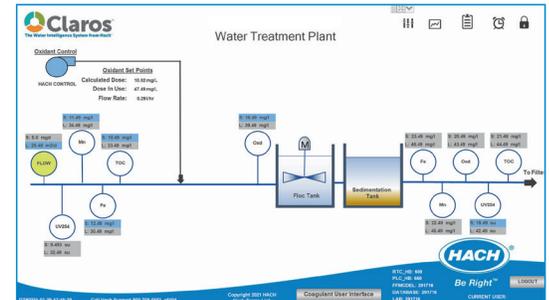


# RTC-PREOX Module Real-Time Control Solution Pre-Oxidation

## Applications

- Municipal Source Water
- Industrial Source Water
- Municipal Drinking Water



## Pre-Oxidation. Under Control.

The Hach® RTC-PREOX module simplifies the management of your pre-oxidation processes and maximizes performance through real-time measurements and chemical dosing control, providing peace of mind and allowing you and your team to focus more time and energy on high-value tasks that matter most.

### Real-time oxidation process visibility

With real-time data and visualizations, you can see and understand exactly what is going on in the oxidation process at any time and how the software is responding. This visibility and new data eliminates guesswork and uncertainty, facilitates training and knowledge sharing opportunities, and offers a level of real-time understanding otherwise unattainable.

### Optimized chemical usage

RTC-PREOX can optimize chemical use while meeting your target finished water quality, avoiding both over-dosing and under-dosing of oxidation chemicals. Real-time control improves your performance allowing for reduced chemical usage and helps you realize the full treatment capacity of your plant.

### Reduced operator effort

RTC-PREOX's constant monitoring and automatic adjustments relieve you and your team of manual tasks, freeing up time and focus for other higher-value production tasks.

### Consistent finished water quality

Achieve your target finished water quality in variable conditions and across all staff shifts, 24/7. This means peace of mind as it helps ensure production continues, you comply with regulations, and your public reputation is protected. For peace of mind, the RTC-PREOX module comes equipped with built-in fallback strategies with the ability to define ranges of valid measurements and automated alerts to the customer via text or email.

### We understand every plant is different

Hach has installed thousands of Claros Process Management systems, including RTC modules. Based on its modular design allowing millions of combinations, it fits almost all plant configurations and solves unique challenges. Only Hach offers a complete solution based on reliable analytical instrumentation and advanced algorithms. With Hach, you'll benefit from our dedication to innovation and over 80 years of process expertise.



## Principle of Operation

The Hach Claros Process Management (CPM) system for Oxidation (RTC-PREOX) utilizes a ratio feed forward model and a variety of parameter inputs to adjust oxidant dosing in real time, optimizing chemical costs and ensuring compliant finished water.

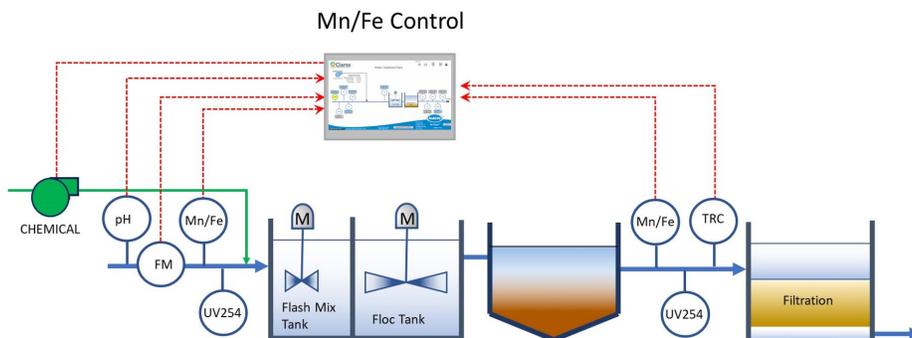
This system improves the  $MnO_4$  usage to remove Mn, Fe, and organics from the raw water supply. The RTC- $MnO_4$  calculates  $MnO_4$  dosing rates in the pretreatment process using feed forward and feedback control loops.

The feed forward loop calculation is based on continuously maintaining a constant ratio of Mn/Fe to  $MnO_4$  concentration as well as a constant ratio of Organics to  $MnO_4$  concentration.

The feedback trim then modifies the dosing rates for  $MnO_4$  based on the concentration measured in the clear finished water respectively.

The following benefits can be expected after implementation of the RTC-PREOX system:

- Optimization of water treatment process
- Achieve savings on Permanganate
- Reduce the risk of overdosing Permanganate
- Mn/Fe/Organic removal optimization



## Order Information

### RTC-PREOX Module

**LXZ532 (B)** RTC-PREOX Module, software only. To be used with LXV515.  
Control module for automatic oxidant chemical dosing for optimal process management.

**LXV515** IPC Hardware

*Please note: Using RTC modules requires applicable transmitters, communication accessories and inputs from analytical instrumentation. Please consult your local Hach sales manager to learn more.*

### Be certain in your control with a first class Service Partner. Be confident with Hach Service.

Hach's Commissioning Service for RTC provides the insurance that your complete RTC solution is installed and configured properly as well as optimized efficiently. During the commissioning period (Start Up phase, Commissioning phase, Hand over phase), Hach will thoroughly monitor your system and review and analyse your data remotely in order to provide guidance to optimize your RTC at its highest performance and efficiency levels for your application.

### Hach World Headquarters: Loveland, Colorado USA

United States: 800-227-4224 tel 970-669-2932 fax orders@hach.com

Outside United States: 970-669-3050 tel 970-461-3939 fax int@hach.com

[hach.com](http://hach.com)

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