WaterSaver

INNOVATIVE PRODUCTS FOR RESEARCH

Installation, Operation and Maintenance Guide:

Laboratory Service Fixtures and Safety Equipment

IOM-010

WaterSaver

To Our Customers:

For over sixty years, WaterSaver Faucet Co. has set the standard for quality in faucets, valves and safety equipment for science laboratories. Our products are carefully designed and manufactured to provide exceptional durability and performance. However, in order to provide this durability and performance, our products must be installed correctly, operated properly, inspected regularly and maintained periodically.

To assist in the installation, operation and maintenance of our products, we have developed this "IO&M Guide." This Guide provides information on installation procedures, repair and replacement parts and trouble-shooting techniques for our products.

When ordering WaterSaver parts, please note the following:

1. Part numbers beginning "HK" (handle kit) are a complete assembly consisting of a valve unit, packing nut, handle and index button. These assemblies are typically used to convert a faucet from one type of handle to another, or for complete rebuilding of the faucet or valve. Handle kits are sold individually.
2. Part numbers ending in "R" are available in package quantities only. The quantity contained in the package is indicated.
3. Parts that are visible when installed (such as packing nuts and handles) are furnished with a polished chrome plated finish as standard. Special finishes (such as satin chrome finish with clear epoxy coating, satin nickel finish with clear epoxy coating and colored powder coated finishes) are available at additional cost. *Please specify if a finish other than polished chrome is required.*

Repair and replacement parts are available on a 24-hour basis through the WaterSaver Parts Hotline. Our product specialists are available to answer questions and provide technical support. Call 1-800-WSF-PART to take advantage of this service.

WaterSaver Faucet Co. is dedicated to providing quality products and service. We trust that you will let us know if we can be of assistance in any way.

Steven A. Kersten
President

Contents

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

Introduction

WaterSaver faucets utilize an interchangeable unit or cartridge that is standardized across the product line. The unit contains all working components of the water faucet or valve. There are no moving parts in the faucet or valve body itself to wear out. As a result, WaterSaver water fittings are virtually everlasting.

Key features of the WaterSaver renewable unit are:

- The unit has outer serrations or splines to lock the unit in position in the faucet body. The unit cannot rotate or turn as the faucet is used. The handles of the faucet will maintain position, even with lever or wrist blade handles.
- The valve seat is machined from solid stainless steel bar stock. The main wearing component of the valve is thus ultra-hard and corrosion resistant for superior durability.
- A hard rubber valve disc provides positive shut-off of the water flow. The valve does not have a soft or "spongy" feel that reduces the ability to meter the water flow.
- The valve stem is sealed with a molded TFE packing. The packing prevents leakage over hundreds of thousands of cycles. An adjustable packing nut permits take up of wear.

The WaterSaver renewable unit has been in use since the late 1940s, and has provided high performance and durability in literally millions of faucets. The overall design and dimensions of the unit have never changed. As a result, every WaterSaver faucet ever made can use the same renewable unit that goes into every faucet we make today.

WaterSaver renewable units are manufactured in a variety of styles and configurations for the many applications in which they are used. These styles and configurations are described below:

1. **Manual vs. Self-Closing Control.** Typical laboratory faucets and valves are manufactured with a renewable unit that has manual (also called compression) control. The unit is manually opened and manually closed by turning the valve handle. However, in certain applications, it is desirable to have a faucet with a self-closing valve and handle. WaterSaver therefore also manufactures renewable units with a spring-loaded valve mechanism. The faucet closes automatically when the handle is released. WaterSaver manual and self-closing units are dimensionally identical and therefore interchangeable. Faucets can be converted from manual to self-closing control, and vice versa, simply by changing the faucet cartridge.
2. **Round Serrated Stem vs. Tapered Square Stem.** The WaterSaver renewable unit was originally manufactured with a round serrated stem end. Handles had a matching round serrated broach to fit on the stem. In 1991, we changed to a valve stem with a tapered square end. Handles were also changed to have a matching female taper. The tapered square end provides a much more solid, durable fit between the stem and handle. However, we still offer renewable units and stems with the round serrated end (the BNV100 series) for use in maintaining older faucets.
3. **Right Hand Thread vs. Left Hand Thread.** A typical faucet or valve is opened by rotating the handle in a counterclockwise direction. The faucet or valve is closed by turning the handle in the opposite (clockwise) direction. This rotation is called "right hand" construction, since the thread on the valve stem is a right hand thread. The vast majority of faucets manufactured by WaterSaver work in this way. However, when faucets are furnished with wrist blade or lever handles, it is preferable to have the handles open in opposite directions. For example, on an L400 series deck mounted mixing faucet, both handles should open by rotating up and close by rotating down. This requires that the valve mechanisms open in opposite directions. One of the valve mechanisms must therefore be furnished with a valve unit that has a reversed (i.e. left hand) thread. The unit with the left hand thread will open in the clockwise direction and close in a counterclockwise direction. The left hand unit is typically, though not always, installed on the cold water side of the faucet.

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

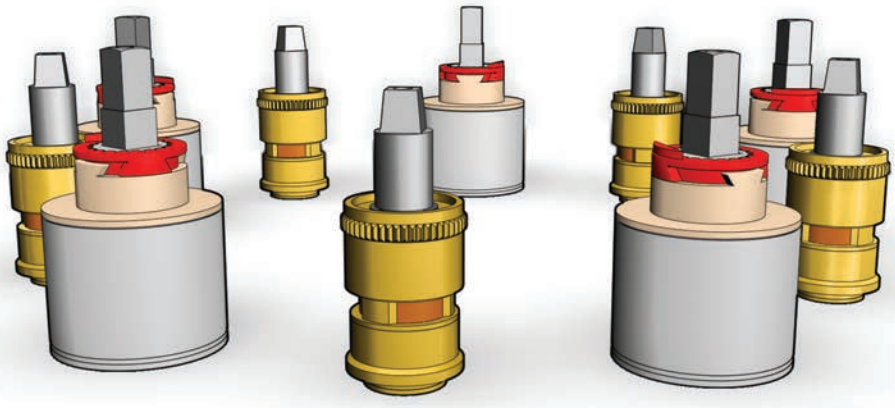
4. **120 Degree vs. 90 Degree Rotation.** Typical WaterSaver renewable units rotate approximately 120 degrees from the closed to open position. However, when a faucet is furnished with wrist blade or lever handles, it is advantageous for the handle to go from closed to open in a 90 degree rotation. This more limited rotation prevents the handles from hitting the counter or a backsplash behind the faucet. WaterSaver therefore offers the BNV200-90 series renewable units for use in faucets with wrist blade or lever handles.

5. **Adjustable Volume Control.** The original WaterSaver renewable unit incorporated an adjustable volume control device. This device consists of a small round cap or thimble held in place by a set screw. By loosening the set screw and rotating the thimble, the user can adjust the size of the inlet port through which the water passes as it enters the valve. By opening or closing the port, the user can compensate for high water pressure or conserve water. Effective in 1985, the adjustable volume control device was changed from a standard to an optional feature of our products. Renewable units with the suffix "AC" include the adjustable volume control feature.

6. **Tin-Lined Units.** Faucets and valves for distilled, deionized and purified water must be manufactured using inert materials that are in contact with the water. These inert materials protect the purity of the water, as well as prevent the purified water from corroding the faucet or valve itself. WaterSaver manufactures faucets and valves for purified water in tin-lined brass, PVC, polypropylene, polypropylene-lined brass, PVDF-lined brass and stainless steel. This wide selection of materials permits the use of products that meet the requirements of the particular application. Faucets and valves that are tin-lined brass use the same renewable unit as all WaterSaver faucets. However, for purified water applications, the brass components of the unit are coated with a layer of pure tin. To order such units or components, add the suffix "TL" to the part number.

7. **Check Valve.** WaterSaver offers renewable units with an internal check valve. The purpose of the check valve is to prevent backflow of water upstream of the valve. This can be used to prevent cross-mixing of hot and cold water when the faucet is opened for a long period of time and the outlet may be closed. This can occur on units such as pre-rinse units where there is a self-closing valve downstream of the faucet valves. All WaterSaver pre-rinse units are furnished with renewable units with internal check valves. To order a renewable unit with an internal check valve, add the suffix "CV" to the part number.

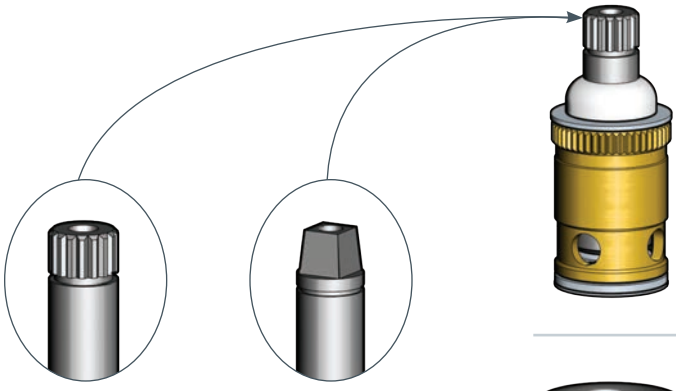
8. **Ceramic Disc Units.** The original WaterSaver renewable unit is based on a compression valve design. The valve operates by means of a rubber disc that is compressed against a valve seat. When the handle is turned to open the faucet, the disc moves up off the seat, thus opening the waterway. When the handle is turned to close the valve, the disc is moved down to recompress against the valve seat. As an alternative to this type of construction, WaterSaver offers units that utilize rotating ceramic discs to control the water flow. The unit has two flat ceramic discs, each of which has a hole or port in it. When the handle is turned, the upper disc rotates, allowing the orifice in the upper disc to align with the orifice in the lower disc and opening the waterway. Units with rotating ceramic discs are dimensionally the same as, and thus interchangeable with, the standard WaterSaver compression renewable unit.



WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

- **BNV100** Renewable Unit, Compression Control, Round Serrated Stem, Right Hand Thread
- **BNV100LH** Renewable Unit, Compression Control, Round Serrated Stem, Left Hand Thread



BNV100 SERIES
Round Serrated Stem

BNV200 SERIES
Tapered Square Stem

BNV100 **Renewable Unit, Compression Control, Right Hand Thread**
Cartridge rotates counterclockwise to open.

BNV100LH **Renewable Unit, Compression Control, Left Hand Thread**
Cartridge rotates clockwise to open.

BNV060R Packing Nut O-Ring (pkg of 6)

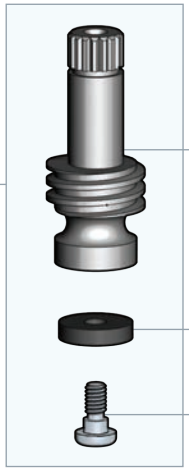
BNV065AS-R Valve Stem Packing with Internal O-Ring (pkg of 6)

SNV055R Retainer Washer (pkg of 6)

SNV050R Stem Friction Ring (pkg of 6)

SNV036-045R
Valve Stem with Disc and Screw (Assembled), Right Hand Thread (pkg of 6)

SNV036-045LH-R
Valve Stem with Disc and Screw (Assembled), Left Hand Thread (pkg of 6)



BNV045R Valve Stem, Round Serrated End, Right Hand Thread (pkg of 6)

BNV045LH-R Valve Stem, Round Serrated End, Left Hand Thread (pkg of 6)

BNV040R Valve Disc (pkg of 6)

SNV036R Valve Disc Screw (pkg of 6)

BNV030-130A-R
Barrel and Seat (Assembled), Right Hand Thread (pkg of 6)

BNV030LH-130A-R
Barrel and Seat (Assembled), Left Hand Thread (pkg of 6)

BNV030R Barrel, Right Hand Thread (pkg of 6)

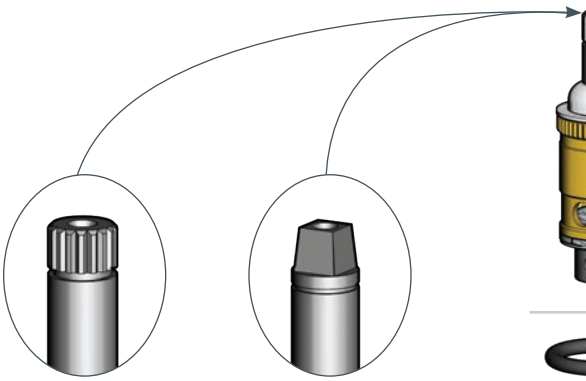
BNV030LH-R Barrel, Left Hand Thread (pkg of 6)

SNV130A-R Stainless Steel Seat With BNV025 Unit Washer (Assembled) (pkg of 6)

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

- **BNV100AC** Renewable Unit, Compression Control, Round Serrated Stem, Right Hand Thread, with Adjustable Volume Control
- **BNV100AC-LH** Renewable Unit, Compression Control, Round Serrated Stem, Left Hand Thread, with Adjustable Volume Control



BNV100 SERIES
Round Serrated Stem

BNV200 SERIES
Tapered Square Stem

BNV100AC **Renewable Unit, Compression Control, Right Hand Thread, with Adjustable Volume Control**
Cartridge rotates counterclockwise to open.

BNV100AC-LH **Renewable Unit, Compression Control, Left Hand Thread, with Adjustable Volume Control**
Cartridge rotates clockwise to open.

BNV060R Packing Nut O-Ring (pkg of 6)

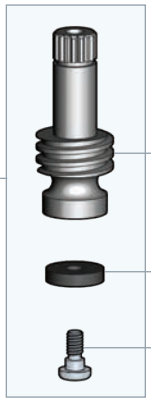
BNV065AS-R Valve Stem Packing with Internal O-Ring (pkg of 6)

SNV055R Retainer Washer (pkg of 6)

SNV050R Stem Friction Ring (pkg of 6)

SNV036-045R
Valve Stem with Disc and Screw (Assembled), Right Hand Thread (pkg of 6)

SNV036-045LH-R
Valve Stem with Disc and Screw (Assembled), Left Hand Thread (pkg of 6)



BNV045R Valve Stem, Round Serrated End, Right Hand Thread (pkg of 6)

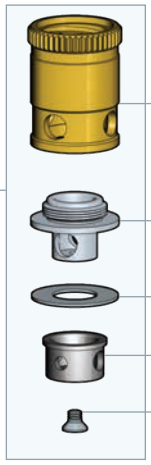
BNV045LH-R Valve Stem, Round Serrated End, Left Hand Thread (pkg of 6)

BNV040R Valve Disc (pkg of 6)

SNV036R Valve Disc Screw (pkg of 6)

SNV005-030R
Barrel and Seat with Adjustable Volume Control (Assembled), Right Hand Thread (pkg of 6)

SNV005-030LH-R
Barrel and Seat with Adjustable Volume Control (Assembled), Left Hand Thread (pkg of 6)



BNV030R Barrel, Right Hand Thread (pkg of 6)

BNV030LH-R Barrel, Left Hand Thread (pkg of 6)

SNV015R Stainless Steel Seat for Adjustable Volume Control (pkg of 6)

BNV025R Unit Washer (pkg of 6)

BNV010R WaterSaver Volume Control (pkg of 6)

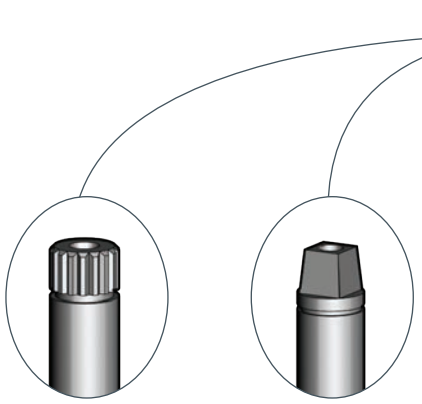
SNV005R Set Screw (pkg of 6)

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

○ **BNV200** Renewable Unit, Compression Control, Tapered Square Stem, Right Hand Thread

Note: For use in faucets with four-arm handles.



BNV100 SERIES
Round Serrated Stem

BNV200 SERIES
Tapered Square Stem

BNV200
Renewable Unit, Compression Control, Right Hand Thread
Cartridge rotates 120 degrees counterclockwise to open.

