

# Frequently Asked Questions: RTC-C/DC

## Q: What is “RTC,” “Claros Process Management,” and “RTC-C/DC?”

**A:** “RTC” means Real-Time Control and generally refers to solutions that utilize real-time data inputs for process automation and control. “Claros™ Process Management” (CPM) is a suite of Hach® RTC software solutions and personalized support that helps manage, optimize, and automate water treatment processes. “RTC-C/DC” is a single software module that optimizes and controls the chlorination and dechlorination of treated wastewater.

## Q: How does the RTC-C/DC software work? What technology does it use?

**A:** RTC-C/DC software evaluates multiple inputs such as flow, total chlorine residual, contact time, hydraulic residence time, CT (concentration x contact time), and other parameters to determine and deliver optimal chlorination chemical (gas or liquid) and dechlorination chemical (bisulfite or SO<sub>2</sub>) dosing based on CT with chlorine residual limits. The software uses a combination of modified feedback PID loops and feed forward algorithms to determine the right dosing strategy for disinfection stability and efficiency.

## Q: What are the benefits of the RTC-C/DC?

**A:** The RTC-C/DC offers many benefits:

**Real-time visibility:** With real-time data and visualizations, you can see and understand exactly what is going on in the disinfection process at any time and how the software is responding. This visibility eliminates guesswork and uncertainty!

**Consistent results:** Achieve your target effluent water quality in variable conditions and across all staff shifts, 24/7. This means peace of mind as it helps ensure production continues, comply with permits, and protect your public reputation.

**Time savings:** RTC-C/DC’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.

**Chemical optimization:** RTC-C/DC minimizes chemical use while meeting your target effluent water quality, avoiding both over-dosing and under-dosing. This can lead to chemical savings and reduces the frequency of swapping gas cylinders or refilling chemicals which reduces operator exposure to harmful chemicals.

**Training and knowledge preservation:** Disinfection process knowledge is built into the software logic. With its powerful visuals and reports, RTC-C/DC facilitates conversations and experiences to more easily train staff and share information.



## Q: What parts or components are needed?

**A:** RTC-C/DC is a software solution. However, other components are needed for implementation, including a touchscreen Industrial PC, transmitter, and instrumentation. All of these components are available through Hach and many can be obtained through other suppliers. Your Hach sales manager and CPM specialist are available to perform a free site survey to determine your specific needs.

## Q: How is this different than SCADA or a PID loop built by a local integrator or programmer?

**A:** RTC-C/DC is much more than simple PID loops and works with any existing SCADA system. It provides control options for constant total chlorine residual, using CT as a limit, or a constant CT with chlorine residual limits along with load proportional dechlorination dosing. With over 1,300 installs globally, our RTC solutions are proven and come with a deeply experienced support system for ongoing success.

## Q: How does RTC-C/DC safely connect to my network and systems?

**A:** RTC-C/DC integrates with your systems using the highest standard of security protocols. We are flexible to meet the IT security needs of your organization. Visit us at [hach.com/claros](https://hach.com/claros) to read the Claros Security Whitepaper.

### Q: How do I know this will work for my site's Chlorination/Dechlorination processes?

**A:** Through deep experience (over 1,300 RTC installs), we have seen and successfully overcome many unique, site-specific challenges. This solution is proven and standardized but tailored to the needs of your site and process. We encourage you to contact your Hach sales manager for RTC-C/DC references.

### Q: What fallback or protection strategies are included in case something goes wrong?

**A:** Every one of the Hach RTC solutions, including RTC-C/DC, has built-in fallback strategies in case of malfunction and in other user-defined scenarios. We support you as you define the what, when, and how these strategies are employed.

### Q: I'm not ready yet for automation, can RTC-C/DC be used for recommendations only?

**A:** Yes. The RTC-C/DC may be used in a feed forward, recommendation-only mode if desired. Maximum benefits are obtained through automation, but there is absolutely stand-alone value in the new data and recommendations.

### Q: Does RTC-C/DC integrate with other Hach Claros solutions like Mobile Sensor Management?

**A:** Yes. Customers can implement RTC-C/DC alone or combine it with other Claros solutions such as Mobile Sensor Management™ to unlock additional value. Please discuss these possibilities with your Hach sales manager.

### Q: What is the process for setup and installation?

**A:** Post-purchase, Hach RTC Project Management and RTC Tech Support teams meet with you to verify your order and site requirements and to map out a plan for a successful installation, commissioning, and optimization.

### Q: What upkeep or maintenance is required?

**A:** RTC-C/DC software does not require regular maintenance. However, customers highly value ongoing RTC Tech Support for proactive monitoring and re-optimization if needed. Underlying instruments should be maintained normally.

### Q: What Hach Service Plans and Support Plans are available?

**A:** Commissioning and initial RTC Tech Support services are included in each RTC-C/DC purchase to ensure success. The RTC Tech Support service may be renewed thereafter. Learn more and explore our full service set at [hach.com/service](http://hach.com/service).

### HACH World Headquarters: Loveland, Colorado USA

United States: 800-227-4224 tel 970-669-2932 fax [orders@hach.com](mailto:orders@hach.com)  
Outside United States: 970-669-3050 tel 970-461-3939 fax [int@hach.com](mailto:int@hach.com)  
[hach.com](http://hach.com)

©Hach Company, 2020. All rights reserved.  
In the interest of improving and updating its equipment, Hach Company reserves the right to alter specifications to equipment at any time.



### Q: How much does the RTC-C/DC cost and what return on investment (ROI) can be expected?

**A:** Because each site is unique and may require different supporting components, we provide RTC-C/DC pricing in a tailored proposal. ROI can vary due to many factors, but most RTC customers see payback periods of 1-3 years.

### Q: We don't spend a lot on chemicals for our disinfection, why use this?

**A:** Chemical savings are important but not the only reason to use the RTC-C/DC. Other key drivers include peace of mind, improved disinfection performance and consistency, process visibility, time savings, effective training, and knowledge sharing.

### Q: How do I order an RTC-C/DC solution?

**A:** Speak with your local Hach sales manager to request a proposal. You can also start by emailing [orders@hach.com](mailto:orders@hach.com), filling out an interest form at [hach.com/claros/process-management-overview](http://hach.com/claros/process-management-overview), or by calling us at the number listed on your local [hach.com](http://hach.com) page.

### Q: How can I learn more?

**A:** To learn more and access additional RTC-C/DC resources, reach out to your local Hach sales manager, visit [hach.com/claros/process-management-overview](http://hach.com/claros/process-management-overview), or explore Hach Support Online at [support.hach.com/app/home](http://support.hach.com/app/home).