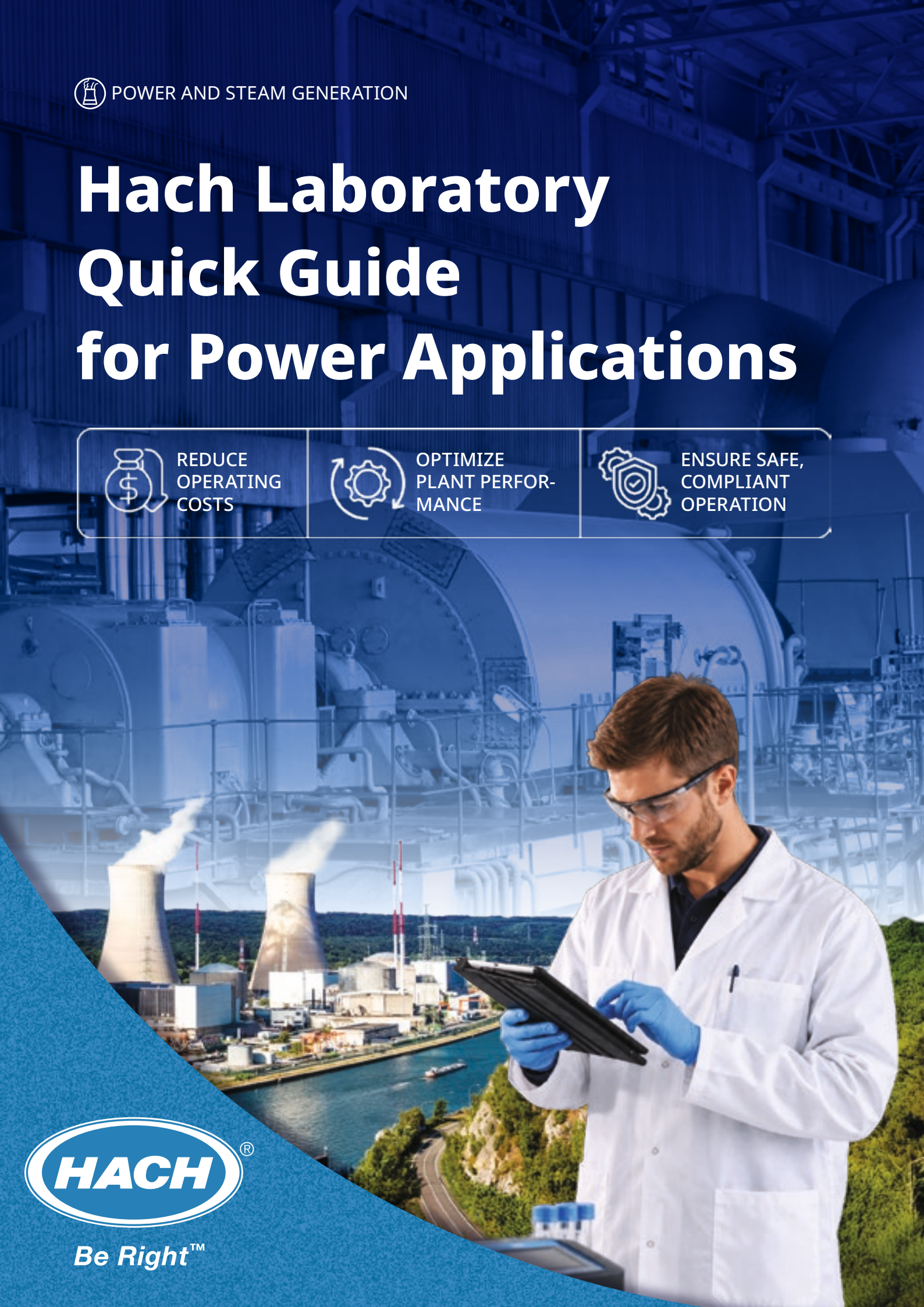
POWER AND STEAM GENERATION

Hach Laboratory Quick Guide for Power Applications

REDUCE OPERATING COSTS

OPTIMIZE PLANT PERFOR-MANCE

ENSURE SAFE, COMPLIANT OPERATION



HACH®

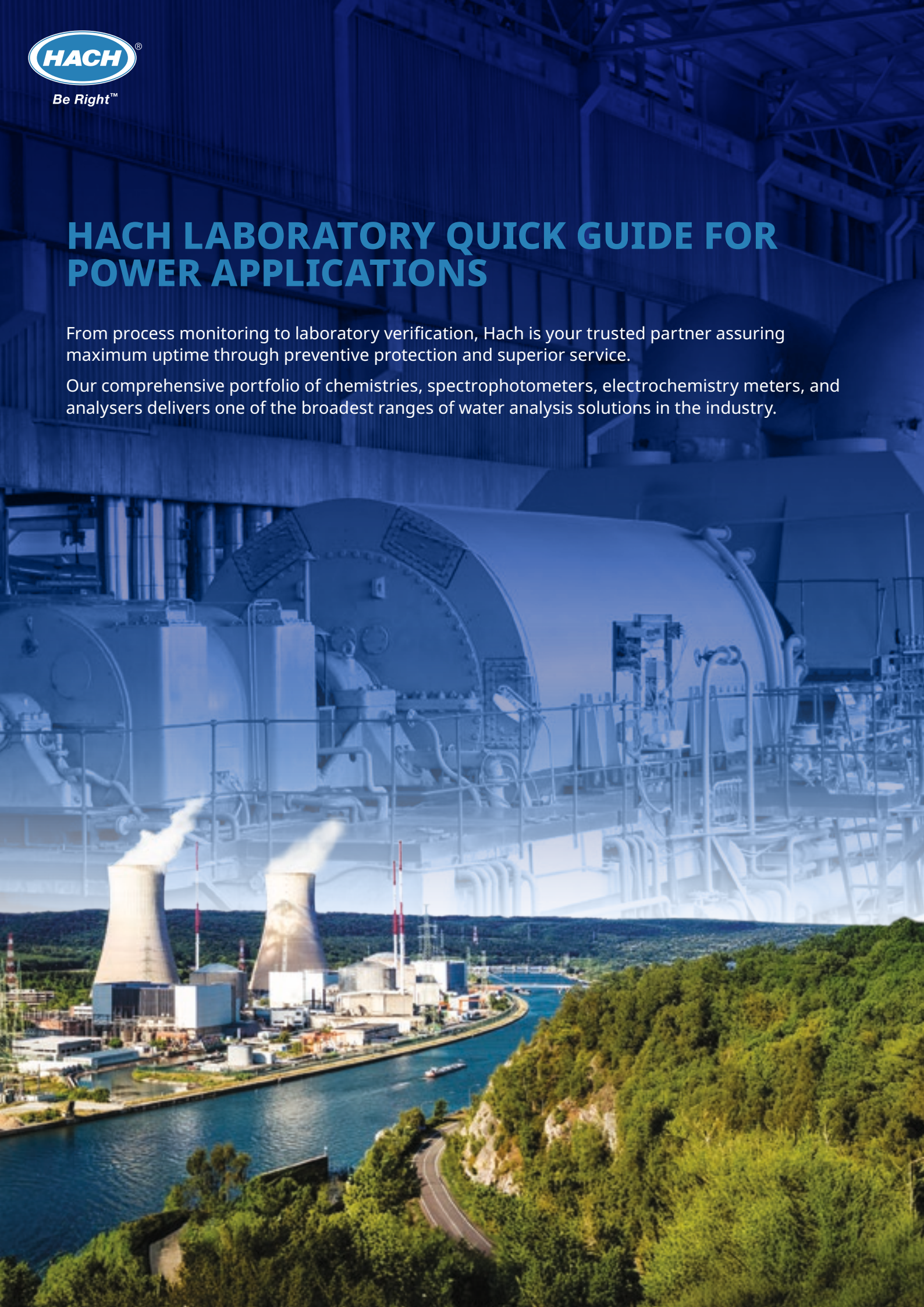
Be Right™

HACH®
Be Right™

HACH LABORATORY QUICK GUIDE FOR POWER APPLICATIONS

From process monitoring to laboratory verification, Hach is your trusted partner assuring maximum uptime through preventive protection and superior service.

Our comprehensive portfolio of chemistries, spectrophotometers, electrochemistry meters, and analysers delivers one of the broadest ranges of water analysis solutions in the industry.



Photometers & Chemistries

Hach photometers and chemistries are built on over 80 years of innovation, delivering accurate, reliable results across a wide range of parameters.

DR4900 Laboratory Photometer

Advanced routine lab photometer designed for high-accuracy water analysis, with intuitive workflows, guided procedures, and robust compliance support.





DR6000 UV-VIS Spectrophotometer

High-performance UV-VIS system enabling extended wavelength analysis and advanced applications, ideal for complex and research-level testing.

Portable photometers: DR1900 / DR900

Lightweight, field-ready instruments built for fast, reliable on-site testing, delivering lab-quality results with simplified operation.

Designed for both lab and field use, these systems support fast, standardized analysis with pre-programmed methods.



Automatic Titration



Titralab AT1000

One-touch automatic titration system designed for routine power plant measurements.

Applications include:

- pH
- Alkalinity
- Hardness

Portable parallel analysers (Colorimetry + Electrochemistry)

SL1000 and SL250 with Chemkey tests

Portable parallel analysers (PPA) perform water tests with less than half the manual steps. They produce highly accurate results with less opportunity for errors in a fraction of the time and allow for up to six parameters to be tested simultaneously, combining electro-chemistry and colorimetry in one platform.

