

Air Release / Vacuum Relief Valves



Air Release / Vacuum Relief Valves provide vital protection to pipeline systems. They allow air to escape during system startup by preventing air restrictions, water hammer caused by large air masses, inaccurate flow meter readings, and explosive conditions from air being compressed by water.

They also allow air to enter the pipeline during valve closure or system shutdown. This minimizes the collapse of mainline and submain pipes, back siphonage of dirt into emitters, and water hammer caused by sudden reversal of flows.

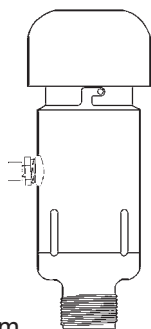
PRODUCT FEATURES

- Available in dual acting, continuous and combination models
- Durable, weather resistant and non-corrosive material
- Removable top for seal maintenance
- Protects irrigation system and components
- Bright color allows easy visibility
- Slam resistant models available
- Easy to install
- Performance data tested and verified at C.I.T.
- Used in Agricultural, Nursery and Landscape applications
- Available in models that seal as low as 1 PSI
- Working pressures as high as 200 PSI on some models
- Optional Schrader Valve to check system pressure
- Inlet available in NPT or BSP



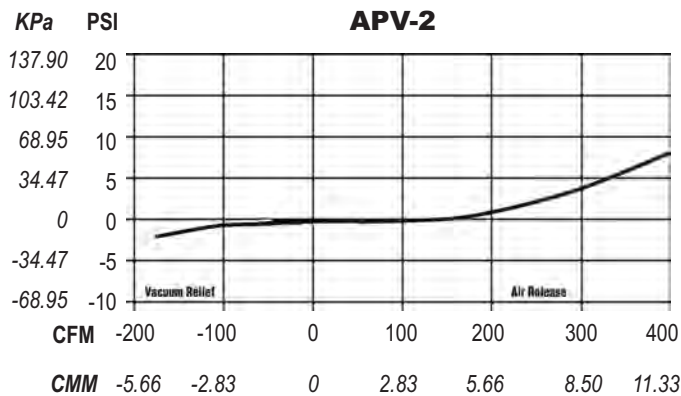
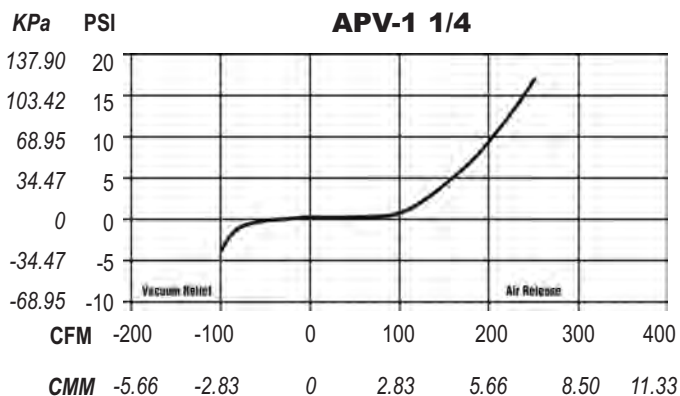
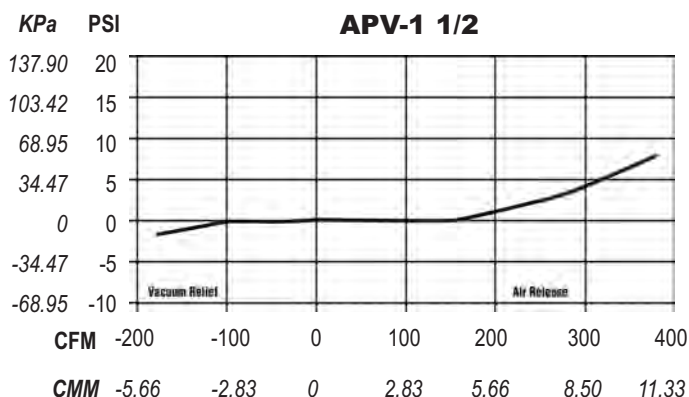
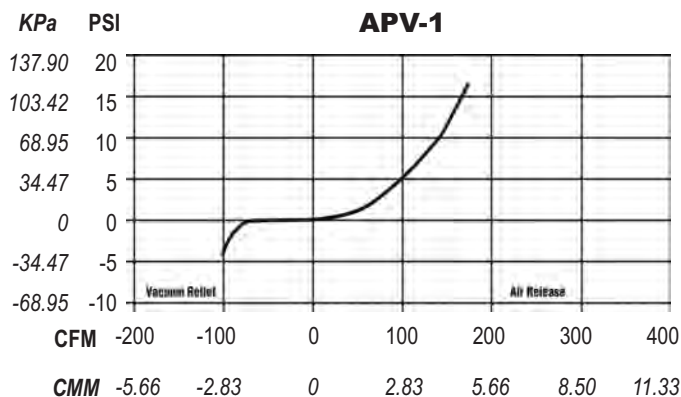
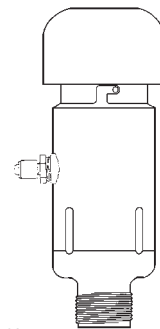
APV-1", 1 1/4" & APVV-1", 1 1/4"

