

AIR AND VACUUM VALVES

AV-010 SERIES

DESCRIPTION

The AV-010 Series Air and Vacuum Valve discharges air at high flow rates during the filling of the system and admits air at high flow rates during drainage, pump shut-off or at water column separation.

The body is made of high strength composite materials. All operating parts are made of specially selected corrosion-resistant materials.

MAIN FEATURES

- Dynamic design allows for air discharge up to 8 psi differential pressure, preventing premature closing.
- Drip-tight sealing at low pressure.
- All parts are UV-protected.
- Lightweight, small dimensions, simple and reliable construction.

SPECIFICATIONS

- Working pressure range: 3 - 150 psi
- Reinforced Nylon: Available in 2", 3" female threaded NPT
- Polypropylene: Available in 3/4", 1" male threaded NPT

OPERATION

The Air and Vacuum Valve discharges air at high flow rates during the filling of the system and admits air at high flow rates during drainage, pump shut-off or at water column separation.

High velocity air cannot blow the float shut. Water entry will cause the sealing of the valve.

At any time during system operation, should internal pressure of the system fall below atmospheric pressure, air will enter the system.

The smooth release of air prevents pressure surges and other hydraulic disturbances.



The intake of air in response to negative pressure protects the system from destructive vacuum conditions and prevents damage caused by water column separation. Air entry is essential to efficiently drain the system.

As the system starts to fill, the valve functions according to the following stages:

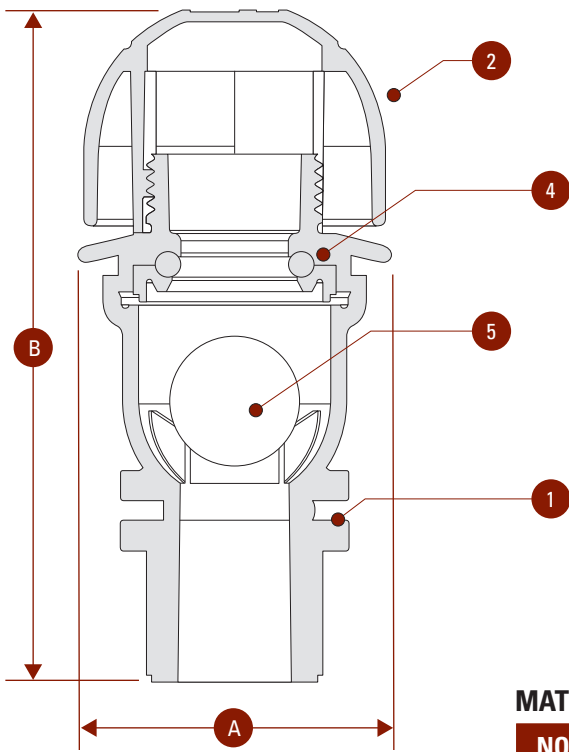
1. Air in the pipeline is discharged by the valve.
2. The liquid enters the valve, lifting the float and sealing the valve.

When internal pressure falls below atmospheric pressure (negative pressure):

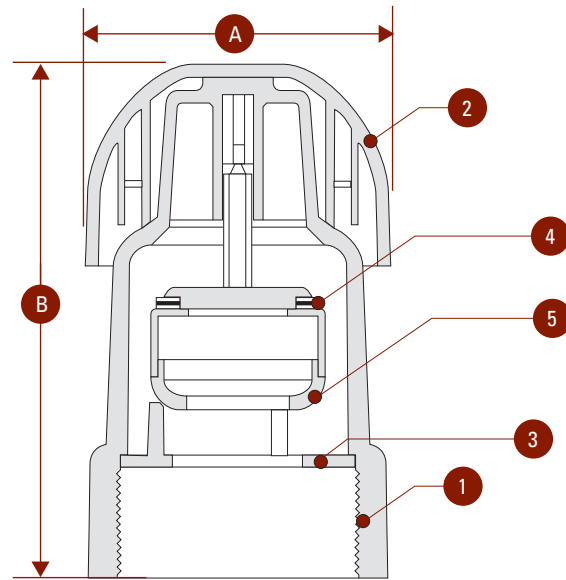
1. The float will immediately drop away from the orifice.
2. Air will enter the system.

