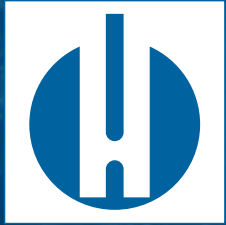




The quality of the water  
A fundamental parameter

HEYL ANALYSIS TECHNOLOGIES  
**GENERAL PRESENTATION**





# About us

*Tradition and Future by your side*



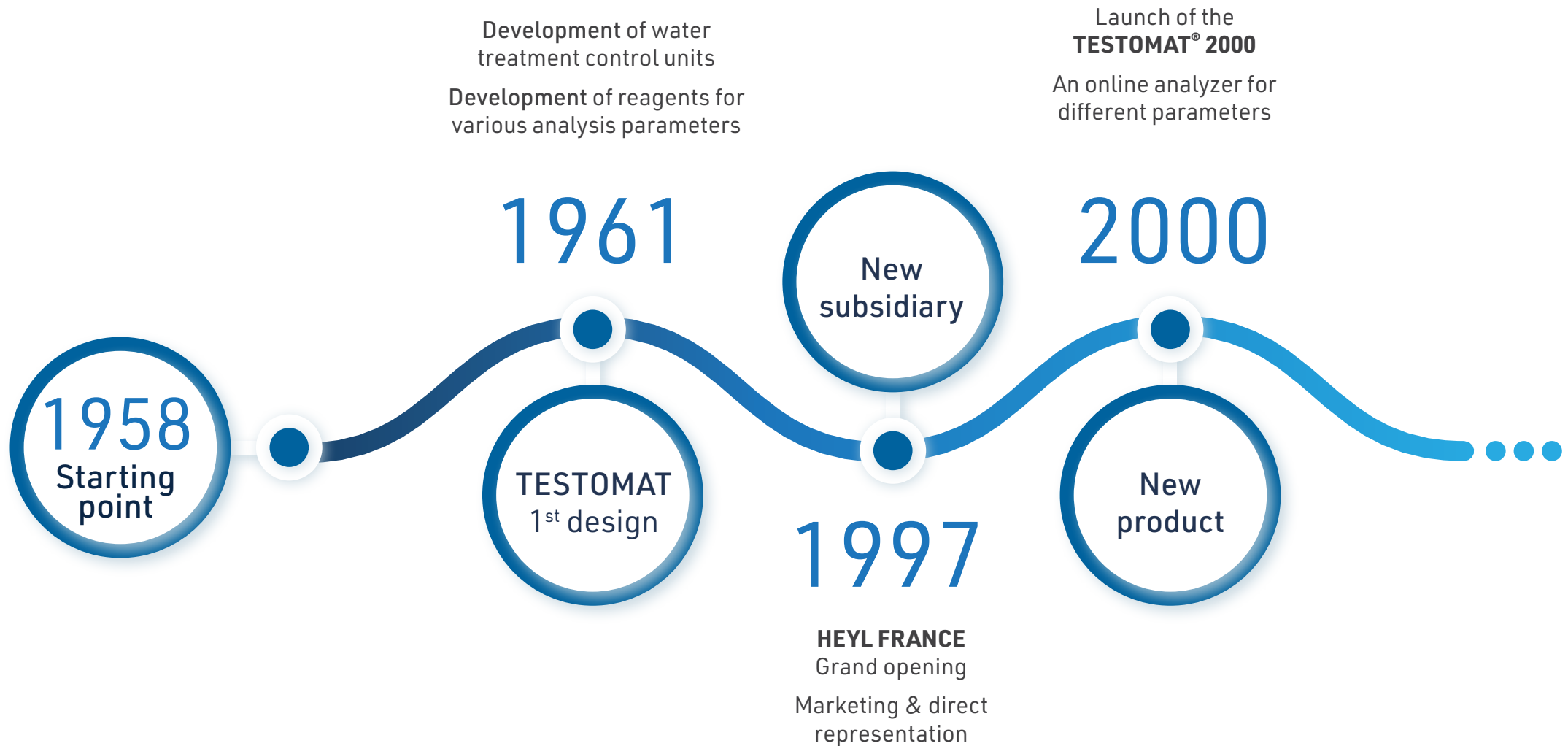


## Water has been our element for almost 60 years...

We provide instruments for water treatment and analysis throughout the industrial, pharmaceutical, food & beverage industry and medical sectors. Over the years we have continued to develop innovative and easy-to-use products. Quality, customer satisfaction and prompt delivery have always been the principles of our company, which operates in many countries around the world. It is for these reasons that we develop, produce and distribute our products ourselves.

