INSTALLATION INSTRUCTIONS FOR SENSOR ACTIVATED
BATTERY POWERED FLUSHOMETER

**Exposed
Closet Flushometer
1-1/2" Top Spud**
Model 8110/8111
Model 8113
Model 8115
Model 8116

**Exposed
Closet Flushometer
1-1/2" Back Inlet
Squat Toilet**
Model 8137

**Exposed
Urinal Flushometer
1-1/4" Top Spud**
Model 8180

3/4" Top Spud
Model 8186

Optima *Plus* Water Closet Models can be furnished for the following:
1.6 gpf/6.0 Lpf	For Low Consumption Bowls
2.4 gpf/9.0 Lpf	For 9 Liter European Water Closets
3.5 gpf/13.2 Lpf	For older Water Closets

Optima *Plus* Urinal Models can be furnished for the following:
0.5 gpf/1.9 Lpf	For Wash Down Urinals
1.0 gpf/3.8 Lpf	For Low Consumption Urinals
1.5 gpf/5.7 Lpf	For older Siphon Jet Urinals
3.5 gpf/13.2 Lpf	For older Blow Out Urinals

Made in the U.S.A.

(CSA)® Certified

(UL)® Listed

LIMITED WARRANTY

Sloan Valve Company warrants its Sloan Optima *Plus* Flushometers to be made of first class materials, free from defects of material or workmanship under normal use and to perform the service for which they are intended in a thoroughly reliable and efficient manner when properly installed and serviced, for a period of three years (1 year for special finishes) from date of purchase. During this period, Sloan Valve Company will, at its option, repair or replace any part or parts which prove to be thus defective if returned to Sloan Valve Company, at customer's cost, and this shall be the sole remedy available under this warranty. No claims will be allowed for labor, transportation or other incidental costs. This warranty extends only to persons or organizations who purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale. This warranty does not cover the life of the batteries.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.

PRIOR TO INSTALLING THE SLOAN OPTIMA *PLUS* FLUSHOMETER

Prior to installing the Sloan Optima *Plus* Flushometer, install the items listed below as illustrated in the Rough-in Diagram. (New installations only.)

• Closet or Urinal fixture
• Drain line
• Water supply line

Important:

• *INSTALL ALL PLUMBING IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.*
• *WATER SUPPLY LINES MUST BE SIZED TO PROVIDE AN ADEQUATE VOLUME OF WATER FOR EACH FIXTURE.*
• *WHEN INSTALLING A FLUSHOMETER, IT IS IMPORTANT THAT THE FLUSH MODEL MATCHES THE REQUIREMENTS OF THE PLUMBING FIXTURE.*
• *FLUSH ALL WATER LINES PRIOR TO MAKING CONNECTIONS.*

The Sloan Optima *Plus* is designed to operate with 15 to 100 PSI (104 to 689 kPa) of water pressure. THE MINIMUM PRESSURE REQUIRED TO THE VALVE IS DETERMINED BY THE TYPE OF FIXTURE SELECTED. Consult fixture manufacturer for pressure requirements.

Most Low Consumption water closets (1.6 gallon/6.0 liter) require a minimum flowing pressure of 25 psi (172 kPa).

TOOLS REQUIRED FOR INSTALLATION

• Slotted screwdriver to adjust control stop.
• Sloan A-50 Super-Wrench™, Sloan A-109 Plier Wrench or smooth jawed spud wrench for couplings.
• Trimpot adjustment screwdriver (supplied) to adjust range, if necessary.
• Strap wrench (supplied) to install Optima *Plus* to valve body.
• 7/64" hex wrench (supplied) to secure Optima Plus cover to base plate.

