

ORION BRP

SIZE

3/4", 1", 3", 4"

DESCRIPTION

This is a reduced pressure assembly. Production was originally under the Toro name and began approximately in 1976. Orion bought this design and produced it from 1980-2000. Febco bought the rights to produce this design in 2000 and discontinued it in 2001. All Orion models use a vertical piping configuration where water goes in the bottom and comes back down out of the bottom. The 3/4" and 1" sizes are constructed inside and out of celcon plastic except for the base and top cover which are made of bronze. These sizes also have ball valves built into the base of the unit. The bodies of the 3" and 4" sizes are constructed of a bronze base with stainless steel check canisters with a bronze top cover. Internal parts are plastic and bronze. All check and relief valve seats are replaceable. Check springs on all sizes are contained when the cover is removed. All sizes utilize an internal relief valve sensing line. Relief valves could be removed from the check bodies.

BASIC REPAIR KIT

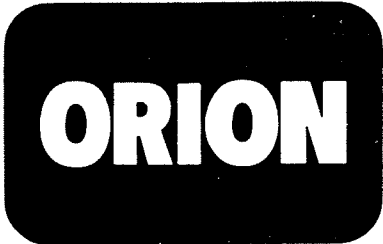
The rubber repair kits contain all rubber discs and O-rings

<u>SIZE</u>	<u>KIT NO</u>	<u>AIR GAP DRAIN</u>
3/4"-1"	80-0422 ◆	80-0662
3"	80-0689 ◆	N/A
4"	80-0669 ◆	N/A

IMPORTANT FEATURES

- ~Vertical piping orientation
- ~Replaceable seats
- ~Contained check springs
- ~Internal RV sensing line
- ~Detachable relief valve

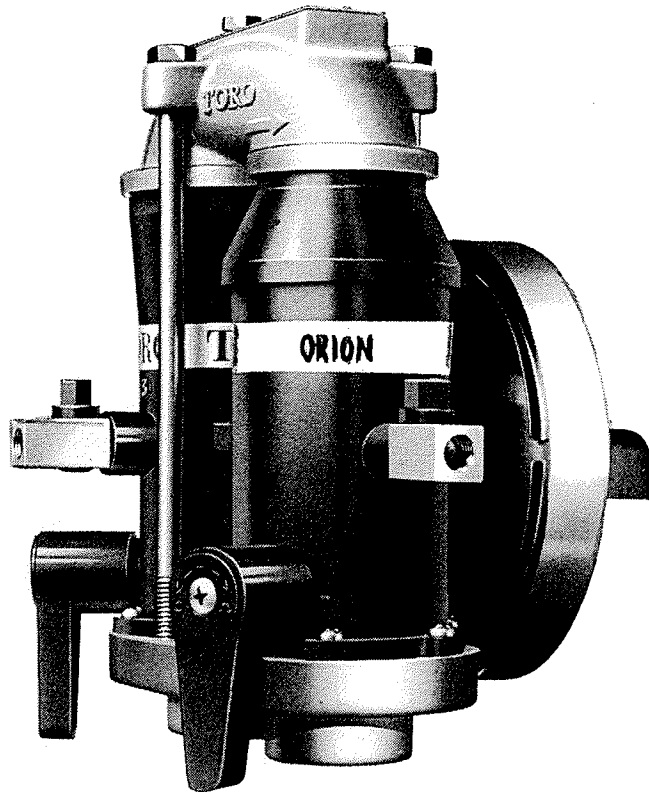




Backflow Preventers

3/4" & 1"

Reduced Pressure Model BRP



Characteristics

Exclusive Anti Spit Relief Valve

Compact — lightweight — only seven pounds.

Base-mounted integral ball valves.

Minimal pressure loss.

Body and internal parts of corrosion-resistant engineering plastic.

Operating pressure 150 psi.

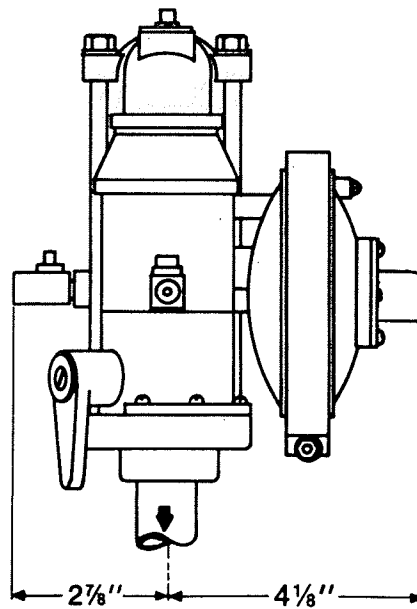
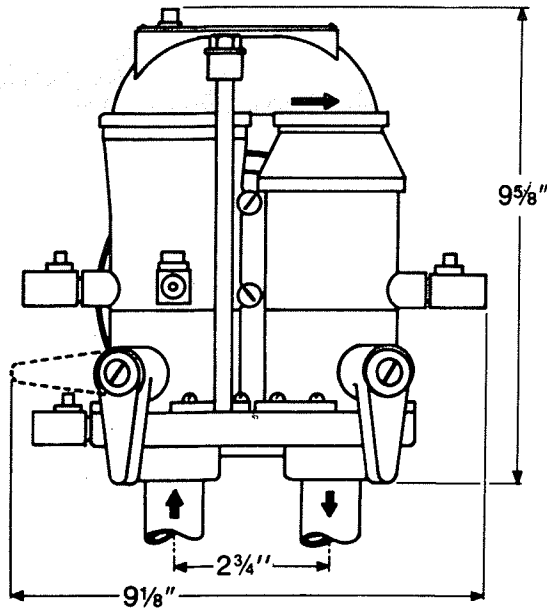
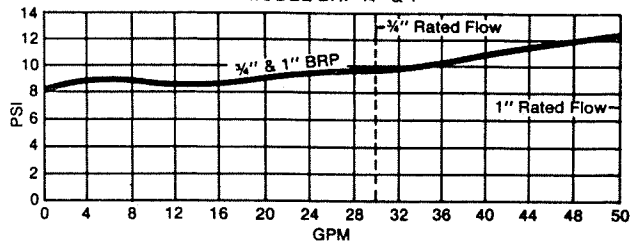
Operating temperature 150°F maximum.

