



POWER AND STEAM GENERATION

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

Complete Water Analysis Solutions for

Power and Steam Generation



Be Right™

The Water Analysis Experts for Power and Steam Generation

With more than 90 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 source water to ultrapure. Our breadth of product solutions support all power plants whether fossil or nuclear, as well as cogeneration and steam production, and waste-to-energy.

Influent water treatment

Demineralisation

Make-up water

Steam cycle

Cooling Water

Return Condensate

Wastewater

Laboratory

Featured water analysis solutions

Silica / Phosphate

5500sc Silica or Phosphate Analyser

Avoid downtime with pressurised reagent delivery.

- 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
- Single and multi-channel configurations available.



Sodium

NA5600sc Analyser

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

- 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 O₂ 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 O₂ Analyser

Mitigate risk with the most rugged portable O₂ analyser 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



Orbisphere GA2400 O₂ EC Sensor

Achieve highly accurate results for very low oxygen levels.

- Electrical conductivity (EC) sensor
- Unrivalled highly accurate reading at $\pm 1\%$ at very low DO levels down to 0.1 ppb
- Easy and fast maintenance
- Robust for harsh environments



Conductivity / pH / ORP

9523 sc Specific and Cationic Conductivity, and pH analyser

Calculate accurate pH measurements without interference from contaminants.

- More contaminant-resistant than traditional pH probes



9525 sc Degassed Cation Conductivity Panel System

Measure conductivity following the removal of CO₂ gas from the sample stream.

An integrated system, now available with a regenerative cooling option that measures:

- Specific conductivity (SC)
- Cation conductivity (CC)
- Degassed cation 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



SC4500 Controller

Deploy the most versatile controller on the market.

- Graphical user interface helps indicate when errors or warnings occur
- Supports the use of pH/ORP and conductivity ultra pure modules



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-pressurising electrode
- Unique construction made of stainless steel
- The entire system is grounded and shields the measuring electrode from EMI and RFI interference



Total Organic Carbon (TOC)

QP1680 High-Temperature TOC Laboratory Analyser

- Available as a combined TOC and TNb analyser or for the individual parameters.
- Large diameter sample aspiration tubing can handle particles up to 800 µm.
- Simple operation, data analysis and system diagnosis thanks to an intuitive software package.
- Has the option for 65 or 96- position autosampler.



BioTector B3500c TOC Analyser

- Identify a wide range of contamination with a powerful, patented oxidation technology
- Certified uptime of 99.7 %, maintenance only 2x per year
- TIC, TOC and VOC analytics in a single analyser



FP360 sc Oil in Water Sensor

- Continuous online monitoring
- Low maintenance
- Easy to clean



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



Disinfection

Ultra Low Range CL17sc Colorimetric Chlorine Analyser

Take control of challenging water treatment processes with an analyser that maintains accuracy across a wide range of sample conditions.

- Wide range of controller mounting options available.
- Reliable, direct total chlorine results
- 8 ppb detection limit
- Cumulative Chlorine Counter



DR1300 FL Portable Fluorometer

- Provides precise and accurate results
- Tests are easy-to-perform, with ULR analysis in minutes
- Reduce biofouling potential
- Save on dechlorination costs
- Handles traditional interferences with ease
- Bluetooth capability allows easy data transfer
- Decrease in toxic reagents and chemical waste





Microbial Load

EZ7300 ATP Analyser

Monitor total bacterial and pathogen load in water.

- Complete ATP recovery, differentiating living biomass from non-living
- Complies with ASTM D4012-81
- Low maintenance



EZ5000 Multi-Parameter Titrator

Measure up to four parameters in one analyser: total hardness, calcium hardness, total alkalinity, and free alkalinity. Application areas include:

- Raw water intake
- Make up water
- Cooling water conditioning and event monitoring



Hardness & Alkalinity

EZ4000 Single-Parameter Titrator

Smart automatic features for validation, priming, and cleaning providing excellent analytical performance and maximised uptime.

