

# COMBINATION AIR VALVE

## Model C30

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 large diameter automatic orifice: 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).
- The boss on the base can be tapped with a thread for pressure gauge connection, check point or test drain for air valve function.
- Threaded Side outlet (2"; DN50) for connection of Surge Protection (code SP) or Inflow prevention (code IP) devices.
- Compact, simple and reliable structure with fully corrosion-resistant internal parts; lower maintenance and increased life span.
- Design in compliance with functional standard and water service standards.
- Factory approval and Quality Control: Performance and specification tested and measured with specialized test bench, including vacuum pressure conditions.

### Additional Features & Accessories

- Surge Protection (code SP) device: Smoother operation, preventing damage to the valve and the system.
- Inflow Prevention (code IP) device: Prevents intake of atmospheric air in cases where this could lead to damaged pumps, required re-priming, or disruption of siphons.
- Assisted Closing - the kinetic orifice is set to be partially closed (code AC) for controlled slow air relief, subsequently avoiding the possibility of surge event during pipeline filling or column separation.
- Service Ports fitted: 1/8";DN3 or 1/4";DN6 plug (code P) for pressure gauge connection, check point or test drain for air valve function.
- 90 degrees elbow: snapped to the outlet, only for inlet sizes 3/4-1"; DN20-25.
- Addition of Female Thread 3/4"; DN20 (code 077, 017) to the outlet, only for inlet sizes 3/4-1"; DN20-25.
- Extension with downwards outlet, only for inlet sizes 2-3"; DN50-80.

All images in this catalog are for illustration only



C30-P

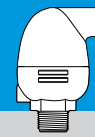


C30-C



### 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.



### Inlet and Outlet Connections

- Inlets:
  - Glass-reinforced Nylon (code C30-P): male threaded 3/4-2"; DN20-50, Flanged 2-3"; DN50-80
  - Ductile Iron Body (code C30-C): male threaded 1-2"; DN25-50, Flanged 2"; DN50
- Outlets:
  - Glass-reinforced Nylon Body (code C30-P):
    - Inlet connections 3/4-1"; DN25: Sideway, not threaded.
    - Inlet connections 2-3"; DN50-80: Sideway Outlet, Female threaded 2"; DN50
  - Ductile Iron Body (code C30-C):
    - Inlet connection 1"; DN25: Sideway Outlet, Female threaded 3/4"; DN20
    - Inlet connections 2"; DN50: Sideway Outlet, Female threaded 2"; DN50

### Materials

- Body
  - Glass-reinforced Nylon (code C30-P)
  - Ductile Iron (code C30-C), coated with Fusion Bonded Epoxy, Blue
- Float Assembly: Polypropylene, Glass Reinforced Nylon.
- Elastomers: EPDM, Optional - Viton.

### Operational Data

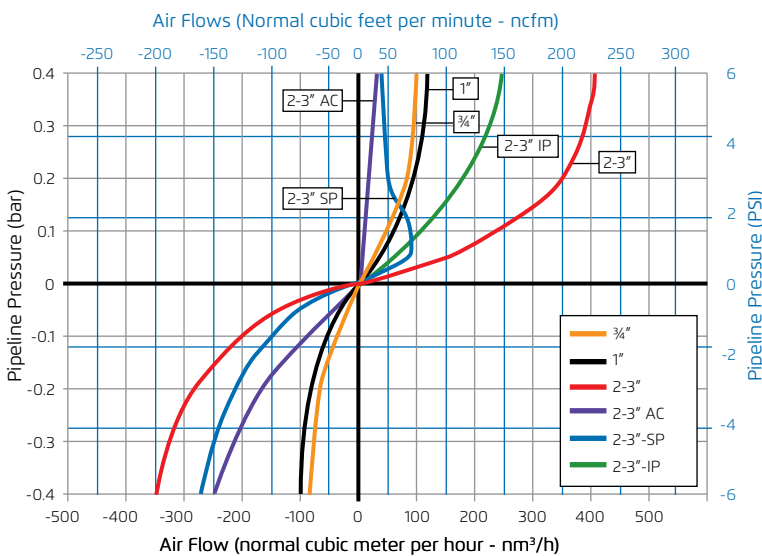
- Pressure Rating: 230 psi; ISO PN16
- Minimum operating pressure: 1.5 psi; 0.1 bar
- Maximum operating pressure: 230 psi; 16 bar
- Media and operating temperature: Water, 33-140°F; 1-60°C

