HBE ENGINEERING Inc.
205 Portage Ave. Three Rivers, MI 49093 U.S.A.
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INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

HBE ANTI FLASH VALVE

MODEL: AFV SERIES

ANTI-FLASH VALVE

FUNCTION

The HBE Anti-Flash valve is provided specifically to eliminate damage to the automatic recirculation valve and bypass piping due to flashing or cavitation.

The Anti-Flash valve functions as a variable orifice to ensure the pressure of the downstream liquid does not fall below the vapor pressure of the fluid.

STORAGE

For short and long term storage the valve should stay in the original packaging as received from HBE. Inside storage is recommended.

INSTALLATION

The HBE Anti-Flash Valve is a “wafer” design and is installed between raised face flanges and spiral metal gaskets, using studs. Installation adjacent the return tank is the best location in the system to install the AFV. I the AFV cannot be installed adjacent the system a straight run of exit piping of one meter or longer is recommended.

The AFV can be installed in horizontal, vertical and angled piping direction.

The AFV design is directional, make sure the valve is installed with the proper flow direction. An arrow is stamped on the valve body indicating flow direction.

OPERATION

Inlet pressure against the disc/insert assembly opens the anti-flash valve by building up back pressure and compressing the spring. After the insert cracks open, flow will keep the anti-flash valve open until flow from the recirculation valve stops.

OPERATIONAL CHECK

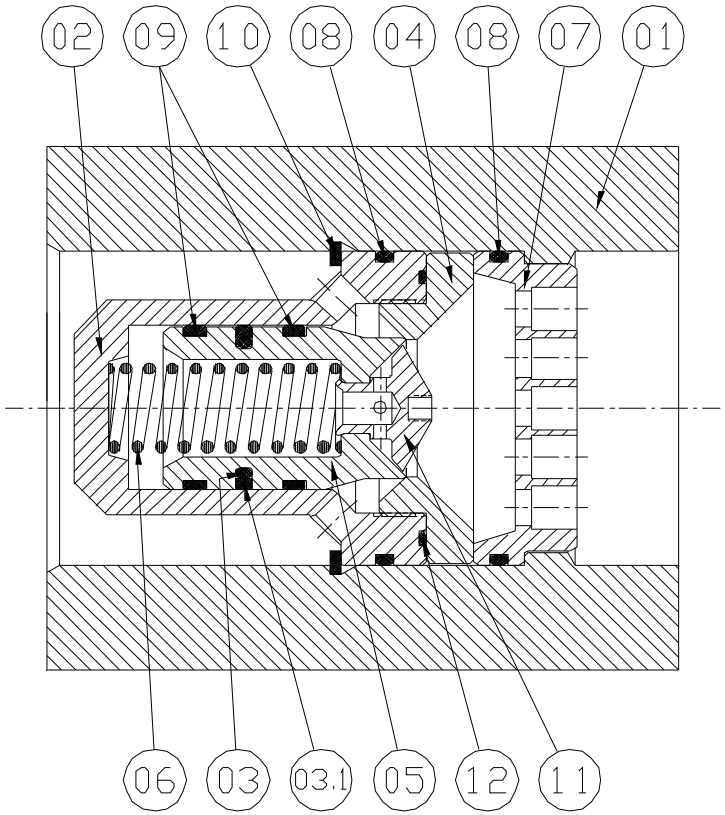
If any of the following occur, the valve should be removed and inspected:

1. Valve fails to open or close
2. Frequency of noise changes during open operation of the valve
3. Valve "hunts" during operation

INSPECTION AND MAINTENANCE

HBE recommends the AFV be replaced and returned to HBE, if it does not operate properly. If this is not possible the valve can be field serviced by:

1. Removing snap ring (part 10)
2. Pull out valve internals by grasping the guide bushing (part 2)
3. Once the internals are removed, disassemble by unthreading the seat bushing (part 4) from the guide bushing (part 2)
4. Clean all parts
5. Inspect for wear and replace any metal components if necessary
6. Inspect stem on insert, if flared over area is loose, tighten by using a ball bearing and press
7. Replace all seals
8. Reassemble internals
9. Inspect flow straightener for wear and replace if necessary
10. Replace internal assembly into housing and lock with snap ring
11. Return to service



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

Pos.	Qty.	Description	Material
01	1	Body	A105 Carbon Steel
02	1	Guide Bushing	416 Stainless Steel
03	1	O-Ring	AFLAS
03.1	1	Glyd-Ring	PTFE
04	1	Seat Bushing	416 Stainless Steel
05	1	Disk	416 Stainless Steel
06	1	Spring	302 Stainless Steel
07	1	Flow Straightener	431 Stainless Steel
08	2	O-Ring	AFLAS
09	2	Wear Ring	PTFE
10	1	Snap Ring	300 Series Stainless Steel
11	1	Insert	416 Stainless Steel
12	1	O-Ring	AFLAS

NOTES:

TOLERANCE UNLESS NOTED	
X	±0.040
X.X	±0.020
X.XX	±0.010
X.XXX	±0.005
∠	±1/2°
√	125RMS

SERIES AFV

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DATE	SCALE	DWG. NO.
08/07/95	NONE	
DWN. JAP	CHK. JAP	SYMBOL NO.
MATERIAL LISTED ABOVE		