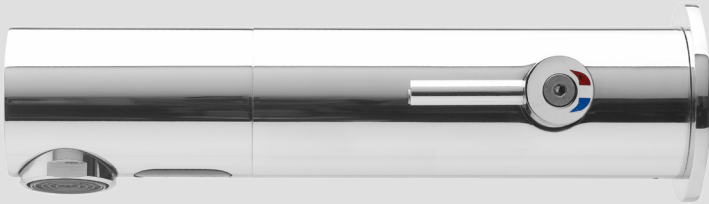


stern

STERN ENGINEERING LTD.



WALL MOUNTED ELECTRONIC FAUCET WITH MIXER

TUBULAR 1000 SERIES

TUBULAR 1000 B TUBULAR 1000 E TUBULAR 1000 B BOX TUBULAR 1000 E BOX

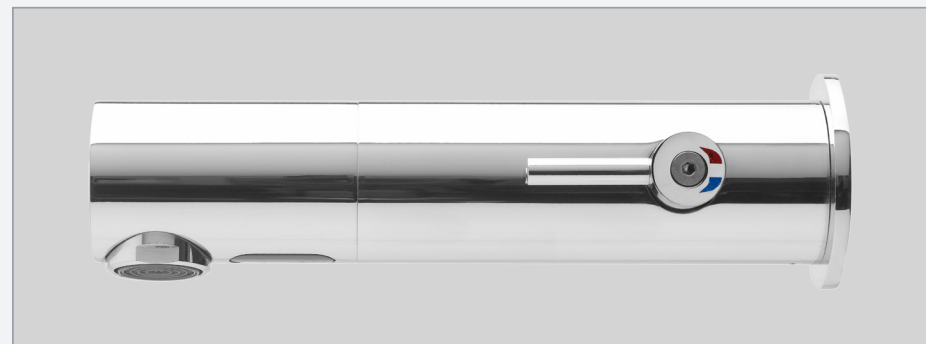
INSTALLATION AND MAINTENANCE GUIDE

INDEX

1	TECHNICAL DATA
2 -3	PACK CONTENTS
4	PRE-INSTALLATION INFORMATION
5-13	FAUCET INSTALLATION
14-16	SETTINGS ADJUSTMENT
17	BATTERY REPLACEMENT INSTRUCTIONS
18	MAINTENANCE
	FILTERS CLEANING INSTRUCTIONS
	CARE AND CLEANING OF CHROME AND SPECIAL FINISHES
19	SPARE PARTS
20	LIMITED WARRANTY
21	TROUBLESHOOTING

The information in this document reflects products at the date of printing. Stern Engineering Ltd reserves the right, subject to all applicable laws, at any time, at its sole discretion, and without notice, to discontinue or change the features, designs, materials and other specifications of its products, and to either permanently or temporarily withdraw any of the forgoing from the market. All information in this document is provided "as is" without warranty of any kind, either expressed or implied, including but not limited to any implied warranties of merchantability, fitness for a particular purpose, or non-infringement. Stern Engineering Ltd assumes no responsibility for errors or omissions in the information presented in this document. In no event shall Stern Engineering Ltd be liable for any special, incidental, indirect or consequential damages of any kind, or any damages whatsoever arising out of or in connection with the use or performance of this information. The tradenames, trademarks, logos and service marks presented in this document, including their design, are the property of Stern Engineering Ltd or other third parties and you are not permitted to use them without the prior written consent of Stern Engineering Ltd or such third party as may own them.