# Timeline Heyl Group

Highlights – from yesterday to today



# Timeline Heyl Group

Highlights – from yesterday to today



Launch of the  
**SOFTMASTER®**

Universal controlling devices  
for water treatment facilities

2003

New  
product

New  
Subsidiary

2007

**GIW - NEOMERIS**  
Grand opening

Separation of Development  
& Production activities

**HEYL Brothers North America LP**  
Grand opening

A new distribution and marketing  
subsidiary created especially  
for American market

2013

New  
Subsidiary

Worldwide  
Analysis  
Technology  
Specialist

# Headquarters Around The World

Where you can find us



## Europe

### HEYL ANALYSIS TECHNOLOGIES

9, rue d'Alembert,  
91240 St Michel sur Orge  
France

**7 employees**

### GEBRÜDER HEYL

Orleanstrasse 75b,  
31135 Hildesheim  
Germany

**50 employees**

### HEYL - NEOMERIS

Max-Planck Str. 16,  
31135 Hildesheim  
Germany

**20 employees**

## USA

### HEYL Brothers LP

321 North Clark Street  
Suite 1425  
Chicago, IL 60654  
USA

## Global Overview

Approx. 80 employees    ISO 9001:2015 certified  
Worldwide export    Products "Made in Germany"  
Global turnover : € 14M  
Distributors in Brazil, Italy, Poland, Holland, Russia, ...





## Our range of equipment consists of :

Online analysis instruments

**TESTOMAT 2000®**



**TESTOMAT® 2000 RANGE**  
Accuracy & Multi-parameter

Controls for water softening systems or reverse osmosis plants

**SOFTMASTER®**



**SOFTMASTER® RANGE**  
Multifunctional & Modular design

Process measurement instruments

**MULTICONTROL®**



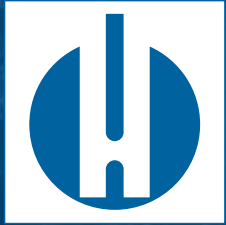
**MULTICONTROL® RANGE**  
Measuring & Controlling

Test kits

**DUROVAL®, DUROGNOST®  
and TESTOVAL®**



**MANUAL TEST KITS RANGE**  
Mobile, Fast & Economic



# TESTOMAT

*Presentation & Characteristics*



# Presentation & Characteristics

For the best Water Quality



## TESTOMAT

### Easy to use

Use and Programming by  
drop-down Menu

### Tailored operation

Time set interval  
Quality dependent  
External control

### Accurate

Accurate titration via piston-dosing pump

### Fully Customizable

Two adjustable limit values  
with programmable switch  
functions

- Water hardness
- Carbonated hardness
- m-Value
- p-Value
- Chromate
- Chrome VI
- Iron
- Sulphite
- Phosphate
- Bromine
- Polymer
- Total and Free chlorine
- Chlorine Dioxide

...Your Parameter !

In addition to the hardness of the water, our TESTOMAT® 2000 monitors and controls various parameters according to your application. We work closely with stakeholders in the water sector and we therefore constantly adapt to regulatory changes and new requirements. For HEYL, R & D is at the heart of our concerns and we are constantly expanding the capacity of our production facilities taking into account the needs of industry. We are working closely with our customers and develop instrumentation units with specific parameters for their application ...