- Dual acting air release/vacuum relief valve
- Innovative and slam resistant design allows only water to close valve
- 150 PSI working pressure
- Inlet 1" and 1 1/4" NPT or BSP
- Seals at 1 PSI
- Clear open diameter is 0.775"
- Optional Schrader Valve to check system pressure



APV- 1 1/2", 2" & APVV-1 1/2", 2"







- Dual acting air release/vacuum relief valve
- Innovative and slam resistant design allows only water to close valve
- 150 PSI working pressure
- Inlet 1 1/2" and 2" NPT or BSP
- Seals at 1 PSI
- Clear open diameter is 1.140"
- Optional Schrader Valve to check system pressure

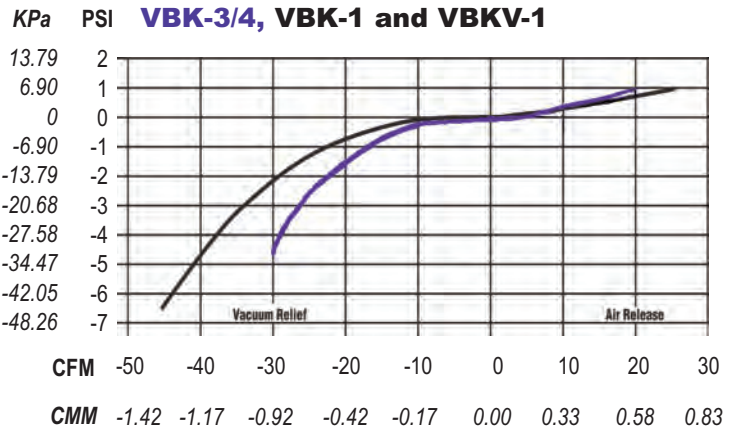
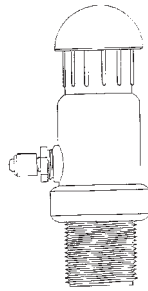


HOW TO SPECIFY APV SERIES

The air release/vacuum relief valve shall have a maximum working pressure to 150 PSI rated at standard temperature of 73 degrees F and have a (1" 1 1/4" 1 1/2" 2") MPT inlet. Valve shall incorporate an innovative and unique slam resistant design that allows only water to close the valve, which will operate as a dual acting air release and vacuum relief. Valve shall achieve minimum positive sealing at a pressure of 1 PSI with a clear open diameter of (0.775 1.140). Valve shall provide vacuum relief of (100 175) CFM @ (-4 -1.9 -1.6) PSI and air release of (175 250 375 400) CFM @ (16.25 16.6 8) PSI. Valve will be manufactured with UV stabilized, durable, weather resistant and non-corrosive engineered plastics of bright colors for easy visibility. Valve will have a removable top for easy seal maintenance. Air release/vacuum relief valve shall be manufactured by Jain Irrigation, Inc., Fresno, CA.

