

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Series HC-200, HCTA-200 and HCP-200 Commercial Water Softening Systems

Connection Size: 2"**Flow Rates: Up to 420 gpm (1590 lpm)**

Watts Series HC-200, HCTA-200, and HCP-200 water softening systems are highly efficient conventional cation exchange type water softeners. These pre-engineered systems are suitable for commercial applications ranging from 90,000 to 600,000 grains of hardness removal per tank and flow rates up to 420 gpm (1590 lpm). Where continuous softened water is required HCTA-200 duplex alternating and HCP-200 systems can be specified for uninterrupted service. Regeneration is meter demand initiated. All cycles of regeneration are fully automatic.

Watts Series HC-200, HCTA-200, and HCP-200 water softeners are designed for point of use or point of entry applications where the benefits of softened water are required. These systems exchange scale-forming calcium and magnesium ions with non scale-forming sodium ions to create soft water for a variety of applications.

Steam boiler make up water, water heater pretreatment, reverse osmosis pretreatment, cooling tower make up water, sterilizer make up water, washing, and process water are all common applications for the Watts Series HC-200, HCTA-200, and HCP-200 water softeners. Watts Series HCP-200 are ideal for commercial and industrial applications where high flow and high capacities are required to accommodate wide variances in flow rates.

Softened water provides a wide variety of benefits such as preventing lime scale formation in pipes, valves, water heating equipment, heat exchangers, and cooling towers to reducing mineral build up in areas that see excessive splashing such as food preparation counters and sink areas. Softened water also conserves soaps and cleaning agents by eliminating the formation of soap curd, so your cleaners can work on cleaning – not reacting with the hardness in your water.

Features

- Durable brass bodied control valve for years of service
- Fully automatic metered demand control valve certified to NSF/ANSI standards
- Sophisticated digital electronic controls that store operating history that can be accessed by the user
- Fully adjustable regeneration cycles
- Dry contact lock out switch for remote interface is standard
- High capacity resin certified to NSF/ANSI standards
- Highly corrosion resistant fiberglass tanks certified to NSF/ANSI standards
- Durable polypropylene lower distribution system



Series HC-200



Series HCTA-200



Series HCP-200

HCP-200 Features

- Easily select duplex, triplex or quadplex systems with flow demand staging
- Model for capacities up to 600,000 grains per tank
- Pre-engineered systems with up to 4 tanks in parallel for flow rates up to 420 GPM
- Arrange up to 8 tanks in parallel for higher flow and capacity custom configurations*
- All systems have no hard water bypass pistons
- Each softening vessel comes complete with brine tank and meter
- All systems have stainless steel in-line flow meters

*Must contact your Watts representative for proper equipment selection of system sizes exceeding 4 mineral tanks.

⚠ 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.

Standards

Control Valve- Certified to NSF/ANSI Std. 61 and 372

Ion Exchange Resin- Certified to NSF/ANSI Std. 61 and 372

Mineral Tank- Certified to NSF/ANSI Std. 44 or 61

Specifications

A Watts Series [HC-200], [HCTA-200], [HCP-200] Model # [] water softening system shall be installed on the building's main water line just after it enters the building. The installation point shall be after any backflow prevention or pressure regulating valves. Other installation options are to install a system just before the water heater or other types of equipment needing the protection of softened water. In installations where dedicated cold water make up to a water heater is the installation point, a backflow preventer and a thermal expansion tank must be installed as well. The system shall be installed with a bypass valve to allow for the shut down and removal of the unit without interrupting the water supply to the building.

The water softener shall be a down flow regenerated, metered demand, sodium cycle cation exchange type system with all components necessary for proper operation.

Electrical requirements are 120 volt 60 hertz. A local drain is required to accept drain water from the system. The feed water pressure must not fall below 25psi or exceed 125psi. Water temperature must not fall below 34°F or exceed 110°F (1°C - 43°C). The system shall provide softened water measuring less than one grain per gallon of hardness as Calcium Carbonate when operated within the manufacturer's operational guidelines.

Feed Water Guidelines

pH 6 to 10

Hardness (maximum) Depends on customer's acceptable hardness leakage level.