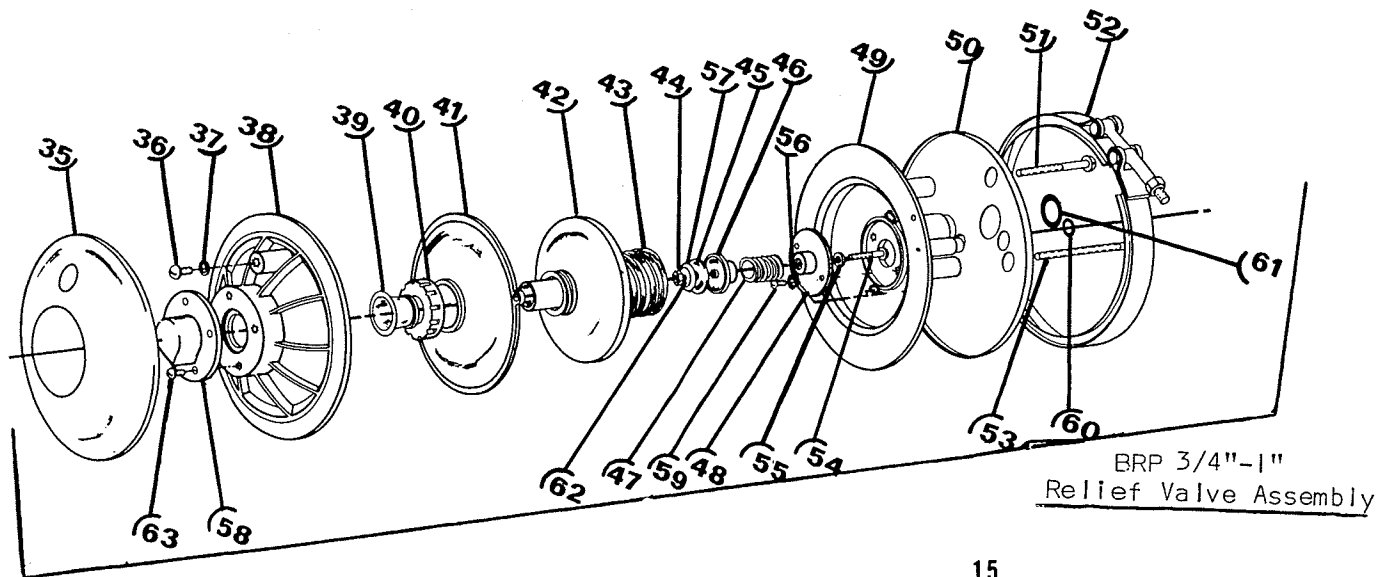
Meets performance specifications of AWWA C-506.

Approved by USC Foundation for Cross Connection Control.

I.A.P.M.O., A.S.S.E. and S.B.C.C.I. Listed

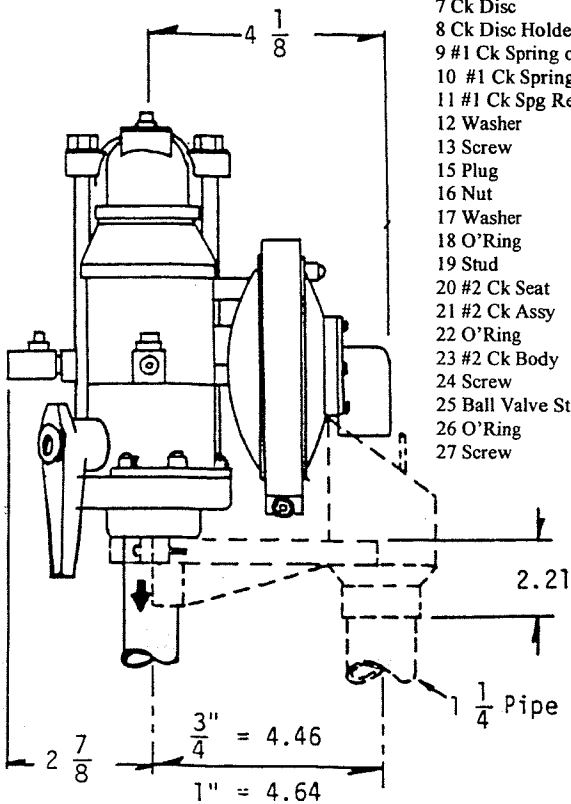
ORION BACKFLOW PREVENTERS
MODEL BRP 3/4" & 1"