TECHNICAL DATA



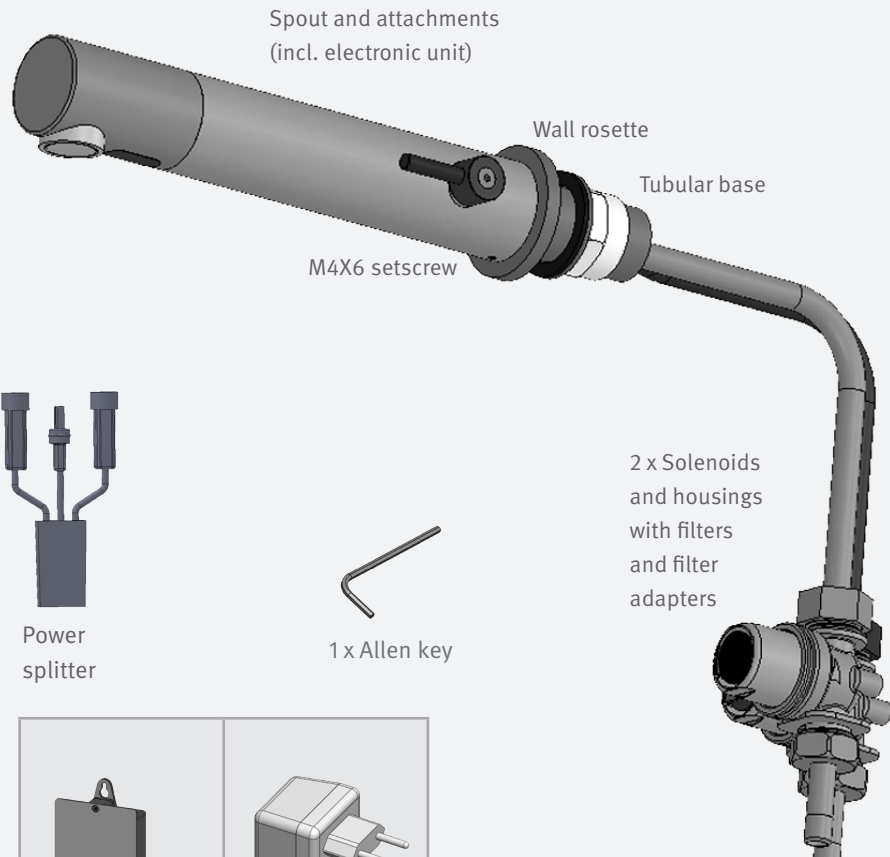
TUBULAR 1000

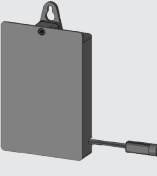
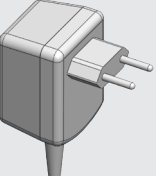
**WALL MOUNTED ELECTRONIC
FAUCET WITH A MIXER TO
ADJUST THE TEMPERATURE**

Power supply for battery versions:	9V battery or 6 X 1.5 V AA batteries
Power supply for electricity versions:	9V transformer
Recommended water pressure:	0.5-8.0 bar (7-116 PSI) With water pressure of more than 8 bars, use a pressure reducing valve for reduction
Sensor range:	Self adjusting
Minimum sensor range:	80 mm
Maximum sensor range:	300 mm
Security time:	90 seconds. Can be reduced with the remote control
Hot water temperature:	Max. 70°C