Water Pressure 25psi to 125psi (171 kPa to 8.5 bar)

Temperature 34 - 110°F (1 - 43°C)

Free Chlorine (maximum) 1mg/L

Iron (maximum) 1mg/L

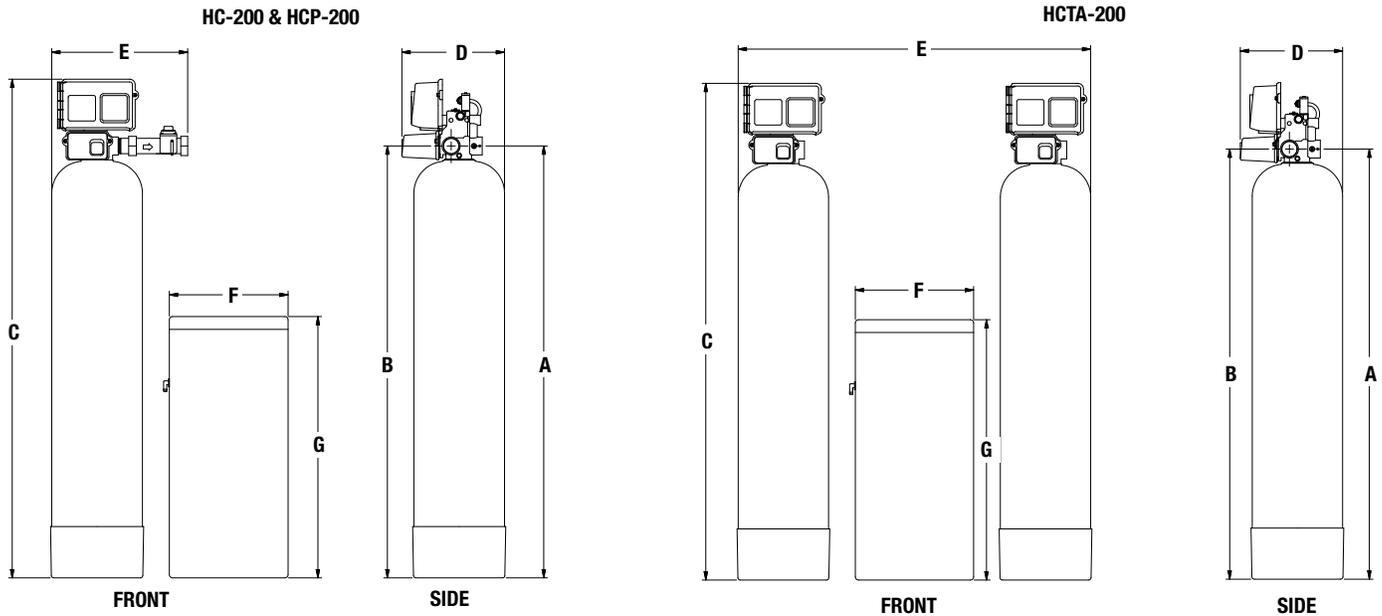
Oil and H2S None Allowed

Turbidity Less than 5.0 NTU

Total Dissolved Solids Must be below 750mg/l for the softener to produce less than 1 grain per gallon soft water.

For all other guideline information please contact your Watts representative.

Dimensions - Weights



NOTICE

Dimensional data is for a single mineral tank system ONLY. HCP-200 models are composed of multiple HC-200 systems which can be arranged according to suit floor space availability. See Space Required in table below for single tank systems and estimate 2 spaces for duplex, three spaces for triplex and 4 spaces for quadplex HCP-200 series systems.

Series HC-200 & HCP-200

MODEL NO.	DIMENSIONS												WEIGHTS			
	A		B		C		D		E		F		G		lbs.	kgs.
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
M4043B-29NT	67 ³ / ₈	1711	67 ³ / ₈	1711	77 ¹ / ₈	1978	16	406	21 ¹ / ₄	538	18	457	40	1016	265	120
M4047B-29NT	67 ³ / ₄	1721	67 ³ / ₄	1721	77 ¹ / ₈	1959	17	432	22 ¹ / ₄	564	18	457	40	1016	350	159
M4048B-29NT	68 ¹ / ₂	1740	68 ¹ / ₂	1740	78 ¹⁵ / ₁₆	2004	18 ¹ / ₈	460	23 ¹ / ₄	589	24	607	41	1041	400	182
M4052B-29NT	70 ¹ / ₂	1791	70 ¹ / ₂	1791	80 ¹⁵ / ₁₆	2055	21 ¹ / ₈	536	24 ¹¹ / ₁₆	627	24	607	50	1270	600	273
M4058B-29NT	76 ³ / ₄	1949	76 ³ / ₄	1949	87 ¹ / ₈	2213	24 ¹ / ₈	613	26 ¹ / ₄	665	30	762	50	1270	710	323
M4059B-29NT	80 ¹ / ₄	2038	80 ¹ / ₄	2038	93 ¹ / ₈	2302	30 ¹ / ₈	765	30 ¹ / ₈	764	39	991	48	1219	1160	527
M4060B-29NT	86	2184	86	2184	97 ⁷ / ₁₆	2449	36 ¹ / ₈	917	36 ¹ / ₈	917	39	991	60	1524	1560	709