BRP 3/4"-1"
Relief Valve Assembly

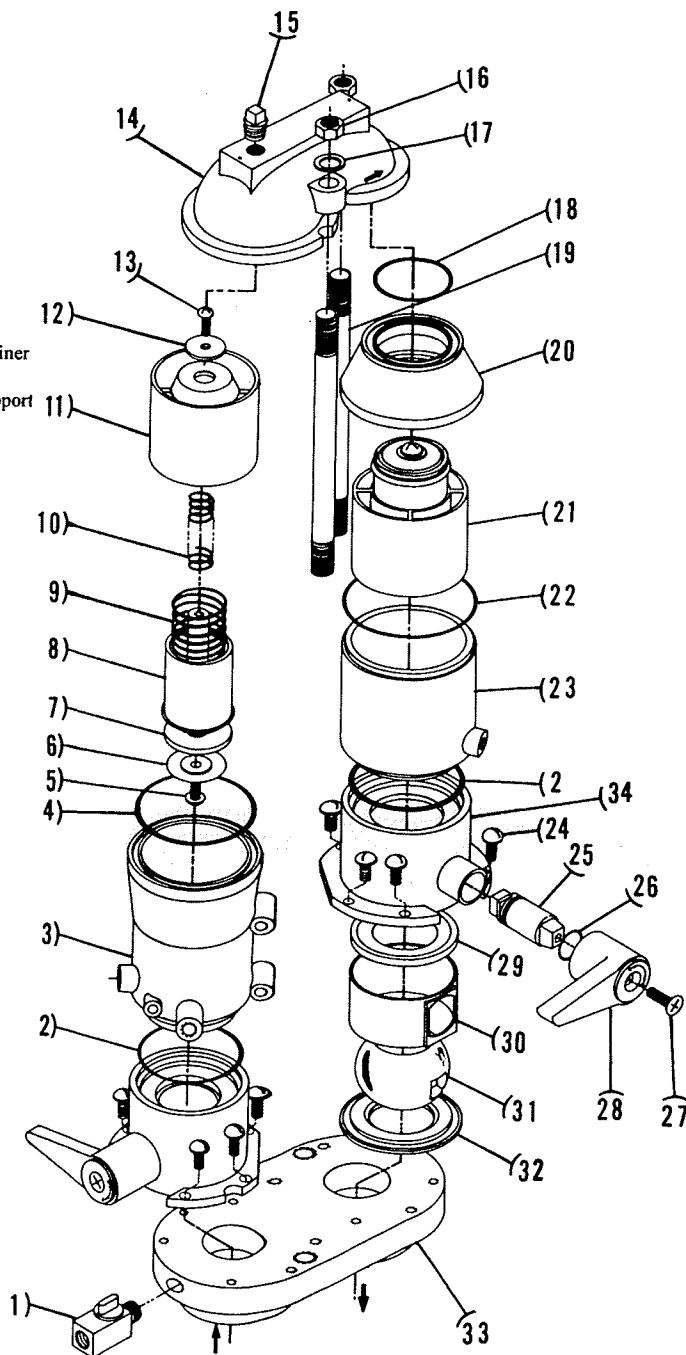
- | | |
|-----------------------|-----------------------|
| 1 Test Cock | 28 Handle |
| 2 O'Ring | 29 Seal |
| 3 #1 Ck Body | 30 Valve Ring |
| 4 O'Ring | 31 Ball |
| 5 Screw | 32 Valve Seal |
| 6 Ck Disc Retainer | 33 Base |
| 7 Ck Disc | 34 #2 Shut Off |
| 8 Ck Disc Holder | 35 Outer Cover |
| 9 #1 Ck Spring outer | 36 Screw |
| 10 #1 Ck Spring Inner | 37 Washer |
| 11 #1 Ck Spg Retainer | 38 Outer Body |
| 12 Washer | 39 Sm Bellofram |
| 13 Screw | 40 Bellofram Retainer |
| 15 Plug | 41 Diaphragm |
| 16 Nut | 42 Diaphragm Support |
| 17 Washer | 43 RV Spring |
| 18 O'Ring | 44 Nut |
| 19 Stud | 45 RV Disc |
| 20 #2 Ck Seat | 46 Spg Ret Outer |
| 21 #2 Ck Assy | 47 Coupler Spring |
| 22 O'Ring | 48 Inner Spg Ret |
| 23 #2 Ck Body | 49 Inner Body |
| 24 Screw | 50 Inner Cover |
| 25 Ball Valve Stem | 51 Screw |
| 26 O'Ring | 52 Clamp |
| 27 Screw | 53 Screw |
| | 54 Screw |
| | 55 Washer |
| | 56 Washer |
| | 57 Guide |
| | 58 Cap |
| | 59 Screw |
| | 60 O'Ring |
| | 61 O'Ring |
| | 62 Washer |
| | 63 Screw |



NOTICE

All Reduced Pressure backflow preventers are subject to discharge from the relief valve. To prevent water damage install a drain pipe to suitable location.

Shown in Phantom is Funnel Kit No. 80-0662.



BRP 3/4"-1"
Check Valve Assembly



Backflow Preventers 3"

Reduced Pressure Model BRP

Characteristics

Compact — lightweight — only 73 pounds (without valves).

Flexible, multi-directional bottom mount permits time saving installation.

Valve options: NRS gate valves, OS & Y gate valves, Butterfly valves and Less valves.

Internal parts of corrosion resistant engineering plastic, copper alloy and stainless steel.

Copper alloy base and cover, stainless steel casing.

