OneFlow®
OF948-16, OF1054-20

Scale Control System

Technical Data Sheet

WATTS®

www.watts-oneflow.com

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, 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 a great salt-free alternative to water softening (ion exchange) or scale sequestering chemicals.

Through scale prevention and protection without chemicals - converting calcium and magnesium minerals into microscopic inert crystals - **OneFlow®** technology is a valid alternative to classic softeners to prevent scale deposits due to water hardness.

Reduced maintenance. Removes pre-existing limescale residues on the internal surfaces of the pipes. Eco-friendly technology does not use waste water, does not consume electricity and does not require the periodic addition of salts or other chemicals.

It improves the efficiency of all appliances that consume water. Quick sizing and installation - all you need to know is the diameter of the pipe and the maximum flow rate of the system. For applications involving high flow rates, it is sufficient to install several tanks in parallel.

OneFlow® does not remove minerals and does not add sodium to the water supplied. **OneFlow®** can be installed as a pre-treatment to commercial reverse osmosis systems (contact your Watts representative for further details).

Exceeding the maximum capacity could compromise the effectiveness and void the product warranty. The pressure drop at the maximum flow rate is less than 1 bar if the supply water temperature reaches 26.5 ° C.

OF948-16

Type	Part No.	DN	Flow rate (l/min)	Dry weight (kg)	Service weight (kg)
OneFlow®	OF948-16-C	1” Plastic	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	75	20,05	80,38

Feed Water Chemistry Requirements	
pH	6.5÷8.5
Hardness (maximum)	28.8°dH, 51.3°F (513 mg/L CaCO3)*
Water Pressure	1,03÷6,9 bar (15÷100 psi)
Inlet temperature	5÷38°C (40÷100°F)
Free Chlorine	< 2 ppm
Iron (maximum)	0,3 mg/L**
Manganese (maximum)	0,05 mg/L**
Copper (maximum)	1,3 ppm***
Oil & H_2S	Must be Removed Prior to OneFlow®
Silica (maximum)	20 ppm†
Total Phosphates	< 3,0 ppm
TDS	1500 mg/l††

Attention: this equipment requires regular periodic maintenance in order to ensure the potability requirements of the treated drinking water and the maintenance of improvements as declared by the manufacturer.

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 513 mg per liter (28,8°dH, 51,3°F) of calcium carbonate. Due to variances in water chemistry, 513 mg/L 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 513 mg/L.

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, verify the chemical characteristics of the water fall within the requirements specified above.

Installation in the presence of copper (Cu).

*** It is not recommended to install **OneFlow®** on new copper pipes or devices. Too high levels of copper can contaminate **OneFlow®** beads. In case of recent installation of NEW copper pipes or devices, these must be passivated for at least 4 weeks before starting the unit.

† **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 th plumbing system difficult to remove. This 20 ppm limitation is for aesthetic purposes.

†† The values of all other contaminants in the water must comply with the requirements of the local water protection body of each country where **OneFlow®** is marketed and installed.

Certifications

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.

Products compliant with D.M. 174/2004 and D.M. 25/2012.

Lead-free WQA certified in accordance with NSF / ANSI 61 and 372 standards.

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. The 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 suitable for use with systems with recirculation.

If the water contains excessive amounts of impurities and debris, proceed to pre-filtration before using **OneFlow®**.

If the **OneFlow®** system is installed on the upper floors of the building, the installation of an air vent valve is recommended to prevent the tank from collapsing in the event of a hydraulic system drain. Install the air vent valve at the system outlet. In the absence of the air vent valve, put the system in bypass at each discharge of the hydraulic system.

Use of OneFlow® with other water treatment equipment

OneFlow® can be used in conjunction with filtration systems or other forms of water treatment by respecting the precautions illustrated below, which take into account the specific characteristics of the product:

1. **OneFlow®** must be placed at the last stage of the treatment chain. Do not install filters downstream of **OneFlow®** or upstream of the devices to be protected. The requirement does not apply to filters inserted at the point of delivery, such as activated carbon, reverse osmosis or ultraviolet (UV) systems.
2. Do not apply phosphate or other anti-scalants upstream or downstream of **OneFlow®**.
3. The addition of soaps, chemicals or detergents upstream or downstream of **OneFlow®** could reverse the effect of the descaling treatment and / or produce water containing heavy residues or potential impurities. The end user is responsible for the side effects caused by the addition of soaps, chemicals or detergents.
4. **OneFlow®** is not a softener and does not purify water. The addition of soaps, chemicals or detergents before or after the **OneFlow®** treatment could affect the proper functioning of the descaling system and / or create residues. Any adverse conditions caused by the addition of soaps, chemicals or detergents are the sole responsibility of the end user.

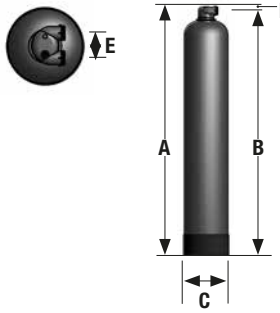
OneFlow® systems are most effective in single-stage (single-pass) applications with drinking water WITHOUT the addition of chemical additives. Depending on the hardness level, slight surface deposits may form. In most cases, to eliminate surface stains it is sufficient to wipe with a damp cloth, preventing their formation. In applications where the absence of stains is essential (e.g. glass goblets, dishes), use a water softener at the dispensing point.

Do not use with water that is unsafe from a microbiological point of view or of unsubstantiated quality without adequate disinfection upstream or downstream of the system.

OF948RM-OF1054RM: replace the medium every 3 years.

The information contained in this document does not fully replace the safety and product installation manuals or the experience of a qualified installer. Carefully read all installation instructions and product safety information before proceeding with installation.

Overall dimensions (mm)



Mod.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
OF948-16	1334	1270	230	64	76
OF1054-20	1511	1448	255	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 downsream plumbing components, protecting from scale formation on internal plumbing surfaces. Maximum flow rate 60 L/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 downsream plumbing components, protecting from scale formation on internal plumbing surfaces. Maximum flow rate 75 L/min, Max. pressure 6,9 bar; max temperature 38°C. Size 1 1/4".

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