VALVE ROUGH-IN

Typical Water Closet Installation
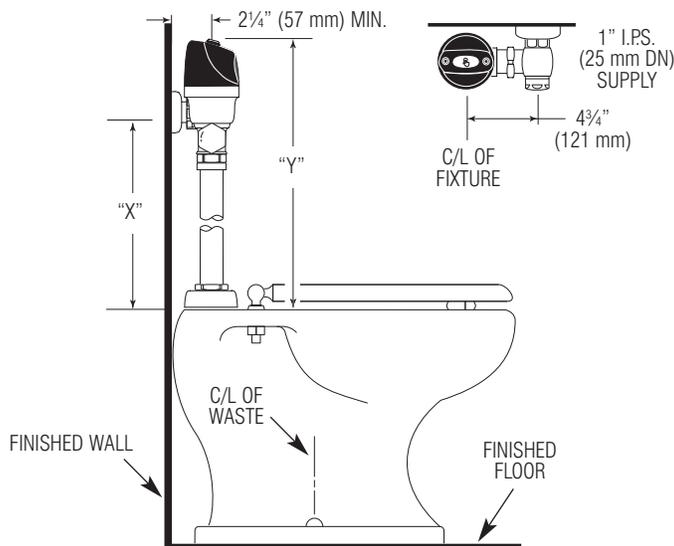### Model 8110/8111
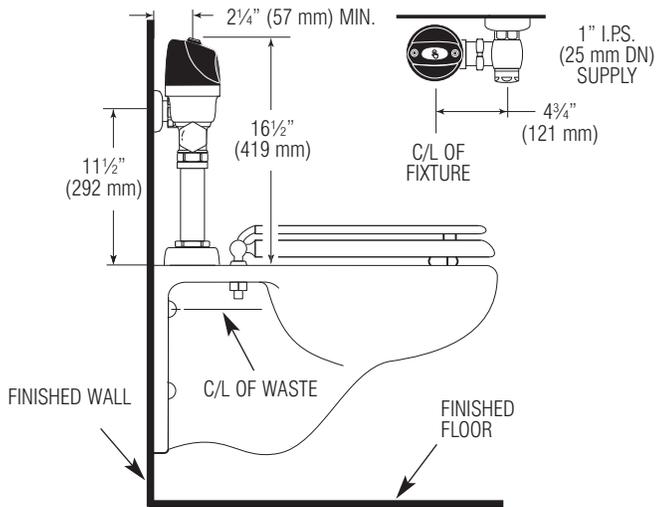
Squat Toilet Installation
Model 8137
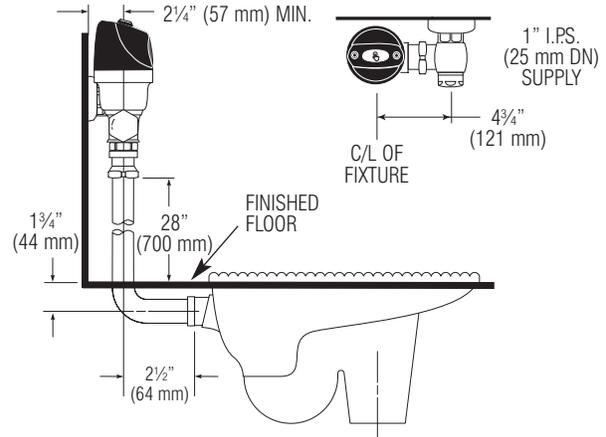
When installing the Optima *Plus* in a handicap stall:

Per the ADA Guidelines (section 604.9.4) it is recommended that the grab bars be split or shifted to the wide side of the stall.

High Rough-in Water Closet Installation
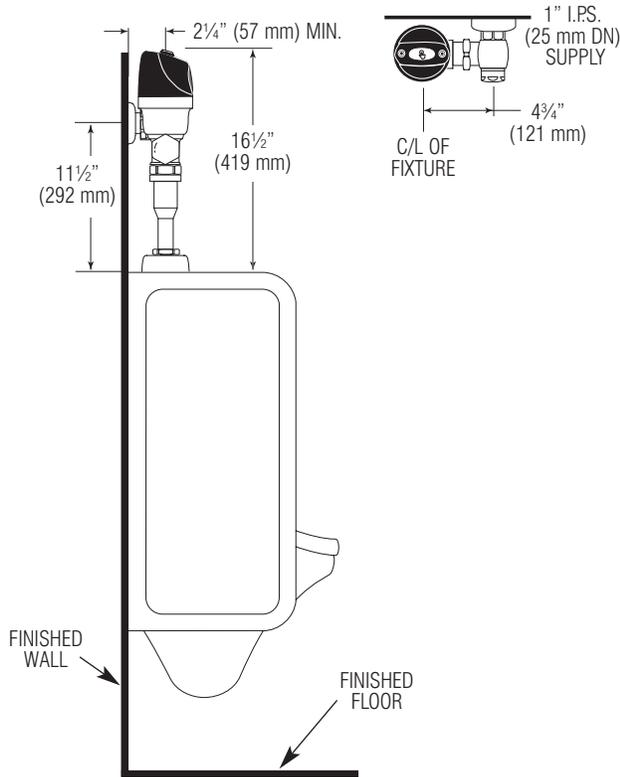### Models 8113, 8115 & 8116

Model 8115 & 8116 valves are designed for installations where the water supply is roughed-in 24" - 27" (610 mm - 686 mm) above the top of the water closet.

For new installations, Sloan strongly recommends the use of our Model 8111 which has a shorter installation height.
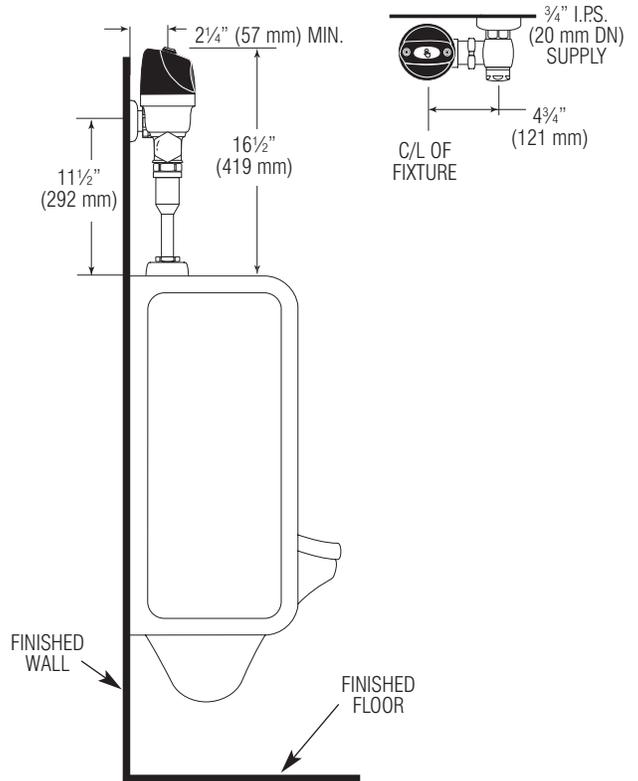
Model	"X"	"Y"
8113	16" (406 mm)	21" (533 mm)
8115	24" (610 mm)	29" (737 mm)
8116	27" (686 mm)	32" (813 mm)

Use the Model 8113 when toilet seat with covers are being used.

