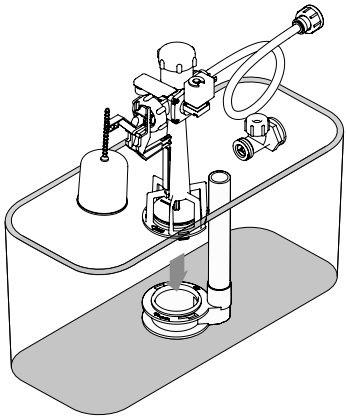
CISTERMISER

Easyflush

Installation guide



Please keep this booklet for future reference.

Installer, when you have read these instructions please ensure you leave them with the user.

Made in BRITAIN

WRAS APPROVED PRODUCT

iphe Industrial Associate

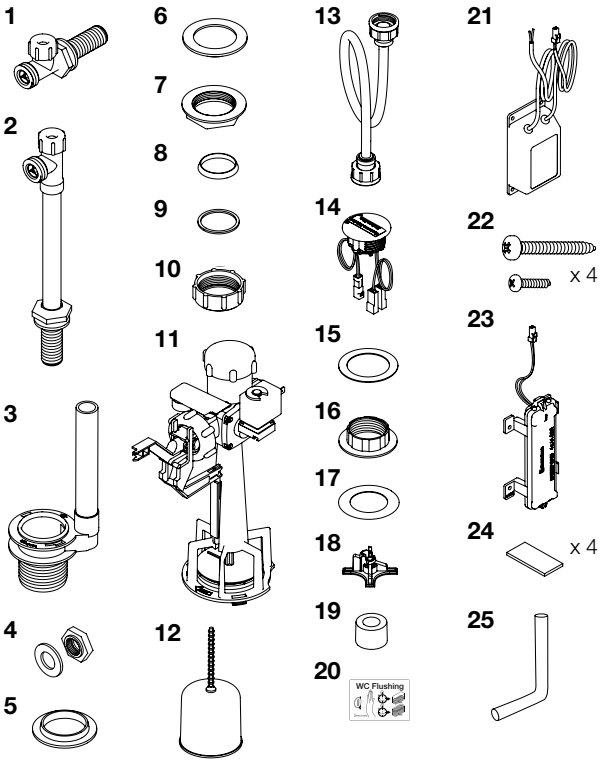
CE

EF2/17 C-05

1. Introduction

The Easyflush valve provides electronic flushing and filling of the WC.

Supplied parts



1. Side inlet
2. Bottom inlet
3. Outlet
4. Inlet washer and nut
5. Stem washer with boss
6. Stem washer
7. Stem nut
8. Cap seal
9. Cap washer
10. Cap nut
11. Valve unit
12. Float
13. Inlet hose
14. Sensor unit
15. Sensor gasket
16. Sensor nut
17. Hole adaptor
18. Clamp plate
19. Screw packer
20. Usage label
21. Mains adaptor*
22. Screws*
23. Battery case*
24. Sticky pad
25. Flush pipe**

* Where supplied

** When pre-assembled in a cistern

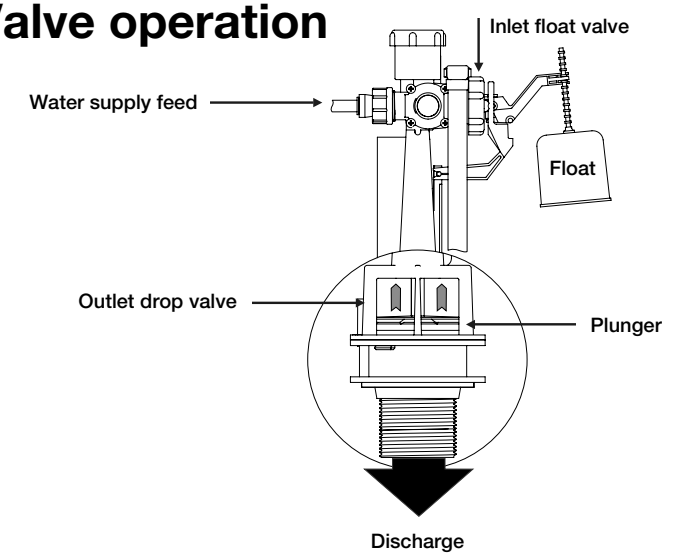
Optional extras

Infrared Configuration Unit (ICU)

Multi Product Power Supply Unit (PSUC)

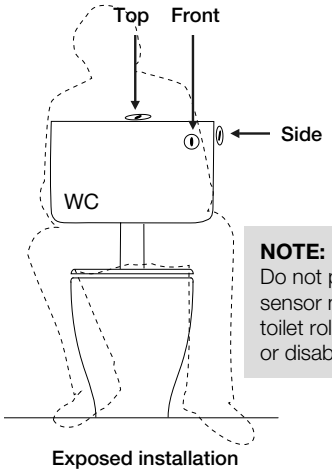
Side Front Adaptor (SFA)

2. Valve operation



3. Sensor positioning

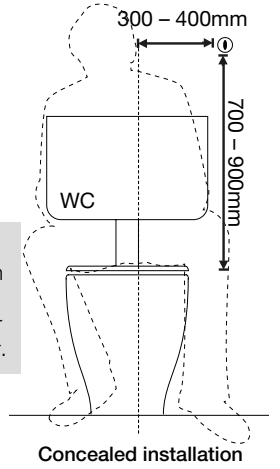
Cistern mounted sensor (WAVE only)



Exposed installation

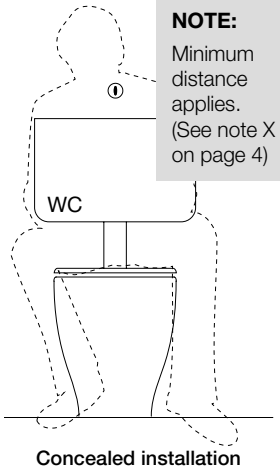
NOTE:
Do not position sensor near toilet roll holder or disabled bar.

