OneFlow®
OF110-1

Sustainable Scale Control System
For Commercial and Food Service Applications

Technical Data Sheet

WATTS®

www.watts-oneflow.com

⚠ WARNING

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.

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.**

⚠ 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 softener 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.**

Description

The **OneFlow®** Anti-Scale System provides protection from scale formation on internal plumbing surfaces. The **OneFlow®** system is a single cartridge-based system that may be installed on a cold water line prior to a water-using device (water heater, hot-beverage system, appliance, steamer etc.) 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. It does not add chemicals. It is a scale prevention device with proven third party laboratory test data and years of successful Food Service and Commercial applications. **OneFlow®** is the intelligent scale solution and is a great alternative to water softening (ion exchange) or scale sequestering devices.

OF110-1

- 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 salt bags or other chemicals to constantly add or maintain
- No control valve, no electricity and no wastewater
- Uses environmentally friendly “green” technology
- Improves efficiency of all water appliances whether heating the water or not
- Simple sizing & installation – all you need to know is pipe size and flow rate
- Perfect system for restaurants, cafeterias and coffee shops where multiple or single equipment protection is desired for longer equipment life and reduced energy consumption
- Inlet ball valve for easy isolation shutoff and filter changes
- **OneFlow®** does not remove the essential minerals in water that are linked to good health
- **OneFlow®** cartridge-based systems

Type	Part No.	DN	Nominal Flow Rate Up To (l/min)
OneFlow®	OF110-1	1/2”	4

Feed Water Chemistry Requirements	
pH	6.5-8.5
Hardness (maximum)	28.8°dH, 51.3°F (513 mg/L CaCO3)*
Water Pressure	10-90 psi (0.69-6.2 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

* Systems using **OneFlow®** technology are effective at controlling lime-scale formation inside the plumbing system at influent hardness levels up to 30 grains per gallon (513 ppm CaCO3) 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.**

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

System specifications

Inlet/Outlet Connections: 1/2" FNPT (15 mm)

Nominal Flow Rate up to 1 gpm (4 lpm)

OF110RM Cartridge should be replaced every 12 months

Independent Research

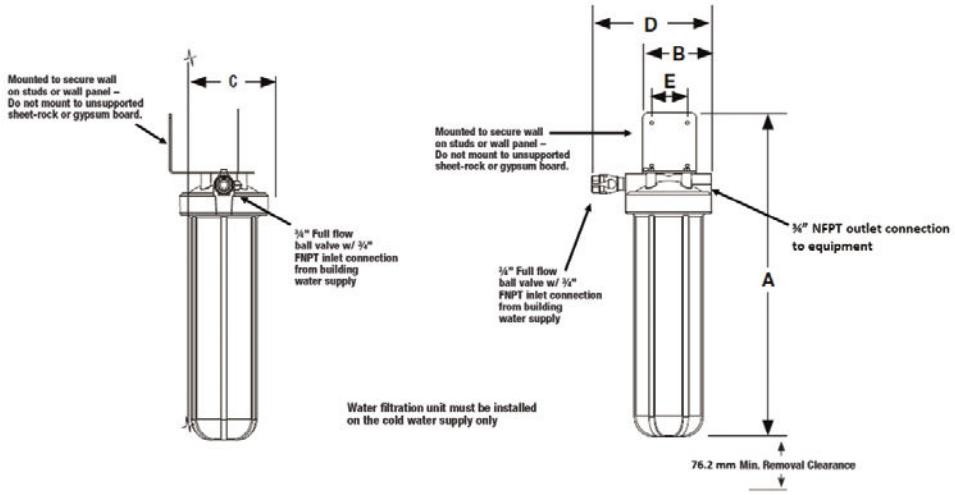
Independent scientific testing has confirmed Template Assisted Crystallization (TAC) technology provides scale reduction of over 95+%. Testing was conducted based on DVGW W512 protocols/tests to assess control of scale formation. (see Water ReUse Foundation/Arizona State University Study, Evaluation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

Application

A **OneFlow®** scale prevention 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. The installation area should be suitable in size for the housing to be serviced without encumbrance and the system should be installed per the Installation, Operation & Maintenance manual as provided with each system. The **OneFlow®** system must not require additional waste 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.

Overall dimensions (mm)

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



Mod.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (kg)
OF110-1	370	110	130	170	60	2,3

Product text

OneFlow® Series OF110-1

OneFlow® Anti-Scale System, **Series OF110-1** - Watts brand, cartridge included. It improves efficiency of all water heating devices and downsream plumbing components, protecting from scale formation on internal plumbing surfaces. Maximum flow rate 4 lt/min, Max. pressure 6,9 bar; max temperature 38°C. Size 1/2".

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