STERN

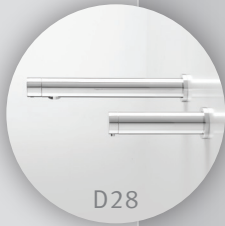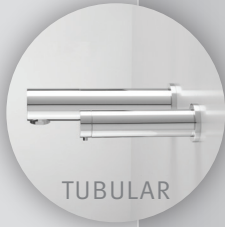## STERN ENGINEERING LTD.
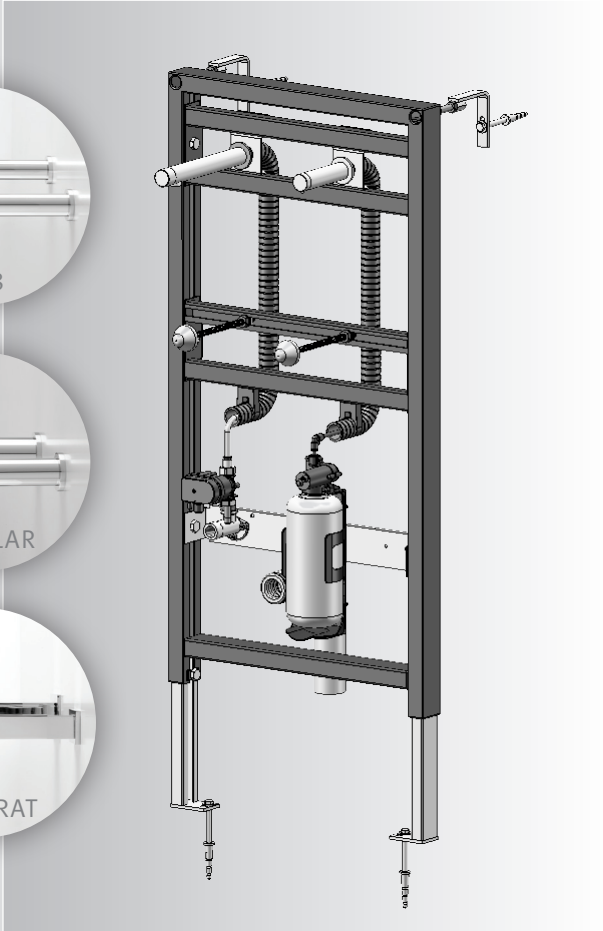

D28

TUBULAR

QUADRAT

D28 / TUBULAR/ QUADRAT
SOAP & WATER KE SYSTEM

INSTALLATION AND MAINTENANCE GUIDE

INDEX

PRE INSTALLATION

ABOUT THE D28/TUBULAR/QUADRAT SOAP & WATER KE

The D28/TUBULAR/QUADRAT Soap & Water KE System is a wall mounted, touch free, faucet and soap dispenser set, complete with an iron frame for in-wall installation.
• Used with cold or premixed water
• Activated by an infrared sensor
• Optional remote controls for sensor features optimization
• Installation in brick walls, drywalls and wood frame constructions.

Notes & Cautions:

Before installing the system, please fully read and understand this document, and verify the package content.
• **It is the installer's responsibility to comply with relevant local codes & regulations.**
• **Water and electrical supplies should be kept OFF throughout the entire installation.**

Package Content Verification
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 that all parts are accounted for before discarding any packaging material. If any parts are missing, do not attempt to install the system until you obtain the missing parts.

Cautions:

• **To avoid reflection problems, keep a distance of more than 300mm between the sink and the spout.**
• **These faucet and soap dispenser models, with an infrared sensor pointing down, are not intended to be used together with a sink of a reflective material such as stainless steel**
• **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).**

Pre Installation - Water Supply Lines Cleaning
Flush thoroughly the water supply lines before installing the faucet. Do not allow dirt, Teflon tape or metal particles to enter the faucet. Shut off water supply when done.