Typical Urinal Installation
Model 8180

2¼" (57 mm) MIN.

1" I.P.S. (25 mm DN) SUPPLY

16½" (419 mm)

11½" (292 mm)

4¾" (121 mm)

C/L OF FIXTURE

FINISHED WALL

FINISHED FLOOR

Typical Urinal Installation
Model 8186

2¼" (57 mm) MIN.

¾" I.P.S. (20 mm DN) SUPPLY

16½" (419 mm)

11½" (292 mm)

4¾" (121 mm)

C/L OF FIXTURE

FINISHED WALL

FINISHED FLOOR

!!! IMPORTANT !!!
With the exception of Control Stop Inlet, DO NOT use pipe sealant or plumbing grease on any valve component or coupling!

!!! IMPORTANT !!!
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.

!!! IMPORTANT !!!
Protect the chrome or special finish of Sloan Flushometers — DO NOT USE toothed tools to install or service these valves. Use a Sloan A-50 Super-Wrench™, Sloan A-109 Plier Wrench or smooth jawed spud wrench to secure all couplings. Also see "Care and Cleaning" section of this manual.

!!! 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.
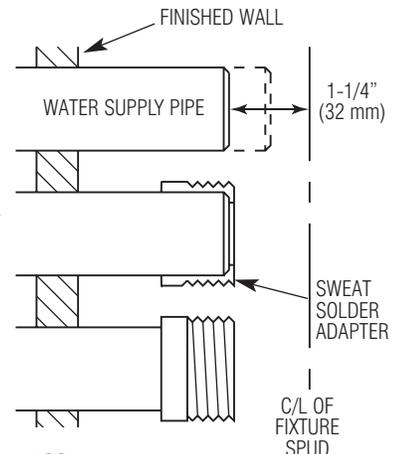
!!! IMPORTANT !!!
The Strap Wrench provided with Optima *Plus* is a convenience tool and is not to be used to remove or install the Flushometer Couplings. Use Strap Wrench ONLY to install Optima *Plus* Locking Ring.

If you have questions about how to install your Sloan Flushometer, consult your local Sloan Representative or call Sloan Installation Engineering Department at:

1-888-SLOAN-14 (1-888-756-2614) OR 1-847-233-2016

1 Install Optional Sweat Solder Adapter (only if your supply pipe does not have a male thread).

A Measure from finished wall to C/L of Fixture Spud. Cut pipe 1¼" (32 mm) shorter than this measurement. Chamfer O.D. and I.D. of water supply pipe.

B Slide Threaded Adapter fully onto pipe.

C Sweat solder the Adapter to pipe.

FINISHED WALL

WATER SUPPLY PIPE

1-1/4" (32 mm)

SWEAT SOLDER ADAPTER

C/L OF FIXTURE SPUD

DO NOT USE PIPE THREAD SEALANT

ATTENTION!

!!! IMPORTANT !!!
With the exception of Control Stop Inlet, DO NOT use pipe sealant or plumbing grease on any valve component or coupling!
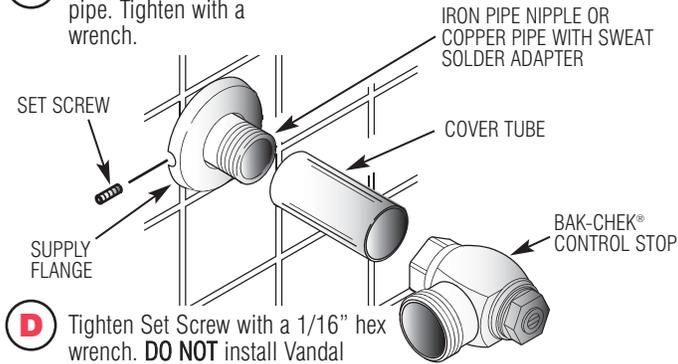
3

2 Install Cover Tube, Wall Flange and Control Stop to supply pipe

A Measure from finished wall to first thread of Adapter or threaded supply pipe (dimension "X"). Cut Cover Tube to this length.

WATER SUPPLY PIPE
SWEAT SOLDER ADAPTER
COVER TUBE
X
WALL FLANGE
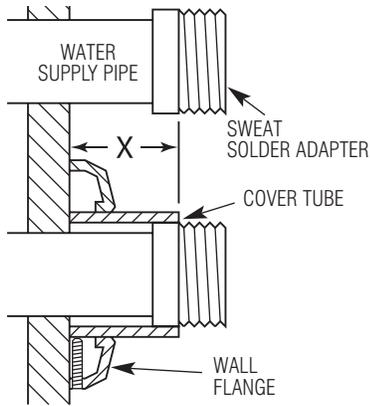
B Slide Cover Tube over pipe. Slide Wall Flange over Cover Tube until against wall.

