## **CL17 Chlorine Analyzer Chlorine control you can depend on.**



THERE'S ONLY ONE WAY TO BE SURE.



# Dependable chlorine analysis – at an affordable price.

With Hach's advanced colorimetric chemistry, the CL17 Chlorine Analyzer provides a fast, reliable method of determining free or total residual chlorine. It performs around the clock, assuring proper disinfection and regulatory compliance. The CL17 also offers unbeatable cost-efficiency – with minimal reagent consumption and ultra-low maintenance.

# Colorimetric chemistry – simple, fast, accurate.

The CL17's proven colorimetric method offers high sensitivity, speed and accuracy, even in acidic or alkaline samples. A DPD indicator is oxidized by free chlorine, turning magenta in proportion to the level of chlorine present. A compact colorimeter measures color intensity and instantly calculates the concentration of either free or total chlorine.

#### Fast, automatic operation

The Hach CL17 samples every 2.5 minutes, using less than 475 mL each of indicator and buffer over a 30-day period. A linear peristaltic pump, seal-free mixer, easy-to-clean cell, and compact colorimeter combine to ensure reliable, low-maintenance operation.

#### Alarms and outputs

The CL17 provides a programmable 4-20 mA recorder output and two user-selectable alarms with SPDT relays that signal out-of-limit test results or system problems.

#### Colorimetric analysis

DPD (N,N-diethyl-p-phenylenediamine) colorimetry is simple and accurate, providing a reliable method for measuring free or total residual chlorine.

#### Genuine Hach reagents

Formulated to meet the strictest quality standards, Hach reagents are your guarantee of accuracy and consistency. Minimal reagent use means maximum economy.



#### Learn More About the CL17 Chlorine Analyzer

- Drinking Water
- Wastewater
- Chemical/Industrial
   Feed or Process Water
- Heating and Cooling Systems
- Food and Beverage Industry
- Reverse Osmosis Filtration Systems

Call Hach today at **800-227-4224** to find out how the CL17 Chlorine Analyzer can help control free or total chlorine levels in your application. Or visit us on-line at **www.hach.com.** 

### Rugged, lightweight enclosure

The CL17's ABS, IP62 enclosure is lightweight, strong and corrosion-resistant. Two large windows allow an easy visual check of reagents and system-status messages without opening the case. Built-in brackets are included for easy wall mounting. Large tubing and By-Pass Y-Strainer make the unit ideal for wastewater applications.

## Complete control. Minimal maintenance.

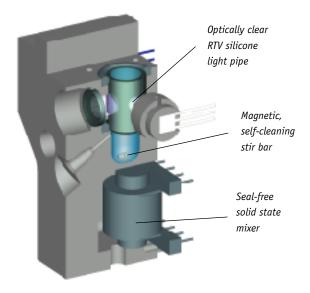
Another product of Hach's world class R&D, the CL17 provides non-stop security for 30 days without operator intervention. Connect an output to a feed pump, chart recorder, PLC or SCADA system. The CL17 does the rest! Learn more by calling Hach today at 800-227-4224. Ask for our free data sheet #1626.





## Big LCD display, intelligent menus, and flexible programming

Set-up, maintenance, and recorder/alarm programming are simple. The instrument allows many options, and they are all easily programmed with step-by-step menus and a simple keypad interface.



#### Maintenance-free mixing and condensation control

The state-of-the-art mixing system in Hach's CL17 Analyzer operates with no moving parts. A self-cleaning stir bar in the sample chamber instantly generates a vigorous mixing action. The system provides fast and thorough mixing with virtually no need for maintenance.

Meanwhile, another Hach innovation prevents condensation from forming on the wall of the sample chamber. A transparent gasket\* occupies the spaces between the light source, sample chamber and detector. These light pipes, made of an optically clear RTV silicone, transmit the colorimetric beam, minimizing the risk of interference caused by high levels of humidity.

