

# D28 SERIES

WALL MOUNTED ELECTRONIC FAUCET FOR COLD OR PREMIXED WATER



D28 B D28 E D28 Dual Power B D28 Dual Power E D28 Box D28 Box E

# stern

STERN ENGINEERING LTD.

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# TECHNICAL DATA

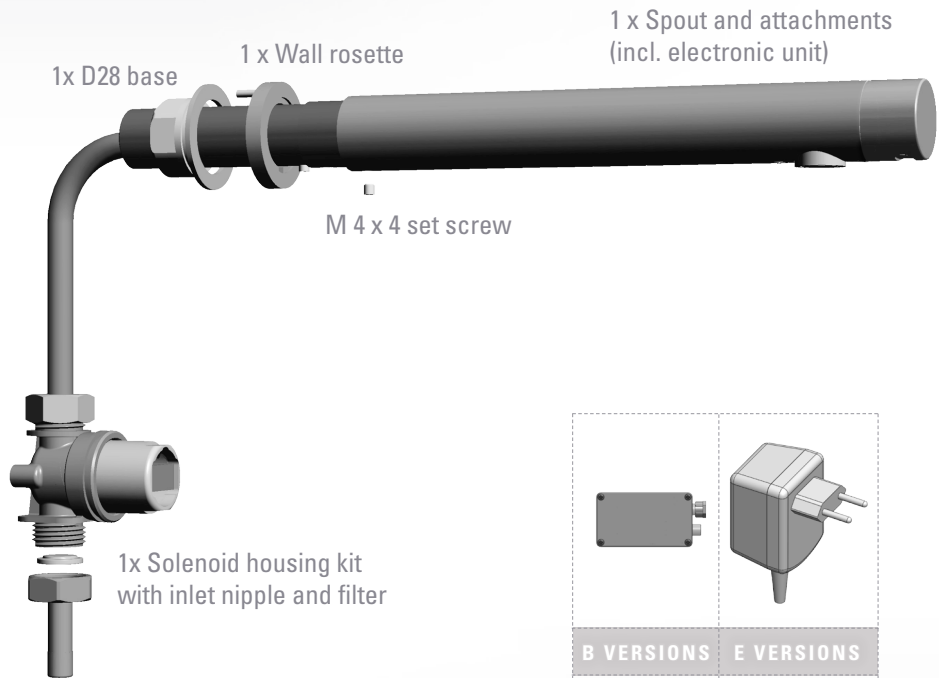


**D28** WALL MOUNTED ELECTRONIC FAUCET FOR COLD OR PREMIXED WATER

<b>Power supply for D28 B model:</b>	6x1.5V AA battery
<b>Power supply for D28 Box B model:</b>	9V Lithium battery
<b>Power supply for D28 Dual Power B model:</b>	9V Lithium battery
<b>Power supply for E models:</b>	9V transformer
<b>Min Operating Water Pressure:</b>	0.5 bar (7 PSI)
<b>Max Operating Water Pressure:</b>	8.0 bar (116 PSI) With water pressure of more than 8 Bars, use a pressure reducing valve
<b>Sensor range:</b>	Self adjusting sensor. Adjustable with remote control
<b>Minimum sensor range:</b>	40 mm
<b>Maximum sensor range:</b>	170 mm
<b>Security time:</b>	90 seconds. Can be reduced with remote control
<b>Hot water temperature:</b>	Max 70°C

