

# CLA VAL RP I

# CLA VAL RPI-EX

## SIZE

2", 2 1/2", 3", 4", 6", 8", 10"

## DESCRIPTION

This is a reduced pressure assembly. The assembly was produced from approximately 1978 to 1990. The 2 1/2"-10" valve consists of two fused epoxy coated cast iron body toggle lever check valves and a bronze body differential relief valve. The 2" size has a bronze body check valve. There are two styles of check rubber discs and the serial numbers are needed to order the correct parts. Assemblies produced after 1986 are the RP1-EX design. The repair parts are the same as the RP1 series. The difference in the two models was the repositioning of the relief valve section below the first check body in the RP1-EX version. The RP1-EX was discontinued in 1990. The RP1 and RP1-EX series used the CDHS 20 relief valve section which can be detached from the check body. The relief valve spring was not contained when the relief valve body was disassembled. Most internal hardware parts in the R.V. are made of stainless steel. The R.V. utilizes a single external sensing line. Check and relief seats are replaceable on the assembly. A seat removal tool is needed to replace the check seats. The RP1 and RP1-EX models utilize the 3081 toggle lever check design. Check springs are not contained when the cover is removed. Most internal check hardware parts are made of bronze.

## BASIC REPAIR KIT

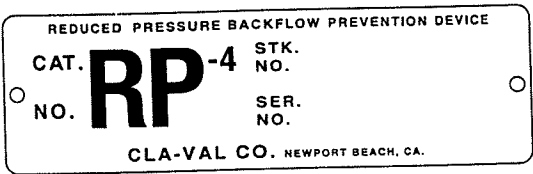
The repair kit contains all rubber discs, rolling diaphragm, diaphragm, gaskets, O-rings, washers, and cover seals.

<u>SIZE</u>	<u>KIT NO</u>
2"	RP1200 *
2 1/2"	RP1250 *
3"	RP1300 *
4"	RP1400 *
6"	RP1600 *
8"	RP1800 *
10"	RP1001 *

## IMPORTANT FEATURES

- ~2" has a bronze body
- ~2 1/2"-10" has a fused epoxy coated cast iron body
- ~All seats are replaceable
- ~Springs are not contained
- ~Detachable relief valve assembly
- ~Serial numbers are needed to order some parts
- ~Factory repair information enclosed





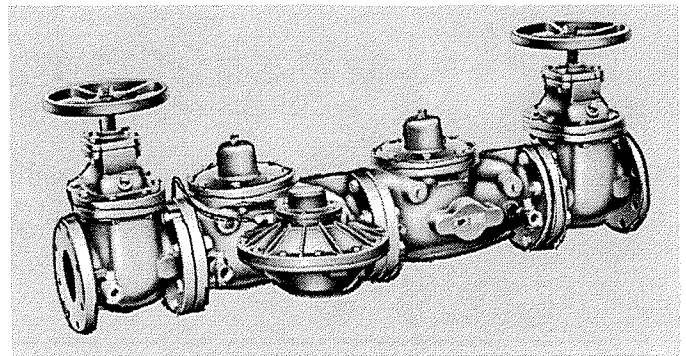
This brass plate is on our backflow prevention assemblies and is found on the side of the number two check. The serial number of the assembly is also stamped on the top of the inlet flange of the number one check.