# Testomat 2000 Range

Accuracy & Multi-parameter



## Innovative analysis devices to meet all needs

Hardness Analyzer  
TH (\*)



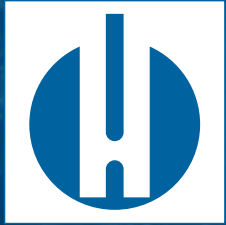
(\*) Measuring Range  
0.45 – 44.8 °f  
0,05 – 25,0 °dH  
Précision 0.01



- Testomat 2000 DUO (2 measuring points)
- Testomat 2000 CAL (calibration function)
- Testomat 2000 Antox (high oxidant reduction)
- Testomat 2000 Fe (Dissolved Iron)
- Testomat 2000 CLF (Free Chlorine)
- Testomat 2000 CLT (Total Chlorine)
- Testomat 2000 THCL (combined TH + CLT)
- Testomat 2000 Br (Bromine)
- Testomat 2000 CL02 (Chlorine dioxide)
- Testomat 2000 POC (Polyacrylate)
- Testomat 2000 SO3 (Sulphite)
- Testomat 2000 PO4 (Phosphate)
- Testomat 2000 SelfClean - Hardness (TH) + SelfClean
- Testomat 2000 CL T SelfClean - Total Chlorine + Selfclean
- Testomat ECO (TH)
- Testomat ECO C (TAC)
- Testomat 2000 (TH – TAC – TAF – TAS)

The TESTOMAT® 2000 undeniably holds a major position in the water treatment world. This analyzer is used in most water treatment plants to control water quality, regardless of the parameter you are looking for. It meets all European standards, ISO7393-2, VDI2035, TRD 604 and is certified TUV WÜ 100 (TRD611).





# OTHER PRODUCTS...

*Presentation & Characteristics*

# Presentation & Characteristics

For the best Water Quality



## SOFTMASTER® RANGE

*Multifunctional & Modular design*



Our **SOFTMASTER®** are precise and adapted to applications, helping to improve production processes. They combine control with analytics features. They are designed to manage and control water treatment facilities.

**SOFTMASTER® MMP** can control softeners in simplex mode, alternate duplex, parallel duplex or serial duplex, for fully automatic regeneration depending on the quantity, time and / or quality of water.



**SOFTMASTER® ROE** is a control unit for fully automatic operation of reverse osmosis systems, integrating the in-line conductivity measurement.

- **Softmaster MMP 1**  
Simplex  
Alternate Duplex

- **Softmaster MMP 2**  
Simplex  
Alternate Duplex  
Parallel Duplex  
Serial Duplex

- **Softmaster MMP Compact**  
Simplex  
Alternate Duplex

- **Softmaster ROE 1**  
1 pump

- **Softmaster ROE 2**  
2 pumps  
Serial Connection  
Change-over Connection

- **Softmaster ROE Compact**  
1 Pump

The technology of these controllers offers a flexible system allowing standard operations as well as specific applications. All our **SOFTMASTER® MMP's** connect to many pilot valves, such as those of FLECK, AUTOTROL, SIATA, etc ...



# Presentation & Characteristics

For the best Water Quality



## MULTICONTROL® RANGE

*Measuring & Controlling*



The **MULTICONTROL®** can be used either as a conductivity measuring device or as a control device for cooling circuits.

**As a measuring device,** it can read the conductivity of the water and control solenoid valves if the programmed limit values are exceeded.

**As a control and desalination device,** it allows to measure the conductivity of the water and thus to control solenoid valves, motorized valves as well as the biocide dosage according to the specific needs of the installation. Its fields of application are the monitoring and regulation of water circuits Industrial processes, monitoring of cooling towers and boiler feed water.



For trouble-free and cost-effective operation, it is essential to treat the water and monitor the circuits using suitable in-line measuring devices.

# Presentation & Characteristics

For the best Water Quality



## MANUAL TEST KITS RANGE

*Mobile, Fast & Economic*

Our **DUROVAL**®, **DUROGNOST**® and **TESTOVAL**® kits can be used for all applications in industrial water treatment, swimming pools, drinking and waste water and to monitor water quality in dialysis services and in hospitals.

We offer all the reagents necessary for the review of the boiler water in a test case. This complete portable laboratory allows for all regulatory examinations in the field of boiler water and boiler power

We also compose individual sets required for other mobile water testing, such as monitoring of reverse osmosis plants, aquarium and various controls wastewater. Thus, the user can perform its controls himself on site.



