

OneFlow[®] OFTWH-R, OFTWH

Innovative Scale Control

Installation manual

UK Installation and Operation Manual



OFTWH

OFTWH-R

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WARNING!

It is recommended that all personnel responsible for operation and maintenance of this product read all installation instructions and product safety information thoroughly before beginning the installation of this product to ensure the best possible installation. Failure to read and follow all safety and use information can result in serious personal injury, property damage, or damage to the equipment. This manual contains important operation, maintenance and precautionary information. Please retain this manual for future reference for parts, maintenance or troubleshooting and present this manual to user/operator/owner after installation.



WARNING!

The OneFlow® system is built with the finest and most advanced materials and each system is quality inspected and pressure tested prior to shipment. With proper installation and routine maintenance, you will have years of trouble-free operation.

Please refer to this manual when performing routine cartridge changes. The instructions make periodic maintenance quick and easy and ensure you will receive maximum benefit from your system.

1. Introduction

The OneFlow® Innovative Scale Control System provides protection from hard scale formation on internal plumbing surfaces. The OneFlow® system is a single cartridge-based system that must be installed on a cold water line prior to a single water heating device (water heater or tankless water heater) that requires protection from the ill effects of hard water.

OneFlow® uses template assisted crystallization (T.A.C.) to attract hardness minerals and convert them into harmless, inactive microscopic crystal particles. These crystals stay suspended in the water and are passed to drain. The system requires very little maintenance, no backwashing, no salt and no electricity. Typical hardness problems, especially build-up of scale in heating elements, pipes, water heaters, boilers are no longer a concern. OneFlow® is not a water softener. It does not need additional chemicals. It is a hard scale prevention device with proven third party laboratory test data and years of successful commercial, residential and foodservice applications. OneFlow® is the intelligent scale solution and is a great alternative to water softening or scale sequestering devices.

OFTWH-R - OFTWH

- OneFlow® converts hardness minerals to harmless, inactive microscopic crystals making OneFlow® an effective alternative to water softeners
- Virtually maintenance free - No salt bags or other chemicals required
- No energy consumption (different compared to other scale control technologies)
- Contributes to reduce water and electric consumption, no control valve needed
- Innovative technology with an enhanced respect of the environment, salt free, without additional chemicals
- Improves efficiency of all water heating devices and downstream plumbing components
- Simple sizing & installation – standard 3/4" connections
- Perfect solution for homes where equipment protection is desired for longer equipment life and reduced energy consumption
- OneFlow® cartridge-based systems are easily maintained; change the TAC cartridge once every two years
- Mounting bracket and wrench for cartridge change-outs included

* Exceeding maximum flow can reduce effectiveness and void warranty. Pressure drop at peak flow rate is less than 1 bar at 27°C feed water.

** This system is delivered with 3/4" fittings.

*** See more information on our website: www.watts-oneflow.com



2. System Specifications

Inlet/outlet connections: 3/4" BSP threaded fittings

Peak flow rate OFTWH-R up to 23l/min

Peak flow rate OFTWH up to 38l/min

Flow capacity (continuous flow rate):

OFTWH-R up to 15,2Lit/min, 24/7/365 for 2 years for the OFTWH-R-RM cartridge

OFTWH up to 22,7Lit/min, 24/7/365 for 2 years for the OFTWH-RM cartridge

Maximum pressure: 90psi / 6.2 bar

Maximum temperature: 38°C

Minimum temperature: 5°C

Weight: OFTWH = 6,2Kg | OFTWH-R = 5,7Kg

Capacity: OFTWH-R-RM and OFTWH-RM cartridges do not have a grain removal capacity, however, other elements present in the water will gradually degrade the effectiveness of the cartridge. Change the OFTWH-R-RM and OFTWH-RM cartridges at least once every two years.

