

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

LEAD FREE*

Models OF744-10, OF844-12, OF948-16, and OF1054-20 OneFlow® Anti-Scale System

Connection Sizes: ¾", 1" and 1¼"

Flow Rates: 10 gpm to 20 gpm (38 lpm to 76 lpm)

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 water using device that requires protection from hard water.

OneFlow® prevents scale by transforming dissolved hardness minerals into harmless, inactive microscopic crystal particles. These crystals stay suspended in the water, have a greatly reduced ability to react negatively like dissolved hardness does, and eventually find their way to the drain. 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 is greatly reduced.

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 installations. 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.

Features

- 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

NOTICE

** For hot water applications where water temperature is 100°F – 140°F (38°C – 60°C), please consult ES-OneFlow-HotWater.



OF744-10

OF844-12

OF948-16

OF1054-20



C US

Systems are tested and certified by WQA against NSF/ANSI/CAN Standard 61 and NSF/ANSI 372 for Lead Free compliance.

- 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)

⚠ WARNING

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

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

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

Models

MODELS	ORDERING CODES	MAX. FLOW RATE	CONNECTION TYPE
OF744-10-C	0002102	10 GPM	1" Plastic MPT
OF744-10-D	0002103	10 GPM	1 1/4" Plastic MPT
OF744-10-E	0002104	10 GPM	1" Plastic MPT 90 Elbow
OF844-12-A	0002105	12 GPM	3/4" Sweat'
OF844-12-B	0002106	12 GPM	1" Sweat'
OF844-12-C	0002107	12 GPM	1" Plastic MPT
OF844-12-D	0002108	12 GPM	1 1/4" Plastic MPT
OF844-12-E	0002109	12 GPM	1" Plastic MPT 90 Elbow
OF948-16-A	0002110	16 GPM	3/4" Sweat'
OF948-16-B	0002111	16 GPM	1" Sweat'
OF948-16-C	0002112	16 GPM	1" Plastic MPT
OF948-16-D	0002113	16 GPM	1 1/4" Plastic MPT
OF948-16-E	0002114	16 GPM	1" Plastic MPT 90 Elbow
OF1054-20-A	0002115	20 GPM	3/4" Sweat'
OF1054-20-B	0002116	20 GPM	1" Sweat'
OF1054-20-C	0002117	20 GPM	1" Plastic MPT
OF1054-20-D	0002118	20 GPM	1 1/4" Plastic MPT
OF1054-20-E	0002119	20 GPM	1" Plastic MPT 90 Elbow

Connection Options

3/4" and 1" Sweat

1" and 1 1/4" Plastic MPT

Replacement Media

OF744RM	Media should be replaced every 3 years
OF844RM	Media should be replaced every 3 years
OF948RM	Media should be replaced every 3 years
OF1054RM	Media should be replaced every 3 years
OF1252RM	Media should be replaced every 3 years

Specifications

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 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.

Standards

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.

Feed Water Chemistry Requirements

pH	6.5-8.5
Hardness (maximum)	30 grains (513 ppm CaCO3)*
Water Pressure	15 psi to 100 psi (1.03 bar to 6.9 bar)
Temperature	40° F to 100° F (5°C to 38°C)
Free Chlorine	<2 ppm
Iron (maximum)	0.3 ppm**
Manganese (maximum)	0.05 ppm**
Copper (maximum)	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) as 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 water soluble flux listed under the ASTM B813 standard.

† 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.

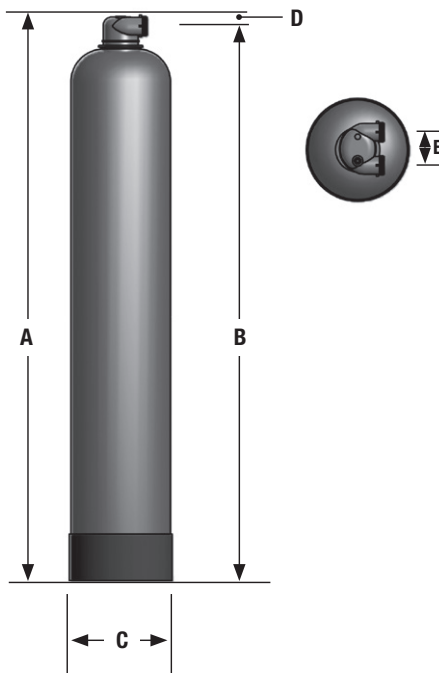
NOTICE

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

NOTICE

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.

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.



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).

Dimensions

Model	Dimensions									
	A		B		C		D		E	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
OF744-10	48½	1232	46	1168	7	178	2½	64	3	76
OF844-12	48½	1232	46	1168	8	203	2½	64	3	76
OF948-16	52½	1334	50	1270	9	229	2½	64	3	76
OF1054-20	59½	1511	57	1448	10	254	2½	64	3	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.

Peak Flow Rates — Weights

	OF744		OF844		OF948		OF1054	
*Maximum Flow	10 gpm	37.8 lpm	12 gpm	45.4 lpm	16 gpm	60.6 lpm	20 gpm	75.7 lpm
Dry Weight	26.60 lbs.	12.06 kgs.	30.5 lbs.	13.84 kgs.	36.36 lbs.	16.49 kgs.	44.20 lbs.	20.05 kgs.
Service Weight	84.60 lbs.	38.97 kgs.	102.50 lbs.	46.50 kgs.	136.36 lbs.	61.85 kgs.	177.20 lbs.	80.38 kgs.

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

NOTICE

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.



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