**SLOAN.**

# G2 Optima® Flushometer

A-3 Body

Earlier model with A-3 body
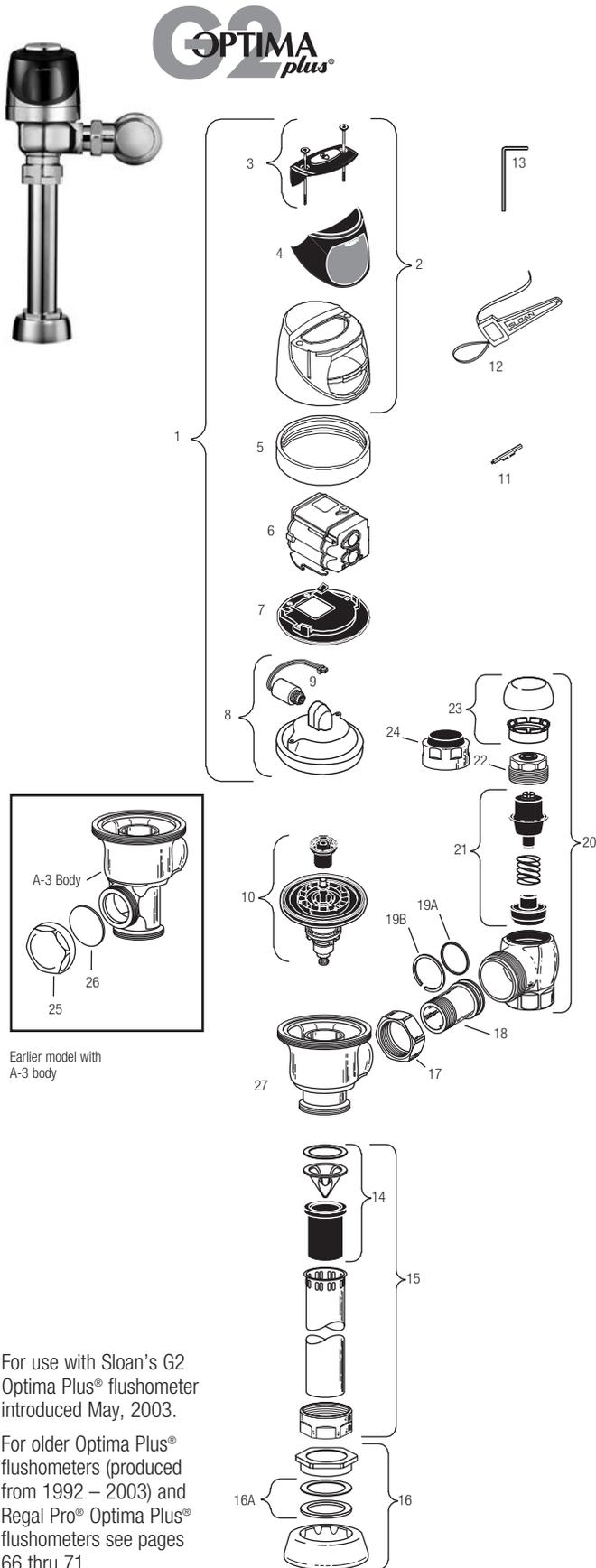
For use with Sloan's G2 Optima Plus® flushometer introduced May, 2003.

For older Optima Plus® flushometers (produced from 1992 – 2003) and Regal Pro® Optima Plus® flushometers see pages 66 thru 71.

## SENSOR MODULE COMPONENT PARTS

| Item No. | Code No. | Part No. | Description |
|---|---|---|---|
| 1. | **0325160** | EBV-138-A | G2 Cover/Ring/Sensor Assembly – Water Closet |
| | **0325161** | EBV-139-A | G2 Cover/Ring/Sensor Assembly – Urinal |
| | **0325166** | EBV-149-A | G2 Cover/Ring/Sensor Assembly – Water Closet w/Zurn Ring |
| | **0325167** | EBV-150-A | G2 Cover/Ring/Sensor Assembly – Urinal w/Zurn Ring |
| 2. | **0325168** | EBV-142-A | Cover Assembly |
| 3. | **0325172** | EBV-130-A | Override Button Assembly includes screws & hex wrench |
| | **0325170** | EBV-132-A | Screws (2) and Allen Wrench Only |
| 4. | **0325169** | EBV-131 | Lens Window Cover |
| 5. | **0325804** | EBV-14 | Locking Ring CP |
| | **0325210** | EBV-168 | Locking Ring CP |
| | **3325524** | EBV-31-A | Locking Ring – for Zurn Valves |
| 6. | **3325450** | EBV-129-A-C | G2 Electronic Module – Water Closet |
| | **3325451** | EBV-129-A-U | G2 Electronic Module – Urinal |
| 7. | **0325171** | EBV-134 | Cover Rest Plate |
| 8. | **3325456** | EBV-145-A | Inside Cover Assembly (includes solenoid EBV-136-A) |
| | **3325089** | EBV-1010-A | Inside Cover Assembly (includes solenoid EBV-136-A and locking ring EBV-14) |
| 9. | **3325453** | EBV-136-A | Solenoid (For G2 Modules only)* |
| 10. | **SEE CHART NEXT PAGE** | | Flex Tube Diaphragm Kit |

* Refer to Page 58 for instructions regarding solenoid replacement.

## ACCESSORIES

| Item No. | Code No. | Part No. | Description |
|---|---|---|---|
| 11. | **0325107** | EBV-91 | Trimpot Adjustment Screwdriver |
| 12. | **0305823** | EBV-22 | Strap Wrench |
| 13. | **0325170** | EBV-132-A | Allen Wrench |