Panel mounted sensor (WAVE only)



Concealed installation

Panel mounted sensor (WALKAWAY only)

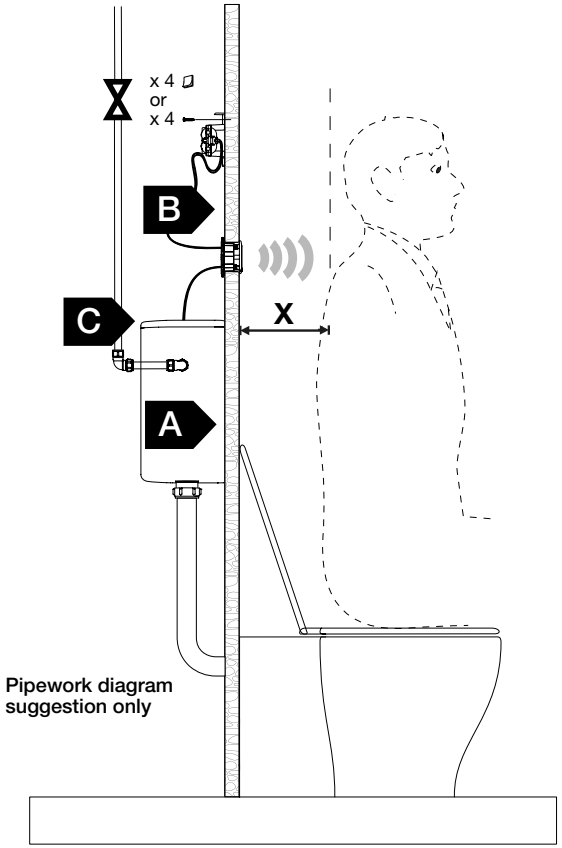


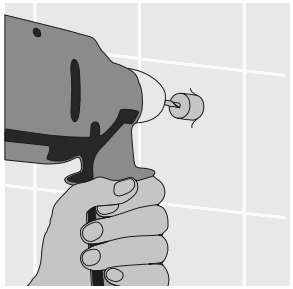
NOTE:
Minimum distance applies. (See note X on page 4)

Concealed installation

NOTE:
Reflective surfaces and materials such as hi-vis jackets may cause the sensor to activate unexpectedly.

4. Installation schematic





Drill hole to the required diameter.
See **B** for guidance

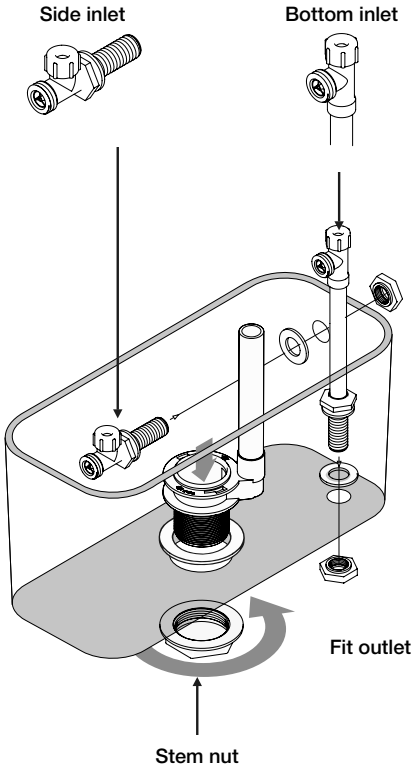
X – Walkaway version only.

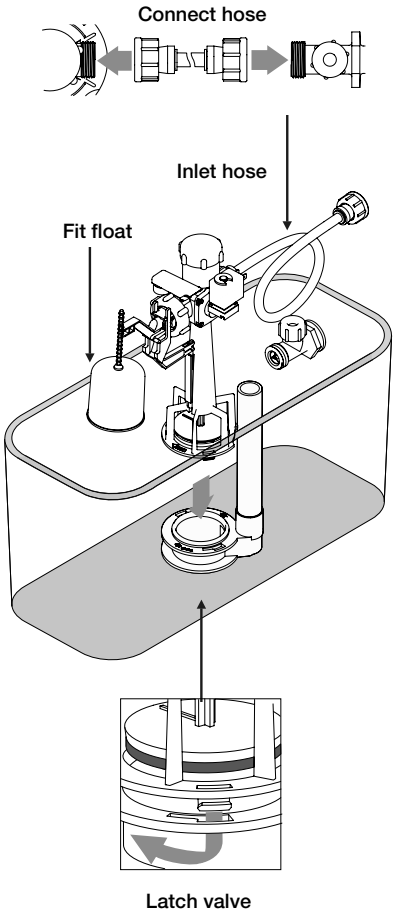
If this distance is less than 12cm it is recommended that the Hand Activation is disabled. Refer to section 10.