PACK CONTENTS

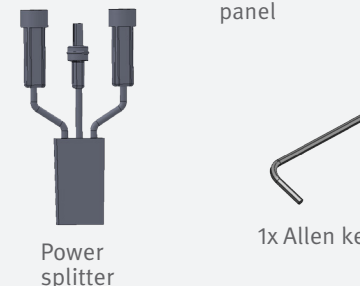
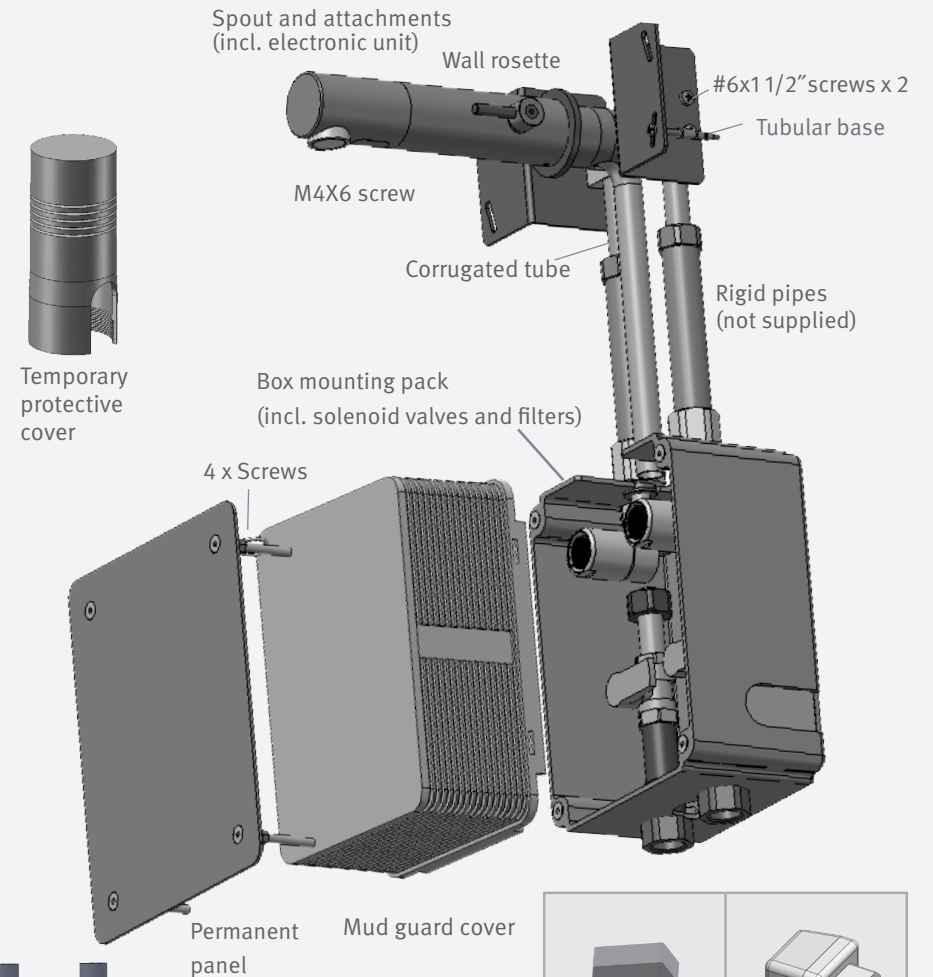
TUBULAR 1000 B / 1000 E


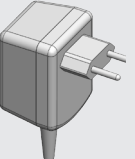


	
B VERSIONS	E VERSIONS
Battery box for 6 X 1.5V batteries	9V transformer

PACK CONTENTS

TUBULAR 1000 B BOX / 1000 E BOX



	
B VERSIONS	E VERSIONS
9V Battery box	Transformer

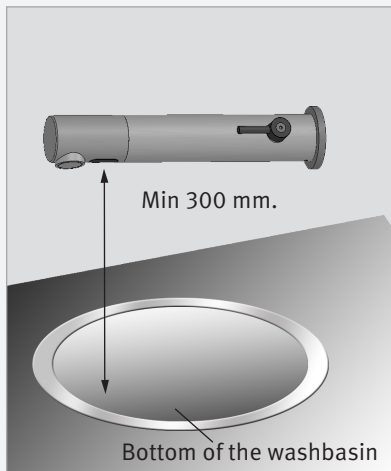
PRE-INSTALLATION INFO

CHECK CONTENTS

Separate all parts from the packaging and check each part with the pack contents section. Pay attention to the variations of the different models.

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

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



WARNING

1) To avoid reflection problems keep a distance of more than 300 mm. between the sink and the spout.

2) This faucet model, with an infrared sensor pointing down, is not intended to be used together with a sink of a reflective material such as stainless steel.

3) If a sink strainer is straight below the faucet sensor, use a strainer with a non reflective finish (do not use a chrome plated one).

PREPARATION FOR INSTALLATION

Flush the water supply lines thoroughly before installing the faucet. Do not allow dirt, teflon tape or metal particles to enter the faucet. Shut off water supply.

IMPORTANT

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

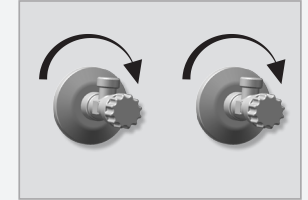
FAUCET INSTALLATION

TUBULAR 1000 B / 1000 E

STEP 1 – INSTALLING THE FAUCET

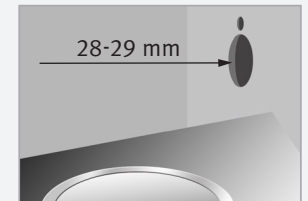
1

Shut off the water supply.



