



Where NATURE & SCIENCE meet.™

SC-Series Commercial Scale Elimination Systems

Featuring Watts
OneFlow™ Technology

No Scale
No Waste
Minimal Pressure Loss
Total Satisfaction



Water Control Corporation is pleased to bring you the very latest in environmentally-friendly scale prevention technology. SC-Series Scale Elimination Systems combine our expertise as a regional leader in water conditioning and filtration with the benefits of Watts Water Technologies' breakthrough, OneFlow™ media.

SC-Series systems completely protect fixtures and plumbing systems from the build-up of hard scale residue. While they do not provide the same bather benefits as commercial water softeners (i.e. soft skin and hair), they require no electricity, salt, chemicals, or backwash water. Moreover, they generate virtually no system pressure loss, and occupy far less space in the mechanical room. Whether you are seeking a cost-effective means for protecting your boilers, dishwashers, and heat exchangers -- or a "green" solution for protecting an entire plumbing system – a Water Control SC-Series System may be the solution.

How They Work:

SC-Series Scale Elimination Systems provide protection from scale formation on internal and external plumbing surfaces. These systems may be installed at the point-of-entry to a building to treat both hot* and cold water, or they 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™ media prevents hard scale via a molecular process called Template-Assisted Crystallization. Dissolved calcium carbonate (CaCO₃) is prematurely drawn out of solution by OneFlow™ media's strong ionic attraction and irregular surfaces. CaCO₃ adheres to the media beads and forms soft crystals, which eventually detach, and are released into the plumbing system. The energy required for remaining CaCO₃ to adhere to these soft CaCO₃ crystals is far lower than what is required for adhesion to any other surfaces in a plumbing system. As a result, any remaining CaCO₃ coming out of solution binds to the free-floating soft crystals (rather than attaching itself to surfaces in the plumbing system). In fact, even existing hard scale in a plumbing system will typically break away and bond with the soft crystals, thereby serving to de-scale the system. The soft crystals remain suspended in the water and are eventually passed to drain, eliminating hard scale build-up, water spots, and soap scum. The only evidence of CaCO₃ soft crystals is an occasional thin layer of harmless white powder residue, which can be easily wiped away from fixtures and equipment. 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.

SC-Series Systems are not water softeners, nor do they work via chemical additives (like anti-scalants or sequesterants). They are scale prevention systems with proven third party test data and years of successful residential and commercial applications. They are the only non-water softener, non-chemical-based systems to have undergone rigorous independent laboratory examination -- and to have been certified to work at an effective level (99.6% to be precise) when applied and installed properly.

Features

- Chemical free scale prevention and protection – converts hardness minerals to harmless, inactive microscopic crystals making SC-Series Systems effective alternative technology to water softeners for the prevention of scale due to water hardness.
- Virtually maintenance free – No salt bags or other chemicals to constantly add.
- No control valve, no electricity and no wastewater.
- Uses environmentally friendly "green" technology.
- 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.
- OneFlow™ media does not remove minerals or add sodium to the water supply.
- SC-Series Systems can be installed as a pre-treatment to reverse osmosis (The SC-System should be the last stage in treatment unless a point-of-use system is being used downstream).

*For hot water applications where water temperature is 110°F – 150°F (43°C – 63°C), please refer to pages 10-11 (Series SCH-500).

Models SC100-1, SC100-2 and SC100-4

Low-Flow Cartridge Systems

Perfect for:

