

INSTALLATION INSTRUCTIONS FOR EXPOSED ROYAL HET WATER CLOSETS AND HEU URINAL FLUSHOMETERS



Closet Flushometer for 1½" Top Spud
MODEL 111 (1.28 gpf /4.7 Lpf)



Urinal Flushometer for ¾" Top Spud
MODEL 186 (0.13 gpf/0.5 Lpf)
MODEL 186 (0.25 gpf/1.0 Lpf)



Urinal Flushometer with Adjustable Ground Joint Tailpiece for ¾" Top Spud
MODEL 188 XD (0.13 gpf/0.5 Lpf)
MODEL 188 XD (0.25 gpf/1.0 Lpf)



Urinal Flushometer with Adjustable Tailpiece for Cambridge Brass Tech Supply Stop for ¾" Top Spud
MODEL 188 XDT (0.13 gpf/0.5 Lpf)
MODEL 188 XDT (0.25 gpf/1.0 Lpf)

LIMITED WARRANTY

Sloan Valve Company warrants its Royal 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.

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 INSTALLATION

Before installing the Royal Flushometer, be sure to install the items listed below. Also, refer to the appropriate rough-in diagram below.

- Drain line
- Water supply line

Important:

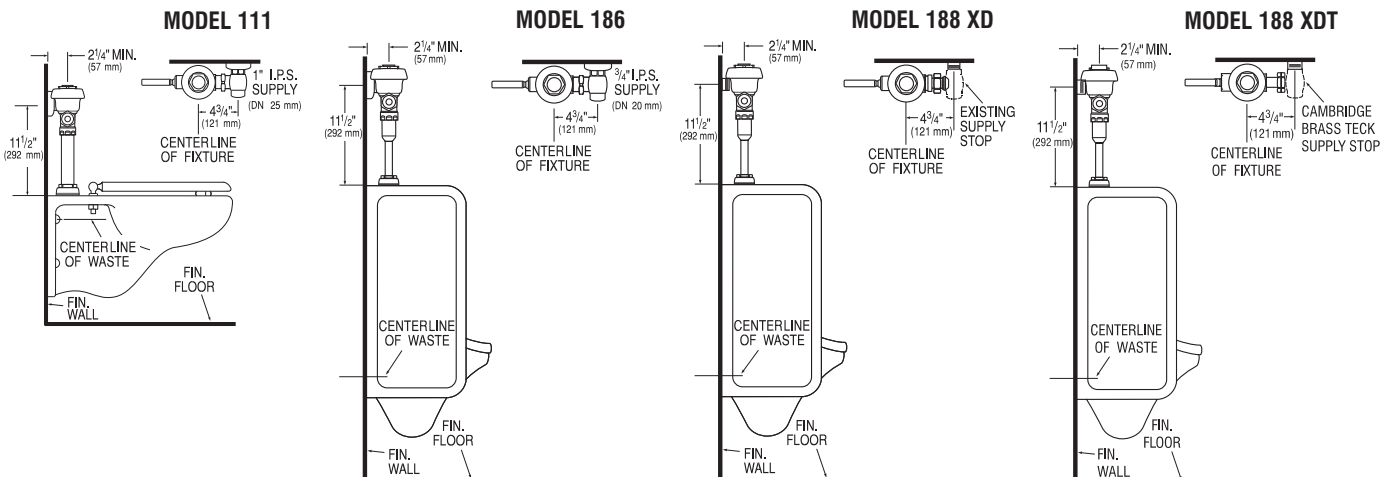
- *INSTALL ALL PLUMBING IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.*
- *WATER SUPPLY LINES MUST BE SIZED TO PROVIDE AN ADEQUATE VOLUME OF WATER FOR EACH FIXTURE.*
- *FLUSH ALL WATER LINES PRIOR TO MAKING CONNECTIONS.*
- *HIGH EFFICIENCY (HE) FIXTURE IS REQUIRED*

The Royal Flushometer is designed to operate with 10 to 100 psi (69 to 689 kPa) of water pressure fixture requirements. Consult fixture manufacturer for minimum pressure requirements.

TOOLS REQUIRED FOR INSTALLATION

- Straight blade screwdriver
- Sloan A-50 Super-Wrench™, Sloan A-109 Plier Wrench or smooth jawed spud wrench

VALVE ROUGH-IN



!!! 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.

