

2060 Process Analyzer



Maximum flexibility for the toughest challenges in process analysis

2060 Process Analyzer - Our most versatile analyzer ever

Metrohm Process Analytics is known as a pioneer in process analysis and has become one of the global process industry's preferred solution providers for monitoring key parameters in large scale industrial manufacturing processes.

The first multipurpose process analyzer was developed by Metrohm in the 1970's, with a limited range to handle four sample streams. Since then, Metrohm Process Analytics has continued to push the limits together with our customers by providing the best customized online analytical solution on the market.

The **2060 Process Analyzer** is the most versatile analyzer in the Metrohm Process Analytics product portfolio and on the market. It enables 24/7 online or atline monitoring of chemical industrial processes, water, wastewater or other liquids.

The 2060 Process Analyzer will help you to:

- Monitor and safeguard your process 24/7
- Optimize process efficiency
- Increase plant safety
- Improve the profitability of your operations

Fully remote controllable

The upper part of the analyzer houses the touch screen controller, which enables users to easily check trend graphs for a clear overview of the process. Additionally, the new 2060 Analyzer can be controlled remotely to evaluate results immediately, inspect diagnostics from the safety of a control room, or connect to our online support.

Robust design: Industrial IP66 rating

Dual compartment enclosure ensures a complete separation between the electronics and the wet part. Hence, maintenance and daily checks are possible without the need to manipulate the electronic part, which overall increases uptime and plant safety. Additionally, the analyzer is splash proof and water tight, which makes it the perfect solution for harsh industrial environments.

Virtually unlimited sampling options

Customized preconditioning systems can be designed for challenging samples such as those with high temperature, high pressure or solids. We also offer custom-made shelters to protect your investment in especially harsh environments.



2060 Basic cabinet

2060 Process Analyzer - Features and Benefits

New configurable software

The *software* of the 2060 Process Analyzer has a new, modern and user-friendly layout, based on «time programming sheets». The software enables users to reduce analysis time and conduct smart diagnosis on the complete analyzer system. Also, users can fine-tune methods for any changes to the process, set limit conditions and alarms to control the analyzer.

Multiple analysis techniques

With a single 2060 Process Analyzer, you can perform multiple analyses to monitor several parameters in many sample streams. The 2060 Process Analyzer can be configured with up to 4 wet parts in one system to handle the most challenging process applications.

Application flexibility

Thanks to the modular architecture of the wet part and the possibility to combine multiple cabinets and even placed different cabinets in different locations, a wide range of applications are possible with this new analyzer.

Additional options

The 2060 Process Analyzer is configured inside a holding frame which can be placed in various ways: wall mount, table stand, floorstand, and on wheels.

Build-in reagents detection

The additional cabinets can be configured in such a way that each wet part cabinet can be combined with a reagent cabinet with integrated (non-contact) level detection to increase analyzer uptime.



2060 Fully configured

Maximum flexibility - for countless applications

Metrohm Process Analyzers are well known for their modular configuration concept, and we have now taken that modularity one step further. The Metrohm **2060 Process Analyzer** not only offers modularity within one cabinet, but also can combine up to four individual cabinets to create a single analyzer configuration.

The IP66 rated cabinet modularity allows maximum flexibility to solve complex challenges that contribute to sophisticated plant automation.

Multiple Analyses with a single analyzer
«The 2060 Process Analyzer is like no other process analyzer available on the market»



2060 Basic cabinet

2060 Fully configured

Basic 2060 Process Analyzer cabinet

This module consists of two parts. The *upper* part contains a touch screen and an industrial PC. The *lower* part contains the flexible wet part where the hardware for the chemical analysis is housed.



1

Flexible housing

If the basic cabinet is not sufficient for your particular analytical challenge, then the basic cabinet can be *expanded*. This **new flexibility** concept guarantees enough space to solve even the most challenging applications with a single process analyzer.

