

For Commercial Applications

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Series PWS20 and Series PWS20-2 Commercial Water Softening Systems

Connection Size: 2" (50mm)

Flow Rates: Up to 105 gpm (397 lpm)

Watts Pure Water Series PWS20 and PWS20-2 water softening systems are highly efficient conventional cation exchange type water softeners. They are suitable for commercial applications ranging from 90,000 to 600,000 grains of hardness removal per tank and flow rates up to 105 gallons per minute (397 lpm). Where continuous softened water is required PWS20-2 duplex alternating systems can be specified for uninterrupted service. Regeneration is meter demand initiated. All cycles of regeneration are fully automatic and do not require manual actuation.

Watts Pure Water Series PWS20 and PWS20-2 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 Pure Water Series PWS20 and PWS20-2 water softeners.

Softened water provides a wide variety of benefits from not introducing scale into 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
- WQA Certified fully automatic metered demand control valve
- 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
- WQA Certified high capacity resin
- Highly corrosion resistant WQA or NSF Certified fiberglass tanks
- Durable polypropylene lower distribution 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.

PURE WATER



Series PWS20

Series PWS20-2

Standards

Control Valve- WQA Certified to NSF/ANSI Std. 61 and 372
Ion Exchange Resin- WQA Certified to NSF/ANSI Std. 61
Mineral Tank- WQA or NSF Certified to NSF/ANSI Std. 44 or 61

Specifications

A Watts Pure Water Series PWS20 / PWS20-2 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.

NOTICE

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 specifications.



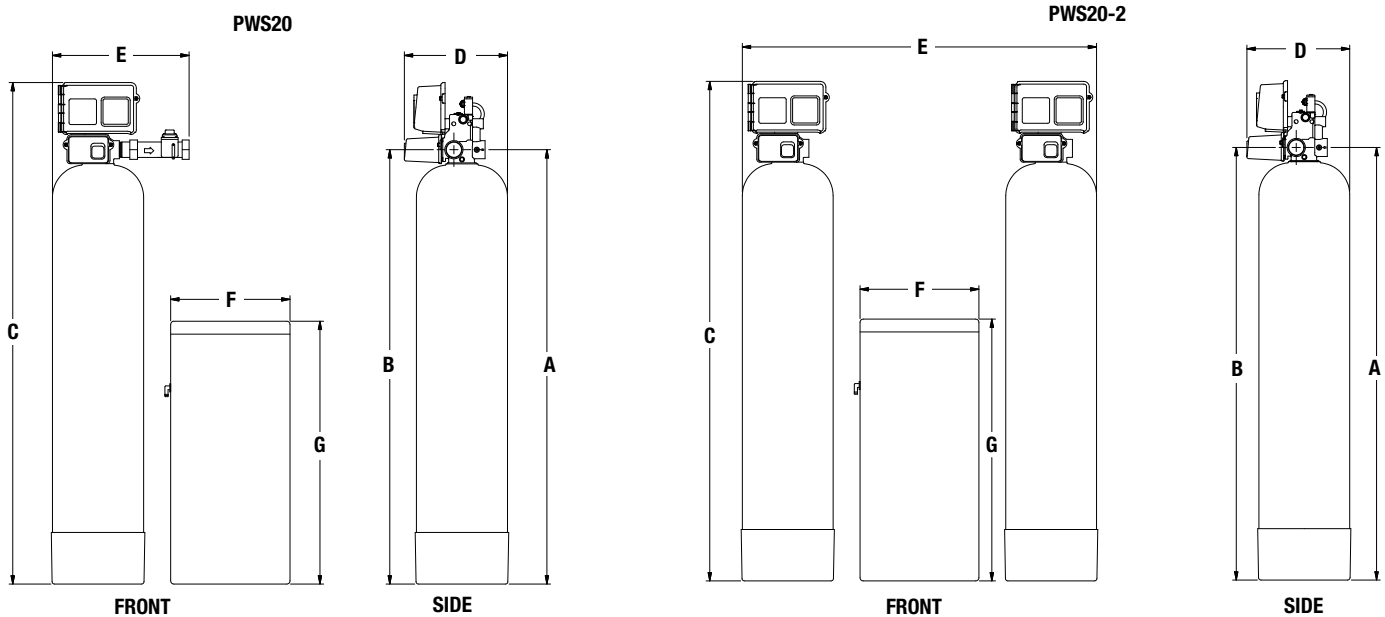
Feed Water Guidelines

pH	6 to 10
Hardness (maximum)	Depends on customers acceptable hardness leakage level.
Water Pressure	25psi to 125psi (171kPa 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

For all other guideline information please contact your Watts representative.