C Thread Control Stop onto pipe. Tighten with a wrench.

IRON PIPE NIPPLE OR COPPER PIPE WITH SWEAT SOLDER ADAPTER
COVER TUBE
SET SCREW
SUPPLY FLANGE
BAK-CHEK® CONTROL STOP

D Tighten Set Screw with a 1/16" hex wrench. **DO NOT** install Vandal Resistant Stop Cap at this time.

3 Flush Out Supply Line

A Open Control Stop.
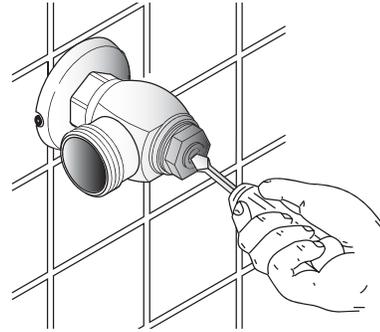
CLOCKWISE CLOSES CONTROL STOP
COUNTERCLOCKWISE OPENS CONTROL STOP

B Turn on water supply to flush line of any debris or sediment.

C Close Control Stop.

4 Install Vacuum Breaker Flush Connection

─── NOTE ───
If cutting Vacuum Breaker Tube to size, note that Critical Line (C/L) on Vacuum Breaker must typically be 6" (152 mm) above fixture. Consult Code for details.

A Slide Spud Coupling, Nylon Slip Gasket, Rubber Gasket and Spud Flange over Vacuum Breaker Tube.

MODELS 8110, 8111, 8113, 8115, 8116
MODEL 8180
MODEL 8186

VACUUM BREAKER TUBE
SPUD COUPLING
NYLON SLIP GASKET
RUBBER GASKET
SPUD FLANGE

VACUUM BREAKER TUBE
SPUD COUPLING
NYLON SLIP GASKET
RUBBER GASKET
SPUD FLANGE
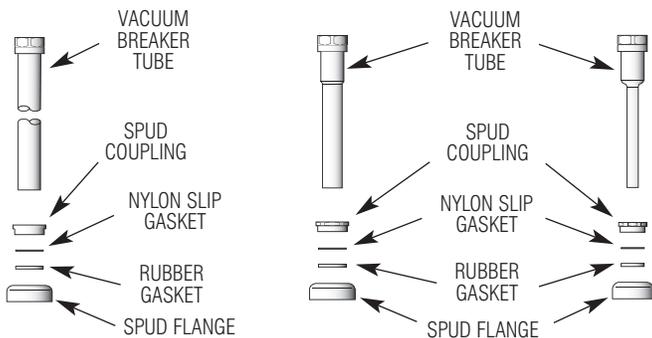
B Insert Tube into Fixture Spud.

C Hand tighten Spud Coupling onto Fixture Spud.

5 Install Flushometer
(Refer to Illustration in Step 5 — Continued, on Page 5)

A Lubricate tailpiece O-ring with water. Insert Adjustable Tailpiece into Control Stop. Tighten Tailpiece Coupling by hand.

B Align Flushometer directly above the Vacuum Breaker Flush Connection by sliding the Flushometer Body IN or OUT as needed. Tighten Vacuum Breaker Coupling by hand.

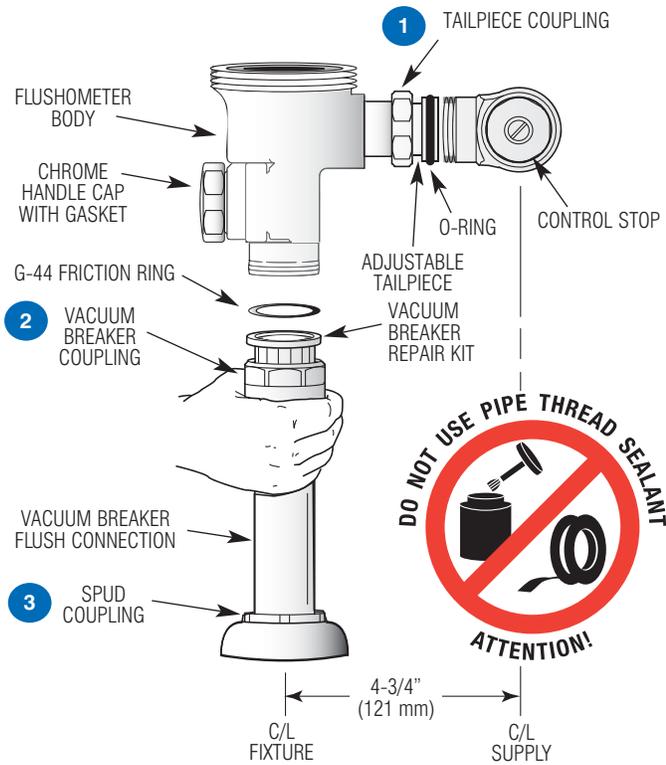DO NOT USE PIPE THREAD SEALANT
ATTENTION!

─── NOTE ───
Maximum adjustment of the Sloan Adjustable Tailpiece is 1/2" (13 mm) IN or OUT from the standard 4-3/4" (121 mm) (centerline of Flushometer to centerline of Control Stop).

