

# SLOAN FLUSHOMETERS

Selection Guide

OPTIMA PLUS®

ROYAL®

REGAL

GEM-2®

NAVAL®

DOLPHIN®

MICROPlumb®

FLUSHMATE®



# SLOAN VALVE COMPANY

The Most Respected Brand in  
Plumbing Throughout the World

Sloan Valve Company is a leading manufacturer of plumbing products. The company offers a comprehensive line of Flushometers, Optima® and Optima Plus® electronic products and other products to architects, engineers, and contractors. In the United States, Sloan commands the leading market share for Flushometers and electronic products. Sloan's goal is to create value for its customers through superior design and advanced manufacturing techniques. This selection guide is designed to help you select the right Flushometer for your installation.



# WHY CHOOSE SLOAN FLUSHOMETERS

**Experience** Sloan has the manufacturing, new product development and field service expertise to ensure the success of your plumbing project. Our installed base of Flushometers provides an extensive knowledge base of water and its behavior in a plumbing system. The result is a product you can count on, and an organization ready to back up its recommendations with on-the-job dedication.

**Preference** In two recent independent surveys of Maintenance Engineers, Sloan was preferred 9 out of 10 times to any other flush valve manufacturer. Sloan has built its reputation on quality, and the market has responded by its preference. Your installation will have the best plumbing products available in the market today — and tomorrow.

**Reliability** Once you install a Sloan Flushometer, you can expect consistent performance. The reason for such outstanding reliability is the quality engineering and manufacturing processes used by Sloan. To meet low consumption flush requirements, manufacturing tolerances have become even more critical. Holding these tolerances translates into superior performance and water conservation. Sloan's manufacturing capability ensures these tolerances are maintained. The result is the most reliable and accurate plumbing products in the world.

**Product Quality/Durability** As you review this Flushometer selection guide, you will see a common thread linking Sloan Flushometer products: Quality. From the highest grades of brass, to our precision finishing processes, to the often proprietary manufacturing technologies used, every Flushometer built by Sloan is designed for quality and accuracy. That means durability, regardless of water conditions. There is a Sloan Flushometer designed to match any water condition that exists today.

**Product Functionality** Sloan manufactures every type of Flushometer available today, from diaphragm to piston. Our experience has enabled us to build superior functionality into these products, regardless of type. As you will see in this selection guide, the keys to proper functionality are to understand the types of installations being considered, the environment of the installations, and matching the correct Sloan Flushometer to these requirements. Sloan makes selection easy, because only Sloan manufactures the widest range of products in the world today!

**Ease of Service** Servicing Sloan Flushometers is as easy as contacting a local plumber or authorized Sloan Sales Representative. Parts are readily available, even for products that have been in use for over fifty years!

**Satisfaction** Perhaps the ultimate reason to choose Sloan is satisfaction. Whether specifying or installing for renovation or for new construction, you can depend on Sloan products.

# HOW TO CHOOSE A SLOAN FLUSHOMETER

**By Market.** Whether your public restroom installation is in an office building, airport, hotel, prison or school, start your planning with the Sloan Royal® Flushometer. Not only is the Royal the most specified Flushometer in the world, it is the standard by which all others are judged. There are special conditions within each market that may lead you to select the Gem or Regal Flushometer, or Optima and Optima Plus, the Sloan line of electronic Flushometers. Each specific product is discussed in the following pages.

There's a Royal to Meet Every Market

111



For Offices

8111



For Hotels

8111LHMC



For Schools

BPW1000



For Hospitals

952FW



For Dorms

111ESS



For Airports

152



For Prisons

152ESSWB



For Stadiums

**By Type of Construction.** If you decide to use the type of construction as your main criterion in selecting Flushometers, this chart can assist you in selecting the correct Sloan product. For example, a new hotel under construction would use either Royal or Optima Flushometers in the public restroom, and *FLUSHMATE*®-equipped toilets in the guestrooms for maximum water savings and performance. The following pages will help you understand specific differences.

