

COMBOAIR® NXP

Anti-Surge, Non-Slam, Combination Air Valve



 CLEAN/POTABLE
WATER LINE



COMBOAIR® NXP

ANTI-SURGE NON-SLAM

COMBINATION AIR VALVE

Flomatic's model ComboAir® NXP is a full-bore, single chamber, 4-function combination air valve equipped with an integrated non-slam surge prevention system to reduce the risk of water hammer in clean and potable water applications.

The air valve provides large orifice air discharge during pipe filling, small orifice release of air pockets accumulated during operation, and the intake of large volumes of air during pipeline draining or pipe bursts to prevent negative pressure and potential pipeline damage. The DVC (Dynamic Velocity Control™) surge prevention system automatically regulates the outflow capacity, reducing the velocity of the incoming water column to reduce the risk of water hammer.

APPLICATIONS: Water distribution networks, Irrigation systems, Cooling Systems, and Industrial Applications.

Features and Benefits

- Compact, reliable, and lightweight design constructed from corrosion, chemical, and fertilizer-resistant materials, ensuring reduced maintenance and an extended lifespan.
- Large kinetic orifice for high air outflow and inflow during filling and draining operations.
- High-capacity automatic air release nozzle.
- DVC (Dynamic Velocity Control), Anti-surge system machined from solid Polypropylene.
- Glass-reinforced polyamide kinetic plug designed for superior durability and extended performance.
- Polypropylene kinetic float delivers precise vertical movement with superior sliding alignment guided by the body's integrated ribs.
- Maintenance is easily performed from the top without removing the air valve from the pipeline.
- Optional service port.

Configuration and Sizes

- **Configuration and Size**
1" and 2" Threaded NPT
- **Part Number Model Series**
P654DVC



COMBOAIR® NXP

OPERATING PRINCIPLES



Discharge of large volumes of air

During pipe filling it is necessary to discharge air as water flows in. The ComboAir® NXP, thanks to an aerodynamic full port body and deflector, will make sure to avoid premature closure of the float during this phase.



Controlled outflow

During pipe filling, if the differential air pressure rises uncontrollably beyond a certain threshold, there is a risk of water hammer and system damage. To prevent this, the DVC™ upper float automatically rises, restricting the air outflow and thereby decreasing the velocity of the incoming water column.



Air release during working conditions

During operation the air produced by the pipeline accumulates in the upper part of the air valve. Gradually, it is compressed and its volume increases, pushing the liquid level downwards, allowing the air to escape through the nozzle.



Entrance of large volumes of air

During pipeline draining, or pipe bursts, it is necessary to bring in as much air as the quantity of outflowing liquid. This is to avoid negative pressure and serious damage to the pipeline and the entire system.

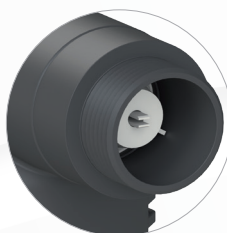


Optional Features



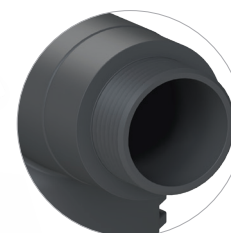
Service Port (P) Threaded 1/4" NPT

Provides a 1/4" NPT threaded service port for pressure gage connection or a test drain to verify the air valve's functionality.



Air Discharge Only (EO)

Allows air valve installation in specific locations of the system where HGL may drop below the pipe profile, and any location where entrance of air must be avoided, such as suction lines or siphon pipelines.



Threaded Outlet Fitting (TO)

Enables the connection of external pipes to convey potential water discharge produced during operation cycles.