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

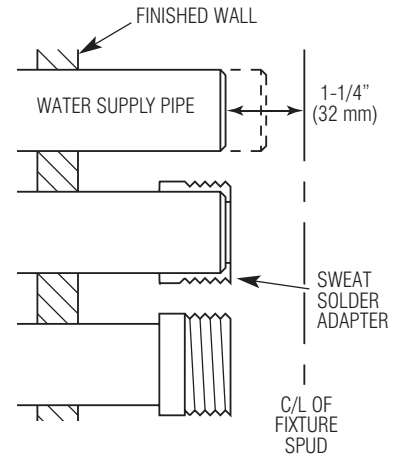
1-888-SLOAN-14 (1-888-756-2614) OR 1-847-233-2016

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 1/4" (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.



!!! IMPORTANT !!!

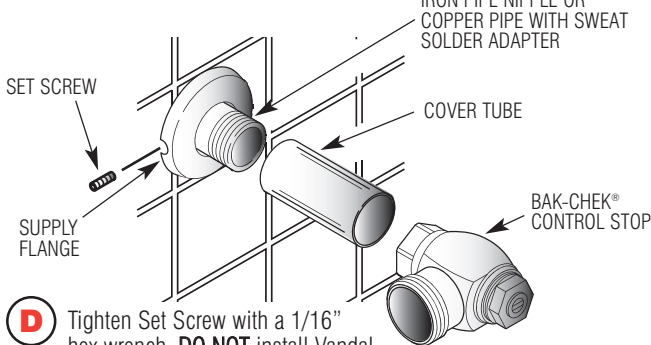
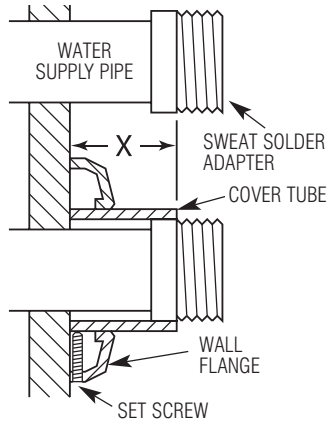
With the exception of Control Stop Inlet, DO NOT use pipe sealant or plumbing grease on any valve component or coupling!

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.

B Slide Cover Tube over pipe. Slide Wall Flange over Cover Tube until against wall.

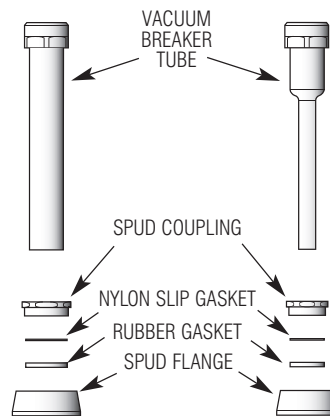
C Thread Control Stop onto pipe. Tighten with a wrench.



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

3 Install Vacuum Breaker Flush Connection

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



B Insert Tube into Fixture Spud.

C Hand tighten Spud Coupling onto Fixture Spud.

4 Install Flushometer and Triple Seal Handle Assembly

- 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.