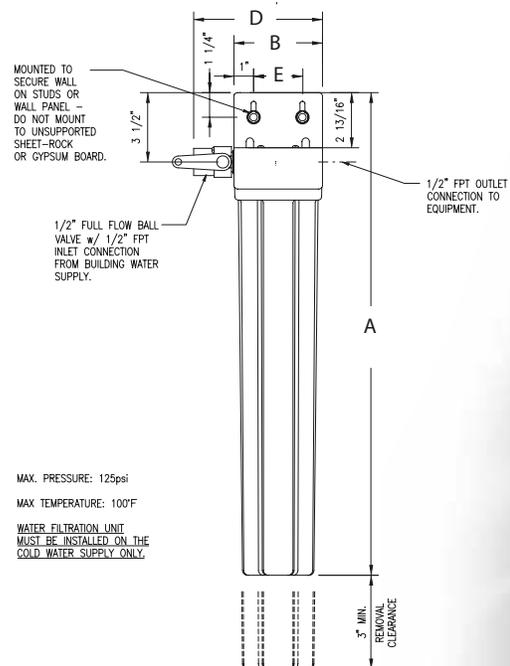
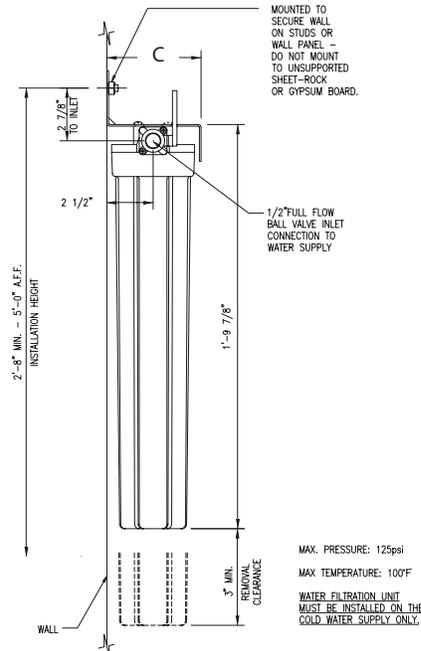
- Small water heaters
- Hot beverage systems
- Small appliances

Models

Model	Maximum Flow Rate	Connection Sizes
SC100 - 1	1 gpm (4 lpm)	½" (15mm) FNPT
SC100 - 2	2 gpm (8 lpm)	½" (15mm) FNPT
SC100 - 4	4 gpm (15 lpm)	¾" (20mm) FNPT

Replacement Cartridge

SC100-1M	Cartridge should be replaced every 12 months
SC100-2M	Cartridge should be replaced every 12 months
SC100-4M	Cartridge should be replaced every 12 months



Dimensions – Weights

Model	Dimensions										Weight	
	A		B		C		D		E		lbs.	kgs
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
SC100-1	14½	37	4½	11	5½	13	6½	17	2½	6	5	2.3
SC100-2	24½	62	4½	11	5½	13	6½	17	2½	6	8	3.6
SC100-4	26	66	7¾	20	8½	22	9 13/16	25	5¾	15	18	8.2

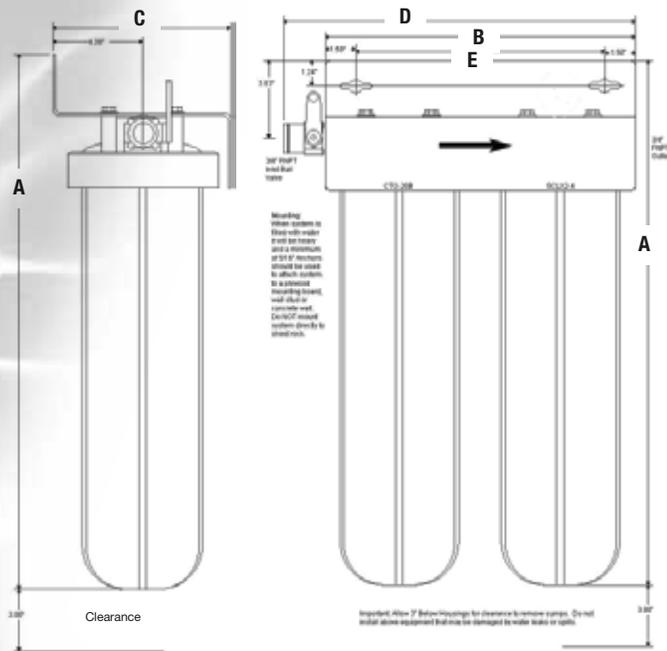
The overall height and the height of the inlet fitting varies due to material variations and assembly tolerances. Please allow additional clearance above the tank for making connections.

