

APCO AVV AIR/VACUUM VALVE & DUAL BODY COMBINATION AIR VALVES

For Water and Other Clean Fluids



Body Style 140/140H
140: .5-3" (15-80mm)
140H: 1-3" (25-80mm)

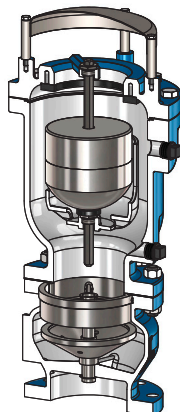


Body Style 150
4-18" (100-450mm)

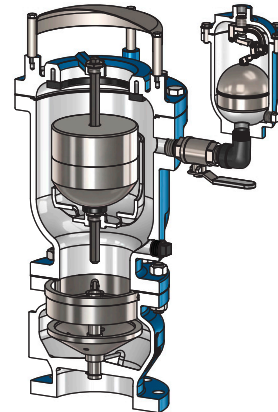


Body Style 1800/1800K
1-18" (25-450mm)

With Surge Check Valve Option for Slow Closing



**Slow Closing Air/Vacuum
Valve, AVV Body Style 150
with CSV Surge Check Valve**



**Slow Closing Dual Body
Combination Valve, AVV Body
Style 1800/1800K with CSV
Surge Check Valve**

How Do Air/Vacuum Valves Work?

The function of an Air/Vacuum Valve is to protect a pipeline from damage. Air/Vacuum Valves expel large quantities of air when filling the pipeline, and admit large quantities of air to relieve a vacuum when draining the pipeline. APCO AVV Air/Vacuum Valves are float operated and have a large discharge orifice, equal in size to the valve inlet, for efficient filling and draining of pipelines.

When filling a pipeline, the Air/Vacuum Valve is open. Once the pipeline is filled, the Air/Vacuum Valve closes and remains closed during normal operation. When the pipeline is drained, the pressure returns to atmospheric and the Air/Vacuum Valve will immediately open to allow air to re-enter the pipeline to prevent a vacuum from developing. In this way, the large venting orifice protects against vacuum and water column separation or pipeline collapse.

Design & Construction

The Air/Vacuum Valve consists of a body, cover, baffle, seat and stainless steel float. The baffle is designed to protect the float from direct contact with rushing air or slugs of water which prevents premature shutoff. The resilient seat is fastened to the valve cover and can be easily removed if needed. The 316 stainless steel float is center guided at each end for positive seating.

The following body styles are available:

- **AVV Air/Vacuum Valve Body Style 140**
The APCO Air/Vacuum Valves in Body Style 140, in sizes .5-3" (15-80mm), are available in ductile iron bodies with a threaded NPT inlet and outlet as standard. ASME 125/150 or 250/300 flanged outlets are available as an option.
- **AVV Air/Vacuum Valve Body Style 140H**
The APCO Air/Vacuum Valves in Body Style 140H are designed for higher pressure service and are available in sizes 1-3" (25-80mm).
- **AVV Air/Vacuum Valve Body Style 150**
The APCO Air/Vacuum Valves in Body Style 150, in sizes 4-18" (100-450mm), with ASME 125/150 or 250/300 flanged inlets and a plain outlet with steel protector hood as standard. Threaded or flanged outlets are available for valves used inside a pump house.

Refer to APCO Air Valve Selection & Sizing Guide, Bulletin 610, for Air/Vacuum Valve sizing data and formulas.



Body Style 140/140H



Body Style 150

Dual Body Combination Air Valves

APCO AVV Dual Body Combination Air Valves combine an Air/Vacuum Valve with an Air Release Valve. Combination Air Valves, also called double orifice valves, are typically installed on all high points of a system where it has been determined that the functions of both an Air/Vacuum Valve and an Air Release Valve are needed to vent and protect a pipeline.

The Dual Body Combination Air Valve body styles 1800/1800K include an Air/Vacuum Valve piped with a shutoff valve to an Air Release Valve. The Air/Vacuum Valve expels large quantities of air when filling and admits air to relieve vacuum when draining.

The Air Release Valve prevents small air pockets from accumulating at the high points of the pipeline that can restrict flow. The Air Release Valve operates under pressure to release entrapped air in the pipeline. The Air Release Valve stays normally closed to prevent the pipeline fluid from escaping. When enough air accumulates to form a pocket, the float lowers and opens the valve orifice to release air. The air release valve then closes until more air accumulates and the opening cycle repeats automatically. By relieving air pockets that restrict flow, a Combination Air Valve can quickly pay for itself in minimizing head loss, which results in reduced energy costs.

The dual body style allows use of a wide variety of Air Release Valves with a range of orifices and higher operating pressures. DeZURIK also offers two styles of APCO Single Body Combination Air Valves - the APCO AVC Single Body Combination Air Valves or ASU High Performance Single Body Combination Air Valve. Single body styles are used where compactness is preferred, and/or where risk of tampering exists due to accessibility of the installation. Refer to separate product bulletins for details.

Refer to APCO Air Valve Selection & Sizing Guide, Bulletin 610, for Air Release Valve sizing data and formulas.



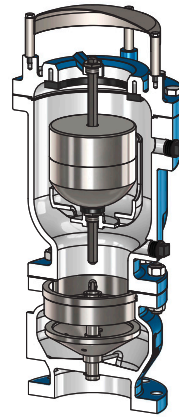
Body Style 1800/1800K

Options & Accessories

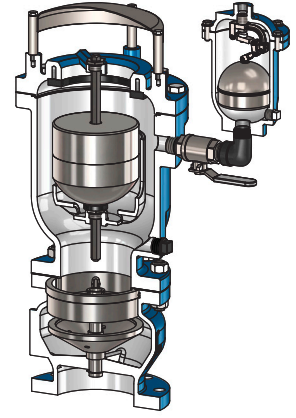
Surge Check Valve (CSV)

An APCO AVV Air/Vacuum Valve combined with a CSV Surge Check Valve creates an optimal Slow Closing Air/Vacuum Valve. The Slow Closing Valve is designed to prevent critical shock conditions occurring in installations where the operating conditions cause a regular air valve to slam open or closed. This slow closing feature protects the Air/Vacuum Valve and the pipeline from damage. The CSV Surge Check Valve is available on either Single Body or Dual Body Combination Air Valves.

Refer to Surge Check Valve Bulletin 613 for sizing, selection and ordering information.



Slow Closing Air/Vacuum Valve, AVV Body Style 150 with CSV Surge Check Valve

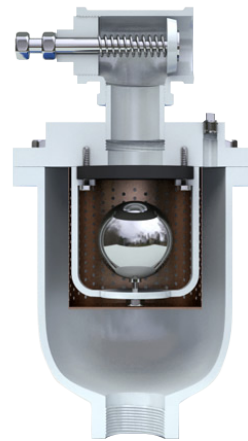


Slow Closing Dual Body Combination Valve, AVV Body Style 1800/1800K with CSV Surge Check Valve

Double Acting Throttling Device (DAT)

The Double Acting Throttling Device (DAT) is fitted on the discharge orifice of the Air/Vacuum Valve to provide both throttling air out and full flow air in.

Air/Vacuum Valves efficiently discharge air from deep well pump columns when combined with an APCO Double Acting Throttling Device (DAT). Available on valves sizes 0.5-8" (15-200mm) valve sizes.



AVV Air/Vacuum Valve with Double Acting Throttling Device (DAT) and Water Diffuser (WD) options.

Water Diffuser (WD)

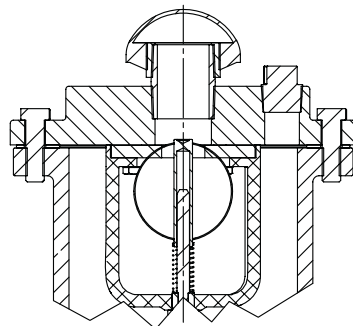
APCO Water Diffusers perform much like water faucet strainers, breaking down the solid water column force into a smooth, non-destructive flow. Water Diffusers (WD) are available in 0.5-3" (15-80mm) sizes.

