

# Section 1

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Residential Water Conditioning Equipment

# Whole house water quality problems.

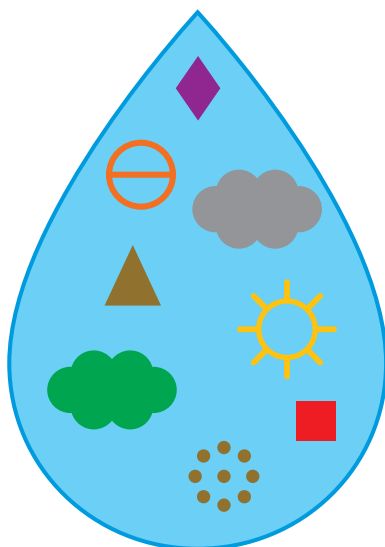
Hardness

Iron

Manganese

Arsenic

Tannin



Bad tastes

Foul odors

Chlorine and harmful chlorine by-products

Turbidity

Acidic water

## The continuous water cycle . . .

Nature intended us to have high quality water. This is why we have the *continuous water cycle*, whereby water from our oceans, rivers, lakes and streams falls to the ground as rain or snow and becomes filtered as it seeps through the earth's surface. As the water works its way through the ground, however, it picks up minerals by dissolving limestone, causing water hardness. Water may also come into contact with Iron, Manganese, Arsenic and other contaminants, which cause additional water treatment problems.

The chart below lists typical whole house water quality problems and indicates which equipment effectively corrects any problems you may have in your home.

Water Quality Problems	Symptoms	Recommended Equipment
Hardness	Mineral deposits on dishes and glassware; stiff, dingy laundry; high soap usage and need for fabric softeners; dry, itchy skin and scalp; unmanageable hair; extra work to remove soap curd on bathtubs and shower stalls; high energy costs due to scale build-up in pipes and on appliances.	Water Softener.
Chlorine, foul odors and tastes	Chlorine taste; foul odors; damage to hair; itchy skin.	Backwashing filter using activated carbon.
Iron & Manganese	Unpleasant metallic tastes; rust particles; staining on plumbing fixtures; red water; odors.	Iron filter.
Turbidity	Cloudy water; sediment, sand, silt and rust particles.	Media filter.
Acidic water (low pH)	Green stains on bathroom sinks and other porcelain surfaces; blue green water. (Acidic water may cause corrosion of pipes & plumbing fixtures.)	Acid neutralizer using Calcite.
Tannin	Brownish, tea colored water; musty odors.	Tannin filter.
Arsenic	A naturally occurring element found in ground water, Arsenic is a carcinogen at high concentrations, and the EPA reports Arsenic may cause adverse health effects in low concentrations. Testing for Arsenic is highly recommended.	Arsenic Reduction System.

# Water Softeners with CK10 Valves

## Water softeners

"Hard" water is not considered unhealthy; however, hard water problems end up costing you money through increased soap usage, reliance on water softening products and shorter life for appliances due to scale build-up in pipes and other factors.

To correct water hardness, We offer a wide range of water conditioning systems, designed to improve water quality throughout your entire household.

## Features and benefits

- Spot-free glassware and dishes.
- No mineral deposits on bathtubs and shower stalls.
- Brighter, softer laundry.
- Less reliance on water softening products.
- Dramatic reduction in soap usage.
- Manageable hair because shampoo works better.
- Pipes remain free of calcium scale build-up.
- Extended life of appliances and reduced energy costs because scale is virtually eliminated.
- Spot-free car wash (if softened water is used).



## Metered valve for greater efficiency

Our control valves are metered for greater efficiency and reduced salt usage, because regeneration of the softener resin is based on water consumption. Push button settings provide ease-of-use.

Model selection is typically based on water hardness, water usage, water source and other factors.

## Two equipment types

Watts water softeners are available in two configurations, including:

### Single tank

Single tank systems include one tank for the softening resin, a brine tank for salt, used to regenerate the softening resin and our metered control valve.

### Dual tank

Dual tank systems come with an additional tank with activated carbon for pre-treatment, which removes chlorine, tastes and odors in municipal water applications and extend the life of the softening resin.