### **DUROGNOST® limit value kits**

Fast dosing kits for water hardness, set to limit values



### **DUROVAL® Drop - Rapid Dosing Kits**

Complexometric titration kits for water hardness analysis - 1 gte = 1 °f (TH)



### **DUROVAL® AF / BF / TF - Rapid dosing kits**

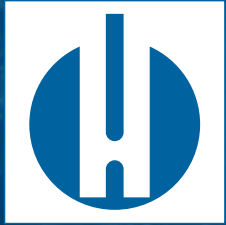
Complexometric titration kits for analysis of water hardness, carbonate hardness, chlorides, etc. by measuring range



### **TESTOVAL® - Color Analysis Kits**

Color comparison kits for concentration ranges of parameters such as Aluminum (Al), Iron (Fe II - Fe III), Copper (Cu), Chlorine (DPD), Nitrates (NO<sub>3</sub>-), etc ...



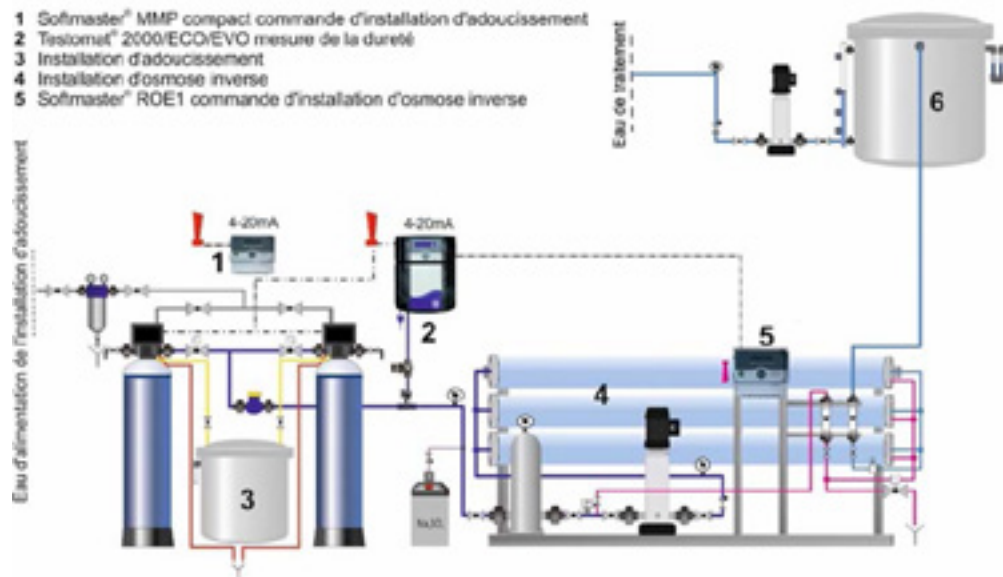


**HEYL & WATER**

*Skills & Know-How*

## INDUSTRIAL PROCESS WATER

A water treatment plant, properly controlled, accurate and adapted to the application, can help to improve a whole production process



### FOLLOWING PARAMETERS MUST BE MONITORED

- Quality
- Lack of salt in the brine tank
- Correct sequence of regeneration

### RESULTS

- Less waste water
- Less salt intake
- Savings due to reduced energy needs

We offer our customers solutions to their specific applications where every component is precisely adapted to each other. The combination of TESTOMAT 2000<sup>®</sup>, SOFTMASTER<sup>®</sup> MMP2 and MULTICONTROL<sup>®</sup> allows less wastewater to be produced, uses less salt and saves costs by reducing energy consumption.