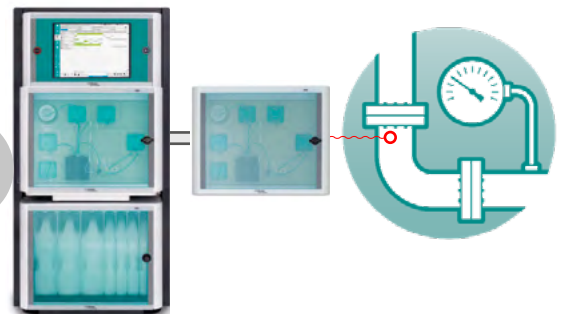
2



Remote wet parts

Thanks to this new modular architecture, the individual wet parts can be separated from the basic cabinet and placed at a different location of the process for more **representative sampling** (which yields more accurate results).

3



Preconditioning systems

To satisfy all needs for the most demanding project requirements, sample preconditioning systems can be provided to guarantee a **robust analytical solution**.

4



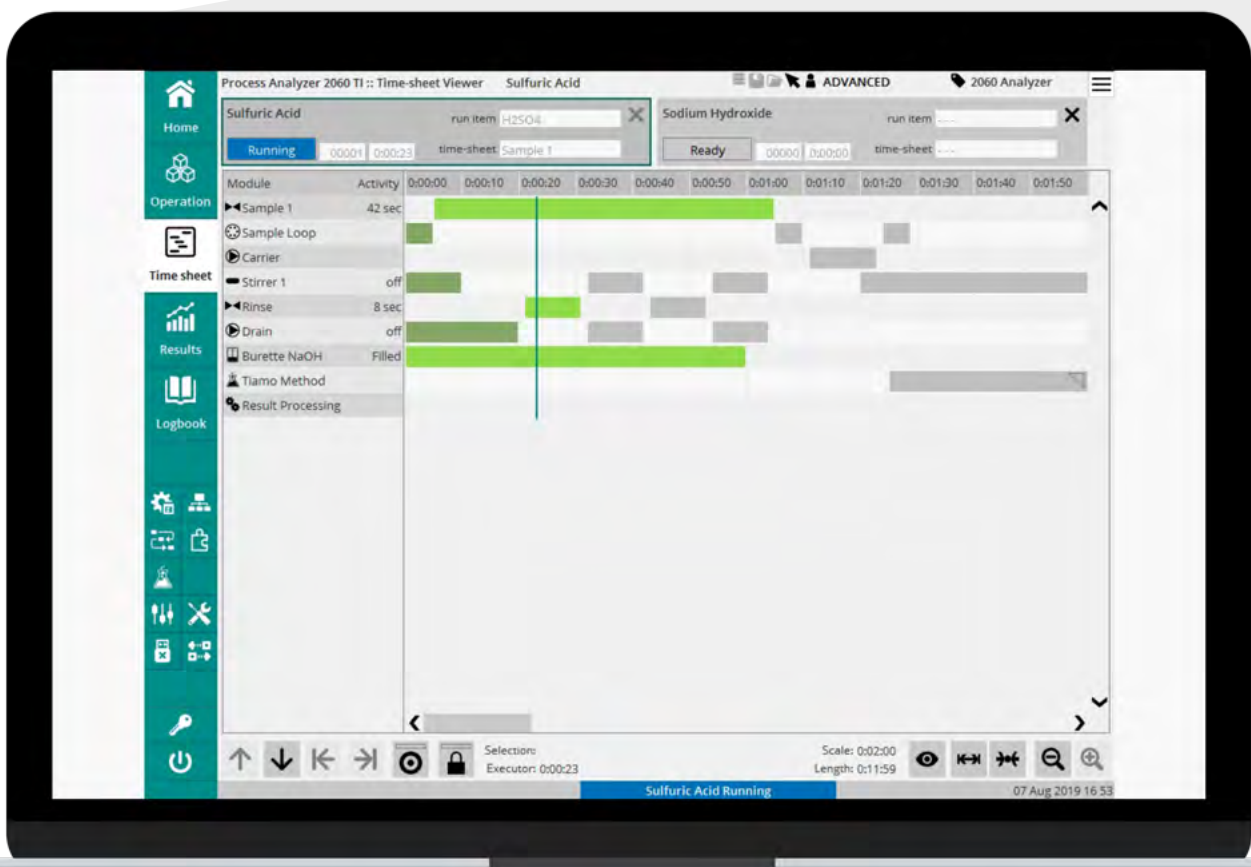
**Images are not to scale*

Intuitive software - Freely programmable and user-defined

The intuitive *new* software is designed to efficiently program and control the analyzer. Using a new feature called «time programming sheets», the analyzer program execution is displayed in a clear graphical timeline representation.