NOTE:

For chemical water treatment.
If the water system has been treated with chemical dosing, ensure the system is thoroughly flushed before fitting any Cistermiser products. Concentrated chemicals in dead legs can damage the product and result in failure. If the water is treated with Chlorine Dioxide (ClO2), ensure concentration levels are maintained below 5ppm.

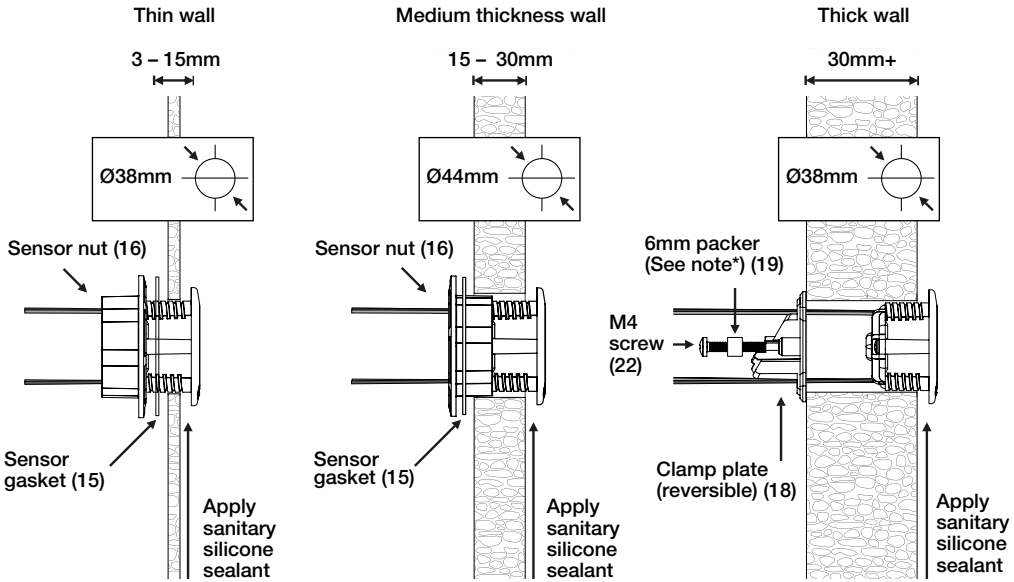
A Valve installation





NOTE:
For extra narrow cisterns fit outlet & valve pre-fitted together.

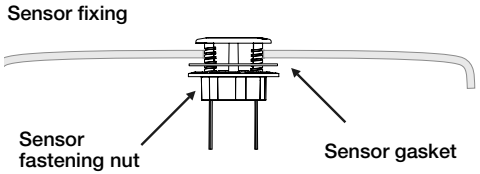
B Panel mounted sensor

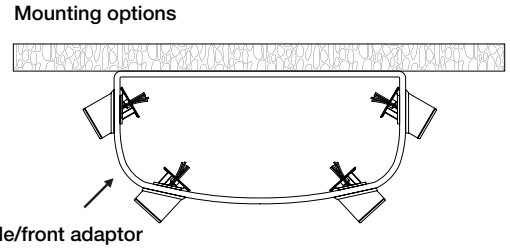


NOTE:

*If wall thickness is under 35mm use packer to prevent screw causing damage to sensor

C Cistern mounted sensor – wave version only





NOTE:

Use hole adaptor for holes between 40 and 50mm. A hole diameter larger than 50mm is a non standard installation.

NOTE:

Side/front adaptor required.

Not supplied with standard product but available as an extra. Contact Cistermiser for further details or order online at **www.cistermiser.co.uk**

5. Power connections

NOTE:

Only one power source should be connected at any time, either mains or batteries. It is not possible to connect both simultaneously.

If using the battery case, open it and fit 4 Alkaline AA (LR-6) batteries as indicated. Reseal and fasten into place on panel using screws (22) or with the sticky pads (24). If used in an exposed installation the battery case can be hung inside the cistern by hooking it over the edge.

If using the mains adaptor, fasten into place on panel in a dry location using screws (22) or with the sticky pads (24) and connect the un-terminated mains cable to a 50Hz 230V AC single phase supply via a 1A fused spur (not supplied).

As shown below, connect the spade connectors from the sensor unit to the solenoid prongs taking care to connect the wires according to the colour coding on the label. If these are not long enough they can be extended up to 1 metre.

Connect the power connector from the sensor to the mains adaptor, or in the case of a battery powered installation, the battery case.

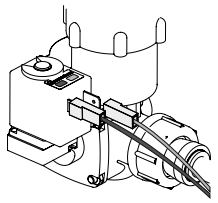
NOTE: Remove the lens protection label from the sensor BEFORE connecting to the power. When the power is first connected the LED in the sensor flashes amber. This is normal and lasts only a few seconds.

Colour conventions are brown for positive and grey for negative.

