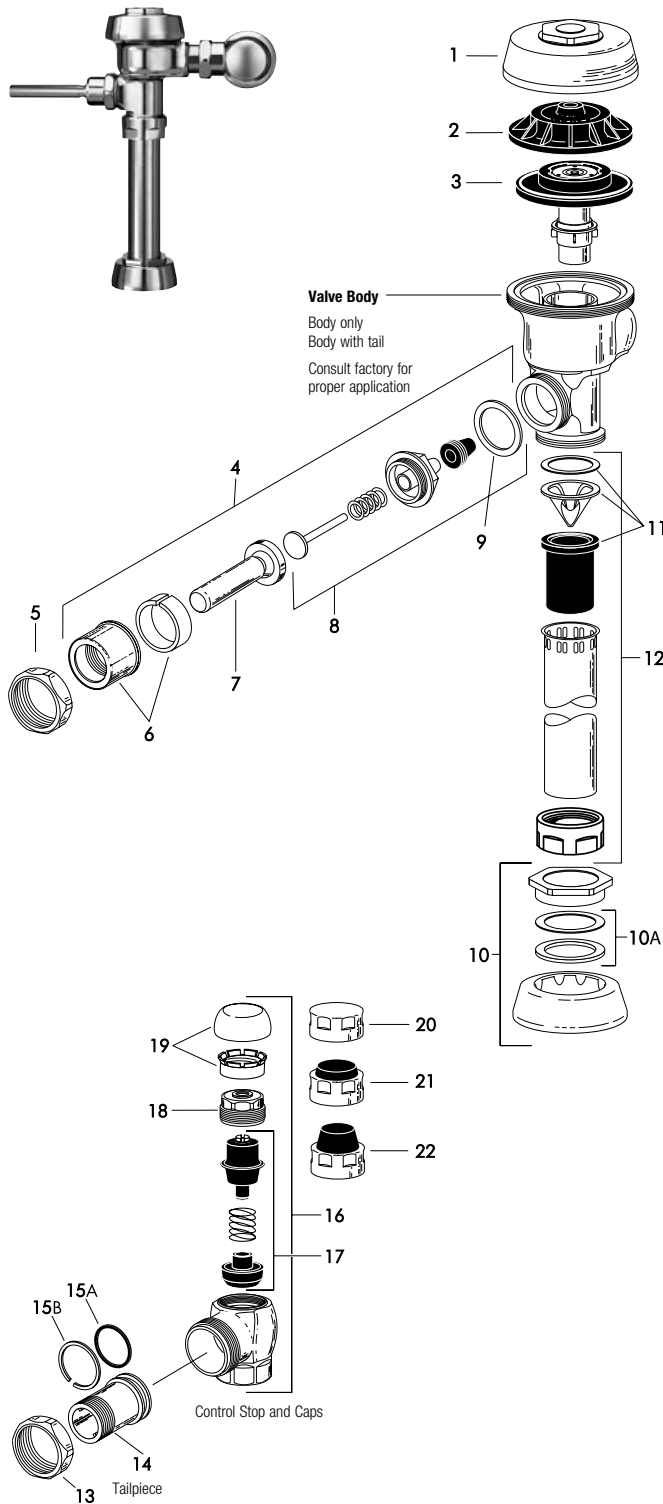


# Royal® Flushometer



## TAILPIECES, CONTROL STOPS AND FLUSH CONNECTIONS

For additional information on tailpieces, control stops and flush connections see Showerheads, Parts and Accessories Tab.