Modular screens allow the user to freely configure the display, for example to control hardware for maintenance purposes or to show analysis results at a glance.

Alarms can be programmed to inform the user about the current status of the analyzer. Low reagent levels, calibration errors, and loss of sample are a few examples of alarms that can be logged into the database. Also, multiple user levels are offered in the software which are suitable for any operator.



Easy operation, «time programming sheets» and remote control from any location

Diverse data communication possibilities

To ensure safer working environments and «*real-time*» monitoring of the system, remote control options are possible from nearly any location. Results can also be exported to USB.

Timesheet control program

The new software comes with the implementation of timesheets for program control. Also, the software allows the user to program different sequences of analysis and set conditions and alarms.



Highlights

- Simple and user-friendly menus and functions
- Flexible software for straightforward control
- Ethernet TCP/IP Network Communication and remote operation
- Real time titration curves, trend graphs and result databases

Experience you can trust - Solutions for all major industries

08

Take a look at any of the major manufacturing industries and even beyond at power generation, mineral extraction, and wastewater treatment. World-leading companies rely on our robust process analyzers across many industries. Applications are numerous; here is an overview of some of the most typical and challenging ones in each market segment.

Petrochemistry / Refining

- Salt in crude oil
- Hydrogen sulfide and ammonia in sour water
- TBC in styrene according to ASTM D4590

Chemicals

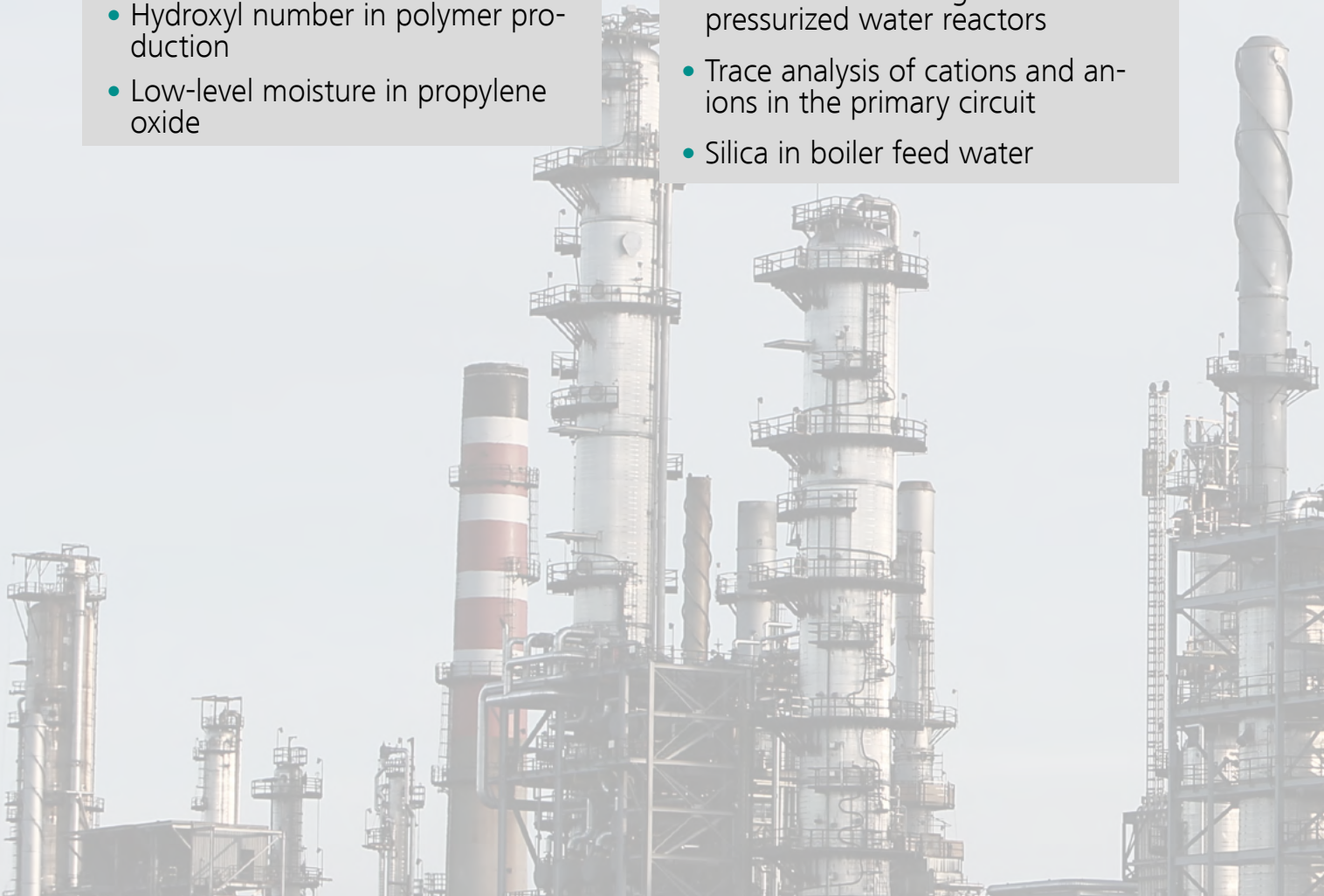
- Hardness in brine
- Hydroxyl number in polymer production
- Low-level moisture in propylene oxide