Key benefits:

- Simultaneous multi parameter testing
- Minimal sample handling
- Faster results vs traditional methods
- Chemkey reagent technology



Electrochemistry



HQ/HQD Series Portable Meter

Flexible electrochemical platform for both field and lab use, designed for reliability and ease of operation.

Key benefits:

- Portable with integrated kickstand for bench or field use
- Plug-and-play Intellical digital probes
- Fast setup and intuitive operation
- Consistent, error reducing measurements

Portable Dissolved Oxygen Analyser

Orbisphere 3100

With Luminescent Dissolved Oxygen (LDO) technology integrated, this analyser is guaranteed to improve process efficiency and provide high precision, low level measurements in power plants.

Key benefits:

- Accurate ppb-level detection
- Fast, stable results with low drift
- Ideal for boiler, condensate, and feedwater monitoring
- Reliable, low-maintenance optical (LDO) technology
- One calibration per year thanks to optimised electronics and sensor optics



TOC Analyser



QP1680 TOC Analyzer

TOC laboratory analysis using the high-temperature digestion method.

Key benefits:

- Wide measurement range
- Reliable high-sensitivity detection
- Remove Suitable for power applications
- Integrated sample changer with stirring function
- Plug and play concept with intuitive software



Your Hach Instruments serviced by the people who know them best.

With more than 500 factory-trained technical support, service center, and field service experts, we help you keep your instruments protected and working at top performance. From setup to repairs using genuine parts and ongoing maintenance to instrument calibration, our support maximizes your resources and safeguards your instrument's accuracy.

Hach Service plans are designed to meet your needs. With regular maintenance visits and validating documentation, you're safeguarding your instrument's accuracy and meeting compliance requirements.



The right plan from Hach Service helps you:

- Maintain operational stability
- Reduce compliance risk
- Maximize instrument uptime
- Ensure data integrity

Spectrophotometric Measurements

Parameter	Platform	Method	Range*
Silica	DR-Series Spectrophotometer	8282/8186/8185	3-100000 µg/L SiO_2
Iron (Total)	DR-Series Spectrophotometer	10263/8147	1-1400 µg/L Fe
Copper	DR-Series Spectrophotometer	8143/8506	1-5000 µg/L Cu
Molybdenum	DR-Series Spectrophotometer	8169/8036	0.02-40.0 mg/L Mo
Ammonia	DR-Series Spectrophotometer	10205	0.015-47 mg/L NH_3-N
Phosphate	DR-Series Spectrophotometer	10210	0.15-60 mg/L PO_4
Chlorine	DR-Series Spectrophotometer	8021/10069	0.02-10.0 mg/L Cl_2
Hardness	DR-Series Spectrophotometer	8374/8030	4-4000 µg/L $CaCO_3$
Hydrazine	DR-Series Spectrophotometer	8141	4-600 µg/L N_2H_4
DEHA	DR-Series Spectrophotometer	8140	0 to 500 µg/L

**Ranges reflect multiple chemistries. See Water Analysis Handbook for details.*

Electrochemical Measurements

Parameter	Platform	Electrode	Range
pH	HQ Series / SL Series	PHC281	0-14 pH
Conductivity	HQ Series / SL Series	CDC401	0.01-200000 µS/cm
DO	HQ Series / SL Series	LDO10101	0.05-20.00 mg/L O_2
Redox/ORP	HQ Series / SL Series	MTC101 ORP	±1200 mV
Ammonia	HQ Series / SL Series	ISENH3181	0.01-14000 mg/L NH_3-N
Sodium	HQ Series / SL Series	ISENA381	0.023-23000 mg/L Na
Chloride	HQ Series / SL Series	ISECL18101	0.1-35500 mg/L Cl

Analysers

Parameter	Platform	Electrode	Range
pH	AT1000	Potentiometry	0-14 pH
Alkalinity	AT1000	Potentiometry	20-1000 mg/L $CaCO_3$
Conductivity	AT1000	Potentiometry	0.01-200000 µS/cm
Hardness	AT1000	Potentiometry	20-360 mg/L $CaCO_3$
Chlorine	AT1000	Amperometry	0.003-5 mg/L Cl_2
Turbidity	TU5200	Nephelometry	0.01-1000 NTU (ISO) 0.01-700 NTU (EPA)
Total Organic Carbon	QP1680	Catalytic combustion	0.05 - 30000 mg/L
Dissolved Oxygen	Orbisphere 3100	Optical LDO sensor	0.6–2000 ppb

Portable Parallel Analyser – SL Series (Colorimetric + Electrochemical)