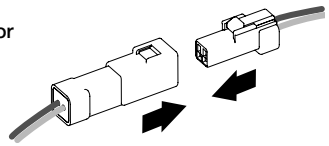
Electrical connection

Connections

Sensor valve unit

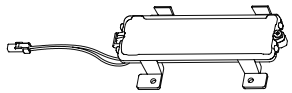


Power connector

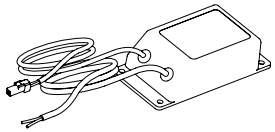


Power options

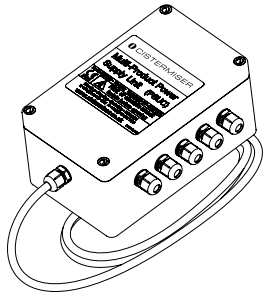
Battery case
requires 4 x AA alkaline batteries



Mains adaptor
requires 1A fused spur



Multi product power supply unit ((Not supplied, contact Cistermiser for further details). Suitable for powering up to 20 units



6. Testing and commissioning

Restore the water supply and check all joints and connections for leaks. The cistern will begin filling until the float rises sufficiently to close the water inlet valve.

Check the water level to ensure the cistern fills to the required full flush volume – typically six litres is sufficient – adjust the position of the float if necessary to allow more or less water in for a full flush.

Testing operation

NOTE:
During installation it is not uncommon for an unexpected flush to occur as a result of a sensor being unintentionally activated during the refill time delay. To check that operation is correct it is important to take the refill time into account.

Wave version: Test the installation by placing a hand within 10cm of the sensor for 1 second. The Easyflush should enter a part flush, lasting 2 seconds (configurable, see section 9 Advanced setting guide). Place a hand within 10cm of the sensor for more than 2 seconds to activate a full flush, lasting 8 seconds. After operating, the Easyflush will not flush again until the cistern is full, but the Easyflush does 'remember' attempts to flush. This is called a memory flush.

walkaway version: Same as above to operate wave or sit on WC for 6 seconds to activate a part flush, lasting 2 seconds and for more than 45 seconds to activate a full flush, lasting 8 seconds.

Explanation of the memory flush (rapid green flashing)

If a second flush is requested whilst the cistern is refilling, the Easyflush will not flush immediately but will 'remember' the request. The sensor will show a rapid green flashing during this time. After the refill duration (see below) the Easyflush will flush, completing either a part or full flush as requested.

Refill duration setting

It may be necessary for it to be increased or decreased depending on the supply water pressure. The refill duration should be matched to the time it takes the cistern to complete its refill. Follow the Advanced Configuration instructions in section 9.

Removal of trapped air from the system

When installing the Easyflush for the first time air may be trapped in the valve and supply line. This will cause the valve to fluctuate repeatedly between the open and closed positions. To expel air from the system activate the valve by placing a hand in front of the sensor whilst the valve is in this repeating cycle. It may be necessary to do this several times before the action ceases and the valve operates normally.

Additional configuration

Additional configuration is possible with an Infrared Configuration Unit (ICU) remote control. (Not supplied; contact Cistermiser). See section 10 for further details.

NOTE:
For grey water/rain water harvesting. Ensure adequate filtering is fitted, a 10µm filter is recommended.

NOTE:
For chemical water treatment.
If the water system has been treated with chemical dosing, ensure the system is thoroughly flushed before fitting any Cistermiser products. Concentrated chemicals in dead legs can damage the product and result in failure. If the water is treated with Chlorine Dioxide (ClO2), ensure concentration levels are maintained below 5ppm.

7. Usage advice and specification

Minimum working pressure:	0.5 bar dynamic
Maximum working pressure:	6 bar static
Back siphonage protection:	Class 4 type double check valve – integral in inlet.

NOTE:
The Easyflush is a flush and fill type valve. It uses the incoming water pressure to lift the flush mechanism. At pressures below 0.5 bar dynamic, the valve will not perform as intended.