WASTE PIPE
(QTY: 1)
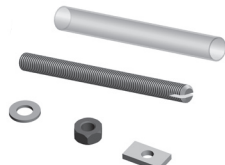
THREADED ROD &
PLASTIC SLEEVE SET
(QTY: 2)
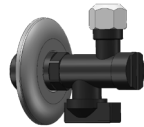
ELBOW VALVE-OPTIONAL
(QTY: 1)

IRON FRAME*
(QTY: 1)

WALL BRACKET
(QTY: 2)

SCREW &
ANCHOR SET
(QTY: 4)

ALLEN SCREW
(QTY: 2)

ALLEN KEY
(QTY: 1)

WASHER
(QTY: 2)

* A washbasin is not included

SOAP BOTTLE
AND BRACKET
(QTY: 1)

SCREW & ANCHOR
FOR SOAP BOTTLE
BRACKET
(QTY: 2)
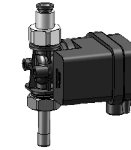
DUAL POWER
INPUT BOX
(QTY: 1)

POWER SPLITTER
(QTY: 1)

SINK FASTENING
SET
(QTY: 1)

ESCUTCHEON
(QTY: 2)

SCREW FOR SPOUTS
(QTY: 2)

POWER TRANSFORMER
(QTY: 1)

D28
FAUCET & SOAP DISPENSER
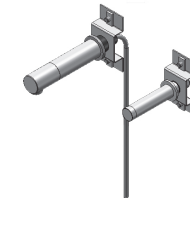
TUBULAR
FAUCET & SOAP DISPENSER
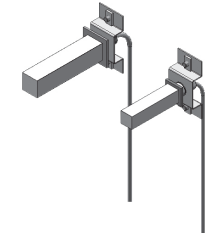
QUADRAT
FAUCET & SOAP DISPENSER

D28/TUBULAR/QUADRAT
Soap & Water KE Schematics

[19⅝"]
500mm

[Min 2 3/8"]
[Max 14 1/8"]
Min 60mm
Max 360mm

[34¾"]
884mm

[24"]
610mm

[Min 3/8"]
[Max 7 7/8"]
Min 10mm
Max 200mm

[4¾"]
Min 120mm

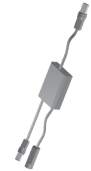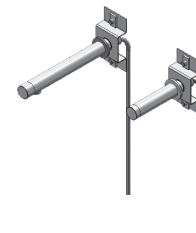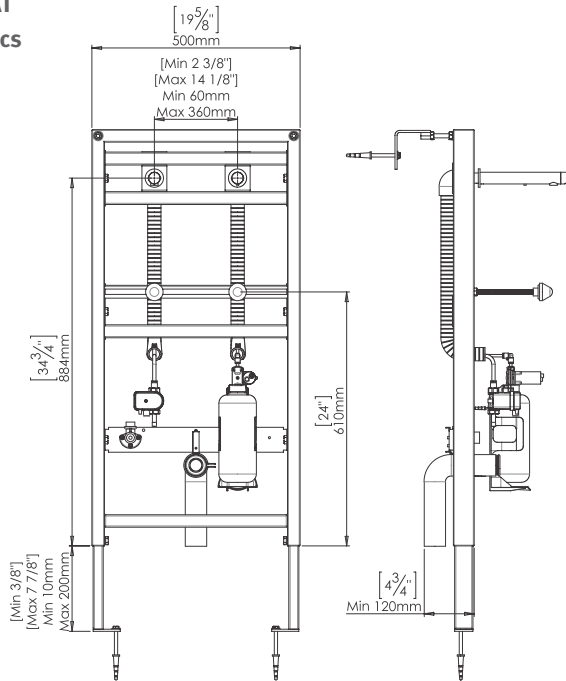| SPECIFICATIONS			
Power supply	12V Transformer		
Operating water pressure	0.5-8.0 Bar Note: with water pressure of more than 8 Bars, use a pressure reducing valve for reduction.		
Sensor range faucet	40-170 mm +/- 10 mm. Self-adjusting sensor. (Adjustable by remote control)		
Sensor range soap dispenser	30-100 mm +/- 10 mm (Adjustable by remote control)		
Soap capacity	1 Liter \ 33.8 oz.		
Soap viscosity	100 – 3800 CPS		
Standard soap discharge	1.4 cc, Adjustable		
Security time (faucet)	90 seconds. Can be reduced with remote control.		
Hot water temperature	Max 70°C		
Code Number	D28 - 500100	TUBULAR - 500200	QUADRAT - 500400

D28/TUBULAR/QUADRAT - Iron Frame Installation

1. Iron Frame Setup and Mounting

Adjust the two legs (A1) of the iron frame to the desired length.