BNV060R Packing Nut O-Ring (pkg of 6)

BNV065AS-R Valve Stem Packing with Internal O-Ring (pkg of 6)

SNV055R Retainer Washer (pkg of 6)

SNV050R Stem Friction Ring (pkg of 6)

SNV036-045TS-R
Valve Stem With Disc And Screw (Assembled), Right Hand Thread (pkg of 6)

BNV045TS-R Valve Stem, Tapered Square End, Right Hand Thread (pkg of 6)

BNV040R Valve Disc (pkg of 6)

SNV036R Valve Disc Screw (pkg of 6)

BNV030-130A-R
Barrel and Seat (Assembled), Right Hand Thread (pkg of 6)

BNV030R Barrel, Right Hand Thread (pkg of 6)

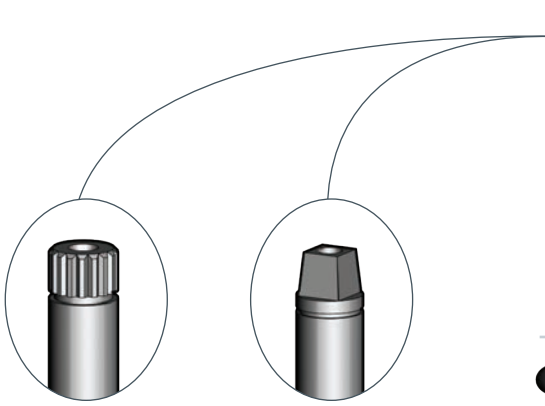
SNV130A-R Stainless Steel Seat With BNV025 Unit Washer (Assembled) (pkg of 6)

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

- **BNV200-90** Renewable Unit, Compression Control, Tapered Square Stem, Right Hand Thread, 90 Degree Rotation
- **BNV200LH-90** Renewable Unit, Compression Control, Tapered Square Stem, Left Hand Thread, 90 Degree Rotation

Note: For use in faucets with wrist blade and lever handles.



BNV100 SERIES
Round Serrated Stem

BNV200 SERIES
Tapered Square Stem

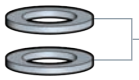
BNV200-90 **Renewable Unit, Compression Control, Right Hand Thread, 90 Degree Rotation**
Cartridge rotates 90 degrees counterclockwise to open.

BNV200LH-90 **Renewable Unit, Compression Control, Left Hand Thread, 90 Degree Rotation**
Cartridge rotates 90 degrees clockwise to open.

BNV060R Packing Nut O-Ring (pkg of 6)

BNV065AS-R Valve Stem Packing with Internal O-Ring (pkg of 6)

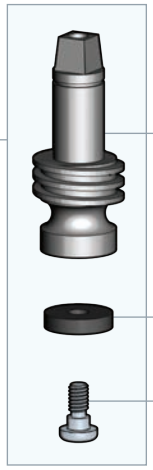
SNV055R Retainer Washer (pkg of 6)



SNV050R Stem Friction Ring (pkg of 6) (2 required)

SNV036-045TS-R
Valve Stem with Disc and Screw (Assembled), Right Hand Thread (pkg of 6)

SNV036-045TS-LH-R
Valve Stem with Disc and Screw (Assembled), Left Hand Thread (pkg of 6)



BNV045TS-R Valve Stem, Tapered Square End, Right Hand Thread (pkg of 6)

BNV045TS-LH-R Valve Stem, Tapered Square End, Left Hand Thread (pkg of 6)

BNV040R Valve Disc (pkg of 6)

SNV036R Valve Disc Screw (pkg of 6)

BNV030-130A-R
Barrel and Seat (Assembled), Right Hand Thread (pkg of 6)

BNV030LH-130A-R
Barrel and Seat (Assembled), Left Hand Thread (pkg of 6)

BNV030R Barrel, Right Hand Thread (pkg of 6)

BNV030LH-R Barrel, Left Hand Thread (pkg of 6)

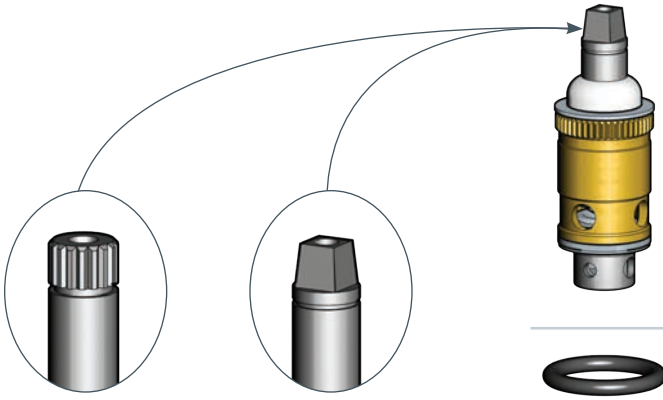
SNV130A-R Stainless Steel Seat With BNV025 Unit Washer (Assembled) (pkg of 6)

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

○ **BNV200AC** Renewable Unit, Compression Control, Tapered Square Stem, Right Hand Thread, with Adjustable Volume Control

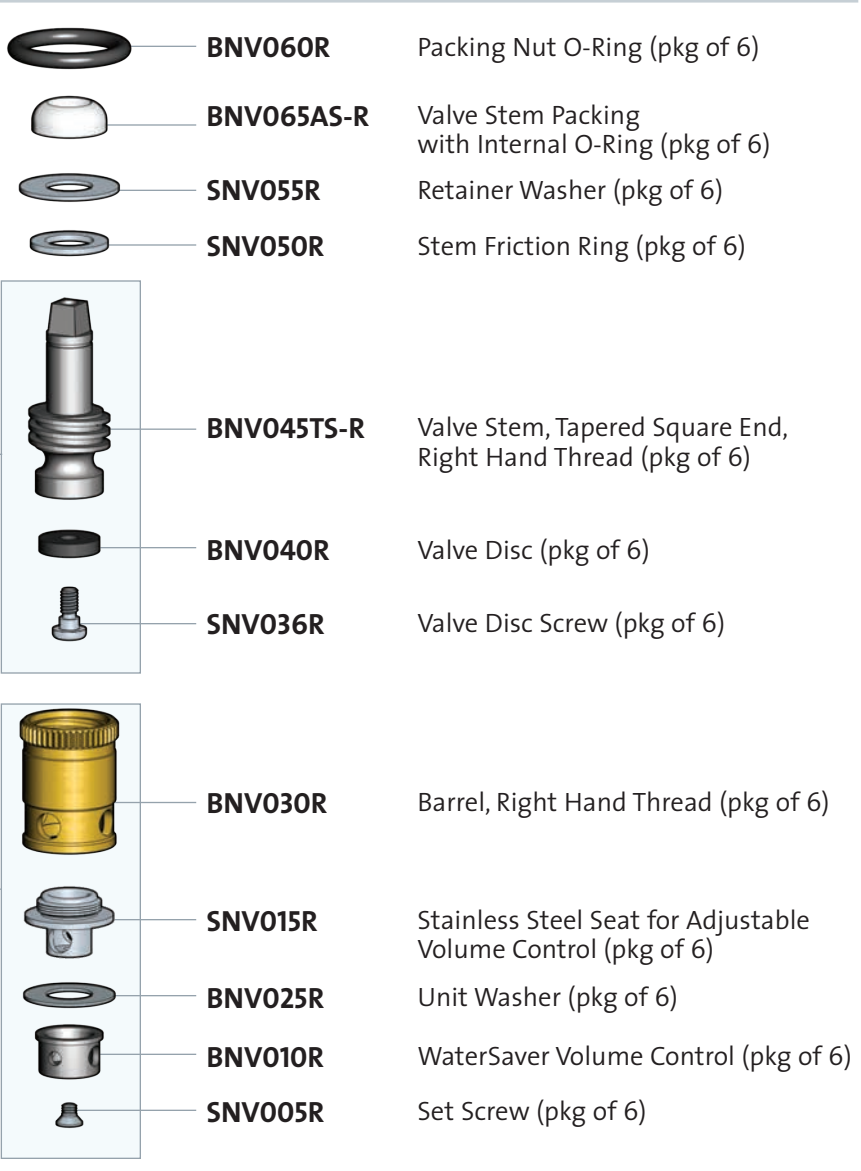
Note: For use in faucets with four-arm handles.



BNV100 SERIES
Round Serrated Stem

BNV200 SERIES
Tapered Square Stem

BNV200AC **Renewable Unit, Compression Control, Right Hand Thread, with Adjustable Volume Control**
Cartridge rotates 120 degrees counterclockwise to open.



BNV060R Packing Nut O-Ring (pkg of 6)

BNV065AS-R Valve Stem Packing with Internal O-Ring (pkg of 6)

SNV055R Retainer Washer (pkg of 6)

SNV050R Stem Friction Ring (pkg of 6)

SNV036-045TS-R
Valve Stem with Disc and Screw (Assembled), Right Hand Thread (pkg of 6)

BNV045TS-R Valve Stem, Tapered Square End, Right Hand Thread (pkg of 6)

BNV040R Valve Disc (pkg of 6)

SNV036R Valve Disc Screw (pkg of 6)

SNV005-030R
Barrel and Seat with Adjustable Volume Control (Assembled), Right Hand Thread (pkg of 6)

BNV030R Barrel, Right Hand Thread (pkg of 6)

SNV015R Stainless Steel Seat for Adjustable Volume Control (pkg of 6)

BNV025R Unit Washer (pkg of 6)

BNV010R WaterSaver Volume Control (pkg of 6)

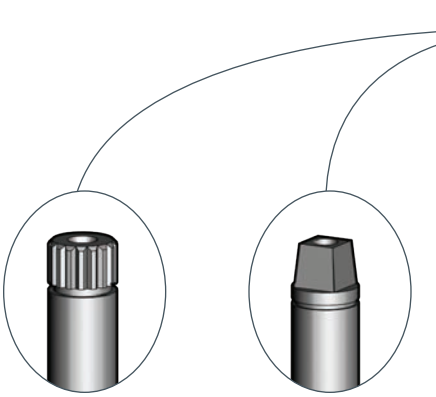
SNV005R Set Screw (pkg of 6)

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

- **BNV200AC-90** Renewable Unit, Compression Control, Tapered Square Stem, Right Hand Thread, 90 Degree Rotation, with Adjustable Volume Control
- **BNV200AC-LH-90** Renewable Unit, Compression Control, Tapered Square Stem, Left Hand Thread, 90 Degree Rotation, with Adjustable Volume Control

Note: For use in faucets with wrist blade and lever handles.



BNV100 SERIES
Round Serrated Stem

BNV200 SERIES
Tapered Square Stem

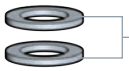
BNV200AC-90 **Renewable Unit, Compression Control, Right Hand Thread, with Adjustable Volume Control**
Cartridge rotates 90 degrees counterclockwise to open.

BNV200AC-LH-90 **Renewable Unit, Compression Control, Left Hand Thread, with Adjustable Volume Control**
Cartridge rotates 90 degrees clockwise to open.

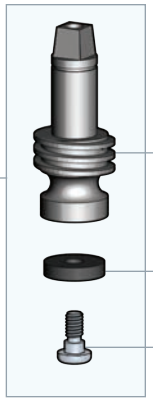
BNV060R Packing Nut O-Ring (pkg of 6)

BNV065AS-R Valve Stem Packing with Internal O-Ring (pkg of 6)

SNV055R Retainer Washer (pkg of 6)



SNV050R Stem Friction Ring (pkg of 6) (2 required)



SNV036-045TS-R
Valve Stem with Disc and Screw (Assembled), Right Hand Thread (pkg of 6)

SNV036-045TS-LH-R
Valve Stem with Disc and Screw (Assembled), Left Hand Thread (pkg of 6)

BNV045TS-R Valve Stem, Tapered Square End, Right Hand Thread (pkg of 6)

BNV045TS-LH-R Valve Stem, Tapered Square End, Left Hand Thread (pkg of 6)

BNV040R Valve Disc (pkg of 6)

SNV036R Valve Disc Screw (pkg of 6)

SNV005-030R
Barrel and Seat with Adjustable Volume Control (Assembled), Right Hand Thread (pkg of 6)

SNV005-030LH-R
Barrel and Seat with Adjustable Volume Control (Assembled), Left Hand Thread (pkg of 6)

BNV030R Barrel, Right Hand Thread (pkg of 6)

BNV030LH-R Barrel, Left Hand Thread (pkg of 6)

SNV015R Stainless Steel Seat for Adjustable Volume Control (pkg of 6)

BNV025R Unit Washer (pkg of 6)

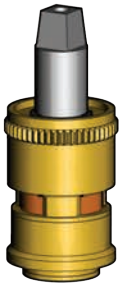
BNV010R WaterSaver Volume Control (pkg of 6)

SNV005R Set Screw (pkg of 6)

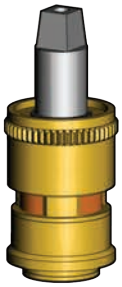
WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

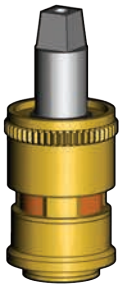
BNV300 Ceramic Disc Renewable Units



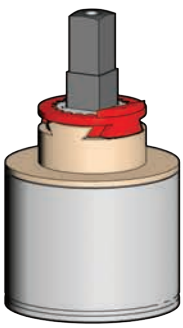
BNV300-180 **Ceramic Disc Renewable Unit**
Cartridge rotates 180 degrees counter clockwise to open.



BNV300-90 **Ceramic Disc Renewable Unit**
Cartridge rotates 90 degrees counter clockwise to open.



BNV300LH-90 **Ceramic Disc Renewable Unit**
Cartridge rotates 90 degrees clockwise to open.



BNV400 **Ceramic Disc Renewable Unit for Single Handle Mixing Faucets**

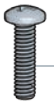
WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

HK013-200 Handle/Unit Kit with BA013TS Four Arm Handle and BNV200 Renewable Unit

HK013-200
Handle/Unit Kit
(Assembled)

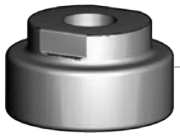
PA032 Index Button
(specify color and service)



SF011 Handle Screw

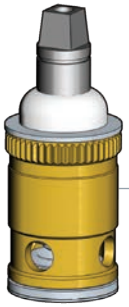
SF012 Lockwasher

BA013TS Four-Arm Handle



BNV090 Packing Nut

BNV060 Packing Nut O-Ring



BNV200 Renewable Unit

Notes:

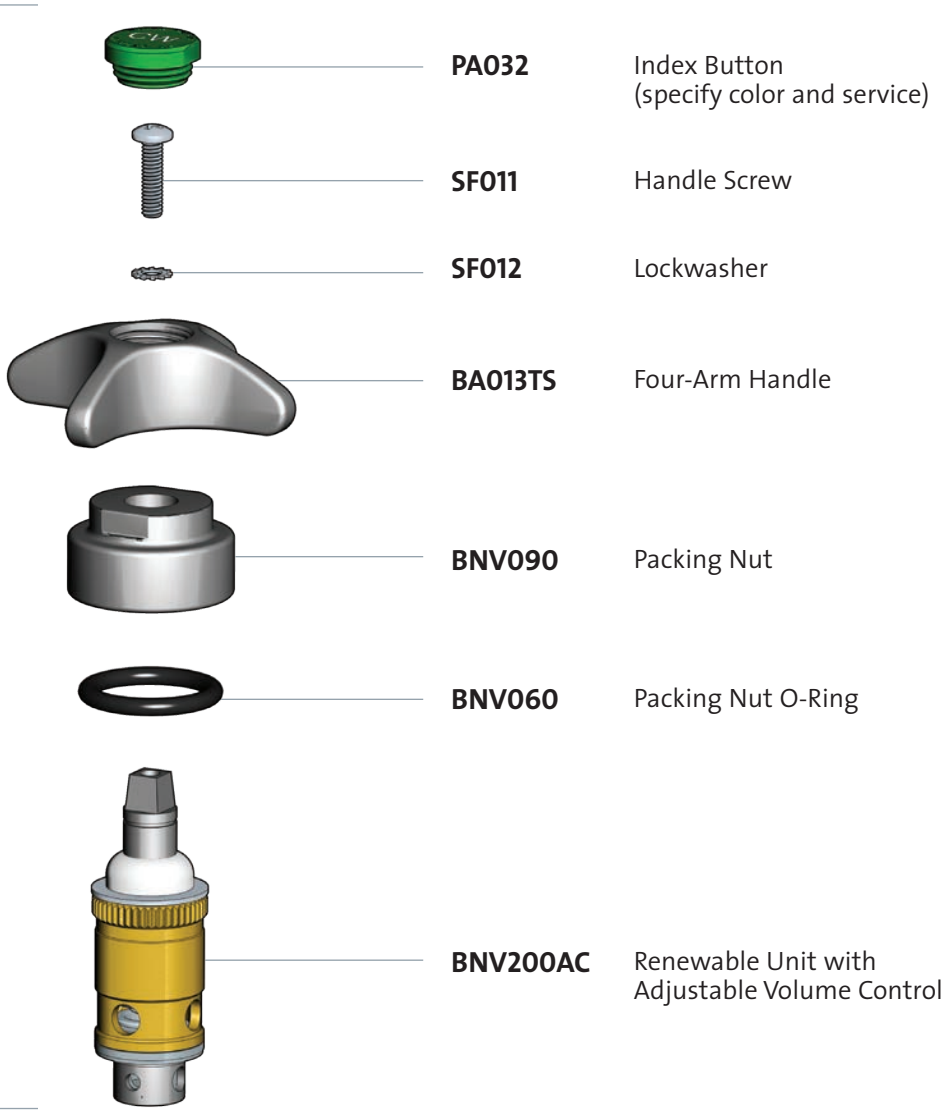
1. Specify color and service for index button when ordering.
2. If tin lining for distilled, deionized or purified water is required, add suffix "TL".
3. If vandal-resistant packing nut with set screw is required, add suffix "VR".

