

Selecting a Sloan Diaphragm Flushometer Regal vs Sloan vs Royal

Presenters



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Sloan Valve Company
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Agenda

This presentation will cover:

- The invention of diaphragm flushometers
- Sloan flushometer advantages
- How Sloan diaphragm flushometers work
- What differentiates Regal, Sloan, and Royal?
 - External differences
 - Internal differences
- Diaphragm flushometer selection
- Summary



Why diaphragm flushometers were invented

1906

Sloan invents the Diaphragm Flushometer

- Replaced overhead tanks
- Relied on water pressure, not gravity
- Used less water and energy



William Elvis Sloan

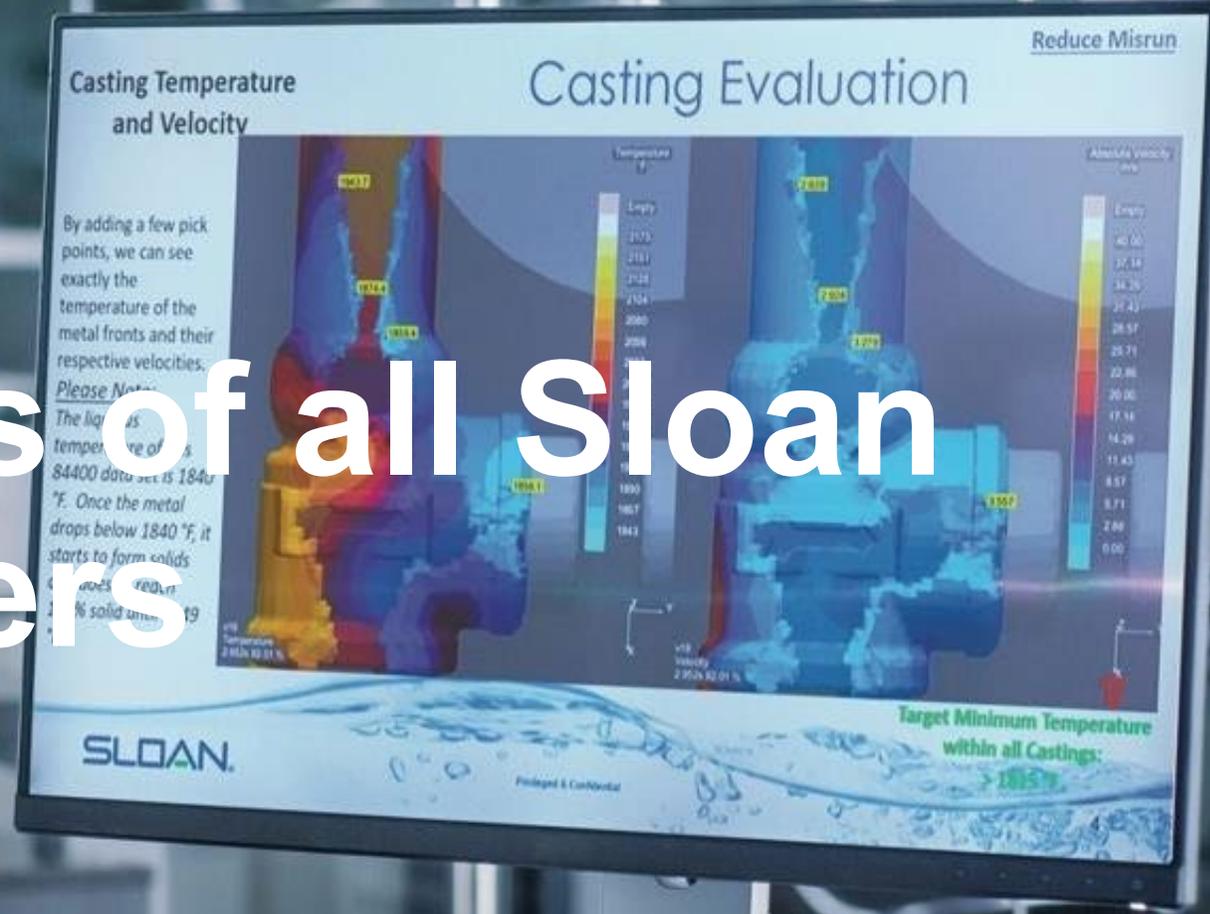


Chicago, Illinois USA

TODAY

Most often specified
Largest installed base

Advantages of all Sloan Flushometers



Advantage – The Sloan Foundry

ISO-9001-2015 Certified

“Magma” modular software optimizes process conditions to ensure structural integrity.

Laempe Core Shooter Machines for high performance product quality with around-the-clock continuous operation.

High-production facility produces 60,000 pounds of high quality castings per day



Augusta, Arkansas USA



Advantage - Semi-Red Brass vs Yellow Brass

High Copper – Low Zinc

Improved corrosion resistance

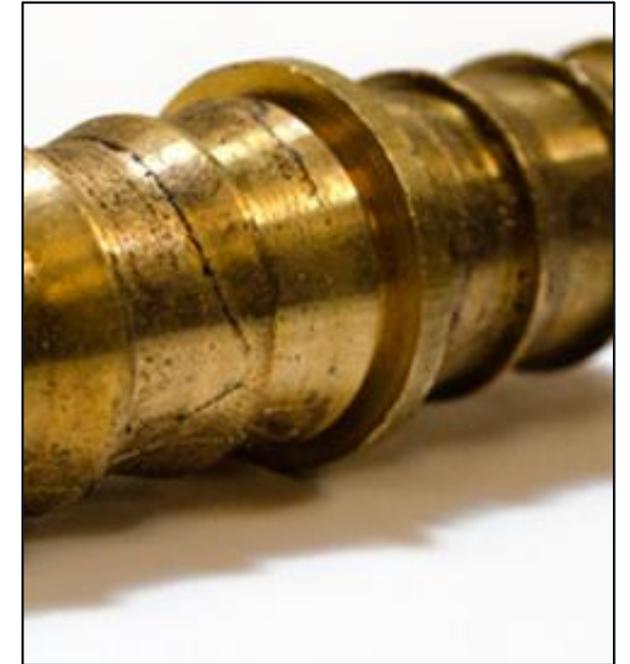
Reduced “Dezincification”

