DeZURIK
APCO | HILTON

Contract Plan M3-03
Installed on Pump Barge

APCO AIR/VACUUM VALVES

AVV,3",146,T1,DI,200,NBR,S2-DI-S1
AVV Style - Air/Vacuum Valve
3 Size - 3 Inch (80mm)
146 Body Style - Series 140; 3" (80mm) NPT Outlet
T1 End Connection - Threaded Inlet NPT
DI Body Material - Ductile Iron (Nipple and Flange are Carbon Steel with F1N or F2N End Connections)
200 Working Pressure - 11-200 PSI; 3" (80mm) Valves
NBR Seating Surface - Acrylonitrile-Butadiene (NBR)
S2 Bushing Material - 316 Stainless Steel
DI Baffle Material - Ductile Iron
S1 Float Material - 304 Stainless Steel

Series 140
.5" (15 mm) - 3" (80 mm)

Series 150
4" (100 mm) - 30" (750 mm)

Air/Vacuum Valves

Guaranteed Protection

1. Protection for pipelines
2. Eliminating risk of collapsing the line due to vacuum
3. Exhausts air when the line is filled
4. Allows air to re-enter immediately when the line drains

Plus these exclusive features at no extra cost:

5. Stainless steel floats - Guaranteed individually tested
6. ASTM quality materials guaranteed throughout
7. Every valve hydrostatically factory tested

Why and Where to Use Air/Vacuum Valves

An Air/Vacuum Valve has a large venting orifice and is used to exhaust large quantities of air from a pipeline when being filled or a deep well pump column when the pump is started.* Once the line is filled, the Air/Vacuum Valve closes and remains closed until the liquid is drained and pressure returns to atmospheric. The Air/ Vacuum Valve will then immediately open to allow air to re-enter the line and prevent a vacuum from developing.

Air/Vacuum Valves do not open to exhaust the small pockets of air which collect in the line while it is operating under pressure. We highly recommend Automatic Air Release Valves (AARV) be used in conjunction with Air/Vacuum Valves for maximum pipeline flow and pump efficiency. The AARV will eliminate constricting air pockets from forming at the high points of the pipeline.

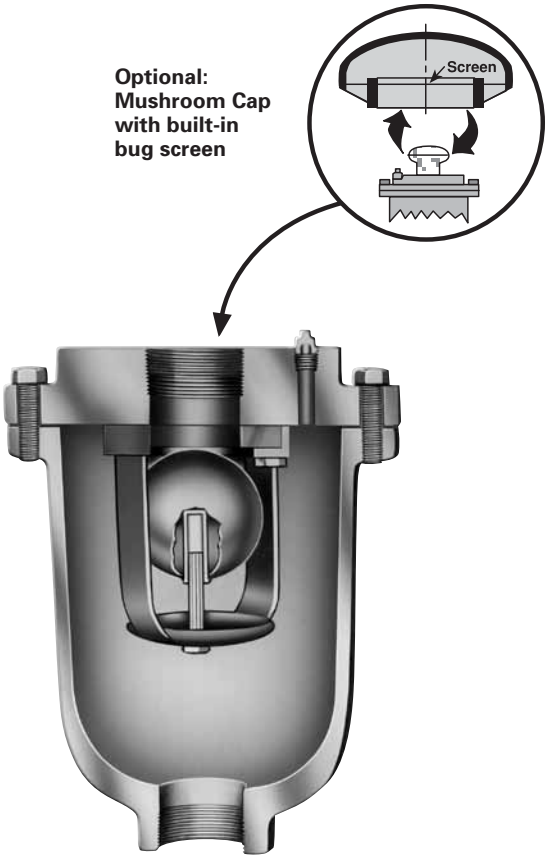
The minimal cost for the Automatic Air Release Valves will quickly pay for itself in minimizing head loss through the pipeline. The result: energy cost savings!

Series 140H available for high pressure service specify operating pressure if below 20 psi (138 kpa).

***See bulletin 586 - Air Valves for Vertical Turbine Pumps**

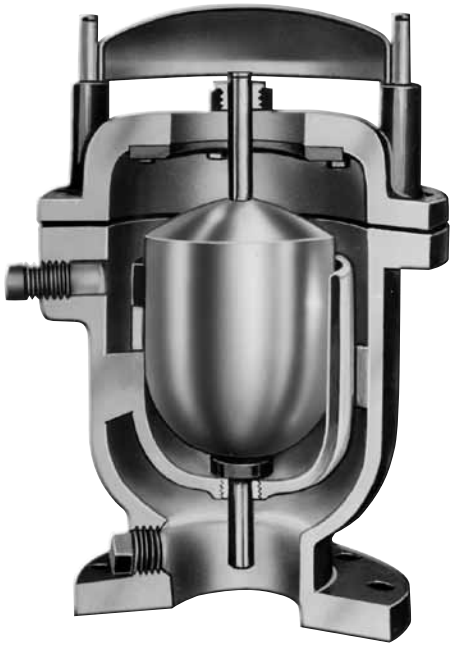
Manufactured to AWWA C-512

ISO flange connections available



Series 140

½" (15 mm) through 3" (80 mm) outlets are NPT thread. It is good practice to install a mushroom cap into the threaded outlet for discharge protection.

