



# 2060 TI Process Analyzer

Maximum flexibility for the toughest challenges in process analysis

Metrohm means ... Spectroscopy!



**PUSHING  
THE  
LIMITS  
TOGETHER**

 **Metrohm**  
Process Analytics

# Monitoring your process 24/7



**Maximize profitability,  
comply with regulations,  
and increase plant safety**

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 platform enables customized online monitoring of industrial processes with multiple parameters and streams. The platform consists of the most versatile analyzers in the Metrohm Process Analytics product portfolio. They enable 24/7 online or atline monitoring of chemical industrial processes, water, wastewater, other liquids, and gases.

# 2060 TI Process Analyzer – Our most versatile analyzer ever

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 TI Process Analyzer** is a versatile wet-chemical analyzer which is capable of performing titration, dynamic standard addition, differential absorbance colorimetry, and direct measurements (e.g., pH, conductivity, and temperature). This combination and analysis flexibility allows you to analyze several parameters simultaneously and meet most online analytical needs.

The 2060 TI 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

## 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.



Basic cabinet

## 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, This analyzer can be controlled remotely to evaluate results immediately, inspect diagnostics from the safety of a control room, or connect to our online support.

## 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.

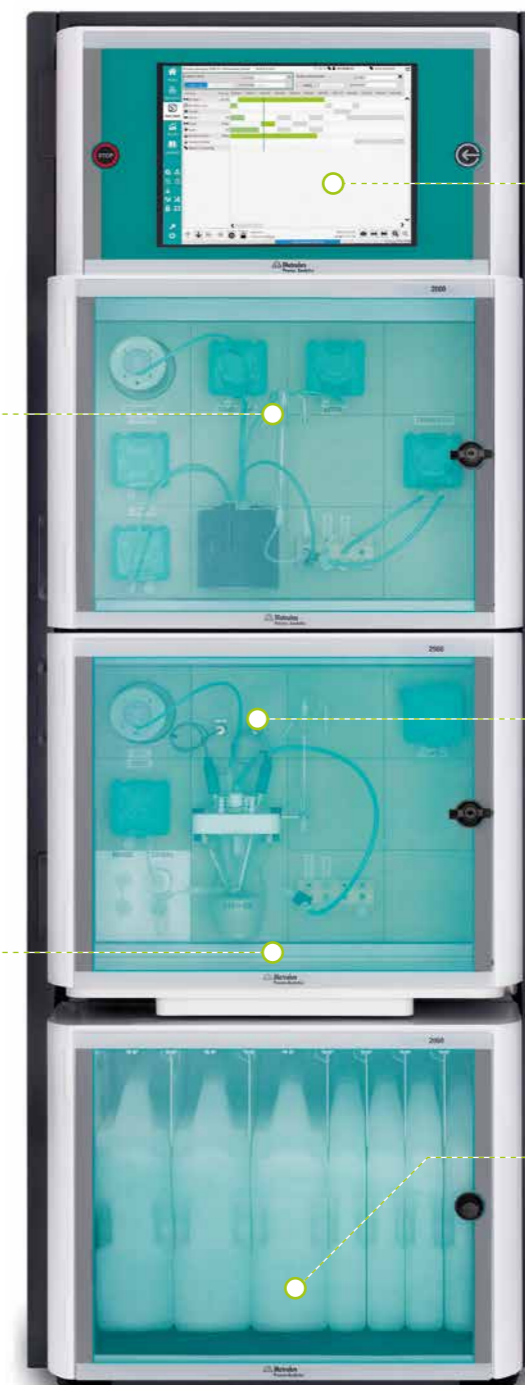
## FEATURES AND BENEFITS

### Multiple analysis techniques

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

### Additional options

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



Fully configured

### New configurable software

The software of the 2060 TI Process Analyzer has a 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.

### 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.

### 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.

# 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 TI 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.



Basic cabinet



Fully configured

## Multiple Analyses with a single analyzer

«The 2060 TI Process Analyzer is like no other process analyzer available on the market»

### Basic 2060 TI 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



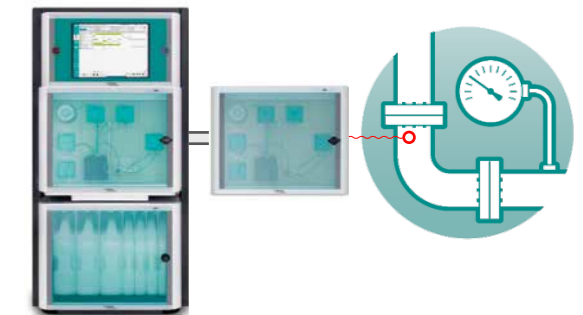
2



3

### 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).



4

### Preconditioning systems

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



# IMPACT

PROCESS CONTROL TO A WHOLE NEW LEVEL

The intelligent and proprietary Metrohm Process Analytics IMPACT software (Intelligent Metrohm Process Analytics Control Technology) is used across the 2060 platform. IMPACT is a complete solution offering a wide range of possibilities for process monitoring and automation.

It facilitates the acquisition of analytical data from Metrohm process analyzers, displays and transfers results to any Distributed Control System or Programmable Logic Controller (DCS, PLC), seamlessly connects to external systems (e.g., sensors), and smoothly executes advanced programs.

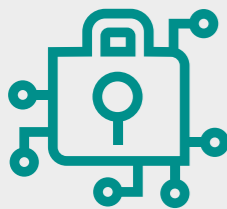


## «REAL-TIME» DATA

Knowledge is key, and the **IMPACT software** is ideal for superior process monitoring. Process data are collected and displayed in «real-time» on the HI. Operators can at any moment have an overview of the analysis, so they can be up to date at all times.

## TAILORED PROGRAMS

With **IMPACT software**, advanced programs can be tailor-made to perfectly match each application. As each program is independent, **IMPACT** can be programmed to monitor multiple measuring points at the same time or control a sample conditioning system (SCS).



## DATA INTEGRITY

Your data are safe with us. The **IMPACT software** has been designed to store results in an encrypted database. All collected data are fully traceable, preventing data tampering. The power buffer and the controlled shutdown sequence prevent data corruption, and the operating system is embedded, preventing user accessibility as another layer of protection.

## MULTILEVEL ACCESS

Different access levels can be configured to make even the routine user feel at ease with the **IMPACT software**. Advanced users can have a deeper access to the software and change/edit parameters.



## CUSTOMIZABLE OPERATION SCREENS

**IMPACT software** can be configured to show multiple operation screens. These screens can be defined to control programs (start, stop, loop, cycles, status...) and to display results in different formats (charts, histograms, tables...). Each user can have their own operation screen defined based on their personal requirements.

## ALARMS AND DIAGNOSTICS

Not only does the **IMPACT software** provide the results from the analysis, it also performs health checks more commonly used on the whole system and proactively informs operators of potential issues. Alarms are triggered if hardware faults are detected, or analytical data are trending out of range.



# Experience you can trust – Solutions for all major industries

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 D4590x

## SURFACE FINISHING

- Acids, bases, and aluminum in etching/anodizing processes
- Acids and iron in pickling baths
- Chromium [Cr<sup>3+</sup>] in chromic acid electroplating baths

## SEMICONDUCTOR

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

## 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

## CHEMICALS

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

## 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

## PHARMACEUTICALS

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

## 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 [Cr<sup>6+</sup>] in waste water effluent

## PULP AND PAPER

- ABC Titration in pulping liquors

**Metrohm  
means ...  
Spectroscopy!**