Note: the legs length determines the final height of the faucet and soap dispenser, as well as the height of the sink. Please take into account the height of the finished floor covering level.

Mount the frame legs to the floor (A2).

Use the supplied wall brackets (A3) to fix the frame to the wall.

150-180mm
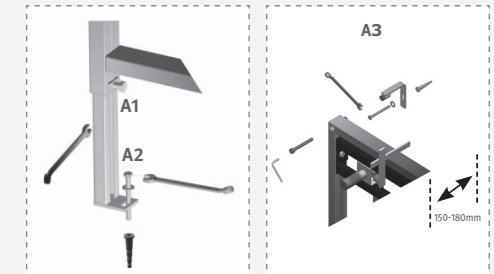
2. Sink Support Assembly

Install the two sink support threaded rods into the iron frame. Adjust the final position of the rods to fit the dimensions of the selected sink.

Place the rod cover plastic sleeves onto the threaded rods.
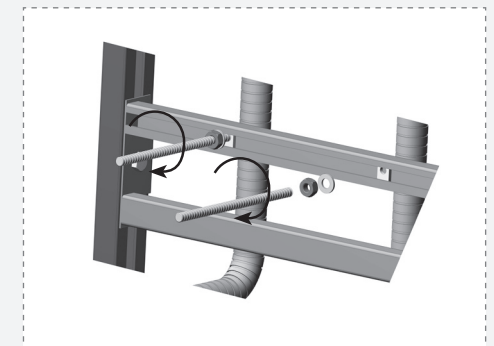
3. Faucet and Soap Dispenser Position Setup

Adjust the horizontal position of the faucet base and the soap dispenser base.

Note: Do not remove the dust covers.

←— 150 mm —→
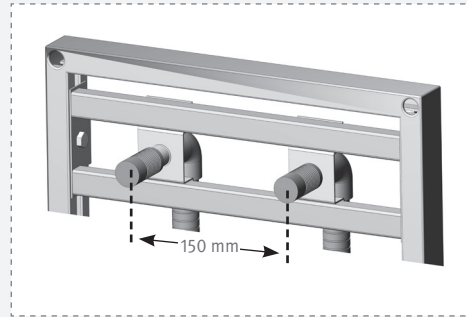
4. Plumbing

Fasten the waste pipe (B1) to the iron frame using the bracket (B2).

Cut the lower part of the waste pipe to the desired length, and connect it to the main waste line.

B2   **B1**
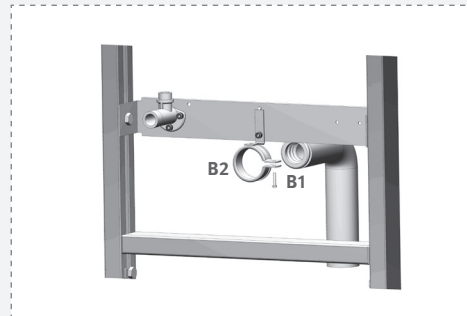
⚠ **Important Note**   *Before wall construction and tiling, make sure all parts are connected properly and securely.*

Perform this part of the installation after the wall and floor construction is completed.

At this point the following parts will protrude out of the wall:

- Faucet and Soap Dispenser bases with dust covers (C1).

  NOTE: It is recommended to fill the cavities around the base with cement to better secure it inside the wall.

- Two threaded rods covered with protective plastic sleeves (C2)
- Faucet and soap dispenser corrugated tubes (C3).
- Water inlet pipe opening (C4)
- Waste outlet pipe (C5).

C1
C2
C3
C4
C5

D1

5. Sink Installation

Cut the threaded rod to the length that will fit the selected sink.

Cut the rod cover sleeves, just enough to expose the threading at the end of the rods ends.

Install the sink onto the threaded rods, and fasten it to its place using the sink fastening set (D1).

Connect the sink trap to the waste outlet pipe in the wall (D2).

