

RP-501 / RP-500

Reduced Pressure Assembly

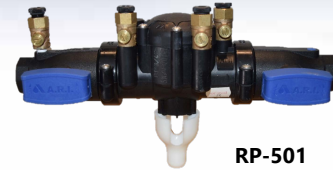
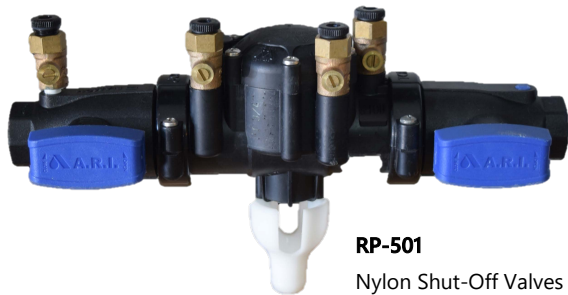
New Generation Begins...

First All Composite Reduced Pressure Backflow Preventer in The World!

Description:

The Backflow Preventer Series: RP-500, RP-501 are designed to supply maximum protection against backflow caused by Backsiphonage or Backpressure. Backflow may cause infiltration of chemicals, fertilizers and/or other pollutants into potable water systems. The Backflow Preventer is reliable and easily maintained, without the need for special tools.

It is built with two independent, easily replaceable encapsulated spring-loaded check valves. A revolutionary, internal Reduced Pressure Zone, located between the check valves, ensures protection and reliable performance of the relief valve.



Design Innovation
New Composite Backflow Technology



USC Listed & Approved!

Main Features:

- Sizes: 3/4", 1", 1 1/4", 1 1/2", 2"
- 2 body size platforms [1/2", 3/4" & 1"] & [1 1/4", 1 1/2" & 2"]
- Working Pressure: 150 psi & 350 psi High Pressure test
- Temp: 33° to 110° F.
- New Shut-off Valves made from Nylon Composite materials
- Corrosion and Scale resistant
- Internal control system ensures reliability and safety
- Easy and quick installation
- Economical to Service & Low Cost Repair Parts
- Lightweight
- UV resistant
- No lead
- Very Low Friction Loss
- Variety of installation options
- Long working life with easy maintenance

Approval Standards:

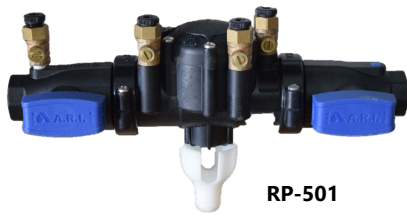
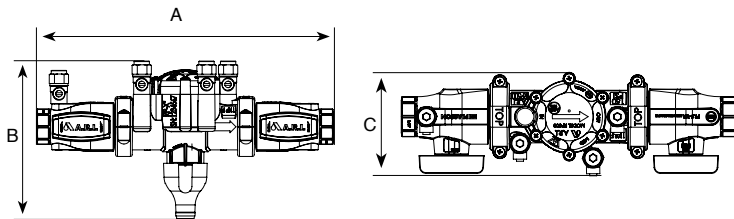
Approved by the following Standards Authorities:

ASSE 1013, AWWA C511, NSF61, Watermark (Australia) AS2845.1 Approved by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California.



Dimensions & Weights

By Models	Dimensions Inch			Weight
	A	B	C	Lbs.
RP-501 Nylon Shut-Off Valve				
¾"	12.60	6.69	3.94	2.60
1"	14.17	6.69	3.94	3.21
1¼"	18.27	9.57	5.91	8.55
1½"	20.47	9.57	5.91	8.94
2"	21.53	9.57	5.91	9.04







RP-501
Nylon Shut-Off Valve



RP-500
Bronze Shut-Off Valve

Shut-Off Valve Table

RP Model	#1 Inlet Shut-Off Valve	#2 Outlet Shut-Off Valve
RP-501 Nylon Shut-Off Valve		
RP-500 Bronze Shut-Off Valve Lead Free		

Materials

- Body..... Polyamide 6.50% Glass Reinforced Nylon
- Cover.....Polyamide 6.50% Glass Reinforced Nylon
- Polymers..... Noryl, NSF Listed
- Elastomers.....EPDM, Buna N, Silicone
- Springs.....Stainless Steel
- Valves.....Nylon Composite UV Mold in Place Ball Valve