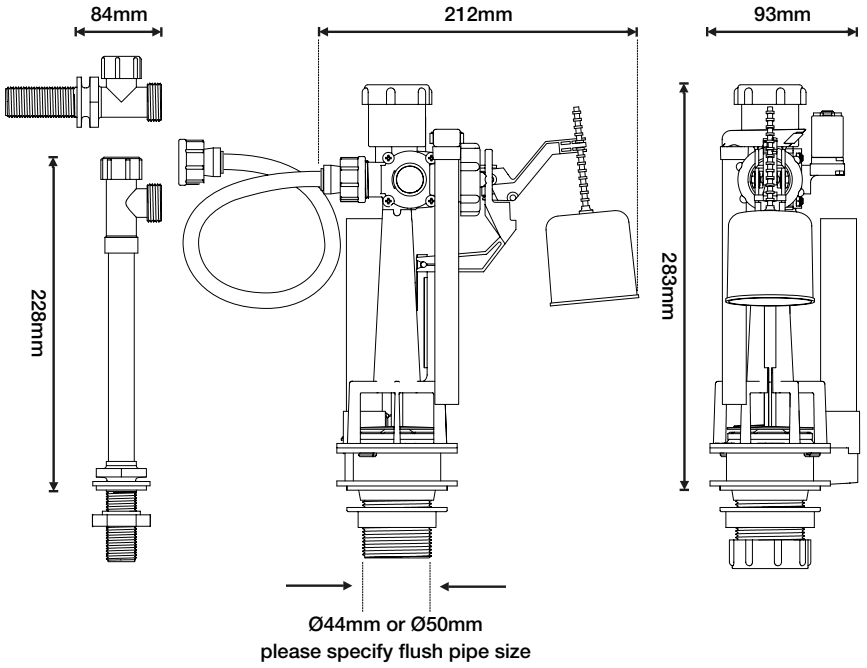
Factory settings

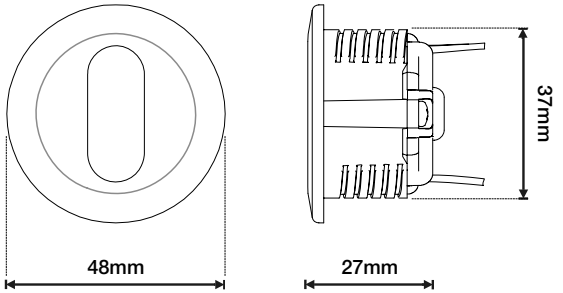
Range (EF Wave):	~18cm.
Range (EF Walkaway):	~65cm (~9cm for hand activation).
Refill duration after part flush:	40 seconds.
Refill duration after full flush:	65 seconds.
Part flush duration:	2 seconds.
Full flush duration:	6 seconds.
Power requirements:	Either 6V from 4 x alkaline AA (LR6) batteries or 6V DC regulated from mains adaptor (1A fused spur required).
Normal battery life:	2 years under typical usage conditions. A single red flashing of the LED indicates that the batteries are low and need to be replaced.
Cleaning:	Clean with soap and water only.
Lens care:	Infrared lens can be polished with a soft cloth.

Electronic specification

Control classification:	Independent.
Maximum load:	7.5W 1.25A (6VDC) EMC emissions tested at load.
Rated temperature range:	0-40 C.
Action classification:	Type 1.Y.
Pollution classification:	Degree 1.
Ingress protection:	IP65.

8. Component dimensions



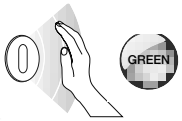


9. Advanced settings guide

Easyflush Walkaway Carry out only if settings need to be changed

1. Disconnect power, wait for 5 seconds and reconnect.

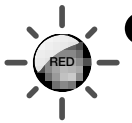
2. When **flashing amber.** 

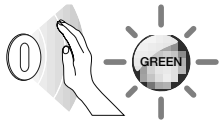
Place hand 4-6cm from sensor until **constant green**, then remove hand. 

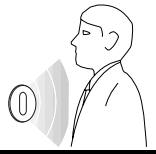
3. You are now in configuration mode

If a hand is not placed over the sensor, it will go into normal operation mode.

Sensing range of adjustment

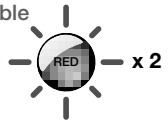
A Wait for **single red flashing** LED to enter sensing range mode. 

B Briefly place your hand in front of the sensor until the **green LED flashes slowly**. Range configuration mode will then be ready. 

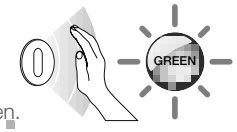
C Stand at the distance from the sensor you would like to set at maximum range. Wait 8 seconds until **constant green** LED shows. 

Sensor distance is now set.

Refill duration adjustment

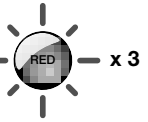
A Wait for **double red flashing** LED to enter refill time. 

x 2

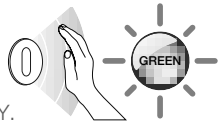
B During **double red flashing**, briefly place your hand in front of the sensor. The valve will flush and the cistern will refill. A **green flashing** LED will be seen. 

C Once the cistern has refilled completely and the water has ceased to flow, move your hand back into the line of sight of the sensor. The refill time has now been set.

Part flush duration adjustment

A Wait for **triple red flashing** LED to enter part flush time mode. 

x 3

B During the **triple red flashing** briefly place your hand in front of the sensor. The valve will start to flush and a **green flashing** LED will be seen. HOLD HAND STEADY. 

C When the valve has flushed for the desired part flush time, move your hand out of the line of sight of the sensor. The water will cease to flow and the part flush time will be set.

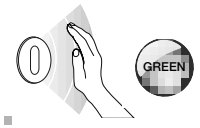
4. After configuration the unit will **flash amber**, giving opportunity to re-enter configuration mode. 

Easyflush Wave Carry out only if settings need to be changed

1. Disconnect power, wait for 5 seconds and reconnect.

2. When **flashing amber.**

Place hand 4-6cm from sensor until **constant green**, then remove hand.

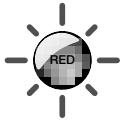


3. ## You are now in configuration mode

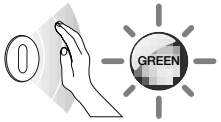
If a hand is not placed over the sensor, it will go into normal operation mode.

Sensing range of adjustment

A Wait for **single red flashing** LED to enter sensing range mode.



B Briefly place your hand in front of the sensor until the **green LED flashes slowly**. Range configuration mode will then be ready.

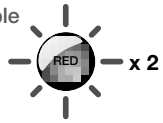


C Move your hand to the distance from the sensor you would like to set as maximum range. Wait 8 seconds until **constant green** LED shows.

Sensor distance is now set.

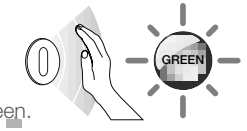
Refill duration adjustment

A Wait for **double red flashing** LED to enter refill time.



x 2

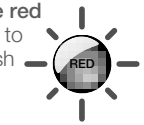
B During **double red flashing** briefly place your hand in front of the sensor. The valve will flush and the cistern will refill. A **green flashing** LED will be seen.



C Once the cistern has refilled completely and the water has ceased to flow, move your hand back into the line of sight of the sensor. The refill time has now been set.

