AVTEK®

VALVES THAT REDEFINE INDUSTRY STANDARDS

Combination **Air Valve** 5700 PP

COMBINATION AIR VALVE MOD. 5700-PP

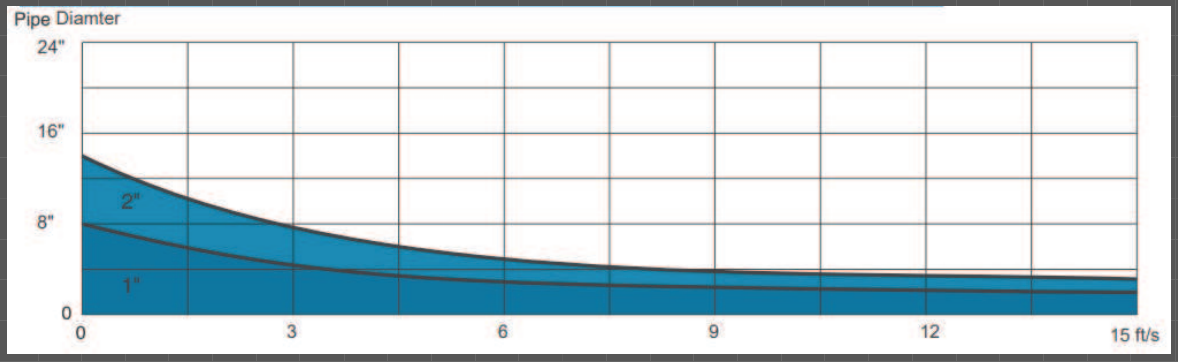
The Av-Tek combination, triple function, automatic air valve 5700-PP for treated and raw water applications, will ensure the proper operation allowing the release of air pockets during working conditions and the evacuation and entrance of large volumes of air during filling and draining operations.

TECHNICAL FEATURES AND BENEFITS

- Single chamber body 250 PSI rated, provided with internal ribs for accurate guiding of the float.
- The aerodynamic full bore body prevents premature closures of the mobile block also at high velocity air intake and discharge.
- Available with bias kits for air discharge only (EO), entrance only (IO) and anti-shock (AS) feature.
- Available version with rapid filling prevention mechanism RFP.
- Drainage valve for chamber control and pressure relief during maintenance available on request.
- Maintenance can be easily performed from the top, without removing the air valve from the pipe.
- Compact and reliable structure whose parts are fully corrosion, chemical resistant. Lower maintenance.
- Designed in compliance with EN 1074/4 standard.
- Approved for potable water use with NSF 61/372 Certifications
- Factory approval and quality control following ISO 9001:2008.

AIR VALVE SELECTION CHART

Air valve preliminary sizing as a function of pipeline internal diameter and fluid flow velocity in ft/s.



OPERATING PRINCIPLE
FOR STANDARD VALVE

DISCHARGE OF LARGE VOLUMES OF AIR

During the pipe filling it is necessary to discharge air as water flows in. The 5700-PP air valve, thanks to the aerodynamic full port body and float, will make sure to avoid premature closures of the mobile block during this phase.

AIR RELEASE DURING WORKING CONDITIONS

During operation the air produced by the pipeline is accumulated in the upper part of the air valve. Little by little it is compressed and the pressure arrives to water pressure, therefore its volume increases pushing the water level downwards allowing the air release through the automatic orifice.