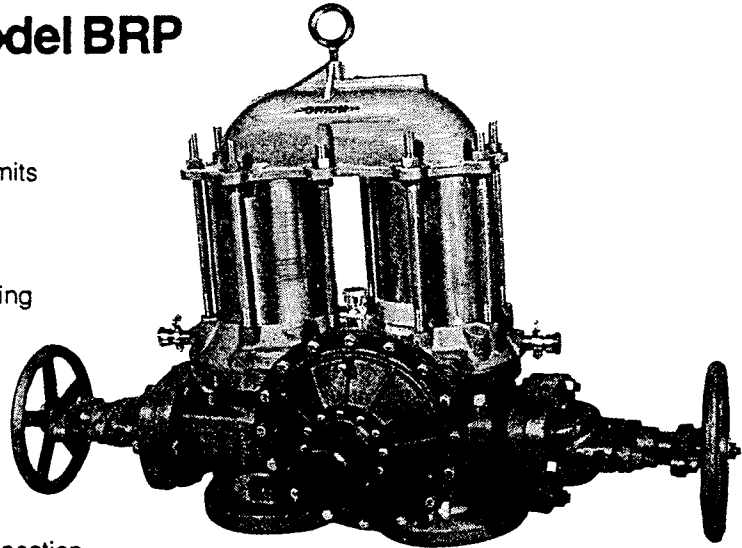
Low friction loss.

Operating pressure 150 psi.

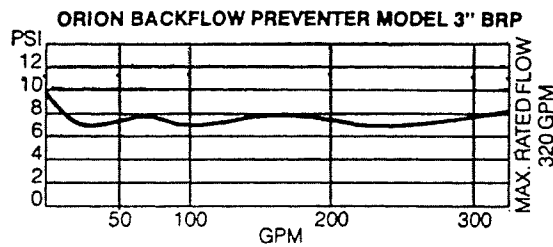
Operating temperature 150°F max.

Exclusive anti-spit relief valve.

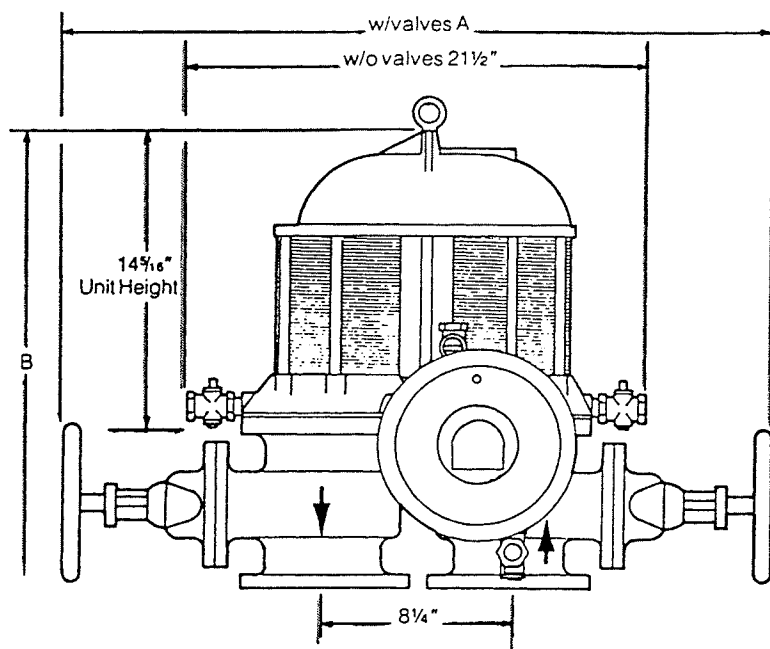
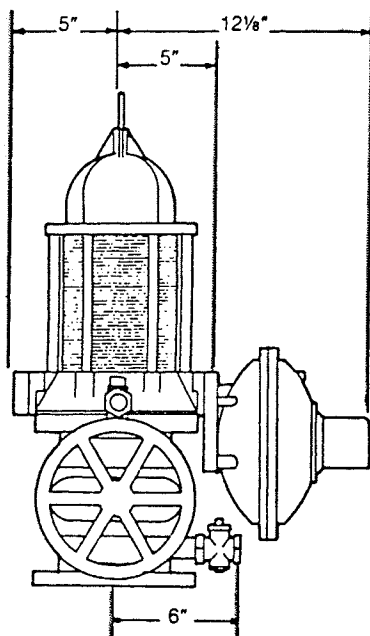
Approved by USC Foundation for Cross Connection Control. Meets performance specifications of AWWA C-506 IAPMO, ASSE and SBCCI Listed.



Relief Valve and Test Cocks shown in standard L.H. mount. If R.H. mount is desired, specify when ordering. For field conversion order Relief Valve Conversion Kit No. 80-0383.



