



VALVES THAT REDEFINE INDUSTRY STANDARDS



Anti-surge  
Combination  
**Air Valve**

Mod. 5700-SS-RFP

The Av-Tek surge dampening, anti-slam combination air valve Mod. 5700-SS-RFP will ensure the proper operation of the system allowing the air release during working conditions, and the entrance of large volumes of air during draining. In addition to that this model will always control the air outflow within a safety limit, without the risk of water hammer.

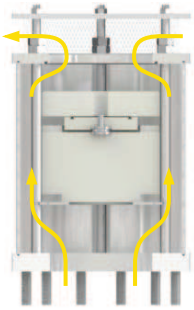


## TECHNICAL FEATURES AND BENEFITS

- Uncontrolled pipeline filling operations and transient events will inevitably generate the rapid closure of the air valves installed along the system, with consequent damages. The Av-Tek 5700-SS-RFP Air Valve will automatically adjust the outflow capacity, thus reducing the velocity of the incoming water column minimizing the risk of water hammer.
- The spray effect during closure and the risk of drowning, compared to standard combination air valves, are reduced.
- Entirely made in high resistant materials suitable for industrial and aggressive environments.
- Mobile block composed of a cylindrical float and obturator, joined together by the Av-Tek air release system, along with the upper disk all made in solid polypropylene. The solid cylindrical floats, created by CNC machining, avoid deformations and ensure precision sliding.
- Nozzle and gasket holder, part of the Av-Tek air release system, entirely made in AISI 316/Duplex and designed with gasket compression control to prevent wear and consequent leakage during working conditions.

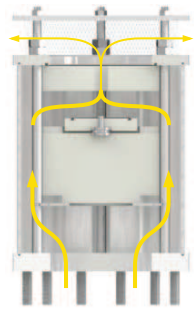
## APPLICATIONS

- Water Ways
- Seawater main transmission lines.
- Desalination plants.
- Demineralized water.
- Wastewater (Extended Body)
- Mining
- Refineries and petrochemical plants.



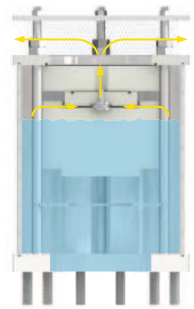
## DISCHARGE OF LARGE VOLUMES OF AIR

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



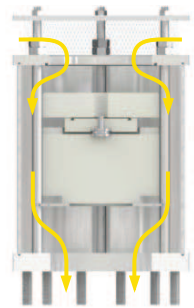
## CONTROLLED OUTFLOW

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



## 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 equalizes water pressure, therefore its volume increases pushing the water 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.

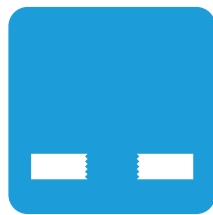


## Certified to NSF ANSI 61 & 372

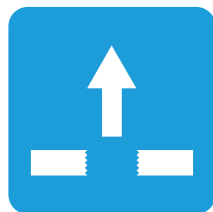




**Vacuum breaker version Mod. 5700 RFP**, to allow the entrance of large volumes of air and the controlled outflow only. This model is normally recommended in changes in slope ascending, long ascending segments, dry fire systems, and wherever the water hammer effect has to be reduced without the necessity of air release.



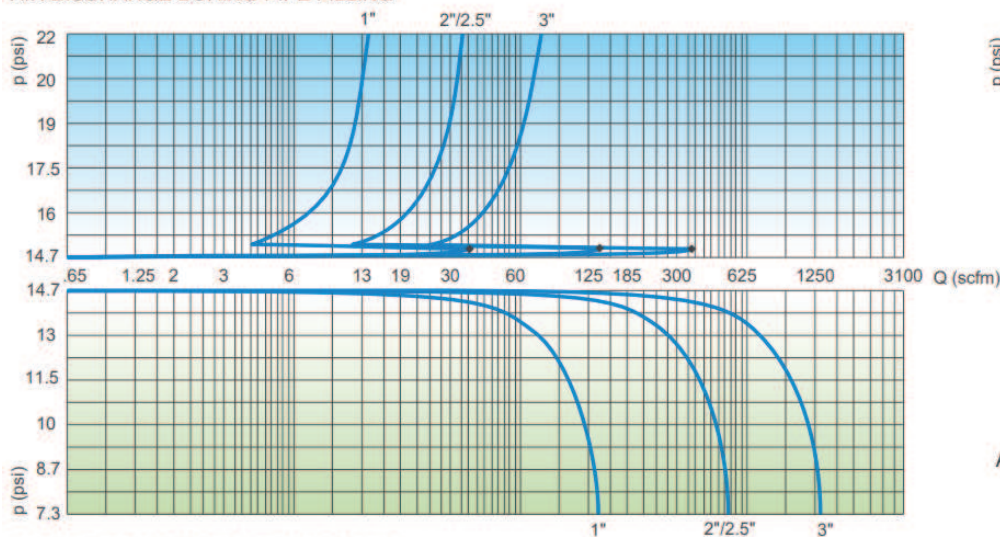
**Version for submerged applications, SUB series**, available both for 5700 3F RFP and 2F RFP Models, with threaded elbow for air conveyance. The design sprang from the necessity of having an air valve performing also in case of flood, without the risk of contaminated water entering the pipeline. Another benefit of SUB is to avoid the spray effect, conveying spurts coming from the closure away from the air valve.