D2
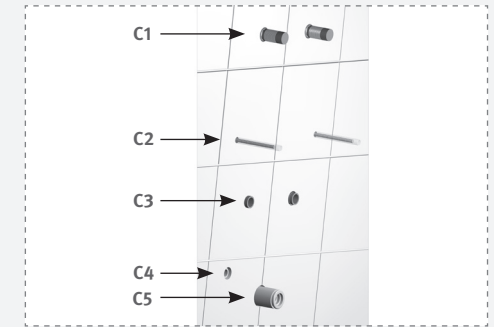
6. Installing the Faucet and the Soap Dispenser

Remove the dust covers (E1) located at the faucet and soap dispenser base and dispose of them.

E1
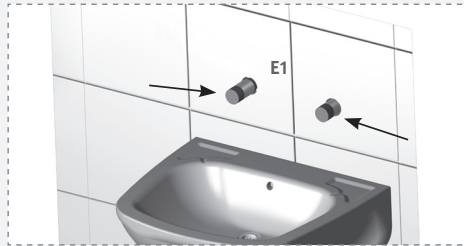
Install the escutcheons (E2) onto the faucet and soap dispenser base.

E2

Thread the soap dispenser Electrical cables and the flexible soap pipe through the soap dispenser base (E3) until it is fully extended outside the corrugated tube (E4).

E3

E4

Install the soap dispenser spout onto the base and tighten it with its screw (E5).
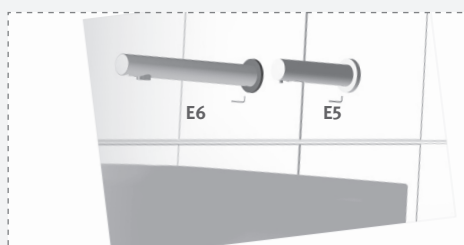
Thread the faucet electrical cable and flexible water pipe through the faucet base and corrugated tube.

Install the faucet spout onto the base and tighten it with its set screw (E6).

E6   E5
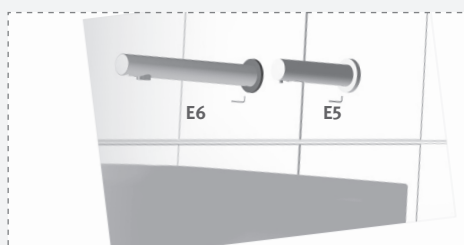
Note: the faucet has one electrical wire and one water Inlet flexible tube. The soap dispenser has two electrical wires and one soap inlet flexible tube and these wires and pipes will be connected at a later stage.

7. Connecting the water supply

⚠️ *Caution: Make sure the central water system is shutoff.*

Connect the shutoff valve* (F1) (if supplied) to the water inlet (C4). Keep it in the shutoff position.

Connect the Dual Power Input Box (F2) directly to the shutoff valve.

Important: Cut the sealed end of the water inlet flexible tube.

Snap the water inlet flexible tube into the Dual Power Input Box (F3).

F4

F3

F2

F1
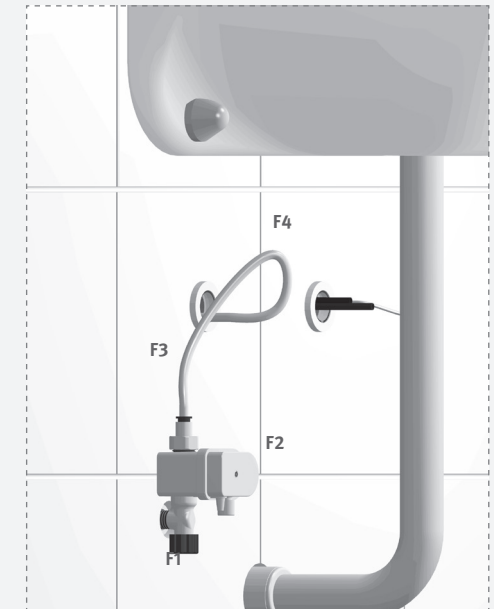
8. Connecting the soap system fix the soap bottle (G1), with its bottle support (G2), to the desired location on the wall.

Cut the sealed end of the soap pipe and connect it to the quick connection fitting at the top of the soap dispenser pump assembly, by snapping it in.

