

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
- High Capacity Type II Anion Resin
- Factory Assembled Diaphragm Valve Nest with Steel 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
- Nitrate Selective Resin
- 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 Res-Kem Corp.**

Res-Kem Zeo-Tech Nitrate Removal Systems are available in a wide range of self-contained packages configured in single, double, and multiple unit systems to remove nitrates from your water. Res-Kem Zeo-Tech Nitrate Removal Systems are used for municipal, institutional, and industrial nitrate removal applications where nitrates can interfere with your process or cause illness for babies and others with compromised immune systems. Single units are rated for flows up to 460 gpm. For larger flow rates, contact Res-Kem to determine whether larger or multiple units would be appropriate. Both options are available from Res-Kem.

Economical and efficient, Res-Kem Zeo-Tech Nitrate Removal Systems can be equipped for manual, semi-automatic, or full-automatic operation. Res-Kem Zeo-Tech Nitrate Removal Systems will integrate into a complete water treatment system without expensive custom field engineering and programming.



Quadruple 36" Diameter Nitrate Removal System with Optional Skid, PVC Diaphragm Valves, Piping, and Instrumentation

Ion Exchange Resin Selection:

Based on your specific requirements, Res-Kem will use either a Type II Anion resin or a Nitrate Selective resin.

A Strong Base Type II Anion is best applied to municipal supplies where there is regular testing and monitoring of the system. A Type II resin has a very high capacity for anions, but is not nitrate selective. Other ions, primarily sulfate, compete for the exchange sites on the resin. To properly size up this system, a complete water analysis will be required. In process monitoring will ensure compliance and avoid nitrate "dumping" as the system approaches exhaustion. The nitrate level during dumping can be many times higher than the untreated nitrate concentration.

A nitrate selective resin is an option used principally on smaller municipal systems and private well sources. Nitrate selective resins strongly prefer the nitrate ions to the competing sulfate ions. With this resin we avoid nitrate "dumping". In general this resin may be up to 50% more in cost.

Model	Vessel Diameter	Flow Rate Continuous	Resin Quantity	Approximate Capacity	Inlet/Outlet Pipe Size Range	Brine Tank Diameter x Height	Approximate Dimensions L x D x H
Prefix	inches	gpm	cubic feet	grains	inches	inches	inches
ZTN20	20	15	5-7	50,000	1 ½	24x54	56x32x94
ZTN24	24	24	8-10	80,000	1 ½	24x54	60x36x94
ZTN30	30	36	12-15	120,000	1 ½	30x48	72x42x98
ZTN36	36	51	17-22	170,000	2	30x60	87x48x98
ZTN42	42	72	24-30	240,000	2	39x48	104x54x101
ZTN48	48	96	32-40	320,000	2 ½	39x60	110x60x101
ZTN54	54	120	40-50	400,000	2 ½	48x48	126x66x110
ZTN60	60	147	49-62	490,000	3	50x60	144x72x110
ZTN72	72	210	70-85	700,000	3	60x46	168x84x110
ZTN78	78	249	83-100	830,000	4	72x46	174x90x110
ZTN84	84	288	96-115	960,000	4	72x46	180x96x110

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

Flow Rate Range: Continuous Flow 3 gpm/ft³ based upon a bed depth of 30 inches

Resin Quantity: Bed Depth 30-36 inches

Capacity: The capacity shown is for estimation purposes only. Actual capacity will vary widely depending upon the level of nitrates and sulfates in the water.

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		◆
Type II Anion Exchange Resin	◆	
Nitrate Selective Ion Exchange Resin		◆
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		◆