

Industrial Water Softeners

Steel Tanks: 24" to 84" Diameter

SF-100S

SERIES

Pure Aqua's water softeners use resin that replaces the hardness in the water with salt which is regenerated periodically.

The softened water can then pass through an RO system to remove the salt without the risk of scaling. Softeners can be used in commercial, industrial and municipal applications.

The image to the right is a computer generated render of WS-30-300-2-T twin softener with PVC face piping and Noryl diaphragm valves.



WS-30-300-2-T

Standard Features

- 115V/1ph/60Hz power requirement
- Steel tank with 100 psi rating
- NSF interior epoxy coated and primed exterior
- Top loading port or manway
- Schedule 80 PVC face piping
- Vent and drain ports
- 1"-3" Noryl diaphragm valves or butterfly valves for 4" or larger
- Digital stager for softeners using diaphragm valves or PLC for butterfly valves
- Fully automatic units with timer control, the timer control initiates regeneration at any pre-determined time
- The automatic regeneration controller features a 7 or 12 day calendar wheel
- Regeneration cycle is fully adjustable
- A premium grade sulfanated nonphenolic polystyrene type resin is contained in the mineral tank
- The resin will deliver 30,000 grains per cubic foot when brined at a rate of 15 lbs. per cubic foot
- The brine tank is a combination of high density polystyrene brine measuring tank and a brine valve, including an air eliminator valve and a safety brine refill shut off to prevent tank overflow
- 1/4" tubing between stager and valves
- PP/PVC sch 80 internal piping and distributor to evenly distribute water and prevent resin loss, and to insure minimal pressure drop at peak flow rates

Available Options

- 240V/1ph/50Hz power requirement
- Duplex, triplex or multi units
- Skid mounted, plumbed, and wired systems
- ASME coded resin tanks
- Stainless steel, galvanized iron or CPVC face piping
- Meter regeneration starts based on the total gallons used
- PLC control system
- Brine pump systems
- Stainless steel internal piping
- Butterfly control valves
- Inline hardness monitor
- Unistrut channel supports

Industrial Water Softeners

Steel Tanks: 24" to 84" Diameter

SF-100S
SERIES

Softener Sizing

A softener is sized based on two different parameters:

- Exchange capacity, which is the quantity of water delivered between regenerations.
- Maximum flow rate, which is the maximum quantity of water required at any peak usage period.

Softener Selection

Recommended service flow rates are based on the cu.ft. of the tank/resin bed; slower flow rate/ft³ = better softening
2 GPM/ft³ = minimum "superior softening" (< 0.15 grain (3 ppm) of hardness leakage), < 2 psi drop

3.5-5 GPM/ft³ = average grade softening (up to 1 grain (17 ppm) of hardness leakage), < 5 psi drop

5-10 GPM/ft³ = utility softening, our peak flow rates are based on 10 GPM/ft³ or >12 psi loss, whichever occurs first

Backwash rates: allow 50% bed expansion at 60°F.

Hardness leakage of < 3 ppm (0.2 grains) @ 6 lb. NaCl, and < 1 ppm (0.1 grains) @ 15 lb. NaCl.

Computer generated render of automatic steel tank water softener plumbed in galvanized face piping (optional feature) using Aquamatic steel diaphragm valves.



WS-30-450-2



WS-30-450-3



Digital Stager

The digital stager can use air or water to actuate the control valves. PLC control is optional.



Hardness Monitor

The hardness monitor continuously monitors water systems to provide an alarm when total hardness exceeds a pre-set limit.



WS-72-3000-4-T



 **Pure Aqua, Inc.®**

© 2014 Pure Aqua, Inc. All rights reserved. Specifications subject to change without notice.

SF.JUNE 2014

Industrial Water Softeners

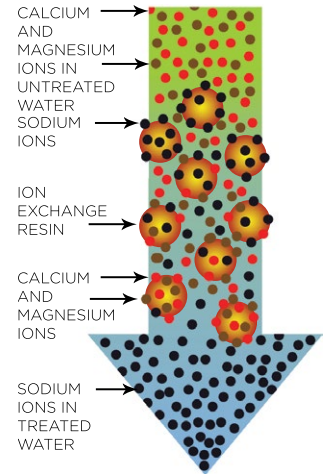
Steel Tanks: 24" to 84" Diameter

Operating Specifications

- Operating Pressure: 30-100 psi
- Temperature: 35°-110°F
- Influent TDS: 0-3000 PPM
- Pathogenic Bacteria: 0 CFU
- Influent Water Hardness: 0-90 gpg
- pH Range: 5-14
- Free Chlorine: 0-0.5 mg/l
- Chloramine: 0-0.5 mg/l
- Turbidity: 0-5 NTU
- Suspended Solids: < 5ppm



SF-100S SERIES



Exchange capacity depends upon the amount of ion exchange resin in the softener and quantity of salt used for resin regeneration. Maximum flow rate is an important datum in case of non-continuous water delivery and is measured in gallons per minute (GPM).

Pure Aqua supplies a full line of standard and fully customizable water softening systems, all of which are engineered using advanced 3D computer modeling software for accurate and customized solutions.