Surface finishing

- Acids, bases, and aluminum in etching/anodizing processes
- Acids and iron in pickling baths
- Chromium [Cr³⁺] in chromic acid electroplating baths

Power

- Boric acid in cooling water and pressurized water reactors
- Trace analysis of cations and anions in the primary circuit
- Silica in boiler feed water



Semiconductor

- Nickel and hypophosphite content in plating baths
- Monitoring tetramethylammonium hydroxide (TMAH) in developer
- Hydrogen peroxide in CMP Slurry

Pharmaceuticals

- Moisture analysis in the granulation process
- Active Ingredients (API) / content uniformity
- Monitoring moisture levels in the fluid bed dryer

Mineral extraction

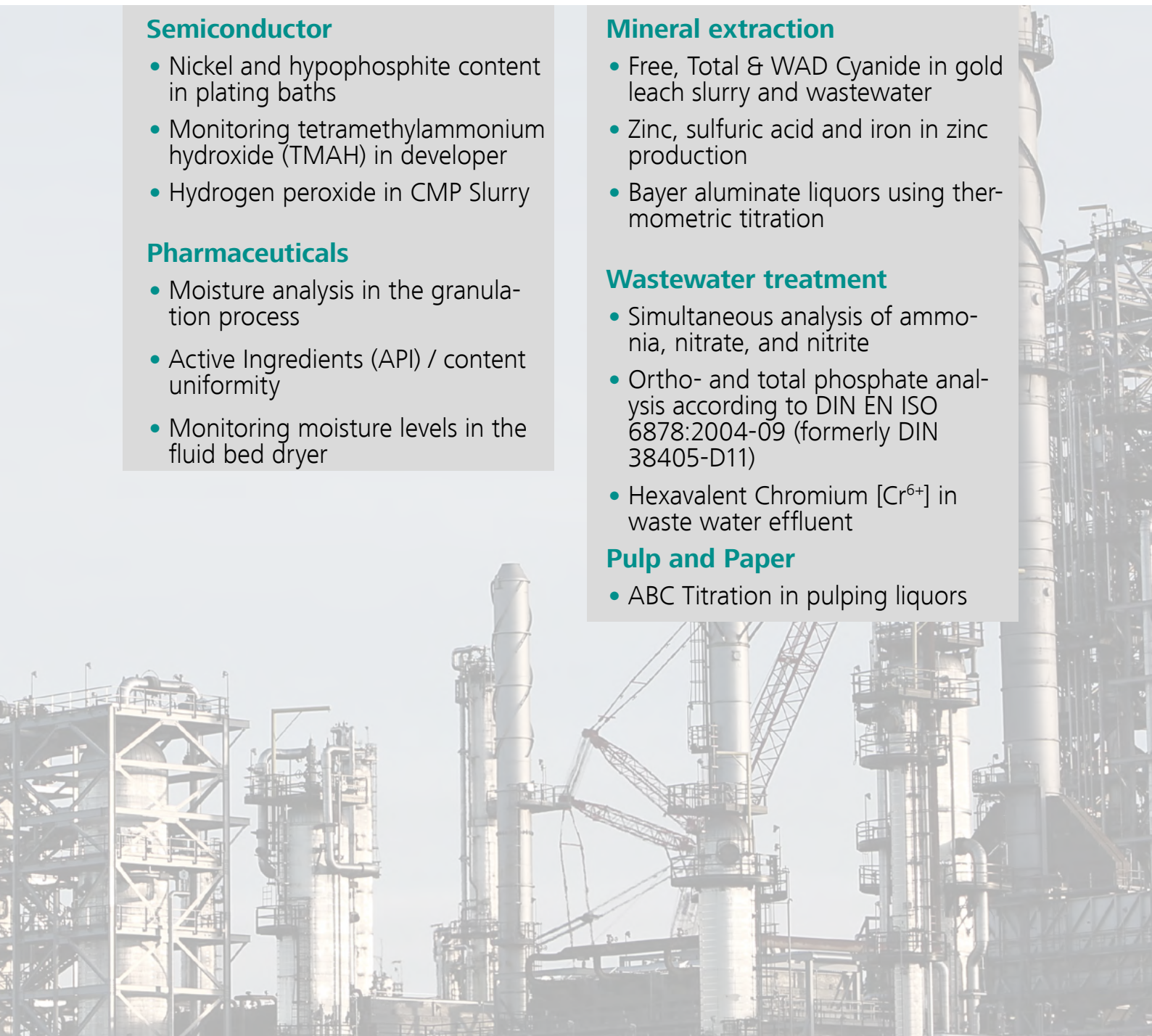
- Free, Total & WAD Cyanide in gold leach slurry and wastewater
- Zinc, sulfuric acid and iron in zinc production
- Bayer aluminate liquors using thermometric titration