## CL17 Chlorine Analyzer Specifications \*

#### Range

0 to 5mg/L free or total residual chlorine

#### **Accuracy**

±5% or 0.035 mg/L as Cl<sub>2</sub>, whichever is greater

#### Precision

±5% or 0.005 mg/L as Cl<sub>2</sub>, whichever is greater

#### **Minimum Detection Limit**

0.035 mg/L

#### Cycle time

One complete sample analysis every 2-1/2 minutes

#### Recorder outputs

One 4-20mA with an output span programmable over any portion of the O to 5 mg/L range 130 V isolation from earth ground

#### **Alarms**

Two alarms selectable for sample concentration alarm, analyzer system warning or analyzer system shut-down alarm

Each is equipped with an SPDT relay with contacts rated for 5A resistive load at 230 VAC

#### Optional external outputs

AquaTrend Network interface

#### Power

100-115/230 VAC 50/60 Hz (switch selectable), 90 VA maximum

#### Compliance/certification

CE approved ETL listed to UL 1262 ETL certified to CSA 22.2 No. 142

#### Enclosure

ABS plastic, IP62 enclosure rating with two clear polycarbonate windows

#### **Dimensions**

Approximately 16.5" tall, 12.5" wide, 7" deep

#### Shipping weight

25 lbs. (11.3 kg)

#### Catalog numbers

54400-01 Model CL17 Free Residual Chlorine Analyzer 54400-02 Model CL17 Total Residual

Chlorine Analyzer
54400-03 Model CL17 Free Residual

Chlorine Analyzer with
AquaTrend Network Capability

54400-04 Model CL17 Total Residual

Chlorine Analyzer with AquaTrend Network Capability

\*Subject to change without notice.

<sup>\*</sup> Patent pending.

### Hach - World class technology and support

At Hach, state-of-the-art technology is only part of the equation – a given. Combine this with Hach's renowned worldwide support, dedicated technical support staff and skilled, responsive service teams, and you have the formula for success in water analysis and testing.

## **Pioneering R&D**



Since its earliest days, Hach has maintained – in fact, *defined* – the leading technological edge in testing and analysis of water. From sophisticated, high-end laboratory instruments to special on-line process monitoring systems to virtual laboratories-in-a kit, Hach set the standard for others to follow.

### Accuracy, repeatability, reliability

By using its own special reagents – stable, pre-measured, sealed from contamination – Hach has elevated analytical chemistry to a new level of accuracy. Hach's precise sampling, mixing and analytical procedures, designed into every piece of Hach equipment, give you accurate, repeatable results time after time.

## Total support - on line, on the phone, at your door



Hach's outstanding technical staff responds quickly and accurately to all calls. From simple questions on the phone to complex inquiries requiring the expertise of our Technical Consulting Group, to extended on-site visits in the field, Hach support is second to none. Customers can also e-mail their requests to techhelp@hach.com.

## The Hach Technical Training Center

The Hach Technical Training Center in Loveland, Colorado has hosted thousands of chemists, technicians, operators, educators and supervisors, all participating in the most up-to-date, practical analytical training available. Topics cover fields as diverse as water and wastewater, boiler and cooling water, meat and dairy products, microbiology, sludge and soils. For a course schedule call 800-227-4224 x2391.

## Factory-trained experts – on call in 95 countries



Hach's dedicated service staff is now available in 95 countries – and counting. Whatever challenge you encounter – choosing the right system, understanding a new procedure, troubleshooting an instrument – Hach's specialists are available to help you. Installation, warranty and repair assistance can be accessed

easily through Hach's toll-free number: 800-227-4224. (Overseas, call the Hach dealer located near you.)



For current price information, technical support and ordering assistance, contact the Hach office or distributor serving your area.

Hach Company is ISO 9001 Certified

In the United States, contact:

HACH COMPANY
P.O. Box 389
Loveland, Colorado 80539-0389
U.S.A.

Telephone: 800-227-4224
Fax: 970-669-2932
E-mail: orders@hach.com
www.hach.com

Other inquiries:

HACH COMPANY
P.O. Box 389
Loveland, Colorado 80539-0389
U.S.A.

Telephone: 970-669-3050 Fax: 970-669-2932 E-mail: intl@hach.com www.hach.com