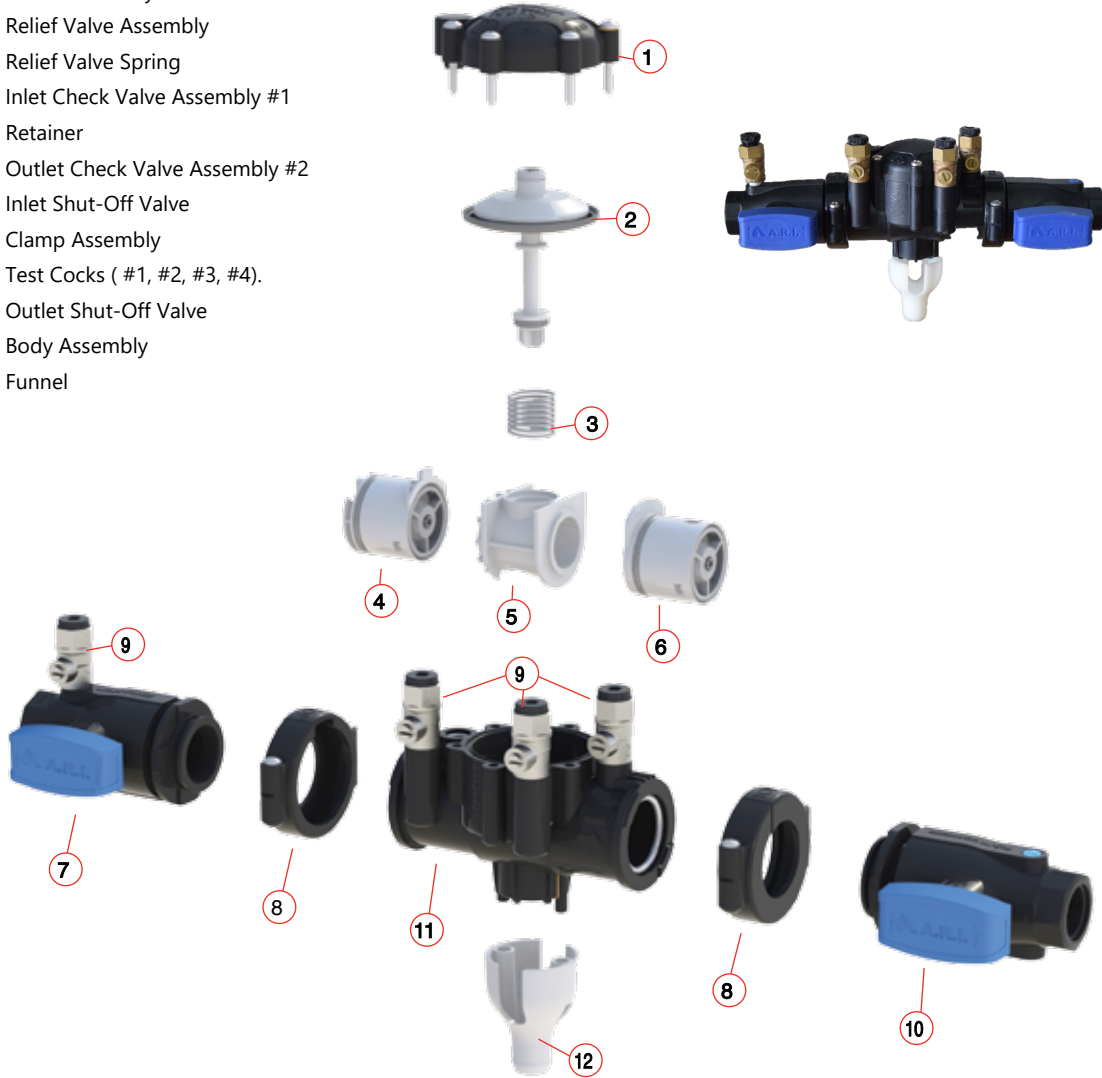
RP-500	Dimensions Inch			Weight
	A	B	C	Lbs.
Lead Free Bronze Shut-Off Valve				
½"	11.81	6.69	3.94	3.20
¾"	12.40	6.69	3.94	3.20
1"	12.99	6.69	3.94	3.35
1¼"	18.50	9.57	5.91	11.68
1½"	19.02	9.57	5.91	13.23
2"	20.28	9.57	5.91	14.07