Occurs when zinc in the brass alloy dissolves over time



Semi-Red Brass

Brass	80%
Zinc	8%
Other	12%



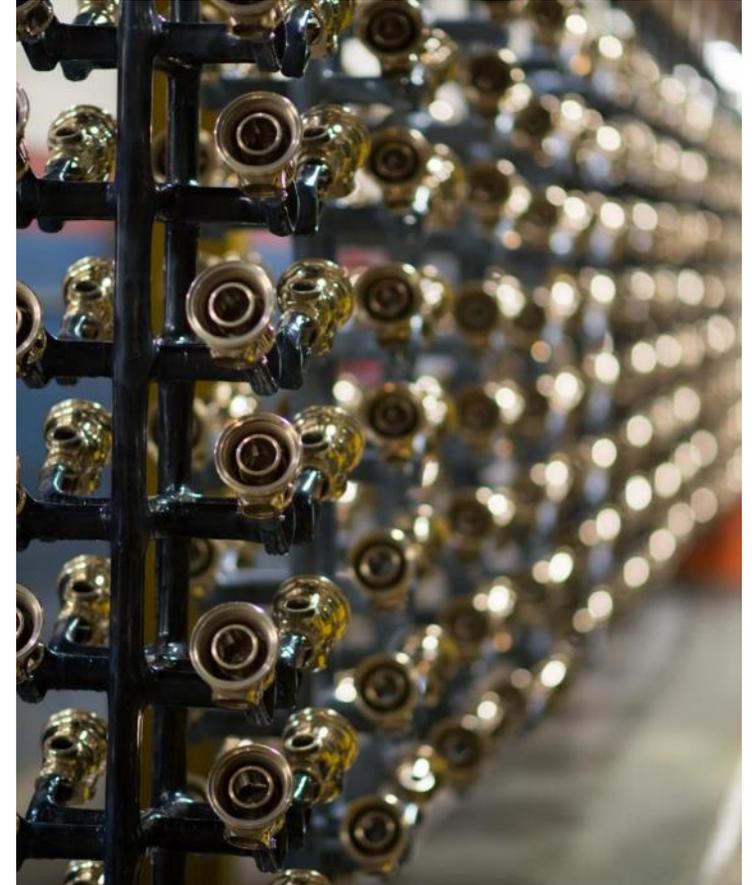
Yellow Brass

Brass	60%
Zinc	35%
Other	5%

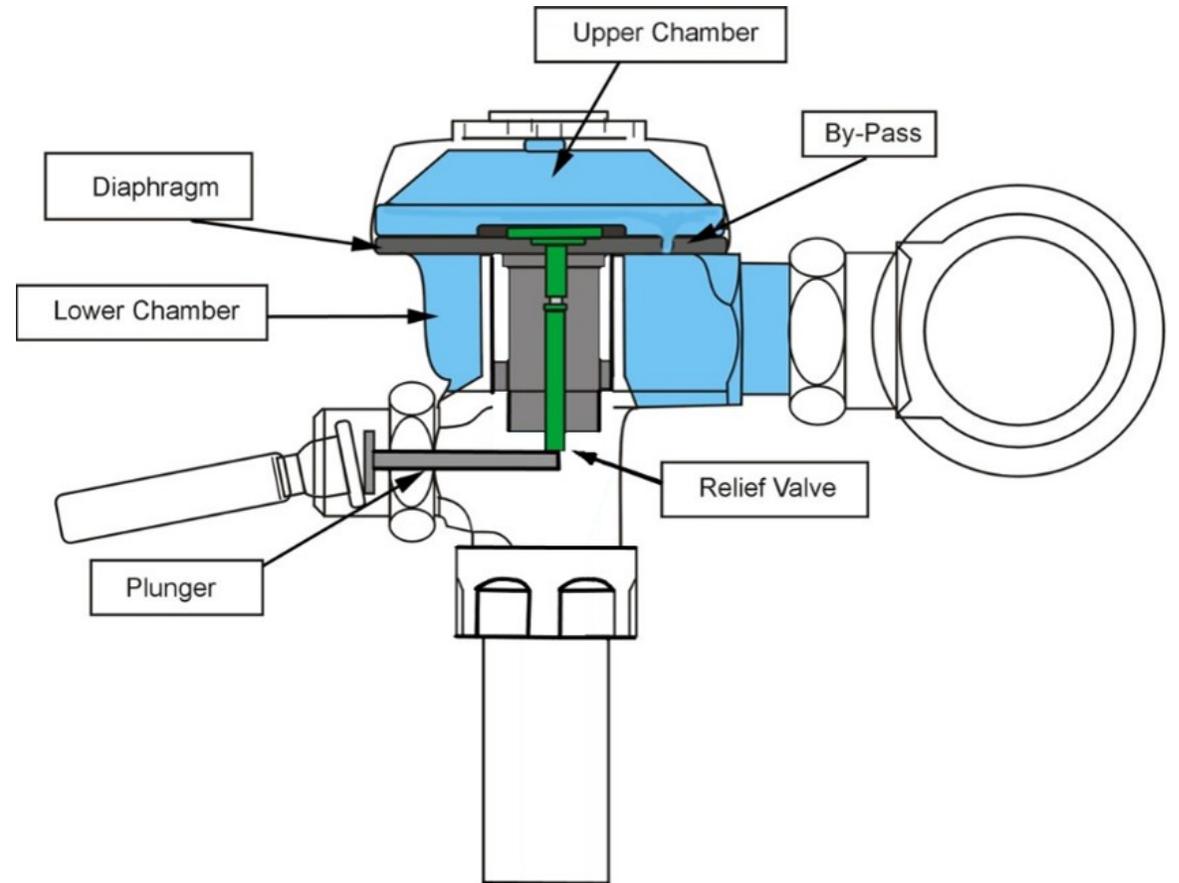
Semi-red brass lasts longer and requires less maintenance

Advantage - Machining, Plating, Assembly, and Testing in Franklin Park, IL, USA

“Our products are made to last, and we take the necessary steps to ensure our products are sustainable throughout the entire duration of their use.”



Advantage – Non-hold Open Design



The flushometer is unaffected by a user continuing to hold the handle down

Advantage – Common Relief Valves



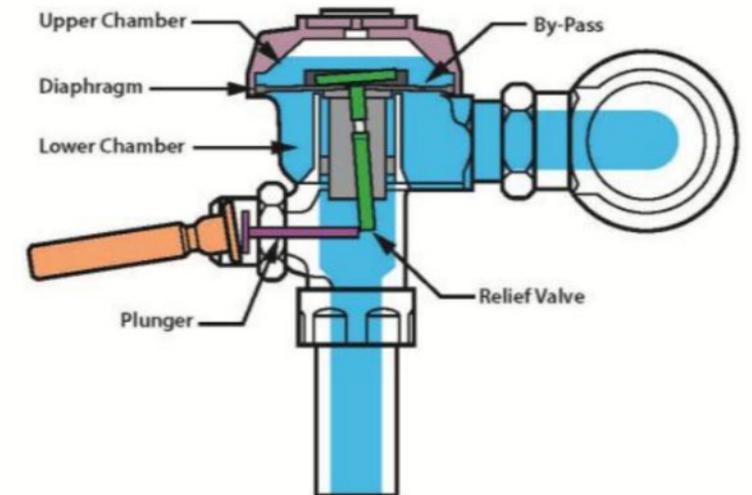
Color differentiates the stroke and is one of the factors that differentiates Gallons-per-Flush (GPF)