Market	Type of Construction	Best (Electronic)	Best (Manual)	Better (Manual)	Good (Manual)
<b>OFFICES</b>	<i>New</i>	Optima	Royal	Regal XL	Regal
	<i>Renovation</i>	Optima Plus LH	Royal	Gem•2	Gem•2
<b>AIRPORTS</b>	<i>New</i>	Optima	Royal	Regal XL	Regal
	<i>Renovation</i>	Optima Plus LH	Royal	Gem•2	Gem•2
<b>HOTELS</b>	<i>New (public)</i>	Optima	Royal	Regal XL	Regal
	<i>New (guest)</i>		<i>FLUSHMATE</i>	<i>FLUSHMATE</i>	<i>FLUSHMATE</i>
	<i>Renovation (public)</i>	Optima Plus LH	Royal	Gem•2	Gem•2
	<i>Renovation (guest)</i>		<i>FLUSHMATE</i>	<i>FLUSHMATE</i>	<i>FLUSHMATE</i>
<b>PRISONS</b>	<i>New</i>	MICROPlumb®	Royal	Regal XL	Regal
	<i>Renovation</i>	MICROPlumb	Royal	Gem•2	Gem•2
<b>SCHOOLS</b>	<i>New</i>	Optima	Royal	Regal XL	Regal
	<i>Renovation</i>	Optima Plus LH	Royal	Gem•2	Gem•2
<b>DORMS</b>	<i>New/Renovation</i>		<i>FLUSHMATE</i>	<i>FLUSHMATE</i>	<i>FLUSHMATE</i>
<b>HOSPITALS</b>	<i>New</i>	Optima	Royal	Regal XL	Regal
		BPW	BPW	BPW	BPW
	<i>Renovation</i>	Optima Plus LH	Royal	Gem•2	Gem•2
		BPW	BPW	BPW	BPW
<b>STADIUMS</b>	<i>New</i>	Optima	Royal	Regal XL	Regal
	<i>Renovation</i>	Optima Plus LH	Royal	Gem•2	Gem•2
<b>MILITARY</b>	<i>New</i>		Royal	Regal XL	Regal
	<i>Renovation</i>		Royal	Gem•2	Gem•2

*Note: Optima® and Optima Plus® are built on Royal® Flushometer bodies. They are recommended as "best" due to their electronics which provide hands free operation with traditional Royal performance and reliability. For the "best" in manual Flushometers, the Sloan Royal remains the unequalled standard.*

# HOW TO CHOOSE A SLOAN FLUSHOMETER

**By Water Conditions.** Today's water conditions are more demanding on Flushometers. Unless manufacturers take special precautions, performance and reliability is often compromised because of water quality.

The chart is helpful if you are selecting a Flushometer by water quality and other installation concerns. Note that depending on your water conditions, you may select different types of Flushometers. Your exact choice may depend on personal preference, or an existing installation. You may also elect to "mix and match" within the installation itself. Either way, there is a Sloan Flushometer designed for the job.

Recommended Flushometer	Diaphragm		Piston		Self-Closing	Pressure-Assist
	Royal	Regal	Gem	Naval	Dolphin	FLUSHMATE®
Water Condition						
Dirty Water	YES		YES	YES	YES	YES
Corrosive (Salt)				YES	YES	YES
Aggressive Water	YES			YES	YES	YES
Flushing Volume Accuracy	YES		YES			YES
Non-Hold Open	YES	YES	YES	YES		
Non-Adjustable	YES	YES	YES			YES
Marginal Pressure	YES		YES		YES	
High Traffic	YES	YES	YES	YES	YES	
Vandalism	YES	YES	YES*	YES	YES*	

*\*GEM and DOLPHIN are not currently available for concealed applications.*

**By Special Applications.** Your choice of Sloan Flushometers will also meet special application requirements such as ADA or remote operation. Simply refer to the upcoming pages on specific Flushometers, or to the Sloan general catalog for more information. For example, Royal and Regal XL and Gem Flushometers are appropriate for ADA requirements. In addition, though not listed here, Royal Flushometers are used in Sloan's 900 Series Hydraulic Flushometers, which are operated remotely by pushbutton, and Optima sensor-operated products, which are electronic.

