

# Flexible. Intuitive. Tailored for you.

Water Analysis System

The MicroChem<sup>®</sup> Analyzer & Controller



# The Importance of Accurate Analysis and Control

Accurate measurement and control of chlorine-based compounds and other relevant parameters in water has an important impact on your operations. In any industry, reliable accuracy and performance is vital to ensure ongoing safety, quality, and optimized operation of your facility. Despite often representing a relatively small percentage of the overall investment and operating costs, the implications of the failure of your analyzer and control system could have severe and wide-ranging consequences.

## Regardless of differences between industries, the need for water quality and disinfection management is universal.

De Nora instruments are used extensively in the following industries for water quality, biofouling, *Legionella* control, and other water and wastewater process applications.

- Municipal water and wastewater treatment
- Food and beverage production
- Power generation
- Leisure and swimming pools



# A Pioneer in Disinfection and Instrumentation

De Nora's original all-vacuum gas feed system was invented in 1960, introducing ground breaking chlorination safety. With thousands of installations around the world and ongoing product innovation, it continues to be the unparalleled standard today.

As a pioneer in the field for more than 50 years, the De Nora name represents a reputation of reliability, built on an intimate knowledge of the science, technology, and applications and a history of listening to and responding to customer needs.

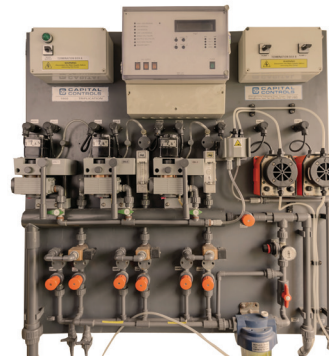
In conjunction, De Nora is recognized for the aftercare support provided to our clients, from field support and optimization to spare parts, repairs, and tailored training packages.



Bufferless & Dual Validation in the 90s and 00s



Improved measurement and control in the 1980s



Triple Validation in the 1970s



# The Future in Water Analysis and Control

The exciting new MicroChem® analyzer and controller represents an industry breakthrough from De Nora. Based on proven De Nora technology, the MicroChem® combines the best features of our sector-leading product lines with new innovations to offer superior flexibility and ease of operation.

The MicroChem® analyzer and controller can be combined with our proven range of wet ends to measure and control any combination of Chlorine, Chlorine Dioxide, pH, ORP, Conductivity, and 4-20 mA e.g., flow.

Advantages of the MicroChem® include:

## Flexibility

- A versatile solution with multiple parameters that can be used as an analyzer, controller, or both at the same time. This means you only need a single instrument regardless of individual needs.
- USB connectivity gives you the flexibility to change setup and measurement parameters by simply plugging into the MicroChem® analyzer
- Multiple proven wet end measurement options to meet your unique requirements



## Ease of Operation

- Simple set up and software updates using USB connector
- Data management, including data log downloading to USB, allows you to more easily manage and understand your plant operation and key trends
- Intuitive touch screen user interface
- Includes six different language options



# MicroChem<sup>®</sup>

## INPUT

- Touch Screen User Interface
- AC or DC Power
- USB Configuration



## OUTPUT

- Messaging/alerts and warnings
- Full PID control output
- External communication via RS232/422/485 MODBUS protocol and external serial modem connections
- 8 digital outputs
- 2 analog outputs per channel available up to 6 total per instrument
- Data file output capability via USB

Choose any combination of up to three of the below parameters:

**Chlorine: Free and Total & Chlorine Dioxide**

**4-20 mA  
e.g., Flow**

**pH**

**ORP**

**Conductivity**



# Proven and Reliable Residual Analyzers

De Nora offers a range of tried and tested analyzers to suit your requirements, whatever they may be. Based on decades of experience, you can depend on us for reliable and accurate measurement and control.



CL4



870



CL1



KC4

# Multiple Measurements to Fit Your Unique Application

Series	MicroChem® KC4	MicroChem® CL4	MicroChem® 870	MicroChem® CL1	pH and ORP	Conductivity
Measurement Type	Free Chlorine Chlorine Dioxide	Free Chlorine	Free / Total Chlorine	Free / Total Chlorine	pH (2100) / ORP (2300)	Conductivity
Electrodes	Two: Gold (working), Copper (counter)	Three: Gold (working), Copper (counter) Silver / Silver Chloride (reference)	Two: Gold (working), Copper (counter)	Three: Gold (working), Copper (counter) Silver / Silver Chloride (reference)		
Range	0 - 10 ppm	0.01 - 2.0 ppm 0.01 - 5 ppm 0.01 - 10.0 ppm	0 - 20 ppm	0 - 20 ppm	0 - 14 pH units	10 – 10,000 μS/cm
Accuracy	Chlorine / Chlorine Dioxide ± 5% of f.s.	± 5% of range	± 1% of range	± 1% of range	± 0.2 pH units Accuracy decreases above 12 pH (sodium ion error occurs)	1% of range
Applications	Drinking/clean water where reagent-free measurements are required & pH of the sample is <7.5	Drinking/clean water where bufferless measurement is desired at elevated pH levels	Waste/Drinking/ Process water with elevated or unstable pH levels	Drinking/waste/ process water where 3 electrode measurements are required or extended time reagent supply is needed	Standard pH / ORP measurement	Standard conductivity measurement



# Global Aftermarket Support

A great product is nothing without a great support team. It's the assistance you encounter after a sale that distinguishes good products from the truly great.

To provide customers with a premium customer experience, De Nora has segmented the after-sale support program into four areas.

## **Technical Service and User Training**

Anywhere in the world, De Nora factory-trained technicians train to properly use and maintain your products. De Nora provides a 24/7 contact center so that you can reach us wherever you are.

## **Spare Parts and Consumables**

Supplied directly from De Nora Water Technologies and guaranteed to be produced to the original specifications and tolerances for exact form, fit and function.

## **Upgrades & Retrofits**

De Nora will guide you through the process of bringing your facility up to current specifications.

## **Asset Management and Solutions**

De Nora Water Technologies can help to assess the performance of your water treatment system in respect to your current and future throughput/capacity or quality goals.