## VALVE COMPONENT PARTS

| Item No. | Code No. | Part No. | Description |
|---|---|---|---|
| 14. | **3323182** | V-651-A | Vacuum Breaker Repair Kit |
| 15. | **0393004** | V-600-AA | 3/4'' x 9'' CP Vacuum Breaker |
| | **0393006** | V-600-AA | 1-1/4'' x 9'' CP Vacuum Breaker |
| | **3393007** | V-600-AA | 1-1/2'' x 9'' CP Vacuum Breaker |
| 16. | **0306125** | F-5-AW | 3/4'' CP Spud Coupling |
| | **0306140** | F-5-AU | 1-1/4'' CP Spud Coupling |
| | **0306146** | F-5-AT | 1-1/2'' CP Spud Coupling |
| 16A. | **SEE SLIP JOINT GASKETS AND RINGS TABLE ON NEXT PAGE** | | |
| 17. | **0308676** | H-550 | CP Stop Coupling |
| 18. | **0308801** | H-551-A | CP Adjustable Tailpiece 2-1/16'' long |
| 19A. | **5308696** | H-553 | O-ring – 24 per package |
| 19B. | **5308381** | H-552 | Locking ring – 12 per package |
| 20. | **3308386** | H-700-A | 1'' Screwdriver Bak-Chek® Stop CP – complete |
| | **3308384** | H-700-A | 3/4'' Screwdriver Bak-Chek® Stop CP – complete |
| 21. | **3308853** | H-541-A | Control Stop Repair Kit † |
| | **3308856** | H-543-A | Control Stop Repair Kit ‡ 3/4" H-540/H-600 only |
| 22. | **0308612** | H-622 | CP Bonnet † |
| | 0308843 | H-577 | CP Bonnet ‡ – **OBSOLETE** |
| 23. | **3308772** | H-1010-A | Vandal Resistant Control Stop Cap Assembly † |
| | **3308790** | H-1009-A | Vandal Resistant Control Stop Cap Assembly ‡ |
| 24. | **3325816** | EBV-1019-A | 3/4'' Decorative Stop Cap |
| | **3308866** | H-574 | 1'' Decorative Stop Cap |
| 25. | **3325814** | EBV-1017-A | Handle Cap — Metal |
| 26. | **0311042** | K-46 | Blind Nut Gasket |
| 27. | **0305381** | EBV-36-A | Squatty Valve Body |
| 28. | **3388015** | H-1050 | Flow Control Kit (HEU Only) (not Shown) |

† For use with 1" and 3/4" H-700-A and 1" H-600-A Bak-Chek® screwdriver control stop
‡ For use with H-600-A 3/4'' screwdriver Bak-Chek® control stops

# SLOAN.

# G2 Optima® Flushometer

Sloan introduced its Optima Plus® battery powered sensor flushometer in 1992, revolutionizing the flushing of water closets and urinals. In both new construction and retrofit applications, the use of the Optima Plus has become the standard method for many facilities to improve restroom hygiene and ensure handicap accessibility compliance.
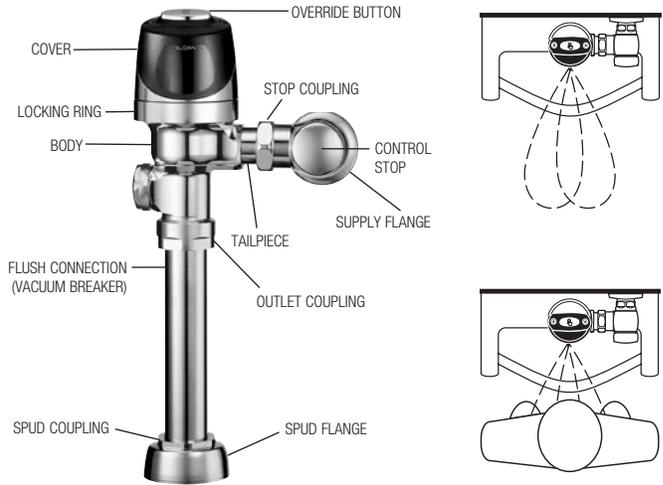
In May, 2003 Sloan introduced the G2 Optima Plus.

The G2 Optima Plus builds on the success of the original product and offers many technological advancements to further improve on performance and reliability expected of sensor activated plumbing. In addition to a new aesthetic design, the G2 Optima Plus features a new state-of-the-art electronic and optical package and a unique solenoid operator that keeps the moving components of the solenoid completely isolated from the water supply. This ensures long life and low maintenance regardless of local water condition.

The G2 Optima Plus replaces the original Optima Plus product, which was phased out of production in mid-2003.

The Sloan G2 Optima Plus automatic battery powered flushometer relies on an infrared sensor to detect a user and activate a flushing cycle. No physical contact with the flushometer surface is necessary, assuring sanitary protection. G2 Optima Plus flushometers are ADA compliant devices.

The flushometer is triggered by means of an active infrared sensor. The Optima Plus sensor emits a continuous invisible light beam. When a user enters the beam's effective range, the beam is reflected into the Optima Plus scanner window. The user is now detected. After the user moves out of the effective range of the sensor, a signal is sent to the flushometer solenoid and, after appropriate arming and/or flush delays, the flush cycle is initiated.

## ITEM 10. FLEX TUBE DIAPHRAGM KIT

| Code No. | Part No. | Description | Regulator Color * |
|---|---|---|---|
| **3325098** | EBV-1026-A | Urinal-0.125 gpf/0.5 Lpf | GREEN |
| **3325090** | EBV-1025-A | Urinal-0.25 gpf/1.0 Lpf | GREEN |
| **3325003** | EBV-1023-A | Urinal-0.5 gpf/1.9 Lpf†‡ | GREEN |
| **3325000** | EBV-1022-A | Urinal-1.0 gpf/3.8 Lpf | GREEN |
| **3325000** | EBV-1022-A | Urinal-1.5 gpf/5.7 Lpf † | BLACK |
| **3325001** | EBV-1020-A | Urinal-3.5 gpf/13.2 Lpf † | WHITE |
| **3325031** | EBV-1024-A | Closet-1.28 gpf/4.8 Lpf | GREEN |
| **3325001** | EBV-1020-A | Closet-1.6 gpf/6.0 Lpf † | GREEN |
| **3325014** | EBV-1021-A | Closet-2.4 gpf/9.0 Lpf | BLUE |
| **3325001** | EBV-1020-A | Closet-3.5 gpf/13.2 Lpf | WHITE |
| **3325001** | EBV-1020-A | Closet-4.5 gpf/17.0 Lpf § | WHITE |

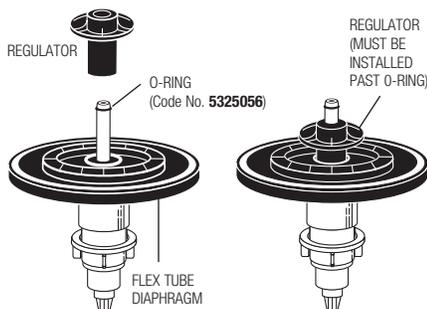† EBV-1020-A and EBV-1022-A are supplied with multiple regulators.
‡ A 0.5 gpf (1.9 Lpf) urinal kit can be converted to a 1.0 gpf (3.8 Lpf) by cutting and removing the smooth A-164 flow ring from the guide.
§ For a 4.5 gpf (17 Lpf) water closet flush use EBV-1020-A with the white regulator, and cut and remove the A-164 flow ring from the guide.
* Color of regulator to be used with flex tube diaphragm to obtain the listed flush volume.