If roughing-in measurement exceeds 5-1/4" (133 mm), consult factory for longer tailpiece.
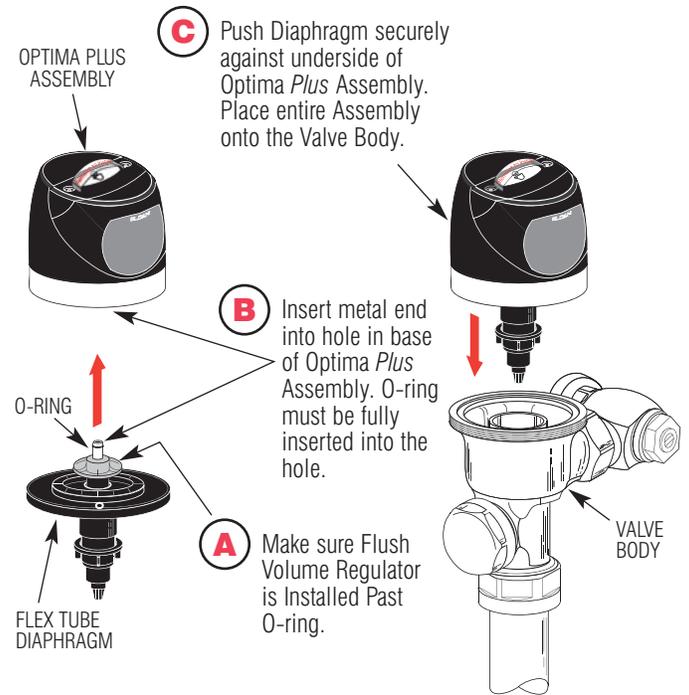
C Align Flushometer Body and securely tighten first the Tailpiece Coupling (1), then the Vacuum Breaker Coupling (2), and finally the Spud Coupling (3). Use a wrench to tighten these couplings in the order shown.

D Install Chrome Handle Cap with Gasket to handle opening on Flushometer Body. Tighten Chrome Handle Cap securely.

5 Install Flushometer — Continued

1 TAILPIECE COUPLING

FLUSHOMETER BODY

CHROME HANDLE CAP WITH GASKET

O-RING

CONTROL STOP

ADJUSTABLE TAILPIECE

G-44 FRICTION RING

2 VACUUM BREAKER COUPLING

VACUUM BREAKER REPAIR KIT

VACUUM BREAKER FLUSH CONNECTION

3 SPUD COUPLING

DO NOT USE PIPE THREAD SEALANT
ATTENTION!

4-3/4" (121 mm)

C/L FIXTURE

C/L SUPPLY

6 Assemble Flex Tube Diaphragm to Optima *Plus* Assembly

OPTIMA PLUS ASSEMBLY

C Push Diaphragm securely against underside of Optima *Plus* Assembly. Place entire Assembly onto the Valve Body.

O-RING

B Insert metal end into hole in base of Optima *Plus* Assembly. O-ring must be fully inserted into the hole.

A Make sure Flush Volume Regulator is Installed Past O-ring.
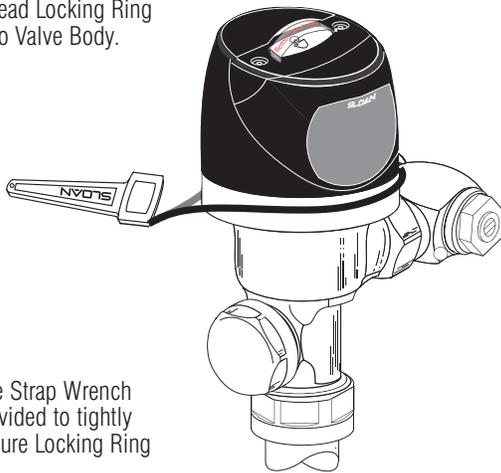
FLEX TUBE DIAPHRAGM

VALVE BODY

To facilitate installation, the O-ring on the diaphragm assembly must be wet for easier insertion.

Note: *Sensor Lens must face directly forward. Rotating the Sensor to either side will decrease the Sensor's ability to detect a target.*

7 Tighten Locking Ring

**A** Thread Locking Ring onto Valve Body.

B Use Strap Wrench provided to tightly secure Locking Ring

Important: *The Locking Ring must be installed down past the valve body threads by at least one thread. If difficulty is experienced installing the Locking Ring, turn the Locking Ring back and forth, each time working it further down the threads. The Locking Ring will act as a thread chaser in the event there has been a build-up of matter on the threads of the old valve body.*

