

## RPLF 4A SERIES REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER ASSEMBLY



2-1/2" - 8"  
304 STAINLESS  
STEEL BODY



10" - 12"  
FDA EPOXY  
COATED DUCTILE  
IRON BODY



TRIFORCE™  
CHECK



### STANDARD MATERIALS LIST

<b>BODY (2-1/2" - 8")</b>	304 Stainless Steel
<b>BODY (10" &amp; 12")</b>	FDA Epoxy Coated Ductile Iron
<b>COVERS (2-1/2" - 6")</b>	Glass Filled PPO/SS
<b>COVERS (8")</b>	304 Stainless Steel
<b>COVERS (10" &amp; 12")</b>	FDA Epoxy Coated Ductile Iron
<b>RELIEF VALVE</b>	LF C89836
<b>CHECK VALVES</b>	Bronze/Glass-filled PPO/SS
<b>SPRINGS</b>	Stainless Steel
<b>SEAT DISCS</b>	Chloramine-Resistant Silicone

The Apollo Model RPLF 4A Reduced Pressure Principle Backflow Preventers consist of two independently acting, TriForce™ center stem guided check valves with a differential pressure relief valve located between the check valves. The unit is designed to give maximum protection against backflow of health or non-health hazard fluids by either back-pressure or back-siphonage. The durable domestic stainless steel units (2-1/2"-8") and the FDA epoxy coated ductile iron units (10" and 12") are easily maintained in the line without any special tools. The TriForce™ check valves operate with a spring assist in the flowing condition to provide excellent flow rates which are documented by an independent laboratory.

### 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 sensing tube on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained 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 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

- Domestic Stainless Steel Body: 2-1/2"-8"
- FDA Epoxy Coated Ductile Iron Body: 10" & 12"
- Easy Maintenance: No Special Tools Required
- Snap-In Check Retainers: 2-1/2"-6"
- Bolted-in Checks: 8"-12"
- Modular Captured Spring Relief Valve
- Low Pressure Loss as Documented by an Independent Approval Laboratory
- Center Stem Guided TriForce™ Check Valves
- Chloramine-Resistant Elastomers
- Designed, Assembled and Tested in the USA
- Lead Free Standard
- Optional Air Gap Drains
- 5 Year Warranty
- US Patent N
- os.: 6,443,184; 7,025,085; 7,533,699

### PERFORMANCE RATING

- Maximum Working Pressure: 175 psi
- Temperature Range: 33° to 140°F, 180°F Intermittent

### APPROVALS

- AWWA C511 (2-1/2" - 12")
- ASSE 1013-2011, CSA B64.4, FM, IAPMO, UL\*, cUL\*
- NSF/ANSI/CAN 61 - Water Quality
- NSF/ANSI 372 - Lead Free
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California (2-1/2" - 12")

\*UL and cUL Installations Must Include Indicating-Type Shut-Off Valves

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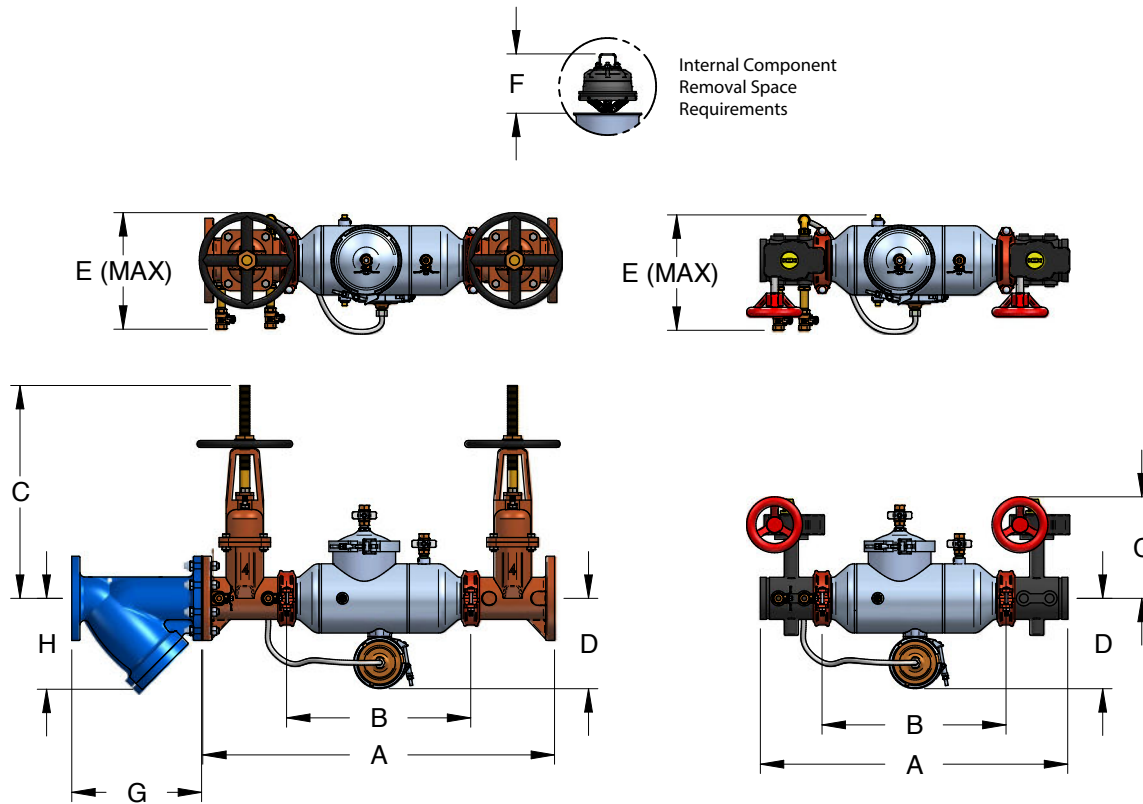
### PART NUMBER MATRIX

