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Product Catalog

AV-MH-KA

AV-MH-KA

Combination Air Release & Air and Vacuum Valves

AV-MH-KA
(Metal Air Valves)

Edition 06/2013

AV-MH-KA General

AV-MH-KA
Combination Air Release & Air and Vacuum Valves

First Operation:
Venting air from a filling pipeline

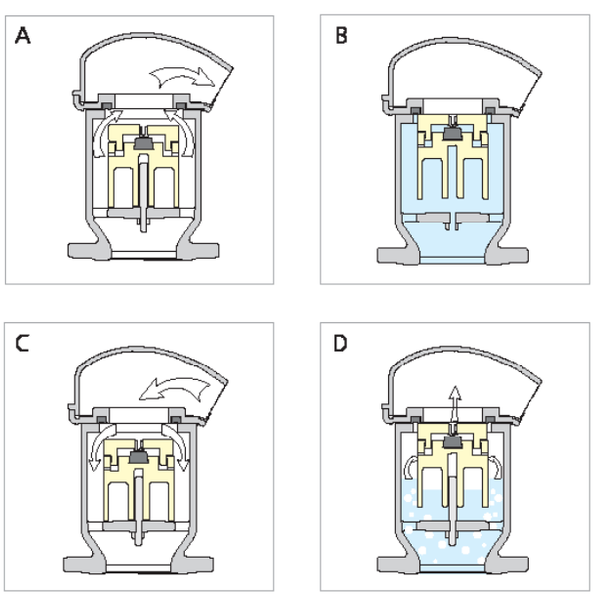
The standard valve allows discharge of trapped air while the system is being filled with liquid. The valve will remain open, even at very high air flow velocity (A), until the liquid has reached the float and lifted it to its closed position (B).
Available for valve models with suffix "K" and "KA".

Second Operation:
Vacuum Breaking (Air Intake) of a draining pipeline

Decrease or the pressure in the system to negative value and the simultaneous drainage of the valve chamber, forces the floats down, allowing the admittance of air into the pipe, thus preventing negative pressure and possible collapse of the pipe (C).
Available for valve models with suffix "K" and "KA".

Third Operation:
Release of dissolved air from a pressurized pipeline

Air that is being released from the liquid in the pressurized system or being introduced into the system from open sources and pumping vortexes, accumulates in the air release valves located at high places.
The accumulated air forces the liquid out of the valve chamber, so the floating force of the bottom float decreases.
The bottom float then drops, allowing for the trapped air to be vented through the small nozzle at the center of the top float. Then the liquid level rises, the bottom float is lifted and the nozzle closes (D).
Available for valve models with suffix "KA" only.



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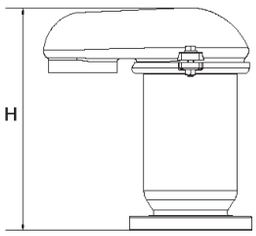
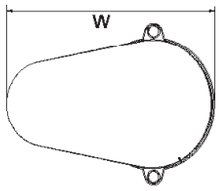
AV-MH-KA Technical Data

Dimensions & Weights

Nom. diameter	Height H	Width W	Orifice Area D	Approx. shipping Weight
inch	inch	inch	inch^2	lbs
2	9.8	6.5	3.0	16.5
3	11	8.9	7.7	27
4	15.7	11.2	12.2	57
6	18.5	14.8	27.4	115
8	22.8	18.9	48.7	192
10	27.4	22.6	48.7	478