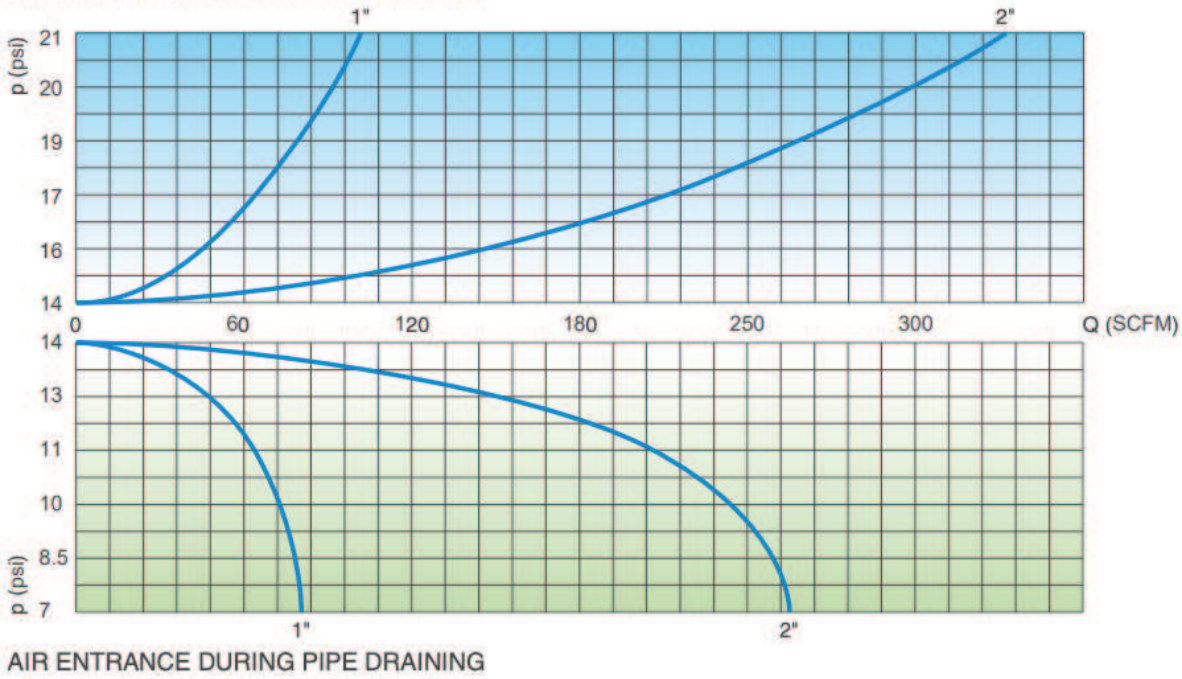
ENTRANCE OF LARGE VOLUMES OF AIR

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

Certified to NSF ANSI 61 & 372

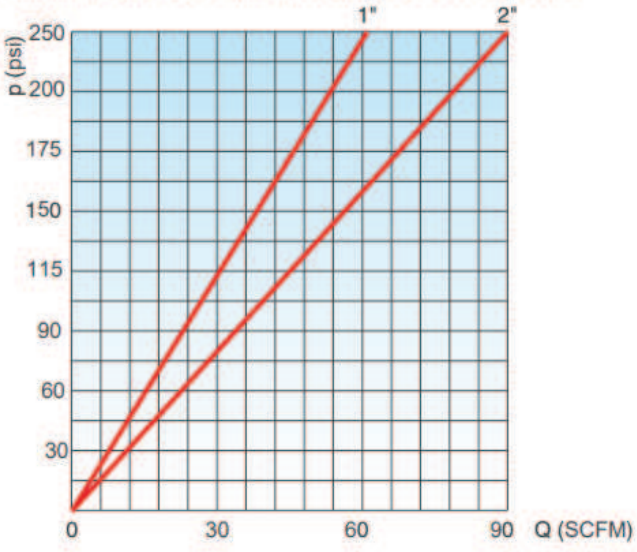
AIR FLOW PERFORMANCE CHARTS

AIR DISCHARGE DURING PIPE FILLING



AIR ENTRANCE DURING PIPE DRAINING

AIR RELEASE DURING WORKING CONDITIONS



The air flow charts were created in Kg/s from laboratory tests and numerical analysis, then converted in SCFM using a safety factor.

OPERATING PRINCIPLE
FOR RFP OPTION

DISCHARGE OF LARGE VOLUMES OF AIR

During the pipe filling it is necessary to discharge air as water flows in. The 5700-PP RFP, thanks to the aerodynamic body and float, will make sure to avoid premature closures of the mobile block during this phase.

CONTROLLED OUTFLOW

If the differential pressure of air, during pipe filling, increases above a certain value without control there is the risk of water hammer and damages to the system. Should that happen the RFP upper float will rise automatically, reducing the outflow and consequently the velocity of the approaching water column.

AIR RELEASE DURING WORKING CONDITIONS

During operation the air produced by the pipeline is accumulated in the upper part of the air valve. Little by little it is compressed and the pressure arrives to water pressure, therefore its volume increases pushing the water level downwards allowing the air release through the nozzle.