### Orifice Specifications

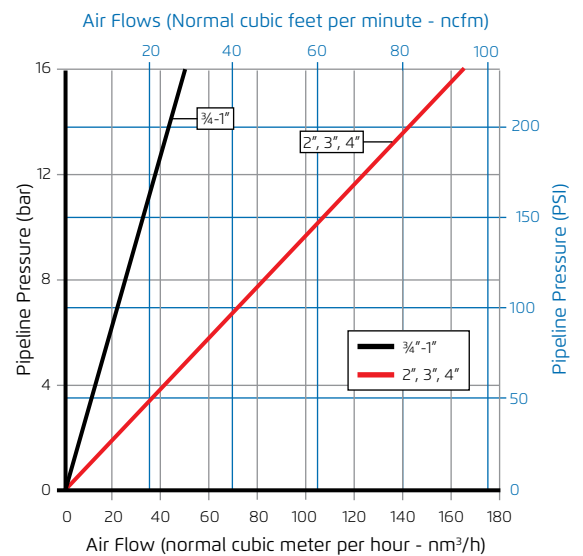
Inlet Sizes	Automatic Orifice	Kinetic Orifice		Surge Protection / Assisted Closing		
	Area	Diameter	Area	Number of holes	Hole Diameter	Total Area
	Sq Inch	inch	Sq inch		inch	
3/4" - 1"	0.008	0.795	0.497	—	—	—
DN20 - 25	5.4	20.2	320	—	—	—
2" - 3"	0.019	1.772	2.465	4	0.157	0.078
DN50 - 80	12.2	45.0	1,590		4	50

### Air Flow Performance Charts

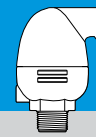
**Air Relief and Intake** (Pipeline Filling, Draining and Vacuum Conditions)



**Air Release** (Pressurized Operation)

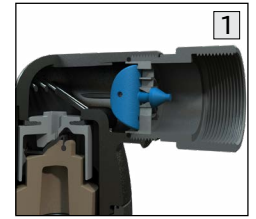
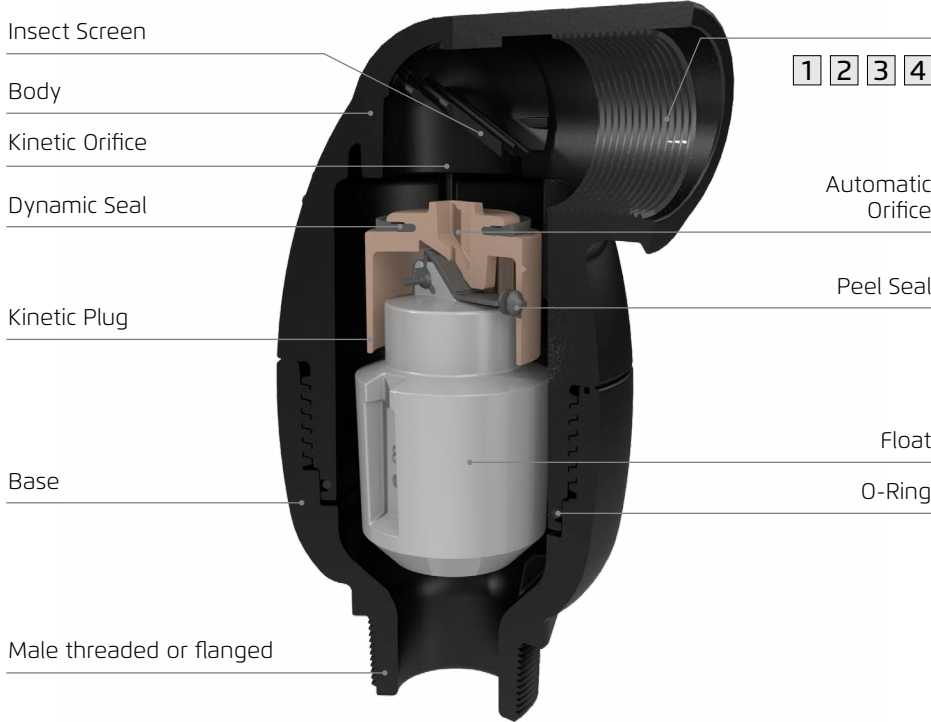


Air relief and intake charts are based on actual measurements, measured in Bermad Air Flow test bench, according to EN 1074-4 et AS4956 standards standard and refer to Side outlet. Use Bermad Air software for optimized Sizing & Positioning of Air Valves.

