FREE
TOUCH-FREE ELECTRONIC FLUSH VALVE FOR URINALS

SPECIFICATIONS

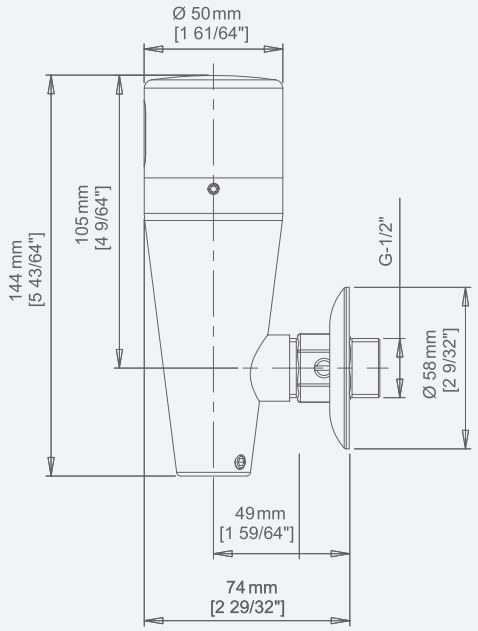
Touch-free electronic flush valve for urinals. Activated by infrared sensor. Shut-off valve, filter and a low battery indicator are included. 24 hours hygiene flush is included. Chrome plated body. Pre-flush optional upon request. Adjustable settings by remote control: sensor range, security time, delay in, delay out, on-off and reset to factory settings.

OPERATION

Touch-free electronic flush valve for urinals. The water will flush once the user moves away from the urinal..

APPLICATION

Helps washrooms stay clean and saves water. Ideal for educational institutions, gas stations and restaurants. Its minimalistic style makes it perfect for locations with high design standards.



PRODUCT AT A GLANCE

Installation	Exposed wall-mounted
Power Supply	• 9V battery • 9V transformer
Operating pressure	0.5-8.0 BAR / 7.0-116.0 PSI

ORDERING INFORMATION

MODEL	CODE	POWER	ADDITIONAL SPECIFICATIONS
FREE	113100	9V battery	Exposed installation
FREE E	113200	9V transformer	
FREE SP	800504	Internal 9V battery	With 200/300 mm bended pipe and spray

OPTIONS

OPTION	CODE
Remote control	07100005

STERN ENGINEERING LTD.

ADVANTAGES

LEED RATING

24 HOURS
OPTIONAL HYGIENE FLUSH

GERM FREE

ADJUSTABLE SETTINGS

EASY TO INSTALL

ADA DESIGNED

APPROVALS

ILGBC

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STERN ENGINEERING LTD.

FREE

ELECTRONIC FLUSH VALVE FOR URINAL

INSTALLATION AND MAINTENANCE GUIDE

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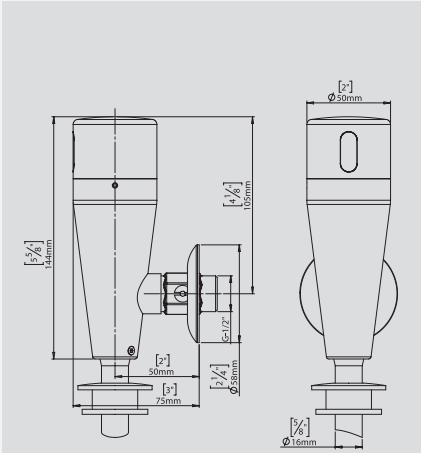
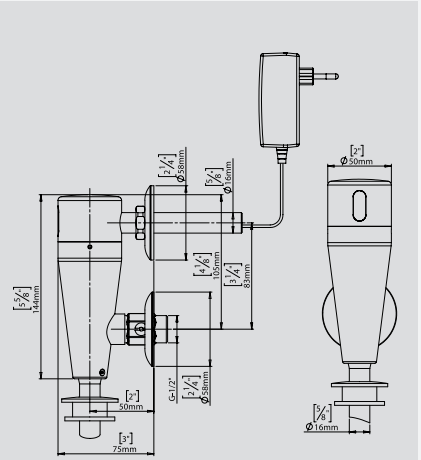
TECHNICAL DATA