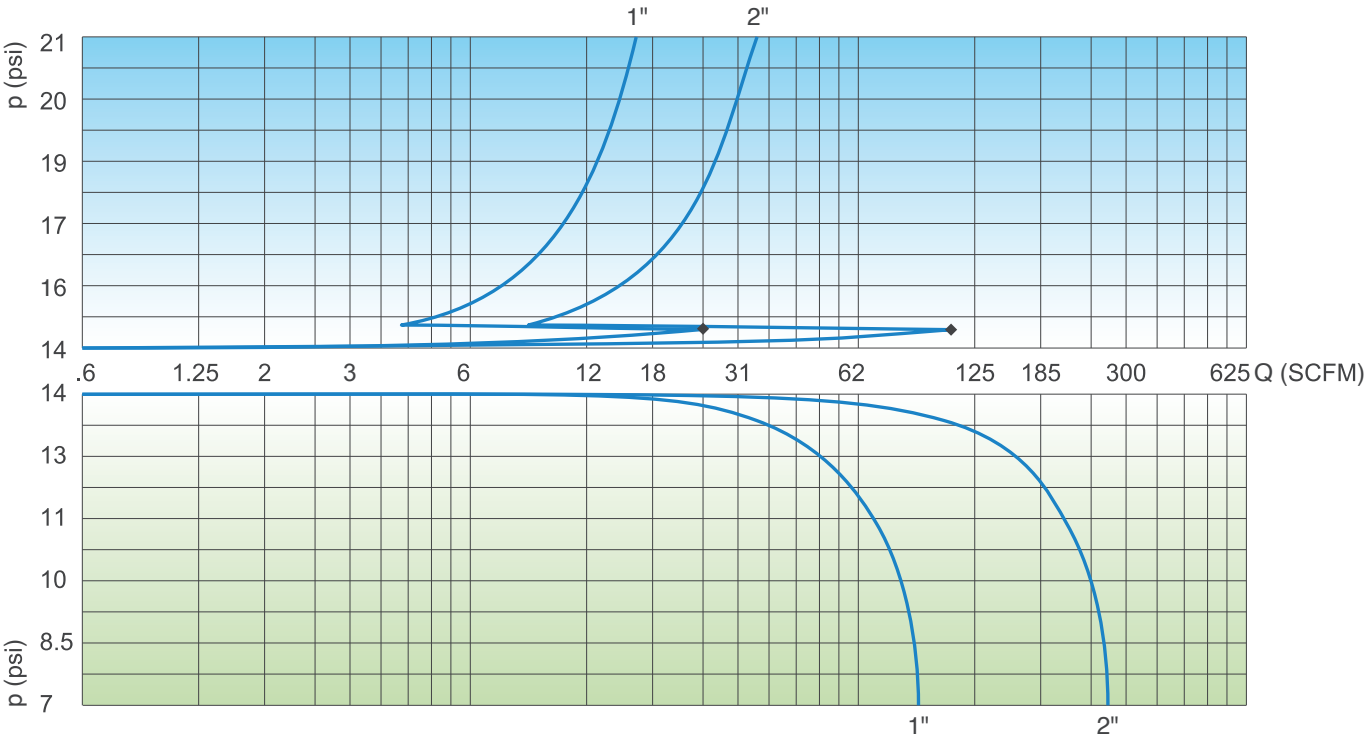
ENTRANCE OF LARGE VOLUMES OF AIR

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

Certified to NSF ANSI 61 & 372

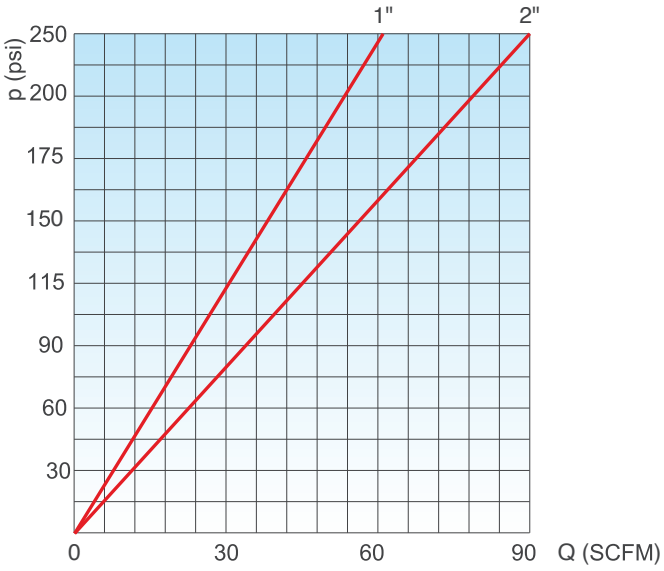
AIR FLOW PERFORMANCE CHARTS
FOR RFP OPTION