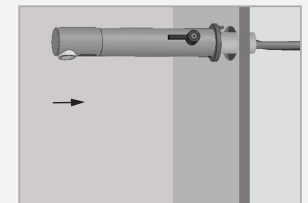
2

Drill a hole (28 to 29 mm.) where you want to install the spout of the faucet, and a small hole just above the previous one for the anti-rotation pin.



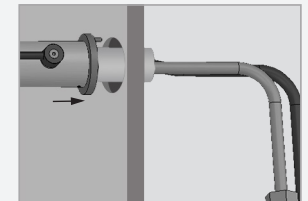
3

Remove the gasket, disk and nut from the base of the faucet and insert the faucet through the wall.



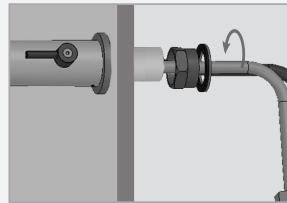
4

Secure the rosette into position using the anti rotation pin.



5

Fix the base behind the wall with the hexagonal nut and the disk.

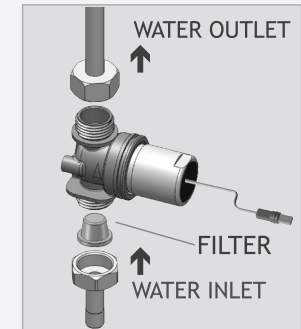


NOTE: Make sure that the aerator in the Tubular spout will be installed facing the washbasin.

STEP 2 - CONNECTING THE WATER SUPPLY

1

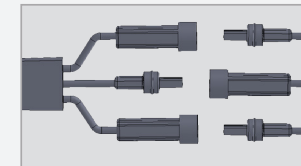
Fit the water supply inlets (hot and cold water inlet) to the adapter at each of the solenoid valve housings.



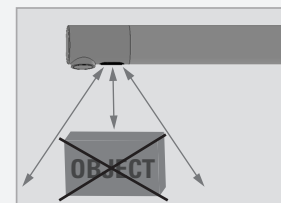
NOTE: Make sure the filters are located between the solenoid housings and the water inlets.

2

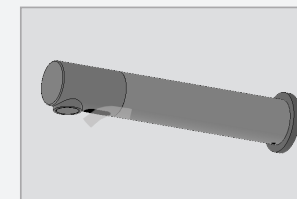
Connect the cable coming from the electronic unit that leads to the solenoid valves to the power splitter.



IMPORTANT: This product includes a self adjusting sensor. The ideal sensor range for the specific location will be set automatically.



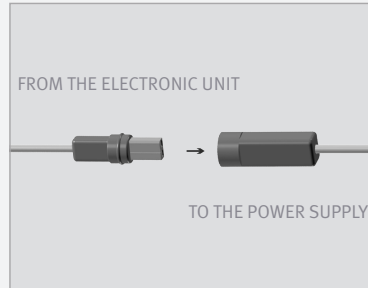
Before proceeding, check that no objects are in front of the sensor besides the washbasin.



Now, remove the protective sticker that covers the sensor.

STEP 3 – CONNECTING THE POWER SOURCE

1a For Tubular 1000 B: Connect the cable coming from the electronic unit in the Tubular base leading to the power source, to the battery box.

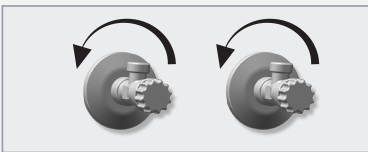


1b For Tubular E: Connect the cable coming from the electronic unit in the Tubular base leading to the power source, to the transformer. Plug the transformer into the electricity socket.

2 After you have connected the power source (battery or transformer) wait about 10 seconds in order to allow the system to set the ideal sensor range. Then the product will be ready for use.



3 Turn on the central water supply. Check for leaks.



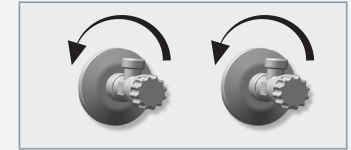
NOTE: Tubular includes a special aerator that allows you to adjust the water stream direction on site in order to prevent water splashing if needed. To change the angle of the water stream, simply move the adjustable tilting plate by pressing it smoothly.