VBK-3/4", 1" & VBKV-1"






-  Dual acting air release/vacuum relief valve
-  80 PSI working pressure
-  Inlet 3/4" and 1" NPT
-  Seals at 5 PSI
-  Clear open diameter is 0.610"
-  Optional Schrader Valve to check system pressure

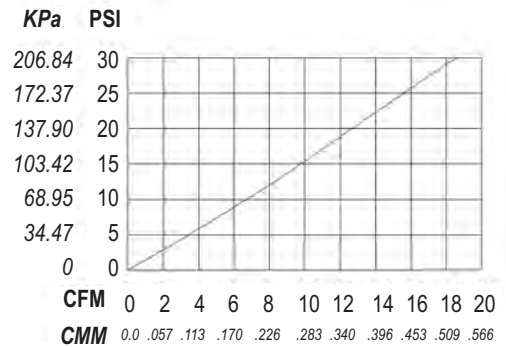
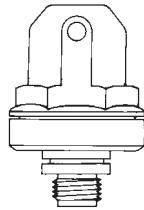


HOW TO SPECIFY VBK SERIES







The air release/vacuum relief valve shall have a maximum working pressure to 80 PSI rated at standard temperature of 73 degrees F and have a (3/4" 1") MPT inlet. Valve shall operate as a dual acting air release and vacuum relief. Valve shall achieve minimum positive sealing at a pressure of 5 PSI with a clear open diameter of 0.610". Valve shall provide vacuum relief of (-30 -45) CFM @ (-4.5 -6.5) PSI and air release of (20 25) CFM @ 1 PSI. Valve will be manufactured with UV stabilized, durable, weather resistant and non-corrosive engineered plastics of bright colors for easy visibility. Valve will have a removable top for easy seal maintenance (and will have a Schrader valve incorporated into the side of the body to conveniently check system pressure). Air release/vacuum relief valve shall be manufactured by Jain Irrigation, Inc., Fresno, CA.

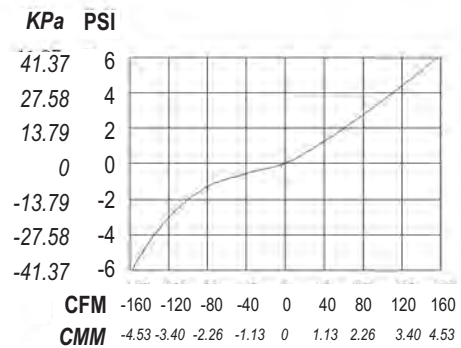
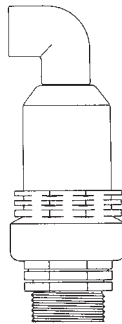
ARV-1

-  Continuous air release
-  170 PSI working pressure
-  Inlet 1" NPT or BSP
-  Simple design
-  Easy maintenance



ARV-2

-  Combination (dual acting air release/vacuum relief and continuous air release)
-  200 PSI working pressure
-  Inlet 2" NPT or 2" BSP
-  Outlet 1 1/4" FPT
-  Seals at 1 PSI
-  Clear open diameter is 1.290"