## There's a Sloan Product to Meet Every Application

	Royal Optima Plus <sup>®</sup> LH	Royal <sup>®</sup>	Regal	Gem•2	Naval	Dolphin	MICROPlumb <sup>®</sup>
Dual Filtered By-Pass	✓	✓					✓
Filtered By-Pass				✓	✓		
Optima		✓					
Optima Plus	✓	✓					
ADA Compliant	✓	✓	✓	✓	✓		✓
Hydraulic (900 Series)		✓	✓				
Concealed		✓	✓		✓		✓
Networking Communication							✓
Pedal Actuated		✓	✓				
Bedpan Washer	✓	✓	✓	✓		✓	
Royal Continental		✓					
Royal Classic		✓					



# OPTIMA PLUS<sup>®</sup> LH FLUSHOMETERS

With Optima Plus<sup>®</sup> LH Flushometers,  
the Possibilities are Endless

## Application Guide

There's no other Flushometer that looks like it. But like all Sloan Flushometers, the Optima Plus<sup>®</sup> LH carries the proven Sloan Quality — and more. Its sleek, new look suggests a whole new way of thinking about design with Flushometers.

- *ADA compliance*
- *Automatic, with no need for AC hookups or wall alterations.*
- *Flushometer operates by means of a battery powered infrared sensor.*
- *Hygienic, no physical contact with Flushometer surface except to initiate the Override Button, when required.*
- *Automatic operation provides savings in water usage over other flushing devices.*
- *Made in the U.S.A.*
- *Shown with optional metal cover variation "MC"*

## Optima Plus<sup>®</sup> LH Flushometer

- Dual Filtered By-Pass
- ADA Compliant Optima PLUS<sup>®</sup> Battery Powered Infrared Sensor for Automatic "No Hands" Operation
- Stop Seat and Vacuum Breaker Molded from PERMEX<sup>™</sup> Rubber Compound for Chloramine Resistance
- Chrome Plated, Die Cast Metal Cover Assembly with Tempered Glass Window
- 3 Second Flush Delay on Water Closets
- Courtesy Flush<sup>™</sup> Override Button
- Four (4) Size AA Batteries Included
- "Low Battery" Flashing LED
- Infrared Sensor Range Adjustment Screw
- Initial Set-Up Range Indicator Light (first 10 minutes)
- Valve Body Less Handle Opening
- Screwdriver Bak-Chek<sup>™</sup> Angle Stop
- Free-Spinning Vandal Resistant Stop Cap
- Sweat Solder Adapter with Cover Tube and Case Set Screw Wall Flange
- Adjustable Tailpiece
- High Back Pressure Vacuum Breaker Flush Connection with One-Piece Bottom Hex Coupling Nut
- Spud Coupling and Flange
- Valve Body, Tailpiece and Control Stop conformance with ASTM Alloy Classification for Semi-Red Brass

# ROYAL<sup>®</sup> FLUSHOMETERS

The Standard by Which All  
Other Flushometers Are Judged



## Application Guide

### Royal<sup>®</sup> Flushometer

- Dual Filtered By-Pass
- Diaphragm, Handle Packing, Stop Seat and Vacuum Breaker Molded from PERMEX™ Rubber Compound for Chloramine Resistance
- ADA Compliant Metal Oscillating Non-Hold Open Handle with a Triple Seal Handle Packing
- Bak-Chek™ Angle Stop
- Free Spinning Vandal Resistant Stop Cap (exposed installations)
- Adjustable Tailpiece
- High Back Pressure Vacuum Breaker Flush Connection with One-Piece Bottom Hex Coupling Nut
- Spud Coupling and Flange
- Sweat Solder Adapter with Cover Tube and Case Set Screw Wall Flange
- Valve Body, Cover, Tailpiece and Control Stop manufactured per ASTM Alloy Classification for Semi-Red Brass
- Valve complies with applicable sections of ASSE 1037, ANSI/ASME 112.19.6 and Military Specification V-29193

Variations include: Bio-Gard<sup>®</sup> Handles, Trap Primers, Extended Bumpers on Angle Stops

The use of low consumption fixtures can dramatically affect the performance of a flush valve. In addition, as water treatment strategies increase the use of ammonia and Chloramines, many plumbing components suffer in terms of performance.

Sloan's new Royal Flushometer was engineered for innovative water treatment strategies – utilizing Sloan's proprietary PERMEX™ rubber compound for added chemical resistance. The Sloan Royal<sup>®</sup> Flushometer incorporates state-of-the-art enhancements. One of the newest features is the Dual Filtered By-Pass, a development that will enable your Flushometer installation to perform longer and better than ever before, even in water conditions with high contents of sand and other particulates.