RP-501

Parts List & Description

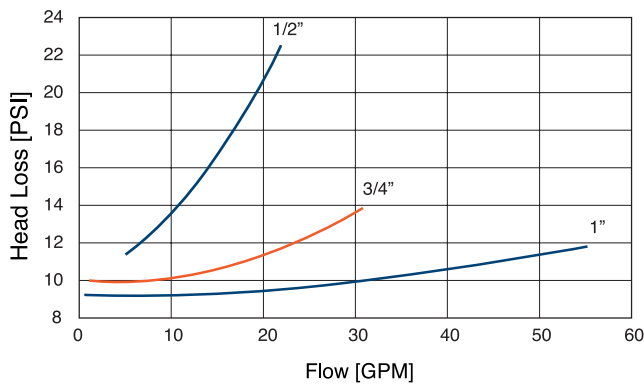
No. Part Description

1. Cover Assembly
2. Relief Valve Assembly
3. Relief Valve Spring
4. Inlet Check Valve Assembly #1
5. Retainer
6. Outlet Check Valve Assembly #2
7. Inlet Shut-Off Valve
8. Clamp Assembly
9. Test Cocks (#1, #2, #3, #4).
10. Outlet Shut-Off Valve
11. Body Assembly
12. Funnel



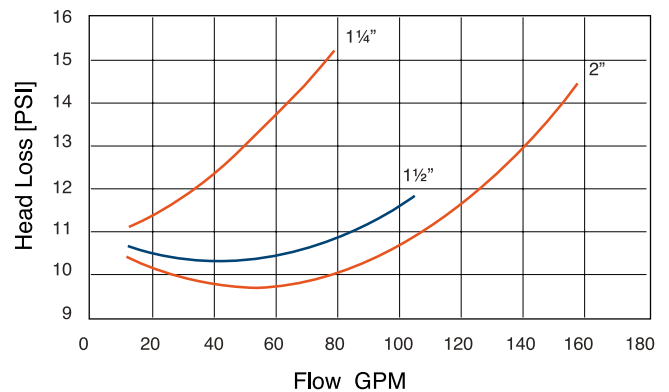
Pressure Loss

RP-500 1/2", 3/4", 1"



Pressure Loss

RP-500 1 1/4", 1 1/2", 2"



Trouble Shooting Guide

Symptom	Cause	Corrective Action
1. Relief valve continuously discharges during no-flow conditions.	<p>a. Check valve #2 clogged with debris.</p> <p>b. Check valve #1 fouled with debris accompanied by a backpressure condition.</p>	<p>a. Inspect and clean the seat and seal.</p> <p>b. Inspect and clean the seat and seal.</p>
2. Relief valves discharge continuously during flow and no-flow conditions.	<p>a. Relief valve fouled with debris.</p> <p>b. Damaged diaphragm (allowing water to pass through, from inlet to zone).</p> <p>c. Sensing passage to inlet side of diaphragm plugged.</p>	<p>a. Inspect and clean relief valve seat disk and seat.</p> <p>b. Replace the relief valve kit.</p> <p>c. Inspect and clean passage in cover and body.</p>
3. Relief valve discharges intermittently in a "spitting" action during no-flow condition.	Pressure fluctuations (water hammer) from supply.	Eliminate or reduce pressure fluctuations.
4. Relief valve does not open during field test no.1	<p>a. Inlet Shut-off valve not closed completely.</p> <p>b. Test equipment improperly installed.</p>	<p>a. Close the Inlet Shut-off valve or inspect for possible through leakage.</p> <p>b. Recheck test procedure.</p>
5. Check valve #2 fails to hold backpressure.	<p>a. Inlet Shut-off valve not closed completely.</p> <p>b. Check valve #1 clogged with debris.</p>	<p>a. Close the Inlet Shut-off valve or inspect for possible through leakage.</p> <p>b. Inspect and clean the seat and seal.</p>
6. Pressure differential across check valve #2 is low during field test no.3 a (does not meet 0.2 bar minimum)	<p>a. Check valve #1 clogged with debris.</p> <p>b. Upstream pressure fluctuations causing inaccurate gauge reading.</p>	<p>a. Inspect and clean the seat and seal.</p> <p>b. Eliminate pressure fluctuation.</p>