Models SC200-1, SC200-2 and SC200-4

Low-Flow Cartridge Systems With Taste/Odor Filter

Perfect for:

- Coffee makers
- Espresso machines
- Post-mix systems
- Steamers

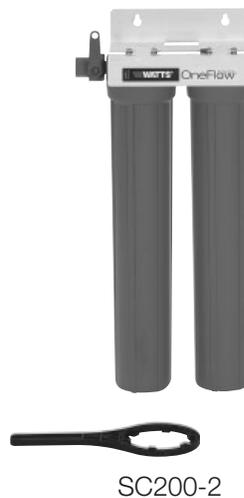


Models

Model	Maximum Flow Rate	Connection Sizes
SC200 – 1	1 gpm (4 lpm)	1/2" (15mm) FNPT
SC200 – 2	2 gpm (8 lpm)	1/2" (15mm) FNPT
SC200 – 4	4 gpm (15 lpm)	3/4" (20mm) FNPT

Replacement Cartridge

SC200-1M	Cartridge should be replaced every 12 months
SC200-2M	Cartridge should be replaced every 12 months
SC200-4M	Cartridge should be replaced every 12 months
SC200-1C	Cartridge should be replaced every 6 months
SC200-2C	Cartridge should be replaced every 6 months
SC200-4C	Cartridge should be replaced every 6 months



Dimensions – Weights

Model	Dimensions										Weight	
	A		B		C		D		E		lbs.	kgs.
	in	mm	in	mm	in	mm	in	mm	in	mm		
SC200-1	14½	37	9¼	24	5⅞	13	11¼	29	5¾	15	9	4.1
SC200-2	24½	62	9¼	24	5⅞	13	11¼	29	5¾	15	14	6.4
SC200-4	26	66	15¼	39	8⅝	22	17⅞	44	12¼	31	31	14.1

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.

Series SC100 and SC200 Series Cartridge Systems

OneFlow™

Engineer Data

Water Chemistry & Limitations

pH	6.5 to 8.5
Hardness (maximum)	75 grains (1300 ppm CaCO ₃)
Temperature	41°F to 140°F (5 to 60°C)
Chlorine	< 3 ppm
Iron (maximum)	0.3 mg/l
Manganese (maximum)	0.05 mg/l
Copper (maximum)	1.3 mg/l
Oil & H ₂ S	none allowed
Polyphosphate	none allowed
Silica (maximum)	10 ppm

SC100 Series: Cartridge Systems Specifications

A Water Control model SC100-_____ Scale Elimination 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 scale elimination system shall feature OneFlow™ media, as manufactured by Watts Water Technologies, to initiate Template-Assisted Crystallization of CaCO₃. The system will be sized for maximum or peak flow rate based on the specification of said equipment. An SC-Series 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 is 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 scale elimination 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. Scale reduction potential shall be third party certified to 99.6% effectiveness or better.

Standards

DVGW – German Technical and Scientific Association for Gas & Water

OneFlow™ meets standard W-512 for testing Physical Water Treatment devices for Scale Prevention and achieved an efficiency rating of 99.6% for scale prevention.

OneFlow™ media has been tested and certified for material safety to NSF/ANSI Standard 42 and 61.

SC200 Series: Cartridge Systems with Taste and Odor Filters Specifications

A Water Control model SC200-_____ Scale Elimination System with added carbon filter shall be installed on the cold water service line to condition and filter the tap water just prior to the service line feeding the equipment it is designed to protect. The scale elimination system shall feature OneFlow™ media, as manufactured by Watts Water Technologies, to initiate Template-Assisted Crystallization of CaCO₃. The system will be sized for maximum or peak flow rate based on the specification of said equipment. An SC-Series system with added carbon filter may also be installed to protect multiple pieces of equipment from the ill-effects of hard water scale and taste/odor concerns 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 housings to allow the bypass of untreated water in the event that service or cartridge replacement is 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 scale elimination 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. Scale reduction potential shall be third party certified to 99.6% effectiveness or better.