## PARTS LIST

Item No.	Code No.	Part No.	Description
1.	<b>0301172</b>	A-72	CP Cover
	—	A-72-HE	CP High Efficiency Cover
2.	<b>0301168</b>	A-71	Inside Cover
3.	—		Dual Filtered Bypass Diaphragm Assembly (refer to table and diagram on following page)
4.	<b>0302390</b>	B-73-A	CP ADA-Compliant Triple Seal Handle Assembly
5.	<b>0301082</b>	A-6	CP Handle Coupling
6.	<b>0302109</b>	B-7-A	CP Socket Assembly
7.	<b>0302389</b>	B-74-A	CP ADA-Compliant Handle
8.	<b>3302306</b>	B-51-A	Triple Seal Handle Repair Kit
9.	<b>5301139</b>	A-31	Handle Gasket – 48 per package
10.	<b>0306125</b>	F-5-AW	3/4" (19 mm) CP Spud Coupling Assembly
	<b>0306140</b>	F-5-AU	1-1/4" (32 mm) CP Spud Coupling Assembly
	<b>0306146</b>	F-5-AT	1-1/2" (38 mm) CP Spud Coupling Assembly
10A.	<b>SEE SLIP JOINT GASKETS AND RINGS TABLE BELOW</b>		
11.	<b>3323182</b>	V-651-A	High Back Pressure Vacuum Breaker Repair Kit
12.	<b>3393004</b>	V-600-AA	3/4" (19 mm) x 9" (228 mm) CP Vacuum Breaker
	<b>3393006</b>	V-600-AA	1-1/4" (32 mm) x 9" (228 mm) CP Vacuum Breaker
	<b>3393007</b>	V-600-AA	1-1/2" (38 mm) x 9" (228 mm) CP Vacuum Breaker
13.	<b>0308676</b>	H-550	CP Stop Coupling
14.	<b>0308801</b>	H-551-A	CP Adjustable Tailpiece 2-1/16" (52 mm long) Standard Length*
15A.	<b>5308696</b>	H-553	O-ring – 24 per package
15B.	<b>5308381</b>	H-552	Locking Ring – 12 per package
16.	<b>3308386</b>	H-700-A	1" (25 mm) CP Bak-Chek® Screwdriver Stop
	<b>3308384</b>	H-700-A	3/4" (19 mm) CP Bak-Chek® Screwdriver Stop
17.	<b>3308853</b>	H-541-ASD	Control Stop Repair Kit †
	<b>3308856</b>	H-543-ASD	Control Stop Repair Kit †
18.	<b>0308612</b>	H-622	CP Bonnet †
	<b>0308843</b>	H-577	CP Bonnet † – <b>DISCONTINUED</b>
19.	<b>3308772</b>	H-1010-A	Vandal Resistant Control Stop Cap Assembly †
	<b>3308790</b>	H-1009-A	Vandal Resistant Control Stop Cap Assembly † H-600 3/4" Stop only
20.	<b>0308738</b>	H-573	Control Stop Cap CP †
	<b>0308848</b>	H-582	Control Stop Cap CP †
21.	<b>3308866</b>	H-574	Control Stop Cap with Bumper † (-YO Variation)
22.	<b>3308867</b>	H-576	Control Stop Cap with Extended Bumper † (-YG Variation)

\* See pages 100-101 for additional lengths

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

‡ For use with 3/4" H-600-A Bak-Chek® screwdriver control stop

Sloan products are also available in satin, brushed nickel, chrome, gold and polished brass finishes – contact factory for part numbers.

## ITEM 10A. SLIP JOINT GASKETS AND RINGS

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

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

# Royal® Flushometer

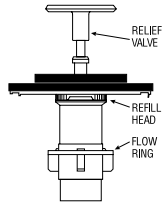
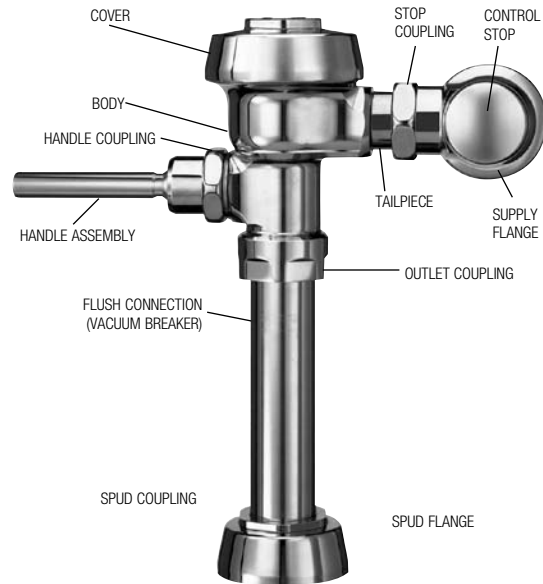
## DUAL FILTERED DIAPHRAGM ASSEMBLY

Available in diaphragm only and Royal® Performance™ Kits.

