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HYGIENE ON THE MOVE!



I-CARO

AUTOMATIC RECESSED DIRECT FLUSH VALVE

INSTALLATION AND MAINTENANCE GUIDE

SUPRATECH

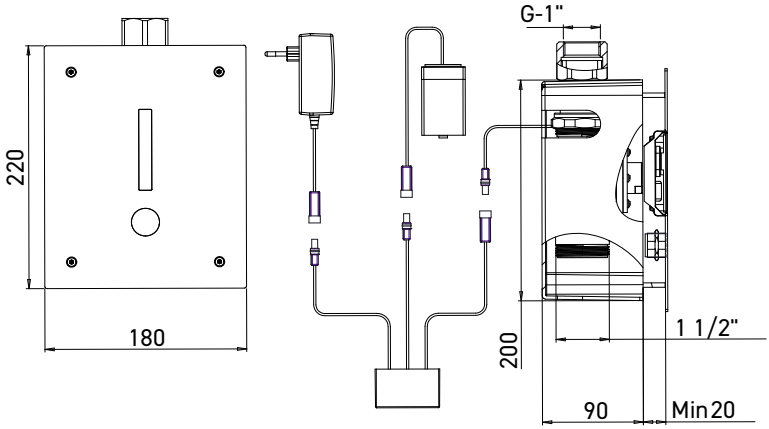
I-CARO automatic recessed toilet flush valve

Ref.: **DWS-40D / DWS-41D**

INDEX

3	TECHNICAL FEATURES
4	COMPONENTS
5	PRE-INSTALLATION
6-9	INSTALLATION
9	BATTERY REPLACEMENT
10-11	SETTINGS ADJUSTMENT
12	MAINTENANCE
13	SPARE PARTS LIST
14	LIMITED WARRANTY
15	TROUBLESHOOTING

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OPERATION

The I-CARO electronic flush valve is designed for direct toilet flushing with infrared activation. Water starts to flow when the user moves away from the toilet and is out of the sensor range.

Two flush volumes:

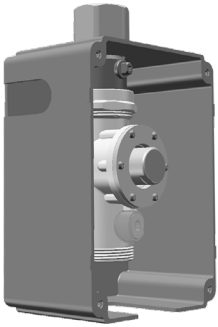
- 3 L half-flush if the user stays on the toilet for less than one minute (liquid waste)
- 6 L full-flush if the user stays on the toilet for more than one minute (solid waste)

A courtesy push button on the front panel for manual operation delivers a full 6 L flush when activated.

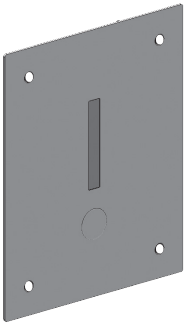
Power supply	DWS-40D: 9V battery DWS-41D: 230/9V transformer with backup battery box
Water pressure	1.0 - 8.0 bar (if above, use a pressure limiter)
Sensor range	700 mm, +/- 50 mm, self-ajusting Adjustable with remote control

COMPONENTS

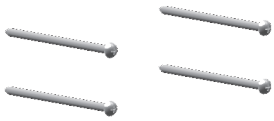
1 X RECESSED BOX
WITH SOLENOID VALVE



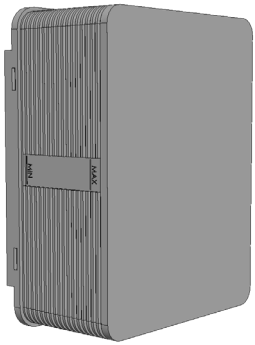
1 X FRONT PANEL
WITH ELECTRONICS



4 X SCREW



1 X PROTECTIVE
COVER





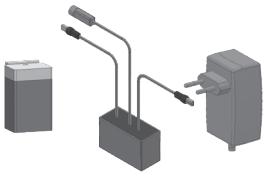
1 X 4 MM ALLEN KEY



1 X ALLEN KEY



DWS-40D:
9V BATTERY BOX



DWS-41D:
230V/9V TRANSFORMER
WITH BACKUP
BATTERY BOX

CHECKING THE PACKAGE CONTENTS

Remove all the parts from the package and check that they are all present, as listed in the COMPONENTS section.