# REGAL<sup>®</sup> FLUSHOMETERS

Regal Brings You Back to Basics  
Without Compromising Quality

## Application Guide

The components of the Regal valve reflect the proud design heritage of the Sloan family of Flushometers. They include an accurate, non-adjustable flush delivery, a high copper, low zinc semi-red cast brass alloy and an oscillating, non-hold open handle. In addition, the Regal is easy to repair and maintain, with a guaranteed performance and a three-year, limited warranty. Also, the Regal XL upgrade includes a variety of "extras" for special project considerations, including: ADA Handle, Vandal-Resistant Stop Cap and Sweat Solder Adapter Kit. Best of all, Regal Flushometers are available at costs competitive with foreign sourced "copycat" valves.

## Regal<sup>®</sup> Flushometer

Quiet, diaphragm Flushometers with the following features:

- Metal Oscillating, Non-Hold Open Handle
- Bak-Chek™ Angle Stop
- Vandal Resistant Stop Cap
- Adjustable Tailpiece
- Vacuum Breaker Flush Connection
- Spud Coupling, Wall and Spud Flanges
- Low Consumption Flush Accuracy Controlled by Para-Flo™ Inside Parts Kit
- Diaphragm, Handle Packing, Stop Seat and Vacuum Breaker Molded from PERMEX™ Elastomeric Compound for Chloramine Resistance
- Valve Body, Cover, Tailpiece and Control Stop manufactured per ASTM Alloy Classification for Semi-Red Brass
- Valve complies with applicable sections of ASSE 1037, ANSI/ASME 112.19.6 and Military Specification V-29193

*Variations include: ADA Compliant Handle, Bio-Gard® Handle, Trap Primers, Sweat Solder Adapter Kits with Stamped Flanges, Sweat Solder Adapter & Cast Wall Flanges with Set Screws, Bumpers on Control Stops*

# GEM•2<sup>®</sup> FLUSHOMETERS

World Class Quality



## Application Guide

### Gem•2<sup>®</sup> Flushometer

Quiet, piston-type Flushometers with the following features:

- Filtered By-Pass
- ADA Compliant Metal Oscillating Non-Hold Open Handle
- Bak-Chek™ Angle Stop
- Vandal Resistant Stop Cap
- Adjustable Tailpiece
- Vacuum Breaker Flush Connection
- Spud Coupling and Wall Flange
- Valve Body, Cover, Tailpiece and Control Stop manufactured per ASTM Alloy Classification for Semi-Red Brass
- Valve complies with applicable sections of ASSE 1037, ANSI/ASME 112.19.6 and Military Specification V-29193

*Variations include: Flush Connections, Trap Primers, Sweat Solder Adapter Kits, Cast Set Screw Wall Flanges, Extended Bumpers on Angle Stops, Split or Solid Ring Pipe Supports*

Sloan Gem•2<sup>®</sup> Flushometers offer you superior functional features and advanced water handling characteristics. As the best performing piston valve on the market, it is designed to accurately meter water delivery from 15 to 100 psi and is available in a 1.6 gallon (6-liter) low consumption flush. Urinal models are also available with a 1-gallon (3.8 liter) flush. The Gem•2 Flushometer is non-adjustable and automatically compensates for changes in water pressure.



# NAVAL<sup>®</sup> FLUSHOMETERS

Meeting the Demands of  
Harsh Water Conditions

## Application Guide

The Naval Flushometer is a heavy-duty Flushometer with a proven, unsurpassed track record of dependable performance in harsh operating environments. The valve's piston incorporates Sloan's exclusive XPELOR<sup>®</sup> metering bypass, which dislodges dirt from the bypass after every use. The inside cover uses a plastic Lexon<sup>®</sup> inner liner to prevent corrosive water from contacting the cover, and eliminating the chance of pitting or mineral build-up.