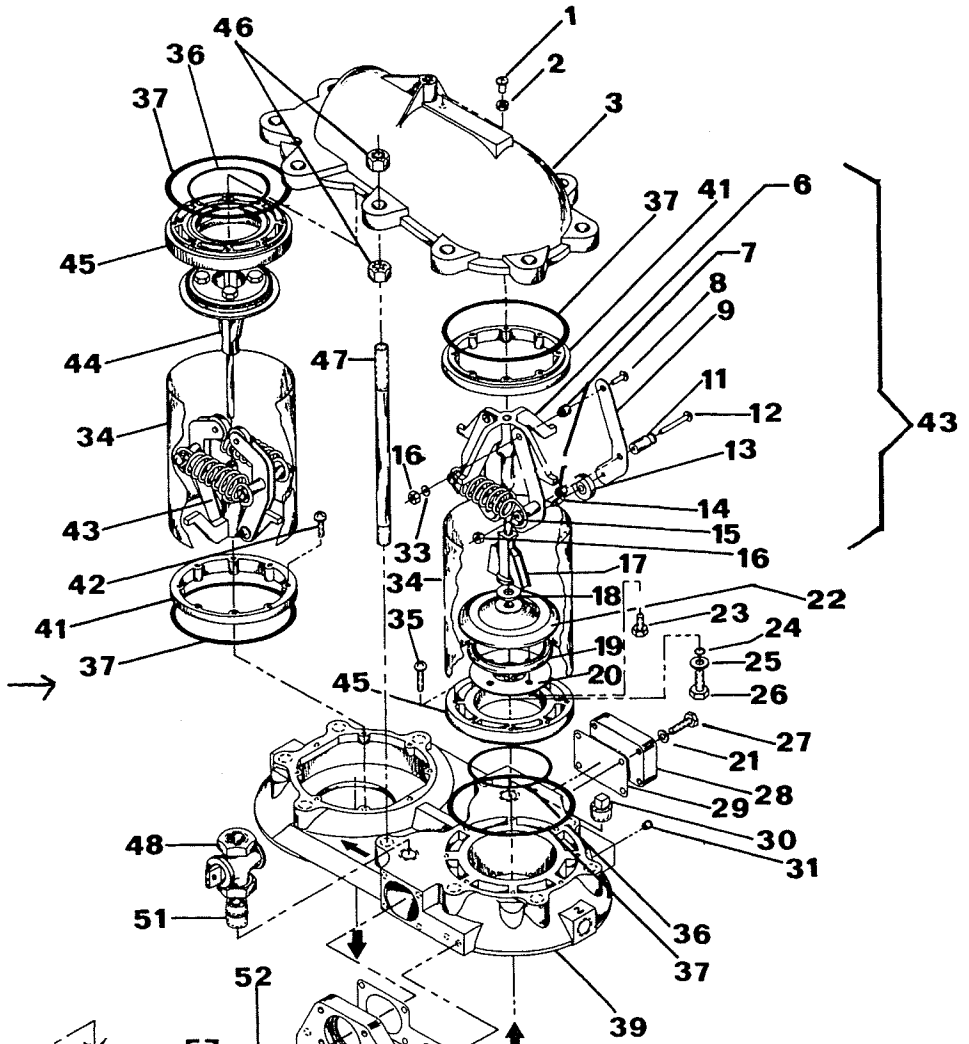
Valves	A	B	w/valves
NRS	33¾"	24¾"	169 lbs.
OS&Y Open	42¾"	24¾"	177 lbs.
Butterfly	20¾"	20¾"	93 lbs.