Bug Screen or Rock Screen (HSB/HSR)

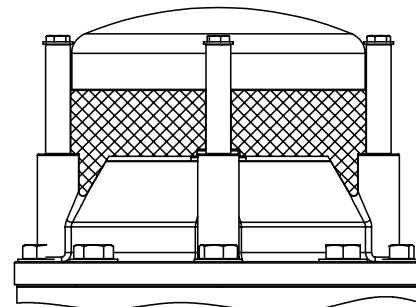
Standard outlets on Air/Vacuum Valves in sizes 4-18" (100-450mm) are plain with a steel protector hood. Bug and rock screens are available as an option to provide additional protection to prevent debris from entering the Air/Vacuum Valve.

Mushroom Cap (MRC)

Mushroom Caps are available as an option on .5-18" (15-600mm) valves. They are installed in the threaded outlet for discharge protection.



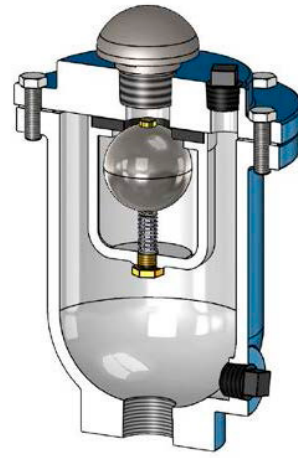
Mushroom Cap (MRC)



Bug Screen or Rock Screen (HSB/HSR)

Vacuum Relief / Air Inlet (AVRT)

The AVV-140 with AVRT Option is equipped with a spring that makes it a normally closed valve. The AVV-140 AVRT remains closed until the pressure differential becomes negative in relation to the atmosphere around the valve. In the event of vacuum in the pipeline, the AVV-140 AVRT opens and allows air into the pipeline and equalizes the pressure. Once pressure equalizes, the AVV-140 AVRT automatically closes. Available .5-3"; not available with body style 140H.



AVV-140 AVRT Option

Adjustable Vacuum Relief (ADJ)

The Adjustable Vacuum Relief is available on .5-3" (15-80mm) valve sizes with the AVRT Vacuum Relief/Air Inlet only. To order, specify pressure range and set point on the order. 0 to 5 psi negative pressure/vacuum setting - lower settings available.

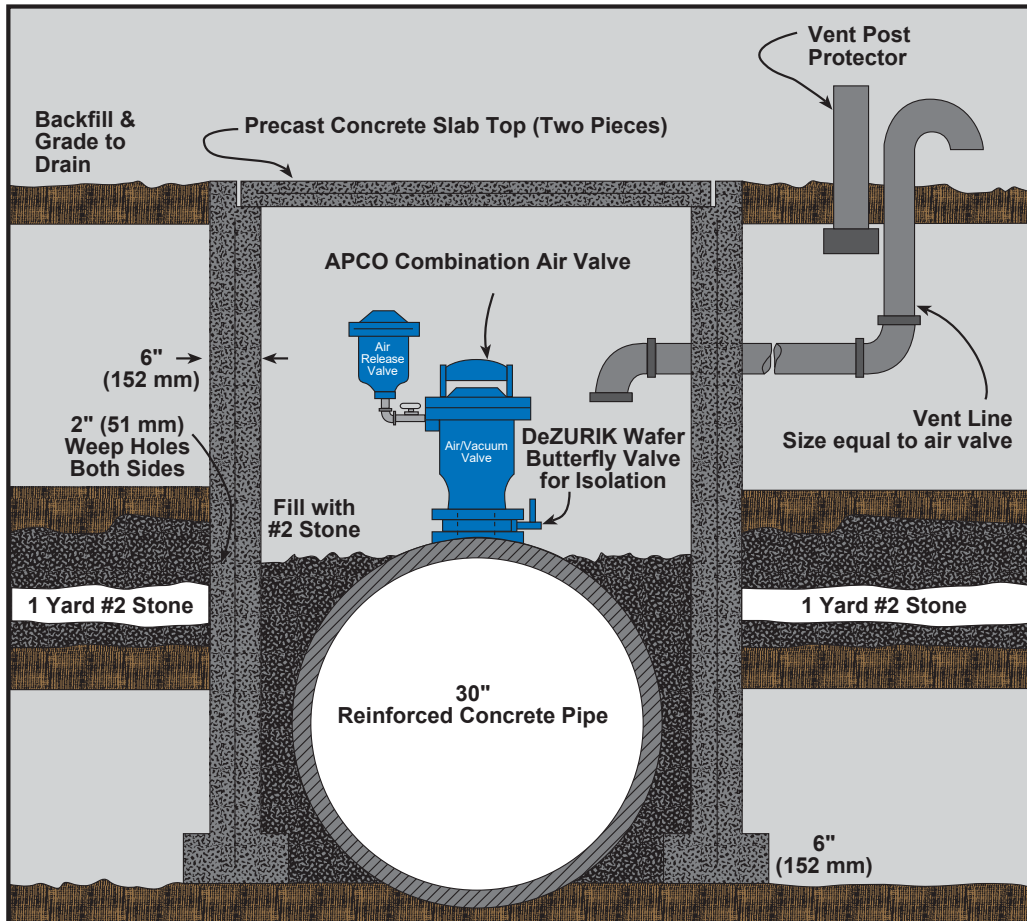
Isolation Valves

DeZURIK Butterfly Valves are an economical and reliable isolation valve that can be mounted on the inlet of the Air/Vacuum Valve. Their short face-to-face dimension can permit a reduction in trench depths, saving excavation costs. Butterfly isolation valves should be ordered as separate items.