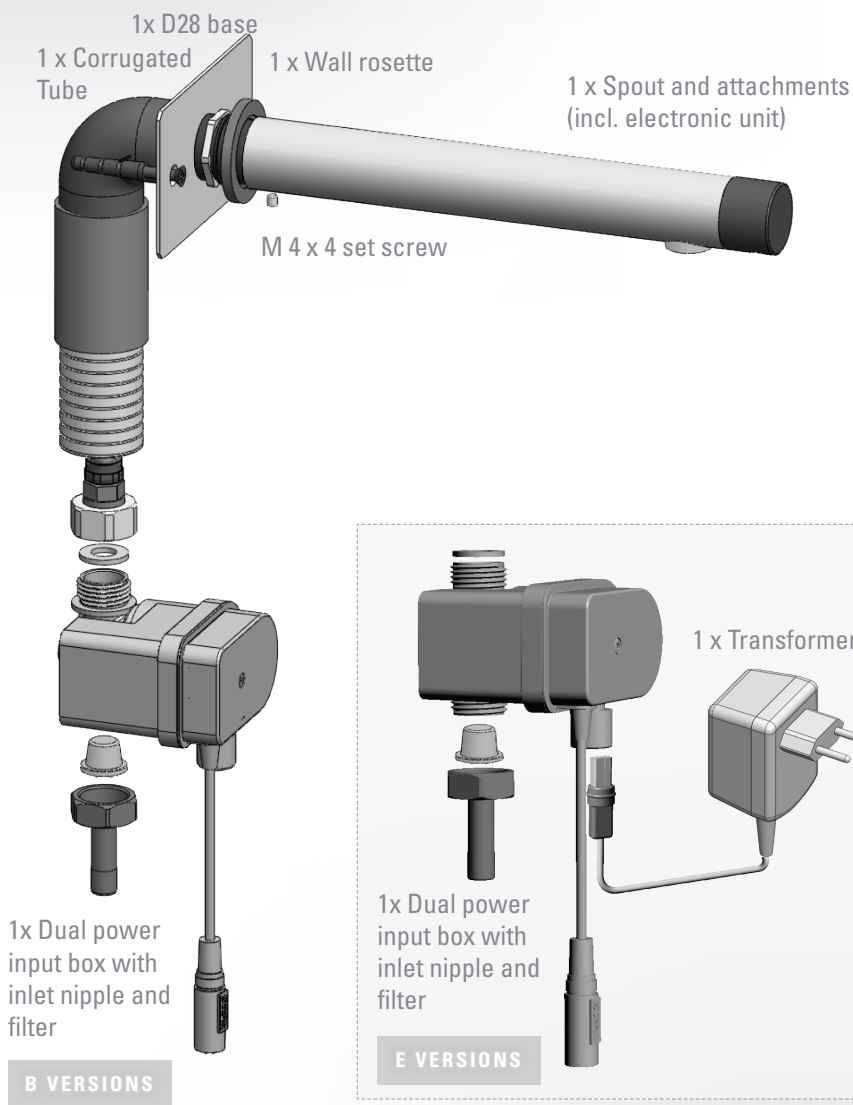
# PACK CONTENTS

D28



# PACK CONTENTS

D28 DUAL POWER

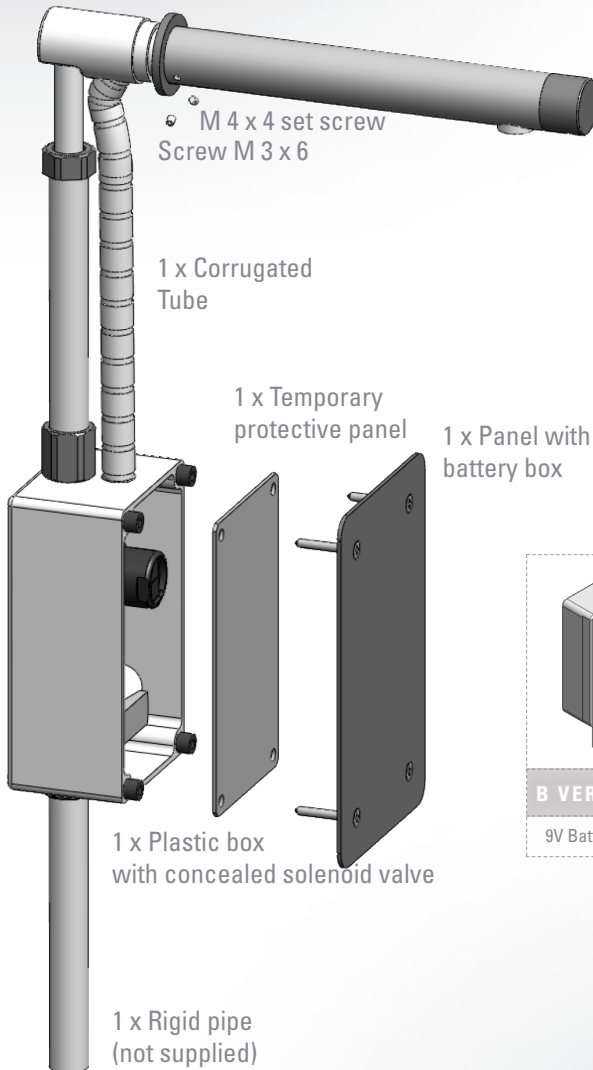


# PACK CONTENTS

D28 BOX

1x D28 base

1 x Wall rosette



M 4 x 4 set screw  
Screw M 3 x 6

1 x Spout and attachments  
(incl. electronic unit)

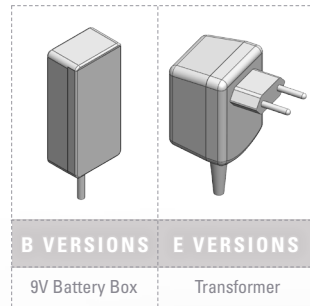
1 x Corrugated  
Tube

1 x Temporary  
protective panel

1 x Panel with  
battery box

1 x Plastic box  
with concealed solenoid valve

1 x Rigid pipe  
(not supplied)



# PRE-INSTALLATION INFO

## Check contents

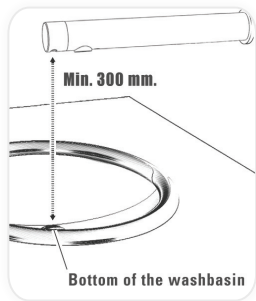
Separate all parts from the packaging and check each part with the pack contents section. Pay attention to the variations of the different models.

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.

### To avoid reflection problems

1. Keep a distance of more than 300 mm. between the sink and the spout.



2. Do not place a shiny pop up in front of the sensor.



## Preparation for installation

Flush 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.

### Warning

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

# FAUCET INSTALLATION

D28

