COMBINATION AIR VALVE

Model C70-AC

BERMAD C70-AC 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 assisted closing Surge Protection (Anti-slam / slow closing) device, this valve provides excellent protection against air accumulation, vacuum formation and pressure surges, with improved sealing in low pressure conditions. The valve minimizes water spraying during air release.

C70-AC (Assisted Closing)
advanced surge protection with side outlet

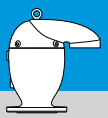
Typical Applications

- Pumping stations and deep well pumps: Air relief, surge protection and vacuum prevention.
- Pipelines: Protection against air accumulation and vacuum formation at elevations, slope change points and at road/river crossings.
- Water networks: Protection against vacuum formation, surge and water hammers at points likely to experience water column separation.

Features & Benefits

- Straight flow body with nominal (equal) inlet and outlet size: Higher than usual flow rates.
- Aerodynamic full-body kinetic shield: Prevents premature closing without disturbing air intake or discharge.
- Dynamic sealing: Prevents leakage under low pressure conditions (1.5 psi; 0.1 bar).
- Minimizes water spraying during air release: Innovative 2-step function, automatic orifice (Patent Pending).
- Three optional outlets (sideways, downwards, circular-surround mushroom configuration) that can swivel 360°: Easy to install in a variety of site conditions.
- Compact, simple, robust and reliable structure with fully corrosion-resistant parts: Lower maintenance and increased life span.
- Approved to AS4945-2017 / AS4020 & appraised with WSAA.
- Factory approval and Quality Control: Performance and specification tested and measured with specialized test bench, including vacuum pressure conditions.

All images in this catalog are for illustration only



Valve models, functions & accessories

- C70-AC (Assisted Closing)
  - Combination air valve with assisted closure to ensure maximum surge mitigation in the event of column separation.
  - Valve has slow controlled air discharge, unrestricted air inflow and automatic air release.
- Note :
  - All valves are fitted with the lower body threaded connection and drainage valve (code Z)

Valve Inlet connections

- Threaded valves - (2") BSPT female
- Flanged
  - AS4087-PN16
  - AS4087-PN35
  - AS2129 T/E
  - ANSI-150/300 on request

Materials

- Body and cover
  - Cast Ductile Iron - standard (sizes 2-8")
  - Stainless Steel 316 optional (sizes 2-6")
- Coating - Fusion bonded epoxy (blue) to AS4158
- Top plate - Stainless Steel 316, Ductile Iron
- Float assembly - Polypropylene, glass reinforced nylon
- Automatic orifice - Stainless Steel 316
- Elastomers - EPDM

Operational Data

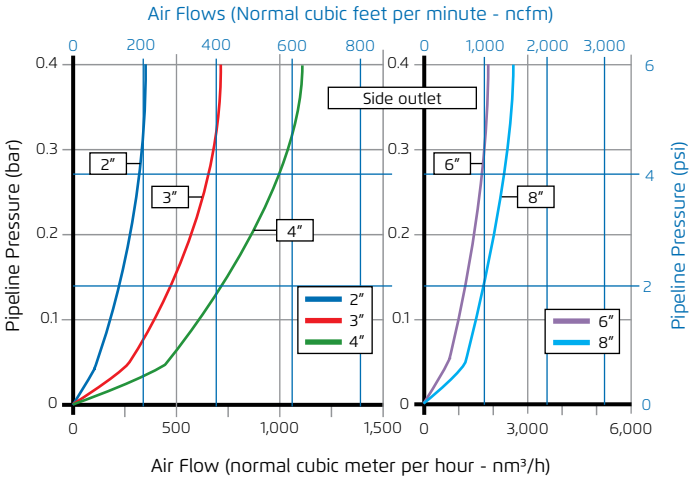
- Pressure rating PN16 or PN35 standard (PN40 on request)
- Minimum sealing pressure: 0.1 bar
- Maximum operating pressure: 16 bar or 35 bar
- Media and operating temperature: Water 1-60 degrees C