Connections: 2" - NPT, 2" - 10" ANSI 150 or ANSI 300 Flanged



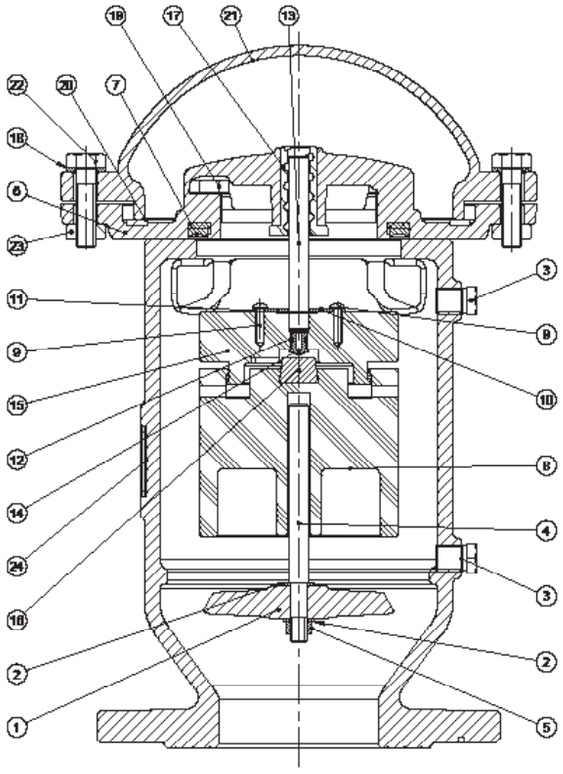


Specifications

Nominal sizes	2" to 10"
Pressure rating	150 Flg. (250 psi), 300 Flg. (400 psi), Thd. (400 psi)
Minimal pressure for drip-tight sealing	3 psi
Max. Temperature	150°F

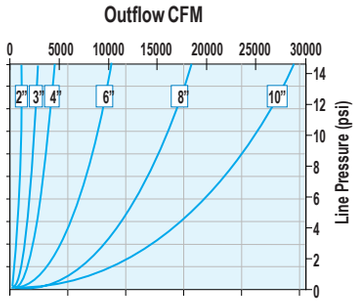
Components

No.	Description	Material
1	Body	D.I.
2	Washer	SST
3	Plug	BRS
4	Bottom Guiding Shaft	SST
5	Nut	SST
6	Plate	D.I.
7	Seal	NR
8	Float Body	PE-H.D.
9	Bolt	SST
10	Disc	SST
11	Retaining Ring	SST
12	O-Ring 2-009	NBR
13	Top Guiding Shaft	SST
14	Nozzle	SST
15	Float Cover	PE-H.D.
16	Nozzle Seal	EPDM
17	Guiding Insert	POM
18	Washer	SST
19	Bolt	SST
20	Cover Seal	EPDM
21	Cover	D.I.
22	Bolt	SST
23	Nut	SST
24	I.D. Plate	AL

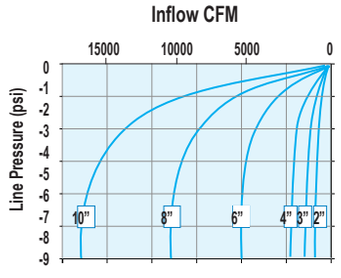


Performance

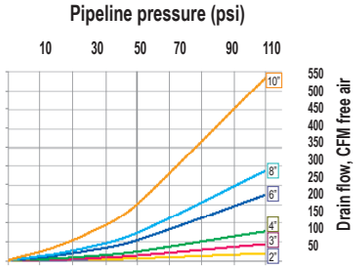
AV-MH-KA Discharge Data of Free Air Flow



AV-MH-KA Intake Data of Free Air Flow



AV-MH-KA Automatic Outlet



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Edition 06/2013

AV-MH-KA-SA General

AV-MH-KA-SA
Surge Arresting Device (SA) for AV-MH-KA Valves

Features

- Surge Arresting – Automatically prevents water hammer pressure surges associated with air release valves operation.
- Optimum performance – Air outlet can be adjusted according to surge analysis results, on site to a required aero-dynamic performance. The SA addition is assembled on user selected valves only (at local high elevated points). The flow through other valves remains unrestricted.
- Simplicity – Can be easily assembled on any of AV-MH series air valves.
- Reliability – Simple, durable mechanism, fabricated from high grade materials. Can be serviced without having to put the air valve out of service.

Function

When air is admitted into the pipe, an in "Air Pocket" is created in the local high points where the Air / Vacuum valve is located.

The returning flow re-fills the "pocket".

Too-high velocity of the approaching water column may generate a pressure surge when it reaches the valve.