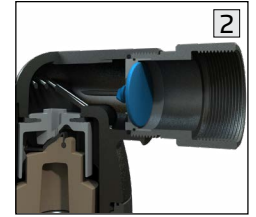


### Cutaway - Glass Reinforced Nylon Body (C30-P)

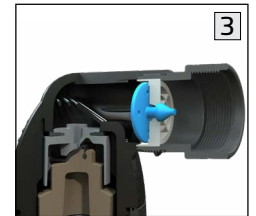
Female Threaded (only for inlet sizes 2-3"; DN50-80) for retrofitting Surge Protection (code SP), Assisted Closing (code AC) or Inflow Prevention (code IP) devices or drain lines.



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



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



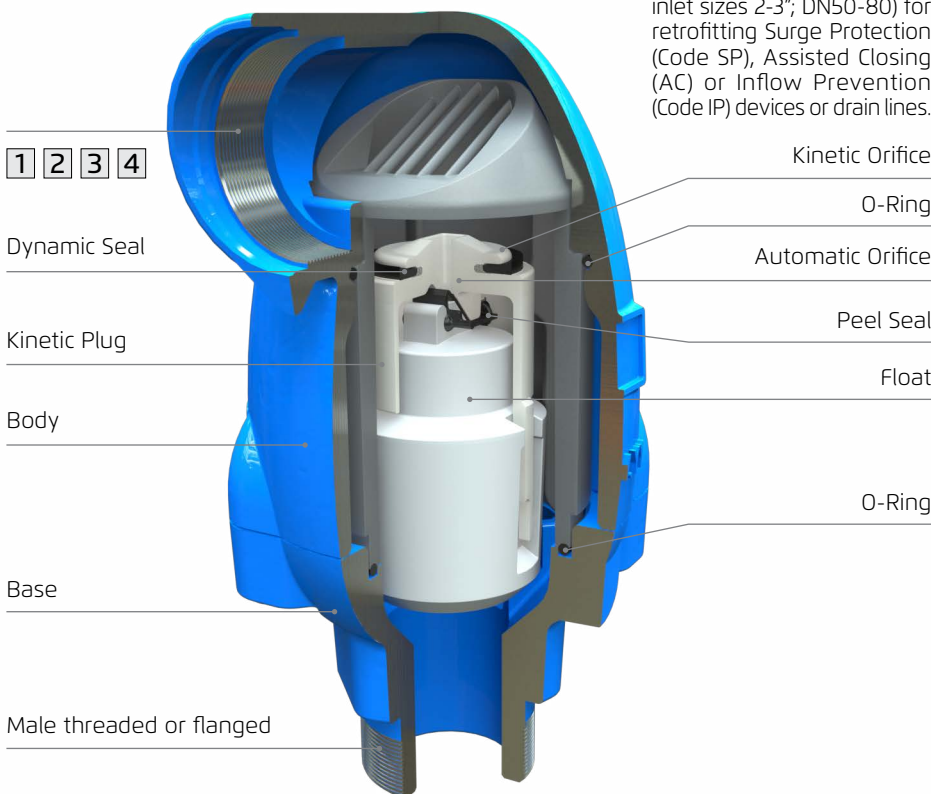
Assisted Closing (code AC), only for inlet sizes 2-3"; DN50-80



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

### Cutaway - Ductile Iron Body (C30-C)

Female Threaded (only for inlet sizes 2-3"; DN50-80) for retrofitting Surge Protection (Code SP), Assisted Closing (AC) or Inflow Prevention (Code IP) devices or drain lines.





### Dimensions & Weights

		C30-P			C30-C		
Inlet Size	Connection	Width (D)	Height (H)	Weight	Width (D)	Height (H)	Weight
		inch	inch	lbs	inch	inch	lbs
mm	---	mm	mm	Kg	mm	mm	Kg
3/4"	Threaded	3.819	6.299	1.10	--	--	--
DN20		97	160	0.5	--	--	--
1"	Threaded	3.819	6.299	1.10	4.331	7.087	4.85
DN25		97	160	0.5	110	180	2.2
2"	Threaded	5.630	9.449	3.31	6.181	9.764	13.66
DN50		143.01	240	1.5	157	248	6.2
2"	Flanged	6.496	9.449	4.30	7.480	10.551	15.0
DN50		165	240	1.95	190	268	6.8
3"	Flanged	7.874	9.961	6.83	--	--	--
DN80		200	253	3.1	--	--	--