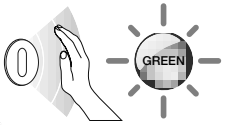
Part flush duration adjustment

A Wait for **triple red flashing** LED to enter part flush time mode.



x 3

B During the **triple red flashing** briefly place your hand in front of the sensor. The valve will start to flush and a **green flashing** LED will be seen. HOLD HAND STEADY.



C When the valve has flushed for the desired part flush time, move your hand out of the line of sight of the sensor. The water will cease to flow and the part flush time will be set.

4. After configuration the unit will **flash amber** giving opportunity to re-enter configuration mode.

10. Infrared Configuration Unit (ICU) guide

NOTE: Not supplied but available from Cistermiser or any major plumbing merchant.

Button descriptions

- C — Activates cleaning mode
- Activates ICU configuration mode
- Decreases setting
- Increases setting
- OK — Checks the setting being altered
- SAVE — Saves changes and exits ICU configuration mode
- QUIT — Quits ICU configuration mode without saving changes
- **1** Configures sensor range
- **2** Configures part flush time
- **3** Configures cistern refill time
- **4** Toggles Wave function ON/OFF (Walkaway ONLY)
- **5** 12-hour hygiene cycle activation
- **6** Dual flush activation
- **7** Autorange setting of sensor range
- **8** Siphonic trap refill activation
- **9** R — Resets to default factory settings

Entering configuration mode

Point the ICU towards the Easyflush sensor and push the configuration button. Activation is most effective when the configuration button is held down as the ICU is brought close to the sensor.

It can take up to 3 seconds for the product to sense the ICU. The Easyflush will return to normal operation if there are no button presses for 30 seconds.

Configuring sensor range

Point the ICU at the Easyflush sensor and press the **1** sensor range button (the sensor blinks green).

Decrease or increase the sensor range by pressing the − and + buttons respectively.

The sensor blinks red when the min or max value is reached.

Press the OK button to check the sensor range setting - the sensor displays the current setting by flashing green; see table.

For Wave version					
Number of flashes	1	2	3	4	5
Range (cm approx)	6	9	11	15	17

For Walkaway version					
Number of flashes	1	2	3	4	5
Range (cm approx)	45	50	53	56	58

Save setting and exit ICU configuration mode by pressing SAVE the button.

Exit without saving by pressing the QUIT button.

Configuring part flush time

Point the ICU at the Easyflush sensor and press the **2** flush time button (the sensor blinks green).

Decrease or increase the part flush time by pressing the − and + buttons respectively. The sensor blinks red when the min or max value is reached.

Press the OK button to check the part flush time setting - the sensor displays the current setting by flashing green; see table.

Number of flashes	1	2	3	4	5
Part flush time (sec)	1	2	3	4	5

Save setting and exit ICU configuration mode by pressing the SAVE button.

Exit without saving by pressing the QUIT button.

NOTE:

The full flush volume is set by setting the float height in the cistern.

Configuring refill time

Point the ICU at the Easyflush sensor and press the **3** refill time button (the sensor blinks green).

Decrease or increase the refill time by pressing the − and + buttons respectively. The sensor blinks red when the min or max value is reached.

Press the OK button to check the refill time setting - the sensor displays the current setting by flashing green; see table.

Number of flashes	1	2	3	4	5	6	7
Refill time (sec)	0	20	40	60	80	100	120

Save setting and exit ICU configuration mode by pressing the SAVE button.

Exit without saving by pressing the QUIT button.

Activating and de-activating the hand wave flushing (walkaway version only)

Point the ICU at the Easyflush sensor and press the **4** (the sensor blinks green). By default the hand wave function is on.

Pressing the − and + button switches the hand wave function on or off respectively.

Press the OK button to check the setting - the sensor flashes green once if function is off or twice if it is on.

Save setting and exit ICU configuration mode by pressing the SAVE button.

Exit without saving by pressing the QUIT button.

Activating the 12-hour hygiene flush cycle

Point the ICU at the Easyflush sensor and press the hygiene cycle button (the sensor blinks green).

Pressing the − and + buttons switches the hygiene flush function on or off respectively.

Press the OK button to check the setting - the sensor flashes green once if function is off or twice if it is on.

Save setting and exit ICU configuration mode by pressing the SAVE button.

Exit without saving by pressing the QUIT button.

Activating the dual flush function

Point the ICU at the Easyflush sensor and press the **6** (the sensor blinks green).

Pressing the − and + buttons switches the dual flush function on or off respectively. Press the OK button to check the setting - the sensor flashes green once if function is off or twice if it is on.

Save setting and exit ICU configuration mode by pressing the SAVE button.

Exit without saving by pressing the QUIT button.

Configuring sensor range using the autorange function

If the cubicle door is opposite the sensor, ensure that the cubicle door is closed or ajar, but not fully open.

Point the ICU at the Easyflush sensor and press the **7** button.

Immediately stand clear of the sensor. Sensor blinks green for 5 seconds, then a steady green when setting complete. The sensor measures the background reflections and sets the sensor range to an appropriate setting.

Save setting and exit ICU configuration mode by pressing the SAVE button.

Exit without saving by pressing the QUIT button.

