



COMBINATION AIR VALVE

Model C75-AC

BERMAD C75-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: 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.





Valve models, functions & accessories

- C70-AC (Assisted Closure)
 - 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

- Flanged
 - AS4087-PN16
 - AS4087-PN35
 - AS2129 T/E
 - ANSI-150/300 on request

Materials

- Body and cover
 - Cast Ductile Iron - standard (sizes 3-10")
 - Stainless Steel 316 optional (sizes 3-8")
- 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

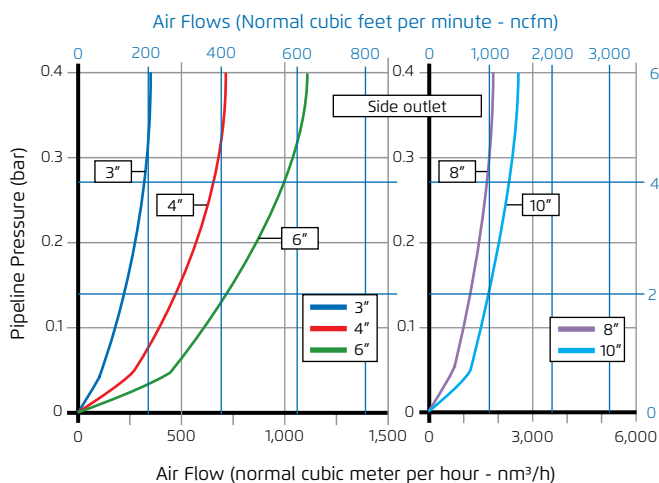
Orifice Specifications

Inlet Size	Automatic Orifice Area		Kinetic Orifice		Surge Protection		
	PN16	PN35	Diameter	Area	Number of holes	Hole Diameter	Total Area
mm	Sq mm	Sq mm	mm	Sq mm	---	mm	Sq mm
DN80	1.1	0.4	50	1,963	4	5	79
DN100	2.5	1	80	5,027	4	8	201
DN150	3.1	1.3	100	7,854	4	10	314
DN200	9.1	3.5	150	17,671	4	15	707
DN250	22.1	8	200	31,416	4	20	1,257

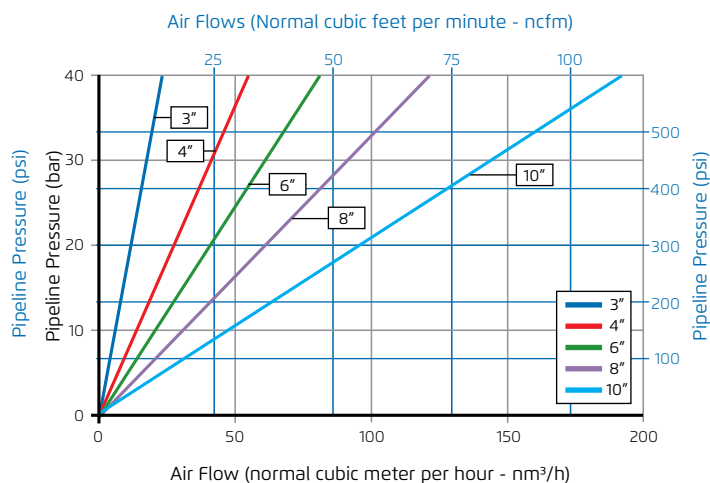


Air Flow Performance Charts

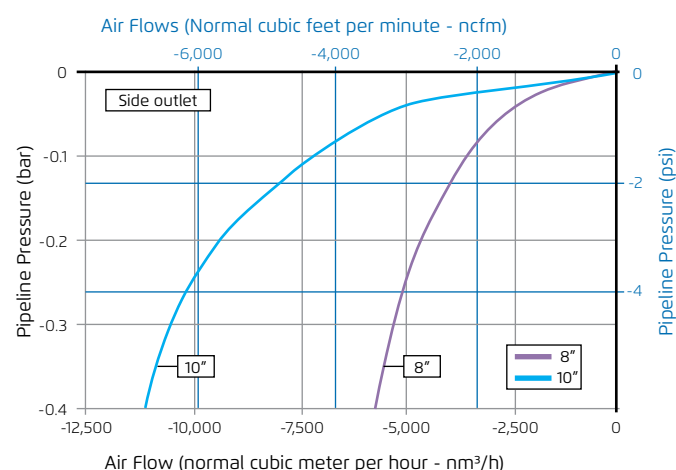
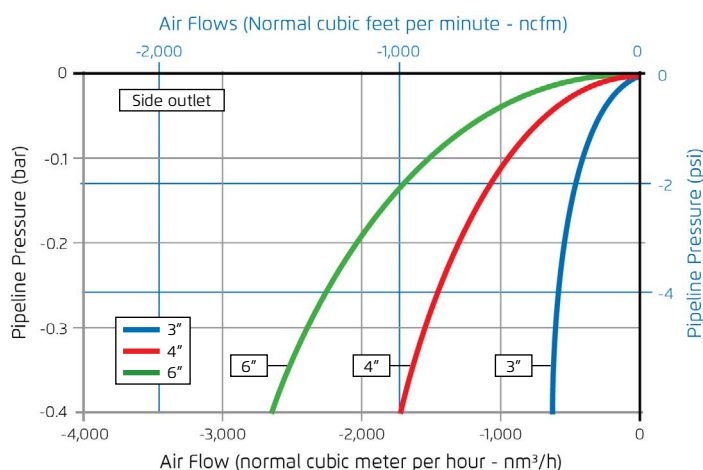
Air Relief with Assisted Closing Surge Protection (Pipeline Filling)



