

K-060 HF NS 285 psi

K-062 HF NS 360 psi

K-064 HF NS 580 psi



Air & Vacuum Air Valve for High Flow Non Slam

Description

The K-060 HF NS series Air & Vacuum Valves are designed to automatically discharge or admit large volumes of air during the filling or draining of a pipeline or piping system. This valve will open to relieve negative pressures valve at pump shut-off and at water column separation.

Applications

- Municipal and industrial water conveyance systems.
- Water pipelines vulnerable to vandalism and/or water theft.
- Water systems found in remote areas.
- Water systems with high pressure demands (K-062 HF NS, K-064 HF NS).

Operation

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

High velocity air will not 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 discharge of air reduces pressure surges and other destructive phenomena.

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 air valve functions according to the following stages:

1. Entrapped air 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 down, opening the air & vacuum orifice.
2. Air will enter the system.

Main Features

- Working pressure range:
 - K-060 HF NS 3 – 285 psi
 - K-062 HF NS 3 – 360 psi
 - K-064 HF NS 3 – 580 psi
- Testing pressure for the air valve is 1.5 times its working pressure.
- Maximum working temperature: 140° F.
- Maximum intermittent temperature: 194° F.
- All main flow cross-sections are equal or greater than the nominal port area.
- Aerodynamic design enables high flow rates of air both at intake and at discharge.
- Reliable operation reduces water hammer incidents.
- Dynamic design allows for high velocity air discharge while preventing premature closure.
- Special orifice seat design: Stainless Steel and E.P.D.M. rubber, assures long-term maintenance-free operation.
- Screen protected outlet.
- The upper screen is protected with a protective cover.

Valve Selection

- Size Range: 2”-10” for all models in the series.
- These valves are manufactured with flanged ends to meet any requested standard.
- The 2” valve is also available with a threaded male NPT connection.
- Valve coating: FBE coating in accordance with the standard DIN 30677-2.
- Other coatings are available upon request.
- The K-060HF NS series air & vacuum air valve is also available as a combination air valve for Models D-060 HF NS, D-060-C HF NS, D-062 HF NS, D-065 HF NS, with the addition of an Automatic Air Release valve.

Note

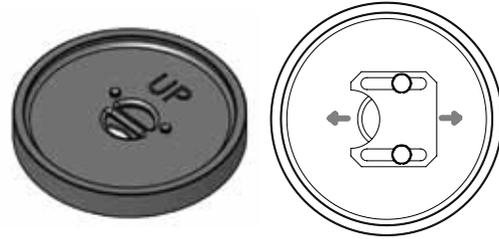
For best suitability, it is recommended to send the fluid chemical properties along with the valve request. Upon ordering, please specify: model, size, working pressure, threads standard and type of liquid.

Non-Slam Disc

The built-in throttling device on the Non-Slam disc of the K-060-C HF NS Combination Air Valves will allow for the graduated opening and closing of the disc orifice.

Advantages:

1. The orifice size of the disc can be adjusted to control and throttle the discharge of air during pipeline filling and during the return of the water column after separation.
2. The controlled discharge of air will reduce surge effects and provide for a silent closure of the air valve.
3. The closure of the orifice can be determined by running a surge analysis or by a decision taken in the field.
4. The orifice throttling device allows for a wide range of options from 100% open, partially open, partially closed to 100% closed.



Note

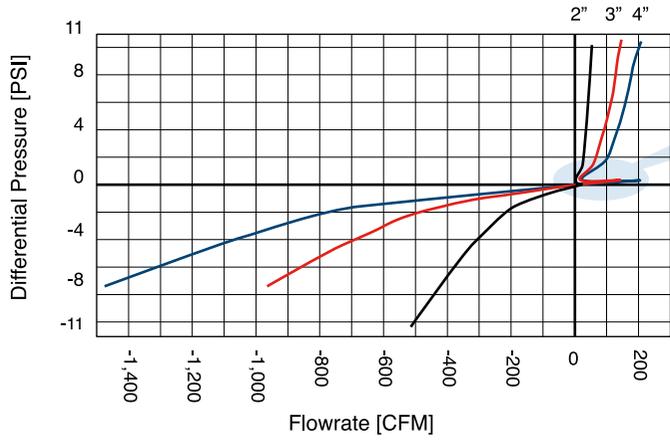
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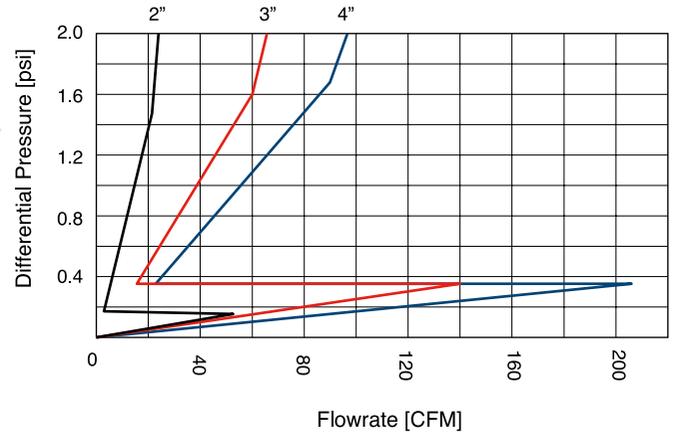
K-060 HF NS -Non-Slam Orifice Data Table