### O-RING

| Code No. | Part No. | Description |
|---|---|---|
| **5325056** | EBV-83 | O-ring – 6 per package |



REGULATOR

O-RING
(Code No. **5325056**)

REGULATOR
(MUST BE
INSTALLED
PAST O-RING)

FLEX TUBE
DIAPHRAGM



COVER

LOCKING RING

BODY

OVERRIDE BUTTON

STOP COUPLING

CONTROL STOP

SUPPLY FLANGE

TAILPIECE

FLUSH CONNECTION (VACUUM BREAKER)

OUTLET COUPLING

SPUD COUPLING

SPUD FLANGE

## REGULATORS

The flush volume of the flex tube diaphragm kit is controlled by the regulator. Regulators are identified by color. Some flex tube diaphragm kits are supplied with multiple regulators. The installer must make sure the proper regulator is used when installing the flex tube diaphragm kit.

### REGULATOR (SOLD 6 PER PACKAGE)

| Code No. | Part No. | Description | Regulator Color |
|---|---|---|---|
| **5325122** | EBV-95 | Urinal-0.25 gpf/1.0 Lpf | GREEN |
| **5325122** | EBV-95 | Urinal-0.5 gpf/1.9 Lpf | GREEN |
| **5325122** | EBV-95 | Urinal-1.0 gpf/3.8 Lpf | GREEN |
| **5325129** | EBV-102-2 | Urinal-1.5 gpf/5.7 Lpf | BLACK |
| **5325130** | EBV-102-1 | Urinal-3.5 gpf/13.2 Lpf | WHITE |
| **5325122** | EBV-95 | Closet-1.28 gpf/4.8 Lpf | GREEN |
| **5325122** | EBV-95 | Closet-1.6 gpf/6.0 Lpf | GREEN |
| **5325130** | EBV-102-1 | Closet-3.5 gpf/13.2 Lpf | WHITE |
| **5325128** | EBV-101 | Closet-2.4 gpf/9.0 Lpf | BLUE |

EBV-1020-A and EBV-1022-A are supplied with multiple flush volume regulators.
The installer must use the correct regulator when installing the kit.

### ITEM 16A. SLIP JOINT GASKETS AND RINGS

| Size | Code No. | Part No. | Description |
|---|---|---|---|
| 1-1/2" | **5306058** | F-3 | Red Friction Ring |
| | **5322001** | VBF-5 | Black Slip Joint Gasket |
| | **0319086/5319086** | S-30 | Flexible Seat |
| | **0319079** | S-21 | Rigid Seat (rubber over brass) |
| 1-1/2" x 1-1/4" | **0396062** | F-105 | Slip Joint Gasket – Rigid |
| 1-1/4" | **5306057** | F-3 | Red Friction Ring |
| | **5322176** | VBF-5 | Black Slip Joint Gasket |
| | **0307052/5307052** | G-21 | Rigid Seat (rubber over brass) |
| 1" | **5306056** | F-3 | Red Friction Ring |
| | **5306115** | F-5 | Black Slip Joint Gasket |
| 3/4" | **5306055** | F-3 | Red Friction Ring |
| | **5306113** | F-5 | Black Slip Joint Gasket |

Sensor Flushometers

# G2 Optima® Flushometer

**SOLENOID REPLACEMENT**

| Code No. | Part No. | Description |
|----------|----------|-------------|
| **3325453** | EBV-136-A | Solenoid operator |

For G2 Optima Plus® modules (identified by a blue module).

1. **Turn off water and relieve pressure by loosening Tailpiece coupling and re-tighten. Loosen and remove top screws along with the outer cover assembly.**

2. **Disconnect wire clip from battery door and remove module from inner metal cover assembly.**
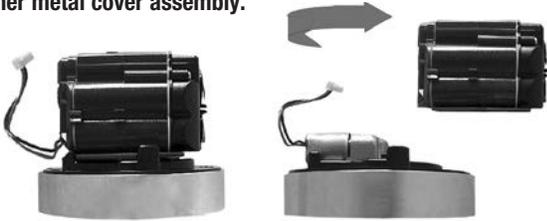
3. **Remove Solenoid by turning counter clockwise. Remove any remaining O-rings or parts in orifice.**

Back View

4. **Remove black plastic Housing from the threaded end of new Isolated Operator by unscrewing (counterclockwise). It is normal to find fluid inside this housing.**
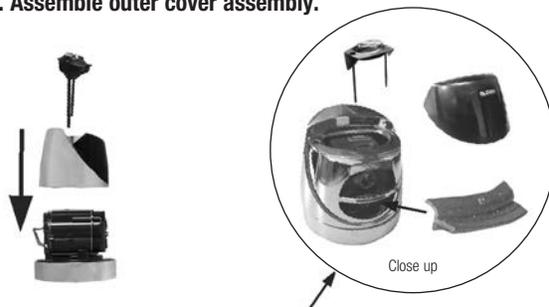
Front View

5. **Make sure all O-rings (2) are installed on the grey End cap of the new Isolated Operator. Install Isolated Operator by threading it (clockwise) into the Housing. Tighten with fingers beyond just snug.**
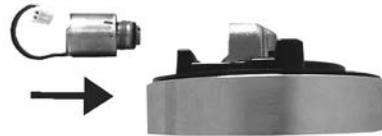
6. **Mount module on inner cover assembly. Reconnect the plastic clip on the battery door.**

7. **Assemble outer cover assembly.**

Close up

Note. Verify that rubber insert is installed

8. **Turn on water at control stop. Installation complete.**

The information contained in this document is subject to change without notice.