A OneFlow® Innovative Scale Control system shall be installed on the cold water service line to condition the tap water just prior to the service line feeding the equipment it is designed to protect. The system will be sized for maximum or peak flow rate based on the specification of said equipment. A OneFlow® system may also be installed to protect multiple pieces of equipment from the ill-effects of hard water scale provided the aggregate peak flow rate for each piece of equipment it is protecting has been considered. The system shall be plumbed with a bypass valve to allow isolation of filter housing to allow the bypass of untreated water in the event that service or cartridge replacement be necessary. Bypass is recommended but not required. The installation area should be suitable in size for the housing to be serviced without encumbrance. The OneFlow® system does not require additional water to backwash, flush, or regenerate once put into service. The system shall not require any chemical additives and shall not require electricity for operation.

2.1 Feed Water Chemistry Requirements

pH	6.5-8.5
Hardness (maximum)	28.8°dH, 51.3°F (513 mg/L CaCO ₃)*
Water Pressure	1.03 - 6.2 bar
Temperature	5 - 38°C
Free Chlorine	<2 mg/l
Iron (maximum)	0.3 mg/l**
Manganese (maximum)	0.05 mg/l**
Copper	1.3 mg/l
Oil & H ₂ S	Must be Removed
Total Phosphates	< 3.0 mg/l
Silica (maximum)	20 mg/l†
TDS	1500 mg/l††

All these water chemistry requirements are corresponding to the average parameters of the water delivered usually, please contact your water supplier or local authorities in order to confirm the compliance.

Notice

* Systems using OneFlow® technology are effective at controlling limescale formation inside the plumbing system at influent hardness levels up to 513mg per liter (28.8°D, 51.3°F) of calcium carbonate. Due to variances in water chemistry, 513mg per liter is a recommended hardness maximum due to potential aesthetic issues related to soft scale residue formation outside the plumbing system. Testing should be performed to determine proper application where hardness levels exceed 513mg per liter.

** Just as with conventional water softening media, OneFlow® media needs to be protected from excess levels of certain metals that can easily coat the active surface, reducing its effectiveness over time. Public water supplies rarely, if ever, present a problem, but if the water supply is from a private well, confirm that the levels of iron (Fe) and manganese (Mn) are less than 0.3 mg/l and 0.05 mg/l, respectively.

Notice

† OneFlow® media does not reduce silica scaling. While silica tends to have a less significant effect on scale formation than other minerals, it can act as a binder that makes water spots and scale residue outside the plumbing system difficult to remove. This 20 mg/l limitation is for aesthetic purposes.

†† All other water contaminants must meet the requirements of the local water control agency of each specific country where OneFlow® is sold and installed. Specific Mineral and Metal Maximum Contaminants Level's, identified in the above Feed Water Chemistry Requirements list, supersedes those requirements. Water known to have heavy loads of dirt and debris may require a pre-filtration prior to OneFlow®.

3. Installation

3.1 Installation Precautions

You are required to consult the local and state building and plumbing codes and regulations prior to installation. If the information in this manual is not consistent with local building or plumbing codes, the local codes should be followed. Inquire with governing authorities for additional local requirements.

Periodic inspection and yearly maintenance by a licensed contractor is required. Corrosive water conditions and/or unauthorized adjustments or repair could render OneFlow® ineffective for service intended. Regular checking and cleaning of the device's internal components helps assure maximum life and proper product function. Frequency of cleaning and inspection depends upon local water conditions.

- Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system
- Connect system ONLY to COLD water supply. Water temperature cannot exceed 38°C. Do NOT install system on HOT water line. Failure to limit line temperature to 38°C may result in housing failure and damage.
- Do NOT allow system to freeze. Turn off water supply to housing and drain housing if temperature falls below 5°C.
- Please provide a shut-off valve before and after the OneFlow® device so it can be isolated for maintenance at all times.
- Do NOT install system in direct sunlight or where system is exposed to harsh chemicals or may be subjected to being struck by moving equipment, carts, mops or any other item that may cause damage.
- Do NOT mount the OneFlow system near any source of heat or above any device or area that would be adversely effected by water.
- Do NOT install system with pressure above 6.2 bar.
- Do NOT install the system backwards with the feed water line connected to the outlet. The direction of flow through the OneFlow unit is always Through the inlet first; keep this in mind when determining installation location.
- The device should be installed in an upright and level position, with both inlet and outlet connections in a horizontal position.
- We do not recommend to apply any other antiscalants before or after OneFlow.
- Do NOT use liquid pipe compounds for fitting connections 3/4"MBSP. Use two to three wraps of PTFE tape.