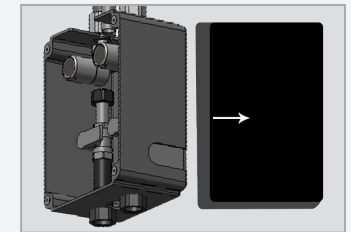
If the automatically adjusted sensor range is not satisfactory to your purposes, please refer to the section entitled “Settings adjustment”.

STEP 1 – INSTALLING THE FAUCET

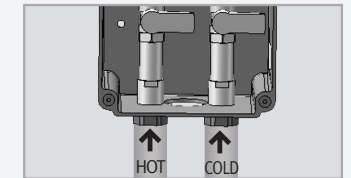
1 Shut off the water supply.



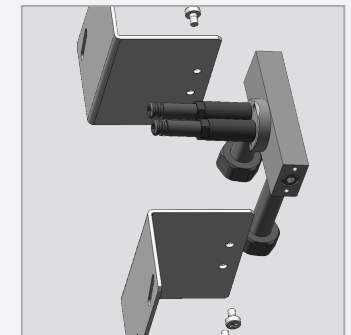
2 Cut an adequate opening in the wall for the dimensions of the Tubular box, corrugated tube, rigid pipes and the Tubular base. Then, insert the Tubular box through the wall.



3 Connect the water supply pipes to the nipples at the bottom of the Tubular box.



4 Prepare the support bar for the Tubular base by assembling the angle supports with the 4 provided screws. Then, mount the Tubular base through the wall opening using the 2 screws and anchors provided. Now, assemble the temporary protective cover to the faucet base.

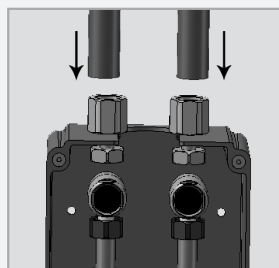


IMPORTANT: The Tubular base should be installed so that the outside surface of the finished wall falls between the minimum and maximum lines marked on the temporary protective cover.

STEP 1 – INSTALLING THE FAUCET

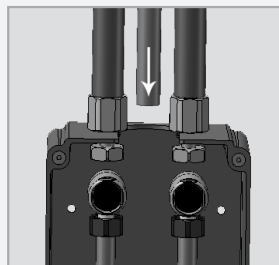
5

Assemble the rigid pipes between the nipples in the box to the inlets in the Tubular base.



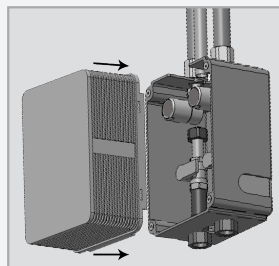
6

Insert the corrugated tube through the Tubular box.
If required, cut it to the appropriate length as needed by the installation.



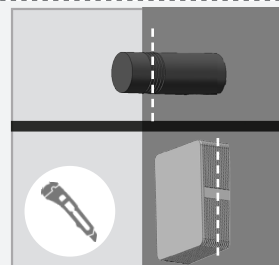
7

Assemble the mud guard cover to the Tubular box.
Note: the MIN and MAX marks on the box



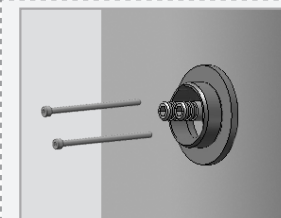
8

Once the works on electricity, plumbing and tiles have been finished:
a. Cut the temporary protective cover at the proper mark in wall level.
b. Cut the box mud guard cover wherever required by the installation.



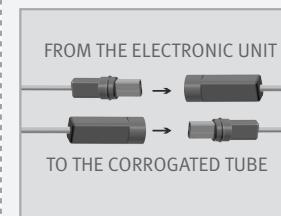
9

Assemble the wall rosette over the Tubular base and secure it using the 2 screws provided.



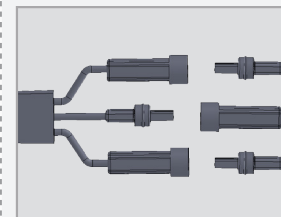
10

Connect the cables from the electronic unit to the cables coming from the corrugated tube.