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**SLOAN.**
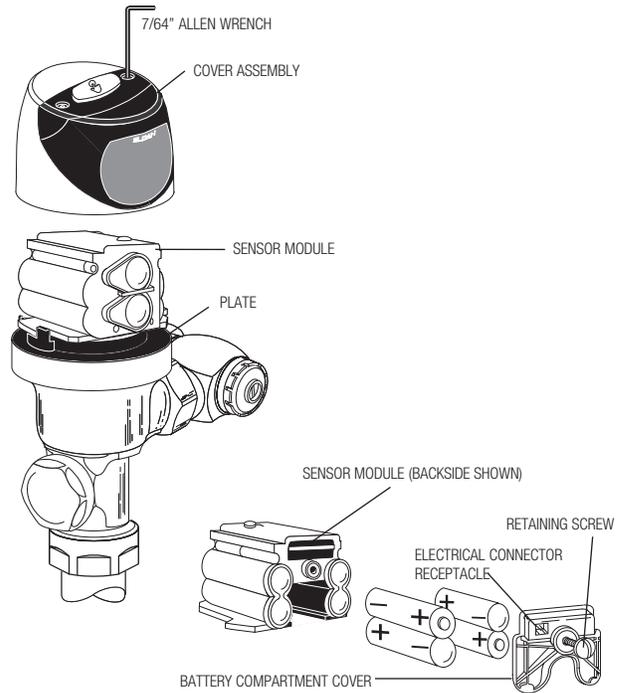
# G2 Optima® Flushometer

## BATTERY REPLACEMENT

When G2 Optima Plus® has approximately 4,000 flushes left, the same red light that appears at start-up will flash four (4) times quickly whenever an object is detected. When this occurs, we recommend changing the batteries as follows:

When required, replace batteries with four (4) alkaline type AA batteries.

**Note: Water does not have to be turned off to replace batteries.**

Loosen the two (2) screws on top of unit. Remove the complete cover assembly. Lift the sensor module from its plate. Unplug the electrical connector from battery compartment cover. Loosen the retaining screw on battery compartment cover and remove battery compartment cover. Install four (4) alkaline type AA batteries exactly as illustrated at right.

Install battery compartment cover and secure with retaining screw. Make certain that battery compartment cover is fully compressed against gasket to provide a seal; Do not overtighten. Plug the electrical connector into the battery compartment cover. Reinstall the sensor module onto the plate. Reinstall the complete cover assembly onto the plate. Tighten the two (2) screws on top of the unit.



7/64" ALLEN WRENCH
COVER ASSEMBLY
SENSOR MODULE
PLATE
SENSOR MODULE (BACKSIDE SHOWN)
RETAINING SCREW
ELECTRICAL CONNECTOR RECEPTACLE
BATTERY COMPARTMENT COVER

## RANGE ADJUSTMENT (ADJUST ONLY IF NECESSARY)

The G2 Optima Plus has a factory set sensing range:

Water closet models – 22" to 42" (559 mm to 1067 mm)

Urinal models – 15" to 30" (381 mm to 762 mm)

**The Factory setting should be satisfactory for most installations.**

If the range is too short (i.e., not picking up users) or too long (i.e., picking up opposite wall or stall door) the range can be adjusted.

**Note: Water does not have to be turned off to adjust range.**

Loosen the two screws on top of the unit. Remove the override button. Remove the rubber plug from top of electronic sensor module to uncover the potentiometer.

## RANGE ADJUSTMENT PROCEDURE

For the first ten (10) minutes of operation, a visible red light flashes in the sensing window of the G2 Optima Plus flushometer when a user is detected. This visible red light feature can be reactivated after ten (10) minutes by opening and closing the battery compartment door or holding the override button for (1) minute.

Check the range by stepping toward the unit until the red light flashes, indicating the sensor's detection of a user. Adjust the range potentiometer screw located on top of the sensor module a few degrees CLOCKWISE to increase the range or a few degrees COUNTERCLOCKWISE to decrease the range. Repeat this adjustment until the desired range is achieved.

**Always determine the sensing range with metal cover and lens window on top of the unit.**

**Important: Adjust in small increments only! Range potentiometer adjustment screw rotates only 3/4 of a turn; DO NOT over-rotate.**

When range adjustment is satisfactory, replace the rubber plug. Reinstall override button and tighten the two screws on top of the unit.



COUNTERCLOCKWISE
Decreases Range
CLOCKWISE
Increases Range
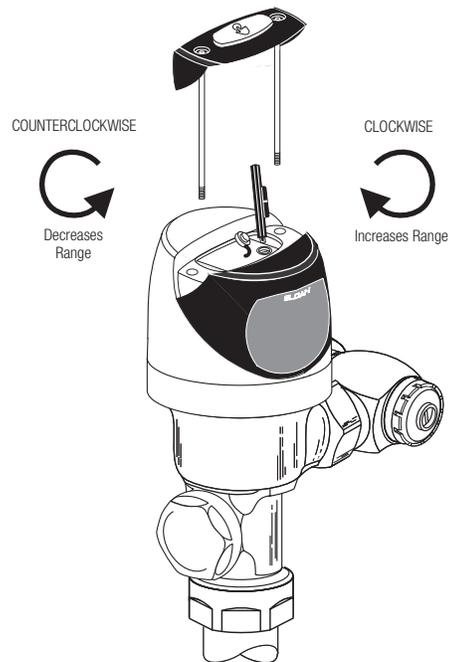
# G2 Optima® Flushometer

**TROUBLESHOOTING AND MAINTAINING THE SLOAN G2 OPTIMA PLUS® FLUSHOMETER**

**IMPORTANT:** This product contains mechanical and/or electrical components that are subject to normal wear. These components should be checked on a regular basis and replaced as needed to maintain the valve's performance.

Never open Control Stop to where the flow from the valve exceeds the flow capability of the fixture. In the event of a valve failure, the fixture must be able to accommodate a continuous flow from the valve.

**ATTENTION INSTALLERS:** With the exception of the control stop inlet, DO NOT USE pipe sealant or plumbing grease on any valve component or coupling! To protect the chrome or special finish of Sloan flushometers, DO NOT USE toothed tools to install or service these valves. Use our A-50 Super-Wrench™ or other smooth-jawed wrench to secure couplings. Regulations for low consumption fixtures (1.6 gpf/6.0 Lpf closets and 1.0 gpf/3.8 Lpf urinals) prohibit use of higher flush volumes.