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

○ **HK013-200AC** Handle/Unit Kit with BA013TS Four Arm Handle and BNV200AC Renewable Unit

HK013-200AC
Handle/Unit Kit
(Assembled)



PA032	Index Button (specify color and service)
SF011	Handle Screw
SF012	Lockwasher
BA013TS	Four-Arm Handle
BNV090	Packing Nut
BNV060	Packing Nut O-Ring
BNV200AC	Renewable Unit with Adjustable Volume Control

Notes:

1. Specify color and service for index button when ordering.

2. If tin lining for distilled, deionized or purified water is required, add suffix "TL".

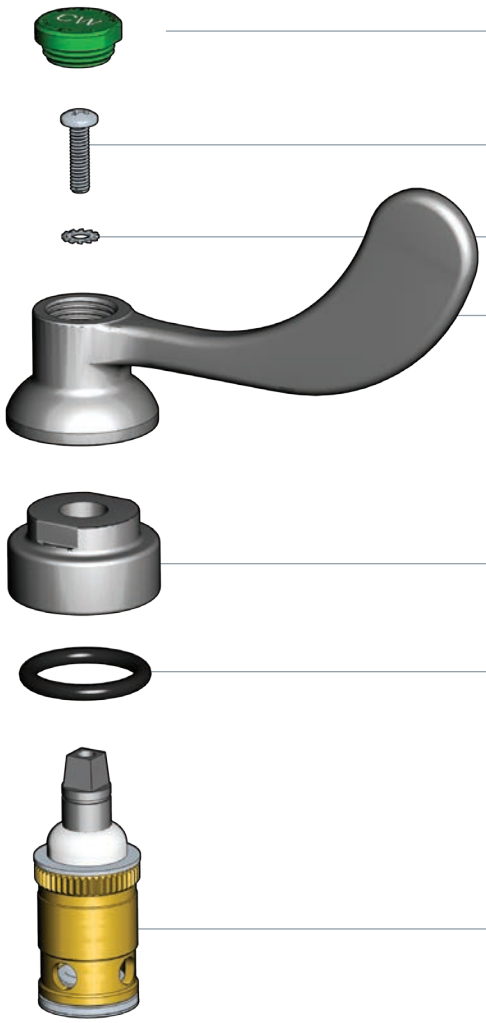
3. If vandal-resistant packing nut with set screw is required, add suffix "VR".

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

- **HK044-200-90** Handle/Unit Kit with BA044TS Wrist Blade Handle and BNV200-90 Renewable Unit, Right Hand Thread
- **HK044-200LH-90** Handle/Unit Kit with BA044TS Wrist Blade Handle and BNV200LH-90 Renewable Unit, Left Hand Thread

HK044-200-90
Handle/Unit Kit
(Assembled)



PA032	Index Button (specify color and service)
SF011	Handle Screw
SF012	Lockwasher
BA044TS	Wrist Blade Handle with Integral Cover
BNV090	Packing Nut
BNV060	Packing Nut O-Ring
BNV200-90	Renewable Unit, Right Hand Thread, 90 degree rotation
BNV200LH-90	Renewable Unit, Left Hand Thread, 90 degree rotation

Notes:

1. Specify color and service for index button when ordering.

2. If tin lining for distilled, deionized or purified water is required, add suffix "TL".

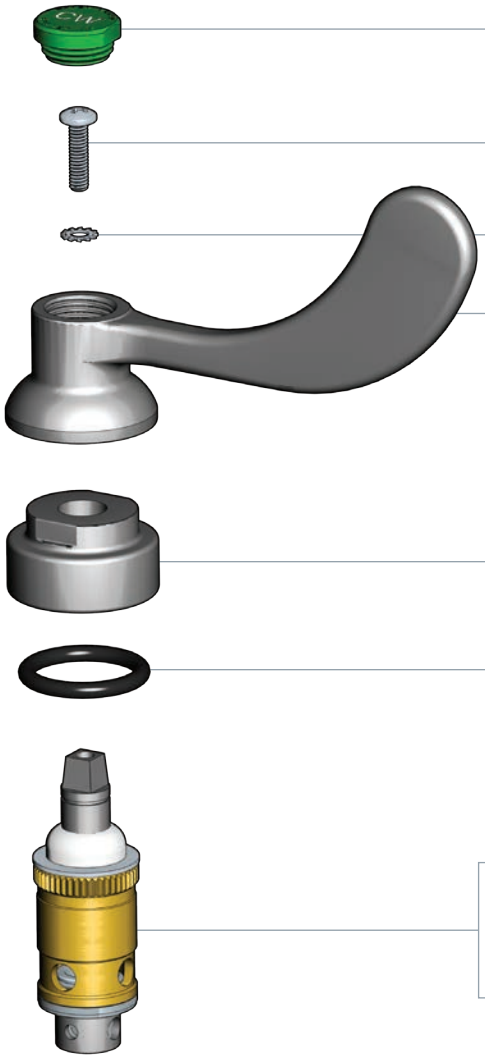
3. If vandal-resistant packing nut with set screw is required, add suffix "VR".

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

- **HK044-200AC-90** Handle/Unit Kit with BA044TS Wrist Blade Handle and BNV200AC-90 Renewable Unit, Right Hand Thread
- **HK044-200AC-LH-90** Handle/Unit Kit with BA044TS Wrist Blade Handle and BNV200AC-LH-90 Renewable Unit, Left Hand Thread

HK044-200AC-90
Handle/Unit Kit
(Assembled)



PA032	Index Button (specify color and service)
SF011	Handle Screw
SF012	Lockwasher
BA044TS	Wrist Blade Handle with Integral Cover
BNV090	Packing Nut
BNV060	Packing Nut O-Ring
BNV200AC-90	Renewable Unit with Adjustable Volume Control, Right Hand Thread, 90 degree rotation
BNV200AC-LH-90	Renewable Unit with Adjustable Volume Control, Left Hand Thread, 90 degree rotation

Notes:

1. Specify color and service for index button when ordering.

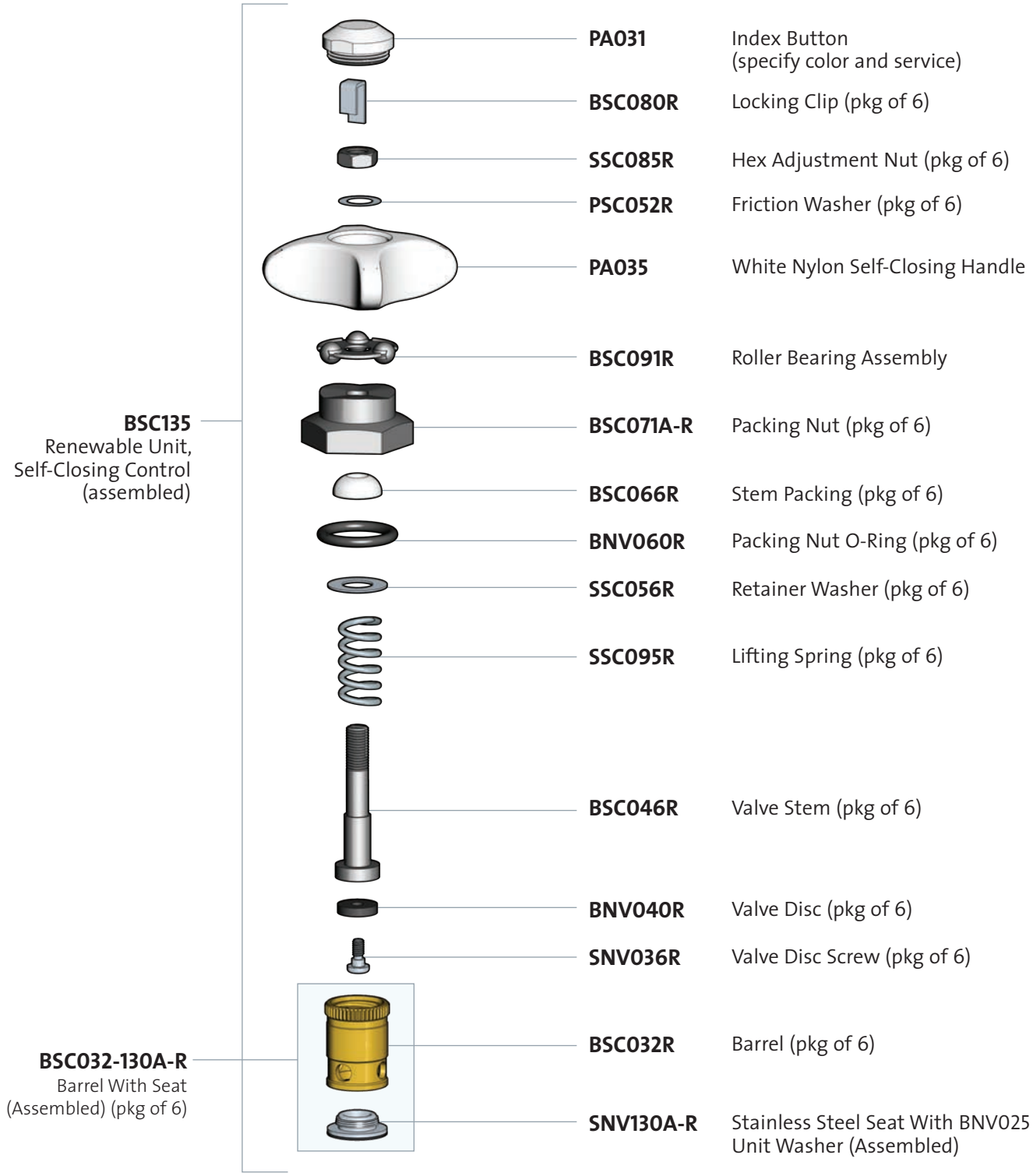
2. If tin lining for distilled, deionized or purified water is required, add suffix "TL".

3. If vandal-resistant packing nut with set screw is required, add suffix "VR".

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

- **BSC135** Renewable Unit, Self-Closing Control
- **BSC135LE** Same as above except with BA030 Self-Closing Lever Handle



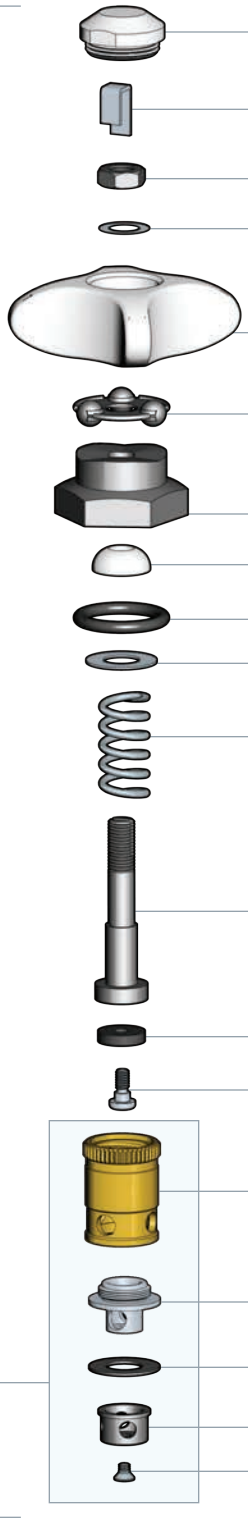
PA031	Index Button (specify color and service)
BSC080R	Locking Clip (pkg of 6)
SSC085R	Hex Adjustment Nut (pkg of 6)
PSC052R	Friction Washer (pkg of 6)
PA035	White Nylon Self-Closing Handle
BSC091R	Roller Bearing Assembly
BSC071A-R	Packing Nut (pkg of 6)
BSC066R	Stem Packing (pkg of 6)
BNV060R	Packing Nut O-Ring (pkg of 6)
SSC056R	Retainer Washer (pkg of 6)
SSC095R	Lifting Spring (pkg of 6)
BSC046R	Valve Stem (pkg of 6)
BNV040R	Valve Disc (pkg of 6)
SNV036R	Valve Disc Screw (pkg of 6)
BSC032R	Barrel (pkg of 6)
SNV130A-R	Stainless Steel Seat With BNV025 Unit Washer (Assembled)

Note: If tin lining for distilled, deionized or purified water is required, add suffix "TL".

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

- **BSC135AC** Renewable Unit, Self-Closing Control, Adjustable Volume Control
- **BSC135AC-LE** Same as above except with BA030 Self-Closing Lever Handle



BSC135AC
Renewable Unit,
Self-Closing Control,
Adjustable Volume
Control (assembled)

BSC005-032R
Barrel With Seat
and Volume Control
(Assembled) (pkg of 6)

PA031	Index Button (specify color and service)
BSC080R	Locking Clip (pkg of 6)
SSC085R	Hex Adjustment Nut (pkg of 6)
PSC052R	Friction Washer (pkg of 6)
PA035	White Nylon Self-Closing Handle
BSC091R	Roller Bearing Assembly
BSC071A-R	Packing Nut (pkg of 6)
BSC066R	Stem Packing (pkg of 6)
BNV060R	Packing Nut O-Ring (pkg of 6)
SSC056R	Retainer Washer (pkg of 6)
SSC095R	Lifting Spring (pkg of 6)
BSC046R	Valve Stem (pkg of 6)
BNV040R	Valve Disc (pkg of 6)
SNV036R	Valve Disc Screw (pkg of 6)
BSC032R	Barrel (pkg of 6)
SNV015R	Stainless Steel Seat for Adjustable Volume Control (pkg of 6)
BNV025R	Unit Washer (pkg of 6)
BNV010R	WaterSaver Volume Control (pkg of 6)
SNV005R	Set Screw (pkg of 6)

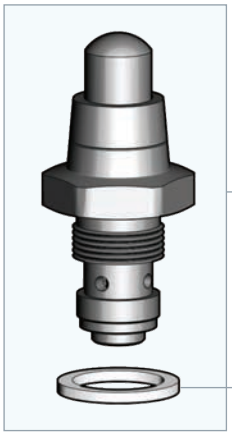
Note: If tin lining for distilled, deionized or purified water is required, add suffix "TL".

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

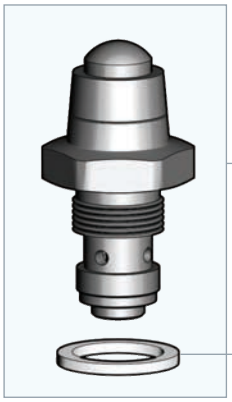
BSC011 / 016 / 021 Renewable Units for Foot-Operated Valves

WaterSaver foot-operated valves were redesigned as of April 1, 1995. Some of the new individual valve components (such as the valve stem and bonnet) are not interchangeable with the old components. Therefore, components for foot-operated valves are sold as complete units only.