SOFT SCALE SPOTTING

Depending on hardness of the water, soft scale spotting may occur on external plumbing surface. But in most cases, these spots can be easily wiped down with a damp cloth and will not form hard scale deposits.

- Do NOT solder plumbing connections attached to filter housing will be damaged by high temperature.
 - Do NOT overtighten fitting connections into housing outlet.
 - Always back-up valves and fittings with a wrench when installing a fitting to avoid turning the valve.
 - Position the OneFlow unit in a suitable location.
 - ALLOW a minimum of 8 to 10 cm under the housing to allow for filter replacement.
 - Do NOT install the unit behind equipment where it may be difficult to access the system for filter replacement.
 - If water hammer is evident, install water hammer arrestors before the OneFlow unit.
3. Drill the wall and insert the dowels. Screw the bracket tightly to the wall. The system must be vertical and upright.
 4. Remove the OneFlow® housing shell from the housing cap and make sure that the O-ring is correctly in place. When attaching the shell back to the cap, make certain the O-ring is properly positioned.
 5. Connect OneFlow® by using PTFE tape. Use two to three wraps of PTFE tape on the fitting connection. **Be careful to always follow the direction of the flow indicated by the arrow on the OneFlow housing.**
 6. Run a suitable line from the $\frac{3}{4}$ " full-flow ball valve at the tap water source to the inlet ball valve on the left side of the OneFlow® system. Use 2-3 wraps of PTFE tape and brace the inlet ball valve on the system with a wrench when connecting
 7. Select the appropriate size tubing for the equipment being fed and connect it to the outlet of the OneFlow® System. **NOTE: DO NOT connect the tubing to the equipment at this time. Prior to making connection to the equipment, this line will be used to facilitate flushing the system. As an option, a drain valve in a tee on the outlet side of the OneFlow® system could be provided in the line to facilitate flushing when changing cartridges.**
 8. With OneFlow® inlet valve closed, slowly open the $\frac{3}{4}$ " full-flow ball valve at the tap water source. Check for leaks.
 9. If a drain valve was not installed on the outlet side of the system, hold the tubing that will connect to equipment in a clean bucket or over sink or drain. Open the system inlet feed valve and allow water to flush through system for 2 minutes at the specified system flow rate to allow air bubbles to escape. **NOTE: NO ACTIVATION IS REQUIRED FOR THE OneFlow® SYSTEM TO PERFORM PROPERLY. FLUSHING IS RECOMMENDED TO ALLOW AIR TO ESCAPE THE SYSTEM.**
 10. Make certain that the end of the tubing to be connected to the equipment is clean and sanitary.
 11. Connect tubing to equipment. Open all water supply valves and check for leaks.
 12. If no leaks, turn on equipment and check for normal operation.
 13. Register the OneFlow® system to ensure proper operation.



WARNING!

Installation with copper (Cu)

*** We do not recommend to install OneFlow® with new copper pipes or devices. Excessive copper levels can foul the OneFlow® media. If NEW copper lines or devices had been installed, they need to be passivated for a minimum of 4 weeks before placing the device into service.



WARNING!

Closed systems/still water

Avoid use in closed circuits (eg hydronic systems) and low flow installations or standing water (max. 72 to 120 hours, depending on the quality of the incoming water).

- Do not apply any other antiscalants before or after OneFlow®.
- You are required to consult the local building and plumbing codes prior to installation. If the information in this manual is not consistent with local building or plumbing codes, the local codes should be followed. Inquire with governing authorities for additional local requirements.
- Need for periodic inspection and yearly maintenance: Periodic inspection and yearly maintenance by a licensed contractor is required. Corrosive water conditions and/or unauthorized adjustments or repair could render the device ineffective for service intended. Regular checking and cleaning of the devices internal components and check stops helps assure maximum life and proper product function. Frequency of cleaning and inspection depends upon local water conditions.



www.watts-oneflow.com/register

3.2 Installation instructions

1. Close the water system. Turn off all equipment to be fed by the OneFlow® System.
2. Determine if the water line has an existing water treatment system. If so, examine system for use of polyphosphate or other scale inhibitors. OneFlow® will not be effective if used in conjunction with other scale inhibitors. Remove the scale inhibitors from the water line or discontinue installation.

