

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Series OFRES-K

Models OFRES-0835-K, OFRES-0935-K,
OFRES-1035-K

Smart and Connected Residential OneFlow®
Anti-Scale Systems with U-M311 Elapsed
Time Monitor
Chemical-Free, Salt-Free Scale Prevention

Connection Size: 1" MNPT

Flow Rates: Up to 16 gpm (60 lpm)

OneFlow® Residential Anti-Scale Systems are a smart and connected whole home solution for the prevention of hardness related scale formation on internal plumbing surfaces. Water using appliances and plumbing fixtures also enjoy a longer lifespan because hardness scale build up on internal parts no longer occurs. These systems are specifically designed for residential applications. OneFlow Residential systems should be installed at the point-of-entry to a home to treat both the hot and the cold water*.

This smart and connected whole home solution monitors its own service schedule as well as water usage. Automatic alerts are sent to the user by email or text notifying when media replacement is necessary. OneFlow Residential systems prevent 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 form scale like dissolved hardness does, and eventually find their way to the drain. These systems require very little maintenance, require no backwashing, and no salt or chemicals for regeneration. Typical hardness problems, especially build-up of scale in pipes, water heaters, boilers and on fixtures is greatly reduced.

As the system operates, conditioned water leaves the system through an in-line flow meter that measures treated water volume. Media life and treated water volume is reported to the user by the display screen and replacement media notifications are sent through text or email.

OneFlow Residential systems are not water softeners or chemical additives (like anti-scalants or sequestrants). They are scale prevention devices with proven third party laboratory test data and years of successful residential installations. OneFlow Residential systems are the one water treatment device that effectively provides scale protection in the home and are a great salt-free alternative to water softening (ion exchange) or scale sequestering chemicals.

NOTICE

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



OFRES-K



#Z64-CC3100MODR1
Meets Class B: ICES & FCC Part 15



OneFlow media (A8210) is certified by WQA to NSF/ANSI/CAN Standard 61 and NSF/ANSI 372 for Lead Free compliance.



The U-M311 is tested and certified by WQA to NSF/ANSI/CAN 61 for material safety and to NSF/ANSI 372 for Lead Free Compliance.

⚠ WARNING

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

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.

WATTS®

Features

- Smart and connected elapsed time monitor – Sends automatic alerts via email and text when media replacement is due
- Displays days remaining, percent media life consumed and total water usage volume
- 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
- No control valve, and no wastewater
- Uses environmentally friendly technology by using no salt or other chemicals to constantly add, and generates no wastewater
- Improves efficiency of all water using appliances – both hot† and cold
- Simple sizing & installation
- Perfect system for towns or communities where water softeners are banned or restricted
- OneFlow Residential systems do not remove minerals or add sodium to the water supply
- OneFlow Residential systems can be installed as a pre-treatment to under counter reverse osmosis systems (OneFlow should be the last stage in treatment unless a point-of-use system is being used downstream.)
- Systems include a bypass valve for a simplified installation

NOTICE

†Always install OneFlow Residential systems before the water heating device.

Standards

Independent scientific testing has confirmed Media-assisted crystallization (MAC) 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 and Operating Conditions

pH	6.5-8.5
Hardness (maximum)	30 grains (513 ppm CaCO3)*
Water Pressure	15psi to 90psi (1.03 bar to 6.2 bar)
Water 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 ††
Min/Max Ambient Temperature	34°F to 120°F (1°C to 48°C)
Maximum Humidity	75%
Power Supply Input Voltage/Frequency	115 VAC / 60Hz
Power Supply Output Voltage	12 VDC
Power Supply Output Current	.4 amps
Maximum Altitude	2,000 meters above sea level
Wi-Fi Signal Type	2.4 GHz

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 30 grains per gallon (513 ppm) 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 ppm and 0.05 ppm, 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.

⚠ 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

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.

These OneFlow systems are complete, self-contained, loaded with media, and ready to use. Please review operating pressures, temperatures and water chemistry limitations to ensure compatibility.

Do Not allow system to freeze.

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).