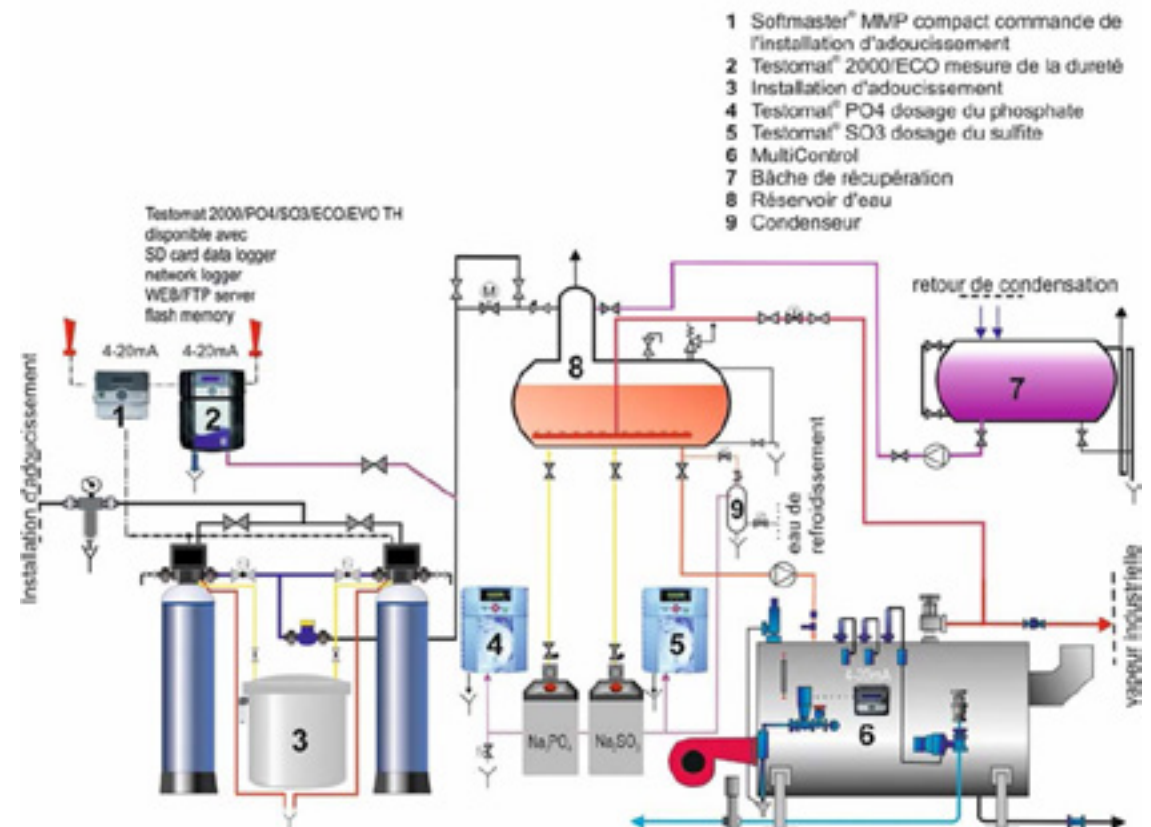


## WATER FOR BOILERS

To prevent salt-related corrosion, the conductivity of the feedwater is monitored using the **MULTICONTROL®** monitoring device

The **MULTICONTROL®** device, controls the desalination of water from high salt concentration boilers and regulates the water supply as needed to maintain the correct salt content.

Our **TESTOMAT 2000®** Analyzer, controls the water hardness (TH) of supply and condensation according to the prescriptions, in order to maximize the efficiency and the profitability of your installation

