



DAV - WWP

Wastewater Air Valves

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(Wastewater Air Valves)



DAV-WP
Wastewater Air Valves

The DAV-WP valve has been designed for efficient discharge and intake of air from pressurized sewage systems where confined air (gases) could impair the system's operation.

The valve's conical elongated body design minimizes the possibility of suspended solids or greases / oils clogging the orifice or causing the mechanism to foul up and stick.

For ease of maintenance, the DAV-WP is equipped with a 1" drain valve to allow periodic flushing of sediments, grease and solids.

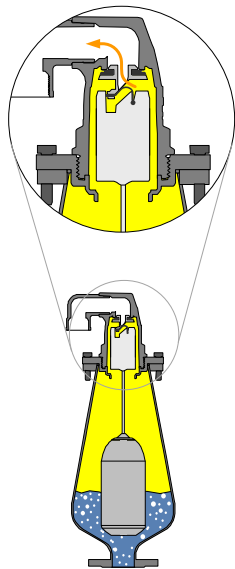
Operation

- Discharge of air at high flow velocity during the initial filling of the network.
- Introducing large quantities of air into the system when the pipe drains, maintaining atmospheric pressures in the pipeline and preventing collapse and cavitation damage to the conduits.
- Relieving entrapped air (gases) from the pipeline while the network is at normal working pressure.



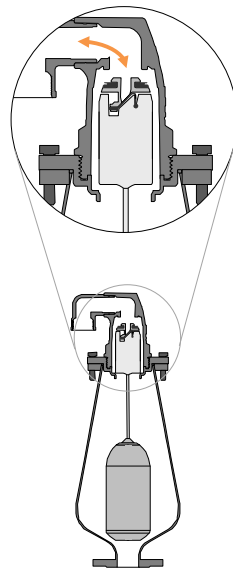
Principle of operation

Automatic



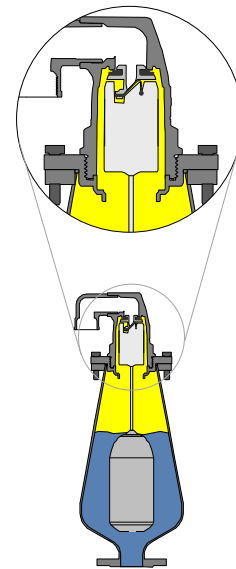
Dissolved gas is accumulated in the valve, released when the float drops

Air and Vacuum (Kinetic)



Pipeline is aerated

Closed



Pipeline is full of liquid

Dimensions & Weights

Valve	2" / 50 mm threaded		2" / 50 mm flanged		3" / 75 mm flanged		4" / 100 mm flanged		6" / 150 mm flanged	
	SI	US	SI	US	SI	US	SI	US	SI	US
H - Height	657 mm	25 ⁷ / ₈ "	657 mm	25 ⁷ / ₈ "	657 mm	25 ⁷ / ₈ "	657 mm	25 ⁷ / ₈ "	657 mm	25 ⁷ / ₈ "
W - Width	245 mm	9 ⁵ / ₈ "	245 mm	9 ⁵ / ₈ "	245 mm	9 ⁵ / ₈ "	245 mm	9 ⁵ / ₈ "	245 mm	9 ⁵ / ₈ "
D - Thread/flange	---	---	165 mm	6 ¹ / ₂ "	200 mm	7 ⁷ / ₈ "	220 mm	8 ³ / ₄ "	280 mm	11"
A - Aut. Nozzle Area	12.85 mm ²	0.02 in ²	12.85 mm ²	0.02 in ²	12.85 mm ²	0.02 in ²	12.85 mm ²	0.02 in ²	12.85 mm ²	0.02 in ²
K - Kinetic Nozzle Area	855 mm ²	1.33 in ²	855 mm ²	1.33 in ²	855 mm ²	1.33 in ²	855 mm ²	1.33 in ²	855 mm ²	1.33 in ²
E - Drainage Diameter (BSP/NPT)	1 ¹ / ₂ "	1 ¹ / ₂ "	1 ¹ / ₂ "	1 ¹ / ₂ "	1 ¹ / ₂ "	1 ¹ / ₂ "	1 ¹ / ₂ "	1 ¹ / ₂ "	1 ¹ / ₂ "	1 ¹ / ₂ "
Weight	12.5 kg	27.5 lbs.	12.2 kg	26.9 lbs.	15 kg	33 lbs.	18 kg	39.7 lbs.	22 kg	48.5 lbs.

End Connections

- Available in BS/ISO/ANSI standards flange, Sizes: 2" (50mm) - 6" (150mm)
- The 2" (50mm) valve is also available with a threaded BSP or NPT connection.