Butterfly Valve

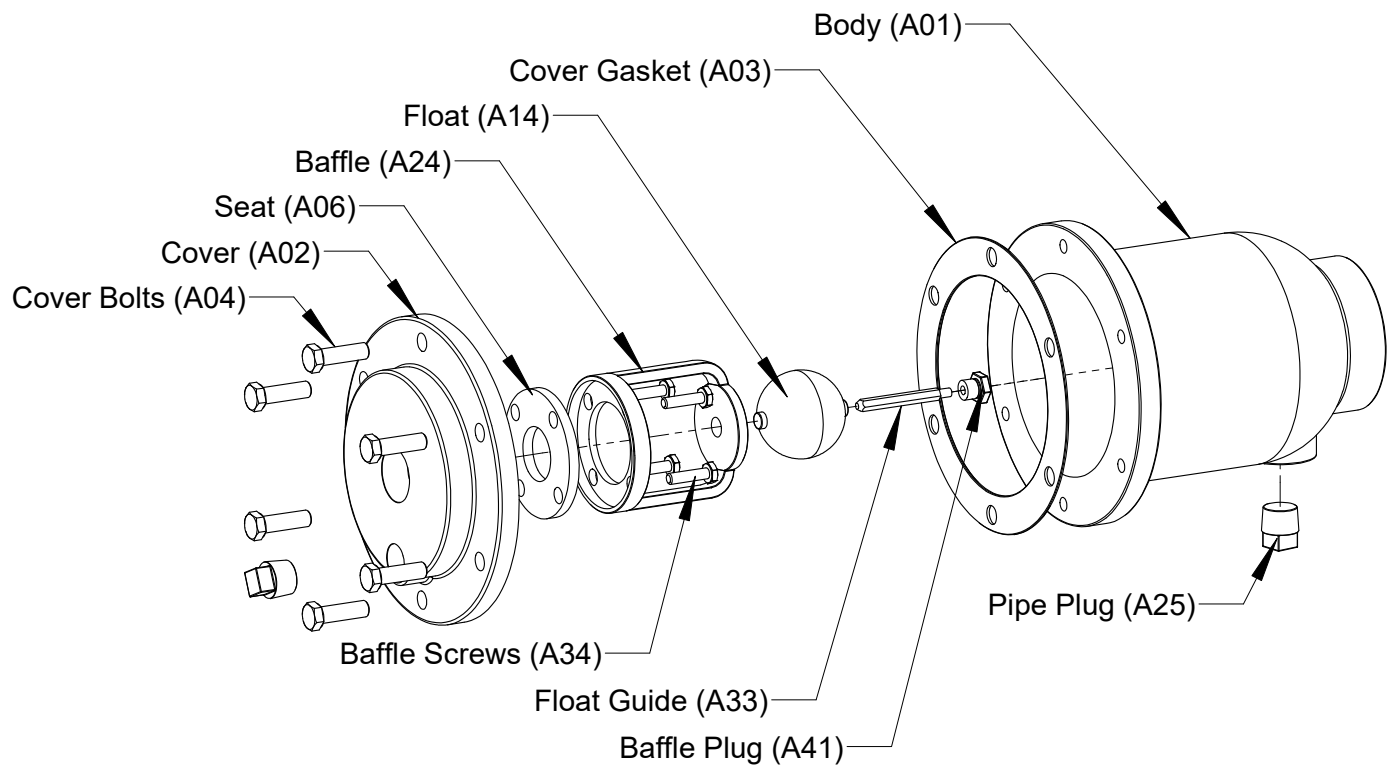
Typical Air Valve Manhole Installation



Materials of Construction

Body Style 140

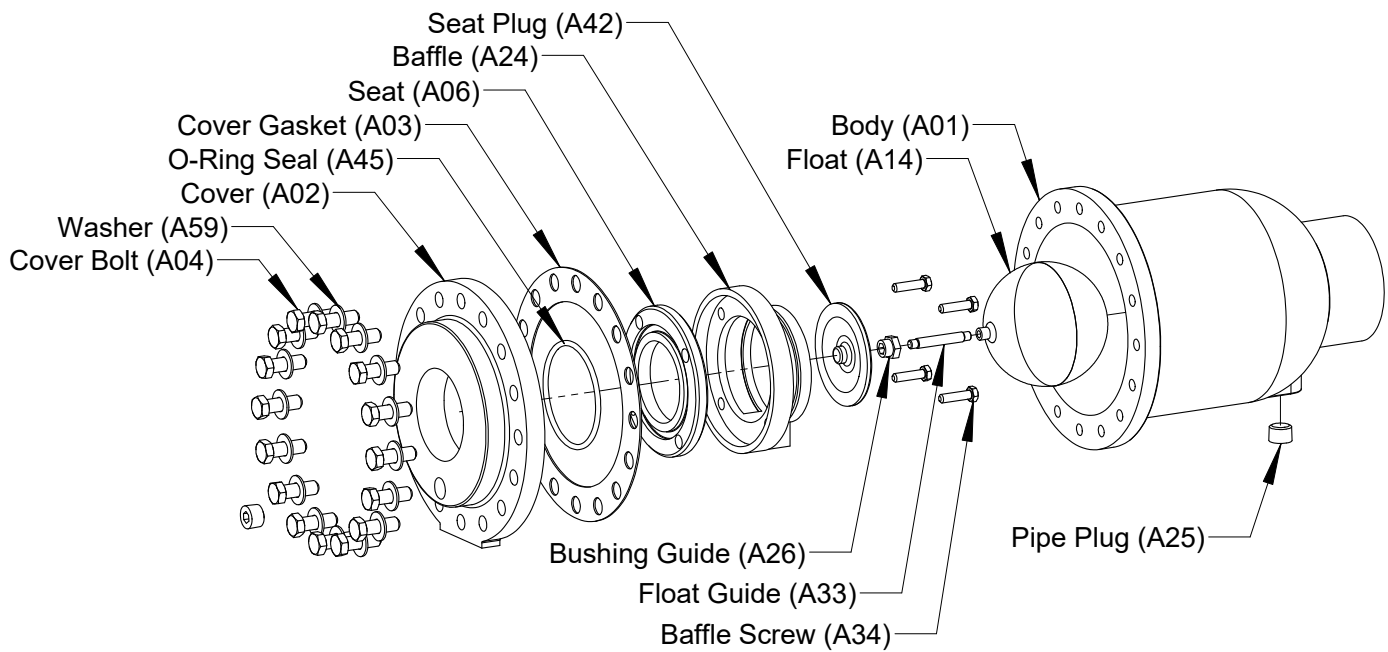
Item	Description	Material
A01	Body	Ductile Iron, ASTM A536/A351, Grade 65-45-12 Carbon Steel, ASTM A216 316 Stainless Steel, ASTM A743
A02	Cover	same as body material
A03	Cover Gasket	Acrylonitrile-Butadiene (NBR) Terpolymer of Ethylene Propylene and A Diene (EPDM) Fluoro Rubber (FKM)
A04	Cover Bolts	Steel, ASTM A449, Grade 5, SAE J429, 316 Stainless Steel Zinc-Plated Carbon Steel
A05	Washer (valves with optional Fusion Bonded Epoxy Coating only)	Zinc-Plated Carbon Steel; Stainless Steel Type 316
A06	Seat	Acrylonitrile-Butadiene (NBR) Terpolymer of Ethylene Propylene and a Diene (EPDM) Fluoro Rubber (FKM)
A14	Float	316 Stainless Steel, ASTM A240
A24	Baffle	316 Stainless Steel, ASTM A743
A25	Pipe Plug	Steel Alloy SAE J502, Stainless Steel Type 316
A26	Float Bushing (3" only - not pictured)	316 Stainless Steel, ASTM F593
A33	Float Guide	316 Stainless Steel ASTM A276
A34	Baffle Screws	316 Stainless Steel
A41	Baffle Plug (.5 - 2" only)	316 Stainless Steel ASTM F593
A44	Optional Water Diffuser (not pictured)	316 Stainless Steel ASTM A240
A50	Inlet Nipple, F1/F2 Inlet Connection Only (not pictured)	316 Stainless Steel ASTM F593, Steel ASTM A53
A51	Inlet Flange, F1/F2 Inlet Connection Only (not pictured)	Steel ASTM A105, 316 Stainless Steel ASTM A240
A54	Outlet Nipple, Optional Flanged Outlet Only (not pictured)	316 Stainless Steel ASTM F593, Steel ASTM A53
A55	Outlet Flange, Optional Flanged Outlet Only (not pictured)	Cast Iron ASTM A126, Steel ASTM A105, Stainless Steel ASTM A276, 316 Stainless Steel ASTM A240



Materials of Construction

Body Style 140H

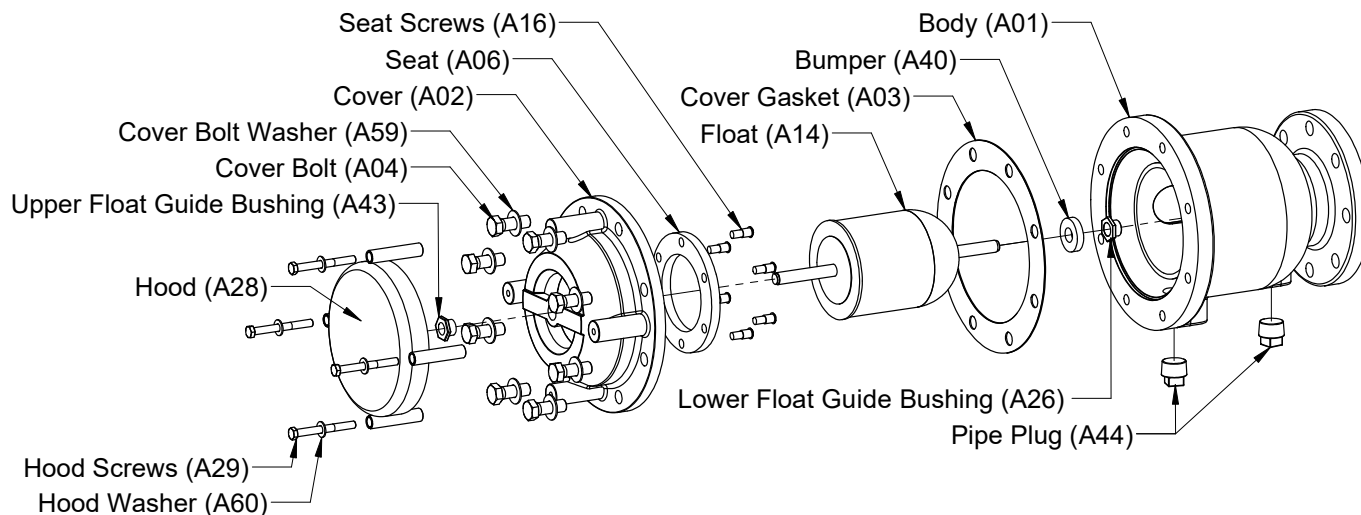
Item	Description	Material
A01	Body	Carbon Steel, ASTM A216 316 Stainless Steel, ASTM A743
A02	Cover	same as body material
A03	Cover Gasket	Acrylonitrile-Butadiene (NBR) Terpolymer of Ethylene Propylene and A Diene (EPDM) Fluoro Rubber (FKM)
A04	Cover Bolts	Steel, ASTM A449, Grade 5, SAE J429, 316 Stainless Steel, Zinc-Plated Carbon Steel
A06	Seat	Acrylonitrile-Butadiene (NBR) Terpolymer of Ethylene Propylene and a Diene (EPDM) Fluoro Rubber (FKM)
A14	Float	316 Stainless Steel, ASTM A240
A24	Baffle	316 Stainless Steel, ASTM A743
A25	Pipe Plug	Steel Alloy SAE J502, Stainless Steel Type 316
A26	Bushing Guide	316 Stainless Steel, ASTM F593
A33	Float Guide	316 Stainless Steel ASTM A276
A34	Baffle Screws	316 Stainless Steel
A42	Seat Plug	316 Stainless Steel
A45	O-Ring Seal	Acrylonitrile-Butadiene (NBR) Terpolymer of Ethylene Propylene and a Diene (EPDM) Fluoro Rubber (FKM)
A59	Washer	Zinc-Plated Carbon Steel, Stainless Steel Type 316