4ALF	2 X	X	XX	XX
	Y-STRAINER	SIZE	SHUT-OFF VALVES (INLET x OUTLET)	OPTIONS
4ALF - Lead Free (Standard)	0 - Standard	9 - 2-1/2"	02 - NRS Flange x NRS Flange	D - Domestic Assembly
	1 - w/ Y-Strainer (Shipped Loose)	0 - 3"	03 - OS&Y Flange x OS&Y Flange	
		A - 4"	04 - OS&Y Flange x Monitored (Mon.) Butterfly Valve Groove†	
		C - 6"	06 - OS&Y Flange x Post indicator Flange	
		E - 8"	07 - OS&Y Flange x OS&Y Groove	
		G - 10"	08 - OS&Y Groove x OS&Y Groove	
		H - 12"	09 - Mon. Butterfly Valve Groove x Mon. Butterfly Valve Groove†	
			10 - OS&Y Flange x Post Indicator Groove	
			11 - NRS Groove x NRS Groove	
			12 - NRS Flange x NRS Groove	
			13 - Post Indicator Flange x Mon. Butterfly Valve Groove†	
			14 - Post Indicator Flange x Post Indicator Flange	
			16 - Mon Butterfly Valve Groove x Post Indicator Flange†	
			17 - Post Indicator Flange x OS&Y Groove	
			18 - OS&Y Groove x Post Indicator Groove	
			19 - Mon. Butterfly Valve Groove x Post Indicator Groove	
			20 - Post Indicator Flange x OS&Y Flange	
			21 - Post Indicator Groove x OS&Y Groove	
			22 - Post Indicator Groove x Mon. Butterfly Valve Groove†	
			23 - Mon. Butterfly Valve Groove x OS&Y Flange	

EXAMPLE: 4ALF 20A 07 = 4" size lead free reduced pressure assembly with OS&Y flanged inlet x OS&Y grooved outlet shut-off valves.

† Butterfly valves not available in 12" size.

## RPLF 4A SERIES REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER ASSEMBLY



DRAWING SHOWN DEPICTS 2-1/2" - 8" ASSEMBLIES.  
SEE SUBMITTAL SS1273 FOR DETAILED DRAWINGS FOR EACH SIZE.

### DIMENSIONS

Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances ( $\pm 1/8"$  (3 mm) per joint)

DIMENSIONS	2-1/2"	60 MM.	3"	75 MM.	4"	100 MM.	6"	150 MM.	8"	200 MM.	10"	250 MM.	12"	300 MM.
A (Butterfly Valves)	28	711	28.5	724	33	838	38.5	978	46	1168	N/A	N/A	N/A	N/A
A (Gate Valves)	31	787	32	813	37.6	955	45.5	1156	53.1	1349	62.3	1582	65.4	1661
B (Less Shut-Off Valves)	16	406	16	406	19.8	503	24.5	622	30	762	36	914	37	940
C (Butterfly Valves)	8.6	218	9.6	244	10.9	277	13	330	16.5	419	N/A	N/A	N/A	N/A
C (NRS/PI Gate Valves)	11.8	300	13	330	14	356	17.8	452	21	533	24.5	622	30	762
C (OS&Y Open)	16.4	417	20.5	521	22.8	579	27.3	693	37.8	960	45.8	1163	53.1	1349
D (Centerline to Bottom)	9	229	9	229	9.8	249	11	279	15.8	401	21	533	21.1	536
E (Max w/Gate or Butterfly Valves)	11.9	302	12.5	318	13	330	15.4	391	19.4	493	21.5	546	21.8	554
F (Check Removal Clearance)	4.8	122	4.8	122	6.5	165	7.5	191	7.5	191	10	254	10	254
G (Strainer Length)	10.9	277	11.6	295	14	356	18.6	472	25.5	648	26.1	663	30.1	765
H (Strainer Clearance)	8	203	8.8	224	9.5	241	12.6	320	16.4	417	19	483	22	559
Test Cocks (NPT)	1/2"	15	1/2"	15	1/2"	15	3/4"	20	3/4"	20	3/4"	20	3/4"	20
<b>WEIGHTS</b>	<b>LB.</b>	<b>KG</b>	<b>LB.</b>	<b>KG</b>	<b>LB.</b>	<b>KG</b>	<b>LB.</b>	<b>KG</b>	<b>LB.</b>	<b>KG</b>	<b>LB.</b>	<b>KG</b>	<b>LB.</b>	<b>KG</b>
Net Wt. (Less Valves)	31	14	32	15	48	22	84	38	228	103	762	346	865	392
Net Wt. (w/ Butterfly Valves)	92.6	42	98.6	45	124.6	57	184.6	84	407	185	N/A	N/A	N/A	N/A
Net Wt. (w/ NRS Gate Valves)	85	39	103	47	143	65	267	121	545	247	1269	576	1725	782
Net Wt. (w/ OS&Y Gate Valves)	103	47	119	54	174	79	327	148	620	281	1384	628	1840	835

Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances ( $1/8"$  per joint).  
Internal body connections are grooved on 2 1/2" - 10" sizes.  
Internal body connections are flanged on 12" size.  
Strainer option only available for flanged-end shut-off options.