Orifice Specifications

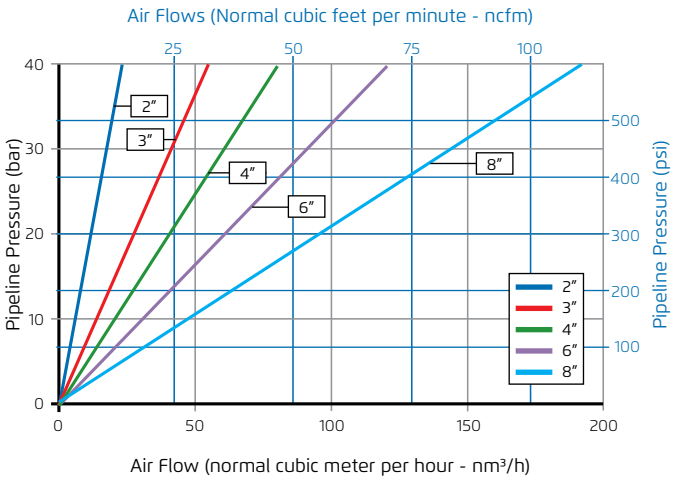
Inlet Size	Automatic Orifice Area		Kinetic Orifice		Assisted Closing Surge Protection		
	PN16	PN35	Diameter	Area	Number of holes	Hole Diameter	Total Area
mm	Sq mm	Sq mm	mm	Sq mm	---	mm	Sq mm
DN50	1.1	0.4	50	1,963	4	5	79
DN80	2.5	1	80	5,027	4	8	201
DN100	3.1	1.3	100	7,854	4	10	314
DN150	9.1	3.5	150	17,671	4	15	707
DN200	22.1	8	200	31,416	4	20	1,257

Air Flow Performance Charts

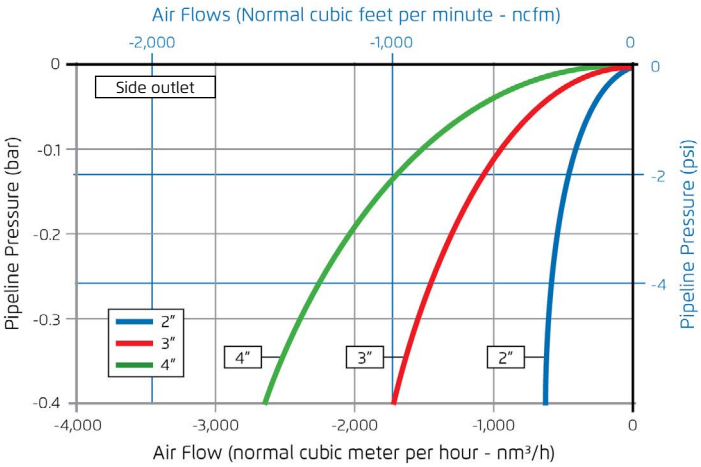
Air Relief with Assisted Closing Surge Protection (Pipeline Filling)

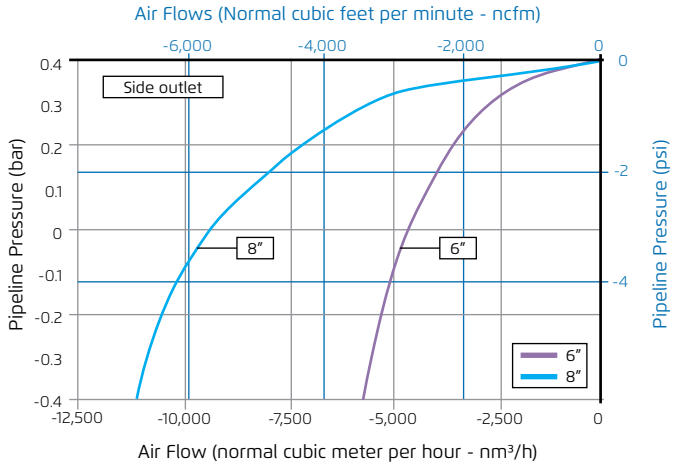


Air Release (Pressurized Operation)