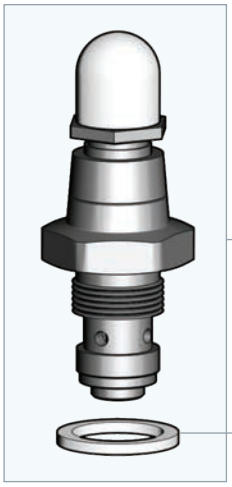
BSC011 Renewable Unit for L3001 / 3050 Foot-Operated Valves

PSC130R Unit Gasket (pkg of 6)



BSC016 Renewable Unit For L3010 / 3060 Foot-Operated Valves

PSC130R Unit Gasket (pkg of 6)



BSC021 Renewable Unit for L3001LP / 3050LP Foot-Operated Valves

PSC130R Unit Gasket (pkg of 6)

Notes:

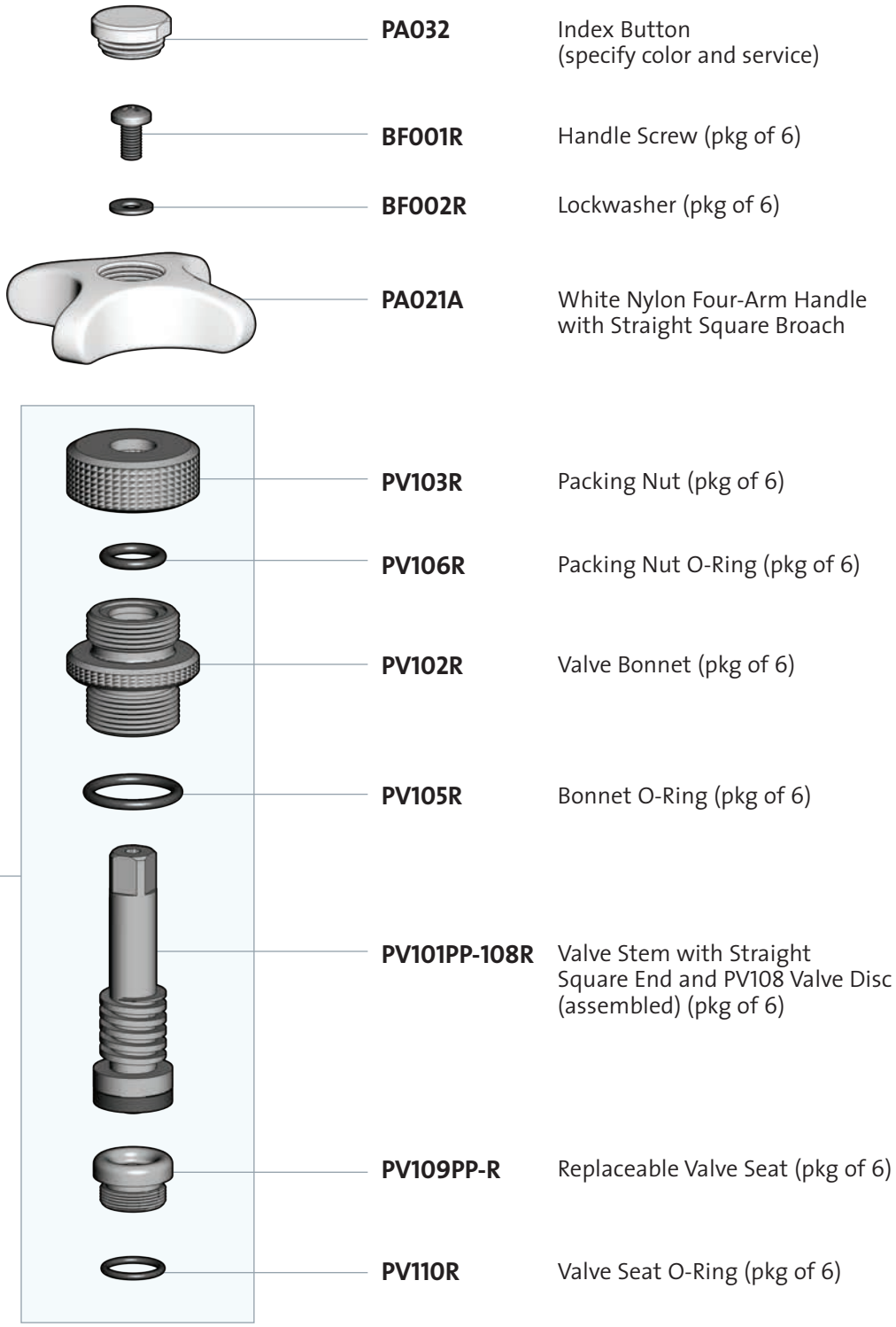
1. If tin lining for distilled, deionized or purified water is required, add suffix "TL".

2. If extra heavy (5/32" thick) unit gasket is required, order PSC130A-R (pkg of 6).

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

- **PV100** Renewable Unit, Compression Control, PVC Construction
- **PV100PP** Renewable Unit, Compression Control, Polypropylene Construction
- **PV100CPVC** Renewable Unit, Compression Control, CPVC Construction



Note: When ordering components individually, specify material required (PVC, polypropylene or CPVC).

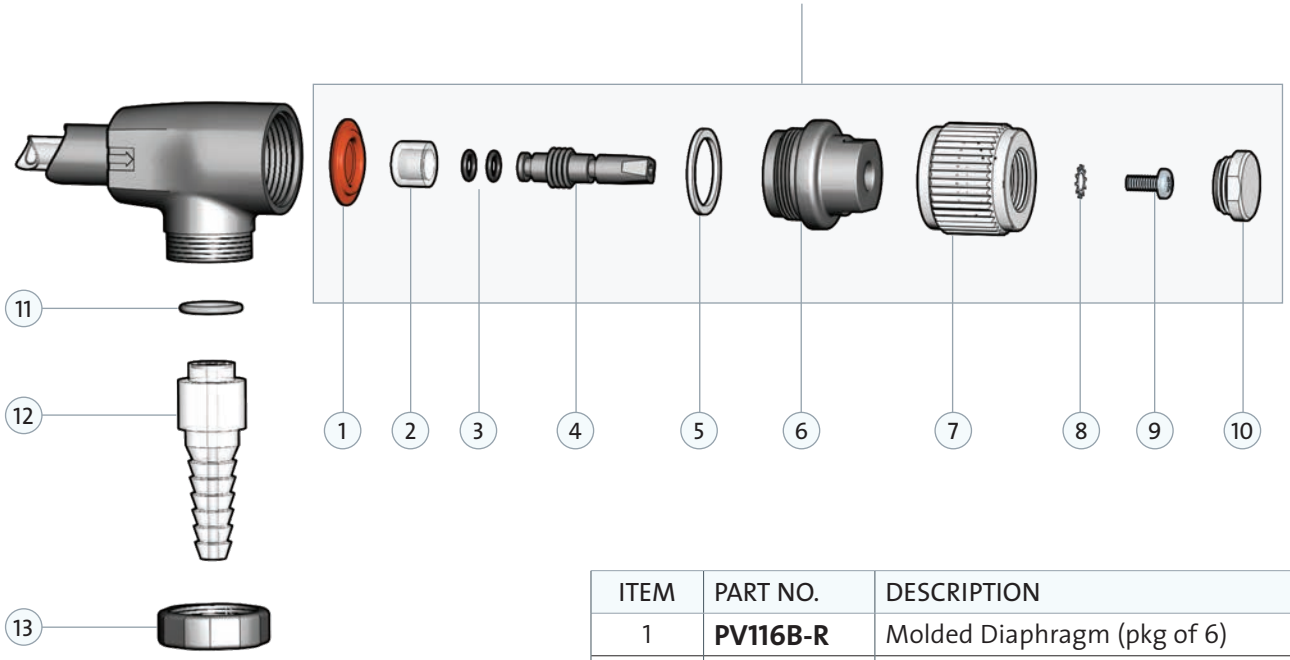
WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

HK019-7800 Handle/Unit Kit for Polypropylene- or PVDF- Lined Pure Water Fixtures, Compression Control (Old Style)

Note: This handle/unit kit is for use in L7833/7834/7837/7838/7840/7844 polypropylene- or PVDF- lined pure water fixtures. These fixtures were redesigned in 2002. Fixtures manufactured prior to 2002 utilize a valve body with a female thread (as shown). Fixtures manufactured after 2002 utilize a valve body with a male thread. This HK019-7800 handle/unit kit is for fixtures manufactured prior to 2002.

HK019-7800
Handle/Unit Kit, Polypropylene-Lined Pure Water Fixtures, Compression Control (Old Style)



ITEM	PART NO.	DESCRIPTION
1	**PV116B-R**	Molded Diaphragm (pkg of 6)
2	**PV120A-R**	Valve Stem Cap (pkg of 6)
3	**600-228R**	O-Ring (2 required) (pkg of 12)
4	**BV112B-R**	Valve Stem (pkg of 6)
5	**PV147R**	Bonnet Gasket (pkg of 6)
6	**BV107D-R**	Valve Bonnet with Male Thread (pkg of 6)
7	**PA019WHT**	White Nylon Round Handle
8	**SF012R**	Lockwasher (pkg of 6)
9	**SNV035R**	Handle Screw (pkg of 6)
10	**PA032**	Index Button (specify color and service)
11	**PO119R**	Hose End O-Ring (pkg of 6)
12	**PO118R**	Hose End (pkg of 6)
13	**BO108R**	Outlet Nut (pkg of 6)

Note: RK7800R repair kit includes:
(6) PV116B diaphragms
(6) PV120A valve stem caps
(12) 600-228 O-rings
(6) PV147 bonnet gaskets

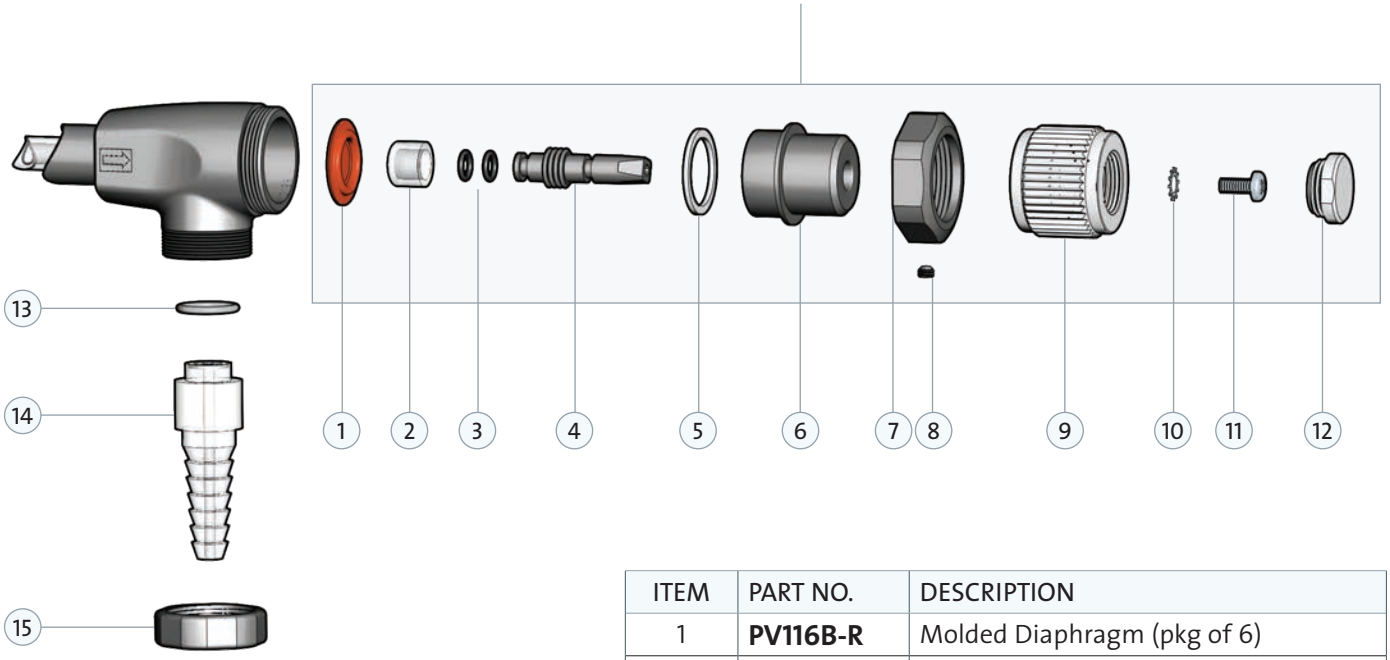
WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

HK019-7800A Handle/Unit Kit for Polypropylene- or PVDF- Lined Pure Water Fixtures, Compression Control (New Style)

Note: This handle/unit kit is for use in L7833/7834/7837/7838/7840/7844 polypropylene- or PVDF- lined pure water fixtures. These fixtures were redesigned in 2002. Fixtures manufactured prior to 2002 utilize a valve body with a female thread. Fixtures manufactured after 2002 utilize a valve body with a male thread (as shown). This HK019-7800A handle/unit kit is for fixtures manufactured after 2002.

HK019-7800A
Handle/Unit Kit, Polypropylene-Lined Pure Water Fixtures, Compression Control (New Style)



ITEM	PART NO.	DESCRIPTION
1	**PV116B-R**	Molded Diaphragm (pkg of 6)
2	**PV120A-R**	Valve Stem Cap (pkg of 6)
3	**600-228R**	O-Ring (2 required) (pkg of 12)
4	**BV112B-R**	Valve Stem (pkg of 6)
5	**PV147R**	Bonnet Gasket (pkg of 6)
6	**BV146R**	Valve Bonnet (pkg of 6)
7	**BV148A-R**	Retainer Nut (pkg of 6)
8	**SF004R**	Set Screw (pkg of 6)
9	**PA019WHT**	White Nylon Round Handle
10	**SF012R**	Lockwasher (pkg of 6)
11	**SNV035R**	Handle Screw (pkg of 6)
12	**PA032**	Index Button (specify color and service)
13	**PO119R**	Hose End O-Ring (pkg of 6)
14	**PO118R**	Hose End (pkg of 6)
15	**BO108R**	Outlet Nut (pkg of 6)

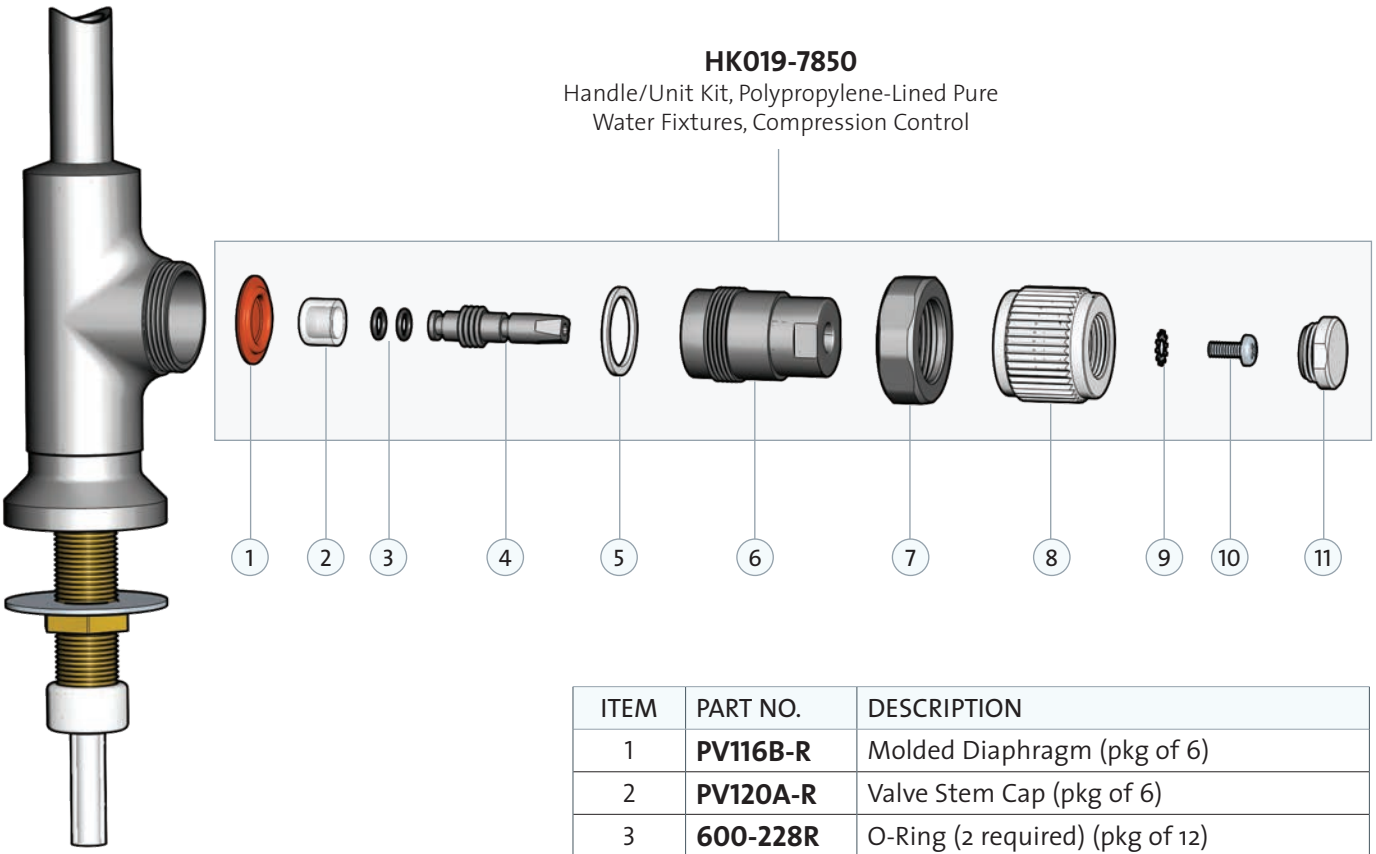
Note: RK7800R repair kit includes:
(6) PV116B diaphragms
(6) PV120A valve stem caps
(12) 600-228 O-rings
(6) PV147 bonnet gaskets

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

HK019-7850 Handle/Unit Kit for Polypropylene- or PVDF- Lined Pure Water Fixtures, Compression Control

Note: This handle/unit kit is for use in L7853/7854 polypropylene- or PVDF- lined pure water fixtures.