## Step 1 – Installing the faucet

1. Shut off the water supply
2. Drill a hole (23 to 24 mm) at the place where you want to install the spout of the tap.
3. Your model includes an optional anti-rotation pin. Drill a small hole just above the previous one for the anti-rotation pin.



4. Insert the D28 and its attachments through the wall. The aerator in the D28 spout must face the washbasin.
5. Insert the anti-rotation pin into the small hole (if needed)
6. Fix the base behind the wall with the hexagonal nut and the disk.

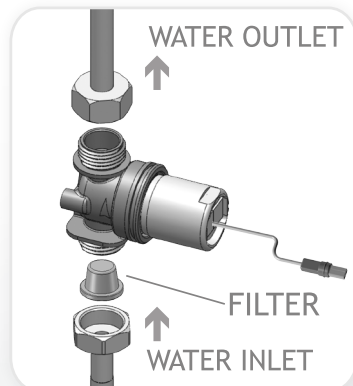
## Step 2 - Connecting the water supply

1. Fit the flexible pipe coming from the D28 base to the solenoid valve housing.
2. Fit the water supply inlet to the inlet nipple at the solenoid valve housing.

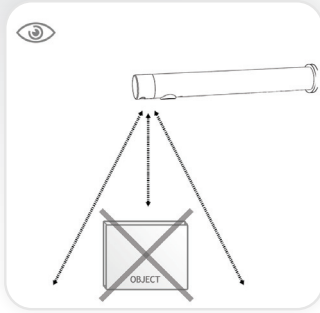
**Note:** Make sure the filter is located at the solenoid inlet.

3. Connect the cable coming from the electronic unit to the solenoid valve.

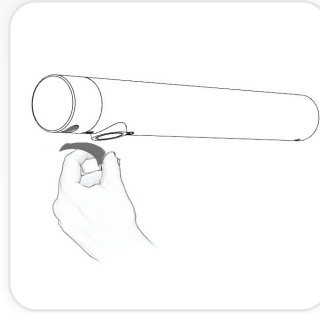
**Important:** D28 was supplied with a Self Adjusting Sensor. The ideal sensor range for the specific location will be set automatically.