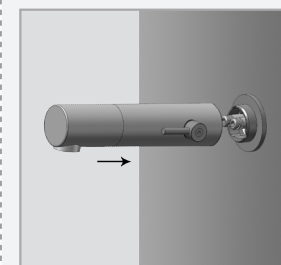
11

Connect the electronic unit connectors coming from the corrugated tube into the box, to the power splitter.



12

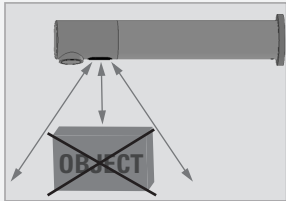
Fix the Tubular body to the rosette and secure the screw with the Allen key. Make sure that this area is clean before proceeding.



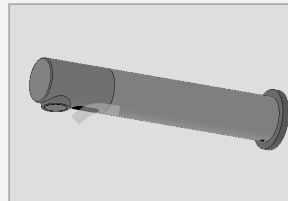
NOTE: Make sure that the aerator in the Tubular spout will be installed facing the washbasin.

STEP 2- CONNECTING THE POWER SOURCE

IMPORTANT: This product includes a self adjusting sensor. The ideal sensor range for the specific location will be set automatically.



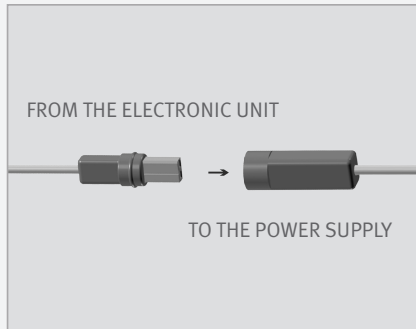
Before proceeding, check that no objects are in front of the sensor besides the washbasin.



Now, remove the protective sticker that covers the sensor.

1a

If your model is Tubular 1000 B Box, the battery box is attached to the panel. Connect the battery box connector to the electronic unit connector.



1b

If your model is Tubular 1000 E Box: Thread the transformer wire to the box.

Connect the power supply connector from the electronic unit coming from the corrugated tube to the transformer, and plug the transformer into the electricity socket.

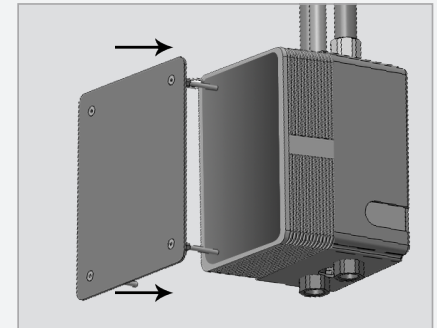
2

After you have connected the power source (battery or transformer) wait about 10 seconds in order to allow the system to set the ideal sensor range. Then the product will be ready for use.



3

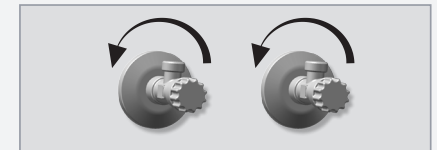
Assemble the permanent panel by screwing the provided four screws.



STEP 3- CONNECTING THE WATER SUPPLY

1

Turn on the central water supply and check for leaks.



NOTE: Tubular includes a special aerator that allows you to adjust the water stream direction on site in order to prevent water splashing if needed. To change the angle of the water stream, simply move the adjustable tilting plate by pressing it smoothly.



If the automatically adjusted sensor range is not satisfactory to your purposes, please refer to the section entitled "Settings adjustment".

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 red light 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



DETECTION RANGE: This faucet was supplied with a self adjusting sensor. The ideal detection range for the specific location will be set automatically.

Only if necessary, use the remote control to adjust the sensor range as follows:

Press the RANGE button. Wait until a quick flashing of the red light in the sensor eye is perceived. Then, press + to increase the range and – to reduce it. Every push will increase or decrease one level.

Note: Once you have changed the detection range with the remote control, the distance will be remembered by the sensor, even if the power source is disconnected. To get back to the self adjustment mode, use the ADJ button only.



