

# Multi-Tank Water Softener



With "WS" Series Control Valves



Automatically reduce hardness (calcium/magnesium) and dissolved iron/ manganese along with their unpleasant side-effects. Only the highest quality resin, controls and materials are used in Chandler Systems Commercial Water Softeners. Our motor-driven piston control valve is the most reliable under even severe water conditions and resists common adversaries such as hardness and iron. Meanwhile, our hub and lateral style or Vortech™ distribution system within the corrosion resistant tanks maximize flow while reducing pressure loss through the units. Designed for use in commercial, industrial or domestic water applications.

As we remain **Committed to Innovation**, **CSI** provides the design and engineering support to ensure the most effective treatment solution for each installation. For a stand-alone installation or a new construction project, replace or integrate new equipment into an existing process, we have the proper system options available to meet your needs.

## Standard Features

- High Flow Control Valves thru 3" – Flow Rates 700+ gpm
- Up to 1.2 Million Grain Tank Capacity per Tank
- Maximum Operating Pressure – 125 psi/110° F
- Clack™ Control Valves
- Electronic Meter Regeneration
- Duplex – Alternating Tank Operation
- Triplex & Quadplex – Progressive Flow Operation
- Premium Cation Resin – 30K grains/cu.ft.
- No Hard Water Bypass
- Brine Tank – HDPE material, Salt Grid Plate or Gravel Underbed, Safety Brine Valve (30" & smaller diameter), Air Check and Overflow

## Options

- Clean Water Backwash
- Electro-Mechanical Control Valve
- Steel and ASME Rated Pressure Vessels
- Side-mount Control Valves
- Flow Management with Motorized Ball Valves or Staged Diaphragm Valves
- Water Quality Monitor Initiated Regeneration
- High Capacity Resin
- 2900, 3900, 9000, or 9500 Top-mount Control Valves

## Typical Use:

- Boiler Feed
- Hospitals
- Large Schools and Universities
- Industrial Pre-treatment
- Hotels/Motels
- Apartments/Condos
- Nursing Home/ Assisted Living
- Laundry Facilities
- Food Service
- Corporate Park



**CSI WATER TREATMENT SYSTEMS – Commercial Division**  
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# Product Specifications

