

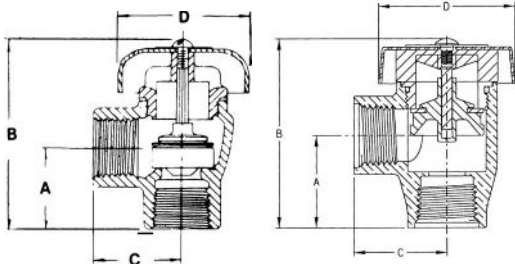
AVB1/AVB2 SERIES

ATMOSPHERIC TYPE VACUUM BREAKER BACKFLOW PREVENTER



38-100 SERIES
AVB1

38-200 SERIES
AVB2
SIZES 1/4", 3/8, 1/2", 3/4"
(OPTIONAL POLISHED
CHROME FINISH SHOWN)



AVB1
38/38LF-10X

AVB2
38-20X

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The Apollo International™ Series Atmospheric Type Vacuum Breakers are designed to prevent back-siphonage of polluted water into a potable water system. They should only be installed in areas where spillage of water could not cause damage and where it can be accessible for periodic maintenance. These devices are not designed for continuous pressure application (maximum 12 hours in any 24 hour period). Should be installed a minimum of 6" above all downstream piping with no downstream shutoffs.

OPERATION

During flow conditions, the flow of water lifts the float disc and seals the atmospheric vent at all rates of flow, preventing leakage. When a negative pressure is created at the supply line or when the water supply valve upstream of the device is closed, the float disc will fall, thus opening the atmospheric vent. This prevents back-siphonage and creation of vacuum at the discharge line.

FEATURES

- Corrosion Resistant
- Bronze Body (AVB1)
- Forged Body (AVB2)
- Lead Free Option (100 Series)
- Heat Resistant Silicone Seat Disc
- Rough Brass, Rough Chrome or Polished Chrome Finish
- Easy to Maintain
- Compact and Lightweight
- Durable

PERFORMANCE RATING

- Suitable for Hot or Cold Water Service: (up to 212°F at 125 psig) for up to 1" (up to 180°F at 125 psig) for 1-1/4" thru 2"

APPROVALS

- ASSE 1001
- NSF/ANSI 372 - Lead Free (38LF only)

STANDARD MATERIALS LIST

VALVE BODY (AVB1)	Cast Bronze (LF C89836)	FLOAT & GASKET	Polypropylene
VALVE BODY (AVB2)	Forged Brass	CANOPY	Powder Coated Steel
SEAT DISC	Silicone	SCREW	Zinc-Plated Steel

Contact local water authorities for installation/service requirements.

PART NUMBER MATRIX

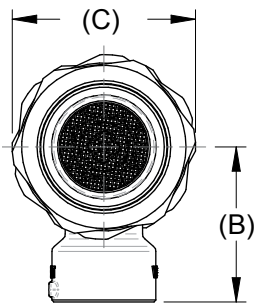
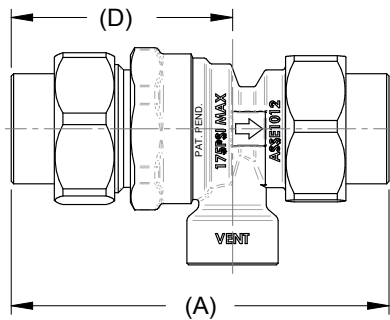
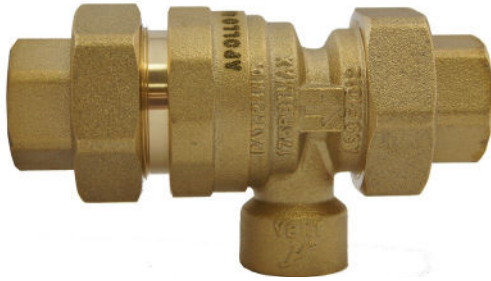
38(LF) X	OX	OX
	SIZE	FINISH
1 - Bronze	1 - 1/4"	1 - Rough Brass
2 - Forged Brass (Not Available in LF)	2 - 3/8"	3 - Rough Chrome (1/4" - 1" Only)
	3 - 1/2"	6 - Polished Chrome (AVB2 Only)
	4 - 3/4"	
	5 - 1"	
	6 - 1-1/4"	
	7 - 1-1/2"	
	8 - 2"	

DIMENSIONS

PART NO.	MODEL NO.	SIZE (IN.) (MM)	DIMENSIONS (IN.) (MM)				WEIGHT (LB.) (KG)
			A	B	C	D	
38(LF)-101	AVB114	1/4 (6)	29/32 (23)	2-3/8 (60)	1-1/32 (26)	1-13/16 (46)	50.96 (23)
38(LF)-102	AVB138	3/8 (10)	29/32 (23)	2-3/8 (60)	1-1/32 (26)	1-13/16 (46)	47.7 (22)
38-103	AVB112	1/2 (15)	1-3/32 (28)	2-1/2 (65)	1-3/16(30)	1-3/16 (46)	54.7 (25)
38-104	AVB134	3/4 (20)	1-5/16 (33)	3-1/16 (78)	1-15/32 (37)	2-1/8 (54)	79.7 (36)
38-105	AVB111	1 (25)	1-3/4 (45)	4-1/16 (103)	1-7/8 (48)	2-7/8 (73)	174 (79)
38-106	AVB1114	1-1/4 (32)	2 (50)	4-3/8 (111)	2 (50)	3-3/4 (95)	316 (143)
38-107	AVB1112	1-1/2 (40)	2 (50)	4-3/8 (111)	2 (50)	3-3/4 (95)	289 (131)
38-108	AVB112	2 (50)	2-1/8 (54)	4-1/2 (114)	2-1/4 (57)	3-3/4 (95)	369 (167)
38-201	AVB214	1/4 (6)	1-3/32 (28)	2-5/16 (59)	1-1/32 (26)	21/32 (17)	50.6 (23)
38-202	AVB238	3/8 (10)	1-3/32 (28)	2-5/16 (59)	1-1/32 (26)	21/32 (17)	47.7 (22)
38-203	AVB212	1/2 (15)	1-9/32 (33)	2-5/8 (67)	1-9/32 (33)	1-7/8 (48)	54.7 (25)
38-204	AVB234	3/4 (20)	1-15/32 (37)	3 (80)	1-15/32 (37)	2 (50)	63.1 (29)

DCAP SERIES

DUAL CHECK WITH ATMOSPHERIC PORT BACKFLOW PREVENTER



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The Apollo International™ DCAP Series Backflow Preventer is designed to protect residential and commercial water supply lines from back-siphonage or back-pressure of non-potable (non-hazardous) substances. It has an intermediate atmospheric vent to insure protection from backflow conditions. It consists of two independently acting and spring-loaded check valves in a corrosion resistant material.

OPERATION

During normal flow operation, the vent valve is closed, and the two check valves are open allowing flow of water through the unit. Each check valve is designed to hold at least 1 psi in the direction of flow. When a back-siphonage condition occurs, both check valves close and the atmospheric vent opens to permit air to enter the intermediate zone. In the event of back-pressure and if the second check valve is prevented from closing tightly, leakage will be vented to the atmosphere through the vent port.

FEATURES

- Corrosion Resistant
- Low Head Loss
- Independently Acting Check Valves
- Ease of Repair and Installation
- Economical
- Suitable for Hot or Cold Water Service
- Durable
- Lead-Free Option

PERFORMANCE RATING

- Maximum Working Pressure: 175 psig
- Inlet Temperature Range: 33° to 210°F
- Maximum Backflow Temperature: 250°F

APPROVALS

- ASSE 1012
- CSA B64.3
- NSF/ANSI 372 - Lead Free (4ALF only)

STANDARD MATERIALS LIST

BODY	Forged Brass C87800
UNION NUT & TAILPIECES	Forged Brass C87800
SEAT DISCS	EPDM (FDA/NSF 61)
SEAT STEM & RETAINER	Forged Brass C46500
SPRINGS	Stainless Steel

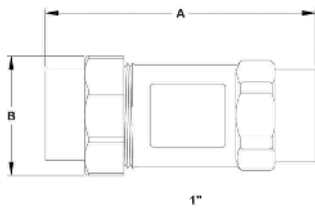
DIMENSIONS

PART NUMBER	DIMENSIONS (IN.)				WT. (LB.)
	A	B	C	D	
4ALF4A33A, 4ALF4A33AC	4.1	1.6	1.9	2.4	1.31
4ALF4H33H, 4ALF4H33HC	3.9	1.6	1.9	2.3	1.24
4ALF4A44A, 4ALF4A44AC	4.3	1.6	1.9	2.5	1.32
4ALF4H44H, 4ALF4A44HC	4.4	1.6	1.9	2.6	1.29

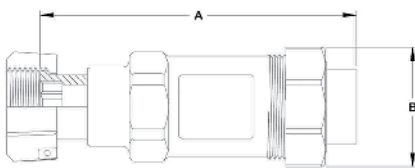
PART NUMBER MATRIX

4A [X]	4 X	X - X	X	X
	UNION INLET CONNECTION	INLET AND OUTLET SIZE	UNION OUTLET CONNECTION	OPTION
4A - Standard	A - FNPT	3 - 1/2"	A - FNPT	C - Canadian (discharge port not threaded)
4ALF - Lead Free	H - Solder joint	4 - 3/4"	B - MNPT H - Solder joint	

DUCLF 4A SERIES DUAL CHECK VALVE BACKFLOW PREVENTER



UNION X NPT



METER SWIVEL X NPT

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The Apollo International™ DUCLF 4A Series Dual Check Valve Backflow Preventer is designed to prevent cross-connections of non-potable water (non-hazardous) into safe drinking water systems. It is a compact and economical device that consists of two independently-acting, spring-loaded check valves in a corrosion-resistant material.

OPERATION

Each of the two spring-loaded check valves is designed to open at 1 psi differential in the direction of flow. The check valves will remain tightly closed until there is a demand for water downstream. If the downstream pressure of the device increases above the supply pressure or there is a reverse direction of flow, the check valves will close to prevent backflow. If the second check valve is prevented from closing tightly, the first check will close to provide protection from a backflow condition.

FEATURES

- Low Head Loss
- Independently-Acting Captured Spring Check Valves
- Compact and Lightweight
- Corrosion Resistant
- Replaceable Check Modules
- Industry Lay Lengths
- Available in Standard and Swivel Types

PERFORMANCE RATING

- Maximum Working Pressure: 175 psi
- Operating Temperature Range: 33° to 180°F

APPROVALS

- ASSE 1024
- CSA B64.6
- NSF/ANSI 372 - Lead Free (4ALF only)

STANDARD MATERIALS LIST

BODY	Lead Free Bronze C87800
TAILPIECE	Lead Free Brass C46500
UNION NUT	Brass C36000
CHECK MODULES	Acetal (3/4"-1")
SPRINGS	Stainless Steel
SEAT DISCS	Buna-N (3/4"-1")

Contact local water authorities for installation/service requirements.