Operation of the SA addition

Air venting

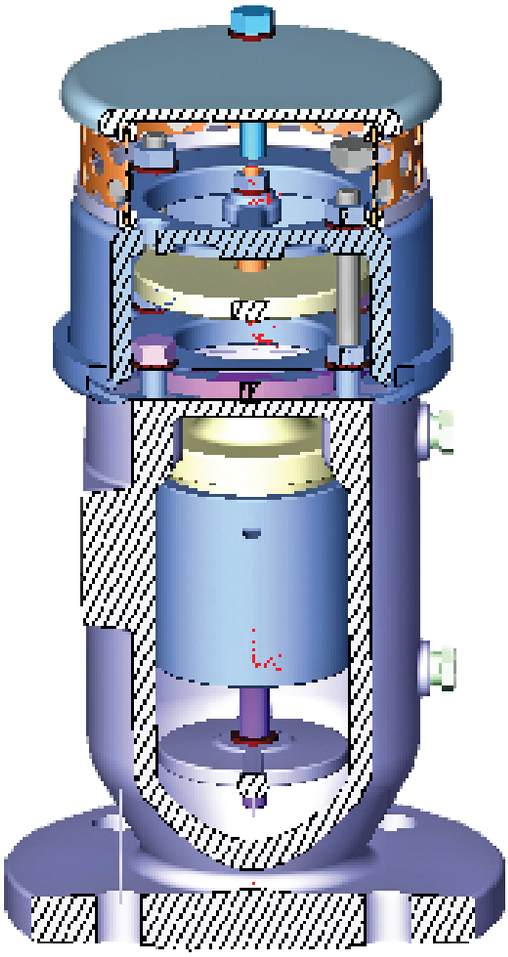
The Surge Arrestor addition to AV-MH Series valves limits the air outflow, when the escaping air velocity exceeds a threshold value.

This optional addition creates a temporary, slow closing "Air Cushion" that decelerates the water velocity, preventing water hammer effect.

Adjustment of the air outflow can be done by plugging or un-plugging a set of bores in the SA adjustment plate (see pictures right side).

Vacuum Breaking (Air Intake)

Decrease or the pressure in the system to negative value and the simultaneous drainage of the valve chamber, forces the floats down, allowing the admittance of air into the pipe. The SA disc is in its low position, allowing unrestricted air flow into the system.



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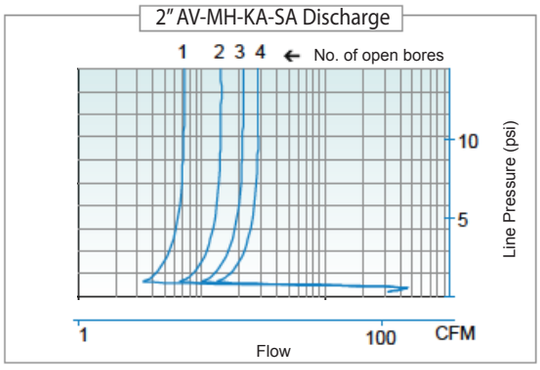
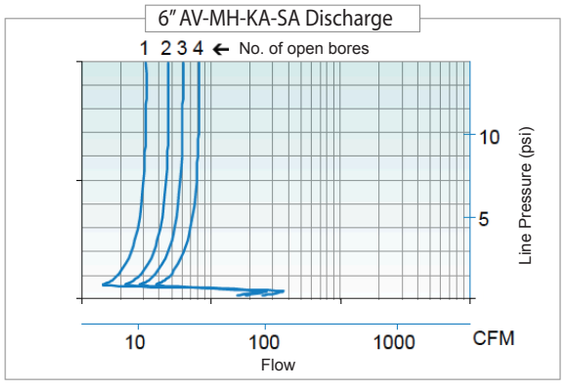
Performance > Free air outflow