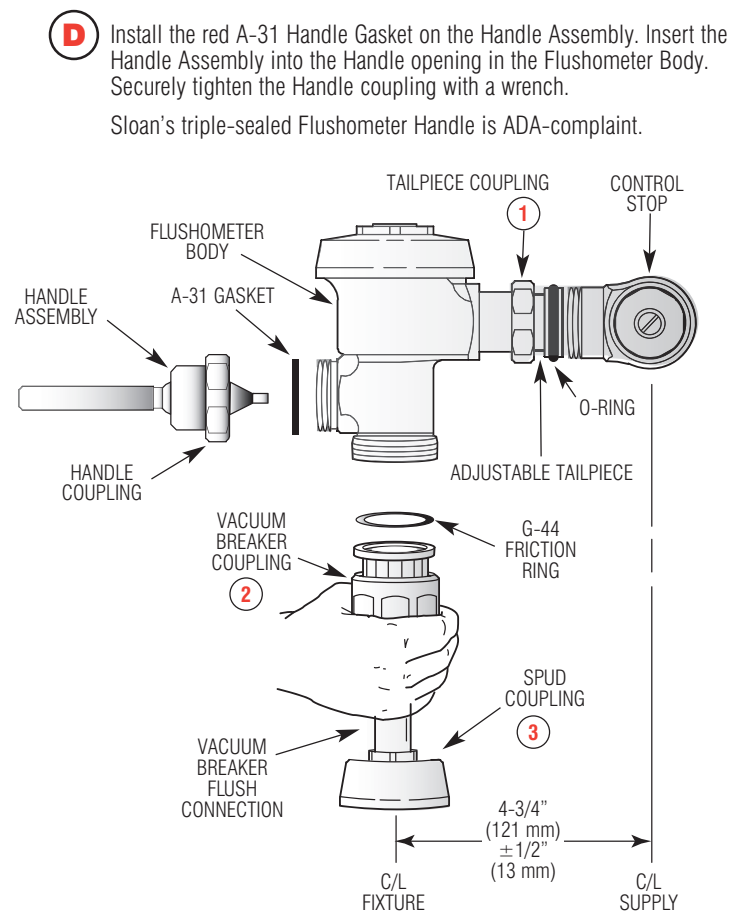


NOTE

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.



5 Flush Out Supply Line

- A** Make sure Control Stop is CLOSED and remove Flushometer Outer Cover.
- B** Remove Inside Cover and lift out Inside Parts Assembly.
- C** Reinstall Outside and Inside Cover wrench tight. Open Control Stop to flush supply line. Close Control Stop and remove Outside and Inside Cover.
- D** Reinstall Inside Parts Assembly, Inside Cover and Outside Cover wrench tight.

6 Adjust Control Stop and Install Vandal Resistant Stop Cap

- A** Open Control Stop COUNTERCLOCKWISE one FULL turn from closed position.
- B** Activate Flushometer.
- C** Adjust Control Stop after each flush until the rate of flow delivered properly cleanses the fixture.

!!! IMPORTANT !!!

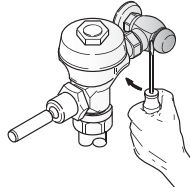
The Royal Flushometer is engineered for quiet operation. Excessive water flow creates noise, while too little water flow may not satisfy the needs of the fixture. Proper adjustment is made when plumbing fixture is cleansed after each flush without splashing water out from the lip AND a quiet flushing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

- D** Install Vandal Resistant Control Stop Cap onto Control Stop.
- Thread the Plastic Sleeve onto the Stop Bonnet until it is snug (tighten only by hand; do not use pliers or a wrench).
 - Place the metal Control Stop Cap over the plastic Sleeve and use the palm of the hand to push or "pop" the Cap over the fingers of the Plastic Sleeve. The Cap should spin freely.

Important: DO NOT install the Cap onto the Sleeve unless the Sleeve has been threaded onto the Control Stop Bonnet. If the Sleeve and Cap are assembled off of the Control Stop, the Sleeve WILL NOT come apart from the Cap.

VANDAL RESISTANT CONTROL STOP CAP REMOVAL

Use a large flat screwdriver as a lever to remove the Cap from the Control Stop. Insert the screwdriver blade between the bottom edge of the Cap and the flat surface of the Control Stop body as shown at right. Push the screwdriver handle straight back toward the wall to gently lift the Cap. If necessary, work the screwdriver around the diameter of the Cap until you can grasp the Cap and lift it completely off the Sleeve. The Sleeve should remain attached to the bonnet of the Control Stop.



CARE AND CLEANING OF CHROME AND SPECIAL FINISHES

DO NOT use abrasive or chemical cleaners (including chlorine bleach) to clean Flushometers that may dull the luster and attack the chrome or special decorative finishes. Use ONLY mild soap and water, then wipe dry with clean cloth or towel.

While cleaning the bathroom tile, protect the Flushometer from any splattering of cleaner. Acids and cleaning fluids will discolor or remove chrome plating.

TROUBLESHOOTING GUIDE

1. Valve does not function (no flush).

- A. Control Stop or Main Valve is Closed. Open Control Stop or Main Valve.
- B. Handle Assembly is worn or damaged. Install Handle Repair Kit or replace Handle Assembly.
- C. Relief Valve is worn or damaged. Replace Inside Parts Kit.

2. Volume of water is not sufficient to siphon fixture.

- A. Control Stop is not open wide enough. Adjust Control Stop for desired delivery of water volume.
- B. High Efficiency Flushometer installed on a higher Consumption fixture. Replace Inside Parts Kit to match the fixtures requirements.
- C. Water supply volume or pressure is inadequate. Properly measure supply pressure or volume of water at the Flushometer.