DIMENSIONS

SIZE (IN.)	DIMENSIONS (IN.)		WT. (LB.)
	A	B	
1/2"	4.38	2.00	1.40
3/4"	4.38	2.00	1.40
3/4" Meter Swivel	4.75	2.00	1.60
1"	4.38	2.00	1.40
1" Meter Swivel	4.75	2.00	1.75

METER THREAD SIZING

5/8" METER	3/4"
3/4" METER	1"
1" METER	1-1/4"

PART NUMBER MATRIX

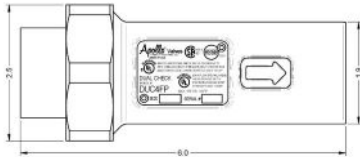
4ALF [X]	3 X	X X	X	X
	UNION INLET CONNECTION ^{1,2}	INLET AND OUTLET SIZE	OUTLET CONNECTION ^{1,2}	FINISH
4ALF - Lead Free	A - FNPT	3 - 1/2"	A - FNPT	Blank - Satin Brass
	B - MNPT	4 - 3/4"	B - MNPT	
	C - Female Meter Thread	5 - 1"		
	S - Female Meter Swivel	6 - 1-1/4" (Meter Thread sizing for 1" meter swivel)		

EXAMPLE: 4ALF 3S54A = Lead Free Dual Check with Female Swivel 1" Inlet (for 3/4" meter connection x 3/4" FNPT outlet)

¹ For meter threads, order one size larger than meter size. (i.e.- 4ALF3S54A = 1" Female Meter Swivel Inlet (for connection to 3/4" meter) x 3/4" FNPT outlet)

² Not all inlet and outlet combinations are available. Please contact Apollo Customer Service for availability.

DUC 4FP SERIES
DUAL CHECK VALVE BACKFLOW PREVENTER



The Apollo DUC 4FP Series Dual Check Backflow Preventer for Residential Fire Sprinkler Systems prevents backflow by either backpressure or backsiphonage from a cross-connection between potable water lines and substances that are objectionable, but not health-hazards.

FEATURES

- Low Pressure Loss
- Corrosion Resistant
- Replaceable Check Modules
- Pressure Drop at 30 gpm is Less than 6 psi
- Complies With NFPA Standard 13D
- 5 Year Warranty
- Made in the USA

PERFORMANCE RATING

- Maximum Operating Pressure: 175 psi
- Temperature Range: 33° to 180°F

APPROVALS

- ASSE 1024
- UL Classified
- CSA B64.6
- NSF/ANSI 372 - Lead Free (4FPLF only)

STANDARD MATERIALS LIST

BODY	Bronze (C84400)	SPACER	Glass-Filled Noryl*
UNION NUT & TAILPIECES	Brass	O-RING	Stainless Steel
CHECK MODULES	Acetal/Nitrile/Stainless Steel		

Contact local water authorities for installation/service requirements.

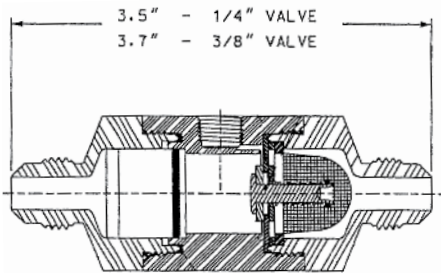
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PART NUMBER MATRIX

4FP [XX]	3 X	X	X	X
	INLET CONNECTION ¹	INLET SIZE	OUTLET SIZE	OUTLET CONNECTION ¹
4FP - Standard	A - FNPT	5 - 1"	5 - 1"	A - FNPT
4FPLF - Lead Free	C - Female Meter Thread	6 - 1-1/4" (Meter Thread Sizing for 1" Meter)	6 - 1-1/4" (Meter Thread Sizing for 1" Meter)	B - MNPT E - Male Meter Thread
EXAMPLE: 4FP3A55A = 1" Dual Check FNPT Inlet x 1" FNPT outlet				

¹ Not all inlet and outlet combinations are available. Please contact Customer Service for availability.

CBBP-A SERIES CARBONATED BEVERAGE BACKFLOW PREVENTER



The Apollo CBBP-A Series Carbonated Beverage Backflow Preventer (CBBP) is designed to help prevent the contamination of the potable water supply due to backflow when installed on water distribution lines serving beverage dispensing equipment. The device consists of two independently acting check valves biased to a normally closed position. A normally open atmospheric port is located between the check valves. During backflow conditions, the port vents gases and/or liquids. Additionally, the CBBP-A is equipped with a 100 mesh integral strainer screen at the inlet. All wetted areas of the device are non-toxic, corrosion resistant, and approved for use with potable water. The CBBP-A is suitable for supply pressures up to 200 psig and water temperatures from 33° to 130° F.

OPERATION

Under static (non-flowing) conditions, the check valves remain in the closed position. When a valve is opened downstream (i.e. a beverage is delivered from the beverage dispensing unit), the check valves open and permit the flow of water. Under backflow conditions, the diaphragm seat on the first check lifts and permits flow through the atmospheric port located between the two check valves. The strainer ensures debris does not enter the backflow preventer.

FEATURES

- Compact Design
- Lowest Head Loss
- Atmospheric Vent Provides Indication of Problems
- Integral Strainer for Equipment Protection
- Lead Free
- 5 Year Warranty
- Available in SAE & NPT Connections
- Repairable Check Assemblies
- Non-Metallic Body for Corrosion Resistance

APPROVALS

- CSA
- NSF/ANSI/CAN 61 - Water Quality
- ASSE 1022
- IAPMO® Listed

STANDARD MATERIALS LIST

END CAP	Noryl/GFN2
STRAINER	PVC/Stainless Steel
O-RING	EPDM
UPSTREAM CHECK	EPDM/Stainless Steel
DOWNSTREAM CHECK	EPDM/Stainless Steel, Acetal
VALVE BODY	Noryl/GFN2
VENT TUBE	Polypropylene

Contact local water authorities for installation/service requirements.

PART NUMBER MATRIX

4C10 X	XX A
SIZE	INLET AND OUTLET CONNECTION
1 - 1/4"	01 - Flare
2 - 3/8"	02 - MNPT (3/8" only)

DIMENSIONS

SIZE	CONNECTION SIZING		WT./EA
1/4"	7/16"-20 UNF	SAE Flare	.19
3/8"	5/8"-18 UNF	SAE Flare	.19
3/8"	3/8" NPT	Male NPT	.19

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HBV SERIES

3/4" HOSE CONNECTION VACUUM BREAKER BACKFLOW PREVENTER



3/4"
(OPTIONAL SATIN CHROME
FINISH SHOWN)

The Apollo International™ HBV Hose Connection Vacuum Breakers are designed to prevent cross-connection caused by back-siphonage. They consist of a single check valve with atmospheric vacuum breaker vent. They feature a break-away set-screw for tamper-proof protection. They are not suitable for continuous pressure applications.

OPERATION

At no flow situations, the check disc seats against the diaphragm with the atmospheric vent open. This prevents back-siphonage or backflow of water. At flow conditions, the spring-loaded check disc opens, thus allowing flow of water through the device and at the same time the diaphragm seals the atmospheric vent.

INSTALLATION

It should only be installed in areas where spillage of water could not cause damage. For permanent installation, screw device directly into faucet, firmly hand tighten and turn set-screw in until head breaks off.

PERFORMANCE RATING

- Maximum Working Pressure: 125 psig
- Maximum Temperature: 180° F

APPROVALS

- ASSE 1011
- CSA B64.2
- IAPMO

DIMENSIONS

PART NUMBER	MODEL NUMBER	FINISH	WT./EA
38LF314AS	HBVLF234	Satin Brass	.17
38LF314CS	HBVLF234	Satin Chrome	.17

38LF-314 shipped in 12 pcs./box

HBVB SERIES

3/4" FREEZE RESISTANT HOSE CONNECTION VACUUM BREAKER



3/4"

The Apollo International™ Series HBVB Freeze Resistant Hose Connection Vacuum Breaker is especially designed to prevent back-siphonage on wall and yard hydrants. It features a break-away set-screw for tamper-proof protection and automatic drain for protection against freezing conditions when hose is removed. It is not suitable for continuous pressure applications.

OPERATION

The principle of operation is similar to the HCVB Series except it has an automatic draining feature. When the hose is removed, the internal mechanism opens to drain water from the unit and the hose bibb to help prevent water from freezing inside the unit.

INSTALLATION

It should only be installed in areas where spillage of water could not cause damage. For permanent installation, screw device directly into faucet, firmly hand tighten and turn set-screw in until head breaks off.

PERFORMANCE RATING

- Maximum Working Pressure: 125 psig
- Maximum Temperature: 180° F

APPROVALS

- ASSE 1011

DIMENSIONS

PART NUMBER	MODEL NUMBER	FINISH	WT./EA
38LF414AS	HBVB2F2	Satin Brass	.37

HBDUC SERIES

3/4" HOSE CONNECTION/LAB FAUCET DUAL CHECK BACKFLOW PREVENTER

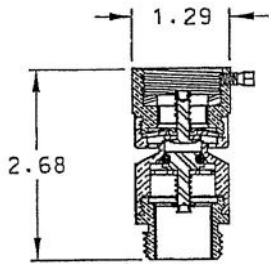


The Apollo International™ Series HBDUC is designed to provide an in-line testable hose connection that will prevent backflow due to back-siphonage or low head back-pressure. Each device consists of two independent checks, forced loaded in the closed position with an atmospheric vent between the checks. The device is threaded for hose connection at both the inlet and outlet with a break-away set screw on the inlet for tamper proof installations. These devices are not suitable for continuous pressure applications.

OPERATION

During initial pressurization, the inlet check shuttles forward to close the atmospheric vent. As flow is established, both the inlet and outlet check open to allow flow through the device. If a backflow condition is present, then both checks will close and the atmospheric vent opens to introduce air and break the siphon.

38-304-02
3/4"



FEATURES

- Corrosion Resistant Body and Checks
- Low Head Loss
- Easy to Install With Break-Away Set Screw
- Protects Against Back Siphonage and Low Head Back Pressure

STANDARD MATERIALS LIST

BODY	Brass
SEATS	EPDM
CHECK COMPONENTS	Stainless Steel
CHECK GUIDE	Acetal

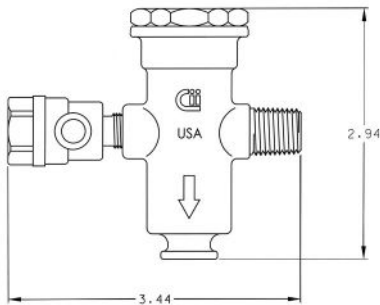
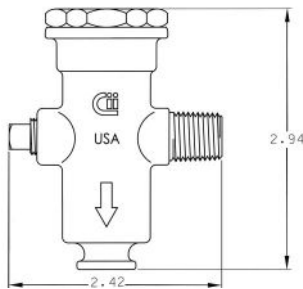
Contact local water authorities for installation/service requirements.

DIMENSIONS

PART NUMBER	MODEL NUMBER	WT./EA
3830402	HBDUC34	.46
38LF30402	HBDUCLF34	.46

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FPV SERIES
FREEZE PROTECTION VALVE



The Apollo Series FPV Freeze Protection Valve protects backflow preventers from freezing when installed in accordance with manufacturer's instructions. All internal parts of the Freeze Protection Valve are replaceable.