If any part is missing, DO NOT attempt to install the electronic flush valve. Wait until the missing part has been received.

PREPARATION FOR INSTALLATION

Carefully flush the water supply before installing the flush valve.
Make sure that no dirt, Teflon tape or metal particles enter the valve.

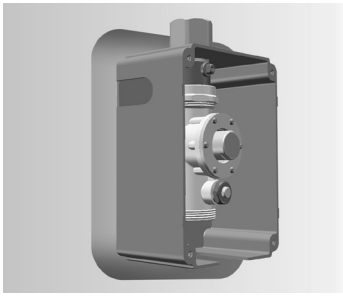
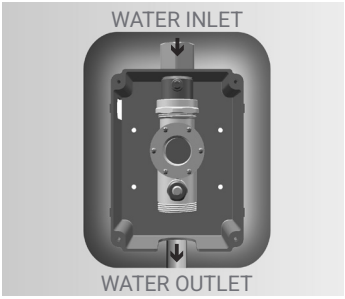
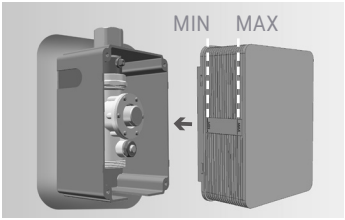
CAUTION

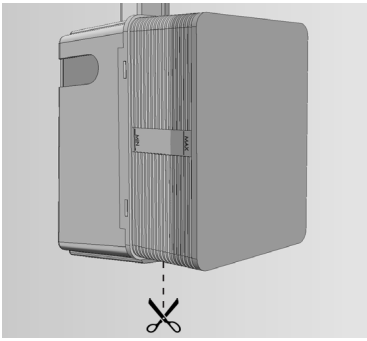
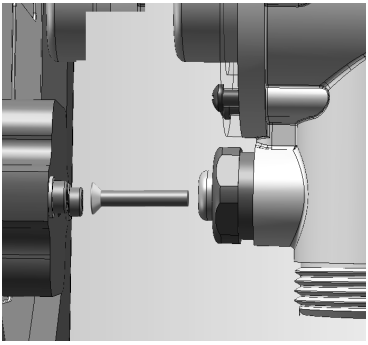
DO NOT install the system in front of a mirror or another electronic device operating with an infrared sensor.

To avoid interference caused by reflections, it is recommended to maintain a minimum distance of 1500 mm between the valve and any other object.

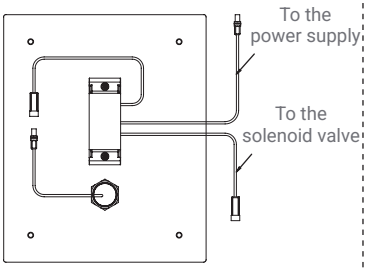
Installation must comply with applicable local standards and regulations.

STEP 1 – VALVE INSTALLATION AND WATER CONNECTION

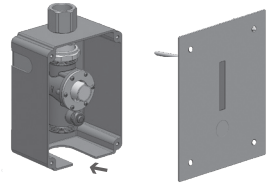
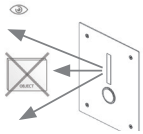
1	Shut off the water supply. Make sure that the water supply has been properly flushed before installation.	
2	Make a wall opening to fit the dimensions of the recessed box (W160 x D90 x H200 mm).	
3	Place the recessed box with the solenoid valve in the wall opening.	
4	Connect to the water supply.	
5	Connect the water outlet of the valve to the flush pipe.	
6	Open the water supply and check for leaks.	
7	Place the solenoid valve protective cover. **NOTE:** observe the MIN and MAX marks on the cover in relation of the finished wall.	