8 Remove Tab to Activate Sensor Module

A Remove the Tab located over the Override Button to activate the Sensor Module.
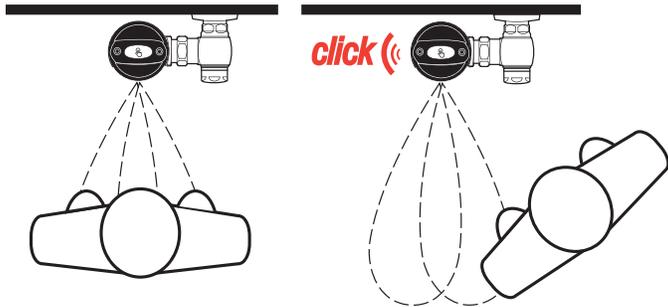
Remove to Install
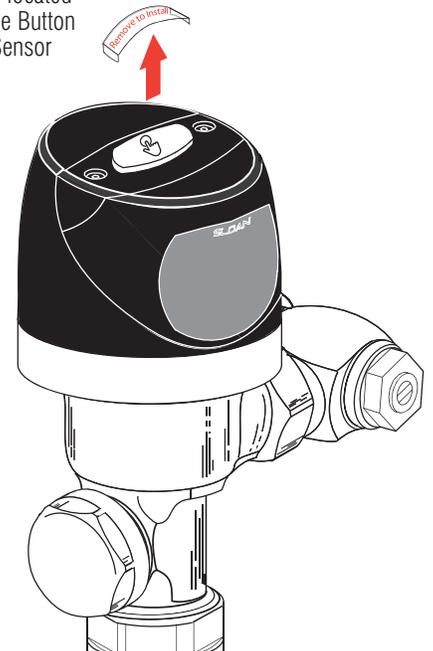
B For the first ten (10) minutes of operation, a Visible Red Light flashes in the Sensing Window of the Optima *Plus* Flushometer when a user is detected.

9   Test Sensor Operation

The 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)

(A) Test Sensor with Cover in Place.

click ((•

(B) Stand in front of Sensor for ten (10) seconds.

(C) Step away from Sensor and listen for "CLICK."

The Factory setting should be satisfactory for most installations. If a range adjustment is required, refer to the Range Adjustment instructions on this page.

10   Adjust Control Stop and Install Vandal Resistant Stop Cap

(A) Open Control Stop COUNTERCLOCKWISE ½ turn from closed position.

(B) Activate Flushometer by placing hand in front of Optima *Plus* Sensor Lens for ten (10) seconds (or press override button) and then moving it away.

CLOCKWISE CLOSES CONTROL STOP

COUNTERCLOCKWISE OPENS CONTROL STOP

**(C)** Adjust Control Stop after each flush until the rate of flow delivered properly cleanses the fixture.

Important: The Sloan Flushometer is engineered for quiet operation. Excessive water flow creates noise, while too little water flow may not satisfy the needs of the fixture. Proper adjustment is made when plumbing fixture is cleansed after each flush without splashing water out from the lip AND a quiet flushing cycle is achieved.

Important: The Control Stop should never be opened to the point 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.

(D) For RESS retrofit applications, reuse Stop Cap from existing valve. In complete valve installations, a new Stop Cap is provided.

Operation

1. A continuous, INVISIBLE light beam is emitted from the Optima *Plus* Sensor.
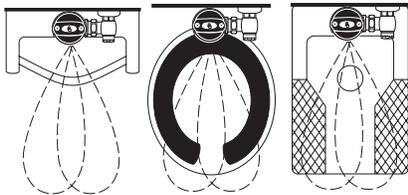
2. As the user enters the beam's effective range, 22 to 42 inches (559 mm to 1067 mm) for closet installations and 15 to 30 inches (381 mm to 762 mm) for urinal installations, the beam is reflected into the Scanner Window to activate the Output Circuit. Once activated, the Output Circuit continues in a "hold" mode for as long as the user remains within the effective range of the sensor.
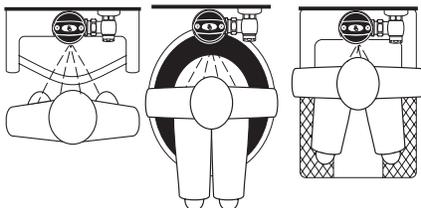
3. When the user steps away, the loss of reflected light initiates an electrical "one-time" signal that activates the flushing cycle to flush the fixture. The Circuit automatically resets and is ready for the next user.

Range Adjustment (Adjust only if Necessary)

The 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.

Refer to Illustration on Next Page.
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 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.

Check the range by stepping toward the unit until the Red Light flashes, indicating the Sensor's maximum detection limit. 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 Plastic Cover and Lens Window On Top of the Unit.

Range Adjustment (Adjust only if Necessary) — *Continued*

Important: Adjust in small increments only! Range Potentiometer Adjustment Screw rotates only ¾ 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.