**Version for air discharge only EO series**, available both for 5700 3F RFP and 2F RFP models. The most important application of EO is to allow the air valve installation in those locations of the system where Hydraulic Grade Line may drop below the pipe profile, and to any other node where for project requirements air entrance must be avoided.

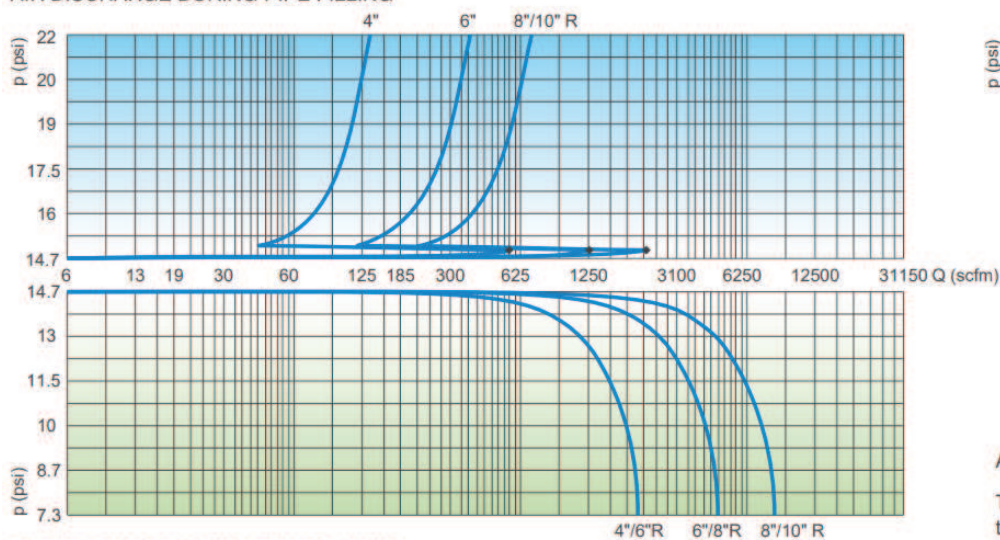
# AIR FLOW PERFORMANCE CHARTS

AIR DISCHARGE DURING PIPE FILLING

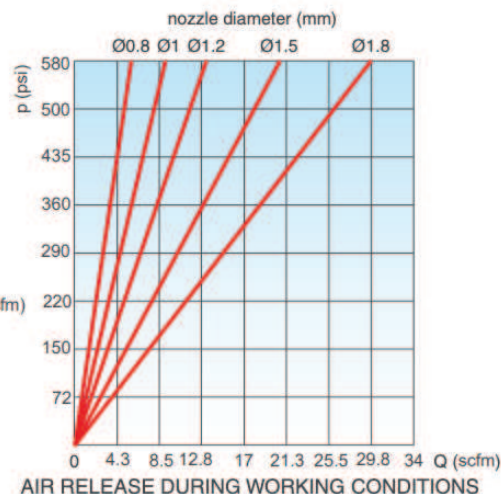


AIR ENTRANCE DURING PIPE DRAINING

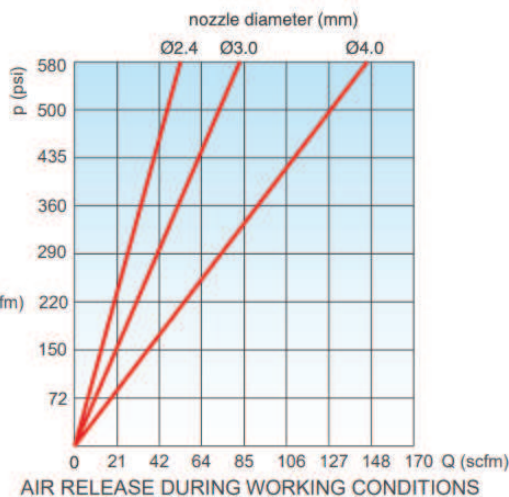
AIR DISCHARGE DURING PIPE FILLING



AIR ENTRANCE DURING PIPE DRAINING



AIR RELEASE DURING WORKING CONDITIONS



AIR RELEASE DURING WORKING CONDITIONS

The air flow charts were created in Kg/s from laboratory tests and numerical analysis without the screen, then converted in scfm using a safety factor.

## WORKING CONDITIONS

Treated water max. 140°F.

Max. Pressure 580 psi.

Min. Pressure 3 psi. Lower pressure on request.

Version for high temperatures on request.

## STANDARD

Designed in compliance with EN-1074/4 and AWWA C-512.

Flanges according to EN 1092/2 or ANSI.

Gaskets in NBR, EPDM or Viton.

Changes and variations on the flanges and gaskets on request.

## NOZZLE CHOICE

Nozzle diameter in mm according to the air valve size and pressure rating.