AIR DISCHARGE DURING PIPE FILLING



AIR ENTRANCE DURING PIPE DRAINING

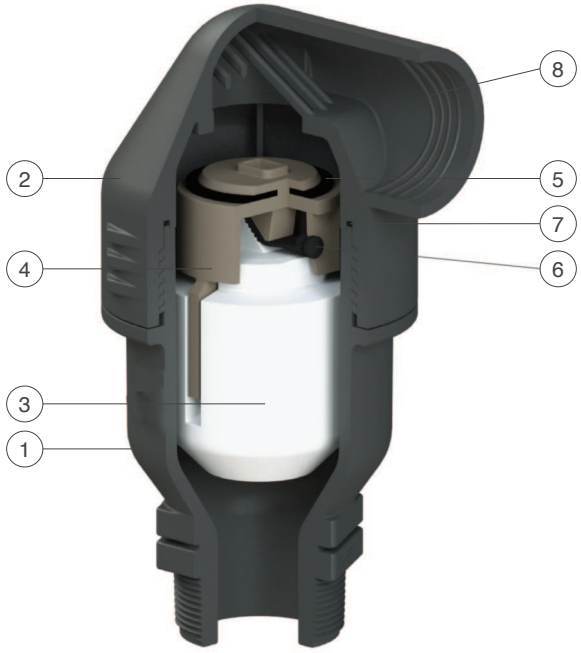
AIR RELEASE DURING WORKING CONDITIONS

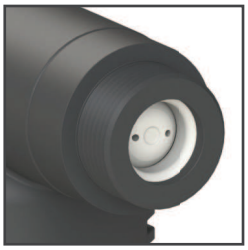


The air flow charts were created in Kg/s from laboratory tests and numerical analysis, then converted in SCFM using a safety factor.

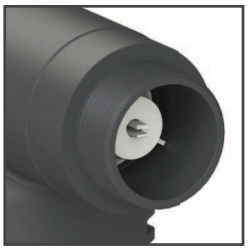
TECHNICAL DETAILS

P.No	Part Name	Material	Optional
1	Body	Glass Reinforced Polypropylene	Provided with Ribs for Accurate Guiding
2	Cap	Glass Reinforced Polypropylene	Provided with Protection Grid
3	Float	Polypropylene	Solid and Resistant to High Pressure
4	Kinetic Plug	Glass Reinforced Polyamide	With High Air Release Capacity
5	Kinetic Orifice Seal	EPDM	
6	Automatic Orifice Seal	EPDM	
7	O-Ring	EPDM	
8	Full Port Threaded Outlet		





Anti-Slam device in polypropylene with threaded connection 2".



Exhaust Only device in polypropylene with threaded connection 2".

WORKING CONDITIONS

Treated water max. 140°F.
Max. pressure 250 psi.
Min. pressure 3 psi;
lower on request.

VALVE SELECTION

Body material: glass-reinforced PP.
Inlet size: 1" or 2" NPT
Outlet size: 1" or 2" NPT
Connections: threaded male NPT. Certified

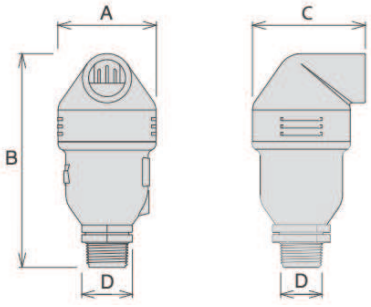
NOZZLE SPECIFICATION

air valve size	kinetic orifice		autom. or.
	d (mm)	A (mm²)	A (mm²)
1"	21	346	5
2"	45	1590	12

WEIGHTS AND DIMENSIONS

CONNECTION (E) inch	A	B	C	D	Weight
Threaded 1"	3"	6.5"	3.6"	1" NPT	10 oz
Threaded 2"	4.5"	9"	5.3"	2" NPT	1lb 10oz

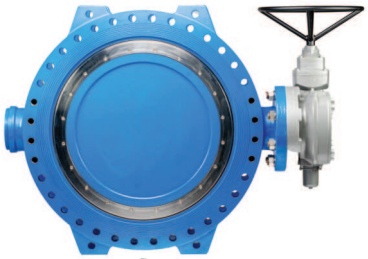
All values are approximate, consult Av-Tek service for more details.



AV-TEK®

VALVES THAT REDEFINE INDUSTRY STANDARDS

Av-Tek® Inc. offers modern solutions for the persistent problems facing water users, plant operators, and engineering firms. Our technology far exceeds the current options in the marketplace, and clients are quickly realizing Av-Tek® is setting a new standard for quality, performance, and craftsmanship.



The Av-Tek® DEX double eccentric butterfly valve is a primary example of superior design and quality. Exceeding the requirements of AWAA C504, this valve simply just works, even years down the road, you can rest assured there is not a better valve on the market today.

The Av-Tek® VRX Plunger Valve has been engineered and designed for absolute control; specifically, for water applications. The VRX accompanied with an electric motor operator can function as a critical isolation, pressure, and control valve without the fear of cavitation damage.

The Hydrant Air Exhaust or HAX, is a patent pending device that allows you to make your system more efficient by removing the air out of your lines, and easily checking line pressure through any fire hydrant!

The Av-Tek® Model 4900 Ball Check Valve has a 100% opening port, there is virtually no head loss when the valve is fully open. Ball Check Valves are a resilient seatedcheck valve used in wastewater lift stations. Different weighted balls allow for this to be adjusted to your application.

The Av-Tek® Resilient Seated Butterfly Valves are a crucial part of nearly every application, and the advanced design allows for quickreplacement of seats.

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