Nominal Size	Discharge Orifice Inch	Total NS area Sq.In.	NS orifice Inch	Differential pressure psi	CFM flow at 5.8 psi
2"	2"	0.098	0.35	0.25	40
3"	3"	0.27	0.59	0.35	110
4"	4"	0.74	0.96	0.35	160
6"	6"	1.4	1.3	0.35	627
8"	8"	2.63	1.8	0.45	1200
10"	10"	2.44	1.8	0.36	1483

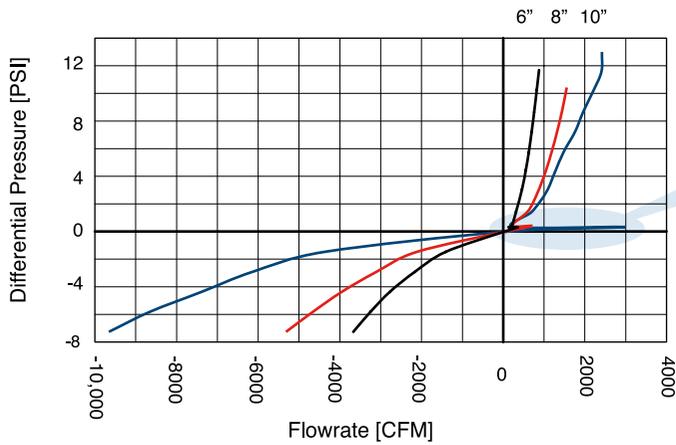
AIR & VACUUM FLOWRATE



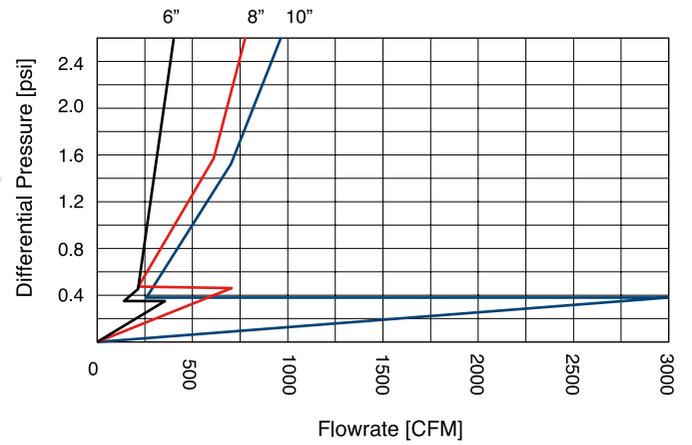
AIR DISCHARGE SWITCHING REGION



AIR & VACUUM FLOWRATE



AIR DISCHARGE SWITCHING REGION



DIMENSIONS AND WEIGHT

Nominal Size	Dimensions Inch		Weight Lbs. K-060 HF NS	Orifice Area Sq.in
	A	B		
2" Threaded	7.6	11.3	27.3	3.038
2" Flanged	7.6	10.9	28.5	3.038
3"	8.9	14.2	42.8	7.796
4"	10.3	16.6	65.6	12.167
6"	15.3	26.7	199.0	27.376
8"	18.3	30.7	304.9	48.670
10"	24.1	35.4	676.4	76.08

PARTS LIST AND SPECIFICATION

No.	Part	Material
1.	Plug	Stainless Steel SAE 316
2.	Domed Nut & Washer	NSF 61 Certified STST UNS 30400
3.	Screen Cover	Cast Iron ASTM A48 CL.35B / Resicoat RT R4
4.	Screen	NSF 61 Certified STST UNS 30400
5.	Cover	Ductile Iron ASTM A536 60-40-18 / Resicoat RT R4
6.	Ring	NSF 61 Certified STST UNS 31600
7.	Non-Slam Disc	NSF 61 Certified STST UNS 31600
8.	Bolt, Nut & Washer	NSF 61 Certified STST UNS 30400
9.	Orifice Seat	Stainless Steel SAE 316 / UNS 31600
10.	Orifice Seal	NSF 61 Certified E.P.D.M
11.	O - Ring	NSF 61 Certified NBR 70
12.	Float	NSF 61 Certified STST UNS 31600 /NSF 61 Certified polycarbonate
13.	Body	Ductile Iron ASTM A536 60-40-18 / Resicoat RT R4
14.	Plug	Stainless Steel SAE 316

