Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

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

Approval _____ Representative _____

Series PWSRL, PWSRL125 & PWSRLTA

Locksmith® Residential Water Softening Systems

Connection Size: 1 & 1.25"
Flow Rates: Up to 25 gpm (94 lpm)

Watts Pure Water Locksmith® PWSRL, PWSRL125, and PWSRLTA Series water softening systems are high-efficiency, cation exchange softeners designed for residential point-of-entry applications. These pre-engineered systems provide capacities from maximum of 30,000 to 120,000 grains of hardness removal with flow rates up to 25 gpm (94 lpm). For applications requiring continuous softened water, the PWSRLTA twin alternating configuration delivers uninterrupted service.

All systems feature meter-initiated, demand-based regeneration with fully automatic cycles requiring no manual operation. The Watts Locksmith controller is a proprietary, advanced control platform capable of operating 1" and 1.25" simplex and twin alternating softeners, as well as controlling external devices for flexible system configuration.

The PWSRL, PWSRL125, and PWSRLTA Series soften water by replacing scale-forming calcium and magnesium ions with sodium ions, protecting downstream equipment and improving water quality. These systems are ideal for residential applications for the flow rates and capacities necessary for appliances in the home.

Softened water protects internal plumbing, water heaters and appliances by preventing scale formation, while reducing mineral residue on fixtures and surfaces. By removing calcium and magnesium, it improves soap and detergent performance, allowing products to lather more effectively and reducing usage by 30–50%. Detergents dissolve fully without these minerals, preventing sticky soap scum buildup. The result is cleaner surfaces, softer fabrics, brighter colors, and extended appliance life.

⚠ WARNING

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

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.

WATTS® pure water



PWSRL & PWSRL125



PWSRLTA

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.

WATTS®

Features and Benefits

- Complete Whole House water treatment system
- Locksmith Controller offering improved functionality of a basic softener using advanced computer programming to increase efficiency, save salt and water.
- Low Salt Alarm Warning
- Programmable Service Company Contact Screen
- Softened water provides a wide variety of benefits including preventing scale build up, longer appliance lifespans, reduced energy usage, cleaner dishes/fixtures, increased soap efficiency, and improved skin and hair health
- Models for capacities up to maximum of 120,000 grains per tank
- Full flow bypass valve included

Operating Parameters

pH	6 to 10
Hardness (maximum)	Depends on customer's acceptable hardness leakage level
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
Water Pressure*	25psi to 125psi (171 kPa to 8.6 bar)
Temperature	40 - 110°F (4 - 43°C)
Operating Ambient Temperature	34° to 120°F (1° to 52°C)
Maximum Humidity	75%
Power Supply Input Voltage	100-120 VAC
Power Supply Input Frequency	50/60 Hz
Power Supply Output Voltage	15 VDC
Power Supply Output Current	500 mA (per control valve)
Maximum Altitude	6562 feet above sea level

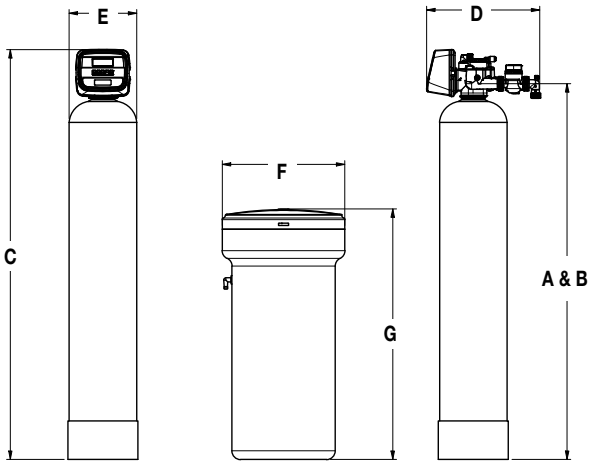
Water known to have heavy loads of dirt and debris may require pre-filtration prior to the water softening system.

For all other guideline information please contact your Watts representative.

