

ZEO-TECH DEALKALIZER

STANDARD FEATURES:

- Single Unit Flows up to 460 gpm
- FDA Approved Epoxy Lined Steel Tanks with 100 psig Design Pressure
- Top Mounted Manway
- Schedule 80 PVC Hub and Lateral Distributors
- Factory Assembled Diaphragm Valve Nest
- Steel External Piping
- Sensor Initiated Regeneration
- Automatic Brine Float Valve
- Backwash Flow Controller

ADVANTAGES:

- Materials and Coatings Selected to Withstand Corrosive Environments
- Reliable, Low Restriction Valves
- Non-Clogging Distributors Allow Operation Over Wide Flow Rate Range and for Even Distribution
- Standard Designs Reduce Cost and Delivery Time
- Simple Operation Reduces Operator Training Requirements

OPTIONS:

- ASME Code Vessel
- Butterfly Valves
- Stainless Steel or Fiberglass Pressure Tanks
- Salt Silo and Bulk Brining System
- Stainless Steel, Copper, PVC, or Galvanized External Piping
- Stainless Steel Internal Piping and Distributors
- Pre-piped and Wired Systems Mounted on Skid
- Interconnecting Piping Between Multiple Units
- Manual Unit Isolation Valves
- Allen Bradley PLC

**For Options Not Listed Here
Please Contact Nalco Res-Kem**

Nalco Res-Kem Zeo-Tech Dealkalizers are available in a wide range of self-contained packages configured in single, double, and multiple unit systems to remove alkalinity from your water. Nalco Res-Kem Zeo-Tech Dealkalizers are used institutional and industrial dealkalization applications for boilers operating below 700 psig and where alkalinity can interfere with your process or degrade your product. Single units are rated for flows up to 460 gpm. For larger flow rates, contact Nalco Res-Kem to determine whether larger or multiple units would be appropriate. Both options are available from Nalco Res-Kem.

Economical and efficient, Nalco Res-Kem Zeo-Tech Dealkalizers can be equipped for manual, semi-automatic, or full-automatic operation. Regardless of the configuration, only limited technical expertise is required for operation. Nalco Res-Kem Zeo-Tech Dealkalizers will integrate into a complete water treatment system without expensive custom field engineering and programming.



**Dual 36" Diameter Dealkalizer System with Optional
PVC Diaphragm Valves and Piping**

Why use an Industrial Water Dealkalizer?

Reduce Blowdown - High alkalinity promotes boiler foaming and carryover and causes high amounts of boiler blowoff. A dealkalizer can increase the cycles of concentrations, reducing blowdown and lowering operating costs.

Reduce Chemical Use – Reducing blowdown by dealkalization keeps the water treatment chemicals in the boiler longer, thus minimizing the amount of chemicals required for efficient, non-corrosive operation.

Reduce Return Line Corrosion – Carbonate and bicarbonate alkalinities are decomposed by heat in boiler water, releasing CO₂ into the steam. CO₂ combines with the condensed steam in process equipment and return lines to form carbonic acid, H₂CO₃. This lowers the pH of the condensate returns and results in corrosive attack on the equipment and piping.

Reduce Chemical Contamination – Pharmaceutical, food, dairy, and beverage plants are not permitted to use the amount of chemicals required to properly treat

FEATURES AND SPECIFICATIONS

Model	Vessel Diameter	Flow Rate Continuous	Flow Rate Maximum	Resin Quantity	Capacity NaCl Only Regeneration	Capacity NaCl & NaOH Regeneration	Inlet/Outlet Pipe Size Range	Brine Tank Diameter x Height	Approximate Dimensions L x D x H
Prefix	inches	gpm	gpm	cubic feet	grains	grains	inches	inches	inches
ZTA20	20	10	20	5-7	52,500	55,000	1 ½	24x54	56x32x94
ZTA24	24	16	32	8-10	67,500	88,000	1 ½	24x54	60x36x94
ZTA30	30	24	48	12-15	112,500	132,000	1 ½	30x48	72x42x98
ZTA36	36	34	68	17-22	157,500	198,000	2	30x60	87x48x98
ZTA42	42	48	96	24-30	217,500	264,000	2	39x48	104x54x101
ZTA48	48	64	128	32-40	285,000	341,000	2 ½	39x60	110x60x101
ZTA54	54	80	160	40-50	360,000	440,000	3	48x48	126x66x110
ZTA60	60	98	196	49-62	442,500	539,000	3	50x60	144x72x110
ZTA72	72	140	250	70-85	637,500	781,000	4	60x46	168x84x110
ZTA78	78	166	332	83-100	750,000	913,000	4	72x46	174x90x110
ZTA84	84	192	384	96-115	862,500	1,056,000	4	72x46	180x96x110

Specification Bases: (For your specific water source, contact Nalco Res-Kem for estimates)

Flow Rate Range: Continuous Flow 2 gpm/ft³ to Maximum Flow 4 gpm/ft³. Capacity 4 gpm/ft³ will be 10% less than at 2 gpm/ft³

Resin Quantity: Bed Depth 30-36 inches

Capacity: 11,000 grains/ft³ using NaCl & NaOH Regeneration or 7,500 grains/ft³ using NaCl Only Regeneration and flow rate of 2 gpm/ft³. Capacity will vary depending upon inlet water analysis and flow rate. Contact Nalco Res-Kem for sizing.

Features	Standard	Optional
System Design and Operation		
Steel Pressure Tank with Epoxy Lining	◆	
Steel Pressure Tank with High Temperature Epoxy, or Baked Phenolic Lining		◆
Stainless Steel or Fiberglass Pressure Tank		◆
ASME Code Vessel Construction		◆
PVC Hub and Lateral Distribution and Internal Piping	◆	
Stainless Steel Internal Piping and Distributors		◆
Cast Iron Diaphragm Valves	◆	
Stainless Steel, Bronze, or PVC Valves		◆
Steel External Piping	◆	
Copper, PVC, Galvanized Steel, or Stainless Steel External Piping		◆
Manual System Isolation Valves		◆
Brine Tank and Brine Float Valve	◆	
Interconnecting Piping to Brine System		◆
Salt Silo and Bulk Brining System		◆
Parallel or Alternating Operation for Multiple Units		◆
Skid Assembly for Multiple Units		◆
Interconnecting Piping between Multiple Units		◆
Instrumentation and Controls		
Time Clock Stager Controller in NEMA 1 Enclosure		◆
Manual, Semi-Automatic, or Full-Automatic Controls	◆	
Flow Sensor	◆	
Inlet and Outlet Pressure Gauges	◆	
Outlet Sampling Valve	◆	
NEMA 4XFG Electrical Enclosure	◆	
Allen Bradley Programmable Logic Controller		◆

ZEO-TECH DEALKALIZER MODEL NUMBER GUIDE