	150 psi	250 psi	350 psi	580 psi
1"	1.5	1.2	1	0.8
2"/2.5"	1.8	1.5	1.2	1
3"	1.8	1.5	1.2	1
4"/6"R	3	2.4	1.8	1.2
6"/8"R	4	3	2.4	1.8
8"/10"R	4	4	4	3

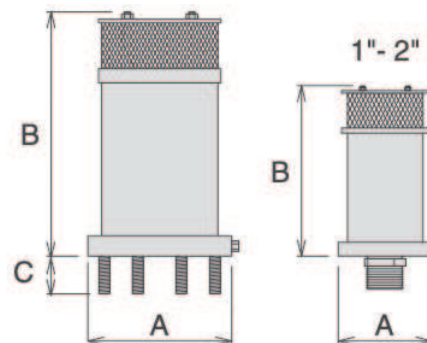
Nozzle diameter in mm according to the size of the air valve and the pressure rating.

## WEIGHT AND DIMENSIONS

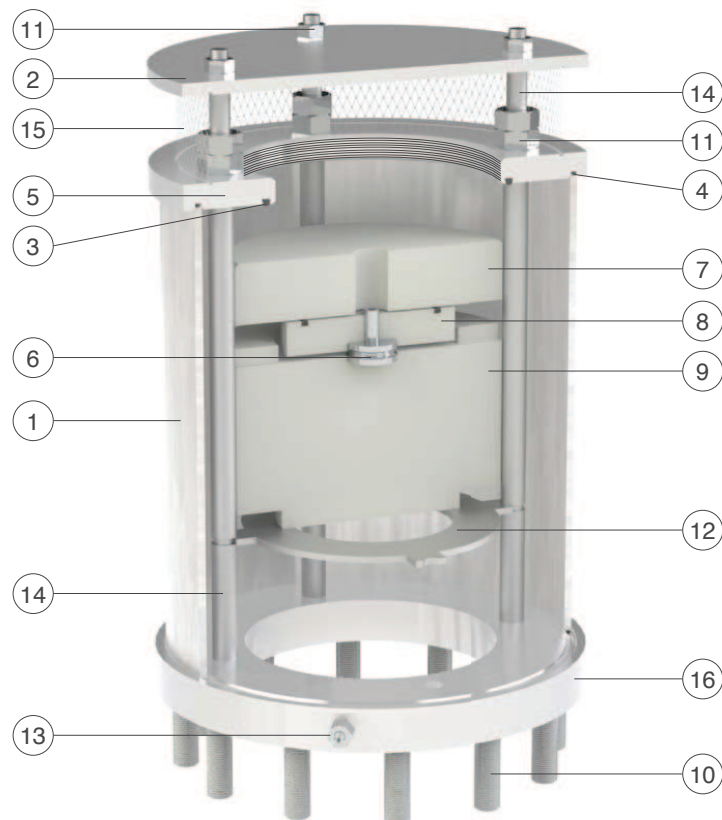
CONNECTION (inches)	A in.	B in.	C in.	Weight lbs.
Threaded 1"	3.9"	8"	-	15
Threaded 2"	6.5"	10"	-	15
Flanged 2"	6.5"	10"	1.6"	18
Flanged 2.5"	7.3"	10"	1.6"	18
Flanged 3"	7.9"	11.2"	2"	27
Flanged 4"	9.3"	13.2"	2"	38
Flanged 6"R	9.3"	15.2"	2"	60
Flanged 6"	11.8"	17.5"	2.8"	100
Flanged 8"R	14.2"	17.5"	2.8"	108
Flanged 8"	14.2"	20.3"	2.8"	140
Flanged 10"R	15.9"	20.3"	2.8"	160

R: reduced bore. Larger sizes available on request.

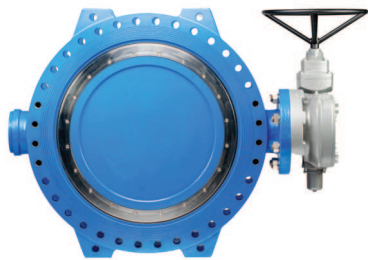
All values are approximate, consult Av-Tek service for more details.



P.No	Part Name	Material	Optional
1	Body	AISI 316 SST	Duplex/Super Dupl. SST
2	Cap	AISI 304 SST	AISI 316 SST
3	O-Ring	NBR	EPDM/Viton/Silicone
4	O-Ring	NBR	EPDM/Viton/Silicone
5	Seat	AISI 316 SST	Duplex/Super Dupl. SST
6	Nozzle Subset	AISI 316 SST	Duplex SST
7	RFP Flat	Polypropylene	
8	Upper Flat	Polypropylene	
9	Float	Polypropylene	
10	Studs	AISI 304 SST	AISI 316 SST
11	Bolts	AISI 316 SST	
12	Deflector	AISI 316 SST	Duplex/Super Dupl. SST
13	Drain Valve	AISI 316 SST	
14	Spacers	AISI 316 SST	Duplex/Super Dupl. SST
15	Screen	AISI 304 SST	AISI 316 SST
16	Flange	AISI 316 SST	Duplex/Super Dupl. SST







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 seated check 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 quick replacement of seats.