3. Flushometer closes off immediately.

- A. Ruptured or damaged Diaphragm. Replace Inside Parts Kit.
- B. Enlarged Bypass orifice from corrosion or damage. Replace Inside Parts Kit.

4. Length of flush is too short (short flush).

- A. Diaphragm Assembly and Guide Assembly are not hand-tight. Screw the two assemblies hand-tight.
- B. Bypass orifice is enlarged from corrosion or damage. Replace Inside Parts Kit.
- C. High Efficiency Flushometer installed on a higher Consumption fixture. Replace Inside Parts Kit to match the fixtures requirements.
- D. Handle Assembly is damaged. Replace Handle

5. Length of flush is too long (long flush) or continuous.

- A. Relief Valve is not seating properly or Bypass orifice is clogged because of foreign material, or Bypass orifice is closed by an invisible gelatinous film from "over-treated" water. Disassemble the working parts and wash thoroughly. NOTE: Size of the orifice in the Bypass is of utmost importance for the proper metering of water into the upper chamber of the flushometer. Do not enlarge or damage this orifice. Replace inside kit if cleaning does not correct problem.
- B. Supply line water pressure has dropped and is not sufficient to close the valve. Close Control Stop until pressure is restored.
- C. Closet Flushometer Parts inside a Urinal Flushometer. Replace Inside Closet Parts with proper Urinal Flushometer Parts.
- D. Inside Cover is damaged. Replace Inside Cover.

6. Chattering noise is heard during flush.

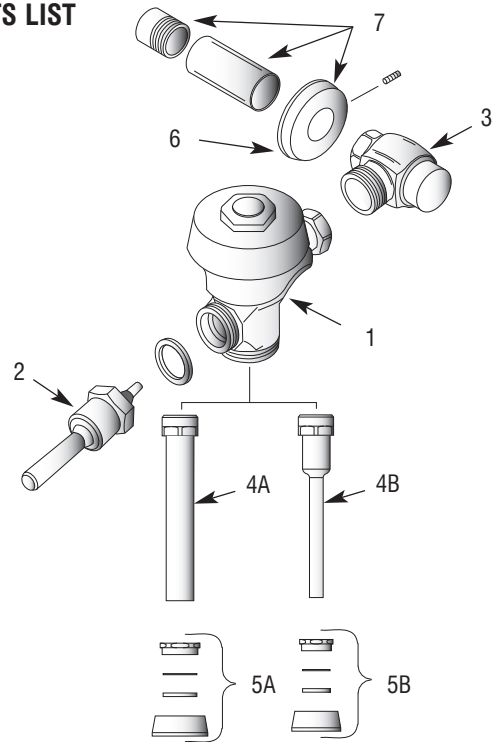
- A. Inside Cover is damaged. Replace Inside Cover.

7. Handle Leaks.

- A. Handle Gasket, Seal or Assembly is damaged. Replace as required.

Manufactured in the U.S.A. by Sloan Valve Company under one or more of the following patents: U.S. Pats. 5,295,655; 5,542,718; 5,558,120; 5,564,460; 5,730,415; 5,865,420; 5,887,848; 5,967,182. Other Pats. Pending. BAK-CHEK®, CID®, PARA-FLO®, PERMEX®, TURBO-FLO®

PARTS LIST



Item Part No. No.	Description
1	† Valve Assembly
2	B-73-A ADA Compliant Handle Assembly
3	H-700-A CP Bak-Chek® Control Stop
4A	V-600-AA 1-1/2" (38 mm) x 9" (229 mm) Vacuum Breaker Assembly
4B	V-600-AA 3/4" (19 mm) x 9" (229 mm) Vacuum Breaker Assembly
5A	F-5-A 1-1/2" (38 mm) Spud Coupling Assembly
5B	F-5-A 3/4" (19 mm) Spud Coupling Assembly
6	F-7 Supply Flange (Supplied when Valve is not Ordered with Sweat Solder Kit)
7	H-633-AA 1" (25 mm) Sweat Solder Kit with Cast Set Screw Flange
	H-636-AA 3/4" (19 mm) Sweat Solder Kit with Cast Set Screw Flange
†	Part number varies with valve model variation; consult factory.

For a complete listing of Flushometer Valve components and Repair Kits, see one of our Maintenance Guides or consult your nearest Plumbing Wholesaler.

For optimum water conservation and Flushometer performance, use only Genuine Parts.

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

When assistance is required, please contact Valve Company Installation Engineering Department at:

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

SLOAN

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