Note: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

Dimensions - Weights



Series PWS20

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		
PWS20131D11	67 ³ / ₈	1711	67 ³ / ₈	1711	77 ⁷ / ₈	1978	16	406	21 ¹ / ₄	538	18	457	40	1016	265	120
PWS20131E11	67 ³ / ₄	1721	67 ³ / ₄	1721	77 ¹ / ₈	1959	17	432	22 ¹ / ₄	564	18	457	40	1016	350	159
PWS20131F11	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
PWS20131G11	70 ¹ / ₂	1791	70 ¹ / ₂	1791	80 ¹⁵ / ₁₆	2055	21 ¹ / ₈	536	24 ¹ / ₁₆	627	24	607	50	1270	600	273
PWS20131H11	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
PWS20131I11	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
PWS20131J11	86	2184	86	2184	97 ⁷ / ₁₆	2449	36 ¹ / ₈	917	36 ¹ / ₈	917	39	991	60	1524	1560	709

Series PWS20-2

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		
PWS20131D21	67 ³ / ₈	1711	67 ³ / ₈	1711	77 ⁷ / ₈	1978	16	406	60	1524	18	457	40	1016	450	205
PWS20131E21	67 ³ / ₄	1721	67 ³ / ₄	1721	77 ¹ / ₈	1959	17	432	60	1524	18	457	40	1016	500	227
PWS20131F21	68 ¹ / ₂	1740	68 ¹ / ₂	1740	78 ¹⁵ / ₁₆	2004	18 ¹ / ₈	460	70	1778	24	610	41	1041	800	364
PWS20131G21	70 ¹ / ₂	1791	70 ¹ / ₂	1791	80 ¹⁵ / ₁₆	2055	21 ¹ / ₈	536	75	1905	24	610	50	1270	1200	545
PWS20131H21	76 ³ / ₄	1949	76 ³ / ₄	1949	87 ¹ / ₈	2213	24 ¹ / ₈	613	87	2210	30	762	50	1270	1400	636
PWS20131I21	80 ¹ / ₄	2038	80 ¹ / ₄	2038	93 ¹ / ₈	2302	30 ¹ / ₈	765	104	2642	39	991	48	1219	2200	1000
PWS20131J21	86	2184	86	2184	97 ⁷ / ₁₆	2449	36 ¹ / ₈	917	115	2921	39	991	60	1524	3000	1364

Specifications

MODEL NO.	MINERAL TANK			BRINE TANK		SOFTENING CAPACITY		LBS. SALT PER REGENERATION		FLOW RATE & PRESSURE		
	TANK SIZE	RESIN F ³	GRAVEL	TANK SIZE	SALT FILL	MAX	MIN	MAX	MIN	SERV GPM	DROP PSI	BKW GPM
PWS20131D11	14" x 65"	3	60 lbs.	18" x 40"	400	90 K	60 K	45	18	25/40	15/25	5
PWS20131E11	16" x 65"	4	80 lbs.	18" x 40"	400	120 K	80 K	60	24	35/55	15/25	7
PWS20131F11	18" x 65"	5	100 lbs.	24" x 41"	600	150 K	100 K	75	30	57/65	15/25	10
PWS20131G11	21" x 62"	7	100 lbs.	24" x 50"	600	210 K	140 K	105	42	60/77	15/25	12
PWS20131H11	24" x 72"	10	200 lbs.	30" x 50"	1200	300 K	200 K	150	60	74/97	15/25	15
PWS20131I11	30" x 72"	15	400 lbs.	39" x 48"	2200	450 K	300 K	225	90	80/100	15/25	25
PWS20131J11	36" x 72"	20	500 lbs.	39" x 60"	2200	600 K	400 K	300	120	84/105	15/25	35

Ordering Information

MODEL NO.	DESCRIPTION	SPACE REQUIRED			WEIGHT	
		D	W	H	LBS	KGS
PWS20131D11	3 Cubic Foot 2" Simplex Softener with Flow Meter	18"	39"	87"	265	120
PWS20131E11	4 Cubic Foot 2" Simplex Softener with Flow Meter	18"	39"	87"	350	159
PWS20131F11	5 Cubic Foot 2" Simplex Softener with Flow Meter	24"	48"	89"	400	182
PWS20131G11	7 Cubic Foot 2" Simplex Softener with Flow Meter	24"	52"	89"	600	273
PWS20131H11	10 Cubic Foot 2" Simplex Softener with Flow Meter	30"	60"	96"	710	323
PWS20131I11	15 Cubic Foot 2" Simplex Softener with Flow Meter	39"	75"	106"	1160	527
PWS20131J11	20 Cubic Foot 2" Simplex Softener with Flow Meter	39"	81"	107"	1560	709
PWS20131D21	3 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	18"	60"	87"	450	205
PWS20131E21	4 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	18"	64"	87"	500	227
PWS20131F21	5 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	24"	72"	89"	800	364
PWS20131G21	7 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	24"	80"	89"	1200	545
PWS20131H21	10 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	30"	90"	96"	1400	636
PWS20131I21	15 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	39"	111"	106"	2200	1000
PWS20131J21	20 Cubic Foot 2" Duplex Alternating Softener with Flow Meter	39"	123"	107"	3000	1364

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.



A Watts Water Technologies Company

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