

Anti-Flash Valve

Technical Data · Model AFV

Usage

The HBE Anti-Flash Valve Model AFV is provided specifically to eliminate damage to the recirculation valve and bypass piping from flashing and cavitation.

How It Works

The Anti-Flash Valve functions as a variable orifice to assure the pressure of the downstream liquid does not fall below the vapor pressure after exiting the recirculation valve.

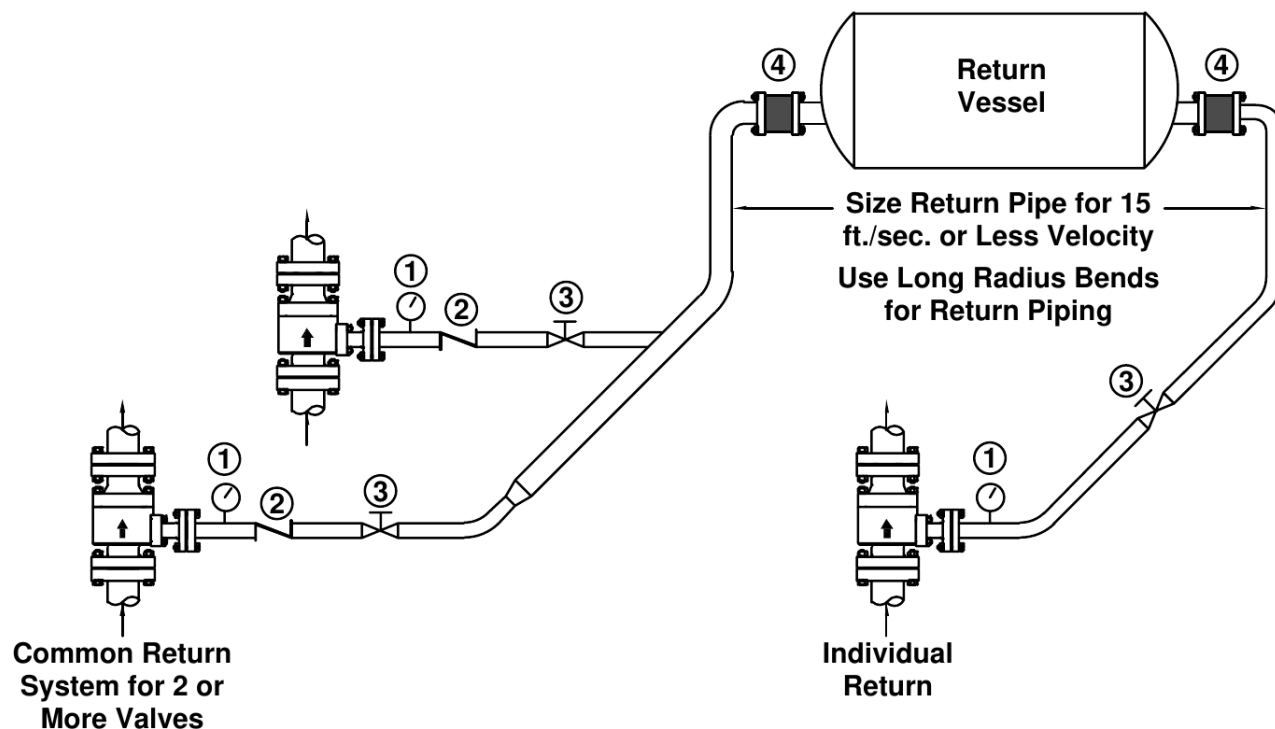
Applications

Applications which require Anti-Flash Valves include boiler feed, condensate, and certain process fluids which bypass to a low or negative pressure vessel. Modulating recirculation valves can run partially open for extended periods during low process demands. The Anti-Flash Valve provides back pressure lost from reduced piping friction and assures a flashing / cavitation condition does not occur.

Installation

The Anti-Flash Valve is a wafer design and is installed between flanges of the bypass piping size and ASME rating. Installed adjacent to the return vessel, the Anti-Flash Valve will assure protection of the entire bypass system.

Typical Installation



1. Pressure Gauge (Optional)

2. Check Valve (Not Required for HPM Valves)

3. Isolation Valve

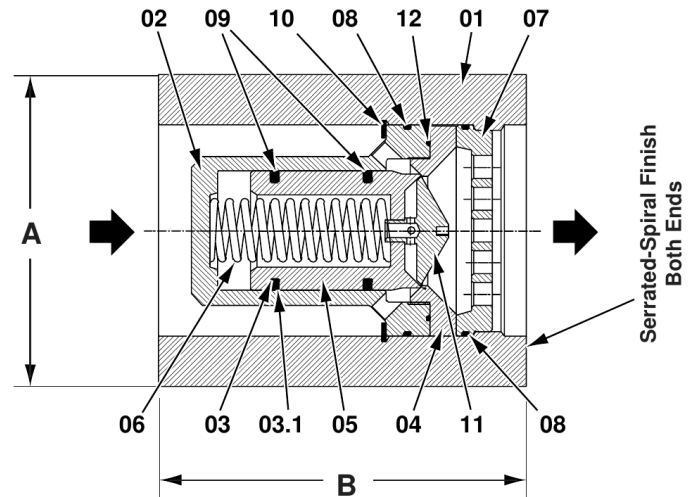
4. Anti-Flash Valve

Materials of Construction

Pos.	Qty.	Description	Material
01	1	Body	A105 Carbon Steel
02	1	Guide Bushing	416 Stainless Steel
03	1	O-Ring	Application Dependent
03.1	1	Glyd-Ring	Filled 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	1	O-Ring	Application Dependent
09	1	Wear Ring	Filled PTFE
10	1	Snap Ring	300 Series Stainless
11	1	Insert	316 Stainless Steel
12	1	O-Ring	Application Dependent

Dimensions (in / mm)

AFV Size	A in. (mm)	B in. (mm)
2	3.62 (91.95)	4.00 (101.6)
3	5.00 (127)	6.00 (152.4)
4	6.19 (157.2)	6.00 (152.4)
6	8.50 (215.9)	10.00 (254)

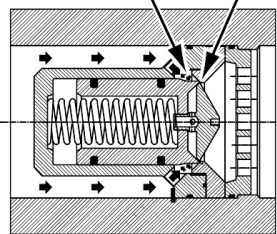


HBE Anti-Flash Valve — sectional view

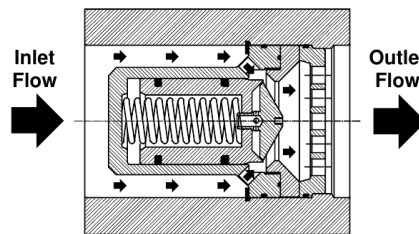
How the Anti-Flash Valve Works

When the inlet pressure reaches the set point, the disk will slide back compressing the spring

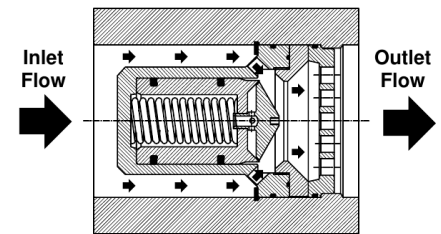
AFV Sealing Surface



AFV Closed
No Recirculation Flow



AFV Modulating
Partial Recirculation Flow



AFV Fully Open
Full Recirculation Flow

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