

## Engineering Specification

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# Series PWS15T Commercial Water Softening Systems

**Connection Size: 1 1/2"****Flow Rates: Up to 55 gpm (208 lpm)**

Watts Pure Water Series PWS15T water softening systems are highly efficient, twin alternating, conventional cation exchange type water softeners. They are designed to supply continuous softened water without interruption.

Series PWS15T water softeners are suitable for commercial applications ranging from 60,000 to 300,000 grains of hardness removal per tank and flow rates up to 55 gallons per minute (208 lpm). Regeneration is meter demand initiated. All cycles of regeneration are fully automatic and do not require manual actuation.

Watts Pure Water Series PWS15T water softeners are designed for point of use or point of entry applications where the benefits of softened water are required and water demand is round the clock. 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 PWS15T water softeners.

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
- Twin alternating design for continuous softened water
- Fully automatic metered demand control valve certified to NSF/ANSI standards
- Sophisticated digital electronic controls that provide system status and error conditions
- Fully adjustable regeneration cycles
- High capacity resin certified to NSF/ANSI standards
- Highly corrosion resistant fiberglass tanks certified to NSF/ANSI standards
- Durable polypropylene lower distribution system

**WATTS®**  
pure water



Series PWS15T Twin Alternating

### 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

Watts Pure Water Series PWS15T 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° - 43°C).

The system shall provide softened water measuring less than one grain per gallon of hardness as Calcium Carbonate when operated within the manufacturers operational specifications.

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.

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## Feed Water Guidelines

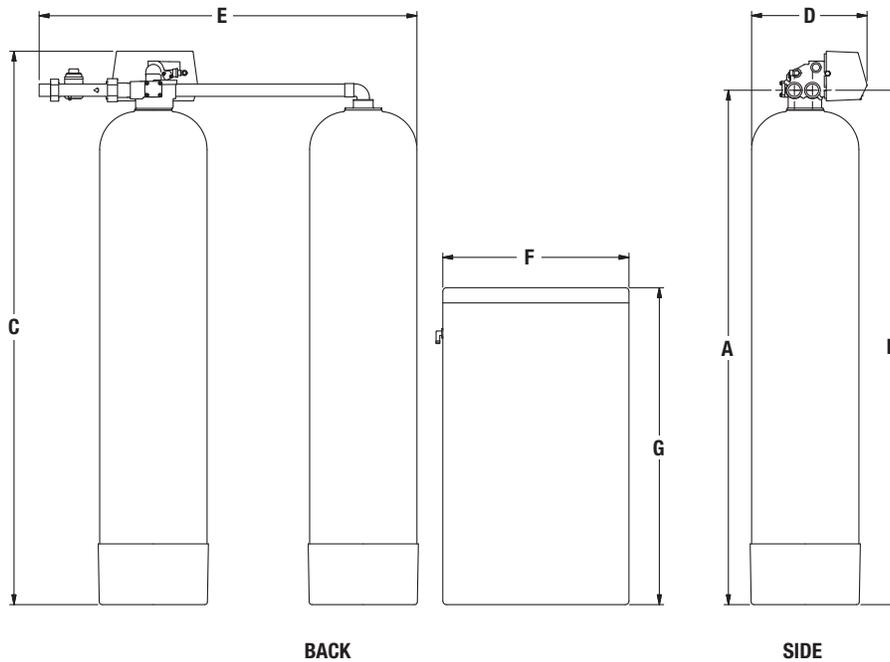
pH	6 to 10
Hardness (maximum)	Depends on customer's acceptable hardness leakage level.
Water Pressure	25psi to 125psi (171 kPa to 8.5 bar)
Temperature	34 - 110°F (1 - 43°C)
Free Chlorine (maximum)	1mg/L
Iron (maximum)	1mg/L
Oil and H <sub>2</sub> S	None Allowed
Turbidity	Less than 5.0 NTU

For all other guideline information please contact your Watts representative.