Before proceeding to step 3 check that no objects are in front of the sensor besides the washbasin.



Now, remove the protecting sticker that covers the sensor.

### Step 3 – Connecting the power source

1. For D28 B: Connect the other cable coming from the electronic unit at the D28 base to the battery box.
2. For D28 E: Connect the other cable coming from the electronic unit at the D28 base to the transformer. Plug the transformer into the electricity socket.



3. After you have connected the power source (Battery or Transformer) wait 15 seconds in order to allow the system to set the ideal sensor range. As an indication that the self adjusting is taking place, a red light in the sensor eye will flash continuously. **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.**

4. Turn on the central water supply. Check for leaks.
5. If the automatically adjusted sensor range is not satisfactory, please refer to the section entitled "Settings adjustment".

# FAUCET INSTALLATION

## D28 DUAL POWER

### OPERATION:

This faucet features an IP67 dual power input box. The product can be operated with a 9V battery or a 9V transformer. In addition, when used with a transformer, the product contains an integrated battery back up, for normal use during power supply failures.

### Step 1 – Installing the faucet

1. Shut off the water supply
2. Cut an adequate opening in the wall for the dimensions of the D28 base (where you want to install the spout), and the corrugated tube.
3. Install the D28 dual power base and its attachments through the opening that was cut in the wall.

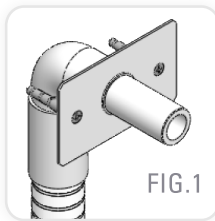


FIG.1

4. Mount the D28 base to the opening cut in the wall, and set it using the two small anchors provided. (See FIG. 1)

**Important:** The D28 base should be installed so that the outside surface of the finished wall falls between the minimum and maximum lines marked at the base.

5. Assemble the temporary protective D28 base cover.

(See FIG.2)

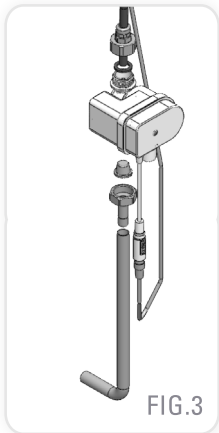


FIG.3

6. Make sure the corrugated tube will stay outside the wall when tiling.

7. Once the works on electricity, plumbing and tiles have been finished, insert the wall rosette through the D28 base.

8. Cut the temporary D28 base cover.

9. Pull the four way connector out of the D28 base, and lead it along with the flexible tube, through the corrugated tube.

10. Connect the flexible tube to the solenoid valve body integrated in the dual power input box. (See FIG.3)

11. Fix the D28 spout by inserting the nipple into the D28 base and tighten the screw.



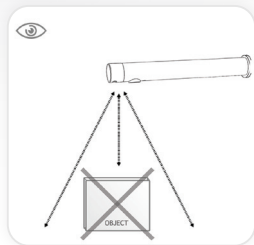
FIG.2

# FAUCET INSTALLATION

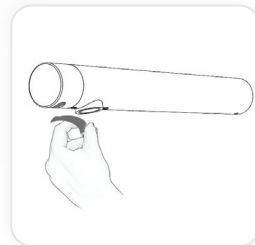
## D28 DUAL POWER

### Step 2 - Connecting the power source

**Important:** D28 was supplied with A Self Adjusting Sensor. The ideal sensor range for the specific location will be set automatically.



Check that no objects are in front of the sensor besides the washbasin.



Now, remove the protecting sticker that covers the sensor.

1. If your model is D28 Dual Power B a 9V battery is already installed in the dual power input box. To do that, remove the rubber seal covering the connectors socket.
2. If your model is D28 Dual Power E, connect the transformer to the transformer socket in the dual power input box.
3. Connect the four contacts connector to the dual power input box.

**Important:** Make sure that the 4 contacts connector is connected all the way through.

4. After you have connected the four contacts connector to the dual power input box, wait 15 seconds in order to allow the system to set the ideal sensor range.