# MODEL RPI

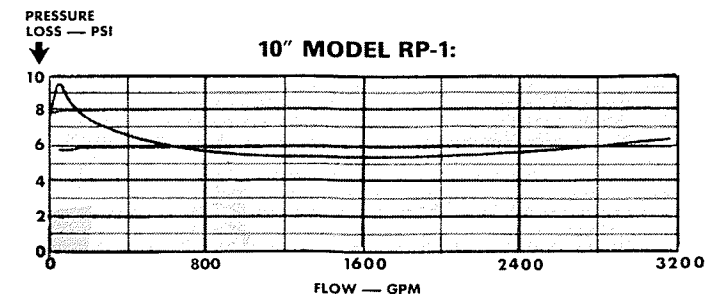
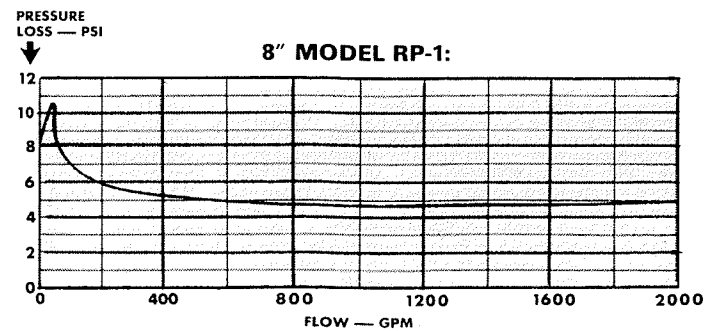
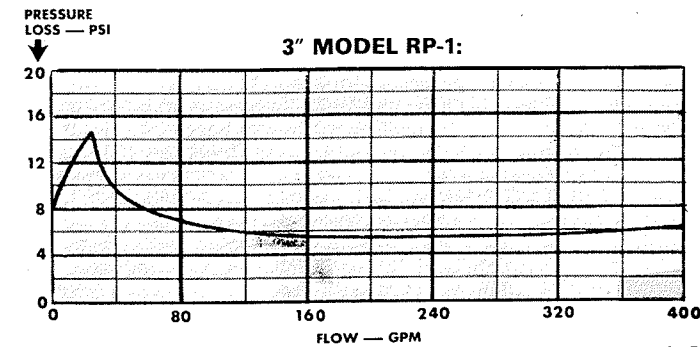
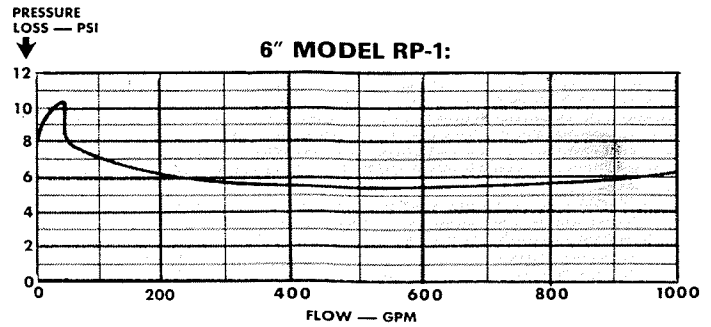
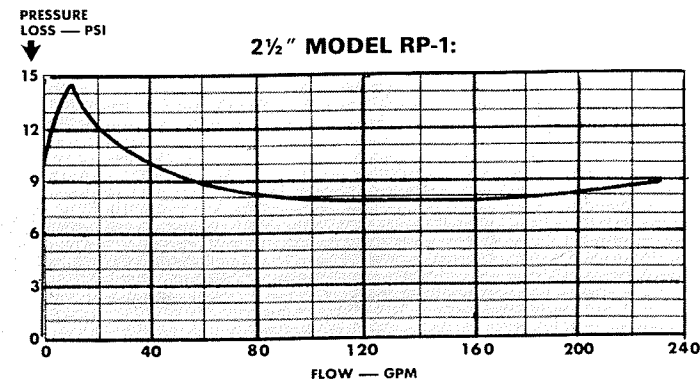
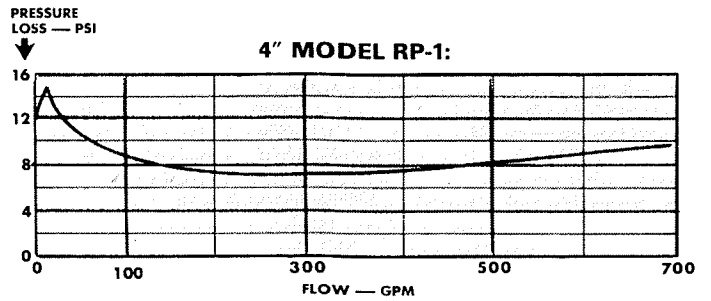
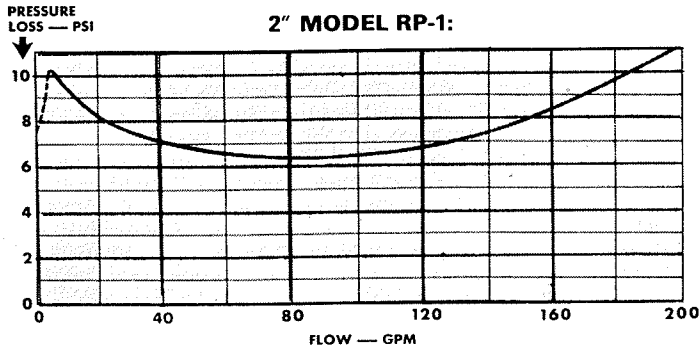
## REDUCED PRESSURE PRINCIPLE