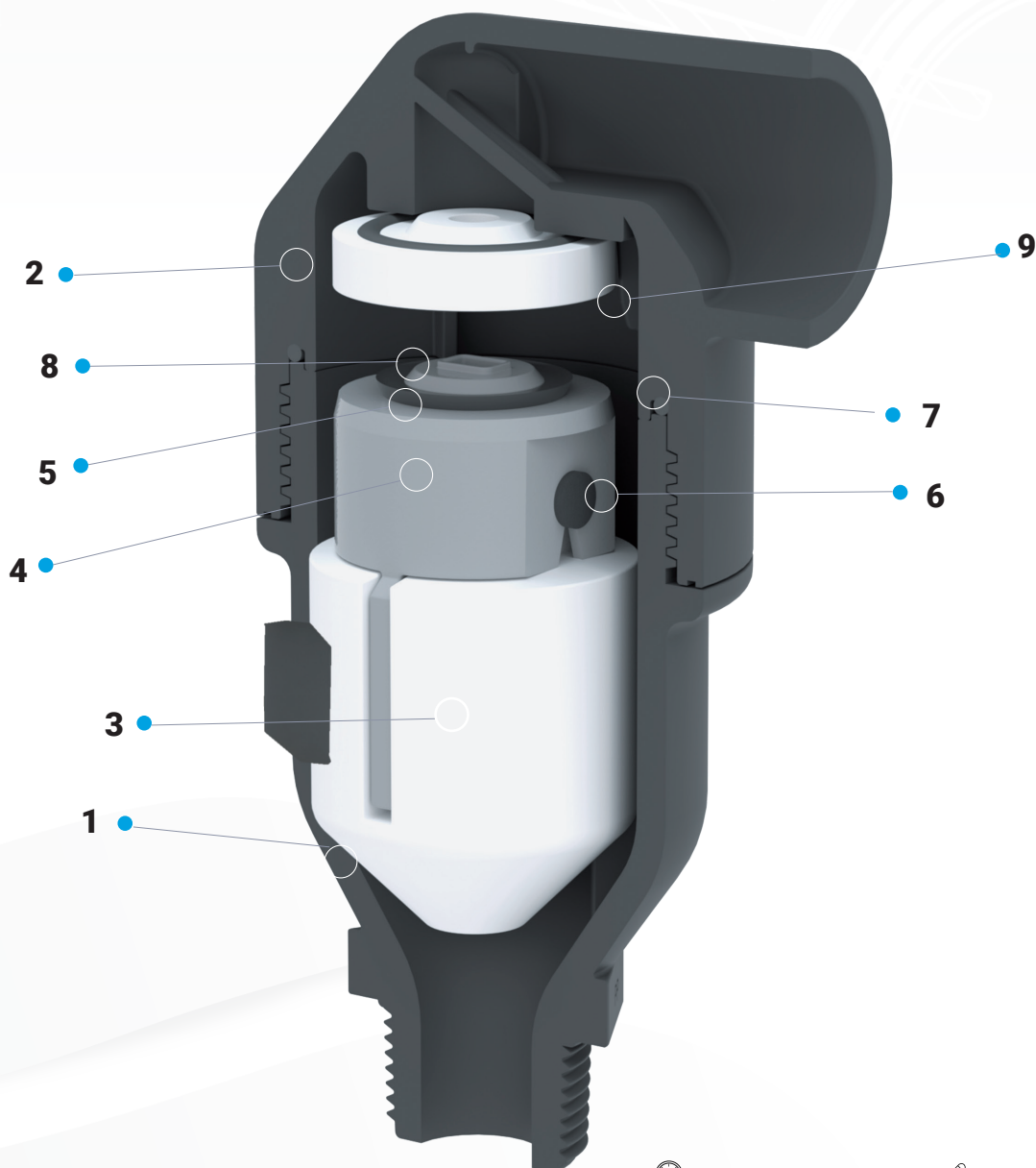
Outlet Types

Unthreaded Side Discharge (SD)

Standard 90° non-threaded outlet equipped with insect protection grid.