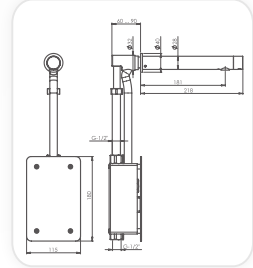
As an indication that the self adjusting has taken place, a red light in the sensor eye will flash continuously. The solenoid valve will open and close for 1 second as an indication that the ideal sensor range was set and the product is ready for use.

### Step 3 – Connecting the water supply

1. Turn on the central water supply.
2. Check for leaks.
3. If the automatically adjusted sensor range is not satisfactory, 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 D28 box, the corrugated tube, the rigid pipe and the D28 base (where you want to install the spout).
3. Insert the D28 box to the opening that was cut in the wall. Connect the water supply pipe to the nipple at the bottom of the D28 box.

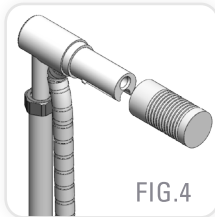


4. Mount the D28 base to the opening cut in the wall and make sure that the spout is at a 90 degree angle with the wall.

**Important:** The D28 base should be installed so that the outside surface of the finished wall falls between the minimum and maximum lines marked at the base.

5. Assemble the rigid pipe (not supplied) from the nipple at the box to the inlet at the D28 base.

6. Assemble the corrugated tube between the D28 base and the box, and lead the connectors through the D28 base and through the D28 box.



6. Assemble the temporary protective cover panel to the D28 box.

7. Assemble the temporary protective D28 base cover. (See FIG.4)

8. Once the works on electricity, plumbing and tiles have been finished, insert the wall rosette through the D28 base.

9. Cut the temporary D28 base cover.

10. Connect the electronic unit connector coming from the corrugated tube to the solenoid valve connector at the D28 box.

11. If your model is D28 Box E, connect the power supply connector coming from the corrugated tube at the D28 base to the transformer. (See FIG.5)



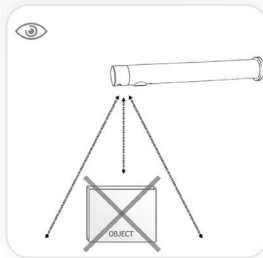
12. Connect the solenoid valve cable and the power supply cable at the spout to those at the D28 base.

13. Fix the D28 spout by inserting the nipple into the D28 base. Make sure that this area is clean before proceeding. Secure the screw with the Allen key.

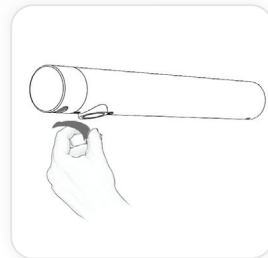
### Step 2 - Connecting the power source

1. Remove the temporary protective cover panel.

**Important:** D28 was supplied with a Self Adjusting Sensor. The ideal sensor range for the specific location will be set automatically.



Check that no objects are in front of the sensor besides the washbasin.



Now, remove the protecting sticker that covers the sensor.

2. If your model is D28 B Box the battery box is attached to the cover panel. Connect the other electronic unit connector coming from the corrugated tube to the battery box
3. If your model is D28 E Box, plug the transformer into the electricity socket.
4. After you have connected the power source (Battery or Transformer) wait 15 seconds in order to allow the system to set the ideal sensor range. As an indication that the self adjusting is taking place, a red light in the sensor eye will flash continuously. 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.

### Step 3 – Connecting the power source

1. Turn on the central water supply.
2. Check for leaks.
3. Assemble the wall cover panel by screwing the four screws.
4. If the automatically adjusted sensor range is not satisfactory, 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 of the sensor eye is perceived. Then, press + to increase the delay out time and – to reduce it every push will increase or decrease one level.

**Note:** Once you have changed the detection range with the remote control, this 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 of 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 of 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 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 red light 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).

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

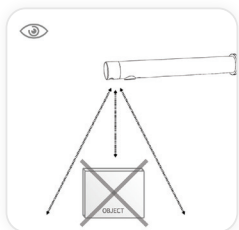
## Battery models only

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.