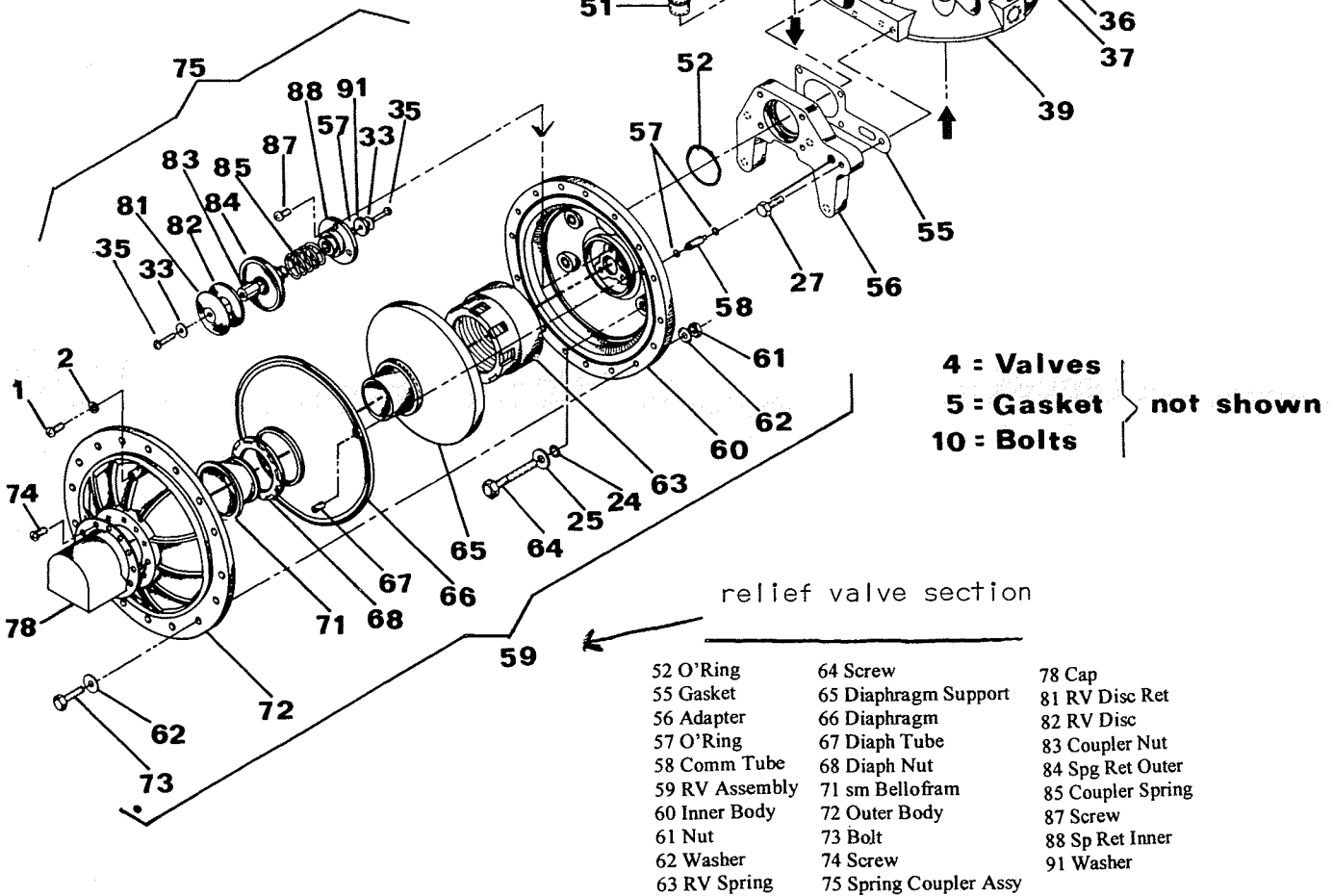
ORION INDUSTRIES

BRP 3"

- 1 Screw
- 2 Washer
- 3 Cover
- 6 Spg Arm Assy
- 7 Spacer
- 8 Screw
- 9 Spring Arm
- 11 Spring Rod
- 12 Screw
- 13 Roller
- 14 Roller Pin
- 15 Ck Spring
- 16 Nut
- 17 Cam Assy
- 18 Spacer
- 19 Ck Disc
- 20 Disc Retainer
- 21 Washer
- 22 Disc Holder
- 23 Bolt
- 24 O'Ring
- 25 Washer
- 26 Bolt
- 27 Bolt
- 28 Base Cap
- 29 Gasket
- 30 Plug
- 31 Plug
- 33 Washer
- 34 Casing
- 35 Bolt
- 36 O'Ring
- 37 O'Ring
- 39 Base
- 41 Locator
- 42 Screw
- 43 Spring Arm Assy
- 44 Cam Assy
- 45 Ck Valve Seat
- 46 Nut
- 47 Stud
- 48 Test Cock
- 51 Nipple



check assemblies →



relief valve section ←

- 52 O'Ring
- 55 Gasket
- 56 Adapter
- 57 O'Ring
- 58 Comm Tube
- 59 RV Assembly
- 60 Inner Body
- 61 Nut
- 62 Washer
- 63 RV Spring
- 64 Screw
- 65 Diaphragm Support
- 66 Diaphragm
- 67 Diaphragm Tube
- 68 Diaphragm Nut
- 69 Inner Body
- 70 Outer Body
- 71 sm Bellofram
- 72 Outer Body
- 73 Bolt
- 74 Screw
- 75 Spring Coupler Assy
- 76 Cap
- 77 RV Disc Ret
- 78 Cap
- 79 RV Disc
- 80 RV Disc
- 81 RV Disc Ret
- 82 RV Disc
- 83 Coupler Nut
- 84 Spg Ret Outer
- 85 Coupler Spring
- 86 Coupler Spring
- 87 Screw
- 88 Sp Ret Inner
- 89 Sp Ret Inner
- 90 Sp Ret Inner
- 91 Washer



Backflow Preventers 4"

Reduced Pressure Model BRP

Characteristics

Compact — lightweight — only 95 pounds (without valves).

Flexible, multi-directional bottom mount permits time saving installation.

Valve options: NRS gate valves, OS & Y gate valves, Butterfly valves and Less valves.

Internal parts of corrosion resistant engineering plastic, copper alloy and stainless steel.

Copper alloy base and cover, stainless steel casing.

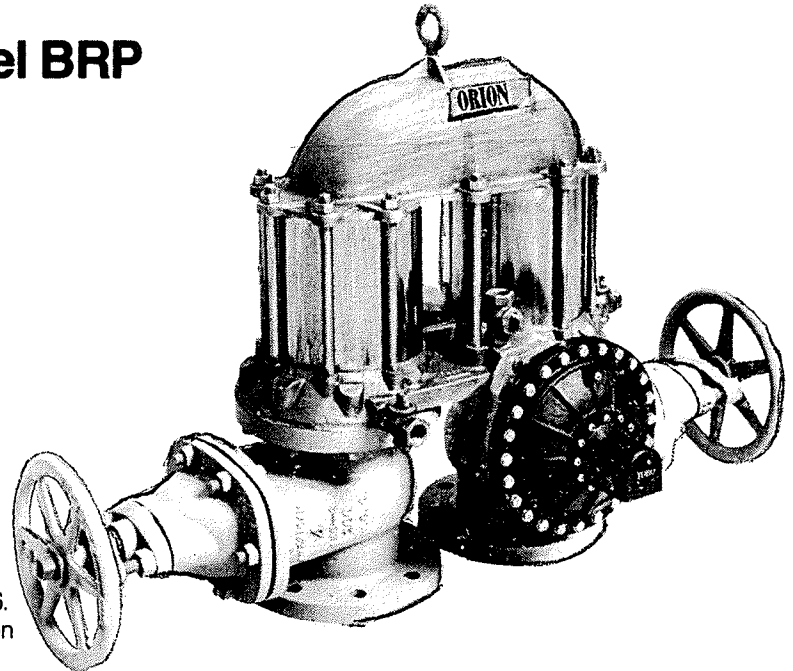
Operating pressure 150 psi.

Operating temperature 150° max.

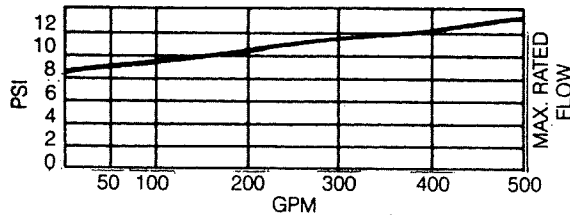
Bottom mount permits installation in vertically upward running pipeline.