Closets — Diaphragm Inside Parts Kits

<p>RELIEF VALVE A-19-AC DIAPHRAGM A-156-A DISC A-15-A FLOW RING A-164 REFILL HEAD A-170 (bevel down) GUIDE A-163</p>	<p>RELIEF VALVE A-19-AC DIAPHRAGM A-156-A DISC A-15-A FLOW RING A-164 REFILL HEAD A-170-1 (bevel up) GUIDE A-163</p>	<p>RELIEF VALVE A-19-ALC DIAPHRAGM A-156-A DISC A-15-A PARA-FLO REFILL HEAD A-172 GUIDE A-163</p>	<p>RELIEF VALVE A-19-AL DIAPHRAGM A-156-A DISC A-15-A PARA-FLO REFILL HEAD A-172 GUIDE A-163</p>
A-36-A	A-38-A	A-41-A	A-44-A
3301036	3301038	3301041	3301024
4.5 gpf/17.0 Lpf	3.5 gpf/13.2 Lpf	1.6 gpf/6.0 Lpf	2.4 gpf/9.0 Lpf
White Relief Valve	White Relief Valve	Green Relief Valve	Blue Relief Valve

Urinals — Diaphragm Inside Parts Kits

<p>RELIEF VALVE A-19-AU DIAPHRAGM A-156-A DISC A-15-A FLOW RING A-164 REFILL HEAD A-170 (bevel down) GUIDE A-163</p>	<p>RELIEF VALVE A-19-ALC DIAPHRAGM A-156-A DISC A-15-A TURBO-FLO FLOW RING A-159 PARA-FLO REFILL HEAD A-172 GUIDE A-163</p>	<p>RELIEF VALVE A-19-AU DIAPHRAGM A-156-A DISC A-15-A TURBO-FLO FLOW RING A-159 REFILL HEAD A-170 (bevel up) FLOW RING A-164 GUIDE A-163</p>
A-37-A	A-42-A	A-43-A
3301037	3301044	3301081
1.5 gpf/5.7 Lpf	1.0 gpf/3.8 Lpf	0.5 gpf/1.9 Lpf
Black Relief Valve	Green Relief Valve	Black Relief Valve



Advantage – No external flush volume adjustment



Sloan flushometers are designed to deliver accurate flush volumes throughout their entire lifetime – no adjustment necessary

Advantage – All Sloan Diaphragm Flushometers can be Exposed or Concealed



Advantage – No planned obsolescence

All standard units are backwards and forwards compatible

- Current components fit past and future products
- Parts for Regal/Sloan/Royal models are easily interchangeable
- Valve bodies built before 1964 require an A108 blue filter ring for dual filtered diaphragms
- Most standard flushometers allow for right or left handed installations



Backwards.....



.....and forwards compatible

Advantage – Upgradeable Manual Flush Handles



SaniGuard®



UPPERCUT



CuVerro®



CuVerro® Retrofit

[Sloan CuVerro Flushometer Handles](#)

Advantage – Upgradeable to Side-mount Sensor

[Sloan Manual to Automatic Flushometer Conversion Training Webinar](#)

[Sloan Flushometer Retrofit Kit Brochure](#)



SMO



SMOOTH



SFSM



DFSM



SFSM Retrofit

Advantage – Upgradeable to Top-mount Sensor

[Sloan Manual to Automatic Flushometer Conversion Training Webinar](#)

[Sloan Flushometer Retrofit Kit Brochure](#)



SLOAN RESS



G2 RESS



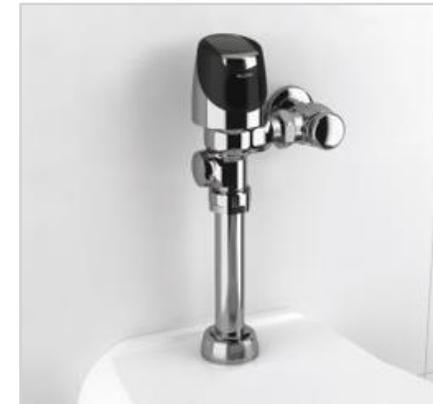
SOLIS RESS



SLOAN RESS MC



ECOS RESS

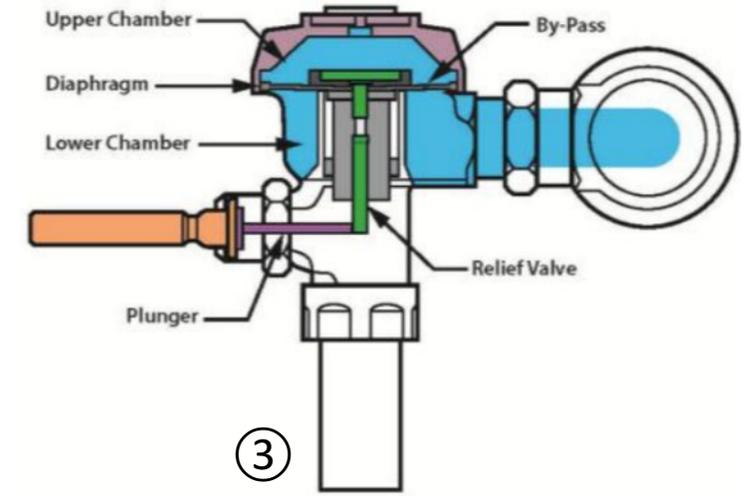
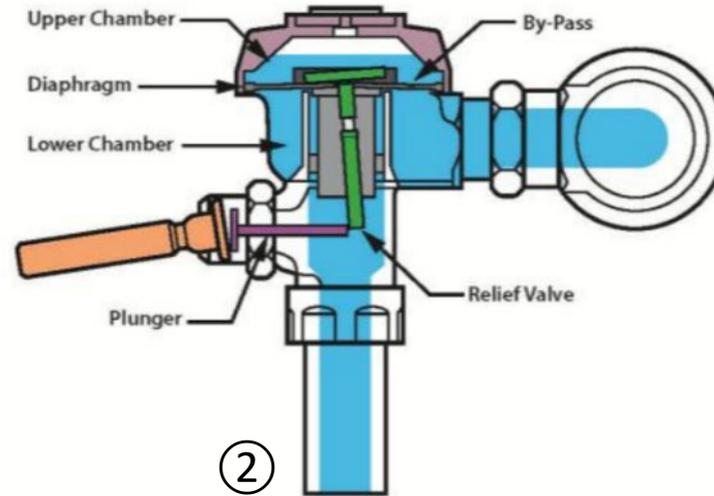
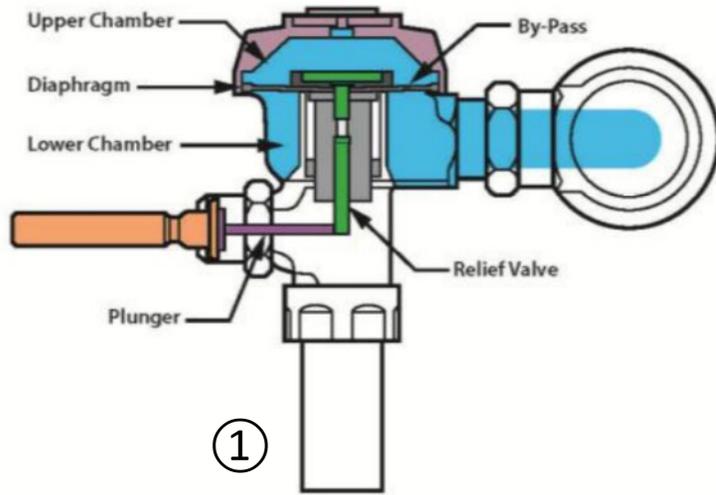