Air Release (Pressurized Operation)



Air Intake (Draining and Vacuum Conditions)



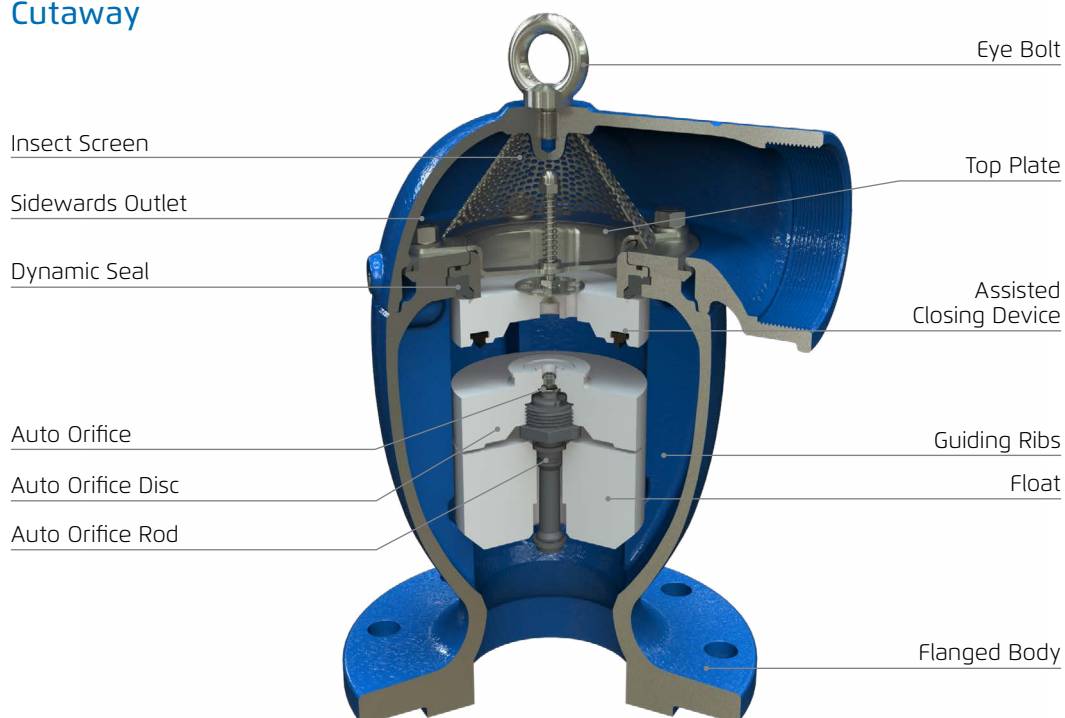
Data for C75 with Assisted Closing Feature

Inlet Size	C70-AC Air relief at 6 psi; 0.4 bar
	Side
mm	nm³/h
DN80	350
DN100	700
DN150	1,100
DN200	1,680
DN250	2,580

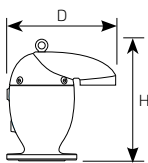

Air intake charts for inlet sizes 3"-10"; DN80-200 are based on actual measurements, measured during 2014-2015 in Bermad Air Flow test bench, according to EN-1074/4 standard and recognized by AS-4598 (2008) standard. For Side outlet air flow performance, please consult with BERMAD. Use Bermad Air software 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
3"	Flanged	7.874	12.598	30.8
DN80		200	320	14.0
4"	Flanged	10.335	14.567	54.6
DN100		263	370	24.8
6"	Flanged	12.402	17.047	82.2
DN150		315	433	37.3
8"	Flanged	15.945	23.346	145.7
DN200		405	593	66.1
10"	Flanged	20.138	30.945	305.1
DN250		512	786	138.4

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