Anti-Shock Air Vacuum Valves – Series WAVASD

Henry Pratt AirPro Max® Anti-Shock Air Vacuum Valves are equipped with a measured closing, Anti-Shock Check Valve which regulates the flow of water into the Air Vacuum Valve. This regulation of flow provides additional protection by preventing the Air Vacuum Valve from slamming shut during critical operations. This controlled closure of the valve prevents surge or water hammer conditions from occurring and helps eliminate the possibility of damage to the valve caused by excessive pressure forces.

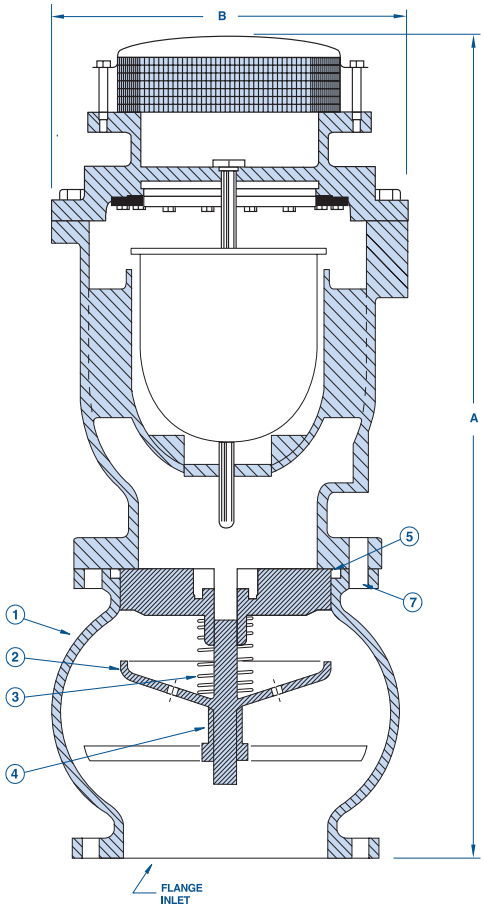
The Series WAVAS Anti-Shock Check Valve, mounted on the inlet of the Air Vacuum Valve, is a normally open valve. The disc is held open by a flexible spring allowing air to pass through unrestricted. As the Anti-Shock Valve fills with water the disc quickly closes preventing fluid surge against the internal components of the Air Vacuum Valve. The disc of the Anti-Shock Valve is drilled with adjustable flow ports which allow water to enter the Air Vacuum Valve at a measured rate. This regulated flow closes the Air Vacuum Valve without excessive force caused by surge or water hammer.

When the Air Vacuum Valve is closed the pressure on both sides of the Anti-Shock Check Valve disc equalize, returning the disc to the open position. This allows the Air Vacuum Valve to open at any time the water level drops and line pressure approaches atmospheric, permitting air to re-enter the pipeline before a vacuum can form.

Series WAVAS Anti-Shock check valves should be used:

- At high points in pipelines where the hydraulic gradient and flow conditions are such that a negative pressure can possibly form.
- High points on sections of the pipeline having velocities in excess of 7-10 f/s.
- Adjacent to any quick closing valve in a pipeline where a vacuum can be formed when closed.
- On the discharge of larger deep well turbine pumps, between the pump and the check valve.

Anti-Shock Check Valve Assembly Drawing



A.V. Pipe Size	Combo #	Air Vacuum Model	Anti-Shock Part #	A	B	CWP
2"	WAVASD-20-125	WAV20-300*	WAVAS-20	17-7/8"	9-1/2"	150
3"	WAVASD-30-125	WAV30-300*	WAVAS-30	20-11/16"	9-1/2"	150
4"	WAVASD-40-125	WAV40-150F	WAVAS-40	23-1/4"	12"	150**
6"	WAVASD-60-125	WAV60-150F	WAVAS-60	30-1/2"	14"	150
8"	WAVASD-80-125	WAV80-150F	WAVAS-80	35-5/8"	18"	150
10"	WAVASD-100-125	WAV100-150F	WAVAS-100	41-5/8"	20"	150
12"	WAVASD-120-125	WAV120-150F	WAVAS-120	45-3/8"	24"	150
14"	WAVASD-140-125	WAV140-150F	WAVAS-140	49-7/8"	27"	150
16"	WAVASD-160-125	WAV160-150F	WAVAS-160	51-3/4"	30-1/2"	150
20"	WAVASD-200-125	WAV200-150F	WAVAS-200	57"	38-1/4"	150

*Threaded inlet with flange adapter
**300 CWP available, contact factory for information

Part #	Description	Material
1	Body	ASTM A536 65-45-12
2	Cover	ASTM A536 65-45-12
3	Guide Bushing	ASTM A582 316SS
4	Seat	Buna-N
5	Float	ASTM A240 316SS
7	Cover Bolt	ASTM F593 316SS

For WAV drawing details, reference WAV series Valve Water Air Vacuum Valves (Pages 12-16).