Sizes 2" through 10"

### FLOW CURVES

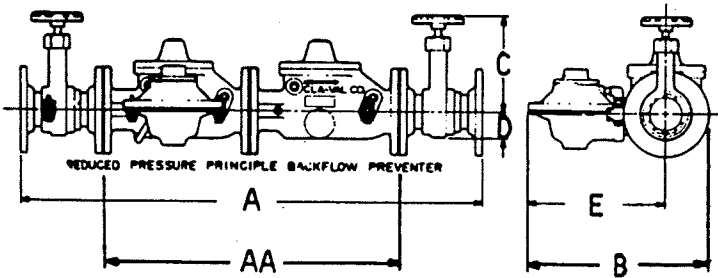


4" size illustrated





### DIMENSIONS



### SPECIFICATIONS

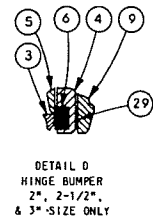
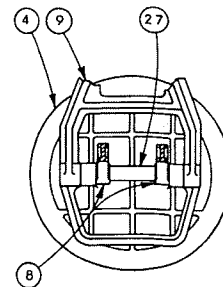
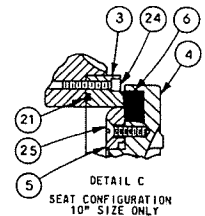
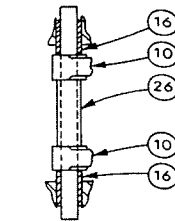
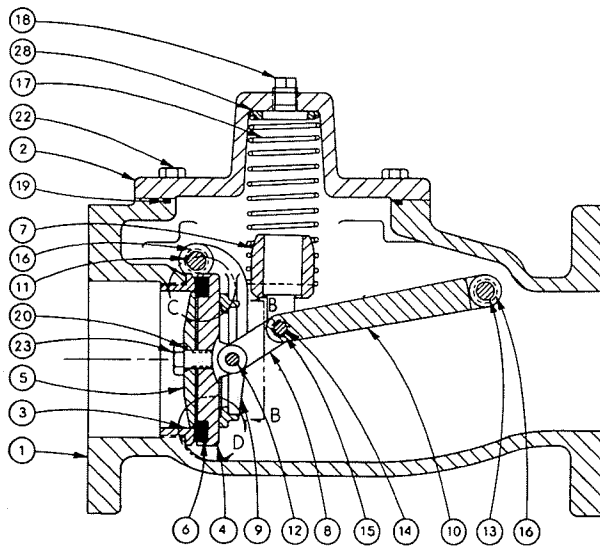
SIZES	2" - 10"
END DETAIL	125 ANSI
MAXIMUM WORKING PRESSURE	150 PSI
HYDROSTATIC TEST PRESSURE	300 PSI
TEMPERATURE RANGE	to 110°F.
FLUID	Water
MATERIAL	2" main valve body and cover: Bronze ASTM B-61  2½" and larger main valve body and cover: Cast Iron ASTM A-126 interior epoxy coated  Main valve trim: Bronze ASTM B-61  Differential relief valve: Bronze ASTM B-61 with Stainless Steel 316 Trim

### DIMENSION TABLE

SIZE	2" SCR	2" FLG	2½	3	4	6	8	10
A END TO END	29¼	33	42¾	42¾	48¼	61¼	74	86
AA LESS G.V.	22¾	20⅞	27¾	27 1/16	30⅞	40⅞	50¼	59½
B OVERALL WIDTH	12¾	12¾	15½	15⅞	20⅞	22½	26¾	30⅞
C CENTER TO TOP	8½	8½	13⅞	15	17½	20¾	25	29½
D CENTER TO BOTTOM	2	2	3	3	3½	4½	5¼	8
E CENTER TO OUTSIDE	9¼	9¾	11⅞	11⅞	14⅞	16	17	19¾
TEST COCKS	¼	¼	½	½	½	¾	¾	¾