Series HCTA-200

MODEL NO.	DIMENSIONS												WEIGHTS			
	A		B		C		D		E		F		G		lbs.	kgs.
	in.	in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
M4043TA-29NT	67 ³ / ₈	1711	67 ³ / ₈	1711	77 ¹ / ₈	1978	16	406	60	1524	18	457	40	1016	450	205
M4047TA-29NT	67 ³ / ₄	1721	67 ³ / ₄	1721	77 ¹ / ₈	1959	17	432	60	1524	18	457	40	1016	500	227
M4048TA-29NT	68 ¹ / ₂	1740	68 ¹ / ₂	1740	78 ¹⁵ / ₁₆	2004	18 ¹ / ₈	460	70	1778	24	610	41	1041	800	364
M4052TA-29NT	70 ¹ / ₂	1791	70 ¹ / ₂	1791	80 ¹⁵ / ₁₆	2055	21 ¹ / ₈	536	75	1905	24	610	50	1270	1200	545
M4058TA-29NT	76 ³ / ₄	1949	76 ³ / ₄	1949	87 ¹ / ₈	2213	24 ¹ / ₈	613	87	2210	30	762	50	1270	1400	636
M4059TA-29NT	80 ¹ / ₄	2038	80 ¹ / ₄	2038	93 ¹ / ₈	2302	30 ¹ / ₈	765	104	2642	39	991	48	1219	2200	1000
M4060TA-29NT	86	2184	86	2184	97 ⁷ / ₁₆	2449	36 ¹ / ₈	917	115	2921	39	991	60	1524	3000	1364

NOTICE

Service gpm is for a single mineral tank system ONLY. For HCP-200 Series systems, you will need to multiply the Service gpm by (x2) for Duplex, (x3) for Triplex and (x4) for Quadplex systems.

Specifications

MODEL NO.	MINERAL TANK			BRINE TANK		SOFTENING CAPACITY		LBS. SALT PER REGENERATION		FLOW RATE & PRESSURE		
	TANK SIZE	RESIN Ft ³	GRAVEL	TANK SIZE	SALT FILL	MAX	MIN	MAX	MIN	SERV GPM	DROP PSI	BKW GPM
M4043B-29NT	14" x 65"	3	60 lbs.	18" x 40"	400	90 K	60 K	45	18	25/40	15/25	5
M4047B-29NT	16" x 65"	4	80 lbs.	18" x 40"	400	120 K	80 K	60	24	35/55	15/25	7
M4048B-29NT	18" x 65"	5	100 lbs.	24" x 41"	600	150 K	100 K	75	30	57/65	15/25	10
M4052B-29NT	21" x 62"	7	100 lbs.	24" x 50"	600	210 K	140 K	105	42	60/77	15/25	12
M4058B-29NT	24" x 72"	10	200 lbs.	30" x 50"	1200	300 K	200 K	150	60	74/97	15/25	15
M4059B-29NT	30" x 72"	15	400 lbs.	39" x 48"	2200	450 K	300 K	225	90	80/100	15/25	25
M4060B-29NT	36" x 72"	20	500 lbs.	39" x 60"	2200	600 K	400 K	300	120	84/105	15/25	35

Ordering Information for 2" Simplex (HC-200) and Duplex Alternating (HCTA-200) Softeners

MODEL NO.	ORDERING CODES	DESCRIPTION	SPACE REQUIRED D X W X H	WEIGHT LBS
M4043B-29NT	68105390	3 Cubic Foot 2" Simplex Softener with Flow Meter	18" x 39" x 87"	265
M4047B-29NT	68105401	4 Cubic Foot 2" Simplex Softener with Flow Meter	18" x 39" x 87"	350
M4048B-29NT	68105407	5 Cubic Foot 2" Simplex Softener with Flow Meter	24" x 48" x 89"	400
M4052B-29NT	68105414	7 Cubic Foot 2" Simplex Softener with Flow Meter	24" x 52" x 89"	600
M4058B-29NT	68105428	10 Cubic Foot 2" Simplex Softener with Flow Meter	30" x 60" x 96"	710
M4059B-29NT	68105443	15 Cubic Foot 2" Simplex Softener with Flow Meter	39" x 75" x 106"	1160
M4060B-29NT	68105455	20 Cubic Foot 2" Simplex Softener with Flow Meter	39" x 81" x 107"	1560
M4043TA-29NT	68105393	3 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	18" x 60" x 87"	450
M4047TA-29NT	68105405	4 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	18" x 64" x 87"	500
M4048TA-29NT	68105411	5 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	24" x 72" x 89"	800
M4052TA-29NT	68105420	7 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	24" x 80" x 89"	1200
M4058TA-29NT	68105435	10 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	30" x 90" x 96"	1400
M4059TA-29NT	68105448	15 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	39" x 111" x 106"	2200
M4060TA-29NT	68105460	20 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	39" x 123" x 107"	3000