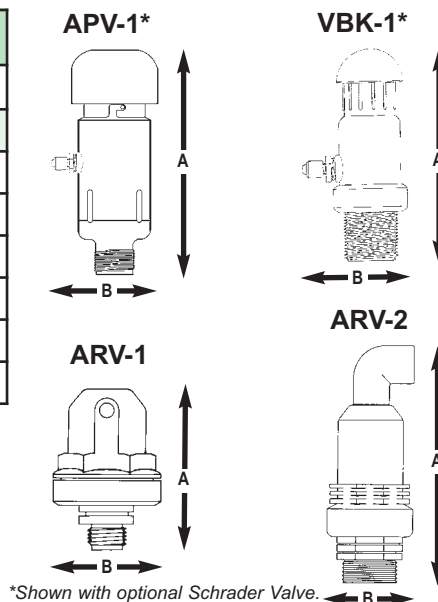
Model #	Part #	Description
APV-1	12090001	1" MPT Air/Vacuum Relief Valve
APV-1 1/4	12090004	1 1/4" MPT Air/Vacuum Relief Valve
APV-1 1/2	12090002	1 1/2" MPT Air/Vacuum Relief Valve
APV-2	12090007	2" MPT Air/Vacuum Relief Valve
APV V-1	12090010	1" MPT Air/Vacuum Relief Valve w/Schrader Valve
APV V-1 1/4	12090013	1 1/4" MPT Air/Vacuum Relief Valve w/Schrader Valve
APV V 1 1/2	12090011	1 1/2" MPT Air/Vacuum Relief Valve w/Schrader Valve
APV V-2	12090016	2" MPT Air/Vacuum Relief Valve w/Schrader Valve

Model #	Part #	Description
VBK-3/4	12090033	3/4" MPT Air/Vacuum Relief Valve
VBK-1	12090023	1" MPT Air/Vacuum Relief Valve
VBKV-1	12090028	1" MPT Air/Vacuum Relief Valve w/Schrader Valve
ARV-1	12090018	1" MPT Continuous Air Release Valve
ARV-2	12090020	2" MPT Combination Air Release Valve

Dimensions & Weights

Description	Nominal / Metric		Height (A)		Width (B)		Weight	
	in.	cm	in.	cm	in.	cm	lbs.	gr.
APV - 1" & 1 1/4"	1 & 1 1/4	2.54 & 3.18	9	22.86	3.43	8.71	0.67	304.18
APV - 1 1/2" & 2"	1 1/2 & 2	3.81 & 5.08	9	22.86	3.43	8.71	1.80	817.20
ARV - 1	1	2.54	5.25	13.34	3.18	8.07	.63	286.02
ARV - 2	2	5.08	10.75	27.31	3.98	10.10	1.64	744.56
VBK - 3/4	3/4	1.91	5.01	12.73	1.81	4.60	.21	95.34
VBK - 1	1	2.54	5.50	13.97	1.81	4.60	0.24	108.96

For detailed sizing information and placement, see our **"Guide to the Use of Air Release / Vacuum Relief and Continuous Acting Air Vents"** Technical Manual.



Metric Conversion Table for the APV-Series Release Valves

Air Action	Pressure									
	CFM	CMM	PSI 2"	KPa 2"	PSI 1 1/2"	KPa 1 1/2"	PSI 1 1/4"	KPa 1 1/4"	PSI 1"	KPa 1"
Vacuum Relief	-175	-4.955	-1.623	-11.192	-1.86	-12.823	-	-	-	-
	-150	-4.248	-1.171	-8.074	-1.330	-9.170	-	-	-	-
	-125	-3.540	-0.778	-5.364	-0.878	-6.054	-	-	-	-
	-100	-2.832	-0.444	-3.061	-0.503	-3.468	-0.397	-2.734	-4.170	-28.751
	-75	-2.124	-0.169	-1.165	-0.205	-1.413	-0.909	-6.267	-0.419	-2.889
0	0	0	0	0	0	0	0	0	0	
Air Release	25	0.708	0.000	0.000	0.000	0.000	0.006	0.041	0.330	2.275
	50	1.416	0.001	0.007	0.000	0.000	0.050	0.345	1.000	6.895
	75	2.124	0.003	0.021	0.001	0.007	0.100	0.689	2.500	17.237
	100	2.832	0.030	0.207	0.005	0.034	0.604	4.164	4.900	33.784
	125	3.540	0.148	1.020	0.009	0.062	2.085	14.373	7.750	53.434
	150	4.248	0.192	1.324	0.035	0.241	4.043	27.876	11.000	75.842
	175	4.955	0.611	4.213	0.562	3.875	6.476	44.650	16.250	112.040
	200	5.663	1.110	7.653	1.178	8.122	9.384	64.700	-	-
	225	6.371	1.689	11.645	1.888	13.017	12.768	88.032	-	-
	250	7.079	2.348	16.189	2.691	18.554	16.628	114.646	-	-
	275	7.787	3.087	21.284	3.586	24.725	-	-	-	-
	300	8.495	3.906	26.931	4.575	31.544	-	-	-	-
	325	9.203	4.804	33.122	5.656	38.997	-	-	-	-
	350	9.911	5.783	39.872	6.831	47.098	-	-	-	-
	375	10.619	6.841	47.167	8.098	55.834	-	-	-	-
400	11.327	7.979	55.013	-	-	-	-	-	-	