COUNTER-
CLOCKWISE

CLOCKWISE

Decreases
Range

Increases
Range
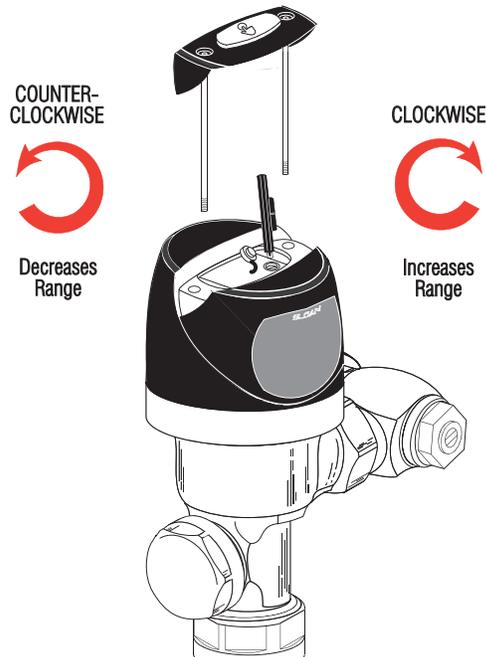
Battery Replacement

When required, replace batteries with four (4) Alkaline AA-Size 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 AA-Size Batteries **exactly** as illustrated.
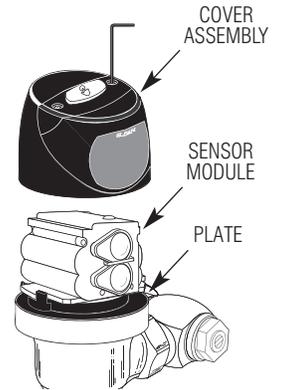
Install Battery Compartment Cover and secure with Retaining Screw. Make certain that Battery Compartment Cover is fully compressed against Gasket to provide a seal; **Do Not** overtighten. Plug the Electrical Connector into the Battery Compartment Cover. Reinstall the Sensor Module onto the Plate. Reinstall the complete Cover Assembly onto the Plate. Tighten the two (2) Screws on top of the unit.

COVER
ASSEMBLY

SENSOR
MODULE

PLATE

BATTERY
COMPARTMENT
COVER

RETAINING
SCREW

SENSOR
MODULE

ELECTRICAL CONNECTOR RECEPTACLE
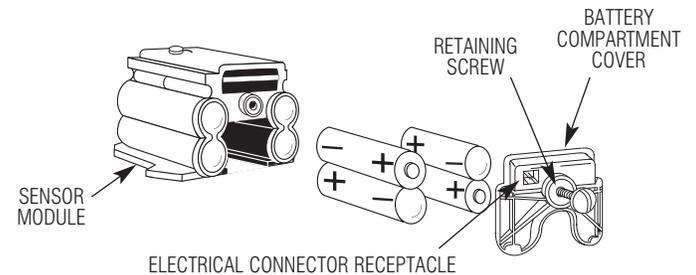
TROUBLESHOOTING GUIDE

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 Four (4) Quick Times When User Steps Within Range.
   A. Batteries low; replace batteries.

6. Valve Does Not Shut Off.
   A. Bypass Orifice in Diaphragm is clogged with dirt or debris, or Bypass 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 Bypass 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 Electronic Sensor Module; replace Sensor Module.

7. Not Enough Water to Fixture.
   A. Wrong Flush Volume Regulator installed in Flex Tube Diaphragm Kit. Install the correct Regulator (see Step 6 of these instructions).
   B. Wrong Optima Plus Diaphragm kit installed; i.e., 1 gpf. urinal installed on 3.5 gal. closet fixture. Replace with proper Optima Plus diaphragm kit.
   C. Enlarged Bypass 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 (see Step 6 of these instructions).
   B. Control Stop not adjusted properly. Readjust Control Stop.
   C. Wrong Optima Plus Diaphragm kit installed; i.e., 3.5 gpf. closet installed on 0.5 gal. urinal fixture. Replace with proper Optima Plus Diaphragm kit.D. Dirt in Diaphragm Bypass. Clean under running water or replace Flex Tube Diaphragm.

Note: The EBV-46-A Beam Deflector is no longer required or available for the Optima Plus.

Refer to the Optima *Plus* Flushometer Maintenance Guide for additional Troubleshooting and Repair Part information.

The Optima *Plus* Repair and Maintenance Guide is available at www.sloanvalve.com.

If further assistance is required, please contact the Sloan Valve Company Installation Engineering Department at:

1-888-SLOAN-14 (1-888-756-2614)

7

PARTS LIST

Item #	Part #	Description
1	EBV-189-A	Cover/Ring/Sensor Assembly - Water Closet
	EBV-190-A	Cover/Ring/Sensor Assembly - Urinal
	EBV-198-A	Cover/Ring/Sensor Assembly - Water Closet w/ Zurn ring
	EBV-199-A	Cover/Ring/Sensor Assembly - Urinal w/ Zurn ring
2	EBV-192-A	Cover Assembly
3	EBV-168	Locking Ring
	EBV-30-A	Locking Ring - for Zurn valves
4	EBV-129-A-C	Electronic Module - Water Closet
	EBV-129-A-U	Electronic Module - Urinal
5	EBV-170-A	Inside Cover Assembly (includes solenoid)
6	EBV-177	Cover Rest Plate
7	EBV-136-A	Solenoid
8	See Chart	Flex Tube Diaphragm Assembly
9	See Chart	Flush Volume Regulator
10	EBV-186	Handle Cap Kit
11	EBV-91	Range Adjustment Tool
12	EBV-22	Strap Wrench
13	EBV-137	7/64" Hex Wrench
14	H-634-AA	1" (25 mm) Sweat Solder Kit
	H-636-AA	¾" (19 mm) Sweat Solder Kit
15	H-700-A	1" (25 mm) Bak-Chek® Control Stop
	H-700-A	¾" (19 mm) Bak-Chek® Control Stop
16	H-573-A	Stop Cap
17	A-3A	Valve Body
18A	V-500-AA	1½" (38 mm) x 9" (229 mm) Vacuum Breaker (Model 8110/8111)
	V-500-AA	1½" (38 mm) x 13 1/2" (343 mm) Vacuum Breaker (Model 8113)
	V-500-AA	1½" (38 mm) x 23" (584 mm) Vacuum Breaker (Model 8115)
	V-500-AA	1½" (38 mm) x 26" (660 mm) Vacuum Breaker (Model 8116)
18B	V-500-AA	1½" (38 mm) Vacuum Breaker Assembly (Model 8137) *
18C	V-500-AA	1¼" (32 mm) x 9" (229 mm) Vacuum Breaker (Model 8180)
18D	V-500-AA	¾" (19 mm) x 9" (229 mm) Vacuum Breaker (Model 8186)
19	F-109	1 ½" (38 mm) Elbow Flush Connection
20A	F-56-A	1½" Spud Coupling Assembly (Models 8110/8111, 8113, 8115 & 8116)
20B	F-55-A	1¼" Spud Coupling Assembly (Model 8180)
20C	F-54-A	¾" Spud Coupling Assembly (Model 8186)
21	V-551-A	Vacuum Breaker Repair Kit