OPERATION

During flow conditions, the Freeze Protection Valve shall be drip-tight during above-freezing normal operating conditions. The Freeze Protection Valve shall be suitable for normal operating pressures of 20 to 175 psig.

FEATURES

- Installs Easily on All Backflow Preventers
- Ease of Repair with Available Repair Kit
- Corrosion Resistant
- 1/4" Male Pipe Thread Inlet Port
- Available With 1/8" M x 1/4" F Testcock
- Discharge Port Accommodates 5/8" I.D. Hose
- Lead-Free Option
- Mechanical Operating Principle
- Compact Design
- IAPMO Listed
- US Patent #6,374,849
- 5 Year Warranty

PERFORMANCE RATING

- Nominal Start to Open Temperature of 35°F
- Maximum Operating Pressure: 175 psig
- Maximum Temperature of 180°F

APPROVALS

- NSF/ANSI 372 - Lead Free (40LF only)

STANDARD MATERIALS LIST

BODY	Bronze (C84400/LF C89836)
CAP	Brass
SPRING GUIDE	Brass
SPRING	Stainless Steel
CAP O-RING	Buna-N
GUIDE O-RING	Buna-N
THERMAL ELEMENT	Copper/Stainless Steel/EPDM

Contact local water authorities for installation/service requirements.

WEIGHTS

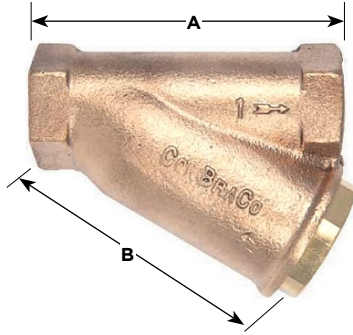
PART NUMBER	NET WEIGHT (LB.)
40-000-FPV1	.70
40-000-FPV2	.77

PART NUMBER MATRIX

40 [X] 000	FPV X
	OPTIONS
40 - Standard	1 - w/ 1/8" NPT plug
40LF - Lead Free	2 - w/ 1/8" Male x 1/4" Female Test Cock
	2F - SAE Test Cock
	R - Repair Kit* for FPV1 and FPV2

* Repair kit includes: Thermal element, spring, spring guide, two o-rings (all internal parts)

YB SERIES WYE STRAINERS



Heavy pattern design with large area screens ensures excellent protection against foreign particles in your fluid system. Corrosion-resistant bronze body and stainless steel screens provide years of service.

FEATURES

- Blow-Off Ball Valve Option (3/4" - 2")
- Replaceable Self-Aligning Screen
- Large Net Flow Area for Longer Maintenance Intervals
- 59-400 Series is Female x Male NPT (3/4" & 1" Only)
- Several Screen and Cap Options
- Made in USA, ARRA Compliant

PERFORMANCE RATING

- Working Pressure:
CWP: 400 psi (up to 3")
SWP: 125 psi
- Maximum Temperature: 350° F

APPROVALS

- NSF/ANSI 372 - Lead Free (59LF)
- CRN-0E 8959.5

DIMENSIONS

PART NUMBER	MODEL NUMBER	SIZE IN.	DIMENSIONS				CAP TAPPING SUFFIX -02	WEIGHT	
			A (IN.)	A (MM.)	B (IN.)	B (MM.)		LB.	KG.
5900101	YB14	1/4 NPT	2	50	1-1/4	32	1/8 NPT	.42	.19
5900201	YB38	3/8 NPT	2-11/16	68	2	50	1/4 NPT	.79	.36
5900301	YB12	1/2 NPT	2-11/16	68	2	50	1/4 NPT	.75	.34
5900401	YB34	3/4 NPT	3-7/8	98	3-1/4	83	1/2 NPT	1.85	.84
5900501	YB1	1 NPT	4-3/4	121	4	100	3/4 NPT	2.76	1.25
5900601	YB114	1-1/4 NPT	5-1/8	130	4-1/4	108	3/4 NPT	3.58	1.62
5900701	YB112	1-1/2 NPT	5-3/4	146	5	127	1 NPT	5.41	2.45
5900801	YB2	2 NPT	6-3/4	171	6	150	1-1/4 NPT	7.47	3.39
5940401	YBM34	3/4 F x MNPT	5-3/8	136	3-1/4	83	1/2 NPT	2.0	.9
5940501	YBM1	1 F x MNPT	5-3/4	146	4	100	3/4 NPT	2.95	1.3
59LF00101	YB14LF	1/4 NPT	2	50	1-1/4	32	1/8 NPT	.42	.19
59LF00201	YB38LF	3/8 NPT	2-11/16	68	2	50	1/4 NPT	.79	.36
59LF00301	YB12LF	1/2 NPT	2-11/16	68	2	50	1/4 NPT	.75	.34
59LF00401	YB34LF	3/4 NPT	3-7/8	98	3-1/4	83	1/2 NPT	1.85	.84
59LF00501	YB1LF	1 NPT	1-3/4	121	4	100	3/4 NPT	2.76	1.25
59LF00601	YB114LF	1-1/4 NPT	5-1/8	130	4-1/4	108	3/4 NPT	3.58	1.62
59LF00701	YB112LF	1-1/2 NPT	5-3/4	146	5	127	1 NPT	5.41	2.45
59LF00801	YB2LF	2 NPT	6-3/4	171	6	150	1-1/4 NPT	7.47	3.39
59LF40401	YBM34LF	3/4 NPT x MNPT	5-3/8	136	3-1/4	83	1/2 NPT	2.0	.9
59LF40501	YBM1LF	1 NPT x MNPT	5-3/4	146	4	100	3/4 NPT	2.95	1.3



YCF SERIES CLASS 125 CAST IRON WYE STRAINER



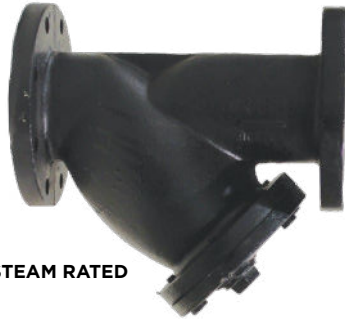
The Apollo International™ YCF Strainers are designed to protect piping systems and process equipment from unwanted foreign particles with minimum pressure loss.

FEATURES

- Iron Strainer with Flat Face Flanges Conforms to ASME/ANSI 16.1 Class 125
- One Piece Cast Body Meets ASME Standard
- Epoxy Coating Models conform to FDA CFR21, Section 175.300 and NSF/ANSI 372 Lead Free
- Equipped with Bolted Cover Employing Flat Gasket Seal
- Upper and Lower Machined Seats for Screen for Self-Aligning Screen Design
- 304 SS Perforated Screens are Standard (P045 STD 2"-3", P125 STD 4"-12")
- Tapped Blow Off Connection with Plug
- 100% Factory Pressure Tested



LEAD FREE



STEAM RATED

PERFORMANCE RATING (LEAD FREE)

- Working Pressure:
CWP: 200 psi @ 150° F

*not for steam service.

PERFORMANCE RATING (STEAM RATED)

- Working Pressure:
CWP 200 PSIG
SWP 125 PSIG @ 352°F

STANDARD MATERIALS LIST

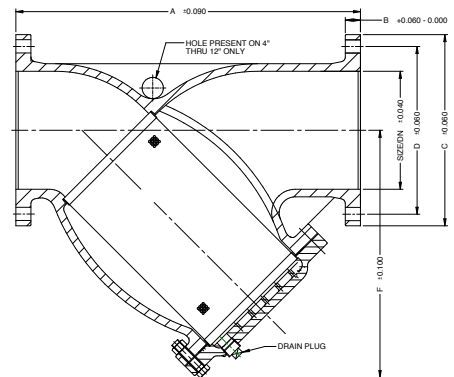
BODY	Cast Iron, ASTM A126-B
CAP/COVER	Cast Iron, ASTM A126-B
PLUG	Carbon Steel, ASTM A307
BOLT/STUD/NUT	Carbon Steel, ASTM A307
SCREEN	304 Stainless Steel
GASKET	Graphite
COATING (LEAD FREE ONLY)	Epoxy, FDA Approved

DIMENSIONS

PART NUMBER STEAM RATED	PART NUMBER LEAD FREE	SIZE/DN		A		B		C		D		E		F		DRAIN PLUG		WEIGHT	
		IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	LB.	KG.
YCF02P045	YCF02P045E	2"	50	8.86	255	0.63	16	5.98	152	4.75	121	0.75	19	6.30	160	1/2"	4	23	11
YCF25P045	YCF25P045E	2-1/2"	65	10.75	273	0.69	18	7.01	178	5.50	140	0.75	19	7.64	194	1"	4	34	15
YCF03P045	YCF03P045E	3"	80	11.50	292	0.75	19	7.48	190	6.00	153	0.75	19	8.86	225	1"	4	47	21
YCF04P125	YCF04P125E	4"	100	13.86	352	0.94	24	8.98	228	7.50	191	0.75	19	10.63	270	1-1/4"	8	72	33
YCF05P125	YCF05P125E	5"	125	16.38	416	0.94	24	10.00	254	8.50	216	0.88	22	12.60	320	1-1/4"	8	111	50
YCF06P125	YCF06P125E	6"	150	18.50	470	1.00	25	10.98	279	9.50	242	0.88	22	14.69	373	1-1/2"	8	150	68
YCF08P125	YCF08P125E	8"	200	21.38	543	1.12	29	13.46	342	11.75	299	0.88	22	17.72	450	1-1/2"	8	235	107
YCF10P125	YCF10P125E	10"	250	25.98	660	1.18	30	15.98	406	14.25	362	1.00	25	20.67	525	2"	12	369	168
YCF12P125	YCF12P125E	12"	300	30.00	762	1.25	32	19.02	483	17.00	432	1.00	25	23.94	608	2"	12	552	250

PART NUMBER MATRIX

YCF	XXX	XXX[X]	X
	CONNECTION SIZE	SCREEN TYPE	OPTION
YCF (Flat Face)	F02 - Flanged 2"	M20 - 20 Mesh	E - Epoxy Coating, FDA Approved
	F25 - Flanged 2.5"	M40 - 40 Mesh	LEAD FREE ONLY, NOT FOR STEAM
	F03 - Flanged 3"	M80 - 80 Mesh	
	F04 - Flanged 4"	M100 - 100 Mesh	
	F05 - Flanged 5"	P045 - .045" PERF	
	F06 - Flanged 6"	P125 - .125" PERF	
	F08 - Flanged 8"		
	F10 - Flanged 10"		
	F12 - Flanged 12"		

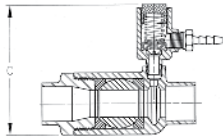
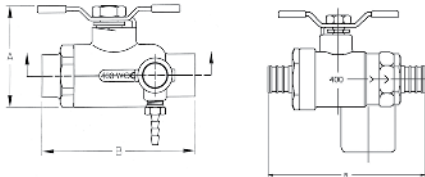


*All mesh screens include liner:
.045" Perf on 3" and smaller
.125" Perf on 4" and larger

**All screens not available for all sizes.

***Limited screen options available for non-lead free steam rated version.

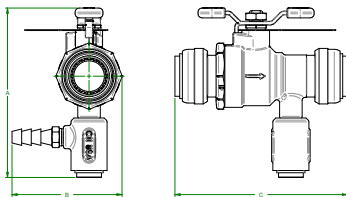
78RV SERIES THERMAL EXPANSION RELIEF VALVE



Relief valve shown rotated 90°. Valve should be assembled w/ hose barb pointed down.