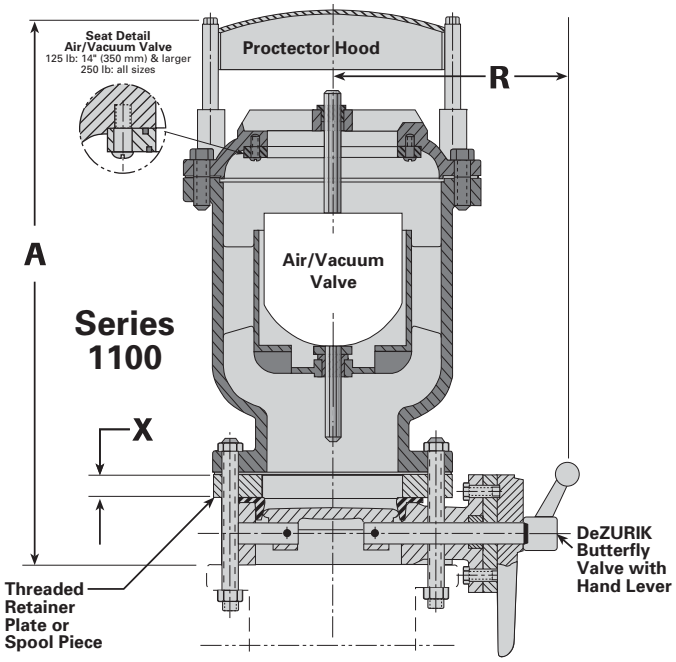


Series 150

4" (100 mm) through 30" (750 mm) standard outlets are plain with a steel protector hood.

Optional threaded or flanged outlets available.

Physical Dimensions



Model	Size	Height	Max. Dia.	Inlet	Outlet	Weight Lbs/Kg
141	.5" / 15	7.063" / 179	5.125" / 130	.5" NPT / 13	.5" NPT / 13	10 / 5
142	1" / 25	9" / 229	7" / 178	1" NPT / 25	1" NPT / 25	22 / 10
144	2" / 50	12" / 305	9" / 229	2" NPT / 51	2" NPT / 51	55 / 25
146	3" / 80	13.625" / 346	9.438" / 240	3" NPT or Flanged / 76	3" NPT / 76	60 / 27
152	4" / 100	18.875" / 479	12" / 305	4" NPT or Flanged / 102	4" Plain / 102	100 / 45
153	6" / 150	21.75" / 552	16" / 406	6" Flanged / 152	6" Plain / 152	150 / 68
154	8" / 200	25" / 635	18" / 457	8" Flanged / 203	8" Plain / 203	200 / 91
155	10" / 250	27.375" / 695	20" / 508	10" Flanged / 254	10" Plain / 254	350 / 159
156	12" / 300	30.375" / 772	25" / 635	12" Flanged / 305	12" Plain / 305	500 / 227
157	14" / 350	30.75" / 781	29" / 737	14" Flanged / 356	14" Plain / 356	625 / 283
158	16" / 400	31.75" / 806	32" / 813	16" Flanged / 406	16" Plain / 406	830 / 376
159	18" / 450	43.5" / 1105	34" / 864	18" Flanged / 457	18" Plain / 457	1100 / 499
160	20" / 500	48" / 1219	40" / 1016	20" Flanged / 508	20" Plain / 508	1650 / 748
162	24" / 600	58" / 1473	48" / 1219	24" Flanged / 610	24" Plain / 610	2600 / 1179

Inch
Millimeter

On sizes 4" (102 mm) and larger, the plain outlet comes with a protector hood, as illustrated. However, threaded or flanged outlets are available and recommended when valves are used inside the pump house.

Replace Shut-Off Valves with DeZURIK Butterfly Valves

Costs to excavate pipeline trenches can be greatly reduced by using DeZURIK Butterfly Valves for isolation instead of gate valves. DeZURIK Butterfly Valves are economical, reliable and much shorter, permitting a reduction in depth of trench. See Below.

Size	Model	Combination	A	R	X	No. Required & Size			
						Studs		Nuts	
						UNC	ISO	UNC	ISO
4" / 100	1104	152/904	21.5" / 546	9.5" / 241	.938" / 24	8 - .625-11 x 6.5	8 - 16-2 x 165mm	16 - .625-11	16 - 16-2
6" / 150	1106	153/906	25.25" / 641	10.75" / 273	1" / 25	8 - .75-10 x 8	8 - 20-2.5 x 203mm	16 - .75-10	16 - 18-2.5
8" / 200	1108	154/908	29" / 737	14.25" / 362	1.5" / 38	8 - .75-10 x 9	8 - 20-2.5 x 229mm	16 - .75-10	16 - 18-2.5
10" / 250	1110	155/910	32" / 813	14.5" / 368	2" / 51	12 - .875-9 x 10	12 - 20-2.5 x 254mm	24 - .875-9	24 - 20-2.5
* 12" / 300	1112	156/912	39.75" / 1010	15" / 381	5" / 127	12 - .875-9 x 8.5	12 - 20-2.5 x 216mm	24 - .875-9	24 - 20-2.5
* 14" / 350	1114	157/914	40" / 1016	16.75" / 425	5" / 127	12 - 1.0-8 x 9	12 - 24-3 x 229mm	24 - 1-8	24 - 24-3
16" / 400	1116	158/916	42.75" / 1086	17.75" / 451	1.438" / 37	16 - 1.0-8 x 11	16 - 24-3 x 279mm	32 - 1-8	32 - 24-3

Inch
Millimeter

*** Uses spool piece**

Additional Air Valve Information	Bulletin
Which Air Valve Should I Use?	610
Combination Air Valves	623
Air Valves for Vertical Turbine Pumps	586
Slow Closing Air and Vacuum Valves	613
Hydraulically Controlled Air/Vacuum Valves	7000