11. Frequently asked questions

Indicators for normal sensor function after user activation

Wave:

- Single green flash once a second (if part flush)
- Double green flash once a second (if full flush)
- Constant rapid green flash (if re-flush has been requested)

Walkaway:

- 3 seconds between green flashes (if a presence is detected)
- Single green flash once a second (if part flush)
- Double green flash once a second (if full flush)
- Constant rapid green flash (if re-flush has been requested)

No water is entering the cistern

No obvious indicator	Ensure that the water supply is reaching the valve. Minimum working pressure 0.5 bar dynamic, maximum 6.0 bar static. Air in inlet hose (normally found with low pressure). Ensure loop is facing downwards. Blockage. Ensure the filters on the inlet and outlet side of the valve are clear.
The sensor is covered	Anti vandal mode has been triggered. The object/debris needs to be removed from the sensor and the valve will resume normal functionality.

The valve is not working at all

The sensor light does not flash when a hand is placed in front of it.	Ensure the power supply is connected. If mains power is being used through the mains adaptor check that the mains adaptor is working by reverting to the battery pack. Remove the mains adaptor when using batteries.
Sensor is flashing red slowly or not at all when hand is placed in front of it.	Low or no battery power; change batteries. If operated by mains power, check wiring then contact Cistermiser.
No obvious indicator	Ensure there is a good water supply and pressure of 0.5 to 6 bar.

11. Frequently asked questions

Continuous flow into the pan from the cistern

No obvious indicator	Check the seal of the flush valve and clean away any debris or scale. Water flowing through the overflow; ensure that the water entering the cistern is being shut off by adjusting the float accordingly. If the float is set too high, water will continuously flow into the cistern and out of the overflow.
Sensor is flashing red slowly or not at all when hand is placed in front of it.	Low or no battery power; change batteries. If operated by mains power, check wiring then contact Cistermiser.

WC flushes when in use

Working as normal otherwise	Ensure that the sensor is mounted in the correct position. Refer to installation schematic (section 3). Ensure the sensor range is correctly configured. Refer to the advanced setting guide (section 9).

Other issues

Shuddering noise	Air in the system. Flush the valve repeatedly to purge the system.
Double red flash	Faulty wiring. Check wiring carefully. Faulty solenoid. Call Cistermiser for advice.
Red flash once every second	Low or no battery power. Change batteries. If operated by mains power, check wiring then contact Cistermiser.
Red flash twice every 3 seconds	Sensor covered or heavily scratched. Uncover or polish out scratches.

Cistermiser product warranty and extended warranty

Cistermiser products are guaranteed for 12 months from the date of manufacture. The guarantee is for faulty products and parts only: there is no labour warranty. If you believe your product is faulty, please either contact Cistermiser directly on **0118 969 1611** or at **support@cistermiser.co.uk**, with a photograph and the serial number, to help diagnose the cause of the problem.

The warranty on Cistermiser products can be extended within one year of date of manufacture, at no cost, to three years from the date of installation (see details on page 17). Please make a note of the serial number and take a photograph of the installation before you leave site.

Commissioning check-list

Easyflush

3 YEAR extended warranty

The warranty on Cistermiser products can be extended within one year of date of manufacture, at no cost, to three years from the date of installation. Once the valve has been installed, complete the product commissioning checklist below to demonstrate compliance with the installation instructions. Email a photograph of this completed form to **warranty@cistermiser.co.uk** or post to **Cistermiser, Unit 1, Woodley Park Estate, 59-69 Reading Road, Woodley, Berks, RG5 3AN.**

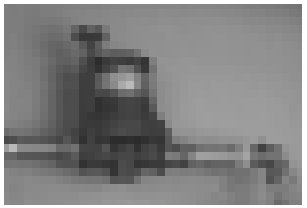
Product serial number .....

Installation address .....

No	Activity	Checked	Date
1.	Flush pipework prior to installation.		
2.	Check all connections for leaks, bleed air from valve.		
3.	Ensure water supply working/dynamic pressure is between 0.5 – 6 bar.		
4.	Check sensor is mounted in correct position (see installation instructions).		
5.	Check cistern water level by adjusting float. Ensure correct full flush amount by adjusting float.		
6.	Ensure label is removed from sensor before connecting power.		
7.	Check electrical connections: sensor to solenoid, orange to orange, blue to blue.		
8.	Ensure either mains or battery power or multi product power supply is connected.		
9.	Check sensor range, refill time, part flush time adjustment (see advanced setting guide).		
10.	Test operation.		
a	Wave: Place hand within 10cm of sensor for 1 second = valve will part flush and sensor will flash once per second. Place hand within 10cm of sensor for two seconds = valve will full flush and sensor will flash twice per second.		
b	Walkaway: If presence is detected, sensor flashes green once every three seconds. When sensor detects a presence for less than 45 seconds, valve will part flush. Where sensor detects a presence for over 45 seconds valve will full flush.		
11.	Ensure the cistern is refilled within the factory set refill time of 80 seconds to ensure correct memory flush operation.		

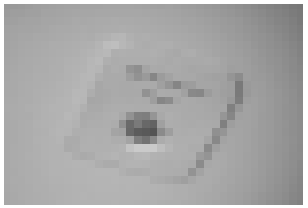
Cistermiser range

Urinal flushing



Hydraulic Valve

An automatic urinal flush control valve which reduces water consumption. The valve uses a simple patented mechanism which prevents water waste by ensuring that the auto-flush cistern is only filled, and can only flush, when the washroom is used.