PUSH OPTION



The Apollo 78RV combines thermal expansion protection and water heater shut-off in a single, simple installation. They're space saving and a less costly alternative to large expansion tanks. Made in the USA, featuring lead free dezincification resistant brass materials.

FEATURES

- 3/4" Solder, NPT, and PEX Ball Valve Connections
- Corrosion Resistant, Heavy Pattern, Forged Brass, Materials
- Chrome-Plated Ball
- Thermal Relief Valve is Factory Preset and Sealed
- Relief Valve Features Soft Seat and Stainless Steel Spring
- Relief Valve Available with Hose Barb, 1/2" PEX, 3/8" Compression or 1/2" Combination Solder/Thread Fitting

- Multiple Relief Pressure Kit Options
- Easily Identifiable White Handle Grip and Blue "Lead Free" Hang Tag
- EZ-Solder™ Lead Free Brass

PERFORMANCE RATING

- Maximum Temperature: 210°F

APPROVALS

- IAPMO IGC 128-2008
- City of Los Angeles Registered
- CSA B125.1 & B125.3

DIMENSIONS

PART NUMBER	SIZE (IN.)	DIMENSIONS (IN.)			WT. (LB.)
		A	B	C	
78LF300	3/4" Solder	4.0	3.9	3.3	.687
78LF400	3/4" FNPT	3.9	2.8	3.3	.750
78LF700	3/4" PEX	3.9	3.8	3.3	.750

PART NUMBER MATRIX

78LF X	X	X RV
PRESSURE SETTING	SIZE	RELIEF VALVE CONNECTION
0 - 125 psig	3 - 3/4" Solder	4 - Hose Barb
1 - 100 psig	4 - 3/4" NPT	5 - PEX
2 - 80 psi	7 - 3/4" PEX	6 - Compression Fitting
		7 - 1/2" NPT/SWT Fitting

DIMENSIONS - PUSH OPTION

PART NUMBER	SIZE (IN.)	DIMENSIONS (IN.)			PORT DIA. (IN.)	PRESSURE
		A	B	C		
78RV88P80	3/4" Push	3.9	4.2	1.6	.750	80
78RV88P100	3/4" Push	3.9	4.2	1.6	.750	100
78RV88P125	3/4" Push	3.9	4.2	1.6	.750	125

EXPT SERIES EXPANSION TANKS FOR POTABLE SYSTEMS



Apollo Model EXPT expansion tanks are designed for use in domestic systems installations for sanitary hot water applications to absorb pressure increases from the heating process.

FEATURES

- Food quality chlorobutyl diaphragm
- Drawn Steel Construction
- Durable Triple Coated Almond Epoxy Finish
- Field Adjustable Pressure Setting
- Corrosion Resistant Liner Connection
- Lead Free Certified

PERFORMANCE RATING

- Maximum Pressure: 150 psi
- Maximum Temperature: 200°F
- Pre-Charge Pressure: 35 psig

APPROVALS

- NSF/ANSI/CAN 61 - Water Quality
- IAPMO

MODEL NUMBER	PART NUMBER	CAPACITY (GAL.)	EXP. VOLUME (GAL.)	CONNECTION SIZE (NPT)	DIAMETER (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
EXTP2	40XT1-04	2.10	0.9	3/4	8.0	12.5	4.7
EXTP5	40XT3-04	4.5	2.5	3/4	11.0	15.0	8
EXTP10	40XT5-04	10	5.2	3/4	11.5	20	13.5

Maximum expansion volume is based on 35 psi.

TK SERIES
DIFFERENTIAL PRESSURE GAUGE TEST KITS



The Apollo Backflow Preventer Test Kits are compact, lightweight and portable testing devices. They come equipped with a gauge, hoses (with integral filters) and all required adapter fittings. Also included is a flexible or adjustable strap for hanging the gauge, laminated test procedures and a molded plastic carrying case with foam inserts.

TK3

These are three-valve test kits used for testing all DCV, RPZ, PVB & SVB backflow preventers. Differential pressure type with a dual scale of 0-15 psid/0-100kPa differential pressure range with a ± 0.2 psig (Descending) accuracy. Maximum working pressure 200 psig.

TK5

This is a five-valve test kit used for testing all DCV, RPZ, PVB & SVB backflow preventers. The five valve test kit is similar to the three valve kit except it has two additional valves that make it possible to bleed lines without disconnecting hoses.

PART NO.	MODEL NO.	APPLICATION	WT./EA (LB.)	WT./CASE (LB.)
40200TKU	TK3	ALL DCV, RPZ, PVB & SVB	6.1	9.5
40200TK5U	TK5	ALL DCV, RPZ, PVB & SVB	6.1	9.5

TEST KIT ADAPTER FITTINGS

Brass fitting which installs onto backflow preventer testcocks by hand to provide quicker testing. Sets of three fittings with o-rings for 1/4" SAE connections to the test kits. Packaged in a resealable plastic bag.



PART NO.	MODEL NO.	SIZE	BACKFLOW APPLICATION
40000TFK	TFK14	1/4" SAE x 1/4" NPT	1/4" - 2"
40001TFK	TFK12	1/4" SAE x 1/2" NPT	2-1/2" - 6"
40002TFK	TFK34	1/4" SAE x 3/4" NPT	8" - 12"
40003TFK	TFKSET	Set of All 3 Sizes	1/4" - 12"

HCPG SERIES
3/4" HOSE CONNECTION PRESSURE GAUGE



The Apollo Hose Connection Pressure Gauge is designed to measure water pressure through a 3/4" hose thread connection. It consists of an indicator needle to determine maximum pressure.

Part Number - W807800
Model Number - HCPG

FEATURES

- 2-1/2" Face Dial
- 0 - 300 psig Pressure Range
- Swivel Type 3/4" Hose Connection
- Adjustable Indicator Needle
- Temperature Range: 50°F - 130°F
- Wt./Ea.: .46 lb.

ST1 SERIES
SIGHT TUBE



The kit allows for visual inspection during testing, provides an extension to the check valve body and offers quick connection with the 90° elbow. Provides means to static test double check backflow preventers.

Part Number - 40200ST
Model Number - ST1

40 200 BV
BLEED VALVE



Test valve used to provide accurate readings in field test of the Double Check Valve backflow preventers. Benefits include quick connections, quick bleed off of testing lines and useful in tight locations.

Part Number - 40200BV

4A, 4AN AND RPS 40 SERIES AIR GAP DRAIN



For installation with all 4A, 4An and RPS 40 Series Reduced Pressure Principle backflow preventers.

The Apollo Air Gap Drain (AGD) is designed to funnel minor relief valve discharges, due to line pressure fluctuations and /or minor check valve fouling, into the drainage system. Drain piping is easily attached to the drain's threaded bottom.

Note: The AGD is designed to collect expected minor discharges due to fouled checks or pressure fluctuations but not the full discharge capacity of the relief valve.

AGD4A1 / AGD4A112 / AGD4A2 / AGD4A6 (1/2" - 6")

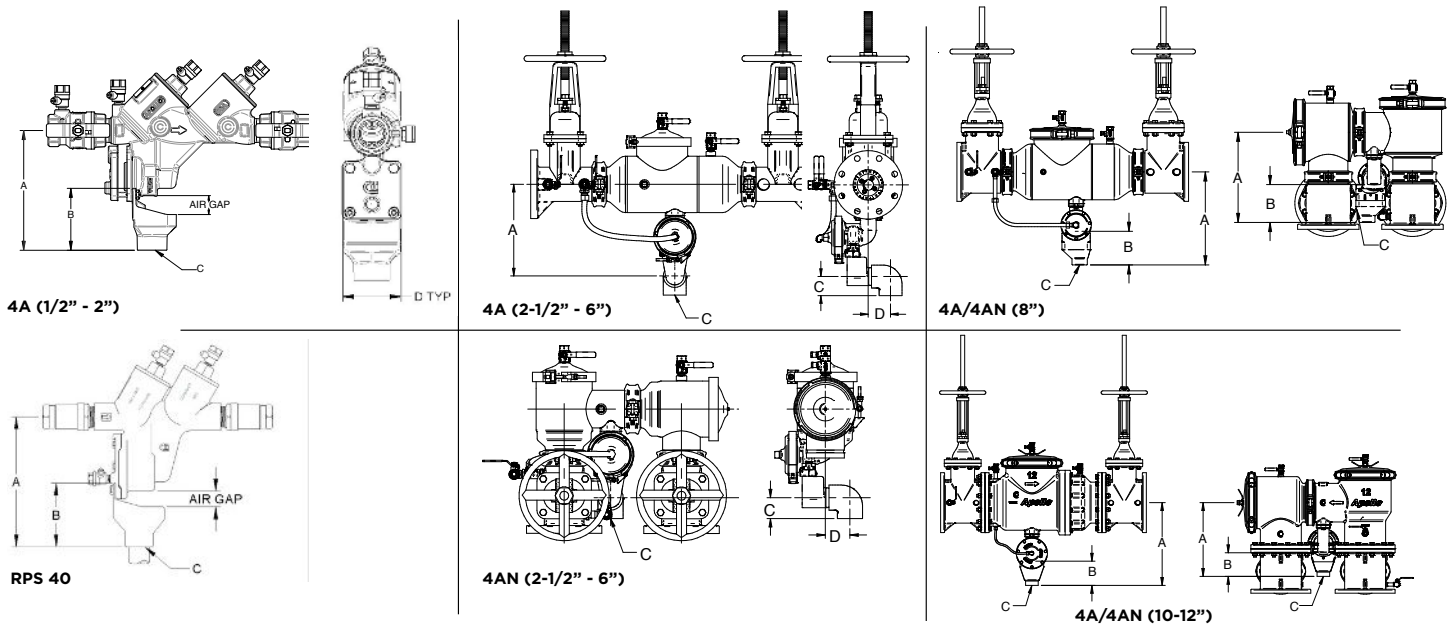
RP SIZE	AIR GAP PART NUMBER	DIMENSIONS (IN.)				OUTLET CONNECTION (FNPT)	WT. (LB.)
		A	B	C	D		
1/2"	AGD4A1	6-1/2	3-3/8	1" FNPT	2-5/8	1-1/4"	0.1
3/4"	AGD4A1	6-1/2	3-3/8	1" FNPT	2-5/8	1-1/4"	0.1
1"	AGD4A1	6-5/8	3-3/8	1" FNPT	2-5/8	1-1/4"	0.1
1-1/4" & 1-1/2"	AGD4A112	8-1/2	4-1/8	1-1/2" FNPT	3-1/2	2"	0.2
2"	AGD4A2	10	5-3/8	2" FNPT	4-1/4	2-1/2"	0.35
RP4A							
2-1/2"	AGD4A6	11.28	-	2.63	3.13	2"	0.7
3"	AGD4A6	11.28	-	2.63	3.13	2"	0.7
4"	AGD4A6	12.02	-	2.63	3.13	2"	0.7
6"	AGD4A6	13.32	-	2.63	3.13	2"	0.7
RP4AN							
2-1/2"	AGD4A6	-	10.87	2.63	3.13	2"	0.7
3"	AGD4A6	-	10.87	2.63	3.13	2"	0.7
4"	AGD4A6	-	10.51	2.63	3.13	2"	0.7
6"	AGD4A6	-	11.76	2.63	3.13	2"	0.7