8	Once the electrical and plumbing work are complete, and the tile has been laid, cut the protective cover to the appropriate size. For the mains-powered version, insert the cable through the designated hole in the cover before cutting the protective cover. DO NOT plug in the transformer at this stage of the installation.	
9	Manual push button: Before fixing the front panel, install the adjusting screw to optimise the push button operation. If necessary, adjust the push button screw from the inside of the front panel to achieve the required distance.	

STEP 2 – ELECTRICAL CONNECTION

1	1. Connect the blue connector to the piezoelectric button. 2. Connect the sensor connector to the solenoid valve connector. 3. Connect the sensor to the power supply (battery box or transformer with backup battery box). DO NOT plug in the transformer at this stage of the installation.	

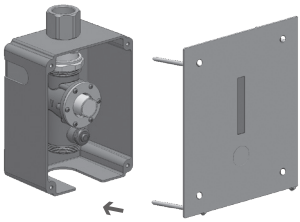
NOTE: Steps 2 to 5 must be completed in 30 seconds

2	Fix the front panel to the recessed box. Insert the screws but DO NOT tighten them at this stage of the installation.	
3	The sensor range will adjust automatically. Make sure that there is no object in front of the sensor.	
4	Remove the protective adhesive from the sensor and move out of the sensor's detection range.	
5	Insert the battery into the battery box (battery-operated version). Plug in the transformer (mains-operated version).	
6	Wait 30 seconds before moving into or placing your hand within the sensor's detection range. When the sensor LED continuously flashes, it indicates that self-adjustment is ongoing. The solenoid valve will then open and close for one second to indicate that the right detection range has been set and that the flush valve is ready for use.	

To activate the automatic flush valve, the user must remain within the sensor's detection range during at least 8 seconds.
The flush will activate a few seconds after the user leaves.

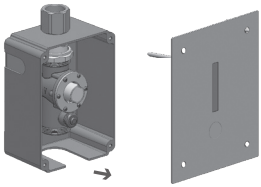
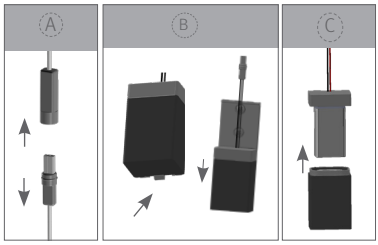
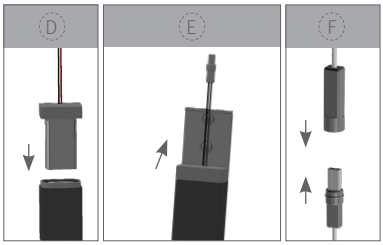
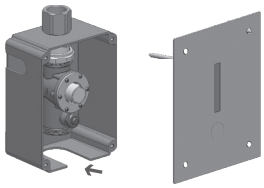
The flush flow can be adjusted by turning the shut-off valve.
To avoid activating the self-adjusment mode, do not disconnect the electronic unit from the battery box. To adjust the detection range, refer to the «Settings adjustment» section.

INSTALLATION

7	Tighten the 4 screws of the front panel on the recessed box.	

BATTERY REPLACEMENT

For the battery-operated version, DWS-40D, when the battery is low, the sensor LED indicator flashes regularly. The battery must be replaced within the following two weeks.

1	Unscrew and remove the front panel of the flush valve.	
2	A. Disconnect the waterproof connector between the battery box and the sensor. B. Remove the battery box from the bracket by pressing on the lower part. C. Remove the battery box cover.	
3	D. Replace the used battery with a new 9V battery (lithium battery recommended). E. Close the battery box and place it back on the bracket. F. Reconnect the waterproof connector.	
4	**WARNING:** Wait a few seconds before activating the flush to avoid activating the sensor's detection range adjusting mode.	