G3

G1   G2
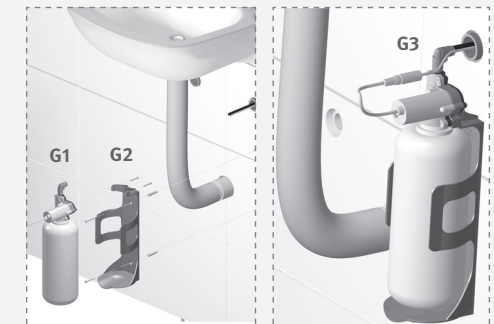
9. Electrical Wiring

⚠ *Caution: assure that the transformer is not connected to the main power line.*

Do not perform any electrical wiring under power.

Connect the power (transformer) to the faucet electrical connector and the soap dispenser electrical connector using the power splitter.

To Soap Dispenser   To Faucet

F1

To Power

F2

Connect the soap dispenser pump connector to its matching connector coming from the electronic unit. Please note that since the connector is waterproof, some friction might have to be applied.

Important: The 4 contacts connector should be connected properly so that the white o-ring is not visible and a clicking sound is heard.

→ ←

O-RING VISIBLE – NOT CONNECTED PROPERLY

ONLY THE GROVES ARE VISIBLE – CONNECTED PROPERLY

⚠ *Caution: If the 4 contacts connectors are not connected properly, the pump will work continuously*
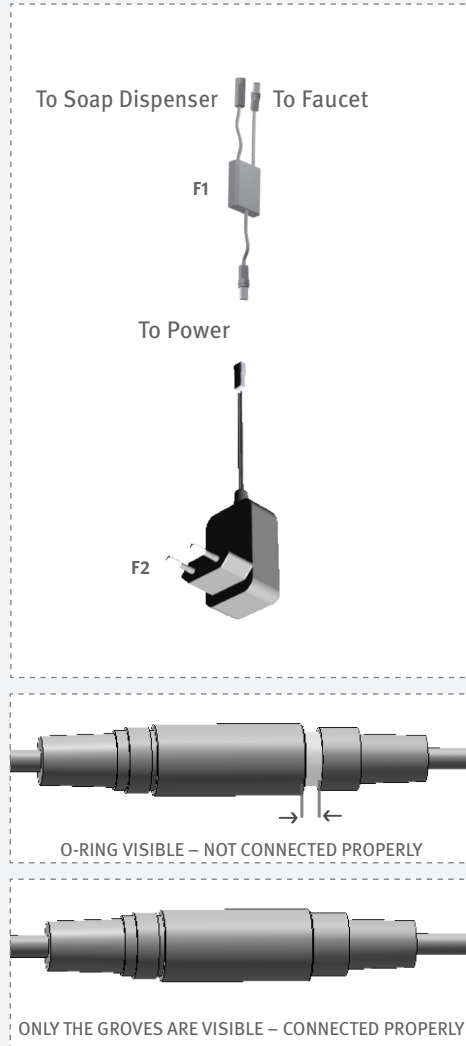
10. Powering and Testing the System

⚠ Important Note: The D28/TUBULAR/QUADRAT faucet and soap dispenser system include the self-adjusting sensors. The ideal sensor range for the specific location will be set automatically.

OBJECT

Before proceeding, check that there are no foreign objects in front of the sensors.

Remove the protective stickers that cover the sensors, both on the faucet and on the soap dispenser.
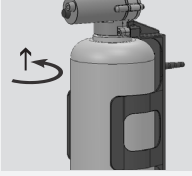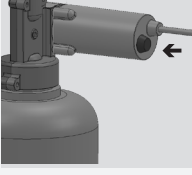
Plug in the transformer to the main power line.

Wait about 10 seconds for the faucet and the soap dispenser sensors to complete their self-adjustment.