ENTRANCE TO THE SELF ADJUSTMENT MODE: Check that no objects are in front of the sensor. Press the ADJ button. Once a quick flashing of the red light of the sensor eye is perceived, remove your hand holding the remote control and move away from the sensor area. The ideal sensor range for the specific location will be set automatically. Once the self adjustment has taken place, the solenoid valve will be opened and closed for 1 second as an indication that the ideal sensor range was set and the product is ready for use.



SECURITY TIME: The Security time, prevents continuous running of water due to reflections or vandalism. By default, if the sensor is covered for more than 90 seconds the water flow will shut automatically. To resume regular operation any obstruction must be removed.

Press the SEC button. Wait until a quick flashing of the red light in the sensor eye is perceived. Then, press + to increase the security time and – to reduce it.

SETTINGS ADJUSTMENT



DELAY IN TIME: It is recommended to change the delay in time for flush valves for urinals or toilets only.

If required, the delay in time can also be modified in faucets as follows:

Press the IN button. Wait until a quick flashing of the red light in the sensor eye is perceived. Then, press + to increase the delay in time and – to reduce it.



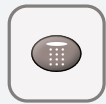
DELAY OUT TIME: This button allows modifying the water flow time after the user removes his hands from the faucet. A delay out time close to 0 will save more water. An increased delay out time will make the user experience more comfortable.

If required, the delay out time can be modified as follows:

Press the OUT button. Wait until a quick flashing of the red light in the sensor eye is perceived. Then, press + to increase the delay out time and – to reduce it.



24 HOUR HYGIENE FLUSH: This model includes a 24 hours hygiene flush which is disabled. To activate the hygiene flush, press the clock button. Wait until a quick flashing of the red light in the sensor eye is perceived. Then press + to activate the hygiene flush. To disable it again, press – to deactivate it.



COMFORT FLUSH: If your model includes a Comfort flush setting, it can be activated by pressing the flush button.

When the button is pressed, one blink of the blue light in the sensor eye is perceived. The pre-programmed flush cycle will take place then.

The Comfort flush cannot be interrupted or deactivated by pressing any button until it is over.



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).

The faucet 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.



RESET BUTTON: This function restores all the factory settings except for the sensor range. If required, press the Reset button and without releasing it, press the + button once.

NOTE: To enter the self adjusting mode, use the ADJ button. To change the sensor range, use the RANGE button.

BATTERY REPLACEMENT

BATTERY MODELS ONLY

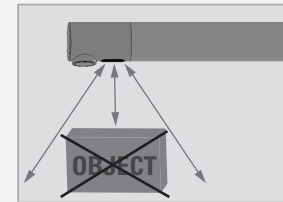
When the battery weakens, the red indicator light will blink at a constant rate when the user's hands are within the sensor range. The battery must be replaced within two weeks.

TO REPLACE THE BATTERY:

1. For Tubular 1000 B: Carefully open the battery box and remove the old batteries. Replace the used batteries with six new 1.5V AA batteries. Close the box.
2. For Tubular 1000 B Box: Release the screws at the panel and remove it. The battery box is located behind the panel. Carefully open the battery box and replace the used battery with a new 9V battery (Lithium battery is recommended). Close the box and re-assemble the wall cover panel.

IMPORTANT: These models were supplied with a self adjusting sensor.

The ideal sensor range for the specific location will be set automatically again after changing the battery.



Check that there are no objects in front of the sensor after the battery replacement was completed.

After you have replaced the battery, move away from the sensor range. Wait 15 seconds in order to allow the system to set the ideal sensor range. Then after the self adjustment has taken place the solenoid valve will be opened and closed for 1 second as an indication that the ideal sensor range was set and the product is ready for use.

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

These models are provided with stainless steel filters preventing foreign particles to enter the lines. It is recommended to clean the filters every six (6) month. If the water flow has decreased, this may be because the filters are clogged. The filters can be cleaned as follows:

1. For Tubular 1000 B and Tubular 1000 E:

- Shut-off the water shut off valve.
- Disconnect the water supply pipes from the adapters and disassemble the filters.
- Wash the filters under running water.
- Reassemble the parts.
- Restore the incoming water supplies.
- Make sure that there is no water leakage.