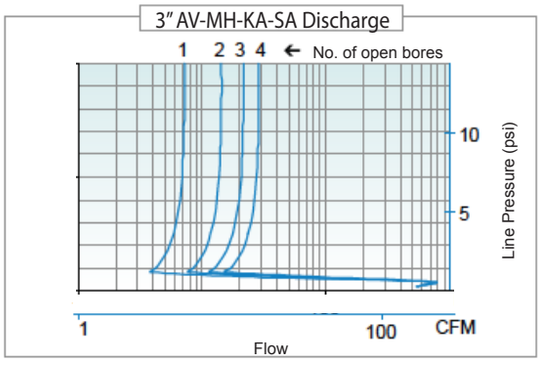
2″ AV-MH-KA-SA Discharge



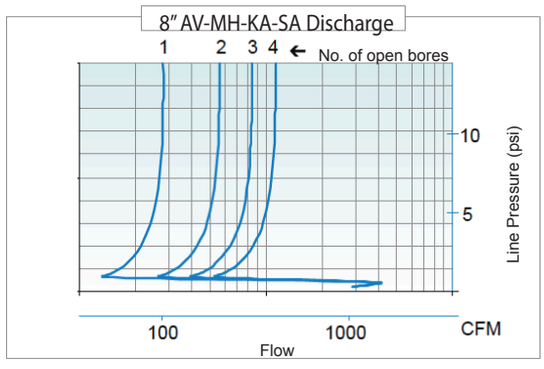
6″ AV-MH-KA-SA Discharge



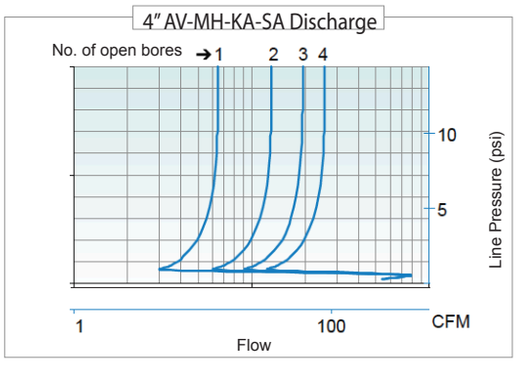
3″ AV-MH-KA-SA Discharge



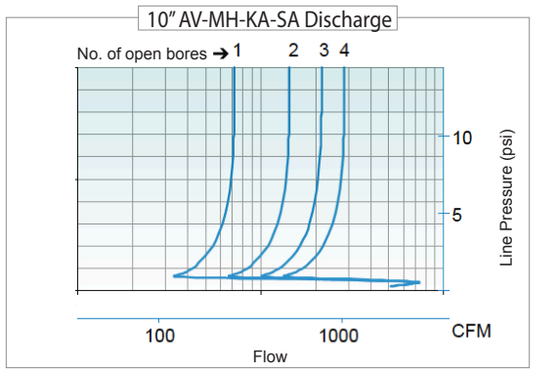
8″ AV-MH-KA-SA Discharge



4″ AV-MH-KA-SA Discharge



10″ AV-MH-KA-SA Discharge

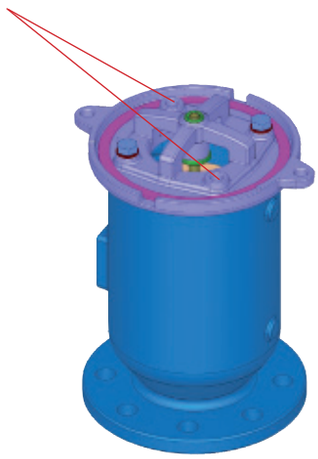


AV-MH-SA Assembly

AV-MH-SA
Assembly of Surge-Arresting device

1. Remove cover

2. Remove 2 bolts



3. Add 2 long bolts

4. Add housing and fasten nuts

5. Add net

6. Add the cover and fasten the M6 bolts

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DUCTILE IRON WATER SERVICE AIR RELEASE VALVES

AV-SIZE-MH	- TYPE	- OPTIONS	- CONNECTIONS
AV2.00-MH	- KA Combination Air Release & Air and Vacuum	Blank (None)	Blank ANSI 150 Flg. (250 psi mwp)
AV3.00-MH		- SA Surge Arrestor	- HP ANSI 300 Flg. (400 psi mwp)
AV4.00-MH			- TH NPT Threaded (400 psi mwp)
AV6.00-MH			
AV8.00-MH			
AV10.00-MH			

Note: -TH available 2" only

ORDERING GUIDE EXAMPLE

AV6.00-MH	- KA	- SA	- HP

Innovation

Expertise

Reliability

Hundreds of companies in the industrial, civil engineering, municipal and agricultural sectors around the world have chosen our innovative and field-proven technologies. Since our establishment we strive to lead the valves market with continued innovation, uncompromising excellence and firm commitment to our customers, consulting and supporting them through all stages of a project and overcoming challenges in R&D, design, implementation, and maintenance.

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