## *For Commercial Applications*

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

# Series PWS15T

## Commercial Water Softening Systems

### Connection Size: 1½" (40 mm)
### Flow Rates: Up to 55 gpm (208 lpm)

**PURE WATER**

**Series PWS15T Twin Alternating**

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 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

- Twin alternating design for continuous softened water
- 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
- Durable brass bodied control valve for years of service
- Dry contact lock out switch for remote interface is standard
- NSF Certified high capacity resin
- Highly corrosion resistant NSF Certified fiberglass tanks
- Durable polypropylene lower distribution system

## Standards

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

## Feed Water Guidelines

pH . . . . . 6 to 10

Hardness (maximum) . . . . . Depends on customers 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

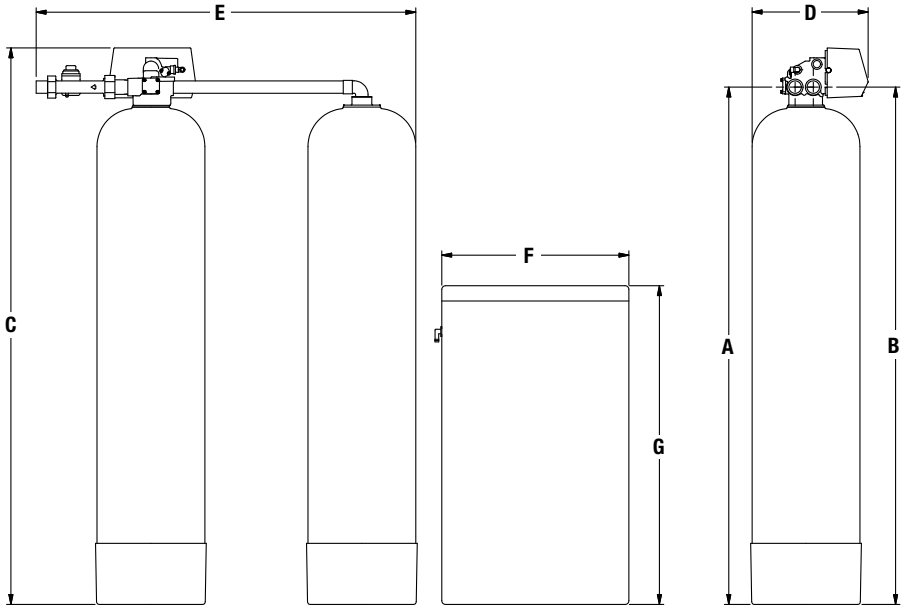
Oil and H2S . . . . . None Allowed

Turbidity . . . . . Less than 5.0 NTU

* 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




**BACK** **SIDE**

| MODEL NO. | DIMENSIONS | | | | | | | | | | | | | | WEIGHTS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | | B | | C | | D | | E | | F | | G | | | |
| | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *lbs* | *kgs* |
| PWS15T171C21 | 55 5/8 | 1413 | 55 5/8 | 1413 | 60 7/8 | 1546 | 14 1/4 | 362 | 48 15/16 | 1242 | 24 | 607 | 41 | 1041 | 370 | 168 |
| PWS15T171D21 | 67 5/8 | 1718 | 67 5/8 | 1718 | 72 15/16 | 1852 | 15 1/4 | 387 | 50 | 1270 | 24 | 607 | 41 | 1041 | 550 | 250 |
| PWS15T171E21 | 67 1/8 | 1705 | 67 1/8 | 1705 | 72 3/8 | 1838 | 16 1/4 | 413 | 50 3/4 | 1289 | 24 | 607 | 41 | 1041 | 720 | 327 |
| PWS15T171F21 | 68 15/16 | 1750 | 68 15/16 | 1750 | 74 | 1880 | 18 1/8 | 460 | 51 3/4 | 1314 | 24 | 607 | 41 | 1041 | 900 | 409 |
| PWS15T171G21 | 70 15/16 | 1801 | 70 15/16 | 1801 | 76 | 1930 | 21 1/8 | 536 | 53 1/4 | 1353 | 24 | 607 | 50 | 1270 | 1215 | 552 |
| PWS15T171H21 | 77 1/8 | 1959 | 77 1/8 | 1959 | 82 3/8 | 2092 | 24 1/8 | 613 | 54 3/4 | 1391 | 30 | 762 | 50 | 1270 | 1750 | 795 |

## Specifications

| MODEL NO. | MINERAL TANK TANK SIZE | RESIN $Ft^3$ | GRAVEL | BRINE TANK TANK SIZE | SALT FILL | SOFTENING CAPACITY MAX | SOFTENING CAPACITY MIN | LBS. SALT PER REGENERATION MAX | LBS. SALT PER REGENERATION MIN | FLOW RATE & PRESSURE SERV GPM | FLOW RATE & PRESSURE DROP PSI | FLOW RATE & PRESSURE 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. | DESCRIPTION | PIPE SIZE | SPACE REQUIRED W x D x H | WEIGHT LBS | WEIGHT KGS |
|---|---|---|---|---|---|
| PWS15T171C21 | 2 Cubic Foot Twin Alt. Water Softener with Flow Meter | 1½" | 24" x 42" x 75" | 370 | 168 |
| PWS15T171D21 | 3 Cubic Foot Twin Alt. Water Softener with Flow Meter | 1½" | 24" x 44" x 87" | 550 | 250 |
| PWS15T171E21 | 4 Cubic Foot Twin Alt. Water Softener with Flow Meter | 1½" | 24" x 46" x 87" | 720 | 327 |
| PWS15T171F21 | 5 Cubic Foot Twin Alt. Water Softener with Flow Meter | 1½" | 24" x 50" x 89" | 900 | 409 |
| PWS15T171G21 | 7 Cubic Foot Twin Alt. Water Softener with Flow Meter | 1½" | 24" x 52" x 89" | 1215 | 552 |
| PWS15T171H21 | 10 Cubic Foot Twin Alt. Water Softener with Flow Meter | 1½" | 39" x 69" 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.