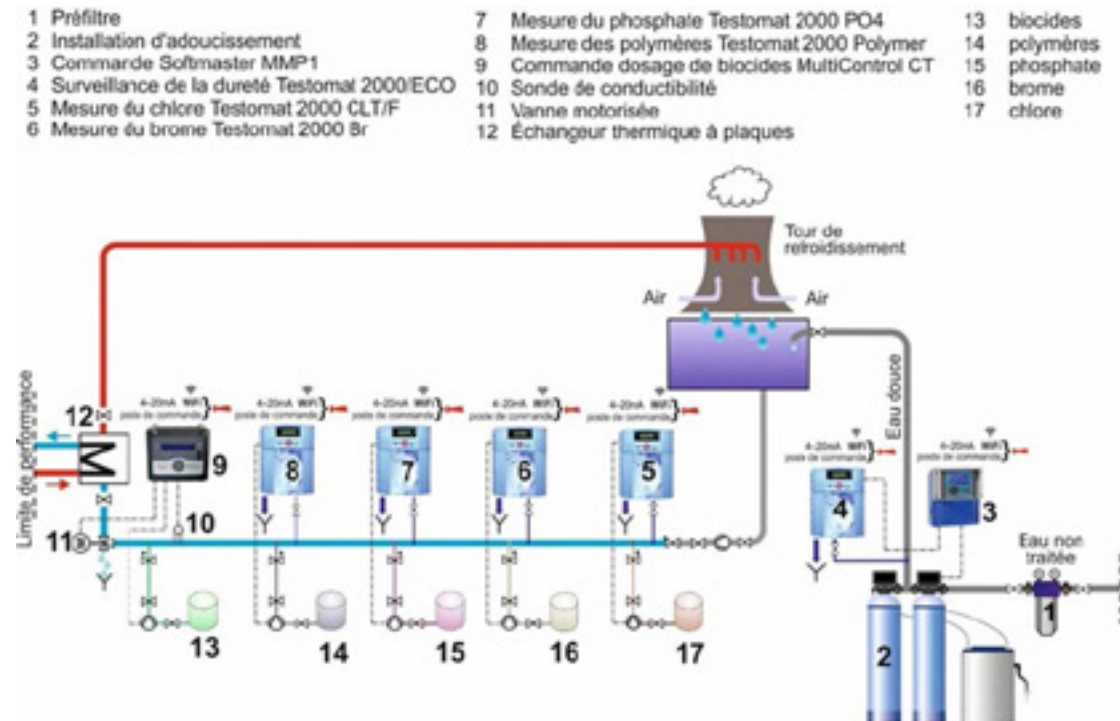


## COOLING WATER

Water control and monitoring in the Cooling Towers are essential nowadays because of the regulations in force. To ensure that they operate economically, without malfunction and in accordance with hygiene guidelines, continuous treatment and monitoring is essential

High salt and mineral content in the circuit causes scaling, corrosion and mineral deposits in the tower and water system. Added to this is the biological disturbances (algae and biofilm). All of this results in malfunctions and / or interruptions in operation.

The directives require the operator to precisely control and apply the measures necessary for the proper functioning of his cooling tower.



A cooling tower system regulated and continuously monitored, operates in accordance with the rules of hygiene, economically and without malfunctions



## WATER FOR MEDICAL PROCESS

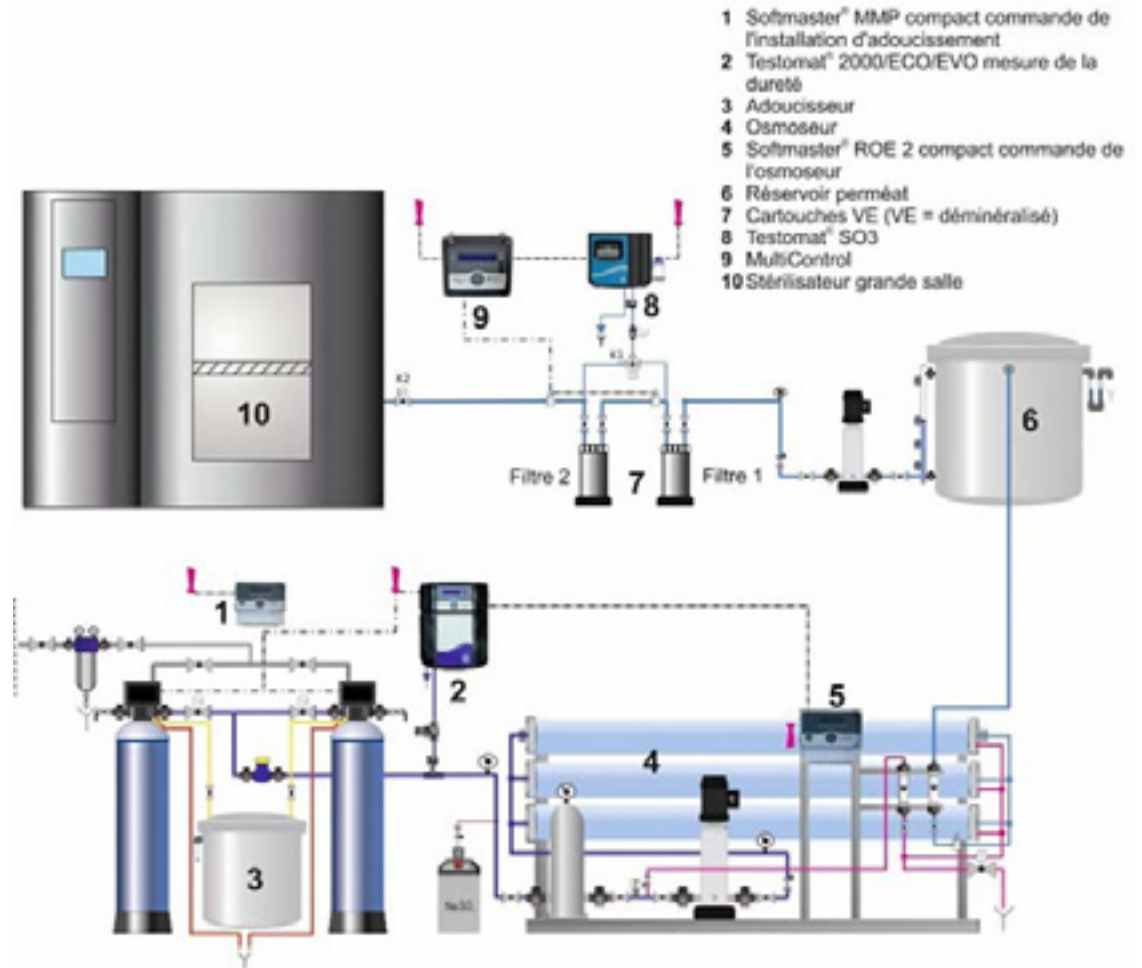
Sterilization of surgical instruments now plays a key role in quality assurance in hospitals. The treatment process is subject to the requirements of the DIN EN 285 standard for steam sterilizers.