Exclusive anti-spit relief valve.

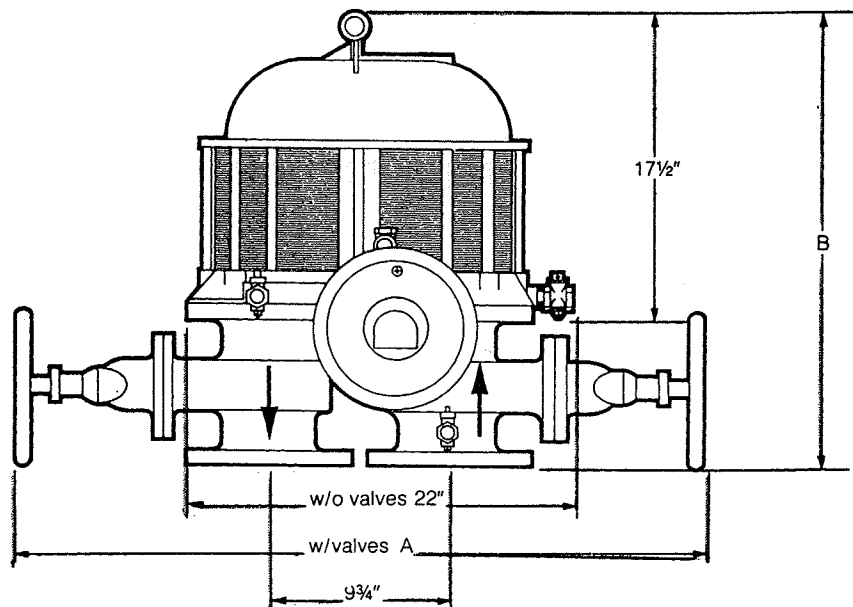
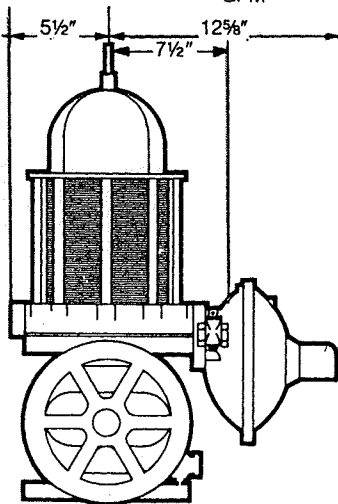
Meets performance specifications of AWWA C-506. Approved by USC Foundation for Cross Connection Control. IAPMO, ASSE and SBCCI listed.



ORION BACKFLOW PREVENTER MODEL 4" BRP



Relief Valve and Test Cocks shown in standard L.H. mount. If R.H. mount is desired, specify when ordering. For field conversion order Relief Valve Conversion Kit No. 80-0383.