Royal® Performance™ Kit includes dual filtered diaphragm assembly (item 3), handle repair kit with triple seal packing (item 8), high back pressure vacuum breaker repair kit (item 11), and one tailpiece O-ring (item 15A). DIAPHRAGM ONLY KIT contains “drop-in” dual filtered diaphragm assembly (item 3) ONLY.

The dual filtered diaphragm can be used in Royal®, Regal®, and similar diaphragm-style valve bodies. For use in Sloan valve bodies with a bell-shaped cover (manufactured before 1964), replace the bottom filter ring in these kits with a blue A-108 filter ring (not shown Sloan Code No. **5301283**).

*NOTE: In January 1998, the Royal® diaphragm design was upgraded to a preassembled unit with two (2) plastic filtering rings attached to the rubber diaphragm (one on top and one on bottom). If the flushometer you are servicing has our older, segmented diaphragm with brass by-pass hole, refer to our Regal section for additional troubleshooting information.*



The colors of the relief valve and the refill head plus the shape of flow ring identify the flush volume of a DUAL FILTERED DIAPHRAGM ASSEMBLY.

## ROYAL® PERFORMANCE KIT

Code No.	Part No.	Description	Relief Valve†	Refill Head*	Flow Ring
<b>3301070</b>	A-1101-A	Low Consumption Water Closets-1.6 gpf (6.0 Lpf)**	Green	Gray	Smooth
<b>3301071</b>	A-1102-A	Water Saver Water Closets-3.5 gpf (13.2 Lpf)**	White	Gray	Smooth
<b>3301072</b>	A-1103-A	9 Liter European Water Closets-2.4 gpf (9.0 Lpf)	Blue	Gray	Smooth
<b>3301073</b>	A-1106-A	Wash Down Urinals-0.5 gpf (1.9 Lpf)	Green	Black	Smooth
<b>3301074</b>	A-1107-A	Low Consumption Urinals-1.0 gpf (3.8 Lpf)**	Green	Black	Slotted
<b>3301075</b>	A-1108-A	Water Saver Urinals-1.5 gpf (5.7 Lpf)**	Black	Black	Smooth

\*Closet refill heads (gray) have larger slots than urinal refill heads (black).

## DIAPHRAGM ONLY KIT

Code No.	Part No.	Description	Relief Valve†	Refill Head*	Flow Ring
<b>3301502</b>	A-1041-A	Low Consumption Water Closets-1.6 gpf (6.0 Lpf)**	Green	Gray	Smooth
<b>3301501</b>	A-1038-A	Water Saver Water Closets-3.5 gpf (13.2 Lpf)**	White	Gray	Smooth
<b>3301505</b>	A-1044-A	9 Liter European Water Closets-2.4 gpf (9.0 Lpf)	Blue	Gray	Smooth
<b>3301504</b>	A-1043-A	Wash Down Urinals-0.5 gpf (1.9 Lpf)	Green	Black	Smooth
<b>3301503</b>	A-1042-A	Low Consumption Urinals-1.0 gpf (3.8 Lpf)**	Green	Black	Slotted
<b>3301500</b>	A-1037-A	Water Saver Urinals-1.5 gpf (5.7 Lpf)**	Black	Black	Smooth
<b>3301506</b>	A-1045-A	High-Efficiency Water Closets-1.28 gpf (4.8 Lpf)	Blue	Gray	Smooth
<b>3301142</b>	A-1047-A	High-Efficiency Urinals-0.25 gpf (1.0 Lpf) with White Inserts	White	HEU Black	Smooth
<b>3301143</b>	A-1050-A	High-Efficiency Urinals-0.125 gpf (0.5 Lpf) with White Inserts	Blue	HEU Black	Smooth

† Consult factory for availability of replacement plastic relief valves (green, black, blue, and white) and brass relief valves.

NOTE: For older water closets that require 4.5 gpf (17.0 Lpf), choose kits A-1102-A or A-1038-A, but remove the flow ring before use. For blowout-style urinals that require 3.5 gpf (13.2 Lpf), choose kits A-1102-A or A-1038-A. For service sinks that require 6.5 gpf (24.6 Lpf), order A-36-A diaphragm repair kit (not shown Sloan Code No. **3301036**) and remove the flow ring before use. Regulations for low consumption fixtures prohibit the use of higher flush volumes.

\*Closet refill heads (gray) have larger slots than urinal refill Heads (black).

