"Designed, Tested, and Approved for Shipment by LWT Engineering Staff"

INDUSTRIAL GRADE WATER SOFTENERS

LWTSF INDUSTRIAL SERIES

150,000 to 1,100,000 GRAINS CAPACITY

Single, Twin, Triple, or Quadruple Demand Systems Available

Phone: 414.365.0787
eMail:info@lakesidewater.com

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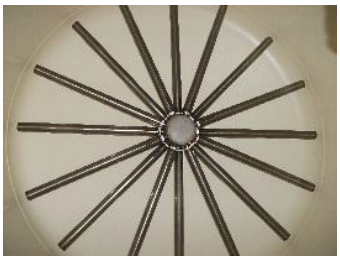
"Industrial Performance and Proven Reliability"

FRP/Composite Pressure Vessel (NON-Code & ASME Code) - Industrial grade polyester/composite construction provides outstanding durability and higher corrosion resistance than carbon steel vessels (Chemical resistant Vinyl ester resins are available). Fiberglass vessel weights are about 1/3 less than steel tank vessels and cost less.

Lakeside Provides Resins that are manufactured using full 8 % DVB. This process provides high chemical and physical stability, lower pressure drop, and greater resistance to bead breakage. Lakeside resins are shipped in the sodium form providing immediate soft water for your customer. High tolerance resins are available for chlorine, high temperature, increased flow rates or lower hardness leakage applications.



Underdrain - The radial hub underdrain construction uses high quality schedule 80 PVC pipe and fittings, delivering high performance standards. The .010" PVC slotted laterals provide high flow rates and reliable service. **Lakeside also features a standard hide-out preventer in all vessels to reduce hardness leakage when dilute brine is not rinsed out in the bottom of the vessel during the regeneration process.** Boiler applications that have very critical water quality requirements often request this feature on custom products.

Brine Maker The non-toxic polyethylene rotationally molded brine tank provides the ultimate corrosion resistance and superior strength. Our standard grid plate and special brine valve maintain precise brine saturation for optimum ion exchange. **The brine valve is designed with four internal primary checks delivering proven and reliable industrial performance.**

Thermoplastic Y-pattern diaphragm valve nest design allows each valve to be exactly designed and sized for the required function, providing the most cost effective, efficient and serviceable corrosion proof system in the market.

Brine Eductors are constructed of PVC and deliver the correct brine concentration to the softener resin. These hydraulic eductors are pressure compensating and produce 8-12% brine concentration to the softener bed for proper Ion exchange.

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Flow Sensors are designed to interface with the controllers. The meter sends a pulse signal to the controller that converts into gallons. The correctly programmed K-Factor will ensure the correct batch count and deliver continuous soft water 24/7.

The Standard Lakeside 2001 Programmable Microprocessor automatically controls the regeneration cycles by utilizing a pilot valve to operate the diaphragm valves. These valves can be hydraulically or pneumatically operated for your operational requirements. **The 2001 microprocessor also features a pre-rinse cycle to prevent hardness leakage at the beginning of the service run on twin alternating systems.** Boiler applications typically have very critical water quality requirements and often request this feature.

The Optional AQMatic Programmable Microprocessor provides single, twin, triple or quadruple system capabilities. The controller features twin alternating, progressive demand, or parallel application options. Multiple tank applications, progressive demand and the diagnostic capabilities are premiere features of this controller. **The progressive demand application allows one to four softeners to be online in proportion to the service demand.** One softener is always in service, and the other units automatically come online as the flow increases. As the flow rate decreases, softeners will be removed from service based on the pre-programmed GPM settings. This feature provides uninterrupted flow of soft water 24/7 during variable and peak flows. *(One auxiliary output is provided to start a chemical feeder, pump or motor application)*

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Optional Allen-Bradley® PLC control packages come standard with a color screen HMI which has user friendly programming. **Lakeside PLC solenoid system features a hold, advance, resume, termination, or close of all valves function, for fast, easy, field service.** The main screen can be designed to display a variety of parameters such as current flow rates, online tank status and remaining gallons of each vessel. Custom programming available.

Custom programming and alternate communication Protocols are available.

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Operating Parameters: Pressure 30-100 PSI. Temperature range 35F-100F Electrical: 120VAC/60Hz Electrical enclosures rated NEMA 12/4X Drain piping limits: Max. 10ft. vertical discharged to an atmospheric floor drain sized to handle the backwash rate of the system. (Max. proven length is 25ft.)

OPTIONS AVAILABLE:

- Skid mounted, pre-piped, pre-wired for faster and cost effective installations
- ASME code vessels are available 18" diameter and above
- Low flow recirculation systems to prevent channeling during low service flow periods
- Hard water by-pass (single units)
- Brine Reclamation systems can save up to 25% on salt usage
- Pumped brine and dilution stations are available for pit or silo applications
- Pre-engineered systems and custom engineered systems are available
- LWTSF-1500 to 1950-3" available with 63" dia. x 86" FRP mineral tank-consult factory.