SHUT-OFF VALVES ON 2" ARE RISING STEM.  
SHUT-OFF VALVES ON 2½" & LARGER ARE NON-RISING STEM STANDARD

## 3081 TOGGLE LEVER CHECK VALVE

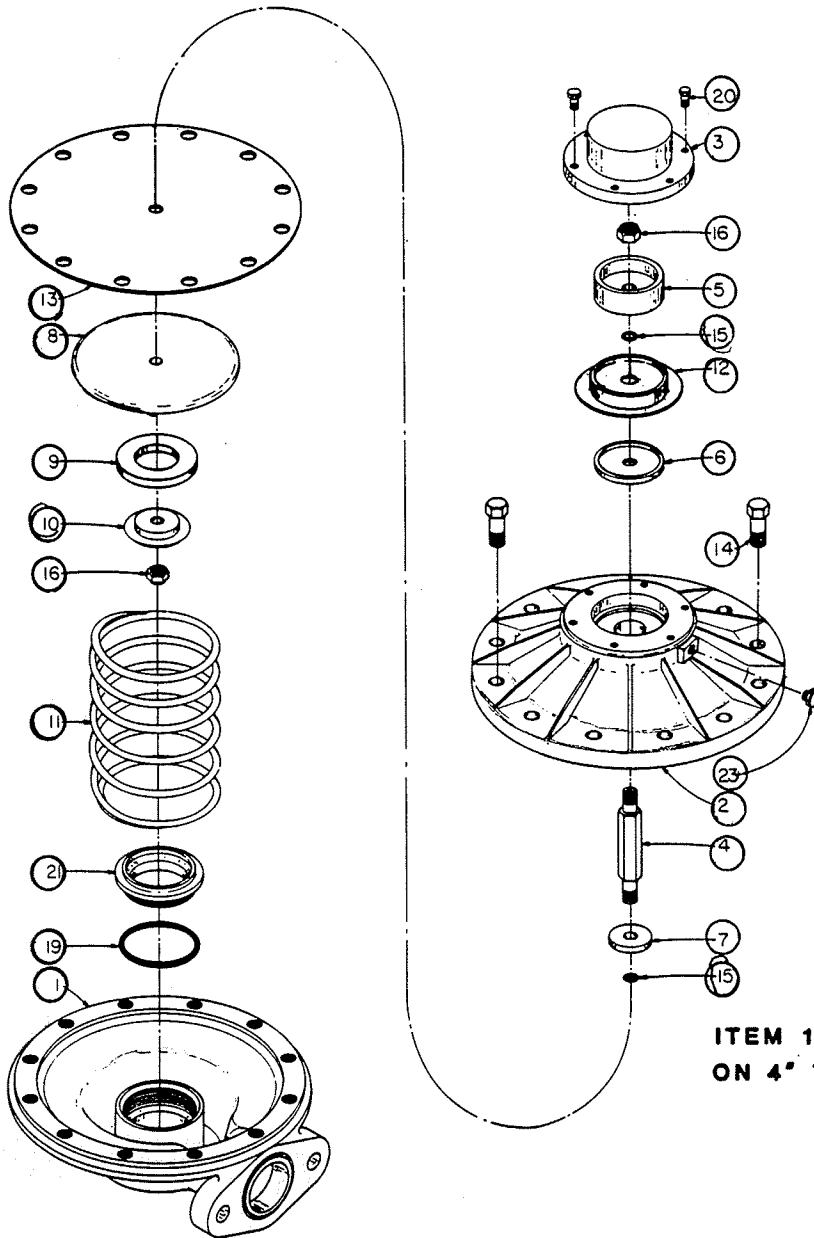


**PARTS LIST**  
When ordering parts  
specify item No.,  
Description,  
all  
name Plate data,  
and valve size

ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION
1	BODY	13	LEVER ARM PIN	22	CAP SCREWS
2	COVER	14	LINK PIN	23	DISC GUIDE BOLT (1" THRU 8")
3	SEAT	15	PIN RETAINER	24	SEAT SCREW (10" ONLY)
4	DISC RETAINER	16	BUSHING	25	DISC GUIDE SCREW (10" ONLY)
5	DISC GUIDE	17	SPRING	26	LEVER ARM SPACER (8" & 10" ONLY)
6	DISC	18	PLUG	27	LINK SPACER (10" ONLY)
7	YOKE	19	COVER SEAL	28	SPRING WASHER (2" ONLY)
8	LINK	20	DISC GUIDE "O" RING (4", 6", 8" ONLY)	29	HINGE BUMPER (2", 2½" & 3" ONLY)
9	HINGE	21	SEAT "O" RING (10" ONLY)		
10	LEVER ARM				
11	HINGE PIN				
12	DISC RETAINER PIN				