Connection Size

1" MNPT- All Models

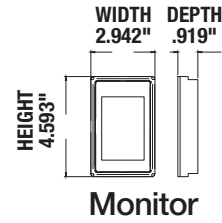
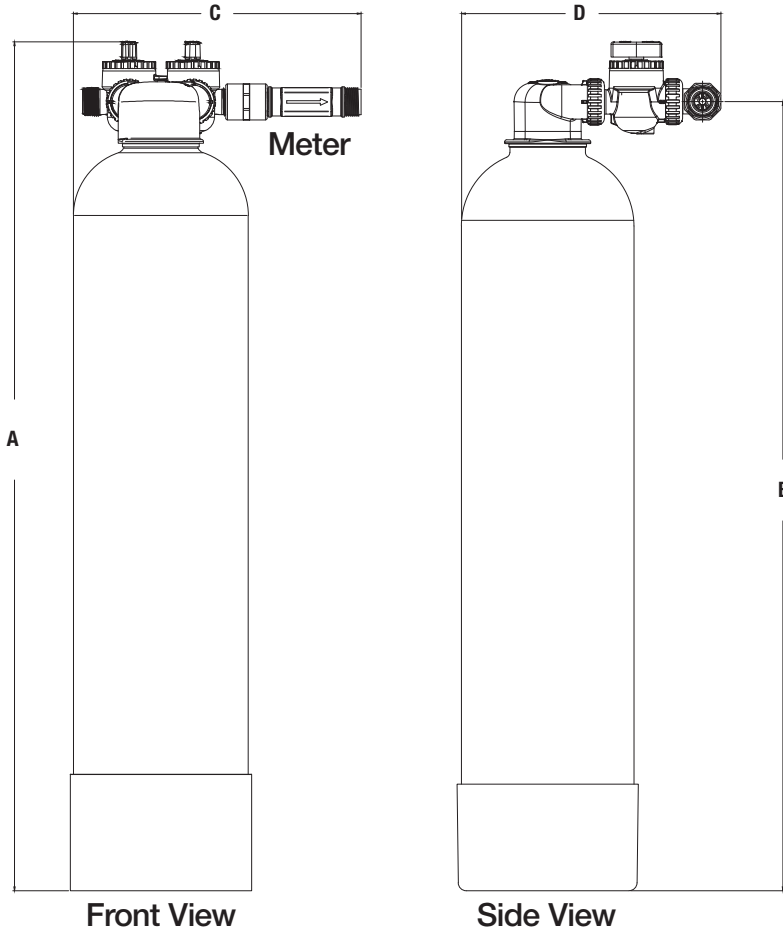
Media Life Span

Replace media when notified by U-M311 Elapsed Time Monitor

Replacement Media

OFRES-0835RM	Media should be replaced every 3 years
OFRES-0935RM	Media should be replaced every 3 years
OFRES-1035RM	Media should be replaced every 3 years

Dimensions



MODEL NO.	DIMENSIONS							
	A		B		C		D	
	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>
OFRES-0835-K	40	1016	37	940	13.50	343	12	305
OFRES-0935-K	40	1016	37	940	14.50	368	12.5	318
OFRES-1035-K	40	1016	37	940	15.50	394	13	330

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

MODEL	OFRES-0835-K		OFRES-0935-K		OFRES-1035-K	
*Maximum Flow	8 gpm	30 lpm	12 gpm	45 lpm	16 gpm	60 lpm
Dry Weight	21 lbs	10 kgs	25 lbs	11 kgs	27 lbs	12 kgs
Service Weight	86 lbs	39 kgs	108 lbs	49 kgs	128 lbs	58 kgs

*Exceeding maximum flow can reduce effectiveness and void warranty.

Pressure drop at peak flow rate is less than 10psi using 80 °F feed water.

NOTICE

Maximum service flow rate is for intermittent use only and is not to be interpreted as continuous service flow rate capability. These systems are designed to treat the domestic water used in a single family dwelling. For higher volume applications please contact your Watts representative.

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. Watts is not responsible for the failure of alerts due to connectivity or power issues.