FREE 113100

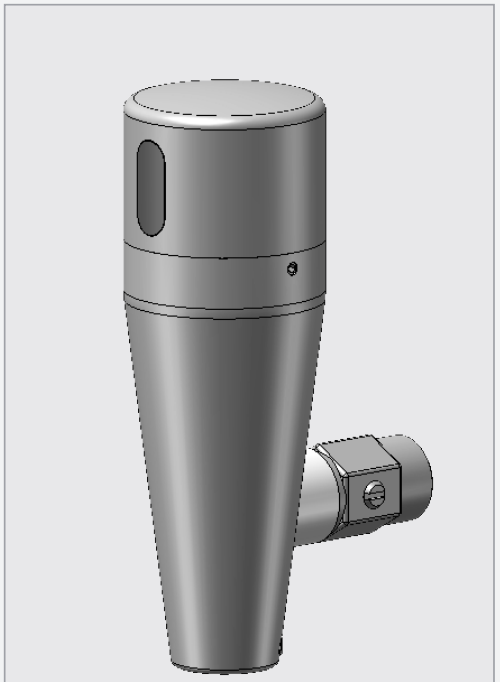


FREE E 113200

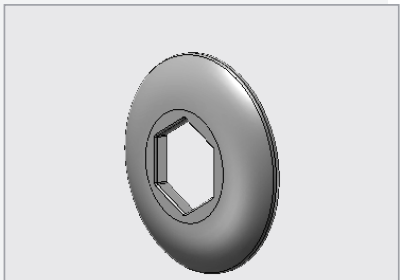
Power Supply	Internal 9V battery or 9V transformer
Recommended water pressure	1-8 bar (14.5-116.0 PSI)
Sensor range	600 mm / 23.62” (customizable with optional remote control)
Minimum sensor range	300 mm / 11.81”
Maximum sensor range	800 mm / 31.50”
Flushing time:	Factory setting 6 seconds, adjustable
Hygiene flush	A flush is triggered automatically every 24 hours after the last use
Pre flush	Optional feature
Connections	1/2”

PACK CONTENTS

Familiarize yourself with the parts names and confirm that all parts are included.



1 X FLUSH VALVE BODY WITH REGULATING VALVE



1 X WALL FLANGE WITH RUBBER SEAL

1 X 200 MM INLET PIPE

PRE-INSTALLATION INFO

Check contents

Separate all parts from the packaging and check each part with the “Pack contents” section.

Pay attention to the different models variations.

Make sure all parts are accounted for before discarding any packaging material.

If any parts are missing, do not attempt to install your electronic product until you obtain the missing parts.

Warnings

Do not install facing a mirror or any other electronic system operated by an infrared sensor.

To prevent reflection problems, it is recommended to keep a minimum distance of 1.50 meters between the product and any other objects.

Note: Keep a minimum distance of 500mm between the upper surface of the bowl and the infrared sensor.

Preparation for installation

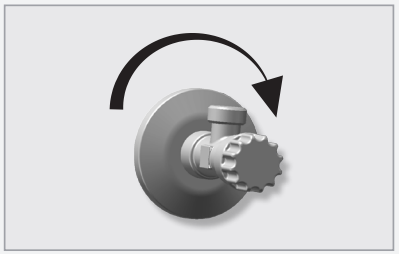
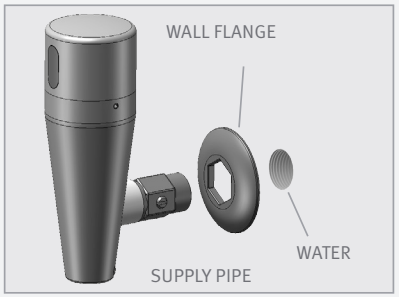
Flush water supply lines thoroughly before installing the product. Do not allow dirt, Teflon tape or metal particles to enter the water line.