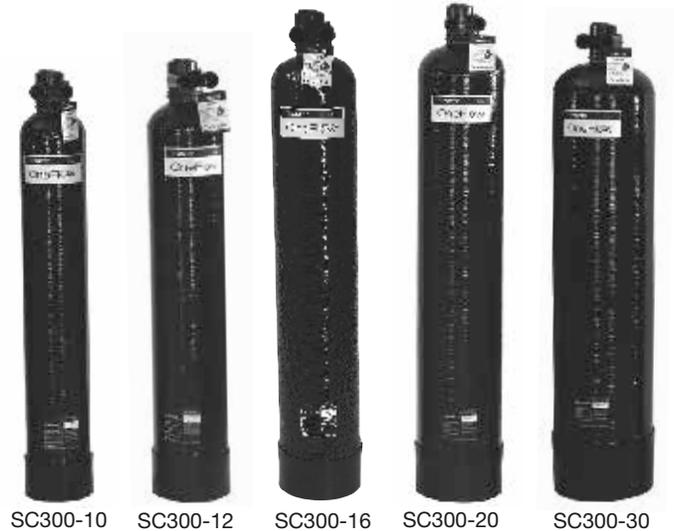
Models SC300-10, 12, 16, 20 and 30 Commercial Scale Elimination Systems up to 30 GPM

Perfect for:

- Domestic water systems
- Boiler feeds (domestic hot water only)
- Water heater feeds
- Commercial dishwashers

Models

Model	Maximum Flow Rate	Connection Sizes
SC300-10	10 gpm (38 lpm)	¾", 1" or 1¼" (20, 25, 32mm)
SC300-12	12 gpm (54.5 lpm)	¾", 1" or 1¼" (20, 25, 32mm)
SC300-16	16 gpm (60.8 lpm)	¾", 1" or 1¼" (20, 25, 32mm)
SC300-20	20 gpm (76 lpm)	¾", 1" or 1¼" (20, 25, 32mm)
SC300-30	30 gpm (114 lpm)	¾", 1" or 1¼" (20, 25, 32mm)



Connection Options

¾" and 1" Sweat (20 and 25mm)

1" and 1¼" Plastic MPT (25 and 32mm)

Replacement Media

SC300-10M	Media should be replaced every 3 years
SC300-12M	Media should be replaced every 3 years
SC300-16M	Media should be replaced every 3 years
SC300-20M	Media should be replaced every 3 years
SC300-30M	Media should be replaced every 3 years

Dimensions

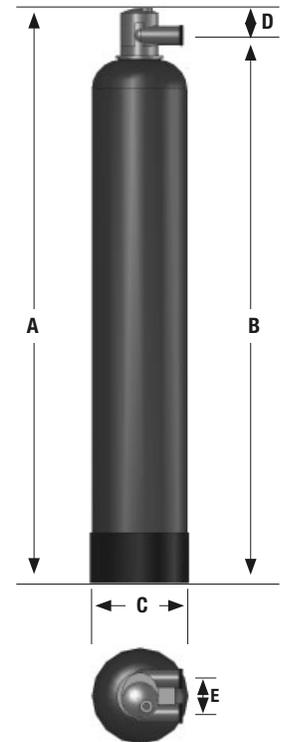
Model	Dimensions									
	A		B		C		D		E	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
SC300-10	48½	1232	46	1168	7	178	2½	64	3	76
SC300-12	48½	1232	46	1168	8	203	2½	64	3	76
SC300-16	52½	1334	48	1219	9	229	2½	64	3	76
SC300-20	59½	1511	57	1448	10	254	2½	64	3	76
SC300-30	56½	1435	54	1372	12	305	2½	64	3	76