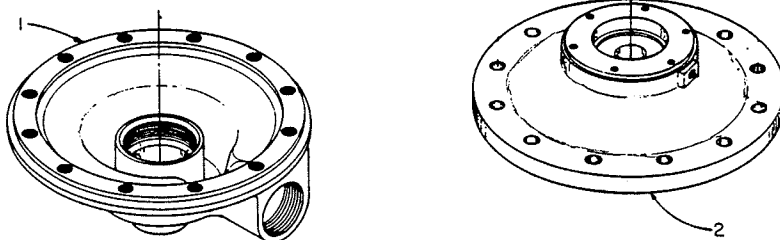
# CDHS 20

## PRESSURE DIFFERENTIAL RELIEF VALVES FOR RP-1 BACKFLOW PREVENTER ALL PARTS TYPICAL EXCEPT AS NOTED



ITEM NO.	DESCRIPTION
1	Body
2	Intermediate Body
3	Cover
4	Stem
5	Piston
6	Retainer Plate
7	Diaphragm Washer
8	Disc Retainer
*9	Disc
10	Disc Guide
11	Spring
*12	Bellofram
*13	Diaphragm
14	Hex Head Screw
*15	Stem O-Ring
*16	Self Locking Nut
19	Seat O-Ring
20	Fill Head Screw
21	Seat
*23	Pipe Plug

ITEM 1 & 2 SHOWN FOR USE  
ON 4" THRU 10" MODEL RP-1



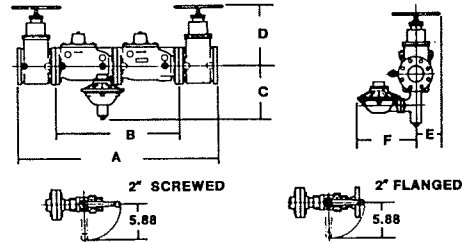
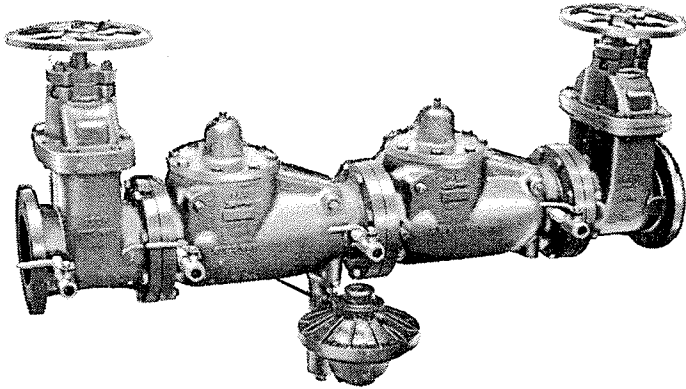
ITEM 1 & 2 SHOWN FOR USE ON 2" THRU 3" MODEL RP-1



MODEL

# RP-1EX

## Backflow Preventer



Dimensions (IN INCHES)

Size	2"		2½"	3"	4"	6"	8"	10"
	screwed	flanged						
A	33.66	37.16	42.19	42.19	48.19	61.19	73.94	85.69
B	20.06	20.06	27.06	27.06	30.06	40.06	50.81	59.56
C	7.94	7.94	9.44	9.44	12.56	13.56	14.75	17.06
D Max	5.25	5.25	19.00	19.00	24.75	31.25	40.25	48.50
E	5.88	5.88	4.50	4.50	5.00	6.00	8.00	10.00
F	9.25	9.25	9.25	9.25	14.25	14.25	14.25	14.25
End Details	2-11¼ NPT 150 Lb ANSI screwed B 16.24				125 Lb ANSI B 16.21			

### Specifications

**Sizes**  
2", 2½", 3", 4", 6", 8", 10"  
**End Detail**  
125 ANSI B16.1  
**Maximum Working Pressure**  
175 PSI  
**Hydrostatic Test Pressure**  
350 PSI

**Temperature Range**  
to 110° F  
**Fluid**  
Water  
**Material**  
2" main valve body and cover:  
Bronze ASTM B-61

2½" and larger  
main valve body and cover:  
Cast Iron ASTM A-126  
interior epoxy coated  
main valve trim:  
Bronze ASTM B-61  
Differential relief valve:  
Bronze ASTM B-61 with  
Stainless Steel 316 Trim

### RP-1EX Reduced Pressure Principle Backflow Preventer Flow Curves