4. Operation

With sufficient pressure, operation of the Watts OneFlow® System is completely automatic. Dependable operation involves only periodic cartridge changes and service documentation.

The descriptions and photographs contained in this product specification sheet are supplied by way of information only and are not binding. Watts Industries reserves the right to carry out any technical and design improvements to its products without prior notice. Warranty: All sales and contracts for sale are expressly conditioned on the buyer's assent to Watts terms and conditions found on its website at www.wattswater.eu. Watts hereby objects to any term, different from or additional to Watts terms, contained in any buyer communication in any form, unless agreed to in a writing signed by an officer of Watts.

5. Maintenance

Routine maintenance of your OneFlow® system involves periodic cartridge changes and/or replacement of sump O-rings. If the system sizing recommendations have been followed, the OneFlow® cartridge should last two years.

5.1 Cartridge change frequency

The cartridges should be changed in response to the following conditions.

OFTWH-R-RM • 24 months since installation or last cartridge change.

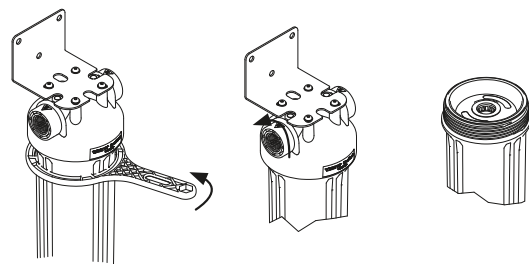
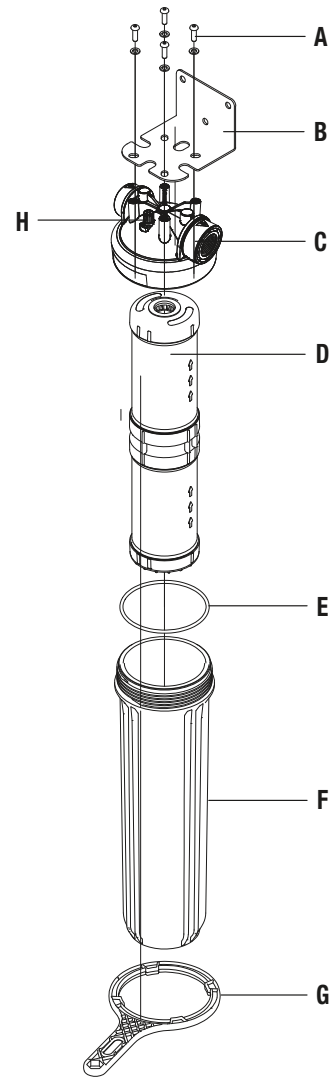
OFTWH-RM • 24 months since installation or last cartridge change.

5.2 Replacement cartridges

OneFlow® systems can only be used with OneFlow® filter cartridges. Use of replacement cartridges other than those specified will void warranties, certifications and may compromise equipment protection, water quality and equipment life.

Cartridge replacement procedure

- IMPORTANT:** All other equipment connected to the OneFlow® system must be turned off prior to shutting off water supply from filters.
- Release pressure by turning the black screwable plastic swivel button identified by the “VENT” sign (H).
- Turn OFF water to OneFlow® system by closing inlet ball valve.
- Remove housing – use cartridge wrench if necessary.
- Remove cartridge from housing. Clean inside of housing with warm water. If desired, disinfect housing by adding a teaspoon of household bleach to housing, fill with water, let stand for 5 minutes, and then discard.
- Insert new cartridge into the housing. Match cartridge model number to model number on bracket.
- Check O-ring (E) for damage and replace if damaged or distorted. For OneFlow® models before 2021: use the BLACK O-ring; for models starting in 2021: use the BLUE O-ring. Using your fingers (not cloth or paper), spread a small dot lubricant on the O-ring, just enough to moisten it all the way around and making sure that the entire O-ring surface is completely coated with grease. As you work the grease into the O-ring, make sure there is no grit or debris on the O-ring. Place the O-ring back on the OneFlow® housing, making sure it is fully seated and level in the groove. Make sure the O-ring is not pinched or twisted and that no dirt, lint, hair, or any debris is trapped on the O-ring. This is necessary to maintain a waterproof seal. Make certain the O-ring is properly positioned and reinstall housing (hand tighten only).
- Slightly open the inlet ball valve; open the pressure relief swivel (H) to release trapped air until a small amount of water comes out – close the pressure relief button and fully open the ball valve.
- VERY IMPORTANT:** With water supply inlet valve OPEN and water flow confirmed, turn on connected equipment. Failure to supply water to equipment may cause serious damage.