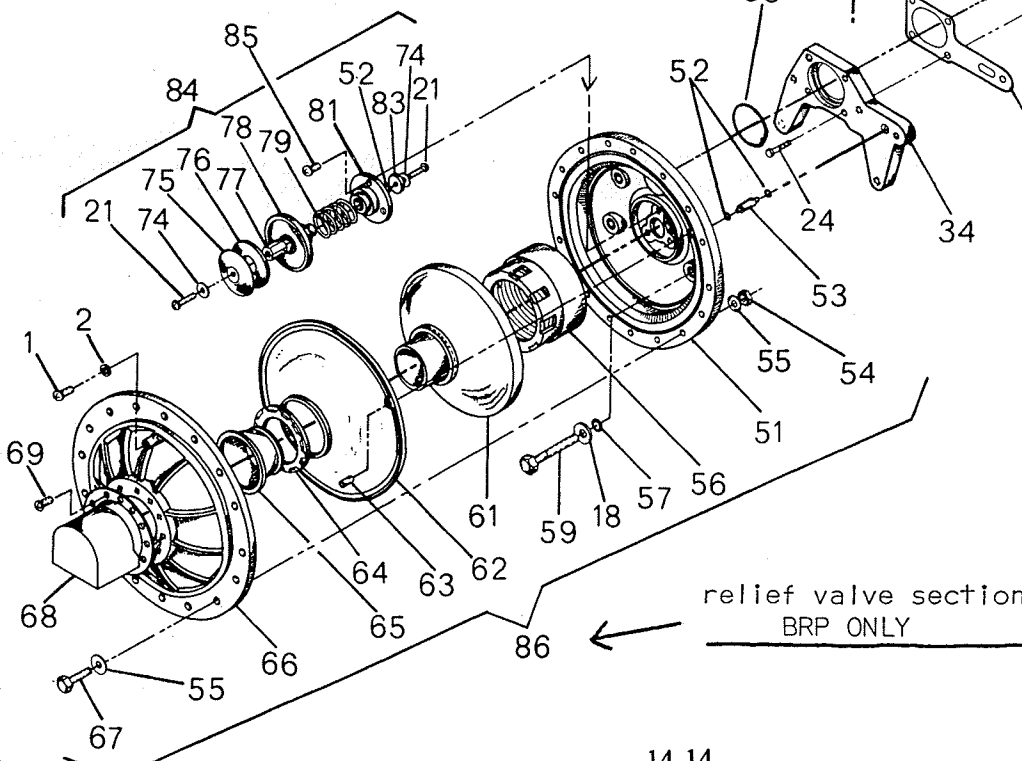
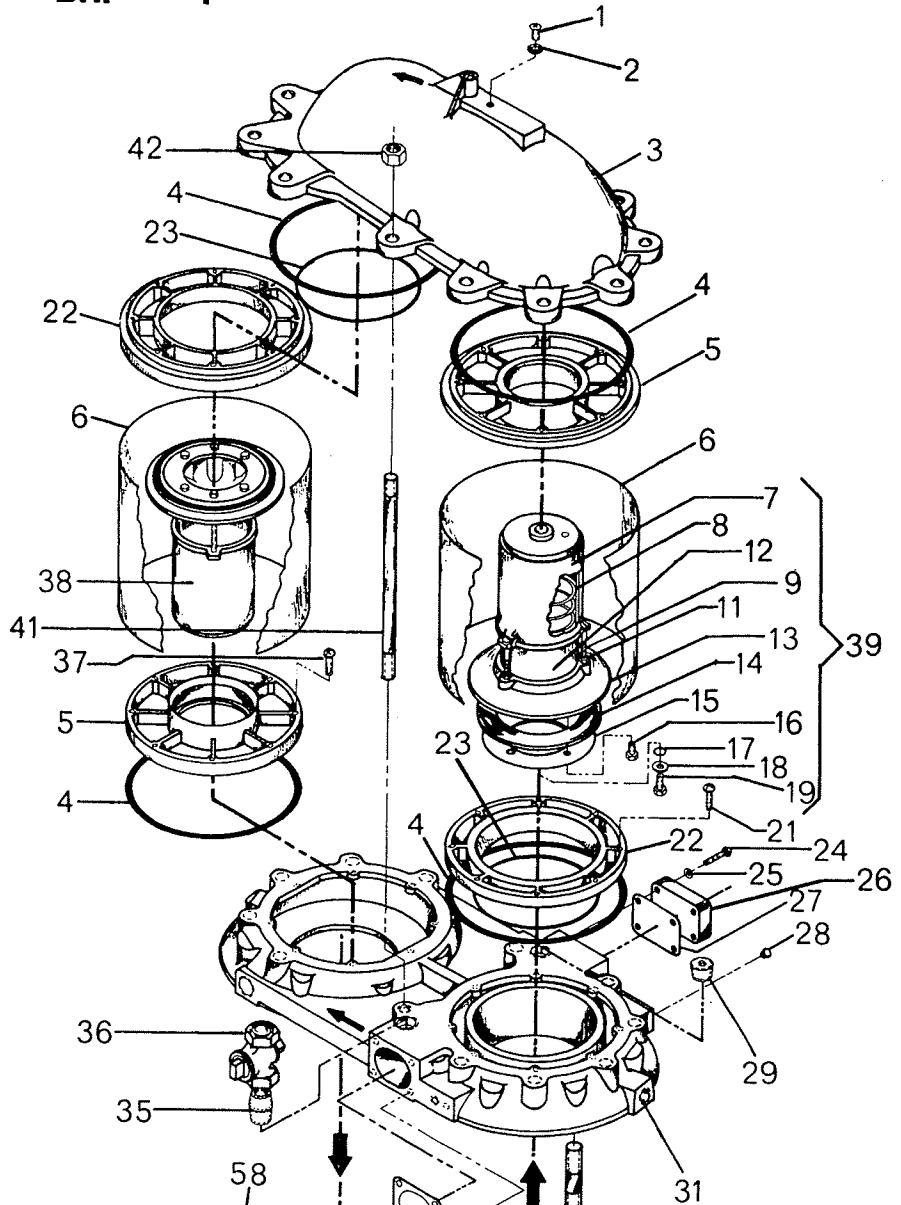
Valves	A	B	w/valves
NRS	39 1/4"	26 1/2"	257 lbs.
OSY Open	53 1/2"	26 1/2"	275 lbs.
Butterfly	26"	19 5/8"	123 lbs.

ORION INDUSTRIES

BRP 4"

- 1 Screw
- 2 Washer
- 3 Cover
- 4 Quad Ring
- 5 Locator
- 6 Casing
- 7 Spg Ret Outer
- 8 Ck Spring
- 9 Screw
- 11 Nut
- 12 Spg Ret Inner
- 13 Disc Holder
- 14 Ck Disc
- 15 Disc Retainer
- 16 Bolt
- 17 O'Ring
- 18 Washer
- 19 Screw
- 21 Screw
- 22 Ck Seat
- 23 O'Ring
- 24 Screw
- 25 Washer
- 26 Base Cap
- 27 Gasket
- 28 Plug
- 29 Plug
- 31 Base
- 32 Stud

check assemblies



- 33 Gasket
- 34 Adapter
- 35 Nipple
- 36 Test Cock
- 37 Screw
- 38 Ck Assembly
- 39 Ck Assembly
- 41 Stud
- 42 Nut
- 51 Inner Body
- 52 O'Ring
- 53 Comm Tube
- 54 Nut
- 55 Washer
- 56 RV Spring
- 57 O'Ring
- 58 O'Ring
- 59 Screw
- 61 Diaph Support
- 62 Diaphragm
- 63 Diaph Tube
- 64 Diaph Nut
- 65 Sm Bellofram
- 66 Outer Body
- 67 Bolt
- 68 Cap
- 69 Screw
- 74 Washer
- 75 RV Disc Ret
- 76 RV Disc
- 77 Coupler Nut
- 78 Spg Ret Outer
- 79 Spring Coupler
- 81 Spg Ret Inner
- 83 Washer
- 84 Coupler Spring Assy
- 85 Screw
- 86 RV Assembly

relief valve section
BRP ONLY