1. **Sensor flashes continuously only when user steps within range.**

    A. Unit in start-up mode; no problem. This feature is active for the first ten (10) minutes of operation.

2. **Valve does not flush; sensor not picking up user.**

    A. Range too short; increase the range.

3. **Valve does not flush; sensor picking up opposite wall or surface, or only flushes when someone walks by. Red light flashes continuously for first 10 minutes even with no one in front of the sensor.**

    A. Range too long; shorten range.

4. **Valve does not flush even after adjustment.**

    A. Range adjustment potentiometer set at full "max" or full "min" setting. Readjust potentiometer away from full "max" or "min" setting.

    B. Batteries completely used up; replace batteries.

    C. Problem with electronic sensor module; replace electronic sensor module.

5. **Unit flashes 4 quick times when user steps within range.**

    A. Batteries low; replace batteries.

6. **Valve does not shut off.**

    A. By-pass orifice in diaphragm is clogged with dirt or debris, or by-pass is clogged by an invisible gelatinous film due to "over-treated" water. Remove flex tube diaphragm and wash under running water.

    **Note:** Size of orifice in the by-pass is of utmost importance for the proper metering of water by the valve. **DO NOT ENLARGE OR DAMAGE THIS ORIFICE.** Replace flex tube diaphragm if cleaning does not correct the problem.

    B. Dirt or debris fouling stem or flex tube diaphragm. Remove flex tube diaphragm and wash under running water.

    C. O-ring on stem of flex tube diaphragm is damaged or worn. Replace O-ring if necessary.

    D. Problem with solenoid. If cleaning does not correct problem, replace with new solenoid operator.

7. **Not enough water to fixture.**

    A. Wrong flush volume regulator installed in flex tube diaphragm kit. Install the correct regulator.

    B. Wrong Optima Plus® model installed; i.e., 1.0 gpf urinal installed on 3.5 gpf closet fixture. Replace with proper Optima Plus model.

    C. Enlarged by-pass in diaphragm. Replace flex tube diaphragm.

    D. Control stop not adjusted properly. Readjust control stop.

    E. Inadequate volume or pressure at supply. Increase water pressure or supply (flow) to valve. Consult factory for assistance.

8. **Too much water to fixture.**

    A. Wrong flush volume regulator installed in flex tube diaphragm kit. Install the correct regulator.

    B. Control stop not adjusted properly. Readjust control stop.

    C. Wrong Optima Plus model installed; i.e., 3 gpf model installed on 1.0 or 1.5 gpf urinal fixture.

    D. Dirt in diaphragm by-pass. Clean under running water or replace flex tube diaphragm.

    Note: The EBV-46-A beam deflector is no longer required or available for the G2 Optima Plus.

**CARE AND CLEANING INSTRUCTIONS**

**DO NOT USE** abrasive or chemical cleaners to clean the flushometer, they may dull the luster and attack the plastic cover and the chrome finish of the flushometer. Use **ONLY** mild soap and water, then wipe dry with clean cloth or towel.

While cleaning the bathroom tile, the Optima Plus should be protected from any splattering of cleaner. Acids and cleaning fluids can discolor or remove chrome plating.
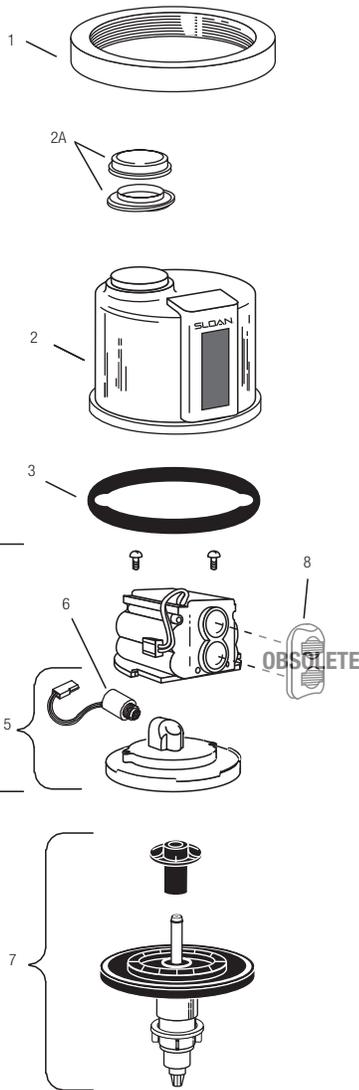
**When assistance is required, please contact Sloan Technical Support at: 1-888-SLOAN-14 (1-888-756-2614).**

**Sensor Flushometers**

The information contained in this document is subject to change without notice.

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# Optima® Flushometers

**OPTIMA**

For all Optima Plus® produced from 1992 – 2003 and
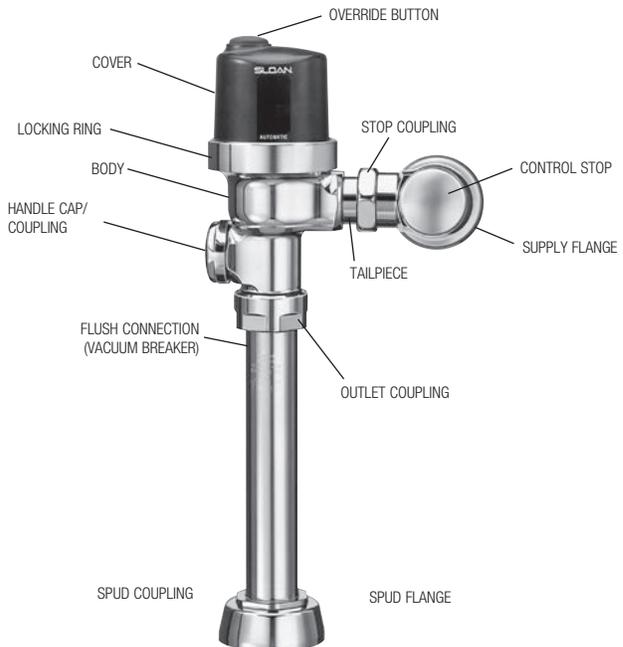Regal Pro® Optima Plus® produced after May, 2003.