Metric Conversion Table for the ARV-2

Air Action	Pressure		
	CFM	CMM	PSI
-160	-4.528	-6.18	-42.639
-150	-4.248	-5.20	-35.885
-140	-3.962	-4.35	-30.010
-130	-3.679	-3.62	-24.943
-120	-3.396	-2.99	-20.613
-110	-3.113	-2.46	-16.947
-100	-2.832	-2.01	-13.874
-90	-2.547	-1.64	-11.322
-80	-2.264	-1.34	-9.220
-70	-1.981	-1.09	-7.496
-60	-1.698	-0.88	-6.079
-50	-1.416	-0.71	-4.897
-40	-1.132	-0.56	-3.877
-30	-0.849	-0.43	-2.950
-20	-0.566	-0.30	-2.042
-10	-0.283	-0.16	-1.083
0	0.000	0.00	0.000
10	0.283	0.31	2.139
20	0.566	0.63	4.342
30	0.849	0.96	6.609
40	1.132	1.30	8.939
50	1.416	1.64	11.334
60	1.698	2.00	13.794
70	1.981	2.37	16.318
80	2.264	2.74	18.908
90	2.547	3.13	21.563
100	2.832	3.52	24.283
110	3.113	3.93	27.070
120	3.396	4.34	29.923
130	3.679	4.76	32.843
140	3.962	5.20	35.830
150	4.248	5.64	38.884
160	4.528	6.09	42.005

Metric Conversion Table for the VBK-Series Release Valves

Air Action	Pressure				
	CFM	CMM	PSI 1"	KPa 1"	PSI 3/4"
-45	-1.274	-6.56	-45.230	-	-
-40	-1.133	-4.81	-33.164	-	-
-35	-0.991	-3.39	-23.373	-	-
-30	-0.850	-2.26	-15.582	-4.8	-33.095
-25	-0.708	-1.40	-9.653	-2.95	-20.340
-20	-0.566	-0.78	-5.378	-1.75	-12.066
-15	-0.425	-0.37	-2.551	-0.80	-5.516
-10	-0.283	-0.13	-0.896	-0.30	-2.068
-5	-0.142	-0.02	-0.138	-0.10	-0.689
0	0	0	0	0	0
5	0.142	0.04	0.276	0.20	1.379
10	0.283	0.18	1.241	0.25	1.724
15	0.425	0.38	2.62	0.50	3.447
20	0.566	0.65	4.482	0.95	6.550
25	0.708	0.88	6.067	-	-

Metric Conversion Table for the ARV-1

Air Action	Pressure		
	CFM	CMM	PSI
0	0.000	0.000	0.000
2	0.057	2.928	20.191
4	0.113	6.042	41.667
6	0.170	9.284	64.027
8	0.226	12.596	86.868
10	0.283	15.919	109.787
12	0.340	19.195	132.381
14	0.396	22.366	154.247
16	0.453	25.372	174.983
18	0.509	28.157	194.185
20	0.566	30.661	211.452

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