ITEM	PART NO.	DESCRIPTION
1	**PV116B-R**	Molded Diaphragm (pkg of 6)
2	**PV120A-R**	Valve Stem Cap (pkg of 6)
3	**600-228R**	O-Ring (2 required) (pkg of 12)
4	**BV112D-R**	Valve Stem (pkg of 6)
5	**PV147R**	Bonnet Gasket (pkg of 6)
6	**BV142R**	Barrel (pkg of 6)
7	**B0391R**	Retainer Nut (pkg of 6)
8	**PA019WHT**	White Nylon Round Handle
9	**SF012R**	Lockwasher (pkg of 6)
10	**SNV035R**	Handle Screw (pkg of 6)
11	**PA032**	Index Button (specify color and service)

Note: RK7800R repair kit includes:
(6) PV116B diaphragms
(6) PV120A valve stem caps
(12) 600-228 O-rings
(6) PV147 bonnet gaskets

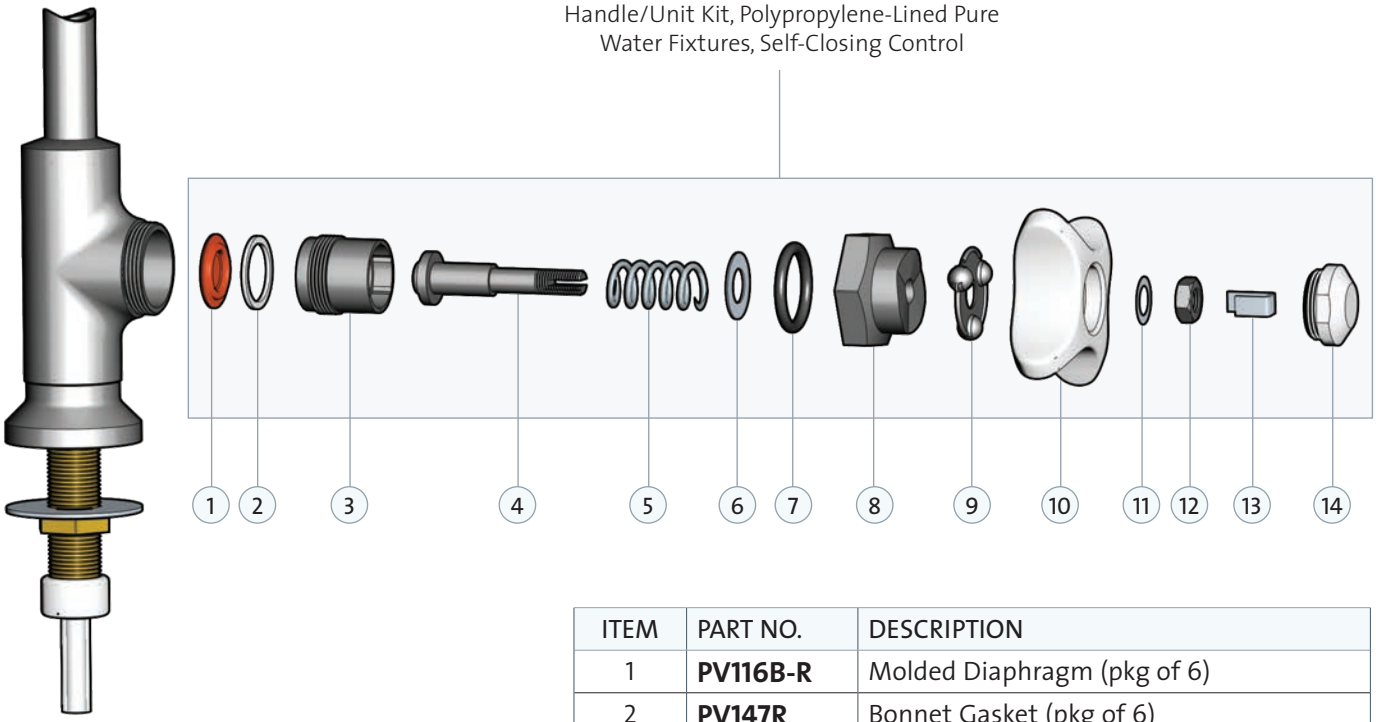
WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

- **HK035-7850SC** Handle/Unit Kit for Polypropylene- or PVDF- Lined Pure Water Fixtures, Self-Closing Control
- **HK030-7850SC** Same as above except with BA030 Self-Closing Lever Handle

Note: This handle/unit kit is for use in L7853SC/7853SC-LE/7854SC/7854SC-LE polypropylene- or PVDF- lined pure water fixtures.

HK035-7850SC
Handle/Unit Kit, Polypropylene-Lined Pure Water Fixtures, Self-Closing Control



ITEM	PART NO.	DESCRIPTION
1	**PV116B-R**	Molded Diaphragm (pkg of 6)
2	**PV147R**	Bonnet Gasket (pkg of 6)
3	**BV118SC-R**	Self-Closing Barrel (pkg of 6)
4	**BV112C-R**	Self-Closing Valve Stem (pkg of 6)
5	**SSC095R**	Lifting Spring (pkg of 6)
6	**SSC056R**	Retainer Washer (pkg of 6)
7	**BNV060R**	Packing Nut O-Ring (pkg of 6)
8	**BSC071A-R**	Packing Nut (pkg of 6)
9	**BSC091R**	Roller Bearing Assembly (pkg of 6)
10	**PA035**	White Nylon Self-Closing Handle
11	**PSC052R**	Friction Washer (pkg of 6)
12	**SSC085R**	Hex Adjustment Nut (pkg of 6)
13	**BSC080R**	Locking Clip (pkg of 6)
14	**PA031**	Index Button (specify color and service)

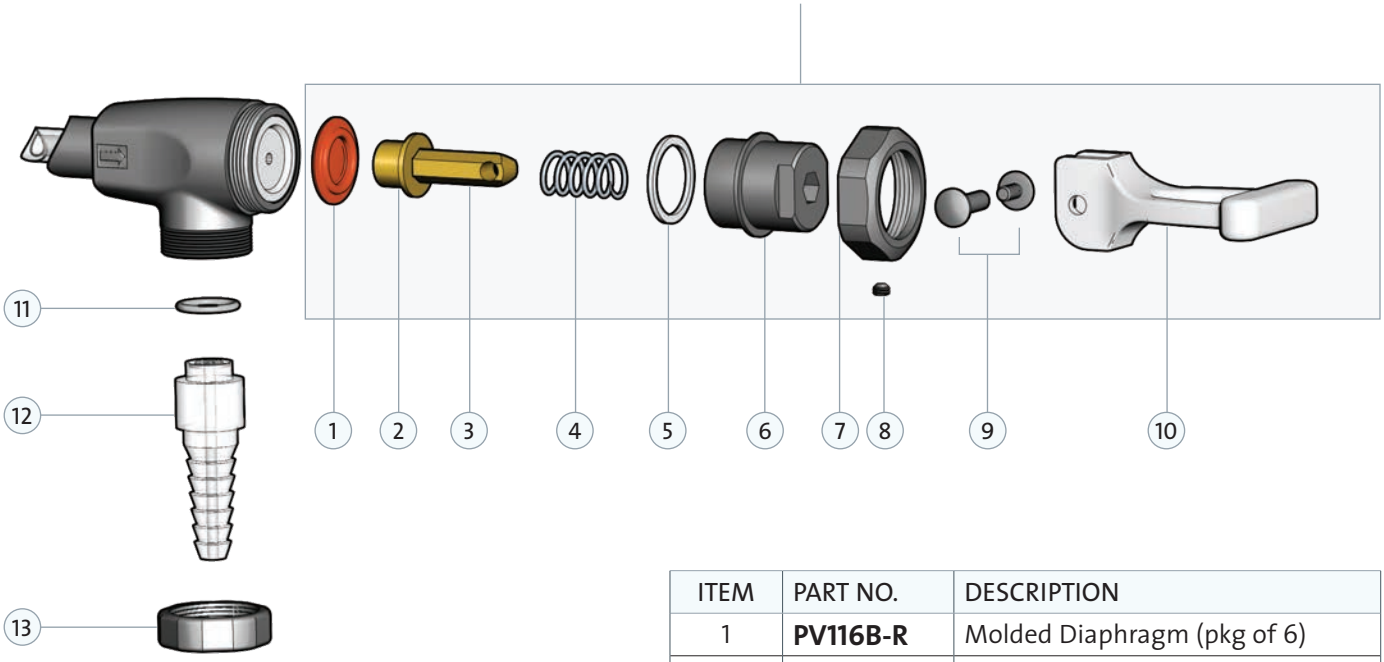
WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

HK080C-7800SC Handle/Unit Kit for Polypropylene- or PVDF- Lined Pure Water Fixtures, Self-Closing Control

Note: This handle/unit kit is for use in L7833SC/7834SC/7840SC polypropylene- or PVDF- lined pure water fixtures.

HK080C-7800SC
Handle/Unit Kit, Polypropylene-Lined Pure Water Fixtures, Self-Closing Control



ITEM	PART NO.	DESCRIPTION
1	**PV116B-R**	Molded Diaphragm (pkg of 6)
2	**BV144R**	Brass Stem Cap (pkg of 6)
3	**BV143R**	Self-Closing Valve Stem (pkg of 6)
4	**SV086R**	Spring (pkg of 6)
5	**PV147R**	Bonnet Gasket (pkg of 6)
6	**BV145R**	Valve Bonnet (pkg of 6)
7	**BV148A-R**	Retainer Nut (pkg of 6)
8	**SF004R**	Set Screw (pkg of 6)
9	**BV082A-R**	Screw and Post (pkg of 6)
10	**PA080C**	White Nylon Self-Closing Handle
11	**PO119R**	Hose End O-Ring (pkg of 6)
12	**PO118R**	Hose End (pkg of 6)
13	**BO108R**	Outlet Nut (pkg of 6)

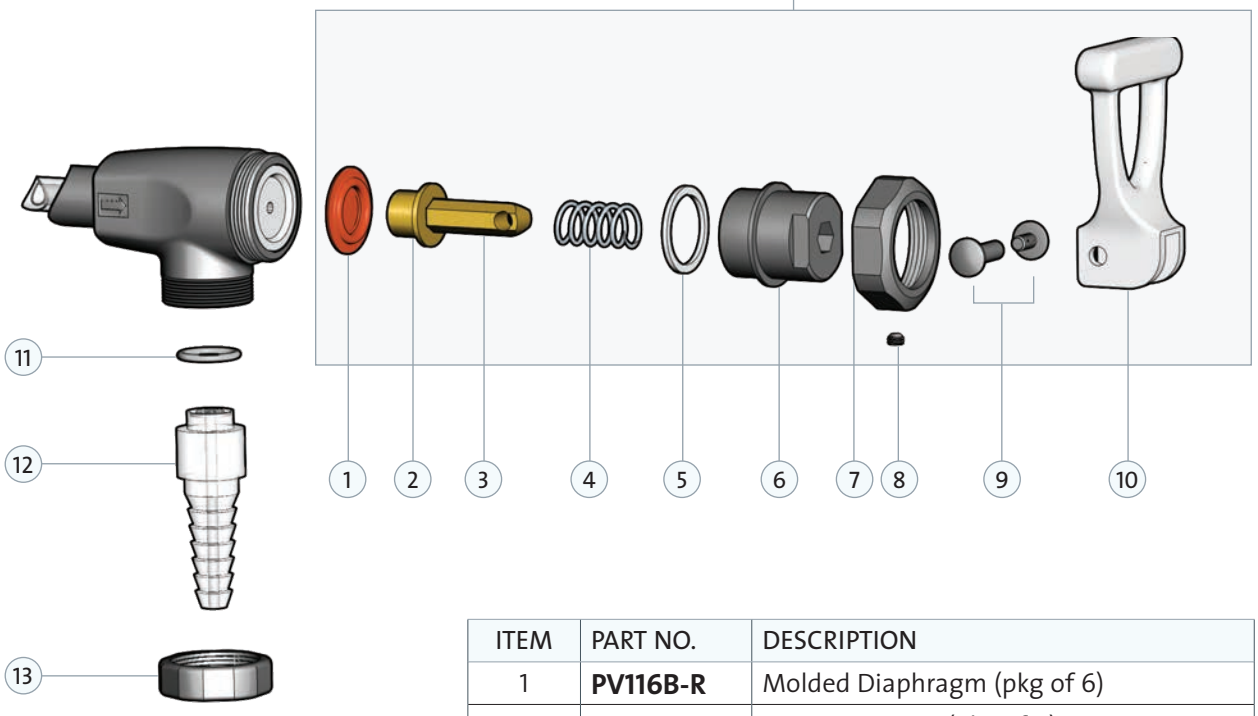
WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

HK080B-7800MSC Handle/Unit Kit for Polypropylene- or PVDF- Lined Pure Water Fixtures, Manual/Self-Closing Control

Note: This handle/unit kit is for use in L7833MSC/7834MSC/7840MSC polypropylene- or PVDF- lined pure water fixtures.

HK080B-7800MSC
Handle/Unit Kit, Polypropylene-Lined Pure Water Fixtures, Manual/Self-Closing Control



ITEM	PART NO.	DESCRIPTION
1	**PV116B-R**	Molded Diaphragm (pkg of 6)
2	**BV144R**	Brass Stem Cap (pkg of 6)
3	**BV143R**	Self-Closing Valve Stem (pkg of 6)
4	**SV086R**	Spring (pkg of 6)
5	**PV147R**	Bonnet Gasket (pkg of 6)
6	**BV145R**	Valve Bonnet (pkg of 6)
7	**BV148A-R**	Retainer Nut (pkg of 6)
8	**SF004R**	Set Screw (pkg of 6)
9	**BV082A-R**	Screw and Post (pkg of 6)
10	**PA080B**	White Nylon Manual/Self-Closing Handle
11	**PO119R**	Hose End O-Ring (pkg of 6)
12	**PO118R**	Hose End (pkg of 6)
13	**BO108R**	Outlet Nut (pkg of 6)

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

Swing Gooseneck Components

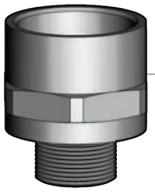
SWING GOOSENECK

B0070R Packing Nut with 1”-22 Male Thread (pkg of 6)

B0071R Friction Ring (pkg of 6)

B0075R Swing Gooseneck Packing (pkg of 6)

B0081R Split Retaining Ring (pkg of 6)



B0226R Swing Gooseneck Adaptor (3/8” Male NPT Inlet, 1”-22 Female Outlet) (pkg of 6)

Notes:

1. *To convert a faucet with a rigid gooseneck to swing using swing construction, order BO226 adaptor and SG series swing gooseneck.*
2. *To convert a faucet with a rigid gooseneck to swing using rigid/swing construction, order BO356COMP (BO356 and parts PO349 through BO355).*

Rigid/Swing Gooseneck Components

RIGID GOOSENECK

BO352A-R Retainer Nut (pkg of 6)

PO349R Nylon Washer (pkg of 6)

BO351R Double O-Ring Guide (pkg of 6)

BO353R O-Rings (2 required) (pkg of 12)

PO355R Nylon Spacer (Swing) (pkg of 6)

BO355R Brass Spacer (Rigid) (pkg of 6)

BO356R Rigid/Swing Adaptor (3/8” NPT Male Inlet, 1”-22 Male Outlet) (pkg of 6)

BO356COMP Rigid/Swing Adaptor with Gooseneck Components (PO349 through BO355)

BO350R Rigid/Swing Adaptor (1”-22 Male Thread) (pkg of 6)

BO354R Copper Body Gasket

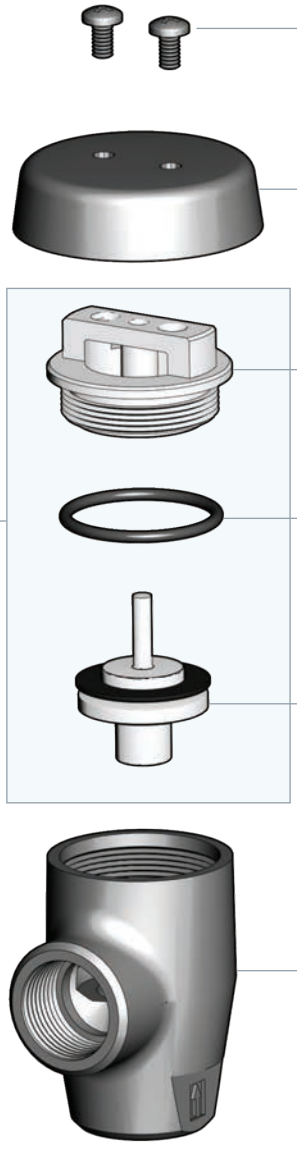
WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

L100 / 101 / 102 / 112 Atmospheric Vacuum Breakers

WaterSaver atmospheric vacuum breakers were redesigned in 2004. Vacuum breakers manufactured prior to 2004 utilize a float cup with a cone-shaped bottom. Vacuum breakers manufactured after 2004 utilize a float cup with a cylinder-shaped flat bottom (shown below). The new float cup incorporates a small sealed air pocket that gives the float cup increased buoyancy and reduces spillage at low flow.