Wastewater treatment

- Simultaneous analysis of ammonia, nitrate, and nitrite
- Ortho- and total phosphate analysis according to DIN EN ISO 6878:2004-09 (formerly DIN 38405-D11)
- Hexavalent Chromium [Cr⁶⁺] in waste water effluent

Pulp and Paper

- ABC Titration in pulping liquors



Problem solver - Preconditioning and integrated systems

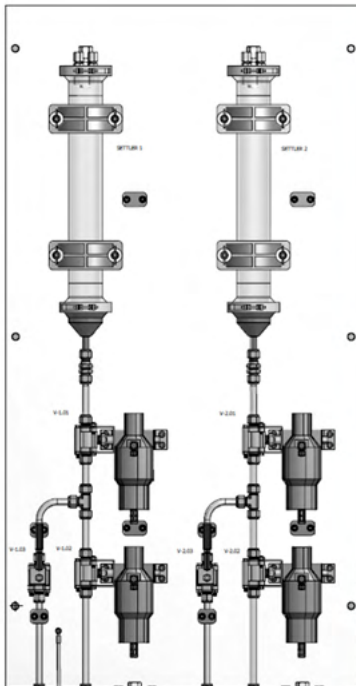
10

Besides the chemical analysis, sample preparation, preconditioning, and location of the analyzer are deciding factors for the success of online & atline analysis. We can provide a full solution for almost any application: an analyzer in combination with sample preparation or even a complete package with a shelter, piping, wiring, and interfacing. This allows seamless startup and integration of the instrument on site.

With more than 40 years of experience, Metrohm Process Analytics can provide a complete and exact solution for almost any application. Projects range from one analyzer in combination with simple sample panel preparation to complete complex turn-key packages. On site, only the necessary utilities and the sample stream need to be connected, saving significant time and energy in the start up phase of the instrument.

Metrohm Process Analytics can engineer and supply virtually any «unit operation» for sample preconditioning:

- Pressure reduction
- Cooling
- Heating, heat tracing
- (Ultra) filtration
- Precipitation and settling
- Dilution (to avoid crystallization)
- Degassing
- Homogenizing
- Flow metering
- Phase separation



Consultation and design of a customized preconditioning system



Customized preconditioning system on site



Sample preconditioning with shelter on site

Local offices worldwide – We are there for you

Metrohm Process Analytics is represented in more than 50 countries. Every subsidiary has its own service organization, spare parts warehouses and trained Service Engineers. Distributors are either equipped with the same infrastructure or receive service and repair support from Metrohm Regional Support Centers (RSC) or even directly at our headquarter in the Netherlands.