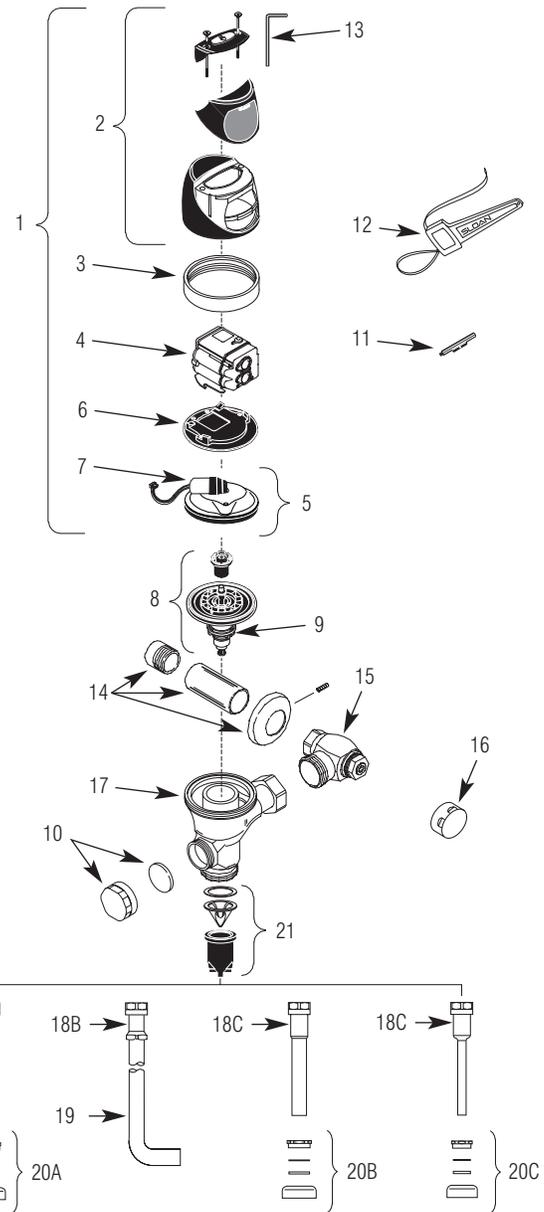*Part number varies with valve model variation; consult factory.*

CARE AND CLEANING OF CHROME AND SPECIAL FINISHES

DO NOT use abrasive or chemical cleaners to clean Flushometers as they may dull the luster and attack the chrome or special decorative finishes. Use ONLY soap and water, then wipe dry with clean cloth or towel.

While cleaning the bathroom tile, the Flushometer should be protected from any splattering of cleaner. Acids and cleaning fluids can discolor or remove chrome plating.

FLEX TUBE DIAPHRAGM KIT SELECTION GUIDE

Flush Volume and Fixture	Item No. 10 Flex Tube Standard Diaphragm Kit No.	Item No. 11 Flush Volume Regulator Part No.	Regulator Color † Color of Regulator to be used with Flex Tube Diaphragm to obtain the listed flush volume
0.5 gpf/1.9 Lpf Urinal	EBV-1050-A	EBV-95	Green
1.0 gpf/3.8 Lpf Urinal	EBV-1051-A †	EBV-95	Green
1.6 gpf/6.0 Lpf Closet	EBV-1053-A †	EBV-95	Green
2.4 gpf/9.0 Lpf Closet	EBV-1052-A	EBV-101	Blue

† The EBV-1051-A and EBV-1053-A Kits are supplied with multiple Regulators.

A 1.0 gpf (3.8 Lpf) Urinal kit can be converted to a 1.5 gpf (5.7 Lpf) Urinal by replacing the Green Regulator with the supplied Black Regulator.

A 1.6 gpf (6.0 Lpf) Closet kit can be converted to a 3.5 gpf (13.2 Lpf) Closet by replacing the Green Regulator with the supplied White Regulator.

FLEX TUBE DIAPHRAGM ASSEMBLY

Optima *Plus* Valve Models Feature Sloan's Exclusive Flex Tube Diaphragm™ for the ultimate in valve performance, reliability and Chloramine resistance.

Manufactured in the U.S.A. by Sloan Valve Company under one or more of the following patents: U.S. Patents: 4,893,039; 5,169,118; 5,244,179; 5,295,655; Des. 345,113; Des. 355,478. Other Patents Pending. BAK-CHEK®, PARA-FLO®, PERMEX®, TURBO-FLO®.

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