COMBOAIR® NXP

CONSTRUCTION MATERIALS



CONSTRUCTION MATERIALS



MAX INLET PRESSURE: 230 PSI
MIN INLET PRESSURE: 3 PSI

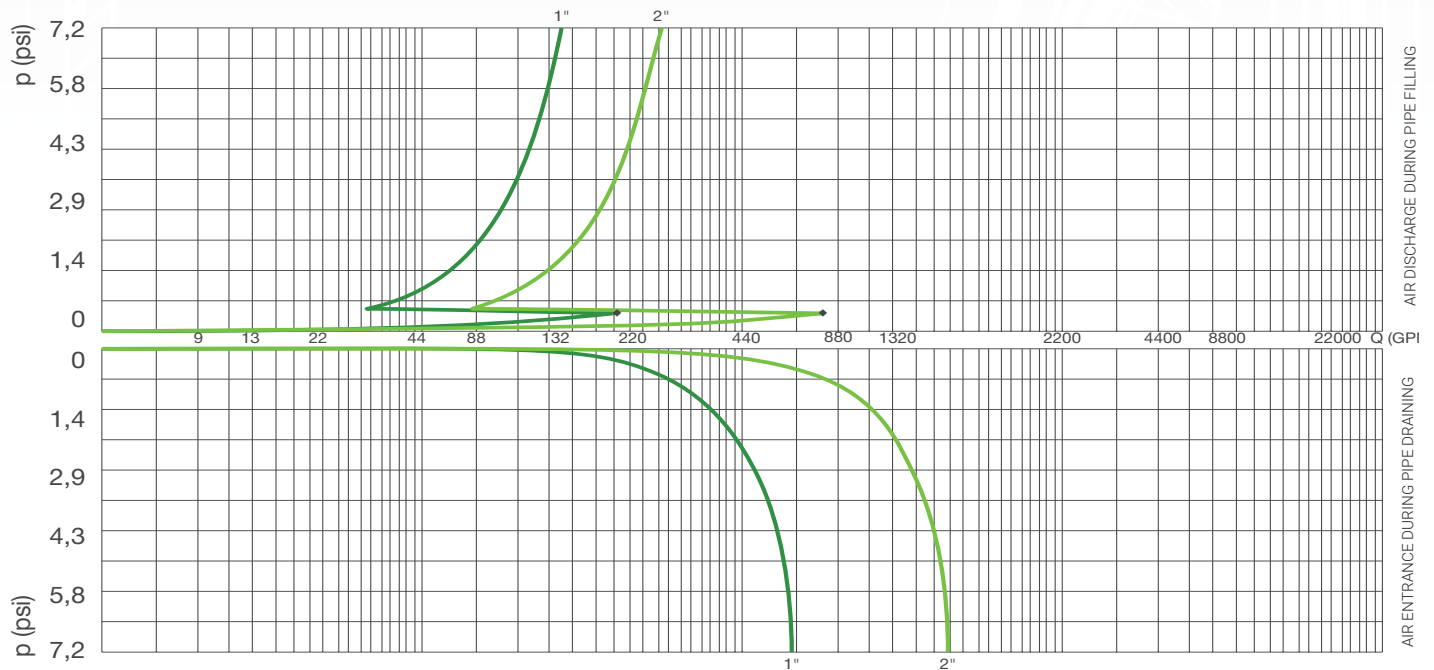


TEMP MAX: 140°F (60°C)