Shut off water supply.

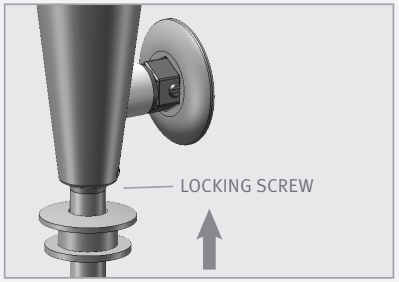
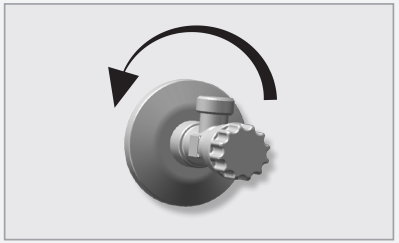
Important

All plumbing is to be installed in accordance with applicable codes and regulations.

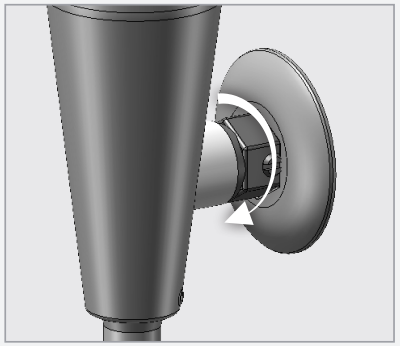
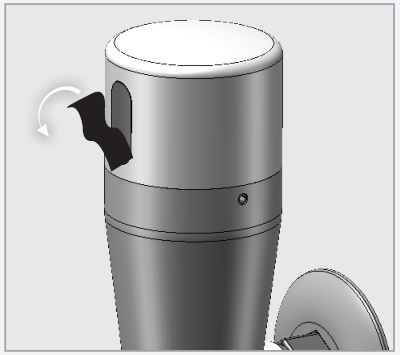
FLUSH VALVE INSTALLATION

1	Ensure that the central water supply has been turned off at the corner valve.	
2	Install the flush valve on the wall connected to the mains water supply. Fit the wall flange between the inlet opening of the regulating valve and the surface of the wall.	

NOTE: Use the sealing thread or Teflon tape to seal the screw thread connection.

3	Insert the inlet pipe and rubber seal into the opening in the urinal. Push the inlet pipe into the water outlet opening of the flush valve and tighten the locking screw	
4	Turn on the mains water supply again and check the installation for leaks.	

FLUSH VALVE INSTALLATION

5	Ensure that the regulating valve is fully open by turning it anti-clockwise.	
6	Remove the sticker that is covering the sensor. The battery is already connected and the flush valve is now operational.	

IMPORTANT:

Carry out functional check. If the sensor coverage area is not adequate it can be readjusted following the procedure in the “Settings adjustment” section.

SETTINGS ADJUSTMENT

Adjusting the settings with the remote control

If necessary, the sensor settings can be adjusted as following:

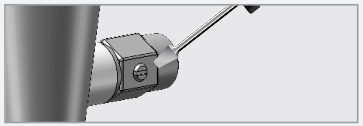
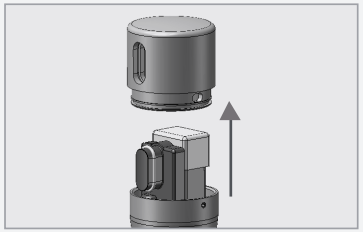
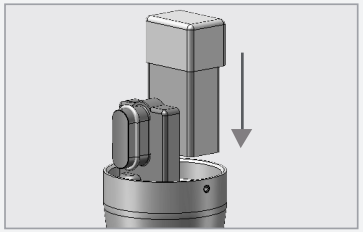
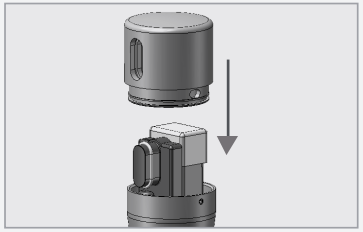
Shut off the water supply. In order to adjust the sensor with the remote control, hold the remote control straight in front of the sensor in a distance of about 6-8" (15- 20cm). Choose the function you want to adjust by pressing once on one of the function buttons. After pressing once on a specific function button, a quick flashing of the LED at the front of the sensor will occur. At this stage, you can change the setting by pressing the (+) or the (-) buttons,

