

# OneFlow® OF744-10, OF844-12, OF948-16, OF1054-20

Anti-Scale System

## Technical Data Sheet



## Description

The **OneFlow®** Anti-Scale System, **Series OF948-16, OF1054-20**, provides protection from scale formation on internal plumbing surfaces. The **OneFlow®** system may be installed at the point-of-entry to a building to treat both hot and cold water, or it can be located directly before a water heater, boiler, or other hot water-using device that requires protection from the ill effects of hard water.

**OneFlow®** prevents scale by transforming dissolved hardness minerals into harmless, inactive microscopic crystal particles. These crystals stay suspended in the water and are passed to drain, thereby having a greatly reduced ability to react negatively like dissolved hardness does. The system requires very little maintenance, no backwashing, no salt, and no electricity. Typical hardness problems, especially build-up of scale in pipes, water heaters, boilers and on fixtures are no longer a concern.

**OneFlow®** is not a water softener or a chemical additive (like anti-scalants or sequestrants). It is a scale prevention device with proven third party laboratory test data and years of successful residential and commercial applications. **OneFlow®** is the one water treatment device that effectively provides scale protection and is a great salt-free alternative to water softening (ion exchange) or scale sequestering chemicals.

Chemical-free scale prevention and protection – converts hardness minerals to harmless, inactive microscopic crystals making **OneFlow®** an effective alternative technology to a water softener for the prevention of scale due to water hardness.

Virtually maintenance free - no control valve.

Uses environmentally friendly technology by using no salt or other chemicals to constantly add, no electricity and no wastewater.

Improves efficiency of all water using appliances – both hot and cold.

Simple sizing & installation – all you need to know is pipe size and the peak flow rate.

Perfect system for towns or communities where water softeners are banned or restricted.

For high-flow applications, install multiple tanks in parallel.

**OneFlow®** does not remove minerals or add sodium to the water supply.

**OneFlow®** can be installed as pre-treatment to commercial reverse osmosis systems (contact your Watts Representative for further details).

**The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.**

**Exceeding maximum flow can reduce effectiveness and void warranty. Pressure drop at peak flow rate is less than 14psi at 80 degree feed water.**



### OF948-16

| Type     | Part No.   | DN             | Flow Rate (l/min) | Dry Weight (kg) | Service Weight (Kg) |
|----------|------------|----------------|-------------------|-----------------|---------------------|
| OneFlow® | OF948-16-C | 1" Plastic MPT | 60                | 16,49           | 61,85               |



### OF1054-20

| Type     | Part No.    | DN                 | Flow Rate (l/min) | Dry Weight (kg) | Service Weight (Kg) |
|----------|-------------|--------------------|-------------------|-----------------|---------------------|
| OneFlow® | OF1054-20-D | 1 1/4" Plastic MPT | 75                | 20,05           | 80,38               |

| Feed Water Chemistry Requirements |   |
|-----------------------------------|---|
| pH                                | 6.5÷8.5                                 |
| Hardness (maximum)                | 75 grains (1282 ppm CaCO <sub>3</sub> ) |
| Water Pressure                    | 15psi÷100psi (103 kPa÷6.9 bar)          |
| Temperature                       | 40°F÷100°F (5°C÷38°C)                   |
| Chlorine                          | < 2 ppm                                 |
| Iron (maximum)                    | 0.3 mg/l                                |
| Manganese (maximum)               | 0.05 mg/l                               |
| Copper                            | 1.3 ppm                                 |
| Oil & H <sub>2</sub> S            | Must be removed prior to OneFlow®       |
| Silica (maximum)                  | 20 ppm                                  |

## Approvals

Independent scientific testing has confirmed Template Assisted Crystallization (TAC) technology provides scale reduction of over 95+%. Testing was conducted under protocol based on DVGW W512 test to access control of scale formation.



WQA Certified against NSF/ANSI Standard 61 and 372 for Lead Free.



## Application

A **OneFlow**® scale prevention system shall be installed on the main water service pipe just after it enters the building, but after other whole building water safety devices (backflow preventers or pressure reducing valves), to effectively address water hardness concerns. A system may also be installed further downstream to protect specific equipment or areas within a plumbing system. The system shall be plumbed with a bypass valve to allow isolation of tank(s) and to allow the bypass of untreated water usage in the event that service or media replacement be necessary. The installation area should be suitable in size for the tank(s) to be serviced without encumbrance and sit upright on a flat level surface.

The system must operate in an upflow manner and does not require additional water to backwash, flush, or regenerate once put into service. The system does not require any chemical additives and does not require electricity for operation.