Internal components for the new style construction can be used in faucets manufactured prior to 2004. However, in such older faucets, the new components might reduce the water flow through the vacuum breaker. If this occurs, it might be necessary to install the old style components in the vacuum breaker (order "RK100R-OS"). Please consult with the WaterSaver factory for further assistance.



RK100R
Vacuum Breaker Repair Kit (pkg of 6 of each component)

SF022R Cover Screw (2 Required) (pkg of 12)

BO317R Vacuum Breaker Cover (pkg of 6)

PO314R Plastic Vacuum Breaker Bonnet (pkg of 6)

BO322R Bonnet O-Ring (pkg of 6)

PO318R Bonnet Gasket (pkg of 6) *(Used on vacuum breakers manufactured prior to 2004)*

PO316A-319HP-R Polypropylene Float Cup with Vent Disc (assembled) (pkg of 6)

BO313 Vacuum Breaker Body with BO324A Seat (assembled) (3/8" FNPT Inlet and Outlet)

BO313-1/2 Vacuum Breaker Body with BO324A Seat (assembled) (1/2" FNPT Inlet and Outlet)

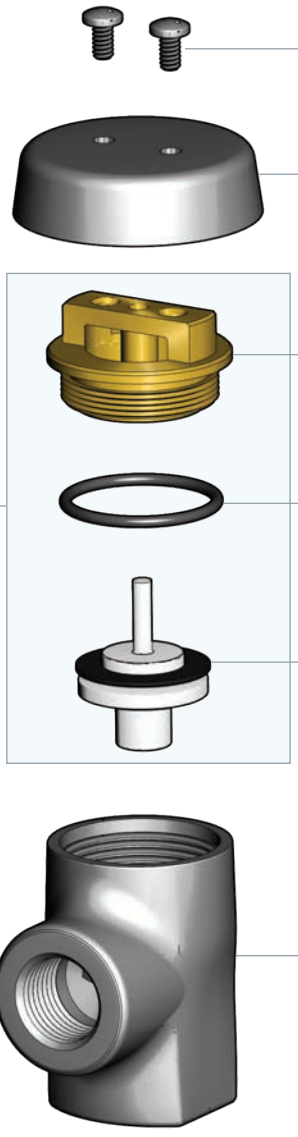
WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

L100VR Atmospheric Vacuum Breaker For Vandal-Resistant Faucets

WaterSaver atmospheric vacuum breakers were redesigned in 2004. Vacuum breakers manufactured prior to 2004 utilize a float cup with a cone-shaped bottom. Vacuum breakers manufactured after 2004 utilize a float cup with a cylinder-shaped flat bottom (shown below). The new float cup incorporates a small sealed air pocket that gives the float cup increased buoyancy and reduces spillage at low flow.

Internal components for the new style construction can be used in faucets manufactured prior to 2004. However, in such older faucets, the new components might reduce the water flow through the vacuum breaker. If this occurs, it might be necessary to install the old style components in the vacuum breaker (order "RK100R-OS"). Please consult with the WaterSaver factory for further assistance.



RK100VR-R
Vacuum Breaker Repair Kit For Vandal-Resistant Faucets (pkg of 6 of each component)

SF022VR-R Vandal-Resistant Cover Screw (2 Required) (pkg of 12)

BO317R Vacuum Breaker Cover (pkg of 6)

BO314R Brass Vacuum Breaker Bonnet (pkg of 6)

BO322R Bonnet O-Ring (pkg of 6)

PO316A-319HP-R Polypropylene Float Cup with Vent Disc (assembled) (pkg of 6)

BO313VR Vacuum Breaker Body with BO324A Seat (assembled) (1/2" FNPT Inlet, 3/8" FNPT Outlet)

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

L100/101/102/112 Atmospheric Vacuum Breakers

Maximum Pressure: 125 PSI
Maximum Temperature: 180°F
ASSE Certified under ASSE Standard 1001

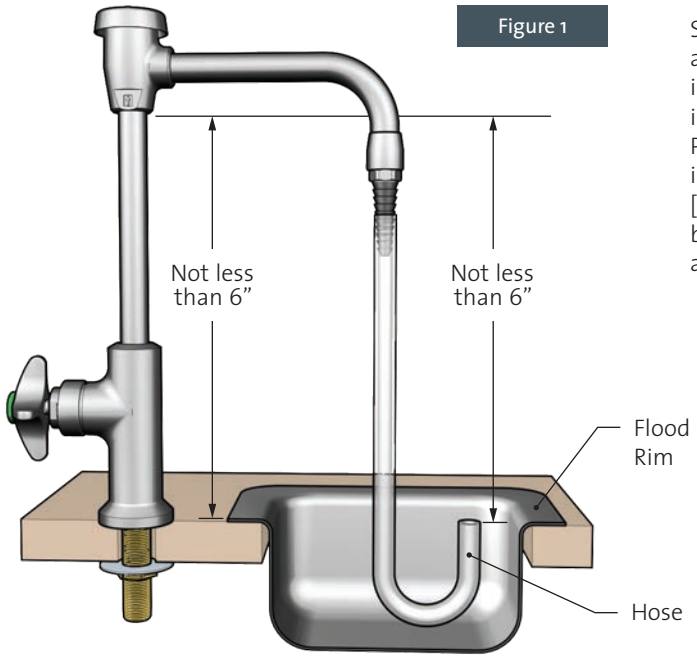
Atmospheric vacuum breakers are used to prevent back-siphonage of contaminated water into a potable water system. They are not designed to protect against backpressure conditions; protection against backpressure may require installation of a backflow preventer in the water supply line.

WaterSaver vacuum breakers are intended for use on laboratory faucets and valves. They are typically installed as an integral part of a laboratory faucet gooseneck. In addition, they are used in water supply systems installed in fume hoods, mounted between a remote control water valve and an outlet fitting. As such, WaterSaver vacuum breakers are designed and constructed specifically for the requirements of laboratory applications. They are designed to seal properly and prevent spillage at as low a flow as possible, thus facilitating many common laboratory procedures. However, under certain circumstances, spillage of water from under the vacuum breaker cover can occur.

The purpose of these guidelines is to assist in the correct installation, operation and maintenance of WaterSaver vacuum breakers. In addition, these guidelines will assist in troubleshooting in the event that spillage does occur.

IMPORTANT: Be sure to review applicable local plumbing codes prior to selecting or installing a vacuum breaker. Many codes have specific provisions regarding the type of vacuum breaker that may be used and the design of the system in which it is used.

Figure 1



Installation

The water supply line must be thoroughly flushed prior to installation. The presence of any scale, debris, chips, thread sealant, etc. in the water line may cause fouling of the vacuum breaker, prevent proper sealing of the float cup and damage internal components.

The vacuum breaker must be installed with the supply connected to the bottom inlet of the vacuum breaker.

An atmospheric vacuum breaker must be installed downstream of the last valve in the water supply line.

The Uniform Plumbing Code requires that “potable water outlets with hose attachments...shall be protected by... an atmospheric vacuum breaker installed at least six (6) inches above the highest point of usage and located on the discharge side of the last valve.” [Uniform Plumbing Code, Section 603.4.7 (2003)] Consequently, when the vacuum breaker is installed, the bottom of the vacuum breaker body must be at least 6” above the flood level rim of the sink or fixture into which water is discharged. [See Figure 1.] Where a hose is to be attached to a serrated hose end, the vacuum breaker must be installed at least 6” above the highest point to which the hose can be raised. [See Figure 1.]

Vacuum breakers must be installed in a plumb and level position, perpendicular to the finished floor. If a vacuum breaker is installed in a tilted or angled position, the float cup will tend not to seal squarely against the bottom of the vacuum breaker bonnet. This can promote leakage under low flow conditions.

Since atmospheric vacuum breakers require routine inspection and maintenance (primarily cleaning and/or replacement of internal components), they should be installed in locations in which they are readily accessible. In addition, the Uniform Plumbing Code prohibits installing a backflow preventer in any area containing toxic, poisonous or corrosive fumes. [Uniform Plumbing Code, Section 603.4.15 (2003)] Vacuum breakers should thus not be installed within the work space of a laboratory fume hood.

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

Operation

When the water control valve is closed, the vacuum breaker float cup rests on the vacuum breaker seat. [See Figure 2.] In this position, the atmospheric vent is open and the waterway through the seat is closed.

When the water valve is opened, the water flow pushes the float cup up off the seat and against the vacuum breaker bonnet. The float cup gasket seals against the bottom face of the bonnet. This seal prevents water from passing through the atmospheric vent and spilling out from underneath the vacuum breaker cover.

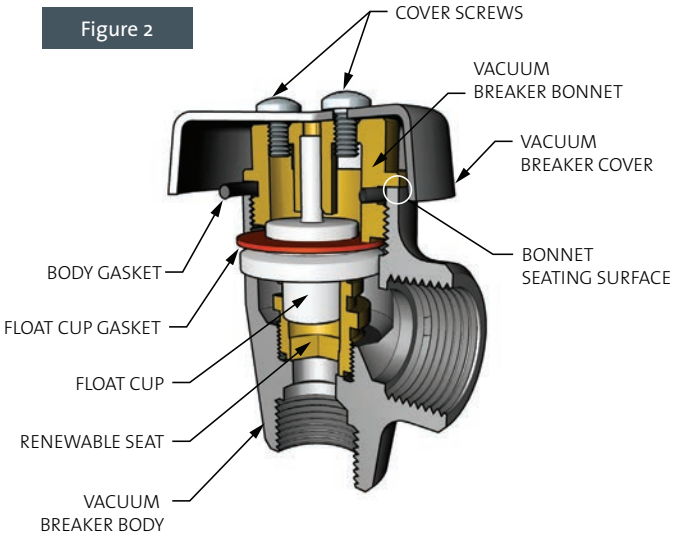
In the event of a loss of pressure on the upstream side of the vacuum breaker and the resulting creation of a negative pressure in the supply line, the float cup drops back down onto the seat. This opens the atmospheric vent and closes the waterway. This action admits air into the discharge line downstream of the vacuum breaker, thereby preventing the creation of a vacuum and stopping any back-siphonage.

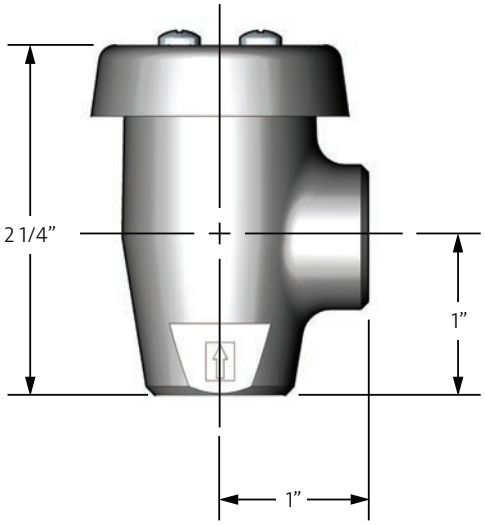
An atmospheric vacuum breaker cannot be used in applications where it is subject to continuous water pressure. In addition, the water control valve should not be left open for extended periods of time.

Maintenance

Contamination of the internal components of the vacuum breaker (e.g. mineral deposits on the float cup gasket or bonnet) may cause a loss of the seal between the float cup gasket and bonnet. Therefore, vacuum breakers should be inspected periodically (at least monthly) for contamination and/or deterioration of the internal working components. Components should be cleaned or replaced as required.

Figure 2





WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

Troubleshooting

The most common problem associated with atmospheric vacuum breakers is the occurrence of spillage of water from underneath the vacuum breaker cover. There are many possible causes of this. Set forth below is a list of the potential causes of spillage, together with the appropriate solution for the problem:

1. ***Vacuum Breaker Installed At Angle.*** As noted above, if a vacuum breaker is installed in a tilted or angled position, the float cup will not seal evenly against the bottom of the bonnet. To address this issue, adjust the position of the vacuum breaker so as to be plumb and level.
2. ***Contamination of Float Cup Gasket.*** If the water contains a high level of calcium or other minerals, deposits and scale can accumulate on the float cup gasket. If this occurs, the gasket will not seal completely against the bonnet. The gasket should be cleaned or replaced.
3. ***Contamination of Bonnet.*** Build-up of deposits can occur on the seating surface of the bonnet as well. The bonnet must then be cleaned or replaced.
4. ***High Water Pressure.*** As noted above, WaterSaver vacuum breakers are designed specifically for laboratory applications. The float cup and gasket are extremely light to permit sealing at as low a flow as possible (since many laboratory procedures require low flow over an extended period of time). When used in water systems with high water pressure (greater than 70 PSI), these components can wear out more quickly than at low pressure. If that occurs, the vacuum breaker may not seal properly at low flow. In higher pressure applications, the float cup and gasket might require replacement at more frequent intervals.
5. ***Deterioration of Bonnet Gasket.*** The vacuum breaker bonnet is sealed into the vacuum breaker body using a nylon gasket or O-ring. Over time, this gasket or O-ring can deteriorate and leakage can occur. In that event, the gasket or O-ring should be replaced.
6. ***Connection to Elevated Equipment.*** As noted above, the vacuum breaker must be installed at least 6" above the flood level rim of the sink or the highest point which can be reached by a hose attached to the outlet. Thus, if a hose is attached to the serrated end of a laboratory faucet, the free end of the hose should not be capable of reaching a height that is less than 6" below the vacuum breaker.

   Spillage can occur in the event that a hose is attached to a faucet and extended above the level of the vacuum breaker. In this situation, when the valve is opened and water is flowing through the system, there can be an accumulation of water in the hose downstream of the vacuum breaker. The pressure created by the weight of the downstream water may exceed the water pressure upstream of the vacuum breaker, causing a negative pressure situation. This will cause a reversal of flow, the vacuum breaker will close, and spillage will occur. In this situation, the vacuum breaker is acting exactly as it is designed in preventing backflow.

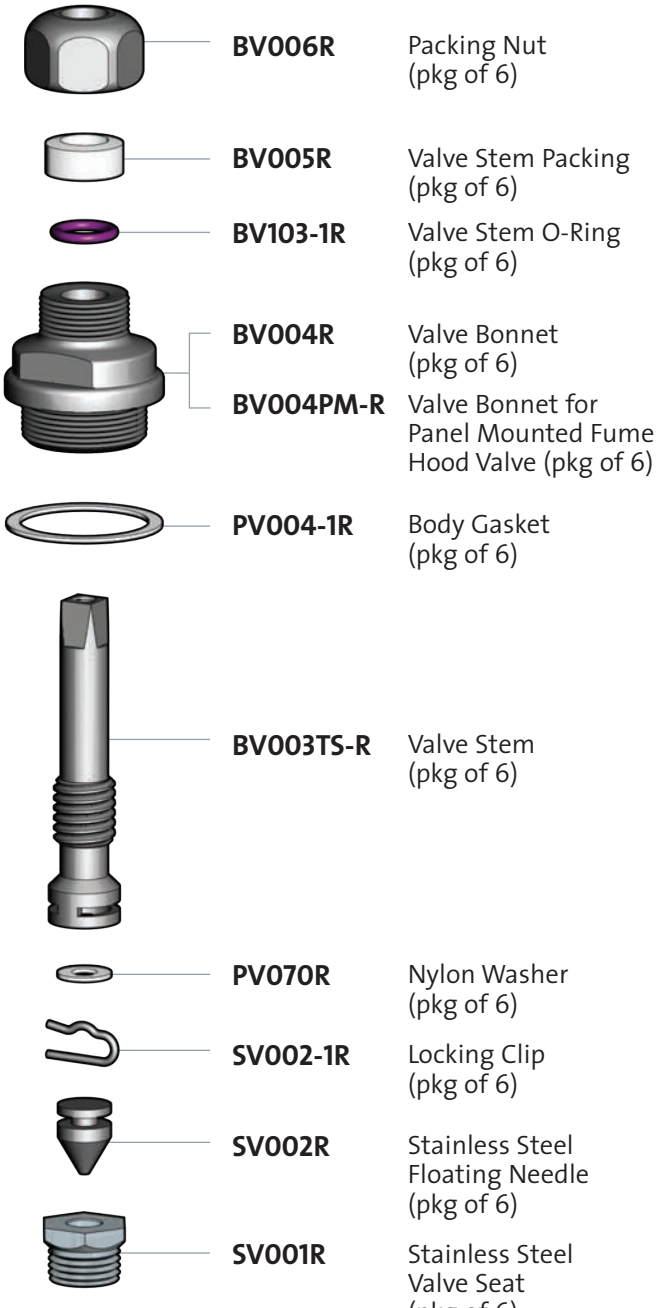
   The situation described above is most likely to occur when the water control valve is opened a slight amount and left in this position for a long period of time. Fluctuations in supply line pressure and flow may cause the float cup to "flutter" rather than seal continuously against the bonnet. This will accentuate the tendency for a negative pressure situation to develop.