Parameter	Platform	Method	Range*
Copper	SL Series	Chemkey	0.06–5.00 mg/L
Ammonia	SL Series	Chemkey	0.20–4.00 mg/L
Phosphate	SL Series	Chemkey	0.04–10 mg/L
Chlorine	SL Series	Chemkey	0.05–1.50 mg/L
Hardness LR	SL Series	Chemkey	3-100 mg/L $CaCO_3$
Alkalinity LR	SL Series	Chemkey	20 - 200 mg/L $CaCO_3$
Electrochemistry (pH, Cond, DO, etc.)	SL Series	Intellical Probes	As per Intellical

Protect What Powers You

Only Hach combines the industry's broadest parameter coverage, innovative online and lab instruments, and dedicated expert service, all in one integrated partnership, to help you:

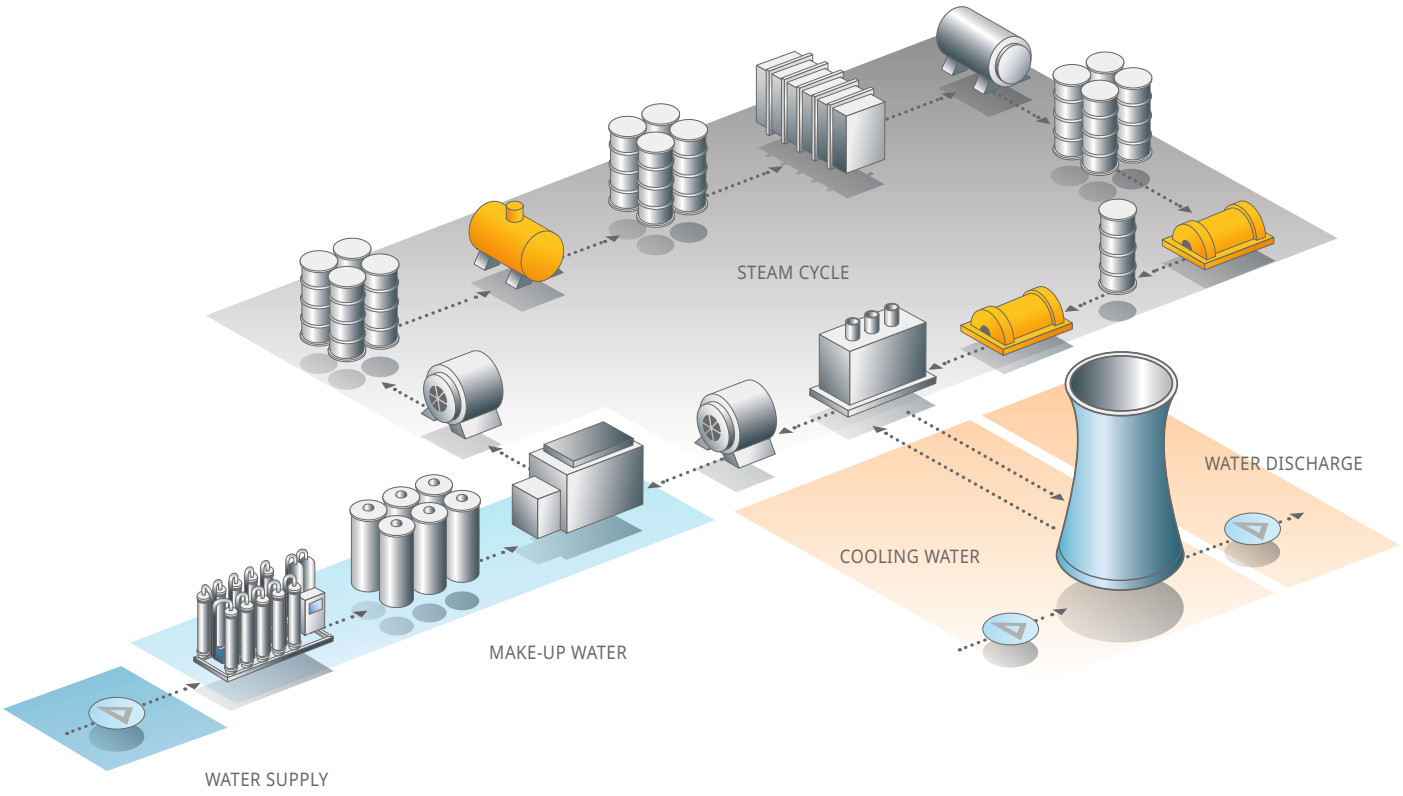
- REDUCE OPERATING COSTS
- OPTIMIZE PLANT PERFOR-MANCE
- ENSURE SAFE, COMPLIANT OPERATION



HACH
Be Right™

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)

Hach Headquarters EMEA, Dusseldorf, Germany
Hach Manchester, UK | Cork, Ireland | Dubai, UAE
uk.hach.com

DOC062.52.20210.Jul26