- Rugged mainframe with compact footprint
- Analysis of up to eight sample streams



Meters & Probes

SL1000 Portable Parallel Analyser

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



HQ 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.

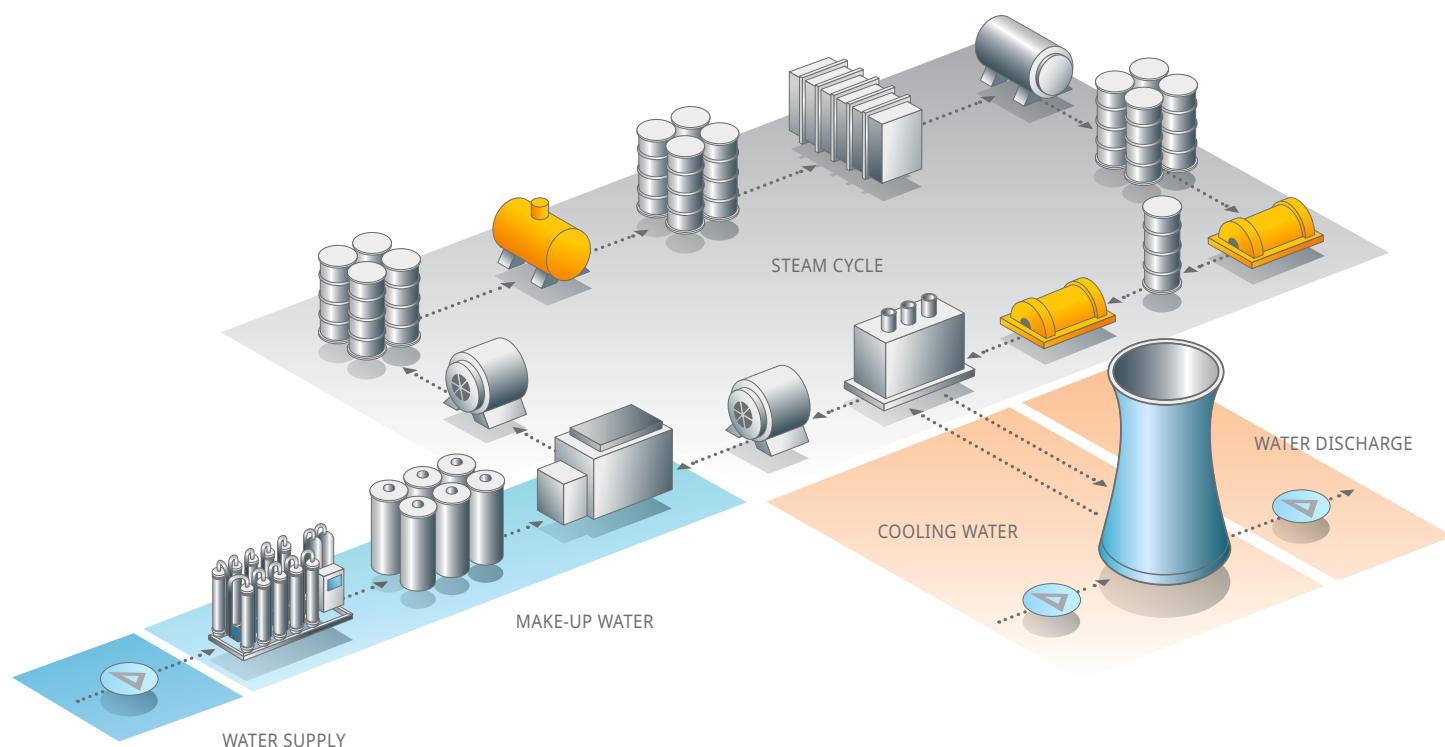


Service

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
Microbial Load (ATP)
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
Microbial Load (ATP)
Microbiology
Molybdate and Other Corrosion Inhibitors
Oxidation-Reduction Potential
Ozone
pH
Sodium
Total Organic Carbon (TOC)