Materials of Construction

Body Style 150

Item	Description	Material
A01	Body	Ductile Iron, ASTM A536, Grade 65-45-12 Cast Iron, ASTM A126, Grade B Carbon Steel, ASTM A216 316 Stainless Steel, ASTM A743
A02	Cover	same as body material
A03	Cover Gasket	Acrylonitrile-Butadiene (NBR) Terpolymer of Ethylene Propylene and A Diene (EPDM) Fluoro Rubber (FKM)
A04	Cover Bolts	Steel, ASTM A449, Grade 5, SAE J429, Stainless Steel Type 316, Zinc-Plated Carbon Steel
A06	Seat	Acrylonitrile-Butadiene (NBR) Terpolymer of Ethylene Propylene and a Diene (EPDM) Fluoro Rubber (FKM)
A14	Float	316 Stainless Steel, ASTM A240
A16	Seat Screws	316 Stainless Steel ASTM F593, Stainless Steel Type 18-8"
A26	Lower Float Guide Bushing	316 Stainless Steel, ASTM F593
A27	Upper Retaining Ring (18" only - not pictured)	15-7PH Stainless Steel ASTM A564/693
A28	Hood	Steel ASTM A635, 316 Stainless Steel ASTM A240
A29	Hood Screws	Zinc-Plated Carbon Steel, Stainless Steel Type 316, Steel, ASTM A449, Grade 5, SAE J429
A40	Bumper	Acrylonitrile-Butadiene (NBR) Terpolymer of Ethylene Propylene and a Diene (EPDM) Fluoro Rubber (FKM)
A42	Lower Retaining Ring (18" only - not pictured)	316 Stainless Steel ASTM A313
A43	Upper Float Guide Bushing	316 Stainless Steel ASTM A213
A44	Pipe Plug	Stainless Steel Type 316, Steel Alloy
A58	Optional Bug & Rock Screen (not pictured)	Stainless Steel, Type 304 & 316, ASTM A240/A276
A59	Cover Bolt Washer (Fusion Bonded Epoxy Coating only)	Zinc-Plated Carbon Steel, Stainless Steel Type 316
A60	Hood Washers (Fusion Bonded Epoxy Coating only)	Zinc-Plated Carbon Steel, Stainless Steel Type 316



Valve Selection

Valve Weights

Body Style 140

Valve Size	Threaded Outlet
0.5" 15mm	10 5
1" 25mm	22 10
2" 50mm	55 25
3" 80mm	60 28

Pounds
Kilograms

Body Style 150

Valve Size	Plain Outlet with Hood
4" 100mm	100 46
6" 150mm	150 69
8" 200mm	200 91
10" 250mm	350 159
12" 300mm	500 227
14" 350mm	625 284
16" 400mm	830 377
18" 450mm	1100 500

Body Style 1800

Valve Size	Plain Outlet with Hood
4" 100mm	110 50
6" 150mm	200 91
8" 200mm	275 125
10" 250mm	400 182
12" 300mm	620 282
14" 350mm	-
16" 400mm	-
18" 450mm	-

Valve with Double Acting Throttling Device (DAT)

Valve Size	Valve & DAT
0.5" 15mm	13 6
1" 25mm	25 12
2" 50mm	50 23
3" 80mm	69 32
4-8" 100-200mm	Contact DeZURIK

Applicable Standards

APCO AVV Air/Vacuum Valves are designed and/or tested to meet the following standards:	
AWWA C-512	Air-Release, Air/Vacuum, and Combination Air Valves for Waterworks Service
ASME B16.5	F1/ASME Class 150 & F2/ASME Class 300 style flanged valves made from carbon steel or stainless steel.
ASME B16.42	F1/ASME Class 150 & F2/ASME Class 300 style flanged valves made from ductile iron.

Valve Sizing

Refer to the APCO Valve Selection & Sizing Guide, Bulletin 610, for Air/Vacuum and Air Relieve Valve orifice sizing and formulas.

Refer to Bulletin 613 for details on APCO Surge Check Valves for Slow Closing.

Ordering

Orders should specify quantity and order code identification, in proper sequence, as shown.

Valve Style

Give valve style code as follows:

AVV = Air/Vacuum Valves

Valve Size

Give valve size code as follows:

.5	=	.5"	15mm	8	=	8"	200mm
1	=	1"	25mm	10	=	10"	250mm
2	=	2"	50mm	12	=	12"	300mm
3	=	3"	80mm	14	=	14"	350mm
4	=	4"	100mm	16	=	16"	400mm
6	=	6"	150mm	18	=	18"	450mm

Body Style

Give body style code as follows:

140 = NPT Outlet, Same size as inlet, .5-3"
 140H = NPT Outlet, High Pressure, Same size as inlet, 1-3"
 150 = Plain Outlet with Hood, 4-18"
 1800 = Customized Dual Body 140 or 150 Body Style with ARV Air Release Valve" 1-3" with ARV 50A; 4-18" ARV 50A, 200A, or 200 based on orifice size selection

Note: Body Style 1800 will be assembled complete at the factory. Body Style 1800K will be shipped as a kit including 1 AVV, 1 ARV, and all necessary connecting parts.

Inlet Connection

Give inlet connection code as follows:

Body Style 140 and 1-3" 1800/1800K

T1 = Threaded Inlet NPT
 F1N = Flanged Inlet ASME 125/150, Nipple & Flange
 F2N = Flanged Inlet ASME 250/300, Nipple & Flange

Body Style 140H

T1 = Threaded Inlet NPT
 F6N = Flanged Inlet ASME 400/600, Nipple & Flange

4-18" Body Style 150/1800/1800K

F1 = Flanged Inlet ASME 125/150, Cast Flange
 F2 = Flanged Inlet ASME 250/300, Cast Flange

Body Material

Give body material code as follows:

DI = Ductile Iron
 .5-3" Body Styles 140, 1800 & 1800K
 4-12" F1; 4" F2
 Nipple & Flange are Carbon Steel with F1N or F2N Inlet
 CI = Cast Iron (14-18" F1; 6-18" F2)
 CS = Carbon Steel
 S2 = 316 Stainless Steel

Cold Working Pressure

Give body material code as follows:

Body Style 140, 1800, 1800K

15 = .5-3", 3-15 psi, all body materials
 150 = .5-2" F1N, 11-250 psi, DI body material
 .5-2" F1N, 11-275 psi, S2 body material
 .5-2" F1N, 11-285 psi, CS body material
 300A = .5-2" T1 or F2N, 11-300 psi, All body materials
 200 = 3", 11-200 psi, All body materials

Body Style 140H

300 = 11-720 psi, S2 body material
 11-740 psi, CS body material
 400 = 11-960 psi, S2 body material
 11-990 psi, CS body material
 600 = 11-1440 psi, S2 body material
 11-1480 psi, CS body material

Body Style 150, 1800, 1800K

15 = 4-18" 3-15 psi All body materials
 125 = 10-12" 11-200 psi, DI body material
 14-18" 11-150 psi, CI body material
 150 = 4-8" 11-250 psi, DI body material
 4-8" 11-275 psi, S2 body material
 4-8" 11-285 psi, CS body material
 250A = 4-12" 11-500 psi, CI/DI body material
 14-18" 11-300 psi, CI body material
 150 = 10-12" 11-250 psi, DI body material
 10-18" 11-275 psi, S2 body material
 10-18" 11-285 psi, CS body material
 300 = 4-18" 11-720 psi, S2 body material
 4-18" 11-740 psi, CS body material

Trim Combination

Seating Material

Give seating surface material code as follows:

NBR = Acrylonitrile-Butadiene
 EPDM = Terpolymer of Ethylene Propylene & A Diene
 FKM = Fluoro Rubber

Bushing Material

Give bushing material code as follows:

S2 = 316 Stainless Steel (.5-3")

Baffle Material

Give baffle material code as follows:

S2 = 316 Stainless Steel (.5-3")
 NA = Not Required (4-18")

Float Material

Give float material code as follows:

S2 = 316 Stainless Steel

Ordering continued on next page.