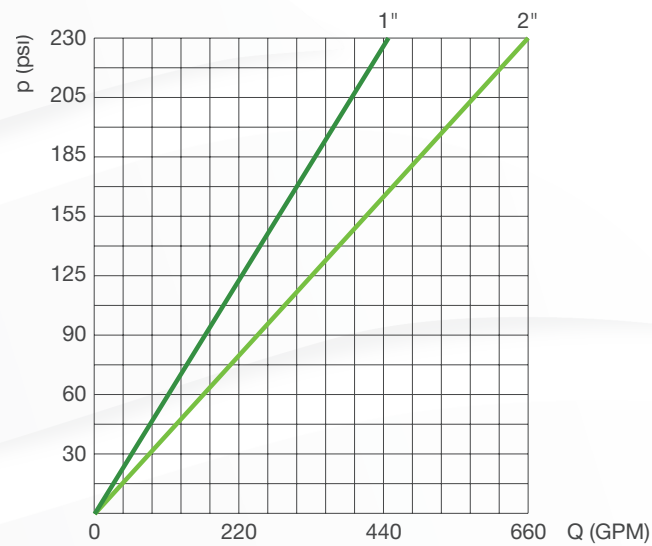
Item #	Components	Material	Features
1	Body	Glass Reinforced Polypropylene	Provided with Ribs for Accurate Guiding
2	Cover	Glass Reinforced Polypropylene	Provided with Protection Grid
3	Float	Polypropylene	Solid and Resistant to High Pressure
4	Kinetic Plug	Glass Reinforced Polyimide	High Air Release Capacity
5	Kinetic Orifice Seal	EPDM	
6	Automatic Orifice Seal	EPDM	
7	O-Ring	EPDM	
8	DVC Flat	Polypropylene	
9	O-ring	EPDM	

COMBOAIR® NXP

AIR FLOW PERFORMANCE



AIR RELEASE DURING WORKING CONDITIONS



COMBOAIR® NXP

TECHNICAL DATA

WEIGHTS AND DIMENSIONS

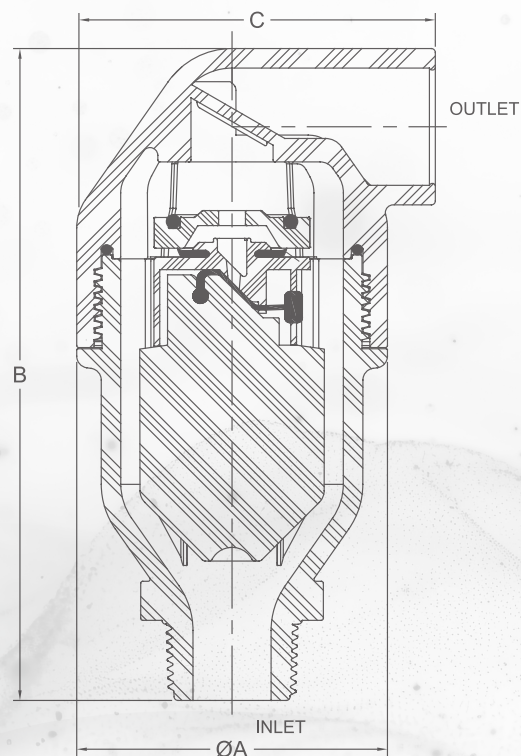
Size		Part #	A		B		C		INLET	Weight	
inch	mm		inch	mm	inch	mm	inch	mm	MNPT	lbs	kg
1	25	P654DVC01SDT5	3.15	80	6.58	167	3.62	92	1	.67	.3
2	50	P654DVC02SDT5	4.33	110	8.90	226	5.32	135	2	1.65	.75

ORIFICE SPECIFICATION

Air Valve Size	Kinetic Orifice		Automatic Orifice	
	in ²	mm ²	in ²	mm ²
NPT Threaded 1"	.008	5	.008	5
NPT Threaded 2"	.019	12	.019	12

TECHNICAL DATA

- **Treated water max:** 140°F.
- **Max. pressure:** 230 PSI.
- **Min. pressure:** 3 PSI.
- **Configuration and Size:** 1" and 2" Threaded NPT
- **Part Number Model Series:** P654DVC



HIGH QUALITY VALVES, BUILT TO LAST.

As one of the first valve manufacturers to achieve and maintain both ISO 9001 & ISO 14001 accreditation we continuously improve our manufacturing practices and products by taking the thorough steps necessary to provide a cleaner environment for all.



FLOMATIC® VALVES

LIMITED ONE YEAR WARRANTY: The Flomatic Corporation warrants that its Air Valves in all sizes are free from defects in materials and workmanship. Flomatic will replace any valve covered by this warranty found to be defective within three years from time of sale. This warranty will be void if the product has been modified in any way by the purchaser, or is subject to unreasonable use.

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