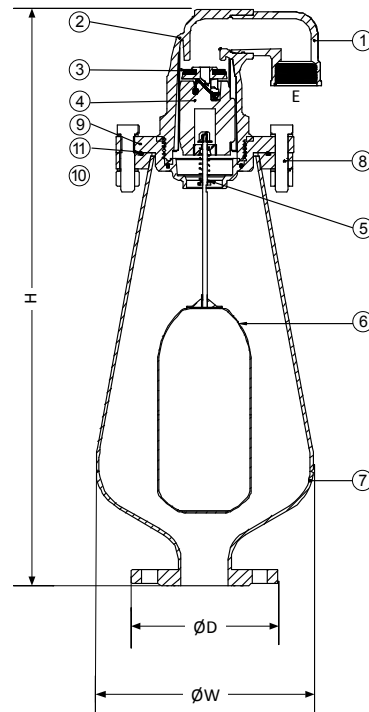
Operating Pressure-Range

0.2 - 16 bar (3 - 230 psi)

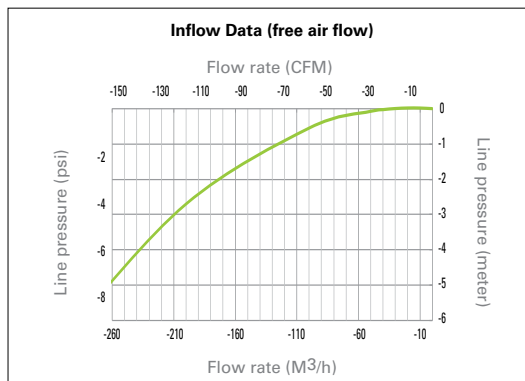
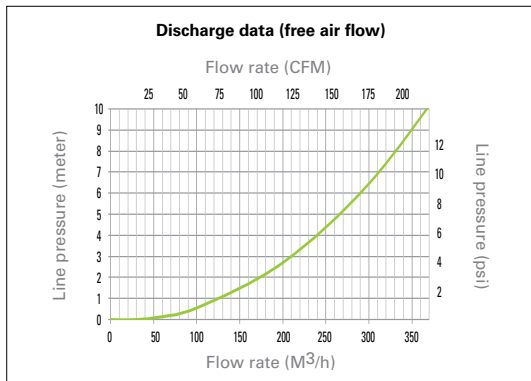
Components

No.	Description	Material
1	Bonnet elbow	PP
2	Bonnet	GRP
3	Seals	EPDM
4	Top Float	Foam PP
5	Spring	SS302
6	Main Float Sub. Assy.	SS316
7	Body	ST-37* or 316SS
8	Bolt	SS316
9	Adapter flange	PA
10	O Ring	NBR
11	O Ring	NBR

* Three layer, UV protected epoxy coating



Performance:



DAV-WP-SA

Surge arresting device for DAV 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.
- **Reliability** - Simple, durable mechanism, Can be serviced without having to put the air valve out of service.



Operation:

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.

Air venting

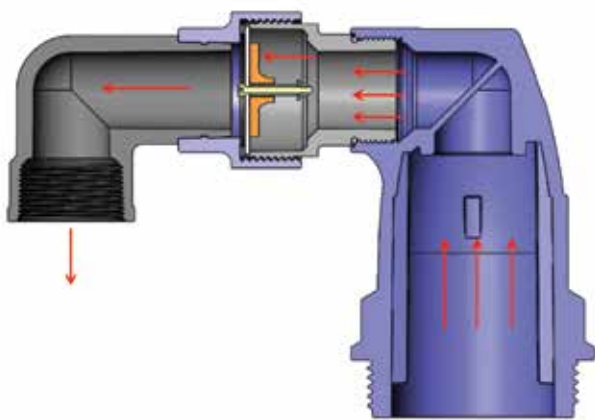
The Surge Arrestor addition of "DAV-WP" valves limits the air outflow, when the escaping air velocity exceeds a threshold value.

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

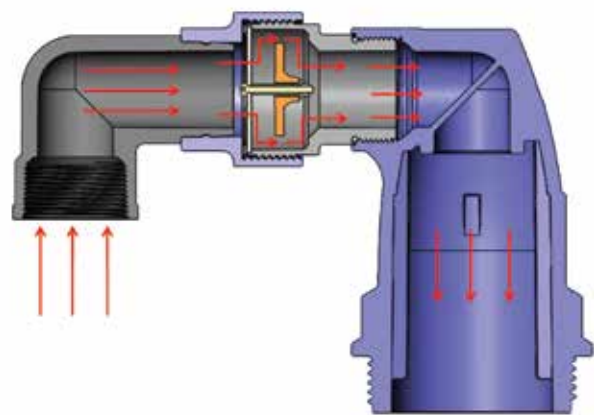
Vacuum Breaking (Air Intake)

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 moves back and allowing unrestricted air flow into the system.