Notes:

Isolation valve is recommended. Order as a separate item.

Maximum operating temperature is a function of the materials used in the valve. All valves are rated to a maximum temperature of at least 250° F (121° C). Contact application engineering if the valve is required to operate above this temperature.

Working pressure is de-rated at temperatures over 100° F.

Limiting factor for pressure will be the lowest rating of the End Connection, CWP, Orifice Selection, and CSV check valve.

DI Body Material CSV Pressure rating: for 1" size is 400 psi CWP, 2" size is 600 psi CWP, 3-18" F1/F1N is 250 psi CWP, 3-12" F2 400 psi CWP, 14" and larger F2 is 300 psi CWP.

Ordering (Continued)

Air Release Valve Orifice Size

CI, CS, and DI will use a DI ARV, S2 will use an S2 ARV. Needle material will be the same as the selected seating surface. All other trim will be S2.

Body Style 1800 or 1800K Only - Not required on other Body Styles

R332	=	3/32", 8-175 psi, 1" Body Style 50A (DI body available with NBR
R116	=	1/16", 11-300 psi, 1" Body Style 50A (DI body available with NBR Seat/Needle only)
L516	=	5/16", 3-15 psi, 1" Body Style 200A (Available with 15 CWP only)
R516	=	316 Stainless Steel
R14	=	1/4", 11-75 psi, 1" Body Style 200A
R316	=	3/16", 11-150 psi, 1" Body Style 200A
R532	=	5/32", 11-300 psi, 1" Body Style 200A
M332	=	3/32", 11-600 psi, 1" Body Style 200A
L12	=	1/2", 3-15 psi, 2" Body Style 200 (Available with 15 CWP only)
R12	=	1/2", 11-75 psi, 2" Body Style 200
R38	=	3/8", 51-150 psi, 2" Body Style 200 (Not used with 15 CWP)
M732	=	7/32", 51-300 psi, 2" Body Style 200 (Not used with 15 CWP)

Options

Give option code as follows:

AVRT	=	Vacuum Relief/Air Inlet (.5-3") not available with 140H
CSV	=	Surge Check Valve, Body Style 1600A. 1-2" Will be certified lead free bronze body and plug. For all other sizes, body material same as above. CI and CS valves will use a DI check valve. Plug and seat will be S2 (available with 1-18" Body Style 140, 150, 1800, or 1800K, Not available with 3" T1 End Connection)
DTR	=	DeZURIK Standard Certified Production Hydrostatic Shell & Seat Test Report
FL	=	Flanged Outlets ASME 125/150, .5-3" are CS Nipple and CI Flange with DI body material, all others are the same as the body material (.5-18")
TH	=	Threaded Outlets NPT (4-8")
HSB	=	Bug Screen - 304 Stainless Steel - for Hood (4-18")
HSR	=	Rock Screen - 304 Stainless Steel - for Hood (4-18")
SB16	=	316 Stainless Steel Bolting
WD	=	Water Diffuser (.5-3" Body Style 140/1800/1800K only)
----	=	Special Coatings, Contact DeZURIK

Accessories

Give accessory code as follows if required

DAT	=	Double Acting Throttling Device (.5-8"); 4-8" must be used with TH option.
MRC	=	Mushroom Cap - Not Available with 150 Body Style, or FL Option on .5-3"

Ordering Example:

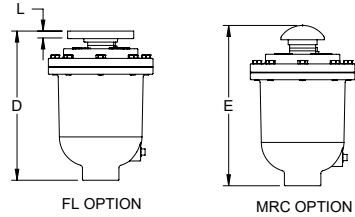
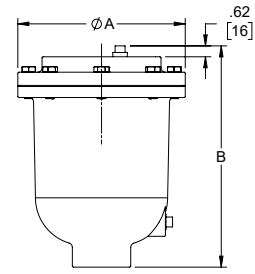
AVV,2,140,T1,DI,300A,NBR-S2-S2-S2,FL-WD*DAT

Dimensions

Body Style 140 & 140H

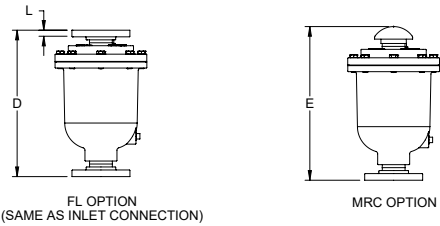
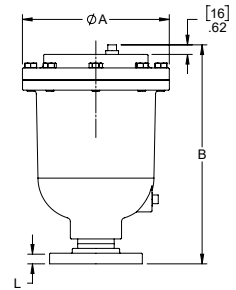
T1 End Connection

Valve Size	A	B	D	E	L
0.5" 15mm	5.13 130	7.06 179	7.74 197	8.69 221	0.44 11
1" 25mm	7.00 178	9.03 229	9.89 251	10.58 269	0.50 13
2" 50mm	9.50 241	12.34 313	13.95 354	14.70 373	0.69 18
3" 80mm	9.50 241	13.47 342	15.25 387	17.06 433	0.88 22



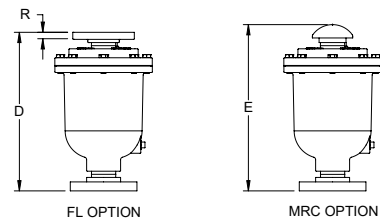
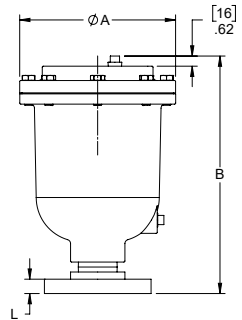
F1N End Connection

Valve Size	A	B	D	E	L
0.5" 15mm	5.13 130	7.87 200	8.55 217	9.49 241	0.44 11
1" 25mm	7.00 178	10.08 256	10.54 268	11.23 285	0.50 13
2" 50mm	9.50 241	14.07 357	15.27 388	16.02 407	0.69 18
3" 80mm	9.50 241	15.50 394	16.87 428	18.69 475	0.88 22



F2N End Connection

Valve Size	A	B	D	E	L	R
0.5" 15mm	5.13 130	7.99 203	8.67 220	9.61 244	0.56 14	0.44 11
1" 25mm	7.00 178	10.27 261	10.73 273	11.42 290	0.69 18	0.50 13
2" 50mm	9.50 241	14.26 362	15.46 393	16.21 412	0.88 22	0.69 18
3" 80mm	9.50 241	15.75 400	17.12 435	18.94 481	1.13 29	0.88 22

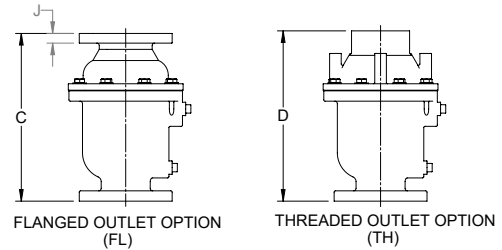
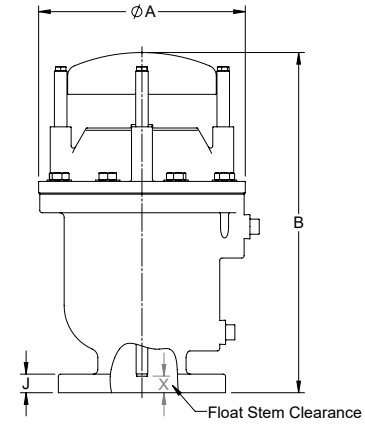


