

Complete Water Analysis Solutions for

# Power, Heat & Steam Generation

- ✓ **Ensure Online Energy Supply**
- ✓ **Protect Equipment**
- ✓ **Save Time and Costs**



Be Right™

# The Water Analysis Experts for Power, Heat & Steam Generation

With more than 85 years as the leading expert in water quality analysis, Hach® provides the knowledgeable and responsive support team you trust to address your unique needs for water and steam applications throughout your entire process.

Hach provides solutions for laboratory, online and portable products whether your application is routine or challenging. We also provide service and training solutions that support you and our products.

Hach has the most comprehensive coverage for all types of water quality from ambient water to ultrapure. Our breadth of product solutions support all power plants whether fossil or nuclear, as well as cogeneration, and heat and steam production.

- Influent water treatment
- Demineralization
- Make-up water
- Steam cycle
- Cooling Water
- Return Condensate
- Wastewater

## Featured water analysis solutions

### Silica / Phosphate

#### 5500 sc Silica or Phosphate Analyzer

Avoid downtime with the industry's only pressurized reagent delivery system.

- 90 days of continuous runtime
- Predictive diagnostics / maintenance technology
- Intuitive user interface
- Verify easily with Hach lab products so you don't waste time second-guessing



### Sodium

#### NA5600 sc Analyzer

Protect the metallurgy in your system and monitor for leaks at sub ppb. Our newest analyzer has a smaller footprint and uses the same interface as the 5500 sc.

- Automatic calibration
- Automatic electrode reactivation
- Optimum response time in a variety of power applications
- Reagent replenishment only every 90 days



## Dissolved Gases

### Orbisphere K1100 Optical O<sub>2</sub> Sensor

Achieve high accuracy in low ppb range with no membranes.

- Maintenance one time per year
- K1200 available for irradiated water applications, providing real-time data while reducing overall dose
- No interference by magnetite, hydrogen or flow



### Orbisphere 510 Multi-Channel Controller

Provides the complete solution in dissolved gas monitoring.

- Accurate, repeatable, trace-level measurements
- Data management
- Complements Orbisphere sensors



### Orbisphere Hydrogen TC Sensor

Monitor hydrogen in the power production process.

- Patented thermal conductivity (TC) sensor
- Continuous measurements
- Gaseous or liquid samples



### Orbisphere 3100 Portable Optical O<sub>2</sub> Analyzer

Mitigate risk with the most rugged portable O<sub>2</sub> analyzer in the power industry.

- Accurate results in seconds; ready to measure right out of the box
- Calibration one time per year
- Internal data storage and export via USB interface



## Conductivity / pH / ORP

### 9523 sc Cationic Conductivity Analyzer

Calculate accurate pH measurements without interference from contaminants.

- More contaminant-resistant than traditional pH probes



### 9525 sc Degassed Cation Conductivity System

Measure conductivity following the removal of CO<sub>2</sub> gas from the sample stream.

Couple with Hach 9523 sc to create a single, integrated system that measures:

- Specific conductivity (SC)
- Cation conductivity (CC)
- Degassed conductivity (DCC)
- Calculated pH



### Contacting Conductivity Sensors

A broad range of product options is available to meet your unique needs.

- Robust construction
- 316 stainless steel
- Integrated temperature sensor



### SC200/9500 Universal Controller

Deploy the most versatile controller on the market.

- Compatible with a broad range of digital and analog sensors
- Communication module-ready
- Advanced features for ease of use



### 8362 pH or ORP Sensor for High Purity Water

High-purity applications require accurate temperature sensitivity and a constant flow of electrolyte to the sample stream.

- Self-pressurizing electrode



## Total Organic Carbon (TOC)

### QbD1200 Laboratory TOC Analyzer

- One 90-minute calibration per year
- Low total cost of ownership
- 95% less carryover



### BioTector B3500c TOC Analyzer

- Maintenance two times per year
- Patented Two Stage Advanced Oxidation Technology



### FP360 sc Oil in Water Sensor

- Continuous online monitoring
- Low maintenance
- Easy to clean



## Disinfection

### CL17 Colorimetric Chlorine Analyzer

Take control of challenging water treatment processes with an analyzer that resists changes in water quality and demand.

- 15-minute maintenance monthly
- Fewer operator interventions and no special tools
- Reagent-free solutions for chlorine, chlorine dioxide and ozone measurements are also available.



## Turbidity & Corrosion Monitoring

### TU5 Series Lab and Online Turbidimeters

A patented optical design delivers the best low-level precision and sensitivity.

- 98% less surface area to clean
- Online and lab results that match



### DRB200 Reactor Heating Block

Combine DRB200 and lab tests with DR3900 and TU5400 online turbidimeter to get a clear view on:

- Iron transport
- Total and dissolved iron
- Ultra low range iron



## Photometry

### DR3900 VIS and DR6000 UV-VIS Photometers

Trace your sample from collection to preparation, sample analysis, to documentation.

- RFID technology
- Pre-programmed with power industry-specific methods
- Measures chlorine, silica, phosphate, oxygen scavengers, TOC, iron and copper



## Meters & Probes

### SL1000 Portable Parallel Analyzer

Get highly accurate chloramination results, with less opportunity for errors, in a fraction of the time.

- Up to six parameters in parallel
- Automation, internal temperature control, and self-contained chemicals to avoid manual steps



### HQD Meters & Intellical Probes

We offer a range of probes for routine and challenging power applications.

- Intuitive user interface



### AT1000 Automatic Titrator

Now anyone in the laboratory can perform Potentiometric Titrations that deliver fast, accurate and reliable results.