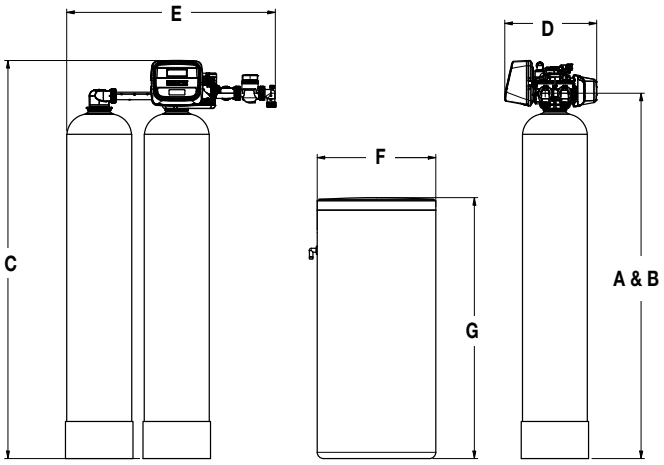
*It is established that when daytime water pressure exceeds 80psi (5.5 bar), the maximum pressure rating of 125psi (8.6bar) can be exceeded. A pressure regulator is required on this system or warranty is voided.

Dimensions

PWSRL & PWSRL125



PWSRLTA



Dimensions & Weights

Series PWSRL

Call customer service (800-659-8400) if you need assistance with technical details.

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*	*lb*	*kg*
PWSRL130	50 1/2	1283	50 1/2	1283	55 1/2	1410	16 3/4	425	9 1/2	241	18 1/2	470	37 1/2	953	110	50
PWSRL145	56 1/2	1435	56 1/2	1435	61 1/2	1562	16 3/4	425	10 1/2	267	18 1/2	470	37 1/2	953	130	59
PWSRL160	55	1397	55	1397	60	1524	16 3/4	425	12 1/2	318	18 1/2	470	37 1/2	953	190	86
PWSRL190	67	1702	67	1702	72 1/4	1835	16 3/4	425	14 1/2	368	18 1/2	470	40 1/2	1016	270	122

Series PWSRL125

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*	*lb*	*kg*
PWSRL12530	50 1/2	1283	50 1/2	1283	55 1/2	1410	16 3/4	425	9 1/2	241	18 1/2	470	40 3/4	1035	110	50
PWSRL12545	56 1/2	1435	56 1/2	1435	61 1/2	1562	16 3/4	425	10 1/2	267	18 1/2	470	40 3/4	1035	130	59
PWSRL12560	55	1397	55	1397	60	1524	16 3/4	425	12 1/2	318	18 1/2	470	40 3/4	1035	190	86
PWSRL12590	67	1702	67	1702	72 1/4	1835	17	432	14 1/2	368	18 1/2	470	40 3/4	1035	270	122
PWSRL125120	68 1/4	1734	68 1/4	1734	73 1/2	1867	18	457	16 3/4	425	18 1/2	470	40 3/4	1035	350	159

Series PWSRLTA

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*	*lb*	*kg*
PWSRLTA130	50 3/4	1289	50 3/4	1289	56	1422	13 3/4	349	32	813	18 1/2	470	40 3/4	1035	230	104
PWSRLTA145	57	1448	57	1448	62	1575	13 3/4	349	32 1/2	826	18 1/2	470	40 3/4	1035	290	132
PWSRLTA160	55 1/2	1410	55 1/2	1410	60 1/2	1537	13 3/4	349	37 1/2	953	18 1/2	470	40 3/4	1035	420	191