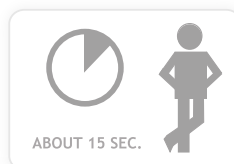
### To replace the battery (battery models only):

1. For D28B: Open the battery box carefully and remove the old batteries. Replace the used batteries with six new 1.5V AA batteries. Close the box.
2. For D28 Dual Power B: Open the dual power input box carefully, using the Allen key provided. Remove the old battery and replace it with a new 9V battery (Lithium battery is recommended). Close the box.
3. For D28B Box: Release the screws at the panel and remove it. The battery box is located behind the panel. Open the battery box carefully and remove the old battery. Replace the used battery with a new 9V battery (Lithium battery is recommended). Close the box and re-assemble the wall cover panel.

**Important:** D28 was 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

This faucet is provided with a stainless steel filter preventing foreign particles to enter the lines. If the water flow has decreased, this may be because the filter is clogged. The filter can be cleaned as follows:

1. For D28B, D28E, D28CB and D28CE:
  - a. Shut-off the water shut off valve.
  - b. Disconnect the water supply pipe from the adaptor and disassemble the filter from it.
  - c. Wash the filter under running water.
  - d. Reassemble the parts.
  - e. Restore the incoming water supply.
  - f. Make sure that there is no water leakage.
2. For D28Box, D28Box E:
  - a. Release the screws at the panel and remove it. Turn off the regulating valve.
  - b. Disassemble the solenoid valve by opening the nuts.
  - c. Remove the filter and wash it under running water.
  - d. Reassemble the filter.
  - e. Reassemble the solenoid valve.
  - f. Turn on the regulating valve and adjust the flow capacity.
  - g. Make sure that there is no water leakage. Re-assemble the wall cover panel.

## 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 use **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.

# SPARE PARTS LIST

D28

Screws Kit .....	07210101
Nano Sensor .....	08004001
Solenoid BS-Housing Kit .....	07231008
Solenoid BS-Housing Kit for USA .....	07231009
Solenoid Valve Kit .....	07230017
Diaphragm .....	04500001
IP 67 Battery box .....	06530020
Battery box .....	06530008

# SPARE PARTS LIST

D28 DUAL POWER

Seals and Screws Kit .....	07210102
Nano Sensor .....	08004012
Solenoid Housing Dual Power Kit .....	07231011
Solenoid Housing Dual Power Kit USA .....	07231012
Stern Interoperable LS9V12WC1 .....	07500068
Dual Power Cover Kit .....	07220080
Transformer .....	06522047

# SPARE PARTS LIST

D28 BOX

Seals and Screws Kit .....	07210107
Nano Sensor .....	07040109
Solenoid Housing Kit .....	08004015
Solenoid Housing Kit USA .....	07231010
Solenoid Valve Kit .....	07230017
Diaphragm .....	04500001
Battery box .....	06530008
Transformer .....	06522042

# TROUBLE SHOOTING

PROBLEM	INDICATOR	CAUSE	SOLUTION
<b>No water coming out of the tap:</b>	1. Sensor flashes continuously when user's hands are within the sensor's range.	Low battery.	Replace battery.
		1. Range is too short. 2. Range is too long.	Increase the range. Decrease the range.
	2. Red light in the sensor does not flash (once) when user's hands are within the sensor range.	3. Battery is completely used up	The battery must be replaced.
		4. Unit is in "Security Mode"*	
		5. Sensor is picking up reflections from the washbasin or another object.	Eliminate cause of reflection.
	3. Red light in the sensor flashes once when user's hands are within the sensor 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.	
<b>Water flow from spout does not stop:</b>	1. Sensor flashes once when user's hands are within the sensor's range.	Debris or scale in diaphragm.	Clean the orifice or replace diaphragm.
		2. Red light in the sensor does not flash (once) when user's hands are within the sensor's range	
	1. Sensor is dirty or covered.	Clean or eliminate cause of interference.	
<b>Water flow diminished</b>		2. Sensor is picking up reflections from the washbasin or another object.	1. 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 to re-establish operation.

# LIMITED WARRANTY

Y. Stern Engineering Ltd. warrants that its electronic faucets, flush valves and controls 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 faucet, valve or control.

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, water composition, 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.

# STERN

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