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

	SC300-10		SC300-12		SC300-16		SC300-20		SC300-30	
*Maximum Flow	10 gpm	37.8 lpm	12 gpm	45.4 lpm	16 gpm	60.6 lpm	20 gpm	75.7 lpm	30 gpm	113.6 lpm
Dry Weight	22 lbs.	10.0 kgs.	25 lbs.	11.3 kgs.	29 lbs.	13.2 kgs.	35 lbs.	15.9 kgs.	43 lbs.	19.5 kgs.
Service Weight	80 lbs.	36.3 kgs.	97 lbs.	44.0 kgs.	129 lbs.	58.5 kgs.	168 lbs.	76.2 kgs.	235 lbs.	106.6 kgs.

*Exceeding maximum flow can reduce effectiveness and void warranty.



Models SC300-50 and 75 Commercial Scale Elimination Systems up to 75 GPM

OneFlow™

Perfect for:

- Domestic water systems
- Boiler feeds (domestic hot water only)
- Water heater feeds
- Commercial dishwashers

Peak Flow Rates - Weights

	SC300-50		SC300-75	
Dry Weight	54 lbs.	31.8 kgs.	88 lbs.	30.8 kgs.
Service Weight	350 lbs.	158.8 kgs.	420 lbs.	190.6 kgs.

Models

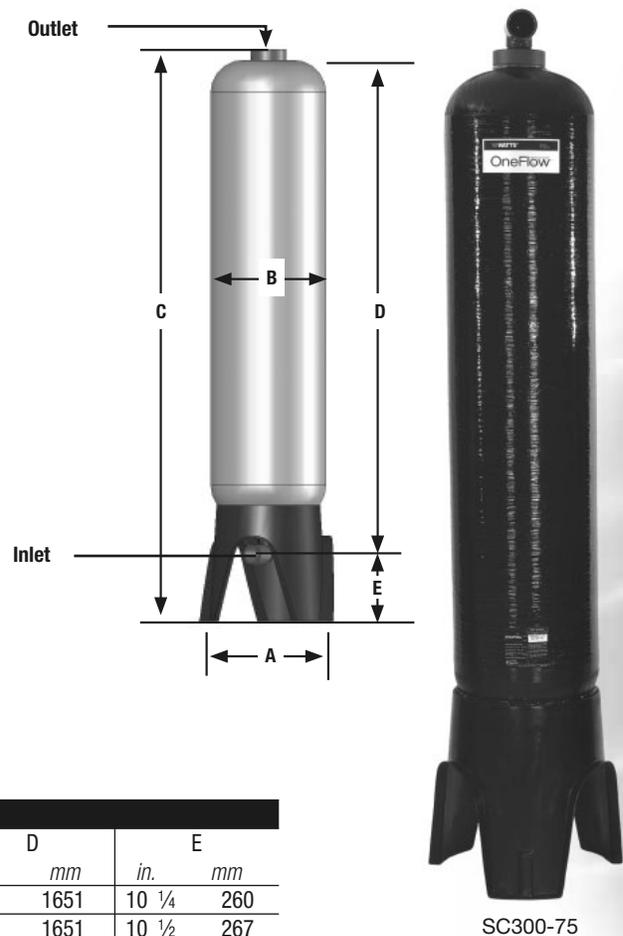
Model	Maximum Flow Rate
SC300-50	50 gpm (189.3 lpm)
SC300-75	75 gpm (283.9 lpm)

Connections

Inlet Connection	2" (50mm) PVC Union with 90° Socket
Outlet Connection	2" (50mm) PVC Socket

Replacement Media

SC300-50M	Media should be replaced every 3 years
SC300-75M	Media should be replaced every 3 years



Dimensions

Model	Dimensions									
	A		B		C		D		E	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
SC300-50	17	432	14	356	79	2006	65	1651	10 ¼	260
SC300-75	17	432	16	406	79	2006	65	1651	10 ½	267

