005	0.004	0.003	3.0	7.069	4	0.315	0.312
4"; DN100	0.005	0.004	0.003	4.0	12.566	4	0.394	0.487
6"; DN150	0.005	0.004	0.003	6.0	28.274	4	0.591	1.096
8"; DN200	0.005	0.004	0.003	8.0	50.265	4	0.787	1.948

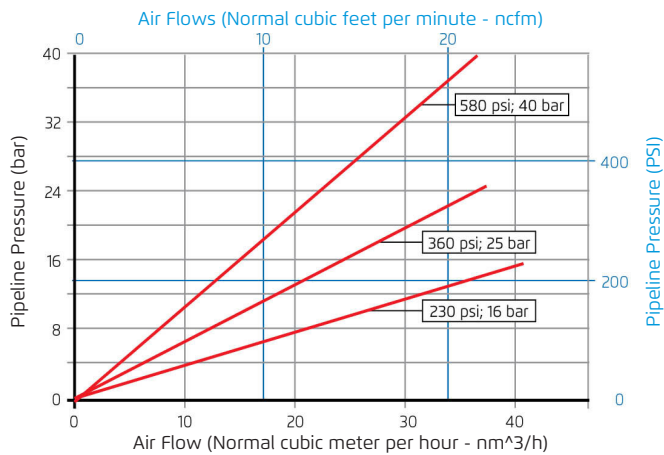
Air Flow Performance Charts

Air Intake (Vacuum Conditions)



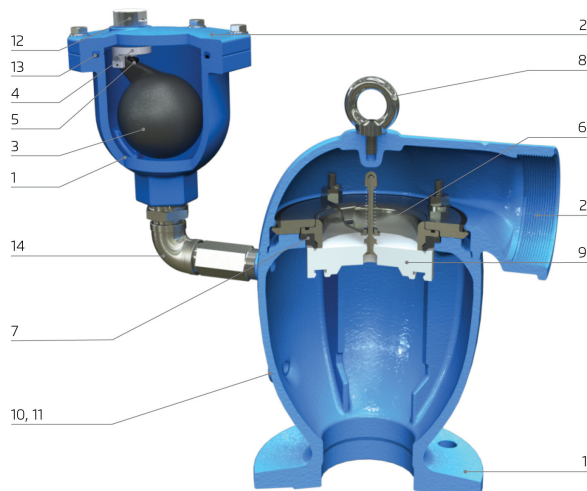


Air Release (Pressurized Operation)



- 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.

Cutaway



- [1] Body
- [2] Cover
- [3] Float
- [4] Auto Orifice
- [5] Auto Orifice Seal
- [6] Kinetic Orifice
- [7] Kinetic Orifice Seal
- [8] Eye Bolt
- [9] Vacuum Breaker disc
- [10] Service port (optional)
- [11] Drainage valve (optional)
- [12] Auto orifice cover
- [13] O - Ring
- [14] Fittings



Dimensions & Weights

		Side Ductile Outlet			Down Ductile Outlet		
Inlet Sizes	Connection	Width (D)	Height (H)	Weight	Width (D)	Height (H)	Weight
in; mm		in	in	lbs	in	in	lbs
2"; DN50	Threaded	12.6	14.12	28.3	14.4	14.2	29.4
2"; DN50	Flanged	12.6	14.2	35.2	14.4	14.2	36.3
3"; DN80	Flanged	14.8	15.6	55.7	17.5	15.6	56.5
4"; DN100	Flanged	16.3	16.7	75.1	23.9	16.7	77.8
6"; DN150	Flanged	22.0	22.8	149.7	26.8	22.8	156.7
8"; DN200	Flanged	26.6	30.5	304.4	32.5	30.5	312.3