AGD4A8 & AGD4A12IN (8" & 12")

RP STYLE	AIR GAP PART NUMBER	DIMENSIONS (IN.)		OUTLET PIPE SIZE	OUTLET CONNECTION (FNPT)	WT. (LB.)
		A	B			
RPLF4A	AGD4A8	21.3	9.1	3"	2-1/2"	1.5
RPLF4AN	AGD4A8	19.8	9.1	3"	2-1/2"	1.5
RPLF4A	AGD4A12IN	26.3	7.7	4"	3"	5
RPLF4AN	AGD4A12IN	23.4	7.7	4"	3"	5

AGD4A012 / AGD4A01 (3/8" - 1")

RPS SIZE	AIR GAP PART NUMBER	DIMENSIONS (IN.)				OUTLET CONNECTION (FNPT)	WT. (LB.)
		A	B	C	D		
3/8", 1/2"	AGD4012	6-1/2	3-3/8	1" FNPT	2-5/8	1-1/4"	0.1
3/4" & 1"	AGD401	8-1/4	4-1/8	1-1/2" FNPT	3-1/2	2"	0.2



DC 4A / DCLF 4A SERIES DOUBLE CHECK VALVE BACKFLOW PREVENTER ASSEMBLY



The Apollo Model DC 4A or DCLF 4A Double Check Valves are designed to prevent contamination of the potable water supply due to back-siphonage or backpressure from substances that are objectionable, but non-health hazards. The modular check valve captured spring cartridges have replaceable seats and reversible silicone seat discs. Ball valve shut-offs with stainless steel handles and nuts are standard.

OPERATION

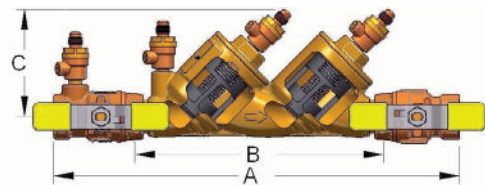
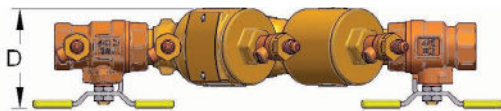
During normal flow conditions, the two check valves are held off their seats, supplying water downstream. Each check valve is designed to maintain a minimum of 1 psi across the valve during normal operation. Should the downstream pressure increase to within 1 psi of supply pressure, both check valves will close to prevent a backflow condition.

FEATURES

- Low Pressure Loss
- Captured Spring Cartridge Check Valves
- Compact, Yet Easy to Maintain
- Ball Valve Shut-Offs w/ SS Handles & Nuts Standard
- Top Access for Fast Testing & Maintenance
- Threaded Testcock Protectors
- Corrosion Resistant
- No Special Tools Required
- 5 Year Warranty
- Lead-Free Option
- Chloramine-Resistant Elastomers
- Designed, Cast, Machined, Assembled and Tested in the USA

APPROVALS

- Horizontal and Vertical Up Approvals
- AWWA C510
- UL, ULC Classified (T2ST Option or Less Shutoffs)
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California
- ASSE 1015
- IAPMO
- CSA
- NSF/ANSI/CAN 61 - Water Quality (4ALF only)
- NSF/ANSI 372 - Lead Free (4ALF only)



**SLOW CLOSE WITH MONITOR SWITCHES
T2ST OPTION (1-1/2" AND 2" ONLY)
SEE SS1396 FOR DIMENSIONS**

PERFORMANCE RATING

- Maximum Working Pressure: 175 psi
- Temperature Range: 33° to 180°F

STANDARD MATERIALS LIST

BODY, CAPS	Bronze C84400/LF C89836
BV SHUT-OFFS TEST COCKS	Bronze C84400 or LF C87800
CHECK VALVES	Glass-Filled PPO
SPRINGS	300 Series Stainless Steel
SEAT DISCS	Chloramine-Resistant Silicone
O-RINGS	Chloramine-Resistant EPDM
BV HANDLES	Stainless Steel

Flow Curves - Page 53

PART NUMBER MATRIX

4A X	1 X	X	XX	X
	Y-STRAINER	SIZE	SHUT-OFF VALVES	OPTIONS (CAN BE COMBINED)
4A - Standard	0 - Standard	3 - 1/2"	A2 - w/ Ball Valves (Standard)	F - SAE Threaded Test Cocks (Standard 1/2" - 2")
4ALF - Lead Free	1 - w/ Y-strainer (Shipped Loose)	4 - 3/4"	A4 - w/ Union Ball Valves (3/4" - 2")	LL - SS Locking Lever Handles
		5 - 1"		PR - Press Connections (Factory Installed)
		6 - 1-1/4"		P - Push Connections (Factory Installed) (3/4" - 1")
		7 - 1-1/2"		
		8 - 2"		

EXAMPLE: 4A 104 A4LL = 3/4" double check valve assembly with union ball valves with locking lever handles

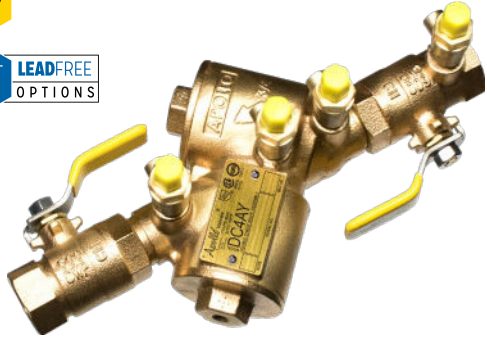
DIMENSIONS

MODEL NO, PART NO. SIZE	4A 103 A2F DC 4A 12 1/2"	4A 103 A2F DC 4A 12 15 MM.	4A 104 A2F DC 4A 34 3/4"	4A 104 A2F DC 4A 34 20 MM.	4A 105 A2F DC 4A 1 1"	4A 105 A2F DC 4A 1 25MM.	4A 106 A2F DC 4A 114 1-1/4"	4A 106 A2F DC 4A 114 32 MM.	4A 107 A2F DC 4A 112 1-1/2"	4A 107 A2F DC 4A 112 40 MM.	4A 108 A2 DC 4A 2 2"	4A 108 A2 DC 4A 2 50 MM.
A*	10-7/8	276	12-5/8	321	14-5/8	371	17-1/2	445	18	457	20-1/8	511
B	7-3/8	187	8-1/2	215	9-1/2	241	11-3/4	298	11-5/8	295	12-3/4	324
C	3-1/4	83	3-1/2	89	4	100	4-1/2	114	4-1/2	114	5	127
D	2-1/2	64	3	76	3-1/4	83	4-3/4	121	4-3/4	121	5-3/8	136
WEIGHTS	LB.	KG.	LB.	KG.	LB.	KG.	LB.	KG.	LB.	KG.	LB.	KG.
Net Wt.	4.1	1.9	5.4	2.5	9.0	4.0	9.1	4.1	12.9	5.9	16.5	7.5

*For T2ST Option, Union Ball Valve, Press, and Push connection dimensions, see submittal sheets.

DC 4AY / DCLF 4AY SERIES

Y-PATTERN DOUBLE CHECK VALVE BACKFLOW PREVENTER ASSEMBLY



The Apollo Model DC 4AY Double Check Valves are designed to prevent contamination of the potable water supply due to back-siphonage or backpressure from substances that are objectionable to the potable water supply, but non-health hazards. The modular check valve cartridges provide captured springs, replaceable seats, and reversible silicone seat discs. This Made in America assembly features Apollo ball valves with stainless steel handles and nuts as standard and carries the five-year Apollo factory warranty.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. Each check valve is designed to maintain a minimum of 1 psi across the valve during normal operation. Should the downstream pressure increase to within 1 psi of supply pressure, both check valves will close to prevent a backflow condition.

FEATURES

- Low Pressure Loss
- Captured Stainless Steel Springs
- Compact Yet Easy to Maintain
- Ball Valve Shut-offs w/ SS Handles & Nuts Standard
- Threaded Testcock Protectors
- Corrosion Resistant
- No Special Tools Required
- Chloramine-Resistant Elastomers
- 5 Year Warranty
- Designed, Cast, Machined, Assembled and Tested in the USA

PERFORMANCE RATING

- Maximum Working Pressure: 175 psi
- Temperature Range: 33° to 180°F

APPROVALS

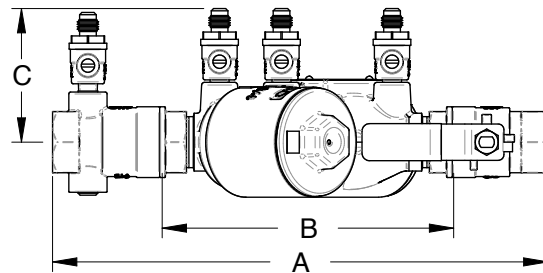
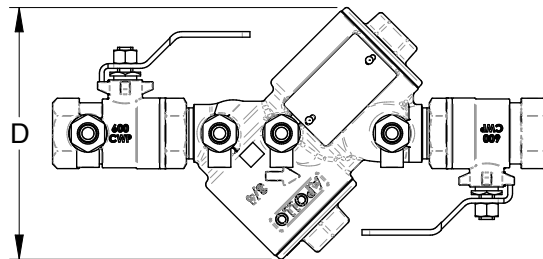
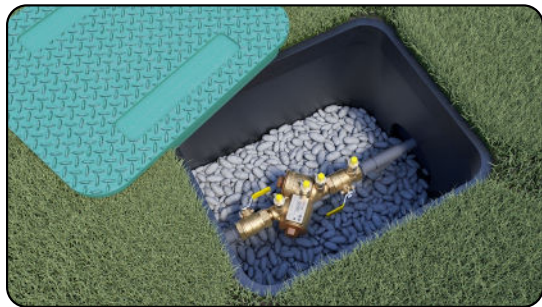
- Horizontal and Vertical Up Approvals
- ASSE 1015
- IAPMO
- CSA
- NSF/ANSI/CAN 61 - Water Quality (4AYLF only)

STANDARD MATERIALS LIST

BODY, CAPS	Bronze C84400 or C89836 Lead Free*
BV SHUTOFFS, TEST COCKS	Bronze C84400 or C87800 Lead Free*
CHECK VALVE CARTRIDGES	Glass-Filled PPO
SPRINGS	300 Series Stainless Steel
SEAT DISCS	Chloramine-Resistant Silicone