   One possible solution for spillage of this type is to install a non-positive closing volume control device (such as the WaterSaver BO358) on the faucet outlet. The control valve can then be fully opened, permitting the vacuum breaker float cup to seal. Water flow is metered using the volume control on the outlet. As noted above, the Uniform Plumbing Code requires that vacuum breakers be located on the discharge side of the last valve in the water line. Therefore, the volume control device must not be capable of fully closing.

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

- **BV200N** Needle Valve Components
- **BV200N-PM** Needle Valve Components for Panel Mounted Fume Hood Valve



BV006R Packing Nut (pkg of 6)

BV005R Valve Stem Packing (pkg of 6)

BV103-1R Valve Stem O-Ring (pkg of 6)

BV004R Valve Bonnet (pkg of 6)

BV004PM-R Valve Bonnet for Panel Mounted Fume Hood Valve (pkg of 6)

PV004-1R Body Gasket (pkg of 6)

BV003TS-R Valve Stem (pkg of 6)

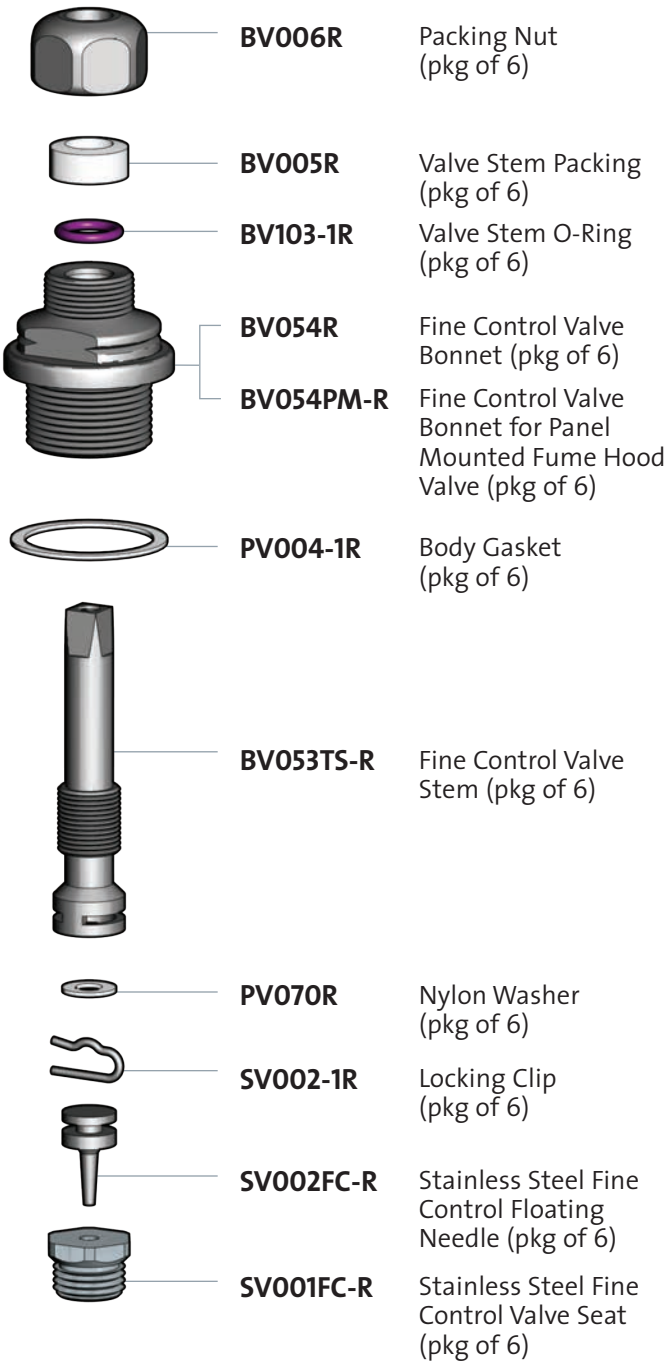
PV070R Nylon Washer (pkg of 6)

SV002-1R Locking Clip (pkg of 6)

SV002R Stainless Steel Floating Needle (pkg of 6)

SV001R Stainless Steel Valve Seat (pkg of 6)

- **BV200FCN** Fine Control Needle Valve Components
- **BV200NFCN-PM** Fine Control Needle Valve Components for Panel Mounted Fume Hood Valve



BV006R Packing Nut (pkg of 6)

BV005R Valve Stem Packing (pkg of 6)

BV103-1R Valve Stem O-Ring (pkg of 6)

BV054R Fine Control Valve Bonnet (pkg of 6)

BV054PM-R Fine Control Valve Bonnet for Panel Mounted Fume Hood Valve (pkg of 6)

PV004-1R Body Gasket (pkg of 6)

BV053TS-R Fine Control Valve Stem (pkg of 6)

PV070R Nylon Washer (pkg of 6)

SV002-1R Locking Clip (pkg of 6)

SV002FC-R Stainless Steel Fine Control Floating Needle (pkg of 6)

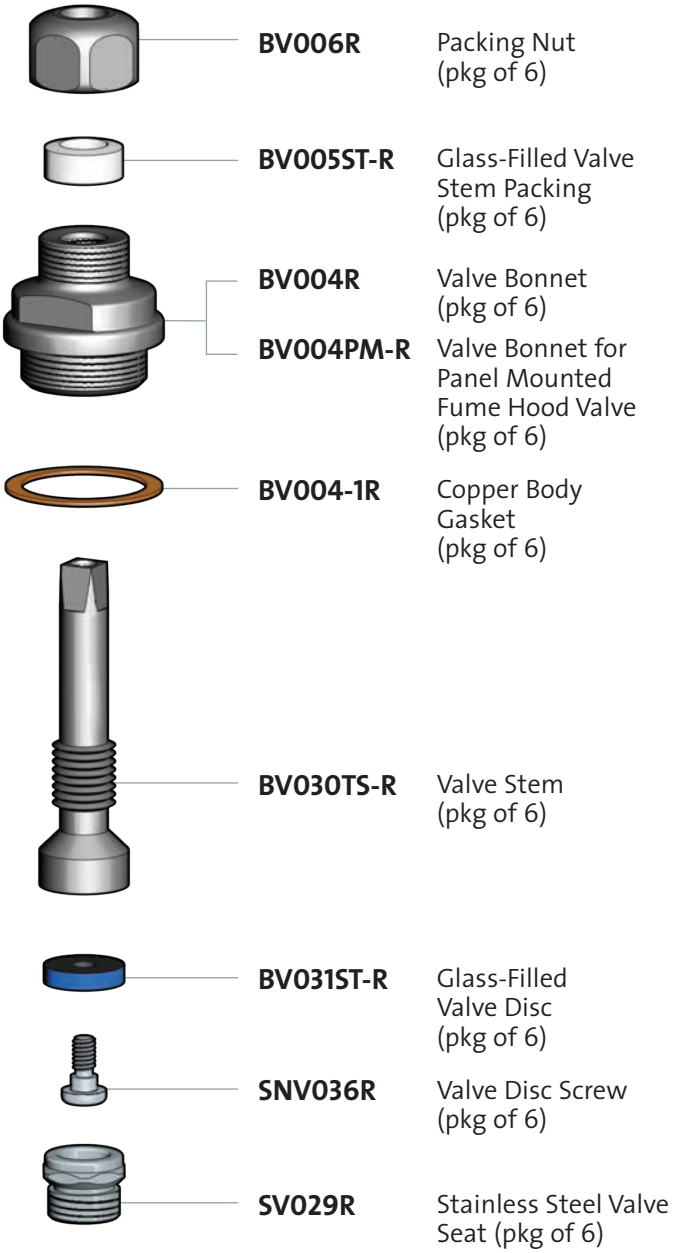
SV001FC-R Stainless Steel Fine Control Valve Seat (pkg of 6)

Note: If valve is used for oxygen or pure gas service, components must be specially cleaned, lubricated and packed.

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

- **BV200S** Steam Valve Components
- **BV200S-PM** Steam Valve Components for Panel Mounted Fume Hood Valve



BV006R Packing Nut (pkg of 6)

BV005ST-R Glass-Filled Valve Stem Packing (pkg of 6)

BV004R Valve Bonnet (pkg of 6)

BV004PM-R Valve Bonnet for Panel Mounted Fume Hood Valve (pkg of 6)

BV004-1R Copper Body Gasket (pkg of 6)

BV030TS-R Valve Stem (pkg of 6)

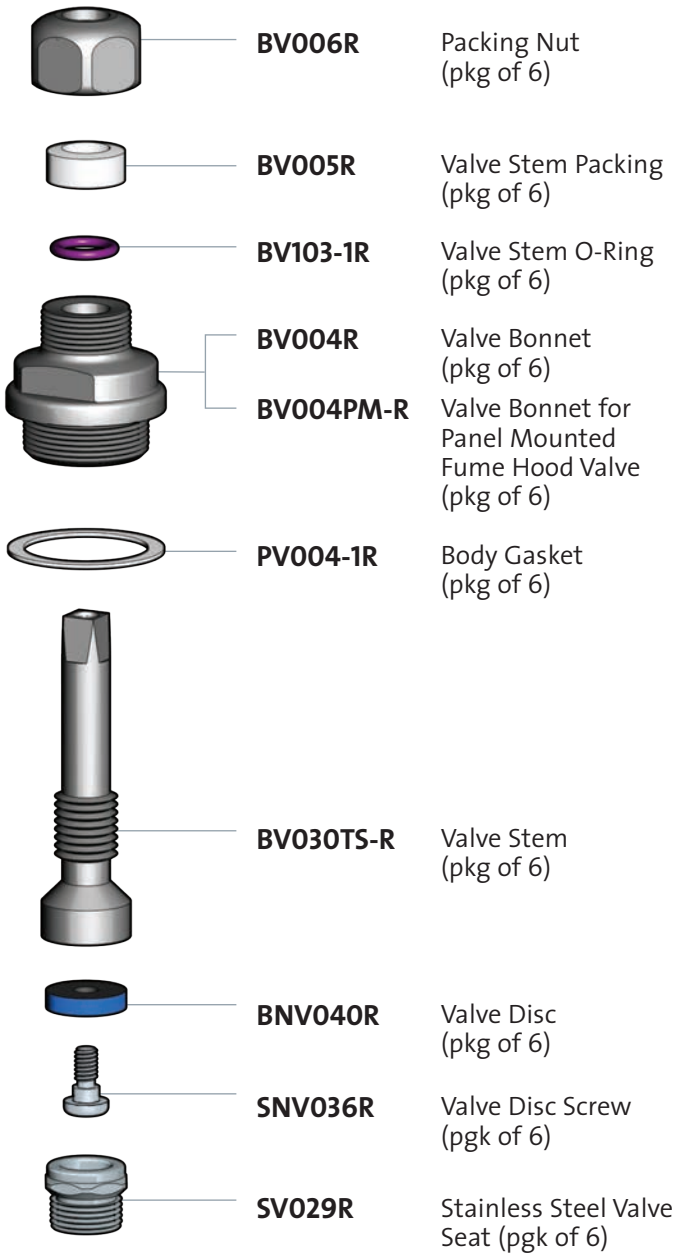
BV031ST-R Glass-Filled Valve Disc (pkg of 6)

SNV036R Valve Disc Screw (pkg of 6)

SV029R Stainless Steel Valve Seat (pkg of 6)

- **BV200W** Water Valve Components
- **BV200W-PM** Water Valve Components for Panel Mounted Fume Hood Valve

Note: BV200W is used on remote control water valves for fume hood use.



BV006R Packing Nut (pkg of 6)

BV005R Valve Stem Packing (pkg of 6)

BV103-1R Valve Stem O-Ring (pkg of 6)

BV004R Valve Bonnet (pkg of 6)

BV004PM-R Valve Bonnet for Panel Mounted Fume Hood Valve (pkg of 6)

PV004-1R Body Gasket (pkg of 6)

BV030TS-R Valve Stem (pkg of 6)

BNV040R Valve Disc (pkg of 6)

SNV036R Valve Disc Screw (pgk of 6)

SV029R Stainless Steel Valve Seat (pgk of 6)

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

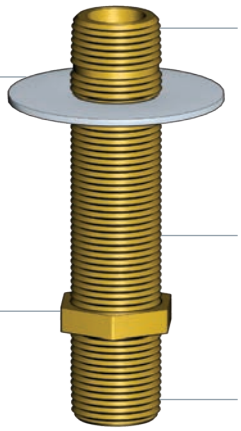
312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

Mounting Shanks, 3/8" IPS, Brass

SI083B-R
Lockwasher, 3/8" IPS, Stainless Steel (pkg of 6)

STI083B-R
Lockwasher, 3/8" IPS, Steel with Black Zinc Coating (pkg of 6)

BI079R
Locknut, 3/8" IPS, Brass (pkg of 6)

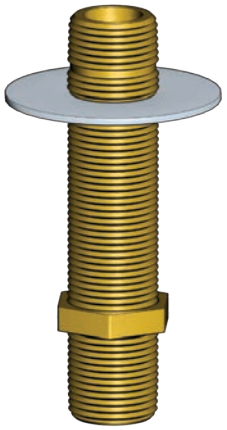


ITEM NO.	OAL
BI136-01-04R	1 1/4"
BI136-01-08R	1 1/2"
BI136-01-14R	1 7/8"
BI136-02R	2"
BI136-02-02R	2 1/8"
BI136-02-04R	2 1/4"
BI136-02-08R	2 1/2"
BI136-02-12R	2 3/4"
BI136-03R	3"

ITEM NO.	OAL
BI136-03-04R	3 1/4"
BI136-03-08R	3 1/2"
BI136-03-12R	3 3/4"
BI136-04R	4"
BI136-04-04R	4 1/4"
BI136-04-06R	4 3/8"
BI136-04-08R	4 1/2"
BI136-04-12R	4 3/4"

Mounting Shanks, 3/8" IPS, Brass, Heavy Duty

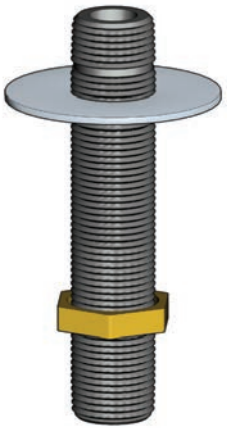
Note:
Heavy duty mounting shanks are used on vandal-resistant fixtures and in applications where the weight of the fixture might cause unusual stress on the shank.



ITEM NO.	OAL
BI136-02-08HD-R	2 1/2"
BI136-02-12HD-R	2 3/4"
BI136-03-04HD-R	3 1/4"
BI136-03-08HD-R	3 1/2"
BI136-04HD-R	4"

Mounting Shanks, 3/8" IPS, Black Iron

Note:
Black iron shanks are used on fixtures for natural gas, propane and other burning gases.



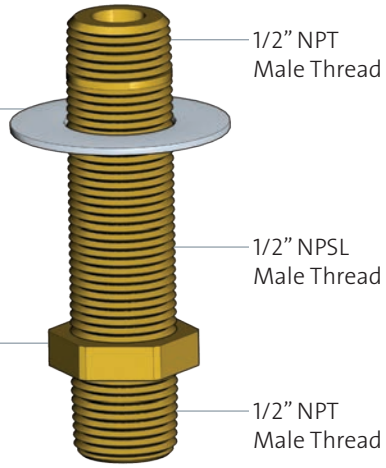
ITEM NO.	OAL
STI136-01-04R	1 1/4"
STI136-01-08R	1 1/2"
STI136-01-14R	1 7/8"
STI136-02R	2"
STI136-02-04R	2 1/4"
STI136-02-08R	2 1/2"

ITEM NO.	OAL
STI136-02-12R	2 3/4"
STI136-03R	3"
STI136-03-08R	3 1/2"
STI136-04R	4"
STI136-04-12R	4 3/4"

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

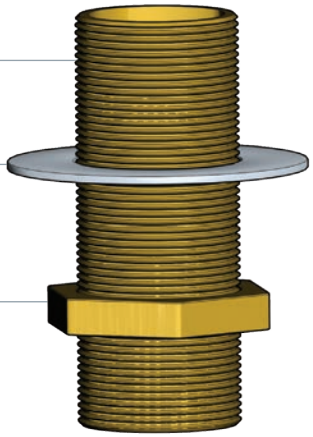
312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

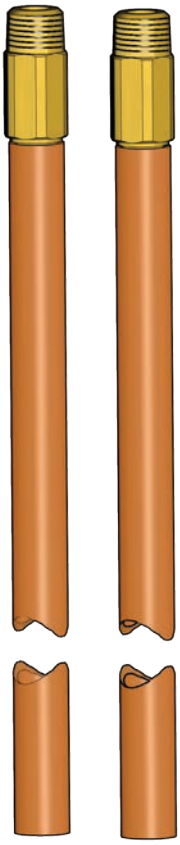
Mounting Shanks, 1/2" IPS, Brass, Heavy Duty



ITEM NO.	OAL
BI137-02-08HD-R	2 1/2"
BI137-03-08HD-R	3 1/2"
BI137-04HD-R	4"

Inlet Fittings for L400 Series Mixing Faucets



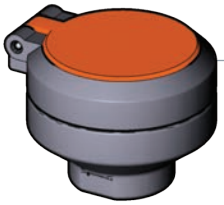


BI425-12R
3/8" OD x 12" Flexible
Copper Inlet Tubes,
1/8" NPT Male Thread
(pkg of 2)

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

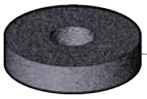
312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

GS-Plus™ Spray Head

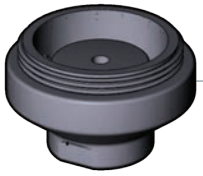


AP470-001
GS-Plus™ Spray Head.
1 1/2" Diameter.
1/4" NPT female inlet.