Dimensions

Body Style 150

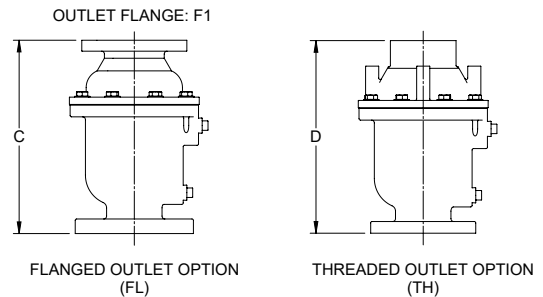
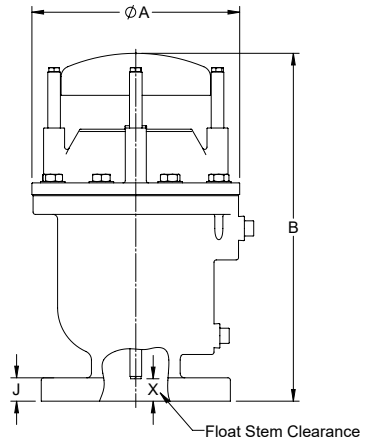
F1 Inlet

Valve Size	A	B	C	D	J	X*
4" 100mm	11.13 283	18.31 465	16.31 414	16.63 422	0.94 24	1.00 25
6" 150mm	13.63 346	21.00 533	18.88 480	19.13 486	1.00 25	1.63 41
8" 200mm	17.25 438	24.63 626	21.81 554	22.31 567	1.13 29	1.06 27
10" 250mm	20.00 508	26.69 678	24.88 632	-	1.19 30	1.56 40
12" 300mm	25.00 635	30.63 778	26.88 683	-	1.25 32	0.94 24
14" 350mm	29.00 737	30.94 786	28.13 715	-	1.38 35	-0.06 -2
16" 400mm	32.00 813	31.50 800	29.88 759	-	1.44 37	2.31 59
18" 450mm	33.00 838	56.50 1435	52.31 1329	-	1.75 44	12.88 327



F2 Inlet

Valve Size	A	B	C	D	J	X*
4" 100mm	11.13 283	18.63 473	16.56 421	16.88 429	1.25 32	2.13 54
6" 150mm	13.63 346	21.50 546	19.31 490	19.56 497	1.44 37	3.25 83
8" 200mm	17.25 438	25.13 638	22.25 565	22.75 578	1.63 41	1.56 40
10" 250mm	20.00 508	27.38 695	25.50 648	-	1.88 48	2.19 56
12" 300mm	25.00 635	30.63 778	26.81 681	-	2.00 51	0.94 24
14" 350mm	29.00 737	30.94 786	28.06 713	-	2.13 54	1.06 27
16" 400mm	32.00 813	31.50 800	29.81 757	-	2.25 57	2.31 59
18" 450mm	33.00 838	56.50 1435	52.25 1327	-	2.63 67	12.88 327



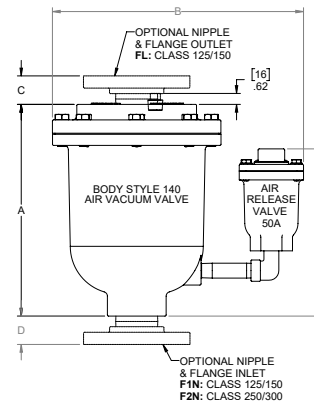
*Spool or spacer may be required when using a butterfly valve on inlet of valve. Dimension X is Float Stem Clearance.

**Outlet Flange is always F1 (Class 125/150) Flat-Faced regardless of inlet flange type.

Dimensions

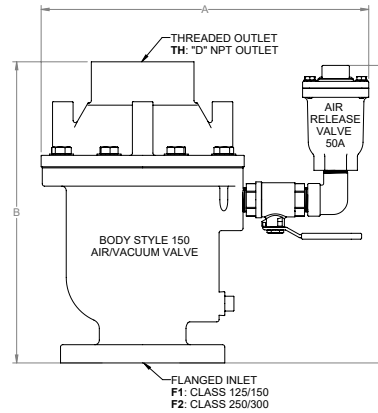
Body Style 1800 with ARV 50A, 1-3"

Valve Size	A	B	C	D		E
				F1N	F2N	
1" 25mm	8.65 220	11.86 301	1.38 35	1.38 35	2.28 58	8.98 228
2" 50mm	11.72 298	14.42 366	2.13 54	2.13 54	2.38 60	9.79 249
3" 80mm	12.85 326	14.42 366	2.28 58	2.28 58	2.66 68	10.23 260



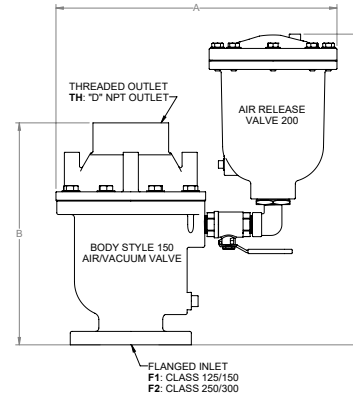
Body Style 1800 with ARV 50A, Threaded 4-8"

Valve Size	A	B		C	
		F1	F2	F1	F2
4" 25mm	19.09 485	16.63 422	16.88 429	16.59 421	16.91 430
6" 50mm	21.72 552	19.13 486	19.56 497	19.03 483	19.47 495
8" 80mm	25.34 644	22.31 567	22.75 578	21.09 536	21.60 549



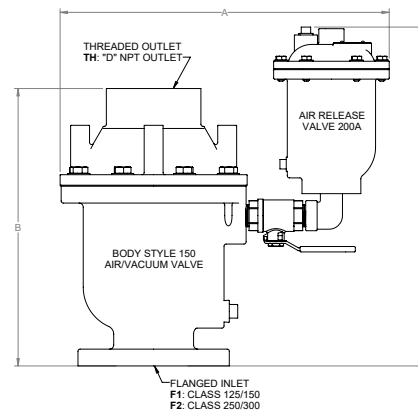
Body Style 1800 with ARV 200, Threaded 4-8"

Valve Size	A	B		C	
		F1	F2	F1	F2
4" 25mm	22.03 560	16.63 422	16.88 429	23.89 607	24.20 615
6" 50mm	24.65 626	19.13 486	19.56 497	26.33 669	26.77 680
8" 80mm	28.38 721	22.31 567	22.75 578	28.39 721	28.99 736



Body Style 1800 with ARV 200A, Threaded 4-8"

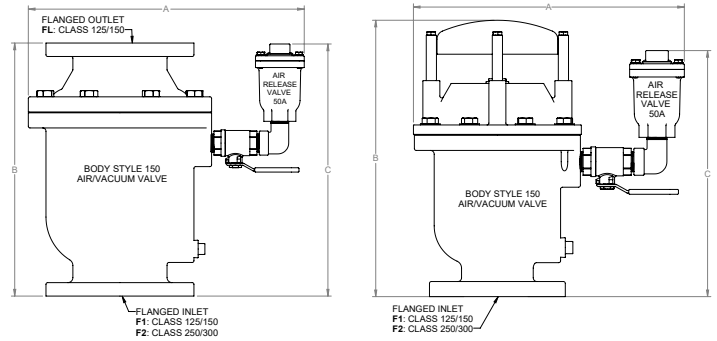
Valve Size	A	B		C	
		F1	F2	F1	F2
4" 25mm	20.72 526	16.63 422	16.88 429	20.49 520	20.80 528
6" 50mm	23.34 593	19.13 486	19.56 497	22.93 582	23.63 600
8" 80mm	26.97 685	22.31 567	22.75 578	24.99 635	25.49 647



Dimensions

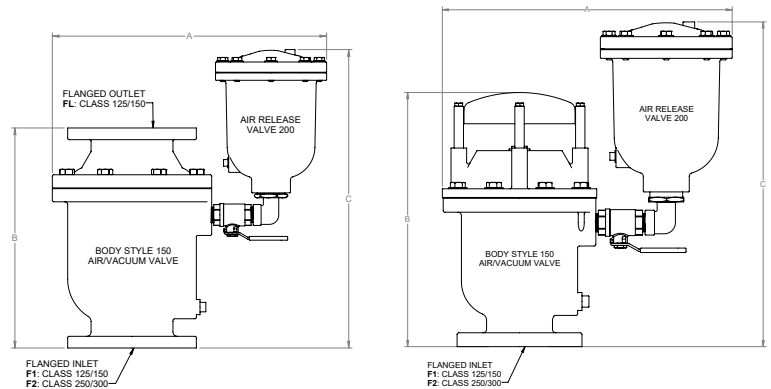
Body Style 1800 with ARV 50A Flanged 4-18"