Ordering Information for 2" Duplex Progressive (HCP-200) Softeners

MODEL NO.	ORDERING CODE	DESCRIPTION	SPACE REQUIRED D X W X H	WEIGHT LBS
M4043TI-NH	68110194	3 Cubic Foot 2" Progressive Duplex Softener with Flow Meters	38" x 55" x 87"	530
M4047TI-NH	68110195	4 Cubic Foot 2" Progressive Duplex Softener with Flow Meters	39" x 57" x 87"	700
M4048TI-NH	68110196	5 Cubic Foot 2" Progressive Duplex Softener with Flow Meters	46" x 59" x 89"	800
M4052TI-NH	68105422	7 Cubic Foot 2" Progressive Duplex Softener with Flow Meters	49" x 62" x 91"	1200
M4058TI-NH	68105437	10 Cubic Foot 2" Progressive Duplex Softener with Flow Meters	59" x 65" x 98"	1420
M4059TI-NH	68105450	15 Cubic Foot 2" Progressive Duplex Softener with Flow Meters	74" x 73" x 104"	2320
M4060TI-NH	68105458	20 Cubic Foot 2" Progressive Duplex Softener with Flow Meters	80" x 85" x 108"	3120

Ordering Information for 2" Triplex Progressive (HCP-200) Softeners

MODEL NO.	ORDERING CODE	DESCRIPTION	SPACE REQUIRED D X W X H	WEIGHT LBS
M4043TR-NH	68110197	3 Cubic Foot 2" Progressive Triplex Softener with Flow Meters	38" x 82" x 87"	795
M4047TR-NH	68110198	4 Cubic Foot 2" Progressive Triplex Softener with Flow Meters	39" x 85" x 87"	1050
M4048TR-NH	68110199	5 Cubic Foot 2" Progressive Triplex Softener with Flow Meters	46" x 88" x 89"	1200
M4052TR-NH	68105424	7 Cubic Foot 2" Progressive Triplex Softener with Flow Meters	49" x 92" x 91"	1800
M4058TR-NH	68105439	10 Cubic Foot 2" Progressive Triplex Softener with Flow Meters	59" x 97" x 98"	2130
M4059TR-NH	68105452	15 Cubic Foot 2" Progressive Triplex Softener with Flow Meters	74" x 109" x 104"	3480
M4060TR-NH	68105464	20 Cubic Foot 2" Progressive Triplex Softener with Flow Meters	80" x 127" x 108"	4680

Ordering Information for 2" Quadplex Progressive (HCP-200) Softeners

MODEL NO.	ORDERING CODE	DESCRIPTION	SPACE REQUIRED D X W X H	WEIGHT LBS
M4043QD-NH	68110200	3 Cubic Foot 2" Progressive Quadplex Softener with Flow Meters	38" x 109" x 87"	1060
M4047QD-NH	68110201	4 Cubic Foot 2" Progressive Quadplex Softener with Flow Meters	39" x 113" x 87"	1400
M4048QD-NH	68110202	5 Cubic Foot 2" Progressive Quadplex Softener with Flow Meters	46" x 117" x 89"	1600
M4052QD-NH	68105417	7 Cubic Foot 2" Progressive Quadplex Softener with Flow Meters	46" x 123" x 91"	2400
M4058QD-NH	68105433	10 Cubic Foot 2" Progressive Quadplex Softener with Flow Meters	59" x 129" x 98"	2840
M4059QD-NH	68105446	15 Cubic Foot 2" Progressive Quadplex Softener with Flow Meters	74" x 145" x 104"	4640
M4060QD-NH	68105458	20 Cubic Foot 2" Progressive Quadplex Softener with Flow Meters	80" x 169" x 108"	6240

Notes: Capacities are based on resin manufacturer's data and are dependent upon influent water TDS, temperature, bed depth, and flow rates. Feed water must be free of oil and color. Pipe size, tank size, and space requirements are in inches. Capacities and flow rates expressed above are per tank. Flow rates listed at 25psi drops are for intermittent peak flow rates and are not to be used as continuous flows.

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.



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