ADJUSTMENTS WITH THE RES-31 REMOTE CONTROL (OPTIONAL)

The optimal detection range is adjusted automatically.
If necessary, the detection settings can be adjusted as follows:

Shut off the water supply.

To adjust the detection settings using the remote control, hold the remote control approximately 5-10 cm in front of the sensor.

Select the function to be adjusted by pressing the corresponding function key once.

After pressing the key once, a blue LED indicator on the sensor flashes rapidly.

The setting can be adjusted by pressing the (+) or (–) keys. Each press increases or decreases the setting by one level.

Once the adjustment is complete, reopen the water supply.

SETTINGS ADJUSTMENT



DETECTION RANGE: the sensor's detection range represents the optimal distance at which a person or a hand must be placed to activate the system. Press the **RANGE** key. Wait until the LED indicator on the sensor flashes rapidly. Then press **(+)** to increase the detection range or **(–)** to decrease it.

NOTE: once the detection range has been adjusted with the remote control, the setting is saved, even in the event of a power failure.



ACTIVATION DELAY: this function allows to adjust the activation delay of the flush valve after the user leaves the detection range. An increased activation delay will make the user's experience more comfortable. Press the **OUT** key. Wait until the LED indicator on the sensor flashes rapidly. Then press **(+)** to increase the activation delay or **(–)** to decrease it.



TEMPORARY STOP: allows any activity in front of the sensor without activating it (e.g. during cleaning). Press this key to deactivate the flush valve for one minute. To cancel this function and return to normal operation, press the key again or wait one minute.



AUTOMATIC ADJUSTEMENT: check that there is no object in front of the sensor. Press the **ADJ** key. As soon as the LED indicator of the sensor flashes rapidly, remove your hand holding the remote control and move out of the detection range. The optimal detection range will then be set automatically. The solenoid valve will open for one second to indicate that the adjustment is complete and that the flush valve is ready for use.



SECURITY STOP: by default, if the sensor is covered more than 90 seconds, water flow stops automatically. To restore normal operation, remove any obstruction from the sensor. Press the **SEC** key. Wait until the LED indicator on the sensor flashes rapidly. Then press **(+)** to increase the secutiry time or **(–)** to decrease it.



RESET: this function restores the original settings, except for the sensor range. If necessary, press and hold the **RESET** key, then press the **(+)** key once.



COMFORT FLUSH: press this key and wait until the LED indicator on the sensor flashes. The pre-set flushing cycle is then activated. The comfort flush can be interrupted or deactivated by pressing the same key before the cycle ends.



24H HYGIENE FLUSH: press the clock key to activate this function, then wait until the LED indicator on the sensor flashes rapidly. Press the **(+)** key to activate the hygiene flush or **(–)** to deactivate it.

FILTER CLEANING INSTRUCTIONS

The flush valve is supplied with a stainless steel filter preventing foreign particles to enter the solenoid valve. It is recommended to clean the filter every six months. If the water flow decreases, this may be due to a clogged filter.
The filter can be cleaned as follows:

1. Close the shut-off valve. Disconnet the power supply.
2. Remove the front panel from the recessed box, disconnect the solenoid valve, and then remove the piston support by unscrewing the six screws.
3. Remove the piston, then clean the filter under running water.
4. Reassemble the parts.
5. Restore the water supply and reconnect the power supply.
6. Check for leaks before reinstalling the front panel back.

SOLENOID VALVE SERVICING

1. Close the shut-off valve. Disconnet the power supply.
2. Remove the front panel from the recessed box and disconnect the solenoid valve.
3. Unscrew the solenoid valve using a 25 mm open-ended spanner.
4. Remove the black diaphragm and clean under running water (small central hole).
5. Check that the black piston in the center of the solenoid valve is correctly positionned, with the spring underneath it in vertical position.
6. Reassemble the parts. Check that the filters are correctly positionned on the hoses.

