

Steel Tank Water Softeners

3000-SA Series

INTRODUCTION

3000-SA series softeners are designed as fully automatic units either with timer control or meter control. The timer control initiates softener regeneration at any predetermined time - on any or everyday. On the other hand, the meter models start the regeneration based on the total gallons.

HOW TO SIZE A SOFTENER

A softener is sized on the basis of two different parameters, i.e.: Exchange capacity, that is the quantity of water delivered between regenerations and maximum flow rate, that is the quantity of water required for the highest water consumption

- Exchange capacity depends upon the amount of ion exchange resin in the softener and upon the quantity of salt used for resin regeneration. The various exchange capacities of the different models of SA series are measured in grains.
- Maximum flow rate is an important datum in case of non-continuous water delivery. It is measured in gallons per minute (gpm).



STANDARD FEATURES

STEEL MINERAL TANKS

The steel mineral tank is engineered for a 100 psi working pressure and is tested to 150 psi. It is equipped with a manhole in the top head and handhole in the lower side shell as follows:

- 24" - 30" tanks: 4"X6" top manhole & 4"X6" handhole
- 36" - 78" tanks: 11"X15" top manhole & 4"X6" handhole.
- 84" tanks: two (2) 11"X15" top manholes & 4"X6" handhole.

EPOXY LINING

The interior of the tank is coated with epoxy for protection against rust and corrosion. The exterior has a rust inhibiting primer coat.

RESIN

A premium grade sulfonated 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.

BRINE TANK

The brine tank is a combination of high density polystyrene brine measuring tank and brine valve including an air eliminator valve and a safety brine refill shut off to prevent tank overflow.

VALVE NEST

Regeneration of 3000-SA softeners is controlled by a brass pilot stager (NEMA 1). This stager sends hydraulic or pneumatic signals to the factory assembled nest of diaphragm and/or butterfly valves connected by sch.80, PVC face piping. These valves open and close slowly to prevent hydraulic shock. The valve nest contains a self adjusting backwash flow control and an ejector for brine draw. Diaphragm valves are available in 1", 1-1/2", 2" & 2-1/2" line size models and butterfly are available in 3", 4" & 6" line size models.

REGENERATION CONTROLLER

The automatic regeneration controller features a choice of 7 or 12 day calendar wheels. Time of regeneration and length of time for each regeneration cycle are fully adjustable.

UNDERRAIN

The underdrain utilizes either a hub & lateral or header & lateral system to support the mineral bed to prevent resin loss and insure minimal pressure drop at peak flow rates.



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AVAILABLE OPTIONS

- Carbon steel or stainless steel tanks up to 120" dia.
- Fiberglass tanks rated at 150 psi
- 316 Stainless steel, FRP or galvanized face piping
- Meter initiated controller (single tank)
- Meter initiated controller (twin parallel)
- Alternating - Time clock (twin)
- Alternating - Meter initiated (twin)
- NEMA 4 or NEMA 12 enclosures

SPECIFICATIONS

Model	Max. Exchange Capacity (Grains) @ 15#/Ft ³	Resin (Ft ³)	Flow Rate (GPM)					Pipe Size (In.)		Tank Size DxH (In.)		Floor Space (In.)		Approx. Shipping Weight (lbs)
			Service		Regen.	B.W.	Rinse	Inlet	Drain & B.W.	Softener	Brine	Single	Twin	
			Min.	Max.										
SA 24-240-1.5	240,000	8	16	32	5	25	16	1.5	1	24X60	24X48	72X40	108X40	1,750
SA 30-300-1.5	300,000	10	24	49	6	40	24	1.5	1.5	30X60	27X42	78X46	120X46	2,300
SA 30-300-2			24	59				2						
SA 30-390-1.5	390,000	13	24	49	7	40	24	1.5	1.5	30X60	31X48	87X46	129X46	2,450
SA 30-390-2			24	59				2						
SA 36-450-2	450,000	15	36	71	8	57	36	2	1.5	36X60	31X48	93X52	141X52	3,700
SA 36-540-2	540,000	18	36	71	10	57	36	2	1.5	36X60	36X48	100X52	148X52	3,850
SA 42-720-2	720,000	24	48	96	14	77	48	2	1.5	42X60	42X48	114X60	162X60	5,200
SA 42-720-2.5			48	116				2.5						
SA 48-960-2.5	960,000	32	63	126	18	100	63	2.5	2	48X60	48X48	126X66	180X66	6,600
SA 48-960-3			63	151				3						
SA 54-1200-3	1,200,000	40	79	159	23	127	79	3	2	54X60	48X48	138X72	198X72	8,000
SA 54-1200-4			79	191				4						
SA 60-1500-3	1,500,000	50	98	196	28	157	98	3	2.5	60X60	52X60	144X78	210X78	10,000
SA 60-1500-4			98	236				4						
SA 66-1800-4	1,800,000	60	119	268	34	190	119	4	2.5	66X60	56X56X56*	156X86	234X86	11,300
SA 72-2130-4	2,130,000	71	141	283	40	226	141	4	3	72X60	58X58X58*	168X92	252X92	14,000
SA 78-2500-4	2,500,000	83	166	333	47	265	166	4	3	78X60	58X58X58*	180X98	270X98	16,650
SA 78-2500-6			166	385				6						
SA 84-3000-6	3,000,000	100	192	390	55	308	192	6	3	84X60	58X58X58*	192X104	288X104	18,850

* Concrete by others

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