Valve Size	A	B				C	
		Flanged Outlet		Hooded Outlet		F1	F2
		F1	F2	F1	F2		
4" 100mm	19.09 485	16.31 414	16.56 421	18.31 465	18.63 473	16.59 421	16.91 430
6" 150mm	21.72 552	18.88 480	19.31 490	21.00 533	21.50 546	19.03 483	19.47 495
8" 200mm	25.34 644	21.81 554	22.25 565	24.63 626	25.13 638	21.09 536	21.60 549
10" 100mm	28.09 713	24.88 632	25.50 648	26.69 678	27.38 695	22.91 582	23.60 599
12" 150mm	33.09 840	26.88 683	26.88 683	30.63 778	30.63 778	24.16 614	24.16 614
14" 200mm	37.09 942	28.13 715	28.13 715	30.94 786	30.94 786	24.03 610	24.03 610
16" 150mm	40.59 1031	29.88 759	29.88 759	31.50 800	31.50 800	23.41 595	23.41 595
18" 200mm	41.09 1044	52.31 1329	52.31 1329	56.50 1435	56.50 1435	47.03 1195	47.03 1195



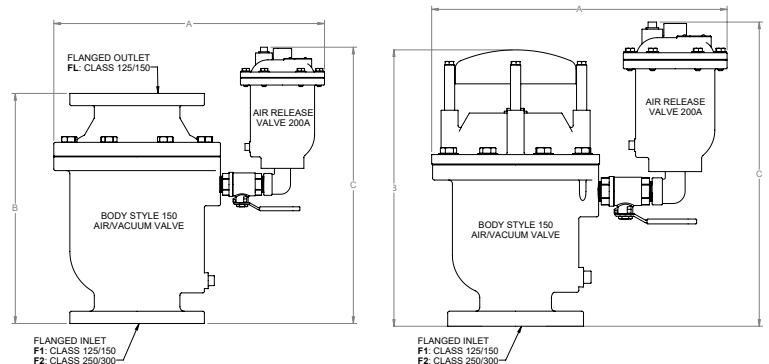
Body Style 1800 with ARV 200, Flanged 4-18"

Valve Size	A	B				C	
		Flanged Outlet		Hooded Outlet		F1	F2
		F1	F2	F1	F2		
4" 100mm	22.03 560	16.31 414	16.56 421	18.31 465	18.63 473	23.89 607	24.20 615
6" 150mm	24.65 626	18.88 480	19.31 490	21.00 533	21.50 546	26.33 669	26.77 680
8" 200mm	28.38 721	21.81 554	22.25 565	24.63 626	25.13 638	28.39 721	28.89 734
10" 100mm	31.03 788	24.88 632	25.50 648	26.69 678	27.38 695	30.20 767	30.89 785
12" 150mm	36.03 915	26.88 683	26.88 683	30.63 778	30.63 778	31.45 799	31.45 799
14" 200mm	40.03 1017	28.13 715	28.13 715	30.94 786	30.94 786	31.33 796	31.33 796
16" 150mm	43.53 1106	29.88 759	29.88 759	31.50 800	31.50 800	30.70 780	30.70 780
18" 200mm	44.03 1118	52.31 1329	52.31 1329	56.50 1435	56.50 1435	54.33 1380	54.33 1380



Body Style 1800 with ARV 200A, Flanged 4-18"

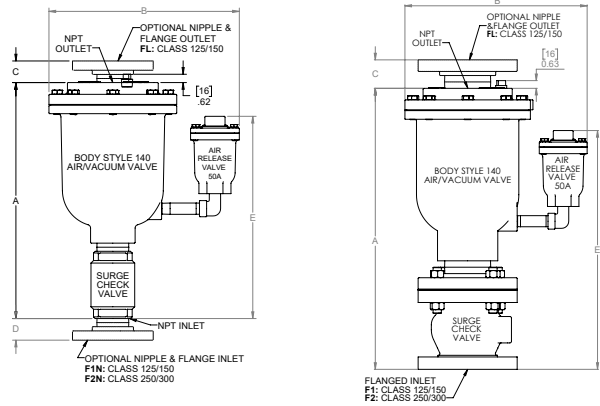
Valve Size	A	B				C	
		Flanged Outlet		Hooded Outlet		F1	F2
		F1	F2	F1	F2		
4" 100mm	20.72 526	16.31 414	16.56 421	18.31 465	18.63 473	20.49 520	20.80 528
6" 150mm	23.34 593	18.88 480	19.31 490	21.00 533	21.50 546	22.93 582	23.63 600
8" 200mm	26.97 685	21.81 554	22.25 565	24.63 626	25.13 638	24.99 635	25.49 647
10" 100mm	29.72 755	24.88 632	25.50 648	26.69 678	27.38 695	26.80 681	27.49 698
12" 150mm	34.72 882	26.88 683	26.88 683	30.63 778	30.63 778	28.05 712	28.05 712
14" 200mm	38.72 983	28.13 715	28.13 715	30.94 786	30.94 786	27.93 709	27.93 709
16" 150mm	42.22 1072	29.88 759	29.88 759	31.50 800	31.50 800	27.30 693	27.30 693
18" 200mm	42.72 1085	52.31 1329	52.31 1329	56.50 1435	56.50 1435	50.93 1294	50.93 1294



Dimensions

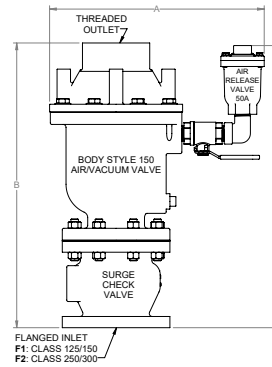
Body Style 1800 with CSV Surge Check Option, 1-3" Threaded & Flanged

Valve Size	A	B	C	D		E
				F1N	F2N	
1" 25mm	12.86 327	11.86 301	1.38 35	1.38 35	1.58 40	13.18 335
2" 50mm	17.97 456	14.42 366	2.13 54	2.13 54	2.38 60	16.04 407
3" 80mm	22.00 559	14.42 366	2.28 58	-	-	19.93 506



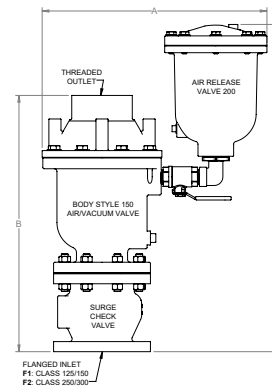
Body Style 1800 with ARV 50A and CSV Surge Check Option, Threaded 4-8"

Valve Size	A	B		C	
		F1	F2	F1	F2
4" 25mm	19.09 485	23.94 608	24.25 616	31.27 794	31.58 802
6" 50mm	21.72 552	28.19 716	28.69 729	35.46 901	35.90 912
8" 80mm	25.34 644	32.50 826	33.00 838	38.64 981	39.15 994



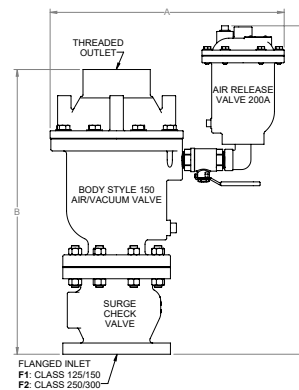
Body Style 1800 with ARV 200 and CSV Surge Check Option, Threaded 4-8"

Valve Size	A	B		C	
		F1	F2	F1	F2
4" 25mm	22.03 560	23.94 608	24.25 616	23.89 607	24.20 615
6" 50mm	24.65 626	28.19 716	28.69 729	26.33 669	26.77 680
8" 80mm	28.38 721	32.50 826	33.00 838	28.39 721	28.99 736



Body Style 1800 with ARV 200A, Threaded 4-8"