## Models

Model Number	Capacity (Grains)	Media Cu.Ft.	Valve Type	Connection	Mineral Tank Size	Brine Tank Size	Safety Float Valve
M3011-CK10SM	30,000	1.0	Metered	1"	9"x48"	18"x36"	Yes
M3013-CK10SM	45,000	1.5	Metered	1"	10"x54"	18"x36"	Yes
M3015-CK10SM	60,000	2.0	Metered	1"	12"x52"	18"x36"	Yes

## Dual tank models

Model Number	Capacity (Grains)	Media Cu.Ft.	Valve Type	Connection	Mineral Tank (Top)	Mineral Tank (Bottom)	Brine Tank Size	Safety Float Valve
M3011CK10SM-ST1	30,000	1.0	Metered	1"	10"x24"	10"x35"	18"x36"	Yes

# Water Softeners with Clack WS125 Valves



## Superior flow rates at a low cost

Water Filters with Clack WS125 control valves provide extremely high service flow rates at the right price. Check out the specifications, features, benefits and options described below.

## Specifications

<b>Valve</b>	Clack WS125 valve
<b>Electrical</b>	120 Volt 60 Hz standard
<b>Valve body</b>	Glass reinforced Noryl®
<b>Distributor</b>	1.32" O.D.
<b>Types</b>	Meter and time clock initiated
<b>Connection</b>	1.25" MNPT Noryl® Standard
<b>Mineral Tank</b>	Corrosion resistant FRP
<b>Brine Tank</b>	Fully assembled polyethylene
<b>Media</b>	High capacity cation resin

## Features & benefits

- Economical pricing and top quality components.
- Attached 24 volt transformer included.
- Up to 2.5 CF fully assembled, ready for installation.
- Models for capacities up to 180,000 grains.
- Advanced digital control with diagnostics.
- Decorative mineral tank jacket options available.
- Multiple brine tank options available
- Multiple ¾" to 1½" bypass and connection options.
- Safety brine valve with air check included.

## Meter initiated models

Part Number	Resin Cu. Ft.	App. GPG Capacity @ 4 lb CF	App. GPG Capacity @ 15 lb CF	Mineral Tank Size	Brine Tank Size	Dry Salt Lbs.	Estimated Peak GPM	Rec. GPM Range	App. Height Inch	Ship Wt. (lbs)
WST-S1209M	1	16,000	30,000	9x48	14x14	200	14	1.3-8	61	115
WST-S1210M	1.5	24,000	45,000	10x54	14x14	200	16	1.6-10	67	155
WST-S1212M	2	32,000	60,000	12x52	15x17	250	18	2.3-15	65	210
WST-S1213M	2.5	40,000	75,000	13x54	18x40	400	18	2.8-18	67	235
WST-S1214M	3	48,000	90,000	14x65	18x40G	350	20	3.2-20	77	290
WST-S1216M	4	64,000	120,000	16x65	24x40	650	20	4.2-20	77	385
WST-S1218M	5	80,000	150,000	18x65	24x50	850	20	5.3-20	80	450
WST-S1221M	6	96,000	180,000	21x62	24x50	850	22	7.2-22	76	545

## Time clock initiated models

Part Number	Resin Cu. Ft.	App. GPG Capacity @ 4 lb CF	App. GPG Capacity @ 15 lb CF	Mineral Tank Size	Brine Tank Size	Dry Salt Lbs.	Estimated Peak GPM	Rec. GPM Range	App. Height Inch	Ship Wt. (lbs)
WST-S1209T	1	16,000	30,000	9x48	14x14	200	14	1.3-8	61	115
WST-S1210T	1.5	24,000	45,000	10x54	14x14	200	16	1.6-10	67	155
WST-S1212T	2	32,000	60,000	12x52	15x17	250	18	2.3-15	65	210
WST-S1213T	2.5	40,000	75,000	13x54	18x40	400	18	2.8-18	67	235
WST-S1214T	3	48,000	90,000	14x65	18x40G	350	20	3.2-20	77	290
WST-S1216T	4	64,000	120,000	16x65	24x40	650	20	4.2-20	77	385
WST-S1218T	5	80,000	150,000	18x65	24x50	850	20	5.3-20	80	450
WST-S1221T	6	96,000	180,000	21x62	24x50	850	22	7.2-22	76	545

Superior flow rates at a low cost

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