AV-010 SERIES

3/4", 1" Models



2", 3" Models



MATERIAL SPECIFICATIONS

NO.	PART	MATERIAL 3/4", 1"	MATERIAL 2"	MATERIAL 3"
1	Body	Polypropylene	Reinforced Nylon	Reinforced Nylon
2	Cover	Polypropylene	Polypropylene	Reinforced Nylon
3	Disc	-	Reinforced Nylon	Reinforced Nylon
4	Seal	Viton	E.P.D.M.	E.P.D.M.
5	Float	Polypropylene	Reinforced Nylon	Polypropylene

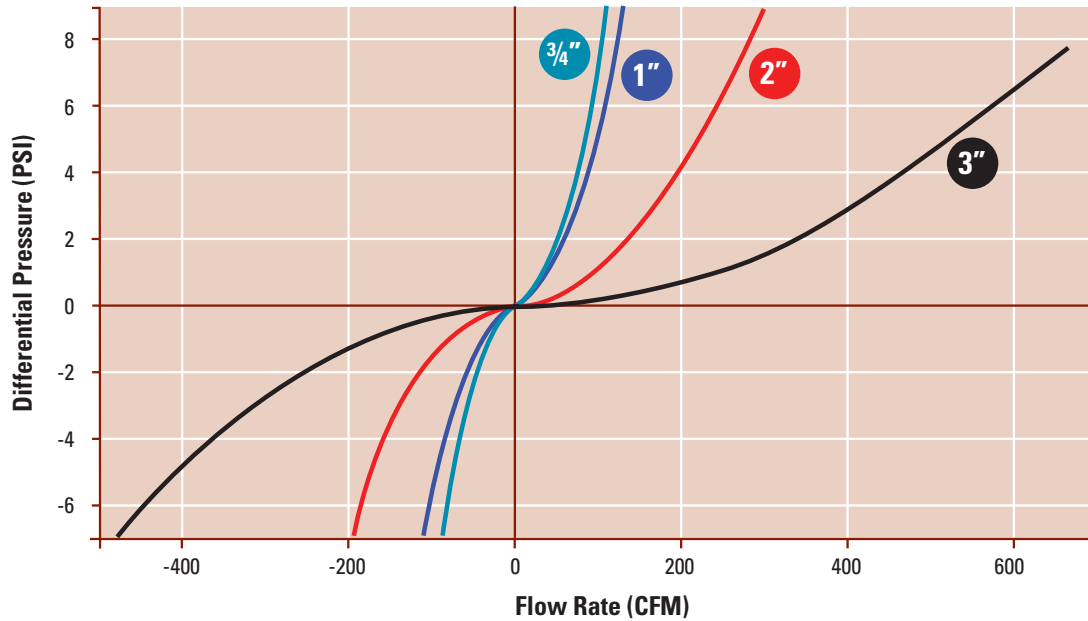
DIMENSIONS AND WEIGHTS

SIZE	DIMENSIONS (IN)		WEIGHT (lbs.)	ORIFICE AREA (in ²)
	A	B		
3/4", 1"	2 3/8	4 29/32	0.2	0.486
2"	2 7/8	4 13/19	0.4	1.24
3"	4.1	6.5	1.3	3.1

MODEL NUMBER AND CONNECTION TYPE

MODEL NUMBER	SIZE	CONNECTION	MAX. WP (PSI)
65AV0101	1"	MNPT	150
65AV0102	2"	FNPT	150
65AV0103	3"	FNPT	150
65ARI1V	1"	MNPT	150

AV-010 SERIES AIR AND VACUUM FLOW RATES



DISCHARGE FLOW RATE (CFM)

SIZE	DIFFERENTIAL PRESSURE (PSI)				
	0	2	4	6	8
3/4"	0	55	82	100	110
1"	0	60	98	112	134
2"	0	130	188	230	279
3"	0	325	460	570	690

INTAKE FLOW RATE (CFM)

SIZE	DIFFERENTIAL PRESSURE (PSI)					
	-6	-5	-4	-3	-2	0
3/4"	-77	-73	-65	-50	-36	0
1"	-100	-93	-85	-75	-42	0
2"	-192	-176	-162	-135	-115	0
3"	-455	-405	-370	-315	-265	0



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