

OneFlow[®] OF948-16, OF1054-20

Sustainable Scale Control System

For Commercial and Industrial Applications

Technical Data Sheet



NOTICE

* For hot water applications where water temperature is 100–140°F (38–60°C), please consult ES-OneFlow-HotWater
 *The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.
 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.

Description

The **OneFlow**® Anti-Scale System 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.

OF948-16 - OF1054-20



- 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)

Type	Part No.	DN	Maximum Flow Rates
OneFlow®	OF948-16-C	1" Plastic MPT	60*
OneFlow®	OF1054-20-D	1 1/4" Plastic MPT	75*

* Exceeding maximum flow can reduce effectiveness and void warranty. Pressure drop at peak flow rate is less than 14 psi at 80° F/27°C feed water.

Feed Water Chemistry Requirements

pH	6.5-8.5
Hardness (maximum)	28.8°dH, 51.3°F (513 mg/L CaCO3)*
Water Pressure	15-100 psi (1.03-6.9 bar)
Temperature	40-100°F (5-38°C)
Free Chlorine	< 2 ppm
Iron (maximum)	0.3 ppm**
Manganese (maximum)	0.05 ppm**
Copper	1.3 ppm***
Oil & H2S	Must be Removed Prior to OneFlow®
Total Phosphates	< 3.0 ppm
Silica (maximum)	20 ppm†
TDS	1500 mg/l††

NOTICE

Not for use on closed loop systems.

* Systems using **OneFlow**® technology are effective at controlling lime-scale formation inside the plumbing system at influent hardness levels up to 75 grains per gallon (1282 mg/l) of calcium carbonate. Due to variances in water chemistry, 30 grains per gallon is a recommended hardness maximum due to potential aesthetic issues related to soft scale residue formation outside of the plumbing system. Testing should be performed to determine proper application where hardness levels exceed 30 grains per gallon.

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.

⚠ WARNING

***** Pursuant to the EPA drinking water standards, the copper concentration permitted is up to 1.3 ppm. Typically originating from new copper plumbing, high levels of copper can foul OneFlow media. New Copper lines need to be passivated for a minimum of 4 weeks before placing unit into service. For applications with copper concentration greater than 1.3 ppm, please consult Watts Water Quality Technical Service. To further minimize any problem with excess copper, avoid applying excessive flux on the inner surfaces of the pipe and use a low-corrosivity.**

† **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 ppm limitation is for aesthetic purposes.

†† All other contaminants must meet the requirements of the USEPA Safe Drinking Water Act. Specific Mineral and Metal MCL's, identified in Watts published Feed Water Chemistry Requirements, supersedes the USEPA SDWA.

NOTICE

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.

⚠ WARNING**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 any other antiscalants 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.**

NOTICE**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).

System specifications

OF948RM Media should be replaced every 3 years

OF1054RM Media should be replaced every 3 years

Independent Research

Independent scientific testing has confirmed Template Assisted Crystallization (TAC) technology provides scale reduction of over 95+%. Testing was conducted based on DVGW W512 protocols/tests to assess control of scale formation. (see Water ReUse Foundation/Arizona State University Study, Evaluation of Alternatives to Domestic Ion Exchange Water Softeners, © 2014, Water Reuse Research Foundation).



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



Applications

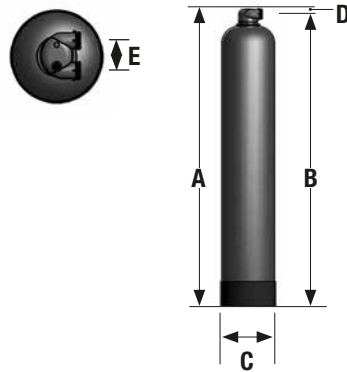
A **OneFlow**[®] scale prevention system shall be installed on the main water service pipe just after it enters the building, but after other whole building water safety devices (backflow preventers or pressure reducing valves), to effectively address water hardness concerns. A system may also be installed 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.

Overall dimensions (mm)

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.



Mod.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Dry Weight (kg)	Service Weight (Kg)
OF948-16	1334	1219	229	64	76	16,49	61,85
OF1054-20	1511	1448	254	64	76	20,05	80,38

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

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.watts-onflow.com. 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.



Watts Industries Italia S.r.l.

Via Brenno, 21 • 20853 Biassono (MB) • Italy
Tel. +39 039 4986.1 • Fax +39 039 4986.222
infowattsitalia@wattswater.com • www.watts.com