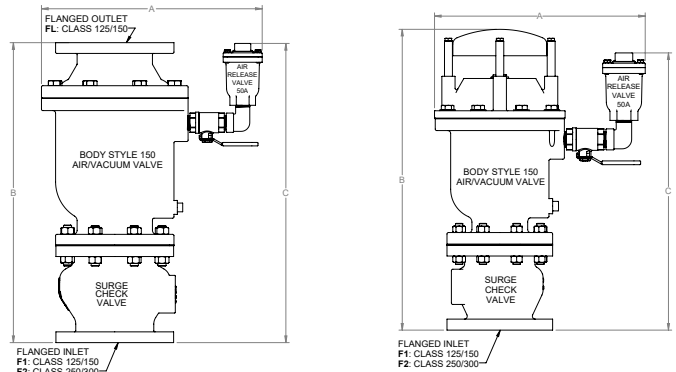
Valve Size	A	B		C	
		F1	F2	F1	F2
4" 25mm	20.72 526	23.94 608	24.25 616	27.86 708	28.17 716
6" 50mm	23.34 593	28.19 716	28.69 729	32.05 814	32.49 825
8" 80mm	26.97 685	32.50 826	33.00 838	35.23 895	35.74 908



Dimensions

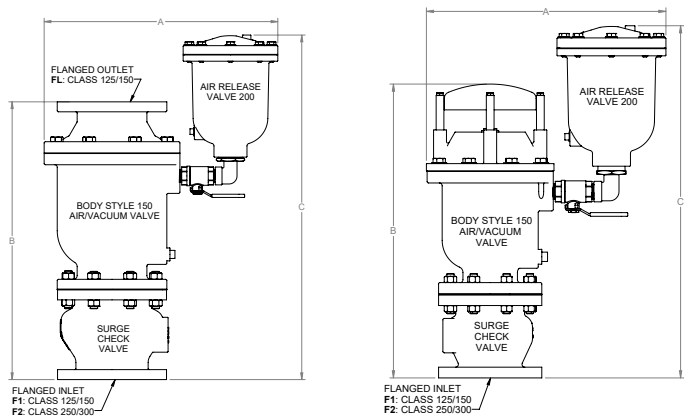
Body Style 1800 with ARV 50A and CSV Surge Check Option, Flanged 4-18"

Valve Size	A	B				C	
		Flanged Outlet		Hooded Outlet		F1	F2
		F1	F2	F1	F2		
4"	19.09	23.63	23.88	25.69	26.00	23.97	24.28
100mm	485	600	607	653	660	609	617
6"	21.72	27.88	28.38	30.13	30.63	28.16	28.60
150mm	552	708	721	765	778	715	726
8"	25.34	32.00	32.50	34.88	35.38	31.34	31.85
200mm	644	813	826	886	899	796	809
10"	28.09	36.88	37.63	38.81	39.50	35.03	35.72
100mm	713	937	956	986	1003	890	907
12"	33.09	41.25	41.25	45.13	45.13	38.66	38.66
150mm	840	1048	1048	1146	1146	982	982
14"	37.09	43.88	43.88	46.81	46.81	39.90	39.90
200mm	942	1115	1115	1189	1189	1013	1013
16"	40.59	47.13	47.13	49.25	49.25	41.16	41.16
150mm	1031	1197	1197	1251	1251	1045	1045
18"	41.09	71.00	71.00	75.38	75.38	65.91	65.91
200mm	1044	1803	1803	1915	1915	1674	1674



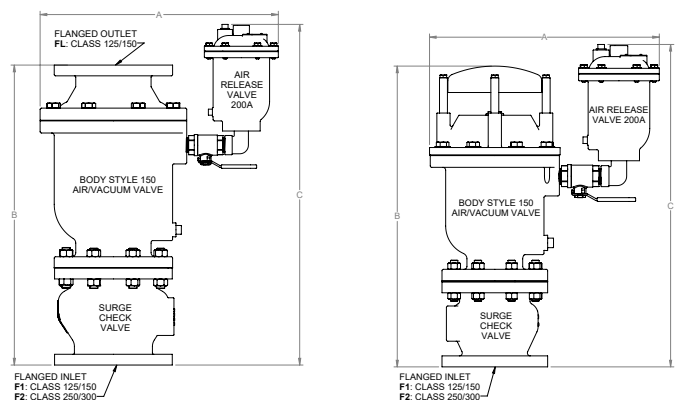
Body Style 1800 with ARV 200 and CSV Surge Check Option, Flanged 4-18"

Valve Size	A	B				C	
		Flanged Outlet		Hooded Outlet		F1	F2
		F1	F2	F1	F2		
4"	22.03	23.63	23.88	25.69	26.00	31.27	31.58
100mm	560	600	607	653	660	794	802
6"	24.65	27.88	28.38	30.13	30.63	35.46	35.90
150mm	626	708	721	765	778	901	912
8"	28.38	32.00	32.50	34.88	35.38	38.64	39.15
200mm	721	813	826	886	899	981	994
10"	31.03	36.88	37.63	38.81	39.50	42.33	43.02
100mm	788	937	956	986	1003	1075	1093
12"	36.03	41.25	41.25	45.13	45.13	45.96	45.96
150mm	915	1048	1048	1146	1146	1167	1167
14"	40.03	43.88	43.88	46.81	46.81	47.20	47.20
200mm	1017	1115	1115	1189	1189	1199	1199
16"	43.53	47.13	47.13	49.25	49.25	48.46	48.46
150mm	1106	1197	1197	1251	1251	1231	1231
18"	44.03	71.00	71.00	75.38	75.38	73.21	73.21
200mm	1118	1803	1803	1915	1915	1860	1860



Body Style 1800 with ARV 200A and CSV Surge Check Option, Flanged 4-18"

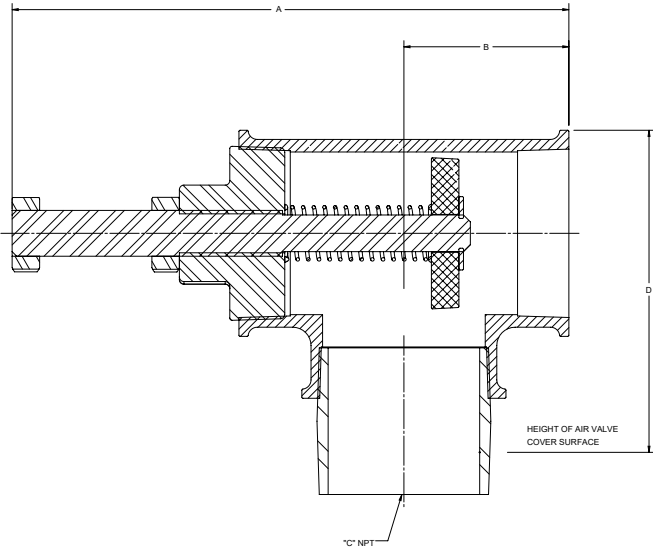
Valve Size	A	B				C	
		Flanged Outlet		Hooded Outlet		F1	F2
		F1	F2	F1	F2		
4"	20.72	23.63	23.88	25.69	26.00	27.86	28.17
100mm	526	600	607	653	660	708	716
6"	23.34	27.88	28.38	30.13	30.63	32.05	32.49
150mm	593	708	721	765	778	814	825
8"	26.97	32.00	32.50	34.88	35.38	35.23	35.74
200mm	685	813	826	886	899	895	908
10"	29.72	36.88	37.63	38.81	39.50	38.92	39.61
100mm	755	937	956	986	1003	989	1006
12"	34.72	41.25	41.25	45.13	45.13	42.55	42.55
150mm	882	1048	1048	1146	1146	1081	1081
14"	38.72	43.88	43.88	46.81	46.81	43.79	43.79
200mm	983	1115	1115	1189	1189	1112	1112
16"	42.22	47.13	47.13	49.25	49.25	45.05	45.05
150mm	1072	1197	1197	1251	1251	1144	1144
18"	42.72	71.00	71.00	75.38	75.38	69.80	69.80
200mm	1085	1803	1803	1915	1915	1773	1773



Dimensions

Double Acting Throttling Device

Valve Size	A	B	C	D
0.5" 15mm	4.63 118	1.12 28	0.50 13	2.21 56
1" 25mm	5.38 137	1.50 38	1.00 25	3.09 78
2" 50mm	9.50 241	2.25 57	2.00 51	4.86 123
3" 80mm	11.00 279	3.08 78	3.00 76	6.31 160
4" 100mm	13.25 337	3.79 96	4.00 102	7.68 195
6" & 8" 150 & 200mm	Contact DeZURIK			



Sales and Service

For information about our worldwide locations, approvals, certifications and local representative:

Web Site: DeZURIK.com E-Mail: info@DeZURIK.com



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