The solenoid valve diaphragm requires periodical cleaning every six months.
DO NOT attempt to dismantle the solenoid valve if you are unfamiliar with electronic solenoid valves.

CARE AND CLEANING OF THE STAINLESS STEEL FRONT PANEL

DO NOT use steel wool or cleansing agents containing alcohol, acids, abrasives, or the like as they may damage the front panel.
For surface cleaning, use ONLY soap and water, then wipe and dry with a clean cloth.
When cleaning bathroom tiles, the valve should be protected from any splattering of harsh cleansers.

SPARE PARTS LIST

Stainless steel front panel kit	S07040271
Sensor kit	S07220427
Solenoid valve and piston kit	S07230015
Push button kit	S07225356
Battery box	S06530080
Transformer	S06522091
Backup battery box	S06530102
Options:	
Remote control	RES-31
IP68 transformer to supply up to 4 valves	RES-294M
Junction box to supply up to 10 valves	RES-295

LIMITED WARRANTY

This faucet is covered by a 3-year contractual warranty from the date of invoicing by SUPRATECH.

In the event of a manufacturing or operating defect attributable to the product and identified during this period under normal conditions of use, SUPRATECH will, at its discretion, repair or replace the parts found to be defective.

This warranty covers parts only. Unless otherwise agreed in writing in advance by SUPRATECH, it does not cover labour, removal, reinstallation, installation, travel expenses or any other incidental costs associated with servicing the product.

The warranty does not cover, in particular, malfunctions or damage resulting from:

- incorrect installation or installation not carried out in accordance with the instructions, including reversed hot and cold water supplies;
- pressure or temperature exceeding the specified limits;
- improper use, modification of the product or inadequate maintenance;
- foreign bodies, dirt, limescale or deposits in the water supply;
- water quality or composition incompatible with the product specifications;
- normal wear and tear and consumable items, including batteries;
- impact, deliberate damage or vandalism.

Failure to comply with the safety precautions, conditions of use, or installation and maintenance recommendations described in this guide may result in exclusion from warranty coverage where such failure is the cause of the malfunction or damage concerned.

For any warranty claim, please contact your installer, reseller or SUPRATECH and provide the information required to process your claim: a detailed description of the malfunction, product reference and serial number, proof of purchase and, if available, the installation date.

This contractual warranty is provided without prejudice to any applicable statutory rights and warranties.

TROUBLESHOOTING

PROBLEM	INDICATOR	CAUSE	SOLUTION
No running water	1.The sensor's LED flashes continuously when the user is within the detection range	Low battery.	Replace battery.
	2. The sensor's LED does not turn on when the user is in the detection range	1. The range is too short.	Increase range.
		2. The range is too long.	Decrease range.
		3. Battery is used up.	Replace battery.
		4. Sensor is picking up reflections from another reflective object.	Remove cause of reflection.
	3. The sensor's LED flashes once when the user is in the detection range	1. Connectors between the sensor and the solenoid valve are disconnected.	Reconnect the electronics to the solenoid valve.
		2. Dirt or cale in the solenoid valve.	Clean the solenoid valve: unscrew it, remove the piston and the spring, and clean it. When replacing the piston, ensure that the spring is in vertical position.
		3. The water supply pressure is higher than 8 bar.	Decrease water pressure or use a pressure limiter.
Water does not stop running	1. The sensor's LED flashes once when the user is in the detection range	1. Particles or dirt in the flush valve that obstruct the piston or the orifice. Piston does not close.	Clean the piston, the orifice and the internal body.
		2. Dirt or cale in the solenoid valve.	Clean the solenoid valve: unscrew it, remove the piston and the spring, and clean it. When replacing the piston, ensure that the spring is in vertical position.

CAUTION: When replacing the battery, DO NOT dispose of the used battery with household waste. Contact your local authority for information on waste disposal and to find the nearest collection point.



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