### ⚠ WARNING

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

## Dimensions - Weights



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		
PWS15T171C21	55 <sup>5</sup> / <sub>8</sub>	1413	55 <sup>5</sup> / <sub>8</sub>	1413	60 <sup>7</sup> / <sub>8</sub>	1546	14 <sup>1</sup> / <sub>4</sub>	362	48 <sup>15</sup> / <sub>16</sub>	1242	24	607	41	1041	370	168
PWS15T171D21	67 <sup>5</sup> / <sub>8</sub>	1718	67 <sup>5</sup> / <sub>8</sub>	1718	72 <sup>15</sup> / <sub>16</sub>	1852	15 <sup>1</sup> / <sub>4</sub>	387	50	1270	24	607	41	1041	550	250
PWS15T171E21	67 <sup>1</sup> / <sub>8</sub>	1705	67 <sup>1</sup> / <sub>8</sub>	1705	72 <sup>3</sup> / <sub>8</sub>	1838	16 <sup>1</sup> / <sub>4</sub>	413	50 <sup>3</sup> / <sub>4</sub>	1289	24	607	41	1041	720	327
PWS15T171F21	68 <sup>15</sup> / <sub>16</sub>	1750	68 <sup>15</sup> / <sub>16</sub>	1750	74	1880	18 <sup>1</sup> / <sub>8</sub>	460	51 <sup>3</sup> / <sub>4</sub>	1314	24	607	41	1041	900	409
PWS15T171G21	70 <sup>15</sup> / <sub>16</sub>	1801	70 <sup>15</sup> / <sub>16</sub>	1801	76	1930	21 <sup>1</sup> / <sub>8</sub>	536	53 <sup>1</sup> / <sub>4</sub>	1353	24	607	50	1270	1215	552
PWS15T171H21	77 <sup>1</sup> / <sub>8</sub>	1959	77 <sup>1</sup> / <sub>8</sub>	1959	82 <sup>3</sup> / <sub>8</sub>	2092	24 <sup>1</sup> / <sub>8</sub>	613	54 <sup>3</sup> / <sub>4</sub>	1391	30	762	50	1270	1750	795

## Specifications

MODEL NO.	MINERAL TANK			BRINE TANK		SOFTENING CAPACITY		LBS. SALT PER REGENERATION		FLOW RATE & PRESSURE		
	TANK SIZE	RESIN Ft <sup>3</sup>	GRAVEL	TANK SIZE	SALT FILL	MAX	MIN	MAX	MIN	SERV GPM	DROP PSI	BKW GPM
PWS15T171C21	12" x 52"	2.0	30 lbs.	24" x 41"	600	60 K	40 K	30	12	15/20	15/25	5.0
PWS15T171D21	14" x 65"	3.0	60 lbs.	24" x 41"	600	90 K	60 K	45	18	17/22	15/25	7.0
PWS15T171E21	16" x 65"	4.0	80 lbs.	24" x 41"	600	120 K	80 K	60	24	25/40	15/25	9.0
PWS15T171F21	18" x 65"	5.0	100 lbs.	24" x 41"	600	150 K	100 K	75	30	30/50	15/25	12.0
PWS15T171G21	21" x 62"	7.0	100 lbs.	24" x 50"	800	210 K	140 K	105	42	35/53	15/25	15.0
PWS15T171H21	24" x 72"	10.0	200 lbs.	30" x 50"	1200	300 K	200 K	150	60	40/55	15/25	15.0

## Ordering Information

MODEL NO.	ORDERING CODE	DESCRIPTION	PIPE SIZE	SPACE	WEIGHT	
				REQUIRED	LBS	KGS
				D X W X H		
PWS15T171C21	7100060	2 Cubic Foot Twin Alt. Water Softener with Flow Meter	1½"	24" x 78" x 75"	370	168
PWS15T171D21	7100061	3 Cubic Foot Twin Alt. Water Softener with Flow Meter	1½"	24" x 79" x 87"	550	250
PWS15T171E21	7100062	4 Cubic Foot Twin Alt. Water Softener with Flow Meter	1½"	24" x 80" x 87"	720	327
PWS15T171F21	7100063	5 Cubic Foot Twin Alt. Water Softener with Flow Meter	1½"	24" x 81" x 89"	900	409
PWS15T171G21	7100064	7 Cubic Foot Twin Alt. Water Softener with Flow Meter	1½"	24" x 83" x 89"	1215	552
PWS15T171H21	7100065	10 Cubic Foot Twin Alt. Water Softener with Flow Meter	1½"	39" x 90" x 96"	1750	795

**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 25 psi 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.



**USA:** T: (800) 224-1299 • F: (978) 794-1848 • [Watts.com/PureWater](http://Watts.com/PureWater)  
**Canada:** T: (888) 208-8927 • F: (905) 332-7068 • [Watts.ca/PureWater](http://Watts.ca/PureWater)  
**Latin America:** T: (52) 55-4122-0138 • [Watts.com/PureWater](http://Watts.com/PureWater)