Every push will increase or decrease one level. After finishing the adjustment, turn the water supply back on.

SETTINGS ADJUSTMENT

RANGE	DETECTION RANGE: The sensor range is the greatest distance that an object can be away from the sensor to activate the flush valve. The sensor is factory preset. To adjust the sensor range press + to increase detection range and – to decrease the detection range of the sensor.
	FLOW TIME: This function determines the water flushing time once the user leaves the urinal. Press the two waves button. Wait until a quick flashing of the LED of the sensor eye is perceived. Then, press + to increase the flow time and – to reduce it.
IN	DELAY IN TIME: If required, the delay in time can be modified as follows: Press the IN button. Wait until a quick flashing of the LED of the sensor eye is perceived. Then, press + to increase the delay in time and – to reduce it.
OUT	DELAY OUT TIME: This button changes the time interval the water starts to flush after the user has left the urinal. If required, the delay out time can be modified as follows: Press the OUT button. Wait until a quick flashing of the LED of the sensor eye is perceived. Then, press + to increase the delay out time and – to reduce it.
	24 HOUR HYGIENE FLUSH: If you have a compatible model with a 24 hours hygiene flush it is possible to enable and disable it. To activate the hygiene flush, press the clock button. Wait until a quick flashing of the LED of the sensor eye is perceived. Then press + to activate the hygiene flush or – to deactivate it.
	TEMPORARY OFF FUNCTION: This function is ideal to perform any kind of activity in front of the sensor without operating the system (for example,cleaning). Urinals will remain shut for 1 minute when this button is pressed once. To cancel this function and to return to normal operation press the On/Off button again or wait 1 minute.
RES	RESET BUTTON: This function allows the sensor to return to the original factory preset settings. If required, press the Reset button and without releasing it, press the + button once.

BATTERY REPLACEMENT

1	Turn off the regulating valve	
2	Unscrew the cover of the electronics unit and remove it.	
3	Replace the old battery with a new 9V battery (lithium battery recommended).	
NOTE: Check that the outer O-ring is not damaged. Replace the O-ring if necessary. ATTENTION: Dry the inside of the cover and interior of the flush valve body carefully. The interior of the flush valve body and the cover plate with the electronic cap must be fully dry before reassembling the parts.		
4	Replace the electronic unit cover and screw it tight. Open the regulating valve once again.	

Important: Spent batteries should not be disposed of with normal household waste. Contact your local authority for information on waste disposal and recycling.

MAINTENANCE

FILTER CLEANING INSTRUCTIONS

This flush valve is provided with a steel filter preventing foreign particles to enter the lines. If the water flow has decreased, this can be because the filter is clogged.

The filter can be cleaned as follows:

1. Turn-off the regulating valve.
2. Disassemble the electronic flush valve from the regulating valve.
3. Remove the filter and wash it under running water.
4. Reassemble the filter.
5. Reassemble the electronic flush valve.
6. Turn on the regulating valve and adjust the flow capacity.
7. Make sure that there is no water leakage.

CARE AND CLEANING OF CHROME AND SPECIAL FINISHES

DO NOTuse steel wool or cleansing agents containing alcohol, acid, abrasives, or the like. Use of any prohibited cleaning or maintenance products or substances could damage the surface of the flush valve. For surface cleaning of flush valve use ONLY soap and water, then wipe dry with clean cloth or towel. When cleaning bathroom tile, the flush valve should be protected from any splattering of harsh cleansers.