## Naval<sup>®</sup> Flushometer

Quiet, piston Flushometers with the following features:

- ADA Compliant Metal Oscillating, Non-Hold Open Handle
- Self-Cleaning XPELOR By-Pass
- 1" Bak-Chek<sup>®</sup> Stop
- Vandal Resistant Stop Cap
- Adjustable Tailpiece
- Vacuum Breaker Flush Connection
- Spud Coupling and Wall Flange
- Stamped Wall Flange
- Tailpiece and Control Stop manufactured per ASTM Alloy Classification for Semi-Red Brass Valve complies with applicable sections of ASSE 1037, ANSI/ASME 112.19.6 and Military Specification V-29193
- Red Brass Valve Body and Cover

*Variations include: Bio-gard<sup>®</sup> Handles, Ground Joint Stops and Tailpieces, 1 1/4" Flush Connections and Spud Couplings, Sweat Solder Adapter Kits, Cast Set Screw Wall Flanges, Extended Bumpers on Angle Stops, Split or Solid Ring Pipe Supports*

# DOLPHIN<sup>®</sup> FLUSHOMETERS

The Solution to Severe Water  
Problems on Land or Sea



## Application Guide

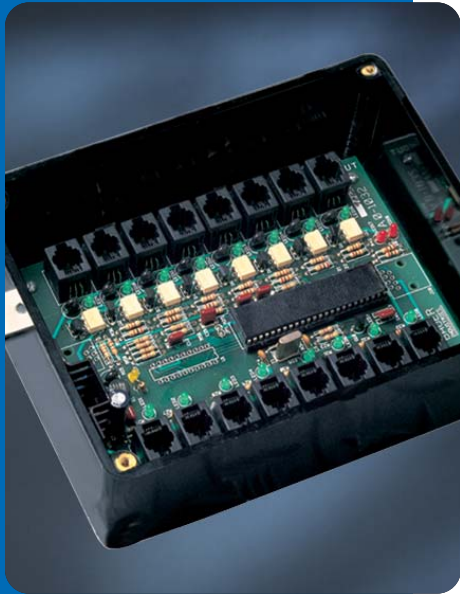
### Dolphin<sup>®</sup> Flushometer

Quiet, self-closing Flushometers with the following features:

- Metal Lever Handle
- Bak-Chek™ Stop
- Vandal Resistant Stop Cap
- Adjustable Tailpiece
- Vacuum Breaker Flush Connection
- Spud Coupling and Wall Flange
- Flushometer does not require water pressure to positively shut off
- Valve Upper Body, Tailpiece and Control Stop manufactured per ASTM Alloy Classification for Semi-Red Brass
- Valve Lower Body manufactured per ASTM guidelines for Red Brass
- Valve complies with applicable sections of ASSE 1037, ANSI/ASME 112.19.6 and Military Specification V-29193

*Variations include: Ground Joint Stops, Wheel Handle Stops, 1 1/4" Flush Connections and Spud Couplings, Sweat Solder Adapter Kits, Cast Set Screw Wall Flanges, Extended Bumpers on Angle Stops*

Sloan Dolphin Flushometers have been engineered for use in the world's most severe water conditions. Whether for marine use or very extreme land water conditions, the Dolphin Flushometer offers a functional design that keeps fixtures and closets flushing in poor or contaminated water conditions. It is used extensively by the United States Navy on all types of vessels. It offers a positive, manual opening and mechanical closing to ensure a positive shut off, even if water pressure drops to zero. Plus, there's no complicated linkage on the handle — it can be positioned conveniently on the job at the left, front or right for installation flexibility.



# MICROPlumb® CONTROL SYSTEMS

Programmed Water Technologies  
Delivers Control

## Application Guide

Programmed Water Technologies' MICROPlumb® Control Systems offer you reliability, low maintenance and high performance flushing of Sloan Royal® Prison Flushometers. MICROPlumb control systems are programmable controller/input devices that use programmed instructions to operate ON/OFF/DELAY/STOP commands with plumbing fixtures. It helps YOU control your entire plumbing network, making it ideal for high use/abuse situations and highly adaptable to a variety of custom requirements in prison design and management.