**The Optima Plus® is currently being phased out and will become obsolete at some point in the future. Some repair parts may not be available. See the G2 Optima Plus® flushometer page 61 for current parts.**
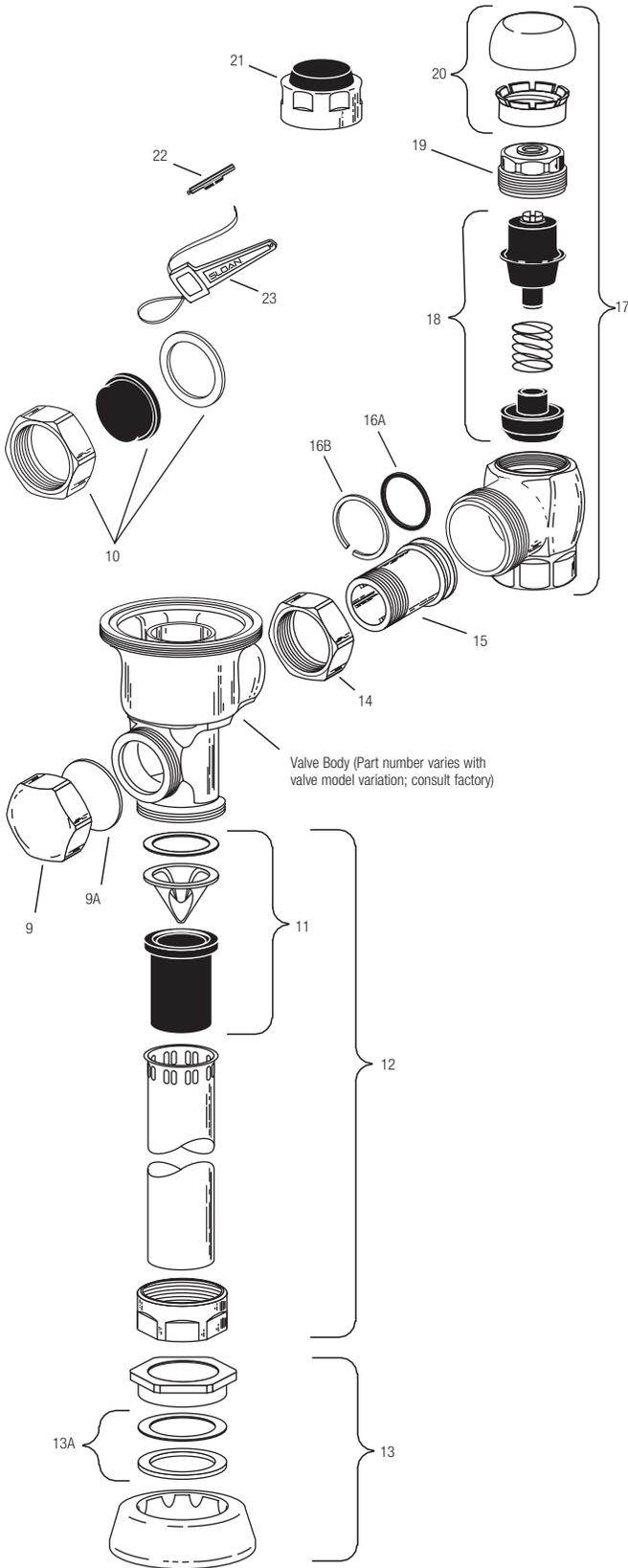
## SENSOR MODULE COMPONENT PARTS

| Item No. | Code No. | Part No. | Description |
|---|---|---|---|
| 1. | 0325804 | EBV-14 | Locking Ring |
| | 3325524 | EBV-31-A | Locking Ring for Zurn Valve Bodies |
| 2. | 3325013 | EBV-60-A | Metal Cover Assembly with Override Button (Water Closet) |
| | 3325016 | EBV-1033-A | Metal Cover Assembly w/Override Button for Zurn Valve Body (Water Closet) |
| 2A. | 3325055 | EBV-1042-A | Replacement Override Button Kit for plastic covers (Old Style) |
| 3. | 5325011 | EBV-67 | Cover Gasket — 12 per package |
| 4. | **SEE CHART PAGE 63 — ELECTRONIC MODULE** | | |
| 5. | 0325814 | EBV-21-A | Inside Cover Assembly (Includes Solenoid) |
| 6. | 3325462 | EBV-144-A | Isolated Solenoid Operator † |
| 7. | **SEE CHART PAGE 64 — Flex Tube Diaphragm Kit** | | |
| 8. | 3325537 | EBV-46-A | Beam Deflector ‡ – **OBSOLETE** |

† The new EBV-144-A solenoid replaces the solenoid used with the old style black EBV-26-A modules only. For blue EBV-146-A-U or EBV-146-A-C G2 modules, use the EBV-136-A solenoid operator. Refer to Page 65 for instructions regarding solenoid replacement.
‡ Beam deflectors are for use on black, old style modules. They are not required (and will not work) on Blue G2 modules.



The information contained in this document is subject to change without notice.

# Optima® Flushometers



Valve Body (Part number varies with valve model variation; consult factory)