Parts of OneFlow® OFTWH / OFTWH-R

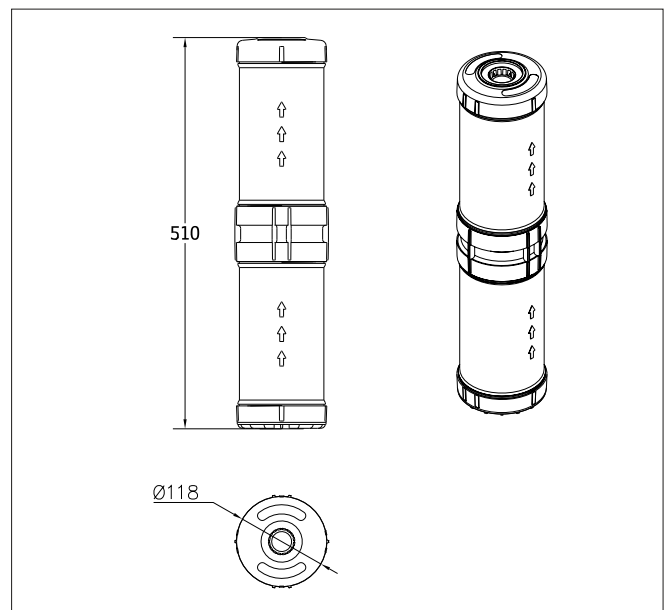
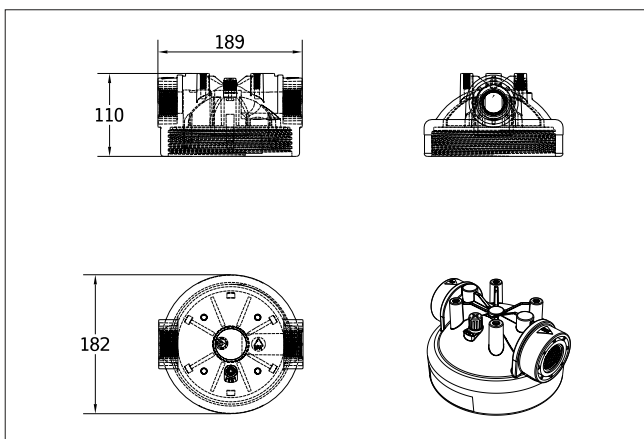
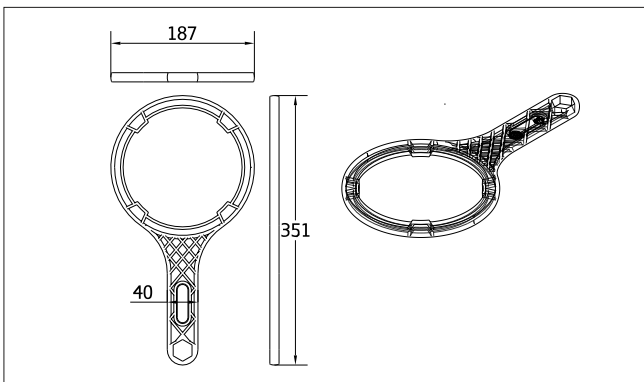
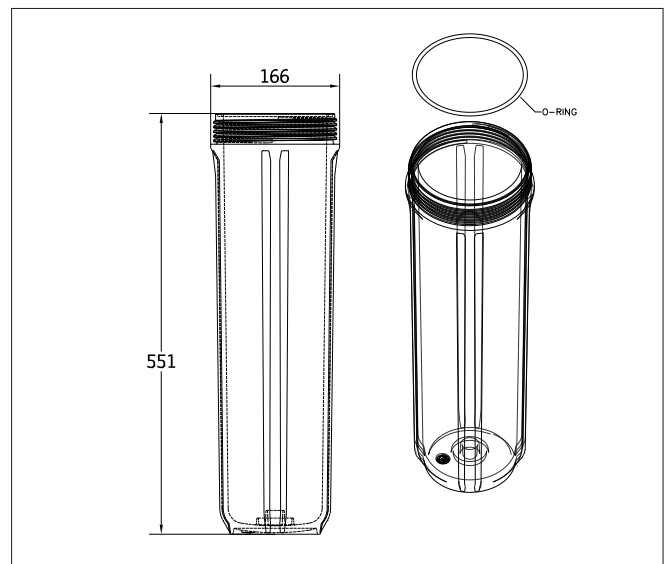
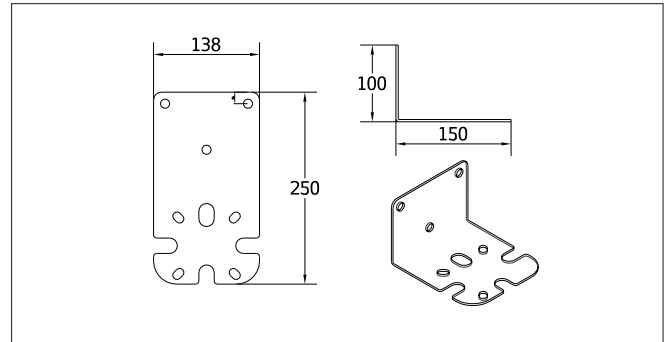
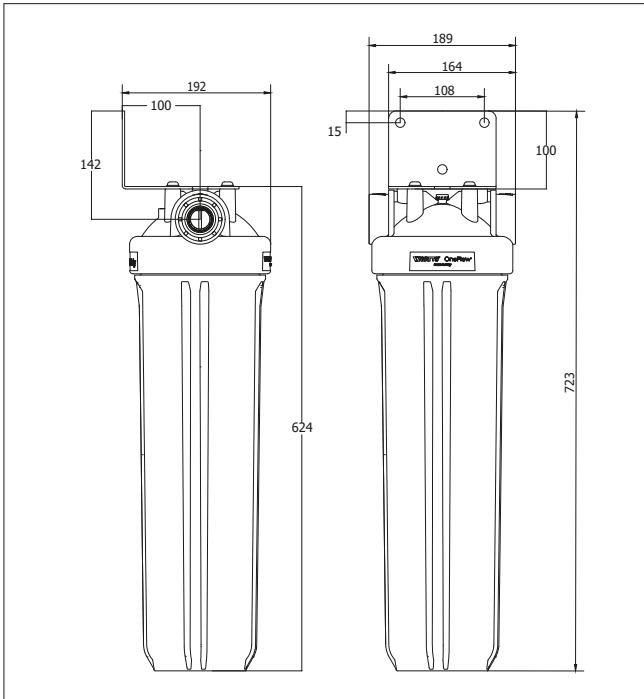
Drawing ID	Description
A	Mounting Screws
B	Mounting bracket
C	Housing cap
D	Replacement Cartridge
E	O-Ring
F	Housing shell
G	Cartridge wrench
H	Pressure relief screw

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6. Dimensions

NOTICE

Please allow additional clearance above the device for making connections and replace the cartridge.



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UK

Guarantee

Watts products are thoroughly tested. The said guarantee covers solely replacement or – at the full sole discretion of WATTS - repair, free of charge, of those components of the goods supplied which in the sole view of Watts present proven manufacturing defects. The period of limitation for claims based on defects and defects in title is two years from delivery/the passage of risk. This warranty excludes any damage due to normal product usage or friction and does not include any modified or unauthorized repair for which Watts will not accept any request for damage (either direct or indirect) compensation (for full details see our website). All sales subject to the Watts terms to be found on www.wattswater.eu

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