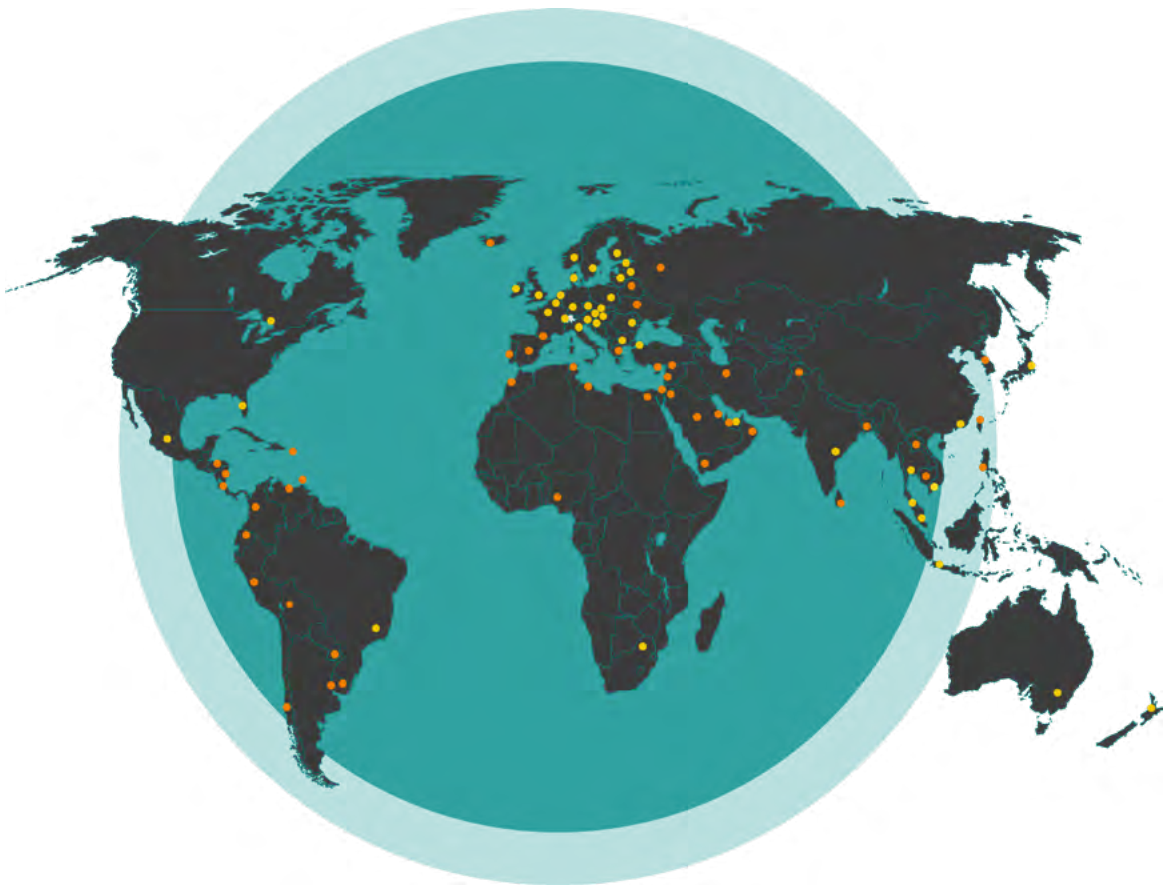
Wherever you need us, we're there to help.



A high standard for us – and a promise to you

The high standards we maintain are also a promise to you. Regardless of when or where in the world you rely on our services, they are performed to the same exacting standards. The core elements of our global service promise are:

- Clearly defined system maintenance
- Implementation with specially developed diagnostic instruments
- Uniform maintenance agreement with clearly defined services tailored to customers' needs
- Training and courses with customized user-specific content
- Uniform documentation of all services executed



www.metrohm.com