SOLIS Retrofit

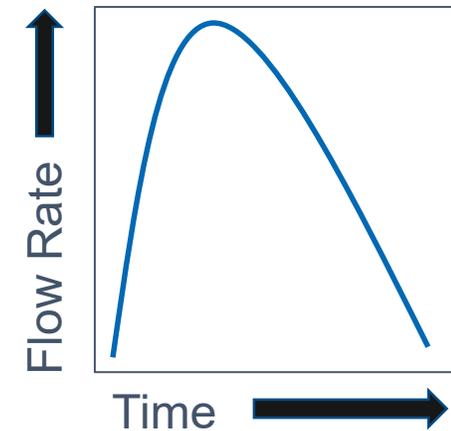


How a Diaphragm Flushometer Works

Basic Diaphragm Function



1. Moving the handle causes pressure relief. The diaphragm flexes up, releasing water into the fixture
2. Diaphragm controls the flow rate, volume of water, and slow close
3. Resets quickly for the next flush



What's the Difference between Regal, Sloan, and Royal?

Product Positioning



Good
Regal



Better
Sloan

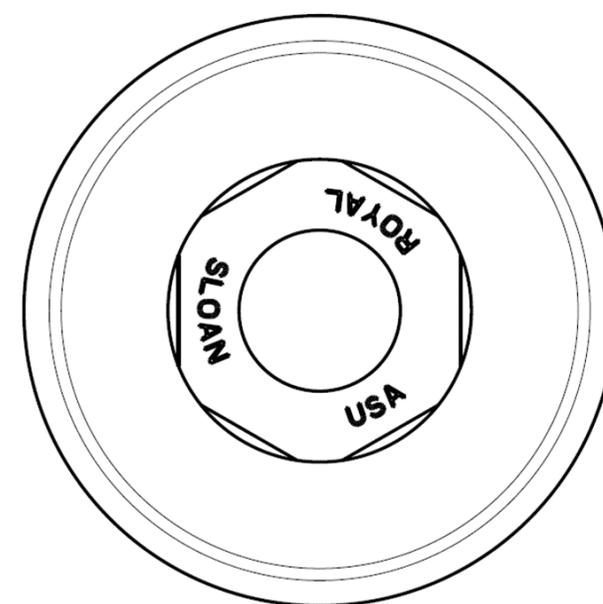
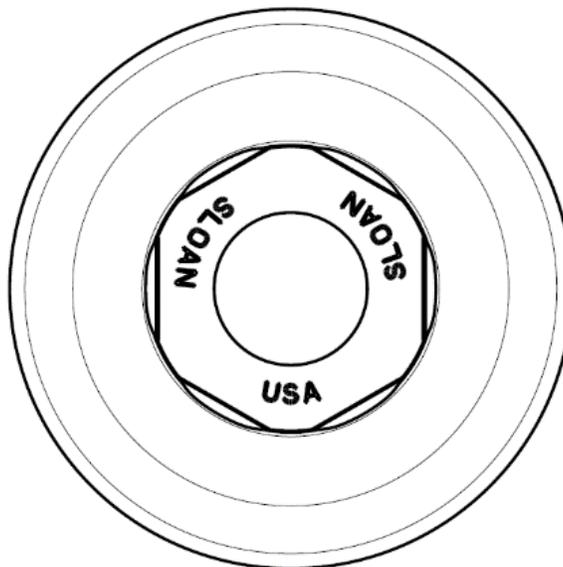
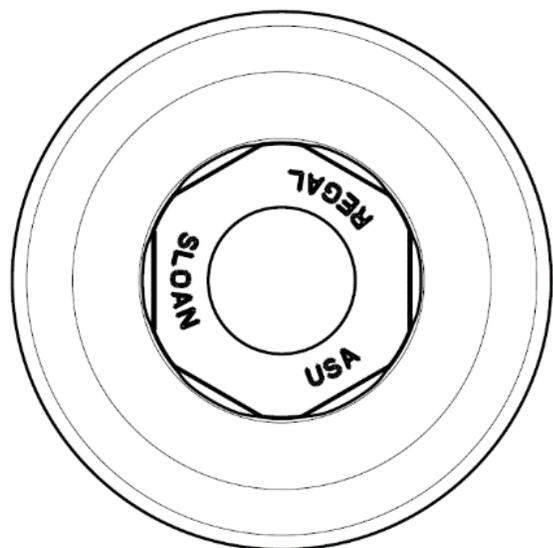


Best
Royal

Three apples are shown in a row against a white background. From left to right, they are green, yellow, and red. The text "External Differences" is overlaid in the center in a bold blue font.