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

Series SC400: Models 100 – 450

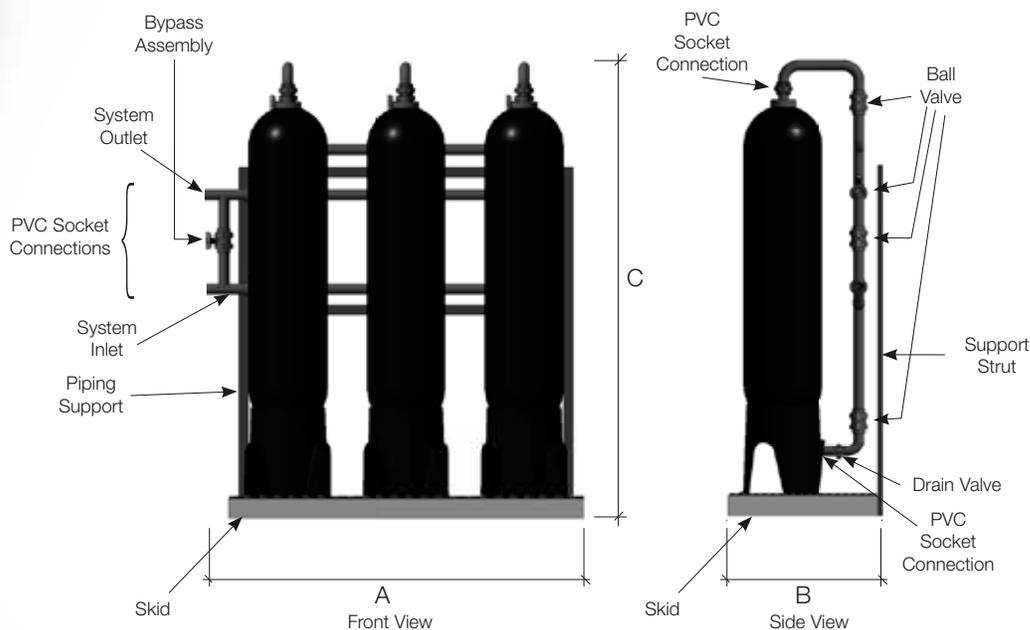
Turnkey, Skid-mounted Systems up to 450 GPM

Perfect for:

- Large domestic water systems
- Large domestic hot water systems (on cold water feeds)
- Industrial applications

Replacement Media

- Media should be replaced every 3 years (replacement media model SC400-___M)



Dimensions – Weights

Model	Max Flow (gpm)	Tank Diameter(s)	No. of Tanks	System Dimensions (A X B X C)	Inlet Height (to center)	Outlet Height (to center)	Manifold Pipe Connections	Approx. System Weight (dry)
SC400-100	100	14"	2	50" X 30" X 92"	50"	68"	2" (SWT)	188 lbs.
SC400-150	150	16"	2	54" X 32" X 92"	50"	68"	2" (SWT)	266 lbs.
SC400-225	225	16"	3	70" X 32" X 92"	50"	68"	2" (SWT)	374 lbs.
SC400-300	300	16"	4	94" X 38" X 96"	44"	44"	3" (SWT)	472 lbs.
SC400-375	375	16"	5	110" X 38" X 96"	44"	44"	3" (SWT)	575 lbs.
SC400-450	450	16"	6	126" X 38" X 96"	44"	44"	3" (SWT)	673 lbs.

*Dimensions may be subject to change without notice.

SC300 and SC400 Series Commercial Systems

OneFlow™

Engineer Data

Feed Water Chemistry Requirements

pH	6.5 to 8.5
Hardness (maximum)	75 grains (1300 ppm CaCO ₃)
Water Pressure	15psi to 100psi (103 kPa to 6.9 bar)
Temperature	40°F to 110°F (5°C to 43°C)*
Chlorine	< 3ppm
Iron (maximum)	0.3 mg/l
Manganese (maximum)	0.05 mg/l
Copper (maximum)	1.3 mg/l
Oil & H ₂ S	None allowed
Polyphosphate	None allowed
Silica (maximum)	10 ppm

Note: Water known to have heavy loads of dirt and debris should be strained prior to OneFlow™ using a wye-pattern strainer (100 mesh) or equivalent.