\*\* Water Saver (3.5 gpf closet and 1.5 gpf urinal) and Low Consumption (1.6 gpf closet and 1.0 gpf urinal) fixtures must use matching gpf (Lpf) diaphragm kits; using a smaller gpf (Lpf) kit in fixtures not intended for less volume will result in inadequate dilution in urinals and improper evacuation in closets.

## Royal® Flushometer

### TROUBLESHOOTING GUIDE

**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. Flushometer does not function (no flush).

- Control stop or main supply valve is closed. Open control stop or main supply valve.
- Handle assembly is damaged. Replace B-73-A handle or repair with B-51-A handle repair kit.
- Relief valve is damaged. Replace relief valve.

#### 2. Handle leaks.

- Handle seal or handle assembly is damaged. Replace B-73-A handle or repair with B-51-A handle repair kit.

#### 3. Water splashes from fixture.

- Control stop is open wider than necessary. Adjust control stop for desired delivery of water volume.
- Water saver/conventional diaphragm assembly is installed on low consumption fixture or closet diaphragm assembly is installed on urinal fixture. Determine the required flush volume (see label on valve or markings on fixture). Replace diaphragm assembly or relief valve for appropriate flush volume of fixture.

#### 4. Volume of water is insufficient to adequately siphon fixture.

- Control stop is not open wide enough. Adjust control stop for desired delivery of water volume.
- Diaphragm assembly is damaged. Replace diaphragm assembly.
- Low consumption diaphragm assembly is installed on water saver/conventional fixture or urinal diaphragm assembly is installed on closet fixture. Determine the required flush volume (see label on valve or markings on fixture). Replace diaphragm assembly or relief valve for appropriate flush volume of fixture.
- Inadequate water volume or pressure is available from supply. Increase flow rate or pressure to the valve. If gauges are not available to measure supply pressure/volume, remove relief valve from diaphragm assembly and open the control stop. If the fixture siphons: Additional water volume is required. Install higher flushing volume relief valve or diaphragm assembly or cut flow ring from guide.

**IMPORTANT: LAWS AND REGULATIONS PROHIBIT THE USE OF HIGHER FLUSHING VOLUMES THAN LISTED ON FIXTURE OR FLUSHOMETER.**

If the fixture **DOES NOT** siphon (or a low consumption flush is required): Additional steps must be taken to increase the water pressure and/or volume at the water supply. Contact fixture manufacturer for minimum supply requirements of fixture.

#### 5. Flushometer valve closes immediately (short flush).

- Worn or damaged diaphragm assembly. Replace diaphragm assembly.
- Handle assembly is damaged. Replace B-73-A handle or repair with B-51-A handle repair kit.
- Low consumption diaphragm assembly is installed on water saver/conventional fixture or urinal diaphragm assembly is installed on closet fixture. Determine the required flush volume (see label on valve or markings on fixture). Replace relief valve or diaphragm assembly for appropriate flush volume of fixture.

#### 6. Length of flush is too long (long flush) or fails to shut off.

- By-pass hole (upper filter ring) of diaphragm assembly is dirty. Remove the diaphragm assembly. Disassemble the filter rings from the diaphragm, wash under running water, and reassemble. Replace as necessary.
- Relief valve or diaphragm assembly is damaged. Replace relief valve or diaphragm assembly.
- Water saver/conventional diaphragm assembly is installed on low consumption fixture or closet diaphragm assembly is installed on urinal fixture. Determine the required flush volume (see label on valve or markings on fixture). Replace diaphragm assembly or relief valve for appropriate flush volume of fixture.
- Inside cover is damaged. Install new A-71 part.
- Line water pressure dropped and is insufficient to close valve. Close the control stop until pressure is restored.
- Relief valve is not seated properly. Disassemble diaphragm components (relief valve, filter rings, and diaphragm unit), wash under running water, and reassemble. Replace as necessary.

#### 7. Chattering noise is heard during flush.

- Inside cover is damaged. Install new A-71 part.
- Relief valve or diaphragm assembly is damaged. Replace relief valve or diaphragm assembly.

### CARE AND CLEANING INSTRUCTIONS

**DO NOT USE** abrasive or chemical cleaners to clean flushometers that may dull the luster and attack the chrome or decorative finish. Use **ONLY** mild soap and water, then wipe dry with a clean towel or cloth. When cleaning the bathroom tile, protect the flushometer 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).**