External Differences

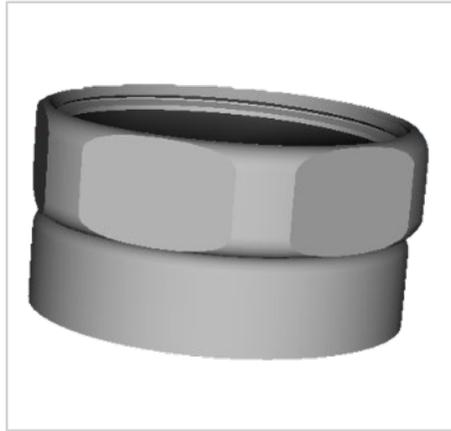
External Difference - Appearance



External Difference - Hex Coupling



Regal and Sloan



“Top” Hex Coupling



Royal



“Bottom” Hex Coupling

External Difference - Spud Flange



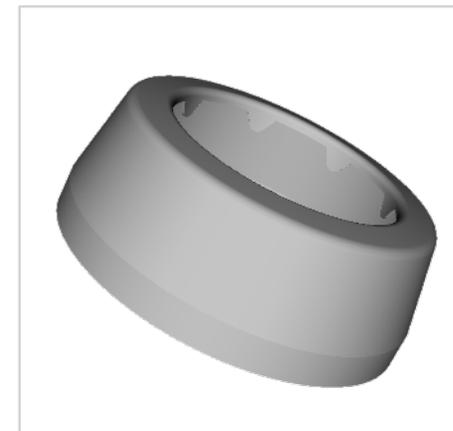
Regal and Sloan



“Bell” Shaped Flange

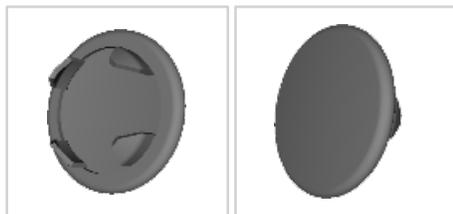


Royal



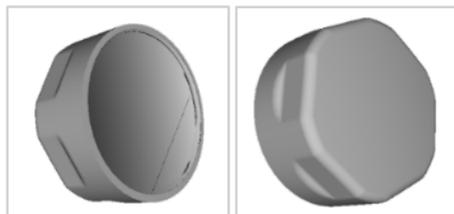
“Diamond” Shaped Flange

External Difference – Control Stop Cap



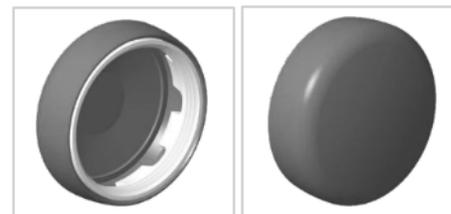
Good – Regal

Hex nut



Better – Sloan

Vandal-resistant locking
stop cap



Best – Royal

Vandal-resistant,
threaded, free-spinning
stop cap



Ultimate – Concealed



Internal Differences



2020 Chevrolet Blazer



2020 Buick Enclave



2020 Cadillac XT6

Internal Differences

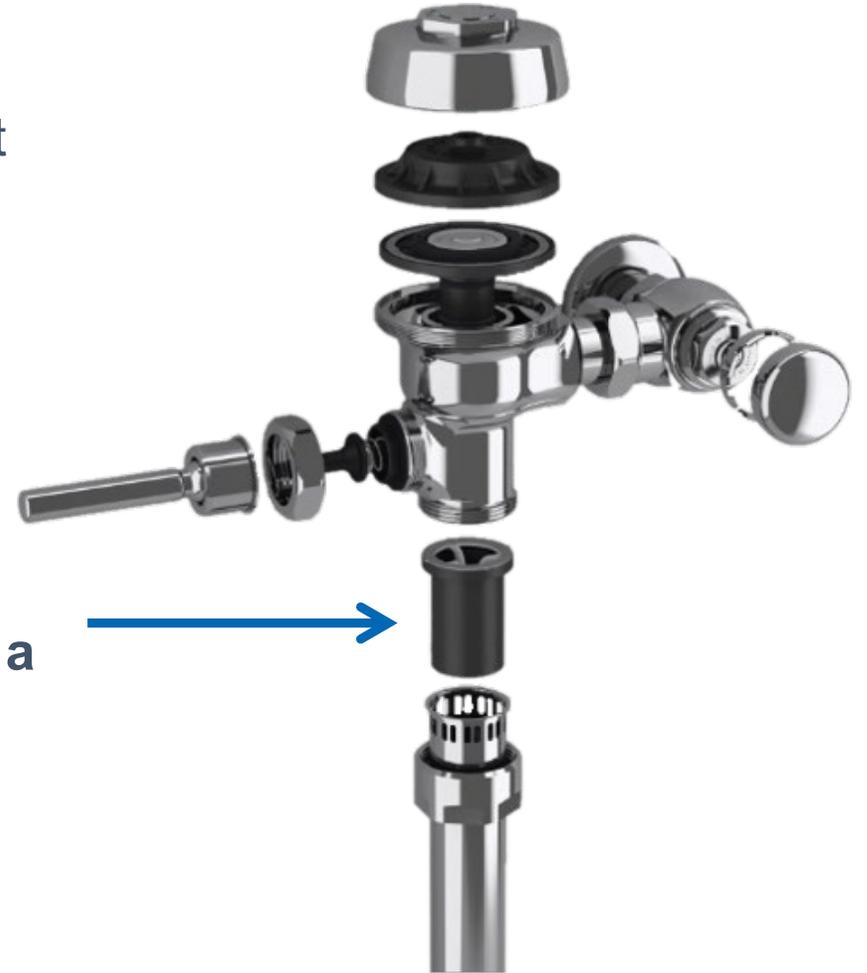
Internal Difference – Vacuum Breaker

A vacuum breaker:

- Provides an instantaneous tight-sealing check against back-flow (required)
- Provides the air gap between flush valve and fixture (required)

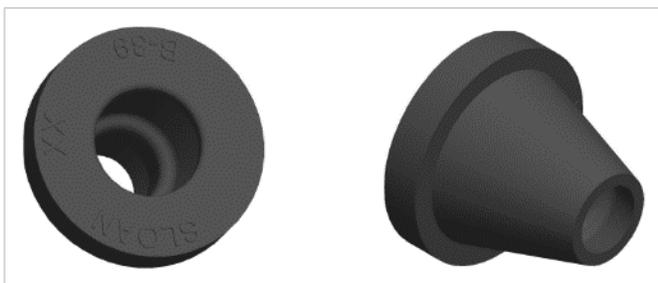
The V551A is standard on Regal and Sloan models

The V651A is standard on Royal models and includes a “skirt” that is designed to resist high back pressure from the fixture

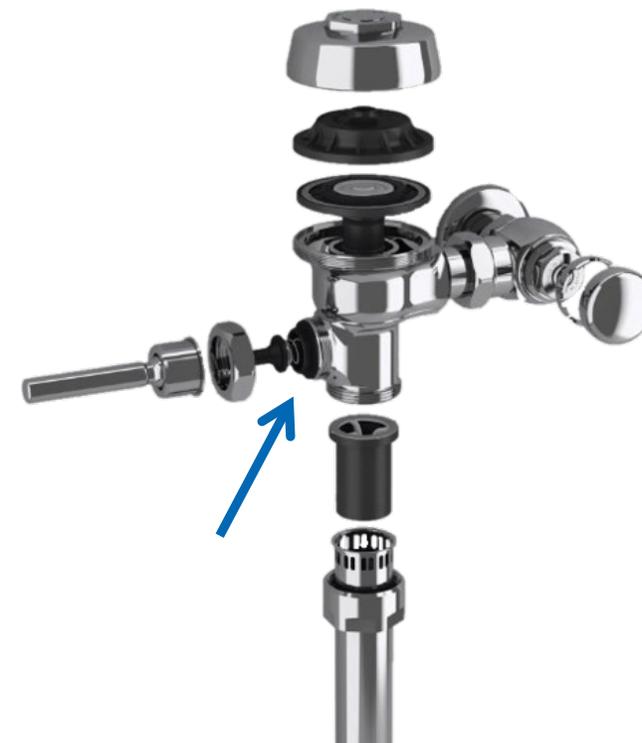
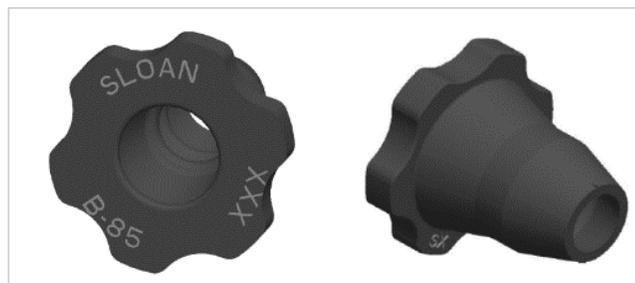


