

SORB 07™ NITRATE REMOVAL SYSTEM

With more than 25 years of ion exchange treatment process experience, De Nora Water Technologies has designed the SORB 07™ nitrate removal system to treat nitrate (NO_3) contamination in ground water supplies.

The SORB 07 system treats a wide range of water qualities at capacities ranging from 100 to 3,000 gpm. The SORB 07 system features a smaller footprint and enhanced operation as compared to conventional ion exchange systems.

The SORB 07 system is an ion exchange process based on the DOWEX™ UPCORE™ technology. The UPCORE packed bed downflow service and counterflow regeneration process ensures consistent water quality.

The SORB 07 system uses NO_3 selective anion resins, in pressure vessels, to remove nitrate contaminants. The system typically includes at least two exchange vessels in parallel operation. Treatment bypass and blending are included in the design to further minimize operating costs. Coupled with process monitoring and controls, the resin bed's ion exchange capacity is also increased in comparison to conventional processes.

SORB 07 is a regenerative process using salt to remove the NO_3 ions as a concentrated spent brine – extending the treatment life of the resin. The SORB 07 system reduces the amount of regenerant by 50 - 75% per cubic foot of ion exchange resin in process.



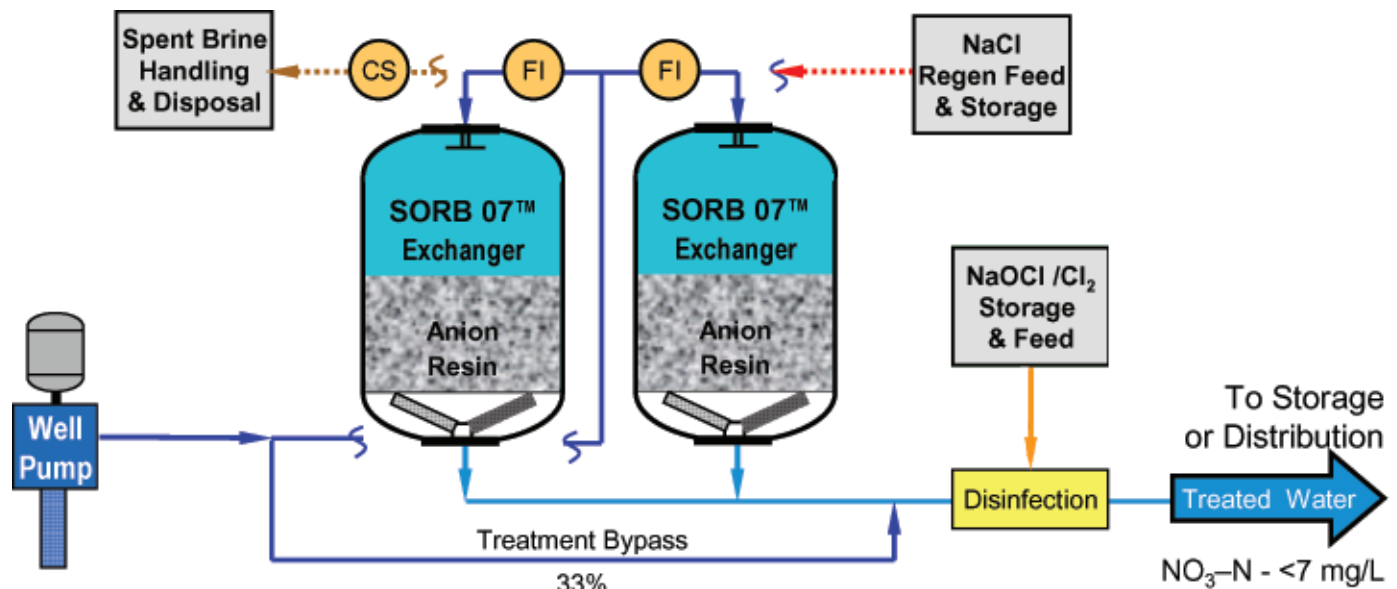
SORB 07™ Nitrate Removal System

Benefits

- Excellent water quality
- High chemical efficiency
- Short regeneration time
- Simple design, construction and control – easy to control and automate
- Self-cleaning
- Insensitivity to product flow variations and stops
- Ideal for upgrades or expansion

Process Description

The operation of the SORB 07 nitrate removal system is simple and straightforward. Some of the contaminated well water flow is fed downward through two or more ion exchange pressure vessels operating in parallel. Some water bypasses treatment and is blended to meet an effluent water quality less than the MCL. The volume of water treated in each exchanger is totalized. When the volume approaches the NO_3 breakthrough point, the exchanger is taken off line and regenerated with brine to remove adsorbed NO_3 from the resin and into a spent brine solution. Regenerated resin is then rinsed of brine and returned to NO_3 ion exchange service for another cycle.



For more SORB 07™ Nitrate Removal System visit www.denora.com

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