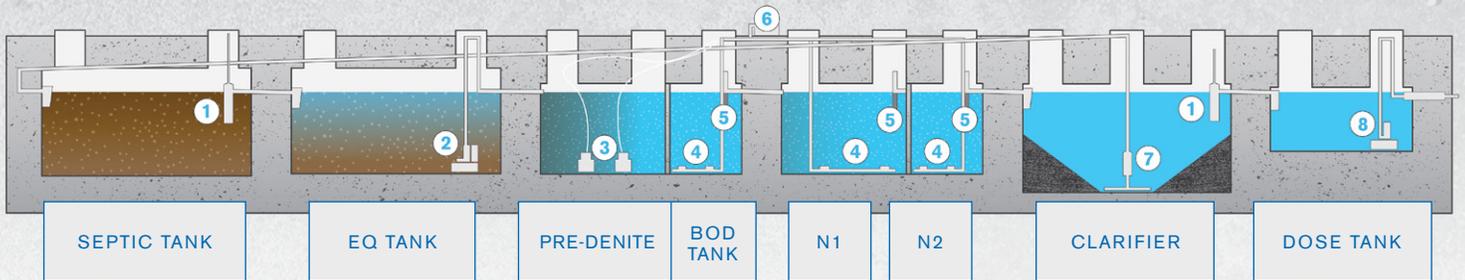


WEXCO ALPHA NITRO DE-NITRIFICATION

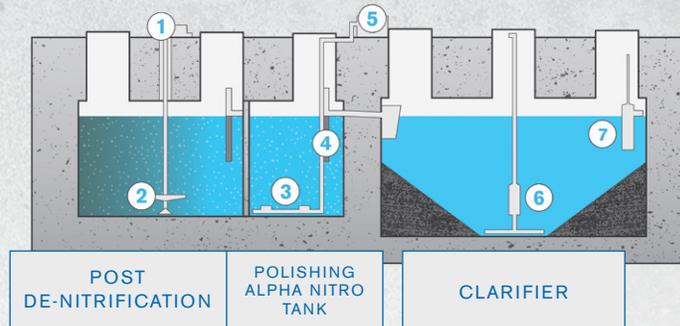
DE-NITRIFICATION



1. EFFLUENT FILTER 2. DUAL TIME DOSE PUMP(S) 3. ANOXIC MIXER 4. AIR DIFFUSER
5. MEDIA SEIVE 6. BLOWER & HOUSING 7. AIR LIFT SLUDGE RETURN PUMP 8. DOSE PUMP(S)

Complete denitrification systems **utilize multiple aerobic stages of treatment** to remove BOD and fully nitrify the waste stream. Recycling nitrified effluent to a pre-DN anoxic stage uses influent BOD as a carbon source to reduce or eliminate chemical addition. Systems are designed to meet nitrogen limits as low as 10 mg/l.

POST DE-NITRIFICATION



1. MIXER MOTOR 2. IMPELLOR 3. AIR DIFFUSER 4. MEDIA SEIVE
5. BLOWER & HOUSING 6. SLUDGE RETURN PUMP 7. EFFLUENT FILTER

Post DN systems are designed to **retrofit existing treatment systems** that fully nitrify wastewater but do not denitrify. Designs include carbon addition, anoxic mixing, and polishing aeration to remove excess carbon. They can be designed to meet nitrogen limits of less than 10 mg/l.

THE **BENEFITS** OF DE-NITRIFICATION

Can be designed for both Pre and Post De-Nitrification (DN).

Pre-DN configuration allows nitrogen removal without supplemental carbon by using influent as a carbon source. Additional carbon may be added if influent carbon is not sufficient.



Biofilm growth on media surface

Anoxic stages uses energy efficient mixing technologies.

Design flexibility with effluent limits down to less than 10 mg/l.

Supplemental heat is added when wastewater temperatures are low.

Can be set up for Post-DN only if existing treatment system isn't meeting total DN requirements.

Multi-stage configuration allows specific populations of bacteria to thrive in each chamber.

Can achieve total nitrogen removal with influent temperatures down to 40°.

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ALPHA NITRO

THE **SMARTER** TREATMENT SOLUTION

Wexco Alpha Nitro (moving bed bioreactor) utilizes small biofilm carriers which provide a stable home for large populations of bacteria to grow and treat the wastewater. That, coupled with time tested aeration equipment, creates an **efficient treatment process** which can be used in most applications.

WHY USE ALPHA NITRO?

Can work for small flows (hundreds of gallons per day) and **easily scales** to large flows (million gallons per day).

Flexible install, below ground fiberglass or concrete tanks, above ground steel, concrete, or fiberglass tanks.

High density of bacterial growth due to large surface area of media.

Expandable if flows or loading increases.

Add pretreatment to or expand existing systems without tank installation.

Works well in **cold climates**.

SIMPLE. EFFICIENT. CLEAN WATER.

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