## OTHER VALVE COMPONENT PARTS

| Item No. | Code No. | Part No. | Description |
|---|---|---|---|
| 9. | 3325814 | EBV-1017-A | Handle Cap — Metal |
| 9A. | 0311042 | K-46 | Blind Nut Gasket |
| 10. | 3325815 | EBV-1018-A | Handle Cap — Metal Coupling/Plastic Hole Cap – **OBSOLETE** |
| 11. | 3323182 | V-651-A | Vacuum Breaker Repair Kit |
| 12. | 3393004 | V-600-AA | 3/4" (19 mm) x 9'' (229 mm) CP Vacuum Breaker |
| | 3393006 | V-600-AA | 1-1/4" (32 mm) x 9'' (229 mm) CP Vacuum Breaker |
| | 3393007 | V-600-AA | 1-1/2'' (38 mm) x 9'' (229 mm) CP Vacuum Breaker |
| 13. | 0306125 | F-5-AW | 3/4'' (19 mm) CP Spud Coupling |
| | 0306140 | F-5-AU | 1-1/4" (32 mm) CP Spud Coupling |
| | 0306146 | F-5-AT | 1-1/2'' (38 mm) CP Spud Coupling |
| 13A. | **SEE SLIP JOINT GASKETS AND RINGS TABLE BELOW** | | |
| 14. | 0308676 | H-550 | CP Stop Coupling |
| 15. | 0308801 | H-551-A | CP Adjustable Tailpiece 2-1/16'' (52 mm) long |
| 16A. | 5308696 | H-553 | O-ring — 24 per package |
| 16B. | 5308381 | H-552 | Locking ring – 12 per package |
| 17. | 3308386 | H-700-A | 1'' (25 mm) Screwdriver Bak-Chek® Stop CP — complete |
| | 3308384 | H-700-A | 3/4'' (19 mm) Screwdriver Bak-Chek® Stop CP — complete |
| 18. | 3308853 | H-541-A | Control Stop Repair Kit † 3/4" H-600/H-540 only |
| | 3308856 | H-543-A | Control Stop Repair Kit ‡ |
| 19. | 0308612 | H-622 | CP Bonnet † |
| | 0308843 | H-577 | CP Bonnet 3/4" H-600/H-540 only – **OBSOLETE**‡ |
| 20. | 3308772 | H-1010-A | Vandal Resistant Control Stop Cap Assembly† |
| | 3308790 | H-1009-A | Vandal Resistant Control Stop Cap Assembly‡ |
| 21. | 3325816 | EBV-1019-A | 3/4'' (19 mm) Decorative Stop Cap |
| | 3308866 | H-574 | 1'' (25 mm) Decorative Stop Cap |

## ACCESSORIES

| | | | |
|---|---|---|---|
| 22. | 0325107 | EBV-91 | Trimpot Adjustment Screwdriver |
| 23. | 0305823 | EBV-22 | Disposable Strap Wrench |

† For use w/H-700-A 1'' & 3/4'' and H-600-A 1'' screwdriver Bak-Chek® control stops, also marked with Quiet Stop II

‡ For use w/H-600-A 3/4'' urinal screwdriver Bak-Chek® control stops, also marked with Quiet Stop II.

## ITEM 13A. SLIP JOINT GASKETS AND RINGS

| Size | Code No. | Part No. | Description |
|---|---|---|---|
| 1-1/2" | 5306058 | F-3 | Red Friction Ring |
| | 5322001 | VBF-5 | Black Slip Joint Gasket |
| | 0319086/5319086 | S-30 | Flexible Seat |
| | 0319079 | S-21 | Rigid Seat (rubber over brass) |
| 1-1/2" x 1-1/4" | 0396062 | F-105 | Slip Joint Gasket – Rigid |
| 1-1/4" | 5306057 | F-3 | Red Friction Ring |
| | 5322176 | VBF-5 | Black Slip Joint Gasket |
| | 0307052/5307052 | G-21 | Rigid Seat (rubber over brass) |
| 1" | 5306056 | F-3 | Red Friction Ring |
| | 5306115 | F-5 | Black Slip Joint Gasket |
| 3/4" | 5306055 | F-3 | Red Friction Ring |
| | 5306113 | F-5 | Black Slip Joint Gasket |

The information contained in this document is subject to change without notice.

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# Optima® Flushometers

**Sensor Flushometers**

## ELECTRONIC MODULE ASSEMBLY CHART

The electronic and optical improvements of the G2 Optima Plus® have been incorporated into the electronic modules for use with older Optima Plus products.

ELECTRONIC SENSOR MODULE

Optima Plus® modules can be identified by color.

Old style modules are black and have a wire that runs along the side of the unit.

G2 modules are blue and have a wire only on the back of the unit.

There are now only two electronic module assembly variations for use with older Optima Plus valves:

EBV-146-A-U      Urinal
EBV-146-A-C      Water closet

This chart cross references the part numbers and code numbers of our new electronic modules over from our old module numbers.

The modules include the solenoid, inner cover and electronic module.

These modules are for use with older Optima Plus and Regal Pro® Optima Plus® valves only.
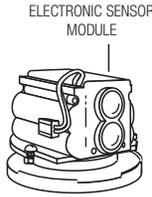
| Code No. | Use Part No. | Description | To Replace Old Part No. |
|---|---|---|---|
| **0325177** | EBV-146-A-U | Electronic — 0.5 gpf/1.9 Lpf Urinal Module | EBV-26-A-U-0.5 |
| **0325177** | EBV-146-A-U | Electronic — 1.0 gpf/3.8 Lpf Urinal Module | EBV-26-A-U-1.0 |
| **0325177** | EBV-146-A-U | Electronic — 1.5 gpf/5.7 Lpf Urinal Module | EBV-26-A-U-1.5 |
| **0325177** | EBV-146-A-U | Electronic — 3.5 gpf/13.2 Lpf Urinal Module | EBV-26-A-U-3.5 |
| **0325176** | EBV-146-A-C | Electronic — 1.6 gpf/6.0 Lpf Closet Module | EBV-26-A-C-1.6 |
| **0325176** | EBV-146-A-C | Electronic — 2.4 gpf/9.0 Lpf Closet Module | EBV-26-A-C-2.4 |
| **0325176** | EBV-146-A-C | Electronic — 3.5 gpf/13.2 Lpf Closet Module | EBV-26-A-C-3.5 |
| **0325176** | EBV-146-A-C | Electronic — 4.5 gpf/17.0 Lpf Closet Module | EBV-26-A-C-4.5 |

Note: EBV-26-A modules are no longer available. Use the EBV-146-A-U or EBV-146-A-C module shown.

## BATTERY REPLACEMENT

When Optima Plus has approximately 4,000 flushes left, the same red light that appears at start-up will flash four (4) times quickly whenever an object is detected. When this occurs, we recommend changing the batteries. On Optima Plus, shut off water and relieve pressure.

Separate locking ring, cover and diaphragm from electronic sensor module.