SPARE PARTS LIST

Seals and Screws Kit Free	07210031
Seals and Screws Kit Free E	07210026
10-Pack Sensor kit Free	07220274
10-Pack Sensor kit Free E	07220377
Filter	08530013
Cover Kit Free	07270007
Cover Kit Free E	07270019
10-Pack Solenoid valve kit	07230049
Transformer (EU plug)	06522091
Remote Control 13B (Optional)	07100005
Soap & Water Remote Control (Optional)	07100014

LIMITED WARRANTY

Y. Stern Engineering Ltd. warrants that its electronic products will be free of defects in material and workmanship during normal use for two years from the date the product is purchased.

If a defect is found in normal use, Y. Stern Engineering Ltd. will, at its discretion, repair, provide a replacement part or product, or make appropriate adjustments. Damage caused by accident, misuse, or abuse is not covered by this warranty. Improper care and cleaning will void the warranty. Proof of purchase (original sales receipt) must be provided to Stern Engineering Ltd. with all warranty claims.

Stern Engineering Ltd is not responsible for labor charges, installation, or other incidental or consequential costs other than those noted above. In no event shall the liability of Stern Engineering Ltd. exceed the purchase price of the product.

If you believe that you have a warranty claim, contact your Stern Distributor, Dealer or Plumbing Contractor. Please be sure to provide all pertinent information regarding your claim, including a complete description of the problem, the product, model number, the date the product was purchased, from whom the product was purchased and the installation date. Also include your original invoice.

Y. STERN ENGINEERING AND/OR SELLER DISCLAIM ANY LIABILITY FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. This warranty excludes product damage due to installation error, incorrect maintenance, wear and tear, battery, product abuse, or product misuse, whether performed by a contractor, service company, or the consumer. This warranty does not cover product damage caused by the following:

- Incorrect installation.
- inversions of supply pipes.
- Pressures or temperatures exceeding recommended limits.
- Improper manipulation, tampering, bad or lapsed maintenance.
- Foreign bodies, dirt or scale introduced by the water supply or soap tank.
- Use of the soap outside of viscosity specifications.
- Alteration of the original soap/foam dispenser components (including pipes).

TROUBLESHOOTING

PROBLEM	INDICATOR	CAUSE	SOLUTION
Valve does not flush:	1. Sensor flashes continuously when the user is within the sensor's range.	Low battery.	Replace battery.
	2. LED in the sensor does not flash when the user step within the sensor's range.	1. Range is too short.	Increase the range.
		2. Range is too long.	Decrease the range.
		3. Battery is completely used up	The battery must be replaced.
		4. Sensor is picking up reflections from the washbasin or another object.	Eliminate cause of reflection.
	3. LED in the sensor flashes when the user step within the sensor's range.	1. Connectors between the electronic unit and solenoid are disconnected.	Connect the electronic unit connectors to the solenoid.
		2. Debris or scale in solenoid.	Unscrew solenoid, pull out the plunger and the spring from the solenoid and clean them. Use scale remover material if needed. When replacing the plunger, please make sure that the spring is in vertical position.
		3. The central orifice in the diaphragm is plugged or the diaphragm is torn	Clean the orifice or replace diaphragm.
		4. The water supply pressure is higher than 8 bar.	Reduce the supply water pressure.
Valve does not shut off:	1. Sensor flashes when the user is within the sensor's range.	Debris or scale in diaphragm	Clean the orifice or replace diaphragm.
	2. LED in the sensor does not flash when the user step within the sensor's range.	1. Sensor is dirty or covered.	Clean or eliminate case of interference.
		2. Sensor is picking up reflections from the washbasin or another object.	Decrease the range or eliminate cause of reflection.

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