## Commercial Multi-Tank Softeners

Model No.	GPM FLOW RATES				PIPE SIZE NPT		GRAINS EXCH CAP @ LBS SALT (PER RESIN TANK)	RESIN TANK CU.FT. RESIN (Per TANK)			BRINE TANK SALT CAPACITY LBS Per TANK			OVERALL HEIGHT
	SERVICE*		PEAK*	BACK WASH	SERVICE	DRAIN		DIA X HT	QTY	DIA X HT	QTY			
	15 PSI Loss	8 PSI Loss					25 PSI Loss					MAXIMUM	MINIMUM	
CAT60-10WS	20	15	27	4.2	1"	3/4"	60,000 GR @ 30 #	14" x 65"	2	2	18" x 40"	300	2	73"
CAT60-12WS	26	19	35	4.2	1-1/4"	3/4"	40,000 GR @ 12 #	14" x 65"	2	2	18" x 40"	300	2	73"
CAT60-15WS	35	26	45	4.2	1-1/2"	3/4"		14" x 65"	2	2	18" x 40"	300	2	73"
CAT90-10WS	19	14	26	4.2	1"	3/4"	90,000 GR @ 45 #	14" x 65"	3	2	18" x 40"	300	2	73"
CAT90-12WS	24	18	33	4.2	1-1/4"	3/4"	60,000 GR @ 18 #	14" x 65"	3	2	18" x 40"	300	2	73"
CAT90-15WS	32	24	43	4.2	1-1/2"	3/4"		14" x 65"	3	2	18" x 40"	300	2	73"
CAT120-10WS	20	15	27	5.3	1"	3/4"	120,000 GR @ 60 #	16" x 65"	4	2	24" x 50"	700	2	73"
CAT120-12WS	25	18	34	5.3	1-1/4"	3/4"	80,000 GR @ 24 #	16" x 65"	4	2	24" x 50"	700	2	73"
CAT120-15WS	35	26	49	5.3	1-1/2"	3/4"		16" x 65"	4	2	24" x 50"	700	2	73"
CAT120-20WS	46	34	59	5.3	2"	3/4"		16" x 65"	4	2	24" x 50"	700	2	74"
CAT150-12WS	27	20	35	7.5	1-1/2"	3/4"	150,000 GR @ 75 #	18" x 65"	5	2	24" x 50"	700	2	73"
CAT150-15WS	39	28	53	7.5	1-1/2"	3/4"	100,000 GR @ 30 #	18" x 65"	5	2	24" x 50"	700	2	75"
CAT150-20WS	52	38	68	7.5	2"	3/4"		18" x 65"	5	2	24" x 50"	700	2	76"
CMS150-203QWSH	108	78	140	7	2"	1"		18" x 65"	3	3	30" x 50"	1000	3	81"
CMS150-204QWSH	162	117	210	7	2"	1"		18" x 65"	4	4	30" x 50"	1000	4	81"
CAT210-15WS	42	31	56	10	1-1/2"	1"	210,000 GR @ 105 #	21" x 62"	7	2	24" x 50"	700	2	75"
CAT210-20WS	65	47	83	10	2"	1"	140,000 GR @ 42 #	21" x 62"	7	2	24" x 50"	700	2	76"
CMS210-203QWSH	136	100	176	10	2"	1"		21" x 62"	3	3	30" x 50"	1000	3	81"
CMS210-204QWSH	204	150	264	10	2"	1"		21" x 62"	4	4	30" x 50"	1000	4	81"
CAT300-15WS	44	32	58	13	1-1/2"	1"	300,000 GR @ 150 #	24" x 72"	10	2	30" x 50"	1000	2	82"
CAT300-20WS	71	52	91	13	2"	1"	200,000 GR @ 60 #	24" x 72"	10	3	30" x 50"	1000	2	83"
CMS300-203QWSH	150	110	194	12	2"	1"		24" x 72"	3	3	30" x 50"	1000	3	89"
CMS300-204QWSH	225	165	291	12	2"	1"		24" x 72"	4	4	30" x 50"	1000	4	89"
CAT450-20WS	81	59	105	20	2"	1"	450,000 GR @ 225 #	30" x 72"	15	2	30" x 50"	1000	2	86"
CAT450-30WS	138	101	179	20	3"	1-1/2"	300,000 GR @ 90 #	30" x 72"	15	3	30" x 50"	1000	2	89"
CMS450-203QWSH	176	128	226	20	2"	1"		30" x 72"	3	3	30" x 50"	1000	3	88"
CMS450-204QWSH	264	192	339	20	2"	1"		30" x 72"	4	4	30" x 50"	1000	4	88"
CMS450-303QWS	276	202	358	20	3"	1-1/2"		30" x 72"	3	3	30" x 50"	1000	3	89"
CMS450-304QWS	414	303	537	20	3"	1-1/2"		30" x 72"	4	4	30" x 50"	1000	4	89"
CAT600-20WS	89	65	114	30	2"	1-1/2"	600,000 GR @ 300 #	36" x 72"	20	2	42" x 60"	2900	2	94"
CAT600-30WS	163	119	210	30	3"	1-1/2"	400,000 GR @ 120 #	36" x 72"	20	2	42" x 60"	2900	2	97"
CMS600-203QWSH	194	142	252	30	2"	1-1/2"		36" x 72"	3	3	42" x 60"	2900	3	96"
CMS600-204QWSH	291	213	378	30	2"	1-1/2"		36" x 72"	4	4	42" x 60"	2900	4	96"
CMS600-303QWS	326	238	420	30	3"	1-1/2"		36" x 72"	3	3	42" x 60"	2900	3	97"
CMS600-304QWS	489	357	630	30	3"	1-1/2"		36" x 72"	4	4	42" x 60"	2900	4	97"
CAT900-30WS	175	128	227	40	3"	2"	900,000 GR @ 450 #	42" x 72"	30	2	50" x 60"	4100	2	109"
CMS900-303QWS	350	256	454	40	3"	2"	600,000 GR @ 180 #	42" x 72"	30	3	50" x 60"	4100	3	109"
CMS900-304QWS	525	384	681	40	3"	2"		42" x 72"	4	4	50" x 60"	4100	4	109"
CAT1200-30WS	181	132	234	50	3"	2"	1,200,000 GR @ 600 #	48" x 72"	40	2	50" x 60"	4100	2	106"
CMS1200-303QWS	362	264	468	50	3"	2"	800,000 GR @ 240 #	48" x 72"	40	3	50" x 60"	4100	3	106"
CMS1200-304QWS	543	396	702	50	3"	2"		48" x 72"	4	4	50" x 60"	4100	4	106"

\*Flow rates shown are minimum possible at all times (they're assuming one tank is off-line for regeneration).

### Duplex CAT-series - Twin Demand Alternating Tank Operation, 12v or 20v electronic timer and turbine meter

(One tank is in operation and one tank is in standby/regeneration at all times)

### Triplex/Quad - "QWS" Progressive Flow Electronic Phased Operation, 20v electronic timer and turbine meter

Electronic timers on up to 4 softeners can be linked and programmed for optimal treatment over highly variable and high flow rate applications. Systems operators program the flow rates at which each tank enters/leaves service mode. System is interlocked, allowing only one tank to regenerate at a time (immediate regeneration).

## Operating Information

For use on Potable Water Only

Do not use on microbiologically unsafe or unknown quality water

Installation must comply with state and local plumbing/electrical codes

120v/12vac (10WS-20WS), 20vac (20WSH-30WS) CUL/UL listed transformer

included with electronic meter systems

Tank warranty void if subject to vacuum

Low flow channeling – less than .5 gpm/cu. ft. resin – may cause hardness leakage

Water Temperature Range

Ambient Air Temperature Range

Operating Pressure Range

35° – 110°F

35° – 120°F

20 – 125 psi

Electronic Requirements

Influent Turbidity

Influent Chlorine

Iron/Manganese

110v/60Hz

5 NTU

1 ppm max.

< 5 ppm

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