Internal Difference – Handle Seal

Regal

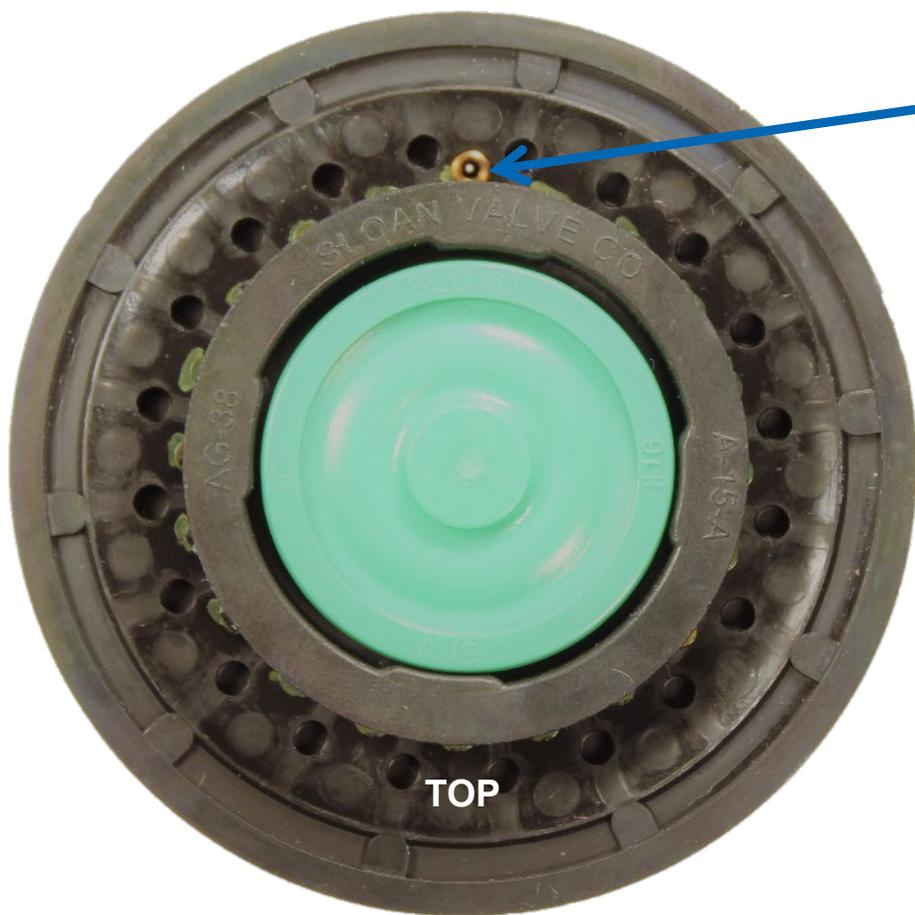


Sloan and Royal

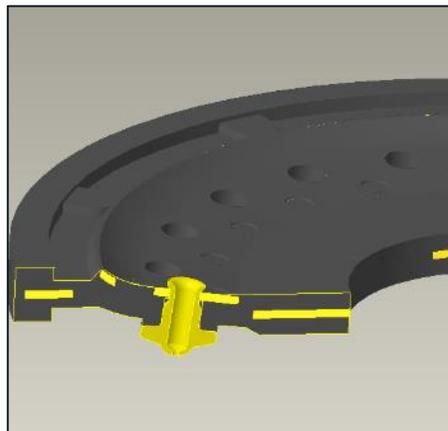


Regal uses a standard handle seal
Sloan and Royal use a triple handle seal