Principle of operation:



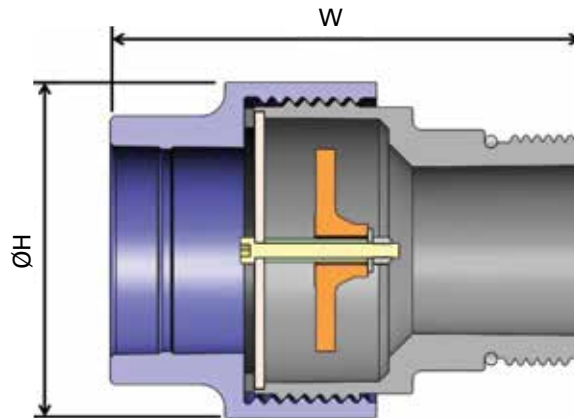
Air venting



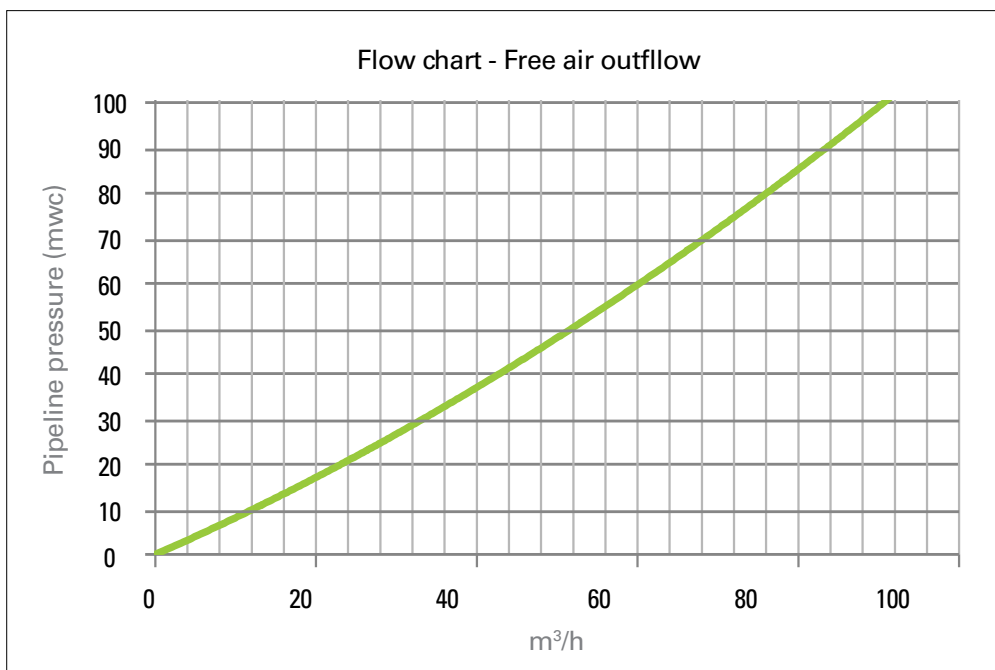
Vacuum Breaking (Air Intake)

Dimensions:

Valve	DAV-P-SA	
	SI	US
H - Height	70 mm	2 ¹¹ / ₁₆ "
W - Width	98 mm	3 ¹³ / ₁₆ "



Aerodynamic Performance



Ordering guide:

Ordering data	Ordering code					Ordering data		
	DAV-WP	□□□	□	□□	□□			
Materials		↑	↑	↑	↑	End connections		
Standard (ST-37 Steel body)	⇒	-				BS	BSP	Thread
SST body	⇒	SST				NP	NPT	
Size						I1	ISO10	Flanges
2" / 50 mm	⇒		2			I6	ISO16	
3" / 80 mm	⇒		3			A1	ANSI 125/150	
4" / 100 mm	⇒		4			BD	BSTD/ASTD	
6" / 150 mm	⇒		6			J1	JIS-10	
Function						UN	Un-drilled	Other
Combination		⇒		KA	XX	Specify		

For example:

DAV-WP-SST-3-KA-I1

This code represents Waste Water air-valve, 80mm / 3", Combination function with stainless steel tank and ISO PN10 inlet flange-connection.

Other Dorot air valves applications:







Innovation
Innovation

Expertise
Expertise

Reliability
Reliability

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