- One-touch automation
- Pre-set application packs
- Ready-to-use straight from the box



## Service & Support



### Online Support

**Hach Support Online (HSO)** pools more than 85 years of water analysis knowledge into a powerful global community. Flowing directly into our customer and technical support teams, this dynamic resource delivers real-time answers, user-friendly search tools, multiple types of content, and easy ways to connect with Hach experts. With HSO, you get the information you need and together, we can power progress for people around the world.



### Technical Training

**Hach Training Center** provides relevant, hands-on training to your team, giving them the experience they need to master various theories and techniques—and produce results you can trust for quality assurance, environmental safety, and regulatory compliance. Hach experts offer a large course catalog of workshop training, personalized training, and digital learning designed to increase proficiency and confidence for plant operators, instrument and field technicians, laboratory personnel, and plant managers and superintendents.

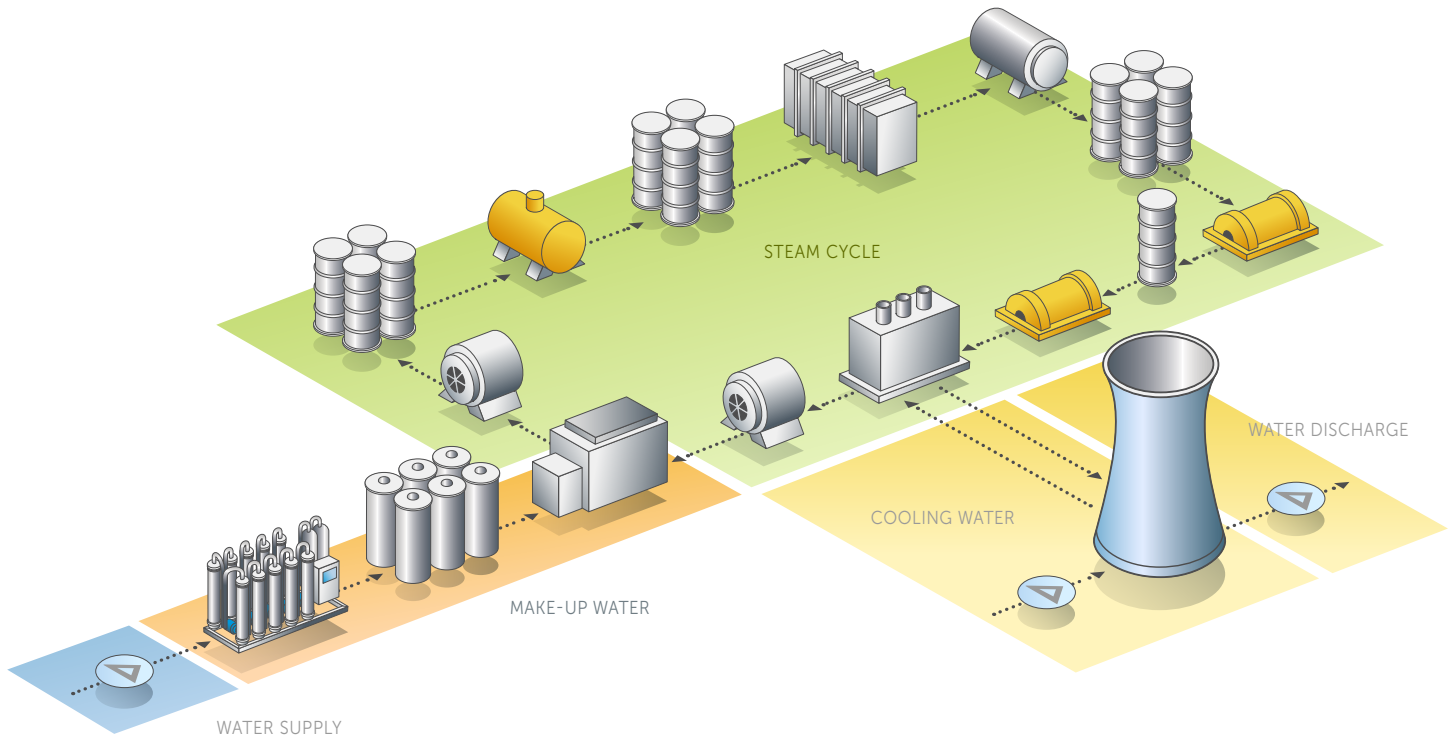
### Service



**Hach ServicePlus® Programs** have been developed to help solve your maintenance and support problems. Whether it's a lack of resources or skills, an instrument that is down, compliance concerns or the need for a predictable budget, we have programs to fit the unique challenges you face in your organization.

# Hach Solutions by Parameter

All parameters are available as both process & laboratory solutions.



## Water Treatment

- Chloride
- Chlorine
- Chlorine Dioxide
- Conductivity/Total Dissolved Solids (TDS)
- Dissolved Oxygen
- Hardness/Alkalinity
- Hydrazine/Oxygen Scavenger
- Oxidation-Reduction Potential
- Ozone
- pH
- Silica
- Sodium
- Total Organic Carbon (TOC)
- Turbidity and Suspended Solids

## Steam Cycle

- Ammonia
- Chloride
- Conductivity/Total Dissolved Solids (TDS)
- Copper
- Dissolved Oxygen
- Hydrazine/Oxygen Scavenger
- Hydrogen
- Iron
- Oxidation-Reduction Potential
- pH
- Phosphate
- Silica
- Sodium
- Total Organic Carbon (TOC)

## Cooling Water

- Chloride
- Chlorine/Oxidants
- Chlorine Dioxide
- Conductivity/Total Dissolved Solids (TDS)
- Copper
- Hardness/Alkalinity
- Microbiology
- Molybdate and Other Corrosion Inhibitors
- Oxidation-Reduction Potential
- Ozone
- pH
- Sodium
- Total Organic Carbon (TOC)

DOC030.53.10024.Oct18