Specifications

MODEL NO.	ORDERING CODE	CAPACITY (MAX.)	PIPE SIZE (IN.)	MINERAL TANK		BRINE TANK		FLOW RATE & PRESSURE			SHIP WT. (LBS.)
				TANK SIZE	RESIN FT3	TANK SIZE	SALT FILL (LBS.)	SERVICE (GPM)	DROP (PSI)	BKW (GPM)	
PWSRL Systems											
PWSRL130	7101314	30,000	1	9x48	1	18x36	350	9-12	15-25	2.2	110
PWSRL145	7101315	45,000	1	10x54	1.5	18x36	350	12-16	15-25	2.7	130
PWSRL160	7101316	60,000	1	12x52	2	18x36	350	15-20	15-25	4.2	190
PWSRL190	7101317	90,000	1	14x65	3	18x40	350	18-23	15-25	5.3	270
PWSRL125 Systems											
PWSRL12530	7101333	30,000	1.25 / 1.5	9x48	1	18x40	400	9-12	15-25	2.2	110
PWSRL12545	7101334	45,000	1.25 / 1.5	10x54	1.5	18x40	400	12-16	15-25	2.7	130
PWSRL12560	7101335	60,000	1.25 / 1.5	12x52	2	18x40	400	15-20	15-25	4.2	190
PWSRL12590	7101336	90,000	1.25 / 1.5	14x65	3	18x40	400	18-23	15-25	5.3	270
PWSRL125120	7101337	120,000	1.25 / 1.5	16x65	4	18x40	400	19-25	15-25	7.5	350
PWSRLTA Systems											
PWSRLTA130	7101330	30,000	1	9x48	1	18x40	400	9-12	15-25	2.2	230
PWSRLTA145	7101331	45,000	1	10x54	1.5	18x40	400	12-16	15-25	2.7	290
PWSRLTA160	7101332	60,000	1	12x52	2	18x40	400	15-20	15-25	2.7	420

NOTICE

Flow rates listed above are based on pressure drop only. Selecting a system based on pressure drop alone does not guarantee that the system will provide adequately softened water. System selection should be based on resin volume, capacity required, feed water analysis, and application requirements.

NOTICE

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.

Ordering Information for 1" Simplex (PWSRL) Softeners

MODEL NO.	ORDERING CODES	DESCRIPTION	SPACE REQUIRED D X W X H	SHIPPING WEIGHT LBS
PWSRL130	7101314	1 Cubic Foot 1" Simplex Softener	19" X 34" X 56"	110
PWSRL145	7101315	1.5 Cubic Foot 1" Simplex Softener	19" X 35" X 62"	130
PWSRL160	7101316	2 Cubic Foot 1" Simplex Softener	19" X 37" X 60"	190
PWSRL190	7101317	3 Cubic Foot 1" Simplex Softener	19" X 38" X 72"	270

Ordering Information for 1.25" Simplex (PWSRL125) Softeners

MODEL NO.	ORDERING CODES	DESCRIPTION	SPACE REQUIRED D X W X H	SHIPPING WEIGHT LBS
PWSRL12530	7101333	1 Cubic Foot 1 1/4" Simplex Softener	19" X 34" X 56"	110
PWSRL12545	7101334	1.5 Cubic Foot 1 1/4" Simplex Softener	19" X 35" X 62"	130
PWSRL12560	7101335	2 Cubic Foot 1 1/4" Simplex Softener	19" X 37" X 60"	190
PWSRL12590	7101336	3 Cubic Foot 1 1/4" Simplex Softener	19" X 39" X 72"	270
PWSRL125120	7101337	4 Cubic Foot 1 1/4" Simplex Softener	19" X 41" X 74"	350

Ordering Information for 1" Twin Alternating (PWSRLTA) Softeners

MODEL NO.	ORDERING CODES	DESCRIPTION	SPACE REQUIRED D X W X H	SHIPPING WEIGHT LBS
PWSRLTA130	7101330	1 Cubic Foot 1" Twin Alternating Softener	19" X 57" X 56"	230
PWSRLTA145	7101331	1.5 Cubic Foot 1" Twin Alternating Softener	19" X 57" X 62"	290
PWSRLTA160	7101332	2 Cubic Foot 1" Twin Alternating Softener	19" X 62" X 61"	420

USA: T: (800) 659-8400 • Watts.com/PureWater
Canada: T: (905) 332-4090 • Watts.ca/PureWater
Latin America: T: (52) 55-4122-0138 • Watts.com/PureWater

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