## MICROPlumb® Control Systems

MICROPlumb® Control Systems are built to withstand abuse, meet ADA requirements and are long-lasting. MICROPlumb Control Systems can be used to control:

- Flushometers
- Lavatories
- Showers

### MICROPlumb Control Systems

- Are Ideal for Both New Construction and Renovation
- Can Integrate Other Manufacturer's Anti-Flood Devices
- Save Water
- Reduce Maintenance

MICROPlumb Control Systems maximize your control over the use/abuse of plumbing fixtures under the most intensive environments. Program options include:

- Fixture Run-Time
- Activation Time Delays
- Regulation of Simultaneous Fixture Use
- Fixture Lockout Control (limited activation)



Programmed Water  
Technologies  
is a division of  
Sloan Valve Company

# FLUSHMATE® TANK SYSTEMS

Pressure-Assist Operating Systems  
Performance Without Compromise



## Application Guide

### FLUSHMATE® Low Consumption Flushometer Tank Systems

1.6 gallon-per-flush (6 Lpf) Tank System for Tank-Type Water Closets with the following features and benefits on specially designed tank toilets:

- Commercial performance in a residential design
- Meets all needs for tank-type toilets
- Lower fixture unit value (2-3) makes it ideal for major renovations and additions
- Largest Trapway — 2 1/8" versus gravity's 1 3/4"
- Large Water Spot — 10" x 12" versus gravity's 6" x 8"
- Exceptional Drainline Carry — performance in accordance with ANSI A 112.19.6 and ASSE 1037. Vitreous china manufactured in accordance with ANSI A112.19.2 and ASSE 1037
- Eliminates Double Flushing — most powerful flushing action available
- Deeper Trap Seal — 2 5/8" for greater safety
- Requires only 3/8" supply line



**FLUSHMATE®**  
A Division of Sloan Valve Company

Sloan *FLUSHMATE*® pressure-assist technology offers the only true high-performance low water consumption alternative to meet consumer expectation and demand. This is why leading toilet manufacturers offer a toilet with Sloan *FLUSHMATE* inside. It's also why you'll find *FLUSHMATE* inside low consumption toilets in virtually every market — from hotels to schools to commercial buildings as well as in your home.

### Suggested Specification for Water Closet on Commercial Installations:

Fixture must meet or exceed ASME A112.19.2M classification requirements for a siphon-jet bowl type and meet the minimum hydraulic requirement of ASME A112.19.6 at the minimum pressure requirement and are pressure assisted by means of a Flushometer tank model M101526. For additional specification information, contact Sloan *FLUSHMATE* at:

**1-800-875-9116.**

# SLOAN FLUSHOMETERS

## *Versatility and Flexibility*

Sloan Flushometers are available in a wide variety of styles to meet any installation need.

### Fixtures and Flushing Volumes

- 1.6 gpf (6.0 Lpf) - low consumption
- 3.5 gpf (13.2 Lpf) - water saver

The Royal Flushometer is also available with a 9.0 liter (2.4 gallon) flush for international applications

### Urinal Flushometers

- 0.5 gpf (1.9 Lpf) - ultra low flush
- 1.0 gpf (3.8 Lpf) - low consumption
- 1.5 gpf (5.7 Lpf) - water saver

### Service Sink Flushometers

- 6.5 gpf (24.5 Lpf) flush delivery

### Accessories

Sloan Flushometers are available with a wide variety of accessories and variations. Please refer to the appropriate sections in the Sloan catalog.

### Made in the USA

Manufactured in the USA by Sloan Valve Company under one or more of the following patents: 5,295,655; 9,542,718; 5,558,120; 5,564,460. Other patents pending.



#### SLOAN VALVE COMPANY

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# Insist on the Best...

## Insist on Sloan Valve Company Products

Over 90 years of experience has earned Sloan Valve Company a reputation for Quality. There is no better choice for engineered performance than Sloan.

### A Family of Reliable Products

Sloan manufactures and sells more Flushometers to world markets than all other brands combined. Our innovative designs, high quality, dependable operation and long life have become benchmarks of an industry.

### World Class Performance

The Royal, with its world-class quality and a wide range of installations, can be found in cities throughout the world, serving a variety of building requirements in high rises, hospitals, and other commercial construction.

### Sloan Offers Excellence

Our focus has been delivering products that provide consistent, reliable performance. Since our beginnings in 1906, we have delivered Quality to the plumbing industry. That's why today, more than any other manufacturer, the name Sloan has come to stand for the highest level of Quality. Your building deserves the very best. It deserves Sloan Excellence.

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