Loosen retaining screw on battery compartment door and remove battery compartment door. Install four (4) alkaline, AA batteries exactly as illustrated. Install battery compartment door and secure with retaining screw. Make certain that battery compartment door is fully compressed against gasket to provide a seal; do not overtighten.
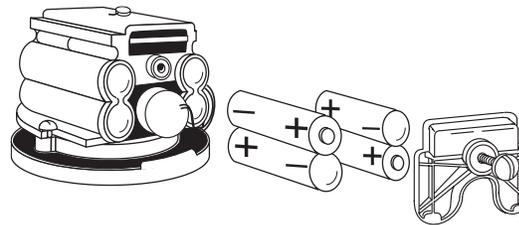
## FLEX TUBE DIAPHRAGM ASSEMBLY

In early 2003 Sloan introduced the flex tube diaphragm kit into the Optima Plus. This design completely replaced the old Optima Plus diaphragm kit that featured the metal shaft with the quad Ring. This change further improved the reliability of the Optima Plus as it replaced a wearable dynamic seal (the Quad Ring) with a non-moving static O-ring seal.
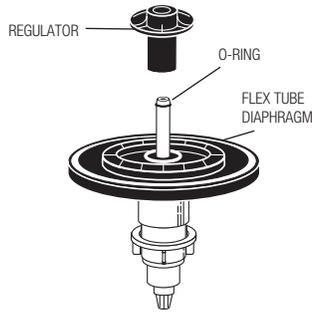
The flex tube diaphragm kit also features Sloan's exclusive dual-filter diaphragm. The dual-filter diaphragm helps to protect the valve from water-borne sediment that can cause the valve to stick open and run on. The dual-filter diaphragm is also made from Sloan's Permex® synthetic rubber material for resistance against chloramines and other water treatment chemicals.

**The flex tube diaphragm can be used to replace all generations of Sloan Optima Plus® diaphragm kits. The same flex tube diaphragm kits are used in the G2 Optima Plus® valve.**
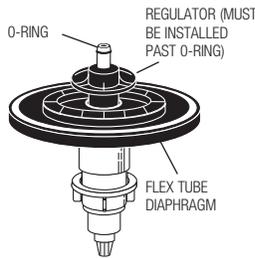
# Optima® Flushometers

## FLEX TUBE DIAPHRAGM KITS

REGULATOR

O-RING

FLEX TUBE DIAPHRAGM

| Code No. | Use Part No. | Description | Color* | To Replace Old Part No. |
|---|---|---|---|---|
| 3325098 | EBV-1026-A | URINAL | GREEN | — 0.125 gpf/0.5 Lpf |
| 3325003 | EBV-1023-A | URINAL | GREEN | EBV-32-A-U-0.5 (0.5 gpf/1.9 Lpf‡) |
| 3325000 | EBV-1022-A | URINAL | GREEN | EBV-32-A-U-1.0 (1.0 gpf/3.8 Lpf†) |
| 3325000 | EBV-1022-A | URINAL | BLACK | EBV-32-A-U-1.5 (1.5 gpf/5.7 Lpf†) |
| 3325001 | EBV-1020-A | URINAL | WHITE | EBV-20-A-U-3.5 (3.5 gpf/13.2 Lpf†) |
| 3325031 | EBV-1024-A | CLOSET | GREEN | — 1.28 gpf/4.8 Lpf |
| 3325001 | EBV-1020-A | CLOSET | GREEN | EBV-10-A-C-1.6 (1.6 gpf/6.0 Lpf†) |
| 3325014 | EBV-1021-A | CLOSET | BLUE | EBV-10-A-C-2.4 (2.4 gpf/9.0 Lpf) |
| 3325001 | EBV-1020-A | CLOSET | WHITE | EBV-10-A-C-3.5 (3.5 gpf/13.2 Lpf†) |
| 3325001 | EBV-1020-A | CLOSET | WHITE | EBV-10-A-C-4.5 (4.5 gpf/17.0 Lpf §‗) |

| Code No. | Description |
|---|---|
| 5325056 | O-ring – 6 per package |

† The EBV-1020-A and EBV-1022-A kits are supplied with multiple regulators.
‡ A 0.5 gpf (1.9 Lpf) urinal kit can be converted to a 1.0 gpf (3.8 Lpf) by cutting and removing the smooth A-164 flow ring from the guide.
§ For a 4.5 gpf (17.0 Lpf) water closet flush, use the EBV-1020-A kit with the white regulator, and cut and remove the A-164 flow ring from the guide.
* Color of regulator to be used with flex tube diaphragm to obtain the listed flush volume.

## REGULATORS

O-RING

REGULATOR (MUST BE INSTALLED PAST O-RING)

FLEX TUBE DIAPHRAGM

The flush volume of the flex tube diaphragm kit is controlled by the regulator. Regulators are identified by color. Some flex tube diaphragm kits are supplied with multiple regulators. The installer must make sure the proper regulator is used when installing the flex tube diaphragm kit.

**REGULATOR** (Sold 6 per package)

| Code No. | Part No. | Description | Regulator Color |
|---|---|---|---|
| 5325122 | EBV-95 | Urinal-0.5 gpf/1.9 Lpf | GREEN |
| 5325122 | EBV-95 | Urinal-1.0 gpf/3.8 Lpf | GREEN |
| 5325129 | EBV-102-2 | Urinal-1.5 gpf/5.7 Lpf | BLACK |
| 5325130 | EBV-102-1 | Urinal-3.5 gpf/13.2 Lpf | WHITE |
| 5325122 | EBV-95 | Closet-1.28 gpf/4.8 Lpf | GREEN |
| 5325122 | EBV-95 | Closet-1.6 gpf/6.0 Lpf | GREEN |
| 5325130 | EBV-102-1 | Closet-3.5 gpf/13.2 Lpf | WHITE |
| 5325128 | EBV-101 | Closet-2.4 gpf/9.0 Lpf | BLUE |

The EBV-1020-A and EBV-1022-A kits are supplied with multiple flush volume regulators. The installer must use the correct regulator when installing the kit.

## OLD STYLE DIAPHRAGM INSIDE PARTS

The **5325813** Quad Ring is still available.

QUAD RING

**OLD STYLE KITS ABOVE ARE OBSOLETE. SEE CHART FOR REPLACEMENT.**
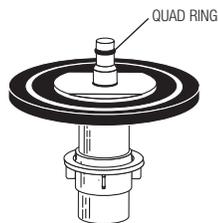
| Code No. | Part No. | Description |
|---|---|---|
| 5325813 | EBV-18 | Quad Ring – 12 per package |