



## RTC-N Software Module

**Product #:** LXZ519  
**AED Price:** Contact Hach

### Do you want to stabilize your effluent ammonium and save energy at the same time?

Numerous factors affect nitrification in plug flow basins and step-feed (cascade) plants: temperature, alkalinity, dissolved oxygen concentration, hydraulic retention time, amount of nitrifying bacteria in the MLSS, TSS and  $\text{NH}_4\text{-N}$ . To maximize the efficiency of this process, you could install expensive blowers and diffusers, but without insight into each parameter—particularly oxygen transfer efficiency—there's no guarantee that high-capital improvements will provide a return on investment.

For a considerably smaller expense, deploy instrumentation to monitor treatment status and operating conditions, then pair it with software that helps manage DO using variable setpoints. Did you know that oxygen transfer efficiency actually drops as the actual DO increases toward saturation? That means that, at times, the same amount of oxygen can be transferred in your MLSS at a lower airflow with a lower DO. Hach's RTC-N Software calculates and adjusts DO concentration in response to your plant's real-time ammonium load and your desired effluent ammonium setpoint. In tandem with your existing blowers, RTC-N delivers ideal dissolved oxygen levels for each of the ASP aerated zones as the ammonium load travels along the lanes, concentrating air to the zones of greatest need and using energy only when required to keep levels within range.

Claros Process Management **solutions for nitrification/denitrification** like RTC-N are designed to make the most of your plant's real-world conditions by transforming every uncertainty into an opportunity for measurement, responsive action, and savings.

#### Stable $\text{NH}_4\text{-N}$ effluent

Consistent compliance security is made possible by a load-based  $\text{O}_2$  setpoint adjustment.

#### Improved denitrification and greater capacity

Lower  $\text{O}_2$  recirculation also results in better compliance on total nitrogen.

#### Typical energy savings of up to 25%

Not only does RTC-N enable targeted delivery to areas of highest requirement, it also helps nitrification processes take place at a lower DO concentration compared to fixed  $\text{O}_2$  control. In addition, DO is recovered as a result of improved denitrification efficiency.

#### Stronger performance

RTC-N is a customizable solution that upgrades the capabilities of your existing treatment basins and provides results not typically observed on ASPs.

#### Validated proof control

Use RTC-N's reporting features to document  $\text{NH}_4\text{-N}$  removal rates.

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## Specifications

**Application:** Nitrification (upstream denitrification)  
**Industry:** Wastewater

Input Parameter:	NH <sub>4</sub> -N <sub>In</sub> , NH <sub>4</sub> -N <sub>Out</sub> , TSS, Temp., Q <sub>In</sub>
Model:	RTC-N
Number of channels:	1 or 2
Output:	O <sub>2</sub> setpoint (profile)
Parameter:	Ammonium, TSS
Process:	Aeration process - Nitrification Control
Prognosys:	Yes
Solution Type:	Software