2. For Tubular 1000 B Box and Tubular 1000 E Box:

- Release the screws at the panel and remove it. Turn off the regulating valve.
- Disassemble the solenoid valves by opening the nuts.
- Remove the filters and wash them under running water.
- Reassemble the filters.
- Reassemble the solenoid valves.
- Turn on the regulating valve and adjust the flow capacity.
- Make sure that there is no water leakage. Reassemble the wall cover panel

SOLENOID VALVE SERVICING

The solenoid valve diaphragm requires periodical cleaning every six (6) month.

Remove the diaphragm from the solenoid valve and examine it for dirt. in case it is dirty or clogged, wash it under running water and reassemble it.

Do not attempt to dismantle the solenoid valve if you are unfamiliar with electronic solenoid valves.

CARE AND CLEANING OF CHROME AND SPECIAL FINISHES

DO NOT use 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 faucet. For surface cleaning of faucet us **ONLY** soap and water, then wipe dry with clean cloth or towel. When cleaning bathroom tile, the faucets should be protected from any splattering of harsh cleansers.

If system chemical disinfection is practiced, chlorine can be used (calculated chlorine concentration of 50mg/l maximum in water per one hour dwell time) at service interval frequency.

SPARE PARTS LIST

TUBULAR 1000	
SEALS AND SCREWS KIT	07210113
10-PACK SA SENSOR KIT TUBULAR 1000 B	07220254
10-PACK SA SENSOR KIT TUBULAR 1000 E	07220255
8-PACK SOLENOID BS-HOUSING KIT	07221119
8-PACK SOLENOID BS-HOUSING KIT FOR USA	07221122
10-PACK SOLENOID VALVE KIT	07232000
10-PACK DIAPHRAGM	04500048
MIXER HANDLE KIT	07260007
BATTERY BOX	06530092
12-PACK 9V TRANSFORMER	06540002
TUBULAR 1000 BOX	
SEALS AND SCREWS KIT	07210076
PANEL KIT	07040119
10-PACK SA SENSOR KIT TUBULAR 1000 B BOX	07220281
10-PACK SA SENSOR KIT TUBULAR 1000 E BOX	07220298
8-PACK SOLENOID BS-HOUSING KIT	07201103
NIPPLE KIT	07246002
10-PACK DIAPHRAGM	04500048
FILTER	08530011
MIXER HANDLE KIT	07260007
BATTERY BOX	06530100
12-PACK 9V TRANSFORMER	06540002

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
No water coming out of the faucet:	1. Sensor flashes continuously when user's hands are within the sensor's range.	Low battery.	Replace battery
	2. Red light in the sensor does not flash once when user's hands are 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. Unit is in "Security Mode"*	
3. Red light in the sensor flashes once when user's hands are within the sensor's range.	5. Sensor is picking up reflections from the washbasin or another object.	Eliminate cause of reflection.	
	1. 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.	
		2. The central orifice in the diaphragm is plugged or the diaphragm is torn	Clean the orifice or replace diaphragm.
		3. The water supply pressure is higher than 8 bar.	Reduce the supply water pressure.
Water flow from spout does not stop:	2. Red light in the sensor does not flash once when user's hands are within the sensor's range.	4. The water supply pressure is under 8 bars and yet the pressure in the faucet's body is higher. This situation could be caused by a sudden increase in the water supply pressure that the backcheck prevents from dropping, even after water supply pressure drops under 8 bars.	Shut off water supply and unscrew one of the flexible pipes in order to reduce the pressure that blocks the product.
		1. Sensor flashes once when user's hands are within the sensor's range.	1. Debris or scale in diaphragm
Water flow diminished	2. Red light in the sensor does not flash once when user's hands are within the sensor's range.	2. Connectors between the electronic unit and the Dual power input box are disconnected or not connected properly	Connect the connectors properly. Refer to page 6 to see how.
		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.
		Filter or aerator is clogged	Remove, clean, re-install

* "Security Mode": If the sensor is covered for more than 90 sec. the faucet will automatically shut off water flow. To return to normal operation remove any blockage.

** In this case, the water flow will stop anyway after 90 seconds because of the security time.

stern

STERN ENGINEERING LTD.

777 Passaic Avenue, Clifton NJ, 07012, USA

Tel: +1-973 773 8011 | Fax: +1-973-779-8768

Toll Free: 1-800-4364410

info@sternfaucets.com | tech@sternfaucets.com