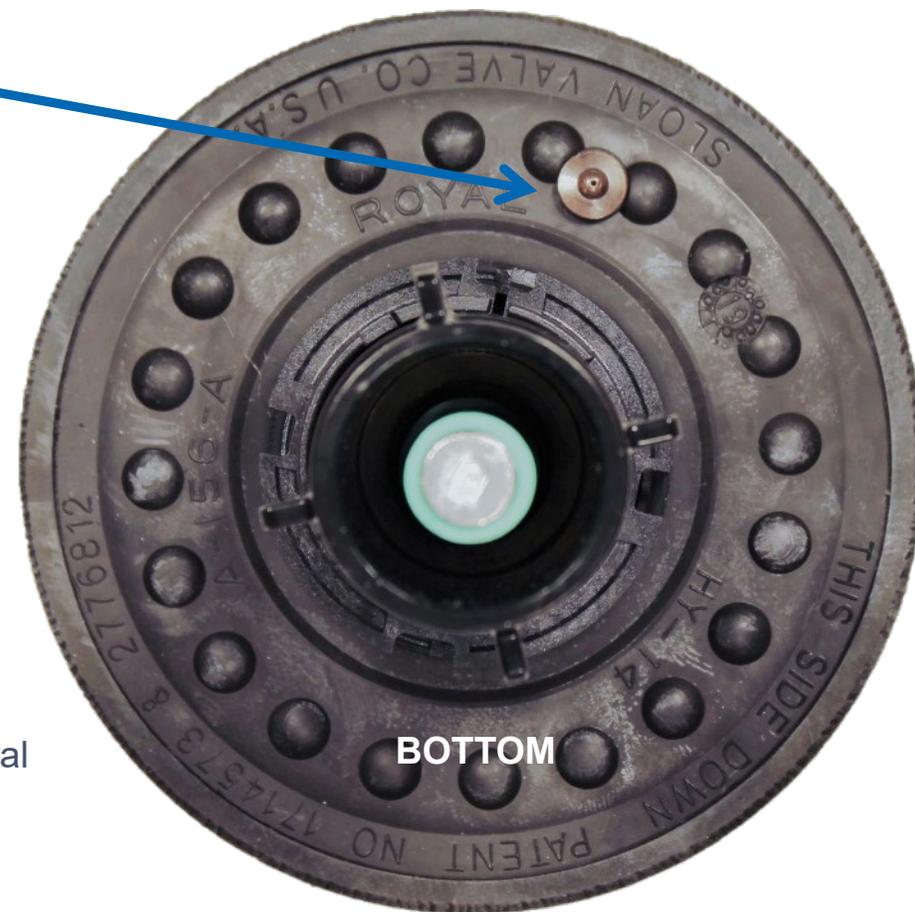
Internal Difference - Regal Diaphragm



Single Unfiltered
Brass Bypass
Orifice

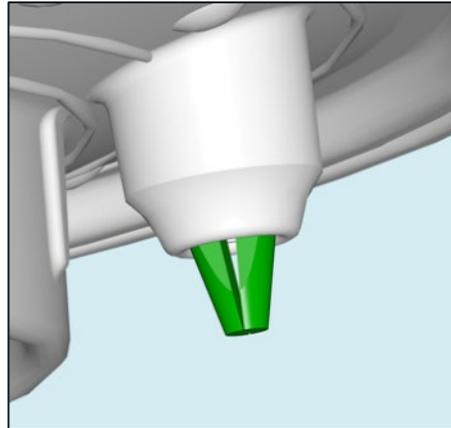
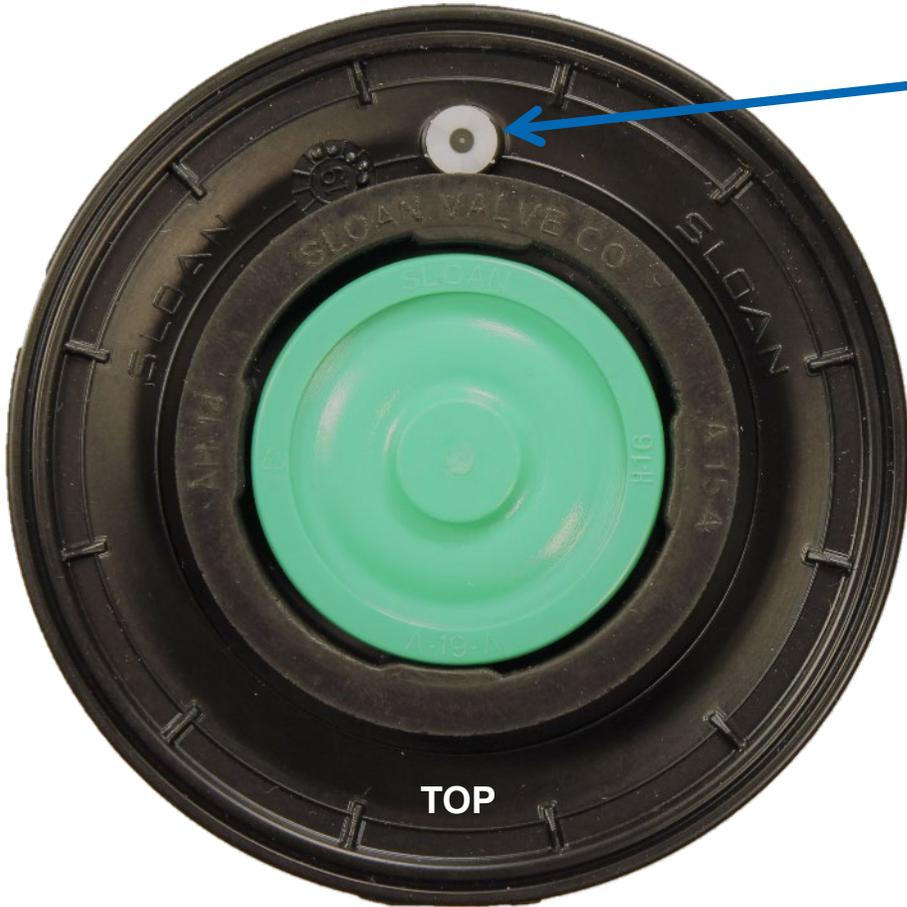