Model #	Exchange Capacity @ 15 lbs/cu.ft. Grain		Flow Rate (GPM)			Pipe Size		Resin Qty (ft³)	Tank Size (inch)		Salt Storage (lbs)
	Max.	Min.	Service		Back-wash	Serv.	Drain		Softener	Brine	
			Cont.	Peak							
WS24-240-1.5	240,000	160,000	40	70	15	1.5"	1"	8	24x54	24x50	900
WS24-240-2			65	120		2"	1"				
WS24-240-2.5			80	170		2.5"	1"				
WS30-300-1.5	300,000	200,000	40	70	20	1.5"	1"	10	30x54	24x50	900
WS30-300-2			65	120		2"	1"				
WS30-300-2.5			80	170		2.5"	1"				
WS30-300-3			120	270		3"	1"				
WS30-450-1.5	450,000	300,000	40	70	20	1.5"	1"	15	30x60	30x60	1,600
WS30-450-2			65	120		2"	1"				
WS30-450-2.5			80	170		2.5"	1"				
WS30-450-3			120	270		3"	1"				
WS36-600-1.5	600,000	400,000	40	70	30	1.5"	1.5"	20	36x60	39x60	2,700
WS36-600-2			65	120		2"	1.5"				
WS36-600-2.5			80	170		2.5"	1.5"				
WS36-600-3			120	270		3"	1.5"				
WS36-750-2	750,000	500,000	65	120	30	2"	1.5"	25	36x72	39x60	2,700
WS36-750-2.5			80	170		2.5"	1.5"				
WS36-750-3			120	270		3"	1.5"				
WS42-900-2	900,000	600,000	65	120	45	2"	2"	30	42x60	42x60	3,100
WS42-900-2.5			80	170		2.5"	2"				
WS42-900-3			120	270		3"	2"				
WS42-1050-2	1,050,000	700,000	65	120	45	2"	2"	35	42x72	42x60	3,100
WS42-1050-2.5			80	170		2.5"	2"				
WS42-1050-3			120	270		3"	2"				

Industrial Water Softeners

Steel Tanks: 24" to 84" Diameter

SF-100S
SERIES

Model #	Exchange Capacity @ 15 lbs/cu.ft. Grain		Flow Rate (GPM)			Pipe Size		Resin Qty (ft ³)	Tank Size (inch)		Salt Storage (lbs)
			Service		Back-wash	Serv.	Drain		Softener	Brine	
	Max.	Min.	Cont.	Peak							
WS48-1200-2	1,200,000	800,000	65	120	60	2"	2"	40	48x72	50x60	4,500
WS48-1200-2.5			80	170		2.5"	2"				
WS48-1200-3			120	270		3"	2"				
WS48-1200-4			250	500		4"	2"				
WS54-1500-2	1,500,000	1,000,000	65	120	80	2"	2"	50	54x72	50x60	4,500
WS54-1500-2.5			80	170		2.5"	2"				
WS54-1500-3			120	270		3"	2"				
WS54-1500-4			250	500		4"	2"				
WS60-1950-2	1,950,000	1,300,000	65	120	100	2"	2.5"	65	60x72	50x60	4,500
WS60-1950-2.5			80	170		2.5"	2.5"				
WS60-1950-3			120	270		3"	2.5"				
WS60-1950-4			250	500		4"	2.5"				
WS66-2400-2.5	2,400,000	1,600,000	80	170	120	2.5"	3"	80	66x72	50x60	4,500
WS66-2400-3			120	270		3"	3"				
WS66-2400-4			250	500		4"	3"				
WS66-2400-6			400	750		6"	3"				
WS72-3000-3	3,000,000	2,000,000	120	270	140	3"	3"	100	72x72	87x53	7,500
WS72-3000-4			250	500		4"	3"				
WS72-3000-6			500	800		6"	3"				
WS78-3600-3	3,600,000	2,400,000	120	270	165	3"	3"	120	78x72	87x53	7,500
WS78-3600-4			250	500		4"	3"				
WS78-3600-6			500	900		6"	3"				
WS84-4200-3	4,200,000	2,800,000	120	270	190	3"	4"	140	84x72	87x53	7,500
WS84-4200-4			250	500		4"	4"				
WS84-4200-6			500	1,000		6"	4"				

* All softeners require periodic regeneration and backwashing to dispose of the accumulated debris and re-activate the resin media. This is accomplished by backwashing clean water through the unit and then starting the brine suction. To avoid interruption during regeneration, Pure Aqua can offer twin alternating or triplex water softeners to supply continuous softened water without interruption. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

Applications for Water Softeners

- 💧 Apartments/condominiums
- 💧 Hospitals
- 💧 Cooling tower
- 💧 Car washes
- 💧 Laundries
- 💧 RO pre-treatment
- 💧 Boiler feedwater
- 💧 Groundwater remediation
- 💧 Contact process water

Pure Aqua also supplies: Custom Engineered Solutions, Multimedia Pretreatment, Activated Carbon Pretreatment, Water Conditioning, Chemical Dosing Systems, Ultraviolet (UV) Sterilizers and Ozonation Systems.

 <p>Pure Aqua, Inc. Water Treatment and Reverse Osmosis Systems sales@pureaqua.com Tel: +1-714-432-9996 www.pureaqua.com Fax: +1-714-432-9898</p>	<div style="text-align: center;">    </div> <p>Authorized Dealer:</p>
---	--