DIMENSIONS

PART NUMBER	SIZE	DIMENSIONS (IN.)				WT. (LB.)
		A	B	C	D	
4AY104A2FB	3/4"	10.2	6	2.8	5.2	6.5
4AY105A2FB	1"	12.2	7.1	3	6.2	8.7



Flow Curves - Page 59

PART NUMBER MATRIX

4A [X]	1X	X	X X	X B
	Y-STRAINER	SIZE	SHUT-OFF VALVES	OPTIONS (CAN BE COMBINED)
4AY - Standard	0 - Standard	4 - 3/4"	A2 - w/ Ball Valves (Standard)	F - SAE Threaded Test Cocks (Standard 1/2"-2")
4AYLF - Lead Free	1 - w/ Y-strainer (Shipped Loose)	5 - 1"	A4 - w/ Union Ball Valves (3/4"-2")	L - Lever Handle (Standard 3/4" & 1" Only)
				PR - Press Connections (Factory Installed)
				P - Push Connections (Factory Installed) (3/4"-1")

EXAMPLE: 4AY 105 A4FB = 1" Double Check Backflow Preventer, Union Ball Valves and Locking Lever Handles

DCDA2 4AST / DCDA2LF 4AST SERIES

DOUBLE CHECK DETECTOR BACKFLOW PREVENTER ASSEMBLY



The Apollo Model DCDA2 4AST or DCDA2LF 4AST Lead Free* 1-1/2"– 2" Double Check Detector Assembly consists of a mainline double check valve with a Type 2 bypass consisting of a single check (SCV) and meter bypassing the mainline second check to prevent backflow while accurately measuring all flows up to 2 gpm while the mainline 2nd check remains closed. The pressure drop across the assembly shall be documented by independent approval agencies. The assembly shall prevent contamination of the potable water supply due to back-siphonage or backpressure from substances that are non-health hazards. This Made in America assembly features Apollo UL® Listed, slow-close, full open port, gear operated ball valves with integral tamper switches and carries the five-year Apollo factory warranty.

STANDARD MATERIALS LIST

BODY, CAPS, BALL VALVE SHUTOFFS, TEST COCKS	Bronze C84400 or C89836 or C87800 (Lead Free*)
CHECK VALVE CARTRIDGES	Glass-Filled PPO
SPRINGS	300 Series Stainless Steel
SEAT DISCS	Chloramine-Resistant Silicone
O-RINGS	Chloramine-Resistant EPDM

DIMENSIONS

SIZE (IN.)	DIMENSIONS (IN.)				WT. (LB.)
	A	B	C	D	
1-1/2"	22-1/4	2-5/8	9-3/4	7-5/8	35.2
2"	23-3/4	2-5/8	10	8	45.8

Flow Curves - Page 55

FEATURES

- Low Pressure Loss Documented By Independent Approval Agencies
- Easily Removable Modular Check Valve Cartridges
- Captured Stainless Steel Springs
- Apollo UL® Listed, Slow-Close, Full Open Port, Gear Operated Ball Valves with Integral Tamper Switches
- Top-Mounted Test Cocks for Easy Testing
- No Special Tools Required
- Chloramine-Resistant Elastomers
- Designed, Cast, Machined, Assembled and Tested in the USA
- Short Lay-Length for Small Spaces
- Pre-Wired Tamper (Supervisory) Switches
- 5 Year Warranty

PERFORMANCE RATING

- Maximum Working Pressure: 175 psi
- Temperature Range: 33° to 140°F
- Hydrostatic Test Pressure: 350 psi

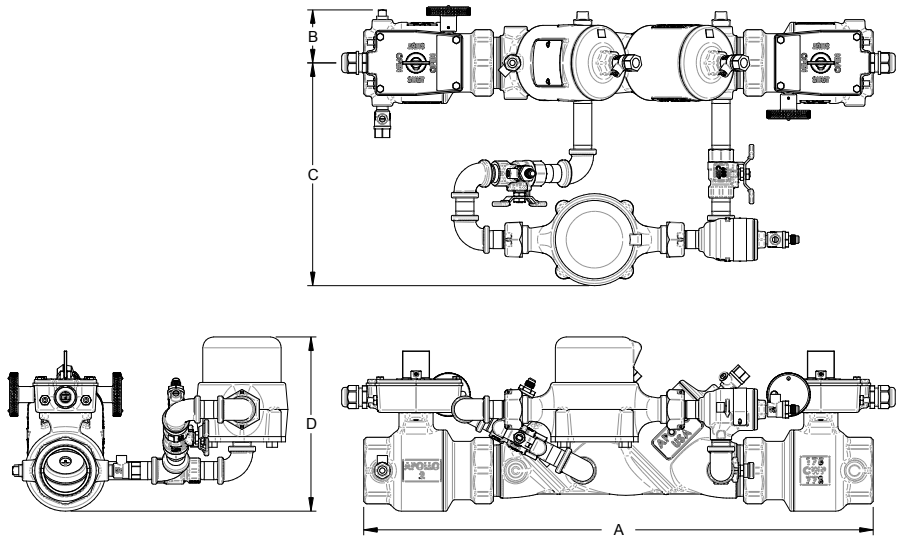
APPROVALS

- ASSE 1048 (Horizontal & Vertical Up)
- UL® Classified (Horizontal & Vertical Up)
- C-UL® Classified (Horizontal & Vertical Up)
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California. (Horizontal & Vertical Up)
- NSF/ANSI/CAN 61 - Water Quality (4ALF only)
- NSF/ANSI 372 - Lead Free (4ALF only)

PART NUMBER MATRIX

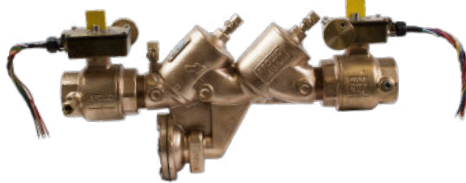
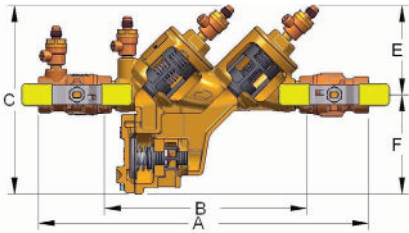
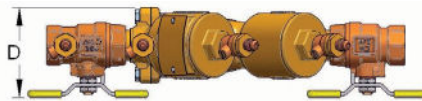
4A X	6 X	X	X 2ST F
	BYPASS SIDE	SIZE	METER OPTION
4A - Standard	2 - Bypass Line on Right Side (Standard - as Shown)	7 - 1-1/2"	C - Cubic ft/min
4ALF - Lead Free		8 - 2"	E - GPM
	4 - Bypass Line on Left Side		G - No Meter

EXAMPLE: 4A 62 8 E 2ST = 2" double check detector, right side bypass with GPM meter.



RP 4A / RPLF 4A SERIES

REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER ASSEMBLY



**SLOW CLOSE WITH MONITOR SWITCHES
T2ST OPTION (1-1/2" AND 2" ONLY)
SEE SS1397 FOR DIMENSIONS**

Flow Curves - Page 54

PART NUMBER MATRIX

4A X	2 X	X	XX	X
	Y-STRAINER	SIZE	SHUT-OFF VALVES	OPTIONS (CAN BE COMBINED)
4A - Standard	0 - Standard	3 - 1/2"	A2 - w/ Ball Valves (Standard)	F - SAE Threaded Test Cocks (Standard 1/2")
4ALF - Lead Free	1 - w/Y-Strainer (Shipped Loose)	4 - 3/4"	A4 - w/ Union Ball Valves (3/4" - 2")	L - Lever Handle (3/4" & 1" Only)
		5 - 1"	T2ST - Tamper Gear Operated Ball Valves (1-1/2" - 2")	LL - Locking Lever Handles
		6 - 1-1/4"		P - Push Connection (Factory Installed)
		7 - 1-1/2"		PR - Press Connection (Factory Installed) (3/4" & 1" Only)
		8 - 2"		

EXAMPLE: 4A 215 A4LL = 1" reduced pressure backflow preventer with strainer, union ball valves and locking lever handles

DIMENSIONS

MODEL NO. PART NO. SIZE	RP4A12 4A 203 A2F 1/2"	RP4A12 4A 203 A2F 15 MM.	RP4A34 4A 204 A2F 3/4"	RP4A34 4A 204 A2F 20 MM.	RP4A1 4A 205 A2F 1"	RP4A1 4A 205 A2F 25MM.	RP4A114 4A 206 A2F 1-1/4"	RP4A114 4A 206 A2F 32 MM.	RP4A112 4A 207 A2F 1-1/2"	RP4A112 4A 207 A2F 40 MM.	RP4A2 4A 208 A2F 2"	RP4A2 4A 208 A2F 50 MM.
A*	10-7/8	276	12-5/8	321	14-5/8	371	17-1/2	445	18	457	20-1/8	511
B	7-3/8	187	8-1/2	216	9-1/2	241	11-3/4	298	11-5/8	295	12-3/4	324
C	7-1/8	181	7-3/8	187	8	203	9-7/8	251	9-7/8	251	11	279
D	2-7/8	73	3-1/8	79	3-1/4	83	5-1/8	130	5-1/8	130	5-7/8	149
E	3-1/4	83	3-1/2	89	4	100	4-1/2	114	4-1/2	114	5	127
F	3-7/8	98	3-7/8	98	4	100	5-3/8	137	5-3/8	137	6	150
WEIGHTS	LB.	KG.	LB.	KG.	LB.	KG.	LB.	KG.	LB.	KG.	LB.	KG.
Net Wt.	6.9	3.1	8.2	3.7	11.7	5.3	13.6	6.2	17.4	7.9	24.5	11.1

*For T2ST Option, Union Ball Valve, Press, and Push connection dimensions, see submittal sheets.

The Apollo Series RP 4A or RPLF 4A Reduced Pressure Principle Backflow Preventer is designed to give maximum protection against backflow caused by either back-pressure or back-siphonage from substances that are hazardous. The durable but economical device is easily maintained in the line with modular check cartridge assemblies that require no special tools. It consists of two independently acting spring-loaded check valves with an automatic differential relief valve located between the check valves. All test cocks are mounted at the top of the unit to assure easy access during repair and maintenance when unit is installed in tight places.