SC300 Series: Commercial (Single-tank) Systems Specifications

A Water Control model SC300-_____Series Scale Elimination 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 scale elimination system shall feature OneFlow™ media, as manufactured by Watts Water Technologies, to initiate Template-Assisted Crystallization of CaCO₃. 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 and to allow the bypass of untreated water usage in the event that service or media replacement is necessary. The installation area should be suitable in size for the tank to be serviced without encumbrance and sit upright on a flat level surface.

The scale elimination system must not require additional wastewater to backwash, flush, or regenerate once put into service. The system shall not require any chemical additives and shall not require electricity for operation. The system shall not require any chemical additives and shall not require electricity for operation. Scale reduction potential shall be third party certified to 99.6% effectiveness or better.

Standards

DVGW – German Technical and Scientific Association for Gas & Water

OneFlow™ meets standard W-512 for testing Physical Water Treatment devices for Scale Prevention and achieved an efficiency rating of 99.6% for scale prevention.

*For hot water applications where water temperature is 110°F – 150°F, please consult ES-OneFlow-HotWater.

OneFlow™ media has been tested and certified for material safety to NSF/ANSI Standard 42 and 61.

SC400 Series: Turnkey (Multi-tank) Skid Systems Specifications

A Water Control Corporation model SC400-_____ Scale Elimination 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 scale elimination system shall feature OneFlow™ media, as manufactured by Watts Water Technologies, to initiate Template-Assisted Crystallization of CaCO₃. A system may also be installed further downstream to protect specific equipment or areas within a plumbing system. The entire system shall be pre-plumbed in reverse-return manifold configuration and securely fastened to a minimum 14 gauge, powder coated, heavy-duty, welded steel skid. Manifold assembly (plumbed in 2" or 3" PVC, per schedule) shall include system bypass, as well as ball valves, drain valves, and socket connections for isolating, draining, and removing each individual tank when media replacement is required. The installation area should be suitable in size for the tank(s) to be serviced without encumbrance. Skid shall include adjustable feet to aid in system leveling. Manifold inlet and outlet shall be located on (left/right) side of skid, and shall be pre-plumbed with PVC X copper sweat adaptors.

The scale elimination system must not require additional wastewater to backwash, flush, or regenerate once put into service. The system shall not require any chemical additives and shall not require electricity for operation. Scale reduction potential shall be third party certified to 99.6% effectiveness or better.

Models SCH500 – 8, 12, 20 and 75 Commercial Hot Water Scale Elimination Systems up to 75 GPM

Flow Rates: 2 gpm to 75 gpm (7.6 lpm to 285 lpm)

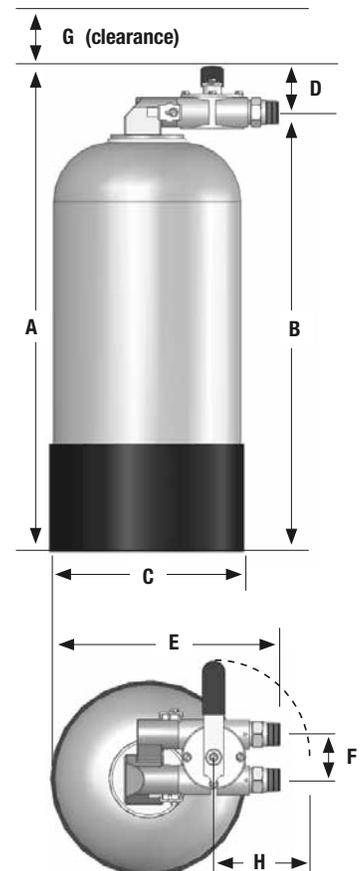
A Water Control SCH500 Series Scale Elimination System for hot water provides protection from scale formation on internal and external surfaces where the hot water feed line is being further heated (booster heater) or brought to steam (steam generator, autoclave). The SC-Series system uses specially designed components to work in applications where the water is heated between 100°F – 150°F but has not yet been treated for scale control. These types of applications typically involve protecting and extending the life of equipment and instruments from the damaging effects of hard water scale.