Diaphragm material - vulcanized natural
rubber with segmented brass inserts



Internal Difference - Sloan Diaphragm

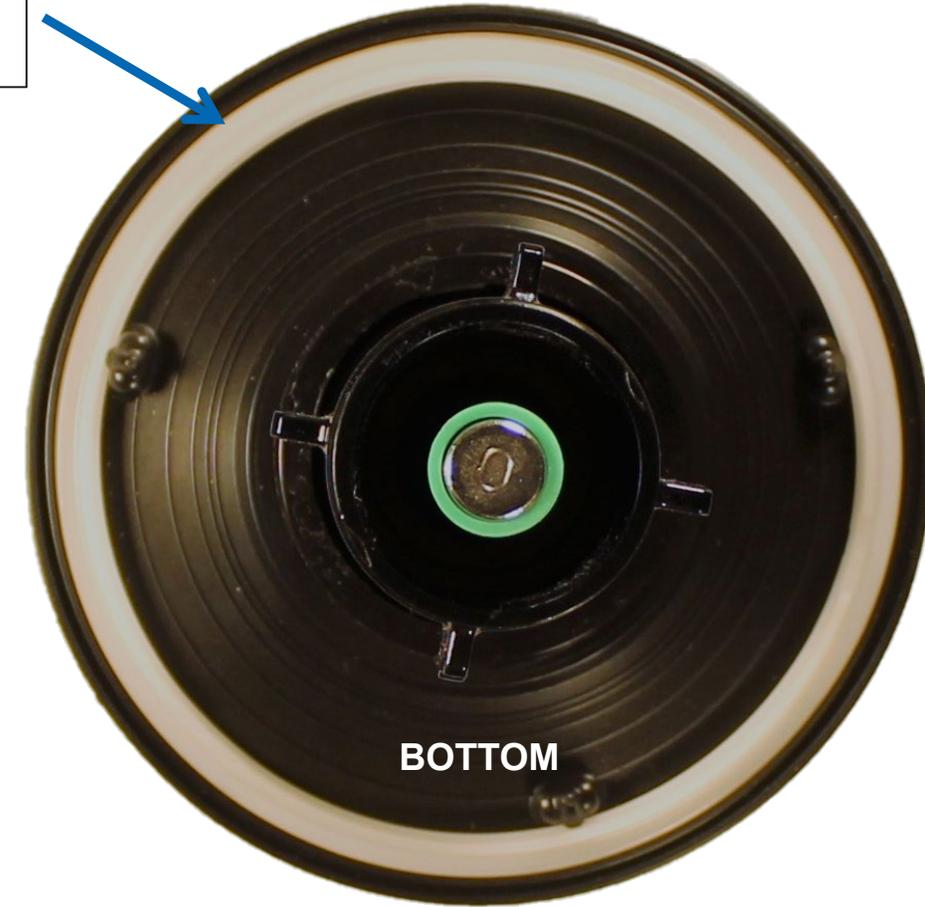
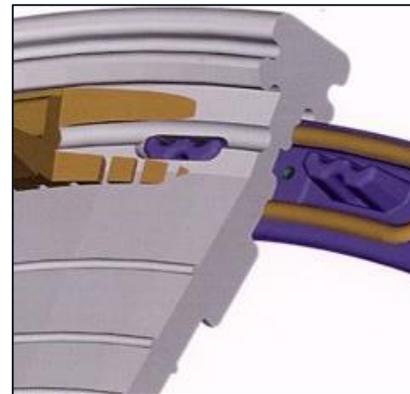
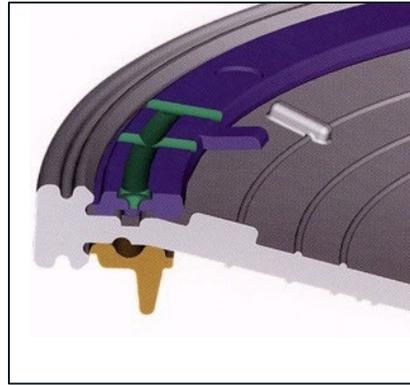
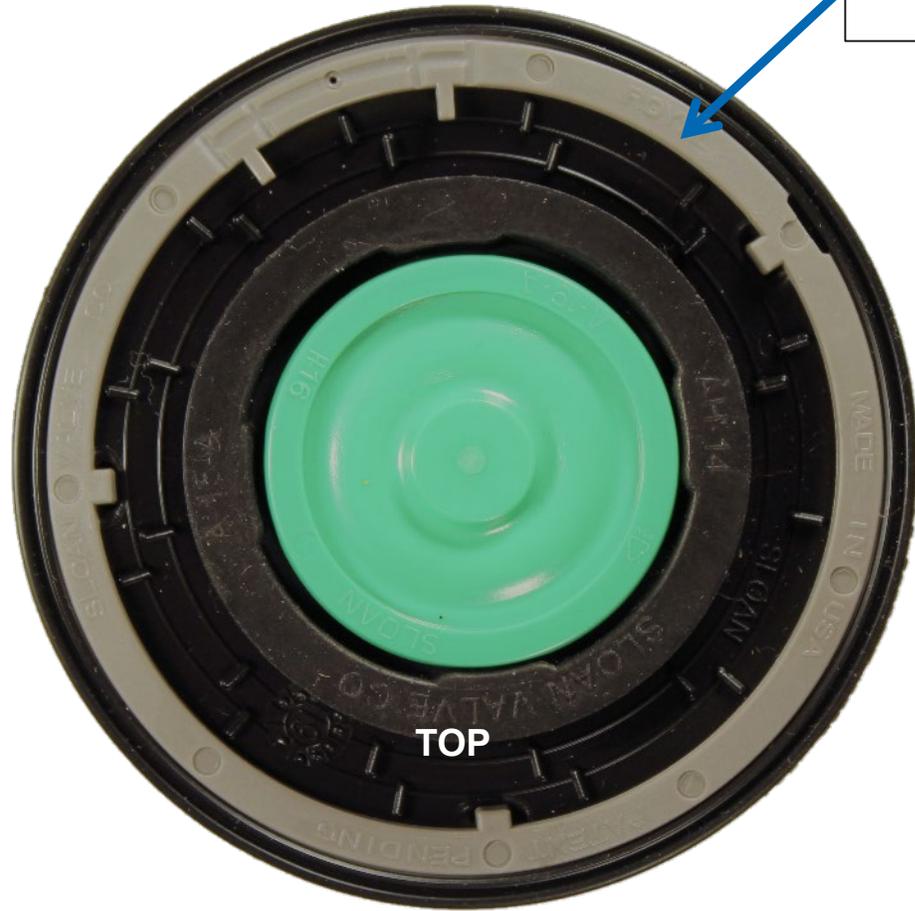
Single Rigid
Plastic Fixed
Filtered Linear
Bypass



Diaphragm material - Permex®
synthetic rubber

Internal Difference - Royal Diaphragm

Dual Bypass molded into Diaphragm -
Plastic Locking Rings with Primary and
Secondary Filters



Diaphragm material - Permex® synthetic rubber

Diaphragm Summary



Diaphragm Attribute	Regal	Sloan	Royal
Material	Vulcanized natural rubber	Permex® synthetic rubber	Permex® synthetic rubber
Bypass material	Brass	Engineered Polymer	Engineered Polymer
Filter	None	Linear filtered bypass	Dual filtered fixed bypass
Rating	Good	Better	Best

Product Selection Guide



Application	Regal	Sloan	Royal	Why It Matters
High Frequency Use	✓	✓✓	✓✓	All Sloan products are designed for commercial use
Dirt and Sediment		✓	✓✓	Filtered bypasses add additional layer of protection
Aggressive Water Conditions		✓	✓✓	Synthetic rubber increases life span Royal models available with Reclaimed Water Option
Fixture Back Pressure			✓	The extended skirt ensures water is delivered to the fixture
Reduced Maintenance		✓	✓✓	Enhanced features extend service life
Lowest Initial Cost	✓✓	✓		Regal is the original design – outperforming offshore copies
Lowest Total Lifetime Cost		✓	✓✓	Enhanced features equal fewer replacement parts and longer maintenance intervals

Summary - Product Positioning



Good
Regal

- Competitive quality
- Lowest initial acquisition cost
- Outperforms offshore copies



Better
Sloan

- A balance of price and performance
- Matches the features of competing 'premium' diaphragm valve offerings



Best
Royal

- Exceptional performance
- Longer Life
- Lower Total Cost of Ownership
- Available with "special finishes" and Reclaimed Water option

“Royal” Flush

roi(ə)l fləʃH/

noun

(in poker) a straight flush including ace, king, queen, jack, and ten all in the same suit, which is the hand of the highest possible value

An unbeatable hand



Summary

Sculpture installed at the Guggenheim Museum in 2016

Artist: Maurizio Cattelan

Medium: Gold sculpture

Title: America

227lbs / 103kgs of solid gold with a Sloan Royal flushometer

The most valuable toilet in the world is a Royal!





Questions?

Upcoming Sloan Training Webinars



May 28th

PWT New Product
Launch



June 4th

Overview of Sloan
Touch-Free Faucets



June 11th

Introduction to Sloan
Touch-Free Soap
Dispensers

Upcoming Sloan Training Webinars



June 18th

Sloan Sensor 101
Installation, Start-Up,
Function and
Troubleshooting



June 25th

Commercial Restroom
Products and ADA
Compliance



July 2nd

Flushometer Care and
Maintenance Part 1 –
Manual Diaphragm Units



July 9th

Power Supply Options
and Installation
Recommendations for
Sloan Sensor Faucets

Training Comments, Questions, or Suggestions?

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