FEATURES

- Maximum Protection Against Back-Pressure/Back-Siphonage
- Modular Check Valve Cartridges w/ Easily Replaced Parts
- Reversible/Removable Chloramine-Resistant Silicone Seat Discs
- Low Head Pressure Loss
- Top Mounted Test Cocks
- Threaded Testcock Protectors
- Internal Sensing Passage
- Modular Captured Spring Relief Valve
- Lead Free Option
- Standard with Full Port Ball Valves with Stainless Steel Handles
- Corrosion Resistant
- Optional Air Gap Drain
- Designed, Cast, Machined, Assembled and Tested in the USA
- 5 Year Warranty

PERFORMANCE RATING

- Maximum Working Pressure: 175 psi
- Operating Temperature Range: 33° to 180°F

APPROVALS

- ASSE 1013
- CSA B64.4
- Federal Public Law 111-380
- AWWA C511
- UL, ULC Classified (T2ST Option or Less Shutoffs)
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California
- Horizontal Installation Approvals on 1/2" thru 2"
- NSF/ANSI/CAN 61 - Water Quality (4ALF only)
- NSF/ANSI 372 - Lead Free (4ALF only)

STANDARD MATERIALS LIST

BODY, CAPS	Bronze (C84400/LF C89836)	DIAPHRAGM	Nitrile and Nylon
BV SHUT-OFFS, TEST COCKS	Bronze (C84400/LF C87800)	CHECK MODULES	Glass-Filled PPO
SPRINGS	300 Series SS	O-RINGS	Chloramine-Resistant EPDM
SEAT DISCS	Chloramine-Resistant Silicone	BALL VALVE HANDLES	Stainless Steel

Contact local water authorities for installation/service requirements.

RPFHB 4A SERIES

REDUCED PRESSURE PRINCIPLE FIRE HYDRANT BACKFLOW PREVENTER ASSEMBLY METER



SIZE 1"
CONTACT LOCAL WATER AUTHORITIES FOR
INSTALLATION/SERVICE REQUIREMENTS.

The Apollo Series RPFHB 4A Fire Hydrant Backflow Meter shall measure potable water flow from a fire hydrant or other non-permanent installation. At the same time it shall protect against backflow by either back-pressure or back-siphonage from a cross-connection between potable water system and substances that are non-health and health hazards. The unit shall consist of a 3/4" Short Water Meter, 1" 4A-205 RP device, 1" resilient-seated full port ball valve with locking device, 2-1/2" - 7-1/2" NST threaded hose couplings, strainer on inlet of meter and adjustable support rod assembly.

OPERATION

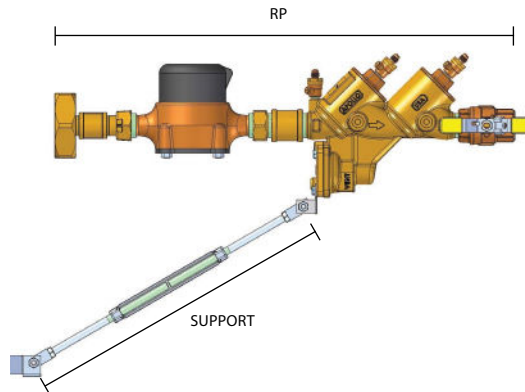
The Fire Hydrant Backflow Meter is connected directly to a fire hydrant with a 2-1/2" - 7-1/2" NST fire hose female swivel coupling. The device operates like a standard Reduced Pressure device except the flow through the device is measured by a Water Meter connected to the inlet of the backflow preventer. Support rod assembly is adjustable to accommodate fire hydrants at different heights from the ground.

FEATURES

- Normal Operating Flow Range: 2-30 gpm
- Maximum Pressure Loss: 11.0 psi at 30 gpm
- Maximum Operating Pressure: 150 psi
- Trim and Casing Bolts are Stainless Steel
- Tamper Proof Locking System Inside the Meter
- 2-1/2"-7-1/2" NST Fire Hose Swivel Couplings, Female Inlet, Male Outlet
- Maximum Rate Listed is for Intermittent Flow Only
- Maximum Continuous Flow Rate as Specified by AWWA is 15 gpm
- Designed, Cast, Machined, Assembled and Tested in the USA
- 5 Year Warranty

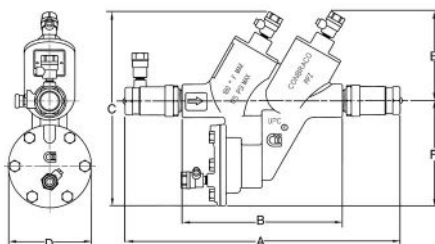
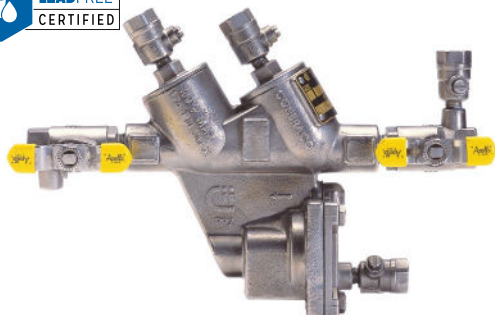
DIMENSIONS

PART NUMBER	DIMENSION (IN.)		WEIGHTS (LB.)	
	RP	SUPPORT	NET WT.	SHIPPING WT.
4A205FHB (meter in cu. ft.)	25-1/8"	20" - 28"	24.1	27.6
4A205FHBG (meter in gallons)	25-1/8"	20" - 28"	24.1	27.6



RPS 40 SERIES

STAINLESS STEEL REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY



The Apollo Series RPS 40 Stainless Steel Reduced Pressure Principle Backflow Preventer is designed to give maximum protection against backflow caused by either backpressure or back-siphonage from a cross-connection wherein a contaminant hazard exists (i.e. a health hazard), or a pollutant hazard exists (i.e. a non-hazard). The assembly is composed of two spring-loaded poppet type check valves and a mechanically independent, hydraulically dependent pressure differential relief valve set in an integral stainless steel body. Three of the testcocks are mounted at the top to assure easy access during repair and maintenance when unit is installed in tight places.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 psi lower than supply pressure. Should a back-pressure or back-siphonage condition occur, the second check valve will seal, prohibiting the backflow of water. Should the second check valve become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere. This will maintain the pressure in the zone at least 2 psi lower than supply pressure.

FEATURES

- Stainless Steel Body and Covers
- Easy to Install and Repair
- Internal Sensing Passage
- Low Head Loss
- Reversible/Removable Seat Discs
- Replaceable Seats
- Comes Standard with Apollo Stainless Steel Full Port Ball Valves with Stainless Steel Handles
- Lead Free Standard
- Designed, Cast, Machined, Assembled and Tested in the USA
- 5 Year Warranty
- Optional Air Gap Drain

PERFORMANCE RATING

- Maximum Working Pressure: 175 psi
- Temperature Range: 33° to 180°F

APPROVALS

- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California
- ASSE 1013
- CSA

STANDARD MATERIALS LIST

BODY, COVERS	316 Stainless Steel (CF8M)
SPRINGS	Stainless Steel
FASTENERS	Stainless Steel
POPPETS	Glass-Filled Celcon™
SEAT DISCS	Silicone Rubber
DIAPHRAGM, O-RINGS	FDA Fluorocarbon
REPLACEABLE SEATS	Glass-Filled PPO
TEST COCKS & HANDLES	Stainless Steel

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PART NUMBER MATRIX

40 2 X	X	T X	S X
	SIZE	SHUT-OFF VALVES	OPTIONS (CAN BE COMBINED)
0 - Standard	2 - 3/8"	1 - Less Ball Valves (UL Classified - 3/4", 1")	LL - Locking Lever Handles
1 - w/SS Y-Strainer (Shipped Loose)	3 - 1/2"	2 - w/SS Ball Valves and SS Tee Handles (Standard)	
	4 - 3/4"		
	5 - 1"		

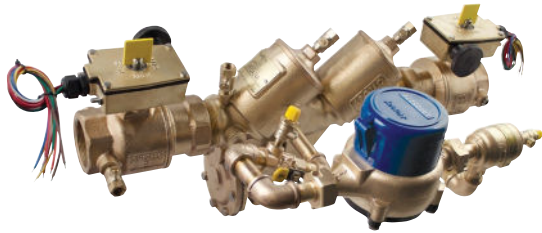
EXAMPLE: 40 20 4 T2 SLL = 3/4" stainless steel reduced pressure backflow preventer, with stainless steel, locking lever ball valves

DIMENSIONS (X = SHUT-OFF VALVE CONFIGURATION)

MODEL NUMBER PART NUMBER SIZE	RP40S14 40 201 TXS 6 MM.	RP40S38 40 202 TXS 3/8"	RP40S38 40 202 TXS 10 MM.	RP40S12 40 203 TXS 1/2"	RP40S12 40 203 TXS 12 MM.	RP40S34 40 204 TXS 3/4"	RP40S34 40 204 TXS 20 MM.	RP40S1 40 205 TXS 1"	RP40S1 40 205 TXS 25 MM.
A	267	10-1/2	267	10-1/2	267	13-1/2	343	15-1/4	387
B	146	5-3/4	146	5-3/4	146	7-15/16	202	7-15/16	202
C	175	6-7/8	175	6-7/8	175	9	229	9	229
D	68	2-5/8	68	2-5/8	68	4-1/16	103	4-1/16	103
E	81	3-3/16	81	3-3/16	81	4-3/8	111	4-3/8	111
F	95	3-3/4	95	3-3/4	95	5-1/8	130	5-1/8	130
Test Cocks	1/8 x 1/4 NPT	1/8 x 1/4 NPT	1/8 x 1/4 NPT	1/8 x 1/4 NPT	1/8 x 1/4 NPT	1/8 x 1/4 NPT	1/8 x 1/4 NPT	1/8 x 1/4 NPT	1/8 x 1/4 NPT
WEIGHTS	KG.	LB.	KG.	LB.	KG.	LB.	KG.	LB.	KG.
Net Wt. (w/o Ball Valves)	2.0	4.3	2.0	4.1	1.9	8.1	3.8	8.1	3.7
Net Wt. (with Ball Valves)	2.5	5.5	2.5	5.4	2.4	10.8	4.9	11	5.0
Shipping. Wt. (w/o Ball Valves)	2.4	5.1	2.3	5	2.3	9.8	4.4	9.6	4.3
Shipping. Wt. (with Ball Valves)	2.9	6.4	2.9	6.3	2.8	12.3	5.6	12.8	5.8

RPDA2 / RPDA2LF 4A SERIES

BRONZE REDUCED PRESSURE DETECTOR BACKFLOW PREVENTER ASSEMBLY



The Apollo Model RPDA24A or RPDA2LF4A Lead Free* 1-1/2" - 2" Reduced Pressure Detector Assembly consists of a mainline reduced pressure principle backflow preventer (RP) with a Type 2 bypass consisting of a single check (SCV) and meter bypassing the mainline second check to prevent backflow while accurately measuring all flows up to 2 gpm while the mainline 2nd check remains closed. The pressure drop across the assembly shall be documented by independent approval agencies. The assembly shall prevent contamination of the potable water supply due to back-siphonage or backpressure from substances that are health and non-health hazards. This Made in America assembly features Apollo UL® Listed, slow-close, full open port, gear operated ball valves with integral tamper switches and carries the five-year Apollo factory warranty.