Models

Model	Maximum Flow Rate	Connection Sizes
SCH500-8	8 gpm (30.4 lpm)	1" (25mm) FNPT bypass
SCH500-12	12 gpm (45.6 lpm)	1" (25mm) FNPT bypass
SCH500-20	20 gpm (76 lpm)	1" (25mm) FNPT bypass
SCH500-75	75 gpm (285 lpm)	2" (50mm) Socket

Replacement Media

SCH500-8M	Media must be replaced every 3 years
SCH500-12M	Media must be replaced every 3 years
SCH500-20M	Media must be replaced every 3 years
SCH500-75M	Media must be replaced every 3 years



Dimensions — Weights

Model	Dimensions										Weight							
	A		B		C		D		E		F		G		H		lbs.	kgs
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
SCH500-8	20	508	18 ⁵ / ₈	472	8 ¹ / ₂	216	1 ³ / ₈	36	10	254	2	51	6	152	4 ¹ / ₄	108	15	6.8
SCH500-12	20	508	18 ⁵ / ₈	472	8 ¹ / ₂	216	1 ³ / ₈	36	10	254	2	51	6	152	4 ¹ / ₄	108	16	7.3
SCH500-20	22	559	20 ⁵ / ₈	523	10 ¹ / ₂	267	1 ³ / ₈	36	11	279	2	51	6	152	4 ¹ / ₄	108	26	11.8
SCH500-75	72	1829	69 ¹ / ₂	1765	17	432	2 ¹ / ₂	64	14	356	2	51	10	254	N/A	N/A	105	47.6

Engineer Data

Water Chemistry & Limitations:

pH	6.5 to 8.5
Hardness (max)	75 grains (1300 ppm CaCO ₃)
Temperature	100°F to 150°F (40°C to 70°C)
Chlorine	< 3ppm
Iron	0.3 mg/l
Manganese	0.05 mg/l
Copper	1.3 mg/l
Oil & H ₂ S	none allowed
Polyphosphate	none allowed
Silica (max)	10 ppm

Standards

DVGW – German Technical and Scientific Association for Gas & Water

OneFlow™ meets standard W-512 for testing Physical Water Treatment devices for Scale Prevention and achieved an efficiency rating of 99.6% for scale prevention.

OneFlow™ media and components have been tested and certified for material safety to NSF/ANSI Standard 42 & 61.

SCH500 Series: Hot Water Systems

Specifications

A Water Control model SC500-_____ Series Scale Elimination System for hot water shall be installed on the hot water feed line just prior to the equipment it is intended to protect. The scale elimination system shall feature OneFlow™ media, as manufactured by Watts Water Technologies, to initiate Template-Assisted Crystallization of CaCO₃. The temperature of the hot water feed line should consistently range between 100°F – 150°F (or 38°C – 66°C) as all of the components are designed to work in this elevated temperature condition. The OneFlow™ system shall effectively reduce water hardness scale concerns thereby protecting heat-transfer and other surfaces from the negative effects of scale. The system shall be plumbed with a bypass valve to allow isolation of tank(s) and to allow the bypass of untreated hot 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 for the tank to sit upright on a flat level surface.

The scale elimination system must not require backwashing, regeneration or any need to discharge water once put into service. The system must not require any chemical additives and must not require electricity for operation. The system must operate in an up-flow manner to minimize any pressure drop. Scale reduction potential shall be third party certified to 99.6% effectiveness or better.

Water Control Corporation is ready to help you with:

- System sizing and selection
- CAD™ and Revit™ drawings
- Installation and codes issues
- Troubleshooting

Contact Our Technical Support Department at:

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