Air Intake (Draining and Vacuum Conditions)



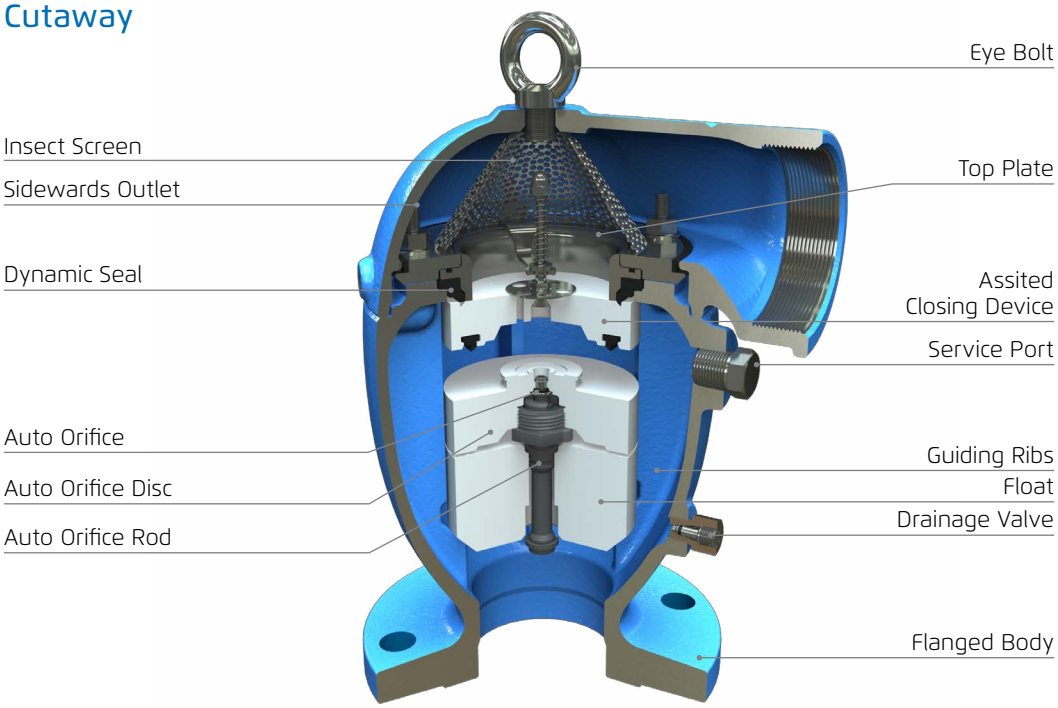


Data for C70 with Assisted Closing Feature

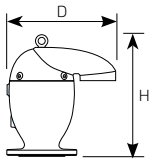
Inlet Size	C70-AC Air relief at 6 psi; 0.4 bar
	Side
mm	nm³/h
DN50	350
DN80	700
DN100	1,100
DN150	1,680
DN200	2,580

Air intake charts for inlet sizes 2-8"; DN50-200 are based on actual measurements, measured during 2014-2015 in Bermad Air Flow test bench,according to EN-1074/4 standard and recongnized by AS-4598 (2008) standard. For Side outlet air flow performance, please consult with BERMAD.Use Bermad Air software for optimized Sizing & Positioning of Air Valves

Cutaway



Dimensions & Weights **



Side Ductile Outlet

Inlet Size	Connection	Width (D)	Height (H)	Weight
Inch	---	inch	inch	lbs
mm		mm	mm	Kg
2"	Threaded	7.362	11.575	17.2
DN50		187	294	7.8
2"	Flanged	7.362	12.205	22.0
DN50		187	310	10.0
3"	Flanged	9.843	14.016	37.0
DN80		250	356	16.8
4"	Flanged	11.339	16.260	49.1
DN100		288	413	22.3
6"	Flanged	15.512	22.441	110.2
DN150		394	570	50.0
8"	Flanged	20.394	30.315	266.7
DN200		518	770	121.0

** Dimension and weight may vary based on the final configuration. Please contact Bermad.