STANDARD MATERIALS LIST

BODY, CAPS, BALL VALVE SHUTOFFS, TEST COCKS	Bronze C84400 or C89836 or C87800 (Lead Free*)
CHECK VALVE CARTRIDGES	Glass-Filled PPO
SPRINGS	300 Series Stainless Steel
SEAT DISCS	Chloramine-Resistant Silicone
O-RINGS	Chloramine-Resistant EPDM

DIMENSIONS

SIZE (IN.)	DIMENSIONS (IN.)				WT. (LB.)
	A	B	C	D	
1-1/2"	22-1/4	2-5/8	9-3/4	10-1/2	39.4
2"	23-3/4	2-5/8	10	12-3/8	51.4

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FEATURES

- Low Pressure Loss Documented By Independent Approval Agencies
- Easily Removable Modular Check Valve Cartridges
- Captured Stainless Steel Springs
- Apollo UL® Listed, Slow-Close, Full Open Port, Gear Operated Ball Valves with Integral Tamper Switches
- Top-Mounted Test Cocks for Easy Testing
- No Special Tools Required
- Chloramine-Resistant Elastomers
- Designed, Cast, Machined, Assembled and Tested in the USA
- Short Lay-Length for Small Spaces
- Pre-Wired Tamper (Supervisory) Switches

PERFORMANCE RATING

- Maximum Working Pressure: 175 psi
- Temperature Range: 33° to 140°F
- Hydrostatic Test Pressure: 350 psi

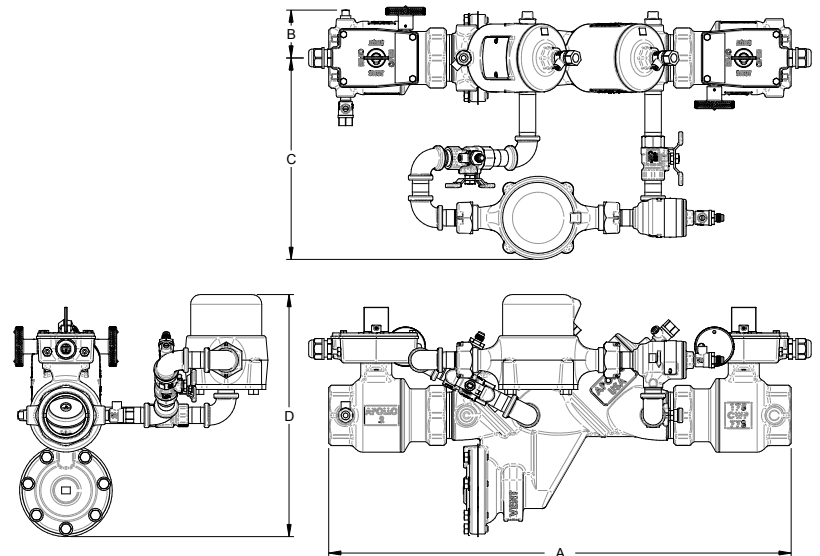
APPROVALS

- ASSE 1047 (Horizontal)
- UL Classified (Horizontal)
- C-UL Classified (Horizontal)
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California. (Horizontal)
- NSF/ANSI/CAN 61 - Water Quality (4ALF only)
- NSF/ANSI 372 - Lead Free (4ALF only)

PART NUMBER MATRIX

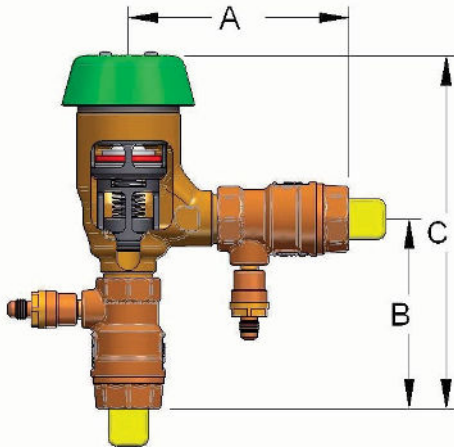
4A X	7 X	X	X 2ST
	BYPASS SIDE	SIZE	METER OPTION
4A - Standard	2 - Bypass Line on Right Side (Standard - as Shown)	7 - 1-1/2"	C - Cubic ft/min
4ALF - Lead Free	4 - Bypass Line on Left Side	8 - 2"	E - GPM G - No Meter

EXAMPLE: 4A 72 8 E 2ST = 2" reduced pressure detector, right side bypass with GPM meter.



PVB 4A / PVBLF 4A SERIES

FREEZE RESISTANT PRESSURE VACUUM BREAKER BACKFLOW PREVENTER



The Apollo Model PVB 4A or PVBLF 4A Pressure Vacuum Breakers are designed to prevent contamination of potable water due to back-siphonage. An integral relief valve serves to reduce the possibility of damage due to intermittent freezing conditions. The modular check valve cartridge has a replaceable seat and a reversible silicone seat disc. Ball valves with stainless steel handles and nuts are standard.

FEATURES

- Modular Captured Spring Cartridge Check Valve
- Low Pressure Loss
- Easy Maintenance
- Built-In Freeze Resistant Relief Valve
- Compact Yet Easy to Maintain
- Ball Valves w/SS Handles & Nuts Standard
- Testcocks Located for Easy Draining
- Threaded Testcock Protectors
- Corrosion Resistant
- 5 Year Warranty
- No Special Tools Required
- Lead Free Option (3/4" - 1")
- Unique Canopy Detachment

PERFORMANCE RATING

- Maximum Operating Pressure: 150 psi
- Design Pressure: 300 psi
- Temperature Range: 33° to 140°F

APPROVALS

- ASSE 1020
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California (1/2" - 2" Non Lead Free Only)
- CSA B64.1.2
- NSF/ANSI 372 - Lead Free (4ALF only)

STANDARD MATERIALS LIST

BODY	Bronze (C84400/LF C89836)
BALL VALVES, TESTCOCKS	Bronze (C84800/LF C87800)
CANOPY	UV Resistant ABS
BONNET	Glass-Filled PPO
CHECK VALVE CARTRIDGE	Glass-Filled PPO
SPRINGS	Stainless Steel
SEAT DISCS	Chloramine-Resistant Silicone
FLOAT	Glass-Filled Polypropylene
O-RINGS	Chloramine-Resistant EPDM
BALL VALVE HANDLES	Stainless Steel

Contact local water authorities for installation/service requirements.

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DIMENSIONS

PART NUMBER.	MODEL NUMBER	DIMENSIONS (IN.) (MM)				WEIGHT	
		SIZE	A	B	C	LB.	KG.
4A-503-A2	PVB4A12	1/2" (15)	4-1/2 (114)	3-3/4 (95)	7-1/4 (184)	2.9	1.3
4A-504-A2	PVB4A34	3/4" (20)	4-3/4 (121)	4-1/8 (105)	7-5/8 (194)	3.0	1.4
4A-505-A2	PVB4A1	1" (25)	5-3/8 (135)	4-5/8 (194)	8-3/8 (211)	4.2	1.9
4A-506-A2	PVB4A114	1-1/4" (32)	7 (178)	5-1/4 (133)	9-7/8 (250)	4.4	2.0
4A-507-A2	PVB4A112	1-1/2" (40)	7-1/4 (184)	5-5/8 (143)	10-1/8 (257)	7.3	3.3
4A-508-A2	PVB4A2	2" (50)	8-1/2 (216)	6-3/8 (161)	11-1/2 (292)	8.9	4.0

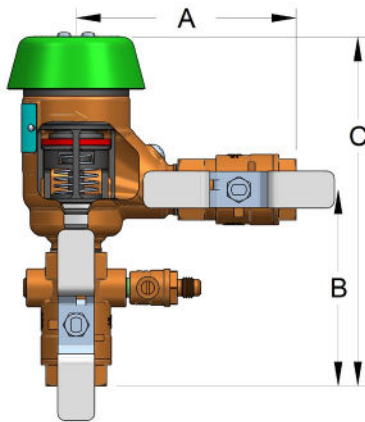
PART NUMBER MATRIX

4A [X]	50 X	A X	X
	SIZE	SHUT-OFF VALVES	OPTIONS (CAN BE COMBINED)
4A - Standard	3 - 1/2"	2 - w/ Ball Valves (Standard)	F - SAE Threaded Test Cocks (Standard 1/2", 3/4", 1")
4ALF - Lead Free (3/4" - 1")	4 - 3/4"	4 - w/ Union Ball Valves	LL - Locking Lever Handles (3/4" - 2")
	5 - 1"	(3/4" and 1" Only)	
	6 - 1-1/4"		
	7 - 1-1/2"		
	8 - 2"		

EXAMPLE: 4ALF 505 A4 LL = 1" pressure vacuum breaker with union ball valves and locking levers

SVB 4A / SVBLF 4A SERIES

SPILL RESISTANT VACUUM BREAKER BACKFLOW PREVENTER



The Apollo Series SVB 4A or SVBLF 4A Spill Resistant Vacuum Breaker is designed to prevent contamination of the potable water supply due to back-siphonage. The SVB is ideally suited for continuous pressure, indoor applications where water spillage is undesirable. The device has a straight through flow path for minimal head loss. All components are easily accessible for easy repair and maintenance. All components are made of corrosion resistant materials for years of reliable service. Should be installed 12" above all downstream piping.

FEATURES

- Modular Captured Spring Check Valve
- Shut-Off Valves w/ Stainless Steel Handles and Nuts
- Threaded Testcock Protectors
- Designed For Easy Maintenance
- Lead-Free Options
- Low Head Loss
- Corrosion Resistant
- 5 Year Warranty
- Unique Canopy Detachment
- No Special Tools Required
- Designed, Manufactured, Assembled and Tested in the USA

PERFORMANCE RATING

- Maximum Operating Pressure: 150 psi
- Temperature Range: 33° to 180°F

APPROVALS

- ASSE 1056-2011
- NSF/ANSI 372 - Lead Free (4ALF only)

STANDARD MATERIALS LIST

BODY	Bronze C84400 or C89836 Lead Free*
BALL VALVES, TEST COCKS	Bronze C84400 or C87800 Lead Free*
CANOPY	UV-Resistant ABS
BONNET	Glass-Filled PPO
CHECK VALVE CARTRIDGE	Glass-Filled PPO
SPRINGS	Stainless Steel
SEAT DISCS	Chloramine-Resistant Silicone
FLOAT	Glass-Filled PPO
O-RINGS	Chloramine-Resistant EPDM

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DIMENSIONS

PART NUMBER	LEAD FREE PART NO.	MODEL NUMBER	LEAD FREE MODEL NO.	DIMENSIONS (IN.) (MM)				WEIGHT	
				SIZE	A	B	C	LB.	KG.
4A-904-A2F	4ALF-904-A2F	SVB4A34	SVBLF4A34	3/4" (20)	4-1/2 (121)	4 (105)	7-1/4 (194)	3.0	1.4
4A-905-A2F	4ALF-905-A2F	SVB4A1	SVBLF4A1	1" (25)	5-3/8 (135)	4-3/4 (194)	8-1/8 (211)	4.2	1.9

PART NUMBER MATRIX

4A [XX]	90 X	XX	X
	SIZE	SHUT-OFF VALVES	
4A - Non-Lead Free	4 - 3/4"	A2 - w/ Ball Valves (Standard)	F - SAE Threaded Test Cocks (Standard)
4ALF - Lead Free*	5 - 1"	A4 - w/ Union Ball Valves	LL - Locking Lever Handles
EXAMPLE: 4ALF 904 A4 LL = 3/4" spill resistant vacuum breaker with union ball valves and locking levers			