10
SECONDS

Put your hands under the Faucet and the Soap Dispenser and verify their functionality.
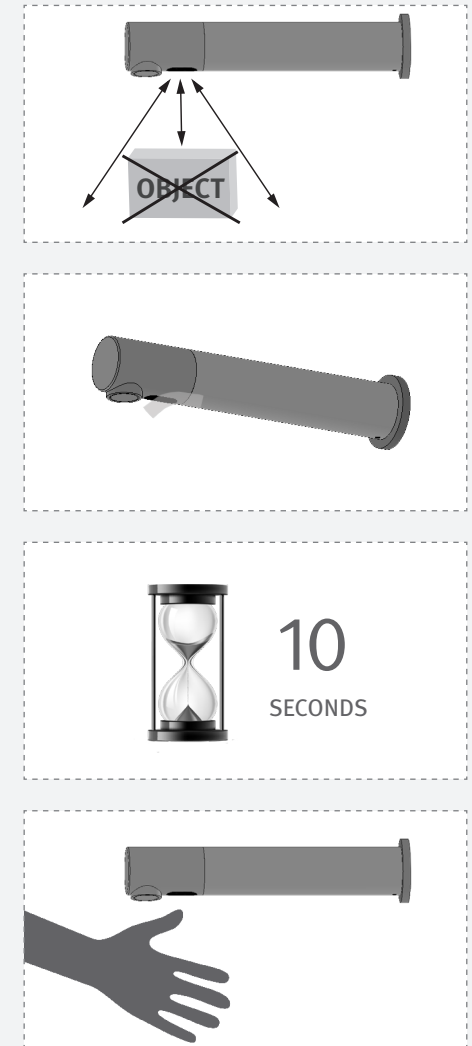
FILLING THE SOAP TANK

1	Unscrew the soap tank from the pump assembly and pull it out of the bottle support.	
2	Fill in the liquid soap up to the top line.	
3	Insert the bottle inside the bottle support.	
4	Screw the soap tank back to the pump assembly. Make sure the tank is firmly secured into place.	
5	Press the refill button located at the back of the pump assembly until soap starts coming out of the soap dispenser spout. This operation can also be done using the soap dispenser remote control Refill function.	
6	**NOTE**: Once the soap in the soap tank has reached the bottom line the soap tank should be refilled. To refill the soap tank please refer to steps 1-5.	

SETTINGS ADJUSTMENT - SOAP DISPENSER

If you acquired the remote control together with your soap dispenser, you may adjust the dispenser settings if required. To use the remote control hold it straight in front of the sensor at a distance of about 10-15 cm (4-6").

Attention: The remote control held out of the recommended range (too close or too far) will not operate.

The remote control can be used to adjust the following functions:

1-SOAP QUANTITY

The 1-4 drop keys allow the user to choose the desired soap quantity.

① 0.7 to 0.9	② 1.2 to 1.6	③ 1.6 to 1.9	④ 2.1 to 2.3 *

Indication: continuous blinking of the LED light in the sensor eye.

2-ADJ

This function resets the sensor back to factory settings.
Indication: 2 blinks of the LED light in the sensor eye.

3-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 soap dispenser will remain shut for one 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 for one minute.

Indication: OFF – 2 fast blinks, ON – 4 fast blinks

4-FILL THE SOAP TANK

Once the soap tank has been filled / re-filled, press the FILL button. The pump will run for one minute for priming the soap to the soap dispenser spout.

To stop this activity press the FILL button again. If the soap has not started coming out of the spout, press the Fill button again.

DETECTION RANGE

DELAY IN TIME

SECURITY TIME

COMFORT FLUSH

RANGE
IN   OUT
−   +

SEC   ADJ   RES

DELAY OUT TIME

TEMPORARY OFF FUNCTION

SELF ADJUSTMENT MODE

RESET

HYGIENE FLUSH

6-8"
15-20 cm

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.

RANGE

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 LED 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.

ADJ

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 LED 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.

SEC

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 LED in the sensor eye is perceived. Then, press + to increase the security time and – to reduce it.

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 LED 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 o 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 LED 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 LED 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 LED 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.

GENERAL

Care and cleaning of chrome and special finishes.

DO NOT use steel wool or cleansing agents containing alcohol, acid, abrasives, and alike. Use of any prohibited cleaning or maintenance products or substances could damage the surface of the soap dispenser or faucet.

For surface cleaning use ONLY soap and water, then wipe dry with a clean cloth or towel.

When cleaning bathroom tiles, the soap dispenser should be protected from any splattering of harsh cleansers.