AP470-002ORG-R
1 1/2" Diameter Spray Cover with "Flip Top" Dust Cover (pkg of 2)



470-004R
1 1/8" Diameter Foam Filter (pkg of 6)



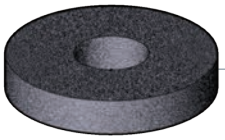
470-001R
GS-Plus Spray Head Body (pkg of 6)

470-005R
1.6 Gallon Per Minute Flow Control (pkg of 6)

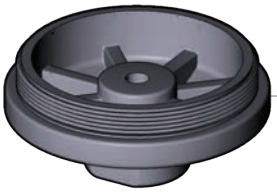
FS-Plus™ Spray Head

AP470-021
FS-Plus™ Spray Head.
2 1/8" Diameter.
1/4" NPT female inlet.

AP470-022ORG-R
2 1/8" Diameter Spray Cover with "Flip Top" Dust Cover (pkg of 2)



470-024R
1 3/4" Diameter Foam Filter (pkg of 6)



470-021R
FS-Plus Spray Head Body (pkg of 6)

470-025R
3.2 Gallon Per Minute Flow Control (pkg of 6)

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

330-12-08RSE-ORG
Orange Plastic Street Elbow

330-12-08RSE-GRN
Green Plastic Street Elbow

330-12-08RSE-YEL
Yellow Plastic Street Elbow

1" NPT female inlet, 1 1/2" NPT male outlet.

AP450-032ORG
Orange Plastic Shower Head. 1 1/2" NPT female inlet.

AP450-032GRN
Green Plastic Shower Head. 1 1/2" NPT female inlet.

AP450-032YEL
Yellow Plastic Shower Head. 1 1/2" NPT female inlet.

300-08SE
1" IPS Galvanized Steel Street Elbow

310-08SE
1" IPS Polished Chrome Plated Brass Street Elbow

320-08SE
1" IPS Stainless Steel Street Elbow

AP450-016
Rough Chrome Plated Cast Brass Shower Head. 1" NPT female inlet.

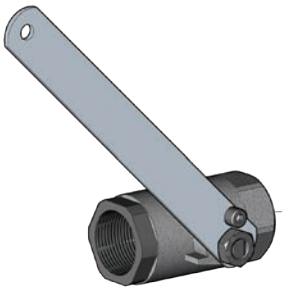
AP450-016PC
Polished Chrome Plated Cast Brass Shower Head. 1" NPT female inlet.

AP450-048
Stainless Steel Shower Head. 1" NPT female inlet.

AP450-062
Stainless Steel Flanged Shower Head. 1" NPT female inlet.

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com



AP600-335H
1" IPS Chrome Plated Brass Stay-Open Ball Valve with Actuating Arm (Horizontal Installation)

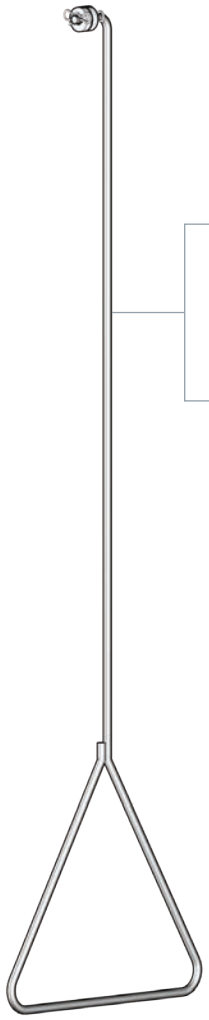
AP600-345H
1" IPS Chrome Plated Brass Self-Closing Ball Valve with Actuating Arm (Horizontal Installation)

AP620-335H
1" IPS Stainless Steel Stay-Open Ball Valve with Actuating Arm (Horizontal Installation)

AP600-335V
1" IPS Chrome Plated Brass Stay-Open Ball Valve with Actuating Arm (Vertical Installation)

AP600-345V
1" IPS Chrome Plated Brass Self-Closing Ball Valve with Actuating Arm (Vertical Installation)

AP620-335V
1" IPS Stainless Steel Stay-Open Ball Valve with Actuating Arm (Vertical Installation)



AP050-079
29" Stainless Steel Pull Rod

AP050-080
47 1/2" Stainless Steel Pull Rod

AP050-081
Custom Length Stainless Steel Pull Rod. Specify length when ordering (82" maximum).

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

Bowls

100-009ORG-R
Orange Plastic Bowl.
Furnished with cupped
washer and gasket.

100-009GRN-R
Green Plastic Bowl

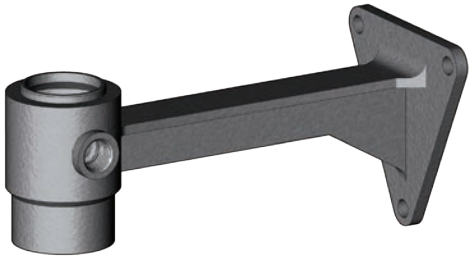
100-009YEL-R
Yellow Plastic Bowl

100-008R
Stainless Steel Bowl.
Furnished with cupped
washer and gasket.

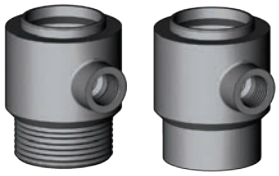
AP150-012A
Stainless Steel Drain Plate with Cupped
Washer and Gasket for Plastic Bowl.

AP150-012B
Stainless Steel Drain Plate with Cupped
Washer and Gasket for Stainless Steel Bowl.

Mounting Fittings



150-014E-2
Powder Coated Cast
Aluminum Wall Bracket.
1 1/4" NPT female outlet.



150-066-1R
Aluminum Waste Receptor for Safety
Stations. Furnished with supply nipple
and coupling nut. 1 1/2" NPT male outlet.

150-066-2
Aluminum Waste Receptor for Pedestal
and Deck Mounted Units.
1 1/4" NPT female outlet.

150-032
Powder Coated Cast
Aluminum Floor Flange.
1 1/4" NPT female thread.

Drain Fittings

AP250-017
Chrome Plated Cast Brass
Tailpiece and Trap.
1 1/4" NPT male inlet,
1 1/2" NPT female outlet.

250-017-2
Chrome Plated Brass Tailpiece.
1 1/4" NPT male inlet,
1 1/2" OD male outlet.

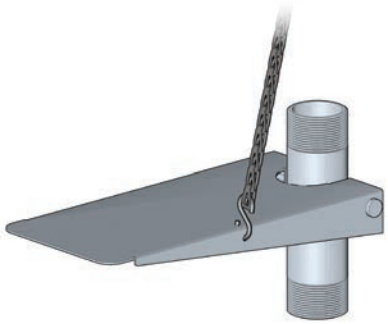
WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

Eyewash and Eye/Face Wash Valves and Actuators

AP600-101H
1/2" IPS Chrome Plated Brass Stay-Open Ball Valve with Flag Handle

AP620-101H
1/2" IPS Stainless Steel Stay-Open Ball Valve with Flag Handle



AP050-010
Hand/Foot Control Treadle Assembly with Chain

Eyewash/Drench Hose Components

AP350-100-096
8 ft. reinforced PVC hose for eyewash/drench hose and drench hose unts. 3/8" NPT male swivel inlet, 3/8" NPT male outlet.

350-007
Molded nylon handle for eyewash/drench hose and drench hose units.

AP350-011W
Molded nylon deck flange for eyewash/drench hose and drench hose units. 1" IPS mounting shank.

AP150-003A
45 degree panel flange for eyewash/drench hose and drench hose units. 3/4" IPS mounting shank.

AP150-051C
Wall Bracket for Eyewash/Drench Hose Units

150-062A
Wall Hook for Drench Hose Units

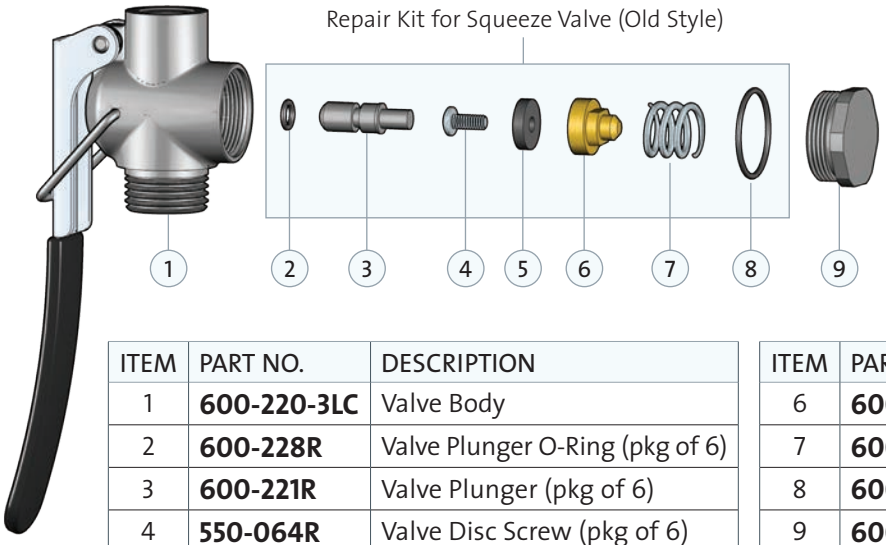
WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

AP600-220-3LC Squeeze Valve with Locking Clip (Old Style). 3/8" NPT Female Outlet.

Note: Prior to 2002, WaterSaver manufactured the AP600-220-3 squeeze valve. This valve had an integral (non-removable) valve seat. In 2002, WaterSaver replaced this valve with the AP600-240 valve with a replaceable stainless steel valve seat. All eyewash/drench hose units and drench hose units manufactured after 2002 utilize the AP600-240 squeeze valve.

RK600-220
Repair Kit for Squeeze Valve (Old Style)



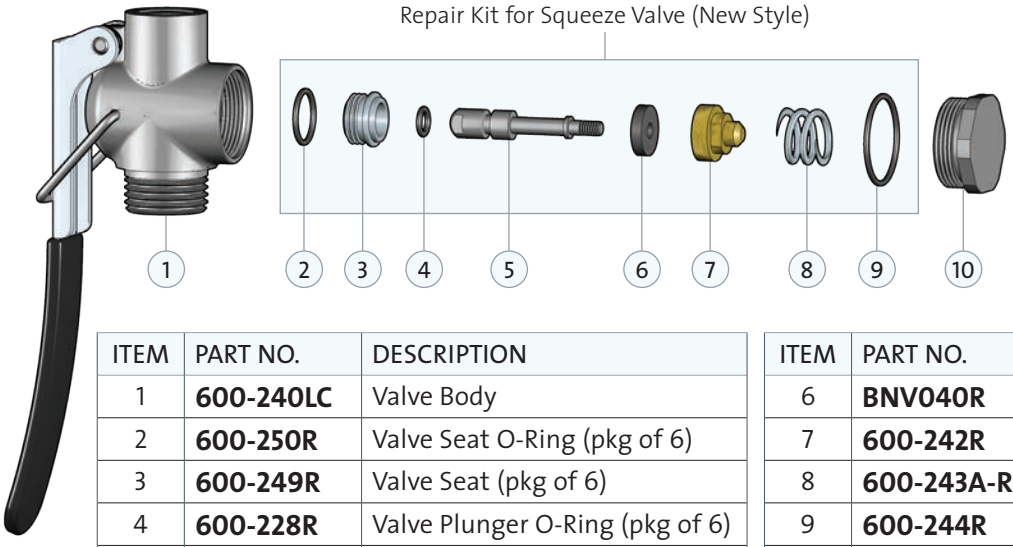
ITEM	PART NO.	DESCRIPTION
1	**600-220-3LC**	Valve Body
2	**600-228R**	Valve Plunger O-Ring (pkg of 6)
3	**600-221R**	Valve Plunger (pkg of 6)
4	**550-064R**	Valve Disc Screw (pkg of 6)
5	**BNV040R**	Valve Disc (pkg of 6)

ITEM	PART NO.	DESCRIPTION
6	**600-242R**	Valve Disc Holder (pkg of 6)
7	**600-223A-R**	Spring (pkg of 6)
8	**600-224R**	Bonnet O-Ring (pkg of 6)
9	**600-225R**	Valve Bonnet (pkg of 6)

AP600-240LC Squeeze Valve with Locking Clip (New Style). 3/8" NPT Female Outlet.

Note: Prior to 2002, WaterSaver manufactured the AP600-220-3 squeeze valve. This valve had an integral (non-removable) valve seat. In 2002, WaterSaver replaced this valve with the AP600-240 valve with a replaceable stainless steel valve seat. All eyewash/drench hose units and drench hose units manufactured after 2002 utilize the AP600-240 squeeze valve.

RK600-240
Repair Kit for Squeeze Valve (New Style)



ITEM	PART NO.	DESCRIPTION
1	**600-240LC**	Valve Body
2	**600-250R**	Valve Seat O-Ring (pkg of 6)
3	**600-249R**	Valve Seat (pkg of 6)
4	**600-228R**	Valve Plunger O-Ring (pkg of 6)
5	**600-241R**	Valve Plunger (pkg of 6)

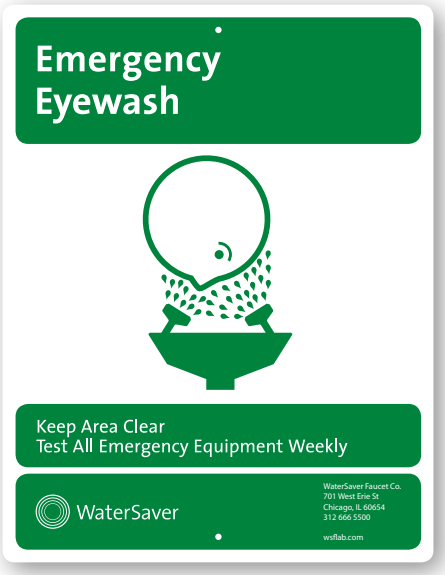
ITEM	PART NO.	DESCRIPTION
6	**BNV040R**	Valve Disc (pkg of 6)
7	**600-242R**	Valve Disc Holder (pkg of 6)
8	**600-243A-R**	Spring (pkg of 6)
9	**600-244R**	Bonnet O-Ring (pkg of 6)
10	**600-245R**	Valve Bonnet (pkg of 6)

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

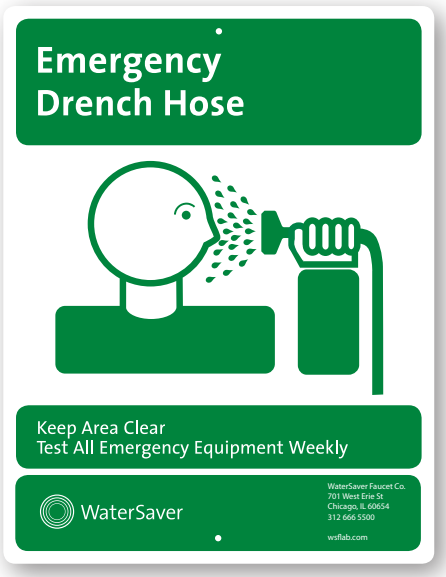
Note: All signs are 8 1/2" x 11" plastic

250-009W



250-007W

250-010W



250-006W

AP250-008W

250-012W

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

WaterSaver

INNOVATIVE PRODUCTS FOR RESEARCH

IOM-010

WaterSaver Faucet
701 W Erie St
Chicago, IL 60654
312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
info@wsflab.com

WaterSaver Faucet
de Mexico SA de CV
Calle Martel #540
Apodaca, NL
Mexico 66634
52 81 10 900000 TELEPHONE

WaterSaver Sales Asia Pte Ltd
30 Petain Road
Singapore 208099
65 6883 2105 TELEPHONE
65 6883 2509 FACSIMILE

WaterSaver LabTaps Ltd
Unit 9
High Carr Network Centre
Newcastle-Under-Lyme
Staffordshire, England, ST5 7XE
44 01782 576910 TELEPHONE
44 01782 576911 FACSIMILE

wsflab.com