LWTSF Series Water Softener Table

Model LWTSF	Grains Capacity Max.	Grains Capacity Min.	Resin Qty. Cu. Ft.	Flow Cont. GPM	PSID	Flow Peak GPM	PSID	Mineral Tank Size DxOAH (Inches)	Service Pipe Size	BW Flow Rate GPM	Brine Maker Size D x H (Inches)	Salt Storage Cap. (Lbs.)	Salt Usage Max. Dosage (Lbs.)	Salt Usage Min. Dosage (Lbs.)
90-2	90,000	60,000	3	25	7	35	10	14 X 65	2"	5	24X41	450	45	18
120-2	120,000	80,000	4	35	10	45	13	16 X 65	2"	6	24 X 41	450	60	24
150-2	150,000	100,000	5	45	11	55	15	18 X 65	2"	8	24 X 41	450	75	30
210-2	210,000	140,000	7	60	15	70	18	21 X 62	2"	10	24 X 54	610	105	42
210-3	210,000	140,000	7	60	8	70	9	21 X 62	3"	10	24 X 54	610	105	42
300-2	300,000	200,000	10	80	22	95	29	24 X 72	2"	15	30X 48	850	150	60
300-3	300,000	200,000	10	80	10	110	14	24 X 72	3"	15	30 X 48	850	150	60
450-2	450,000	300,000	15	90	23	95	26	30 X 72	2"	20	30 x60	950	225	90
450-3	450,000	300,000	15	125	12	165	18	30 X 72	3"	20	30 X60	950	225	90
600-2	600,000	400,000	20	75	16	95	24	36 X 72	2"	30	39 X 48	1250	300	120
600-3	600,000	400,000	20	165	14	205	20	36 X 72	3"	30	39 X 48	1250	300	120
750-2	750,000	500,000	25	75	15	95	22	42 X 72	2"	45	39 X 60	1630	375	150
750-3	750,000	500,000	25	165	12	205	18	42 X 72	3"	45	39 X 60	1630	375	150
1,100-2	1,100,000	740,000	37	75	14	95	22	48 X 72	2"	55	50 X 60	2,200	555	222
1,100-3	1,100,000	740,000	37	165	12	205	17	48 X 72	3"	55	50 X 60	2,200	555	222

2020-05

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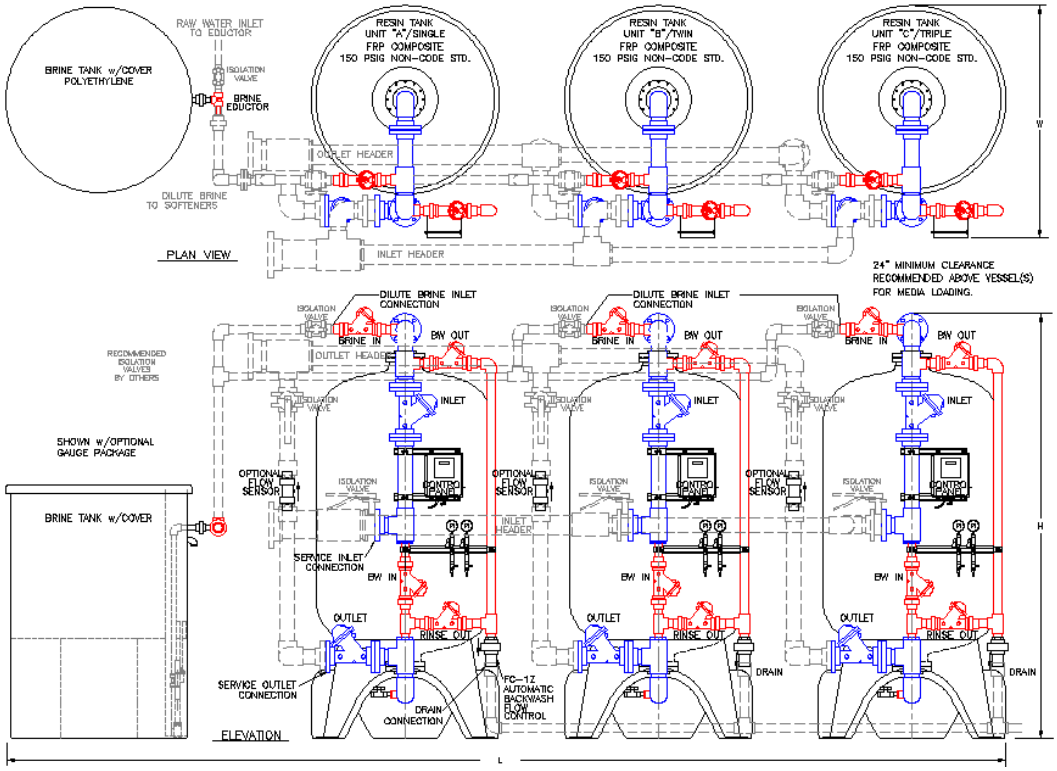
LWTSF Series Water Softener Dimensions

MODEL NO.	RESIN TANK	BRINE TANK	OAH	WIDTH	Overall Length Including Brine Tank		
					SINGLE	TWIN	TRIPLE
LWTSF-90	14" X 65"	24" X 41"	87	26	68	99	122
LWTSF-120	16" X 65"	24" X 41"	88	28	68	99	128
LWTSF-150	18" X 65"	24" X 41"	93	30	68	99	132
LWTSF-210	21" X 62"	24" X 54"	93	34	71	107	143
LWTSF-300	24" X 72"	30" X 48"	100	37	79	118	157
LWTSF-450	30" X 72"	30" X 60"	101	42	73	115	157
LWTSF-600	36" X 72"	39" X 48"	102	48	88	136	184
LWTSF-750	42" X 72"	39" X 60"	102	54	98	152	206
LWTSF-1100	48" X 72"	50" X 60"	105	60	113	173	233

• Dims. are approximate. • Add 6" to OAH for skid mounted. • ASME tanks add additional height.
• OAL includes 12" clearance between tanks. • Clearance above tanks required to load resin.



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