The **OneFlow**® systems are complete, self-contained, loaded with media, and ready to use. A simple inlet and outlet connection is all that is required for installation. Please review operating pressures, temperatures and water chemistry limitations to ensure compatibility.

Not for use on closed loop systems.

Water known to have heavy loads of dirt and debris may require pre-filtration prior to **OneFlow**®.

Anytime **OneFlow**® systems are installed above the ground floor of a building it is recommended that a vacuum relief valve also be installed to protect against tank collapse in the event the plumbing system is drained. If a vacuum relief valve is not used then the system should be placed in bypass anytime the plumbing system is drained. The EDP code for the suggested vacuum relief valve is 0556031 (not included). The vacuum relief valve should be installed on the outlet of the system.

**Iron and Manganese:** 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.

**Copper:** pursuant to the EPA drinking water standards, the maximum copper concentration permitted is up to 1.3 ppm. Copper usually originates from new copper plumbing upstream of the **OneFlow**® system and high levels of copper can foul **OneFlow**® media. To further minimize any problem with excess copper, avoid applying excess flux on the inner surfaces of the pipe and to use a low-corrosivity water soluble flux listed under the ASTM B813 standard. For applications with copper concentration greater than 1.3 ppm, please contact Watts Pure Water Technical Service at 1-800-224-1299.

## Using OneFlow® with other water treatment equipment:

due to the unique properties of **OneFlow®**, there are some unique requirements for using **OneFlow®** in conjunction with filtration or other forms of water treatment.

1. **OneFlow®** must be the last stage in the treatment chain. Do not install any filters after **OneFlow®** or before any devices for which scale prevention is required. POU filters, e.g. carbon, RO or Ultraviolet (UV) are exempt from this requirement.
2. Do not apply phosphate or any other antiscalant before or after **OneFlow®**.
3. The addition of soaps, chemicals, or cleaners, before or after **OneFlow®** treatment, may reverse its anti-scale treatment effects and/or create water with a heavy residue or spotting potential. Any adverse conditions caused by the addition of soaps, chemicals, or cleaners are the sole responsibility of the end user.
4. **OneFlow®** is not a water softener and does not soften the water - Water treatment chemistry (e.g. antiscalants, sequestrants, soaps, chemicals or cleaners etc.) will most likely have to be changed to be compatible with **OneFlow®** treated water. Laundry and ware-washing chemistry will likewise require adjustments.

## Operation

Spotting May Occur on External Plumbing Surfaces.

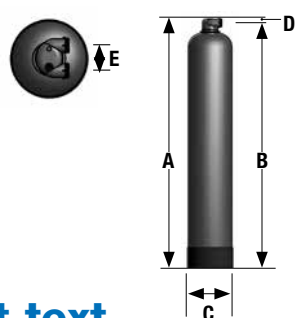
**OneFlow®** media systems perform best in single pass potable water applications with NO additional chemical additives. Depending on hardness, soft scale spotting may occur. Soft scale spots in most cases can be easily wiped down with a damp cloth and will not form hard scale deposits. A Point of Use (POU) Water Softener should be used on mandatory spot-free applications (e.g. glass stemware, dishware).

Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

OF744RM-OF844RM-OF948RM-OF1054RM-OF1252RM: media should be replaced every 3 years.

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

## Overall dimensions (mm)



| Mod.      | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) |
|-----------|--------|--------|--------|--------|--------|
| OF744-10  | 1232   | 1168   | 178    | 64     | 76     |
| OF844-12  | 1232   | 1168   | 203    | 64     | 76     |
| OF948-16  | 1334   | 1219   | 229    | 64     | 76     |
| OF1054-20 | 1511   | 1448   | 254    | 64     | 76     |

The overall height and the height of the fitting varies due to material variations and assembly tolerances. Please allow additional clearances above the tank for making connections.

## Product text

### OneFlow® Series OF948-16-C

OneFlow® Anti-Scale System, **Series OF948-16-C** - Watts brand improves efficiency of all water heating devices and downstream plumbing components, protecting from scale formation on internal and external plumbing surfaces. Maximum flow rate 60 lt/min, Max. pressure 6,9 bar; max temperature 38°C. Size 1".

### OneFlow® Series OF1054-20-D

OneFlow® Anti-Scale System OF1054-20-D - Watts brand improves efficiency of all water heating devices and downstream plumbing components, protecting from scale formation on internal and external plumbing surfaces. Maximum flow rate 75 lt/min, Max. pressure 6,9 bar; max temperature 38°C. Size 1 1/4".



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