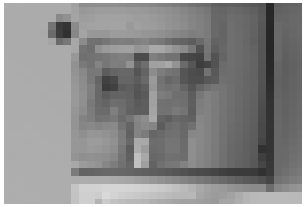
Infrared Control (IRC) Valve

This valve automatically manages the water supply to the urinal cistern and reduces water consumption by up to 80%. The PIR sensor detects movement and activates the solenoid valve, allowing water into a urinal cistern.

Direct Flush Valve

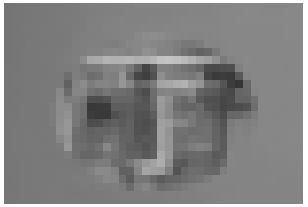
An infrared sensor controlled urinal valve. It automatically flushes individual urinals after use, ensuring the highest level of hygiene from the minimum volume of water.

WC flushing



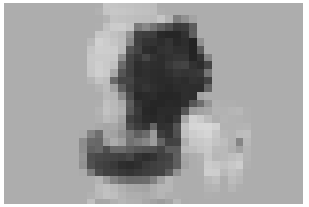
Easyflush Wave

An infrared, hands-free and water-conserving WC cistern flush valve suitable for concealed or exposed cisterns. Easy to install in retrofits or new installations, its no-touch dual flush WC cistern valve promotes water economy and hygiene in domestic and commercial washrooms.



Easyflush Walkaway

An infrared controlled automatic WC cistern flush valve that is suitable for concealed cisterns. The valve flushes once the user exits the cubicle. Ideal for use in environments where hygiene and water economy are concerns.

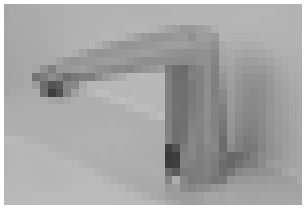


Easyflush Direct

An infrared electronic flushing system that removes the need for a WC cistern by taking its water feed straight from the mains supply. Ideal for high traffic areas as the system allows for a second flush without a delay.

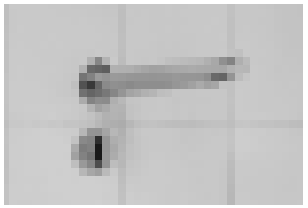
CISTERMISER

Taps & spouts



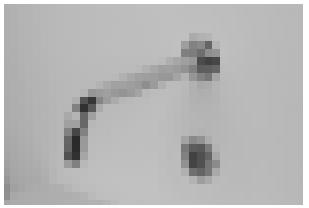
Novatap/Vectatap

A range of infrared taps which promote hygiene and reduces maintenance costs. They are contemporary deck-mounted chrome basin spouts with infrared sensor, control unit and an internal (Novatap) or external (Vectatap) valve, making them extremely simple to install.



Vectaspout

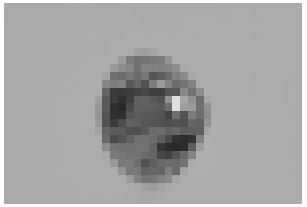
A polished stainless steel panel-mounted basin spout. The infrared control reduces water and energy usage and stops dripping or the risk that the tap may be left running. It is completely hands-free and reduces cross contamination.



Novaspout

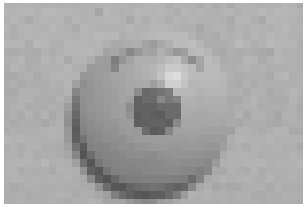
Helps improve water and energy efficiency with its automatic shut-off, eliminating the risk of dripping or taps left running. It is an elegant panel-mounted polished stainless steel basin spout supplied with an infrared sensor control unit and valve.

Washroom control systems



Anti-vandal range

Our specialist vandal-resistant range of touch-activated washroom controls; for use in high risk or demanding public environments, such as prisons, secure hospitals, schools and sports facilities.



Sensazone

An innovative system to conserve water and energy. Occupancy is monitored by sensors; when someone enters the washroom all services controlled by Sensazone are activated – the hot and cold water, lighting and extractor fans.

Davidson Holdings' brands

Salamander is one of the UK's leading manufacturers of pumps for boosting water pressure for showers, bathrooms and whole house supply in domestic and small commercial tank-fed systems.

www.salamanderpumps.co.uk

Talon is the UK market leader in the manufacture and supply of plastic pipe clips, pipe collars and fixing plugs, plus a range of cover profiles for concealing pipework.

www.talon.co.uk

Keraflo manufacture delayed action float valves, which provide an accurate and effective method of controlling the level of stored cold water in tanks both with and without raised float valve chambers. The range is used in domestic, commercial and industrial applications worldwide.

www.keraflo.co.uk

Combimate is a domestic limescale prevention device that prevents limescale build-up and soft water corrosion in combination boilers and other domestic hot water appliances.

www.combimate.co.uk

Homeboost is an intelligent pump from Salamander Pumps that recognises when water flow is less than 12 ltrs/min and automatically boosts the performance of the incoming mains water up to 12 ltrs/min.

www.home-boost.co.uk

Fuelstop TFV is an overheat protection device that shuts off supply to fuel burning appliances. The FuelStop TFV complies with British safety standards and, unlike other fire valves, it is filled with liquid not gas, reducing nuisance trips.

www.fuelstop.co.uk

Pendock manufacture solutions to the challenges of enclosing structures and perimeter casings for building interiors. The range includes pipe boxing, column and HVAC casings, radiator covers and washroom cubicles.

www.pendock.co.uk

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