

SPECIFICATION SECTION XXX

PRODUCT: E-TREAT® WATER CONDITIONING SYSTEM

1.0 GENERAL

Furnish a combination scale prevention system with activated carbon as specified here in this section and as called for in the equipment schedule for the reduction of water hardness related scale formation and chlorine tastes and odors. It shall be a non-electric zero discharge type system with no drain connection and no regeneration requirement. The system shall be supplied complete, and assembled entirely by one manufacturer and include all components required for proper operation of the system. These components include a 2 in 1 mineral tank, scale prevention media, activated carbon media, inlet and outlet connections/plumbing manifold, factory supplied bypass valve assembly, and internal distributor systems. The system shall be a Watts E-Treat® Water Conditioning System Model # ETREATWCS.

2.0 RELATED SECTIONS XXX

3.0 COMPONENTS

3.1 Mineral Tank

The mineral tank shall be constructed of a polyethylene liner with a continuous roving outer fiberglass reinforced wrapping. The tank shall be Non-ASME code with a 150 psi maximum pressure rating and 120 deg. F (48 deg. C) maximum temperature rating. The tank shall be a tank in tank design so that 2 independent medias can operate in 2 different flow modes simultaneously, one in up flow and one in down flow, within a common pressure vessel. The OneFlow® scale prevention media chamber shall operate in the up flow mode while the activated carbon chamber shall operate in the down flow mode. The tank shall have a 2.5" top threaded port for loading media and connection of the plumbing manifolds and 1.25" top tank dome port for accessing the carbon bed. The tank shall be designed with a safety factor of 4:1 for minimum burst pressure.

3.2 Scale Prevention Media

The scale prevention media shall convert dissolved bicarbonate related water hardness into inactive non-scale forming nano-crystals. The media shall operate in an up flow flow pattern and shall not require backwashing or chemicals for regeneration. The media shall be certified to NSF/ANSI standard 61. The scale prevention media shall be Watts OneFlow® Model # A8210.

3.3 Activated Carbon Media

The activated carbon media shall be a high activity carbon manufactured by heat activation of select coconut shell charcoal. The carbon will be high in micro porosity and have an iodine number of no less than 1,000 mg/g. The total ash content of the carbon shall not exceed 4% and shall have a Ball-pan hardness of no less than 98%. Activated carbon media shall be Watts Model # A9231-ALLF.

3.4 Internal Distributor System

The internal distributor system shall come already installed in the water conditioning system's mineral tank. The distributors shall be designed to keep each media bed in its intended chambers and ensure that the medias cannot be washed out of the tank. The screens of the internal distribution system shall be a slotted screen type diffuser. The slots shall be sized to not allow the scale prevention media or activated carbon to pass through and become present in the systems effluent water. The internal distribution system shall be made of corrosion resistant polymers.

3.5 System Tank Head

The system shall be supplied with a corrosion resistant polymer tank head. The tank head will be constructed of thermoplastic and certified to NSF/ANSI Standards 44, 61, and 372. The system shall be supplied with a bypass valve assembly and plumbing adapters for connection of the plumbing. The bypass valve and plumbing adapters shall have union style connections to accommodate removal of the system from the plumbing for servicing.

4.0 SERVICES

4.1 Warranty

The Contractor providing the equipment shall provide a 1 year parts and labor warranty for the system to protect against manufacturers defects. The system shall not be subjected to water temperatures above 100 deg. F (38 deg. C) or below 40 deg. F. (5 deg. C) nor shall it be subjected to pressure exceeding 125 psi. During operation the feed water pressure must not fall below 20 psi. The media shall not be subjected to iron levels greater than .3 ppm, manganese greater than .05 ppm, total phosphates greater than 3 ppm, copper greater than 1.3 ppm, pH below 6.5 or higher than 8.5, free chlorine greater than 2 ppm, and any oil or grease.

4.2 Start Up

The Contractor providing the equipment shall provide start up of the scale prevention system and perform operator training for the owner upon completion of start up.