FAUCET MAINTENANCE
FILTER CLEANING INSTRUCTIONS

This D28/TUBULAR/QUADRAT 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:

- Shut-off the water shut off valve.
- Disconnect the water supply pipe from the adaptor and disassemble the filter from it.
- Wash the filter under running water.
- Reassemble the parts.
- Restore the incoming water supply.
- Make sure that there is no water leakage.

SOLENOID VALVE SERVICING

The solenoid valve diaphragm requires periodical cleaning every six (6) month. The solenoid valve is located inside the Dual Power input box.

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.

SPARE PARTS

Seals & Screws Kit (D28 faucet)	07210102
10-Pack Sensor Kit (D28 faucet)	08004503
Seals & Screws Kit (Tubular faucet)	07210138
Seals & Screws Kit (Quadrat faucet)	07210035
10-Pack Sensor Kit (Tubular/Quadrat faucet)	07220355
10-Pack Solenoid Valve (D28/Tubular/Quadrat faucet)	07232005
Dual Power Input Box (D28/Tubular/Quadrat faucet)	06530042
Remote Control for Faucets	07100005
Seals & Screws Kit (Tubular Soap Dispenser)	07210150
Seals & Screws Kit (Quadrat Soap Dispenser)	07210128
10-Pack Sensor Kit (Tubular/Quadrat Soap Dispenser)	07220280
Soap Dispenser Pump	07222032
6-Pack 1L Soap Tank Kit	07100035
6-pack 1L Bottle Support Kit	07100037
Dual Power Input Box	06530042
Power Splitter	06001025
12V Transformer (EU)	06522081
12V Transformer (UK)	06522086
12V Transformer (US)	06522080
12V Transformer (AU)	06522085
Remote Control for SD (Optional)	07100008
Remote Control 13B (Optional)	07100005

LIMITED WARRANTY

LIMITED WARRANTY

Y. Stern Engineering Ltd. warrants that its electronic faucets, soup dispensers, 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 shower, 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. 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.
- Use of the soap outside of viscosity specifications.
- Alteration of the original soap/foam dispenser components (including pipes).

PROBLEM	INDICATOR	CAUSE	SOLUTION
No soap is coming out of the spout	LED light flashes (once) and the soap pump operates.	Soap has run low or is completely out.	Refill the soap tank. *Refer to page 12*
		The soap tank has been filled, but soap has not reached the spout.	Press the refill button located at the bottom of the pump to prime the soap to the spout. Alternatively, remote control FILL button can be used for priming. *Refer to page 13*
		The connectors between the pump and the electronic unit are not connected properly.	Connect the connectors properly so that the white o-ring is not visible.
		Soap solidification in the pipe.	Fill the tank with hot water (50/60Cº) and run the pump continuously for a short time until the pipe is cleansed.
	LED light in the sensor does not flash (once) when user's hands are within the sensor range.	Sensor is picking up reflections from the washbasin or another object.	Eliminate cause of reflection.
		Connectors between the electronic unit and power source are disconnected or not properly connected.	Connect the electronic unit connectors to the power source connector.
Soap coming out from the spout does not stop		The connectors between the pump and the electronic unit are not connected properly.	Connect the connectors properly so that the white o-ring is not visible.

PROBLEM	INDICATOR	CAUSE	SOLUTION
No water is coming out of the faucet:	1. LED 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. Unit is in "Security Mode"*	
		4. Sensor is picking up reflections from the washbasin or another object.	Eliminate the cause of reflection.
	2. LED light in the sensor flashes once when user's hands are within the sensor's range.	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 the diaphragm.
		3. The water supply pressure is higher than 8 bar.	Reduce the supply water pressure.
		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 the water supply and unscrew one of the flexible pipes in order to reduce the pressure that blocks the product.
Water flow from spout does not stop:	1. Sensor flashes once when user's hands are within the sensor's range.	1. Debris or scale in diaphragm	Clean the orifice or replace the diaphragm.
		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 10.*
	2. LED 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 the cause of interference.
		2. Sensor is picking up reflections from the washbasin or another object.	Decrease the range or eliminate the cause of reflection.
Water flow diminished		Filter or aerator is clogged	Remove, clean, re-install the filter or aerator

* "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.

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