The water steam used must not exceed the prescribed limits, otherwise deposits and corrosion can occur on the metal surfaces of the instruments.

Is used, generally demineralized water for the sterilization process.

### DIN EN 285 STANDARD DEFINES QUALITY LIMITS

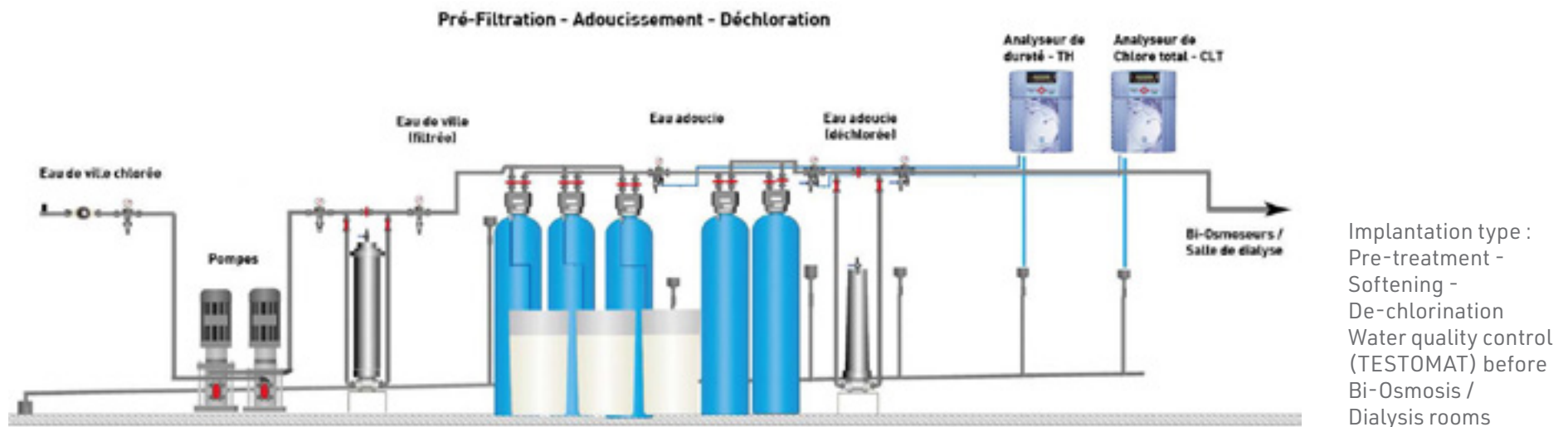
Conductivity	5 $\mu\text{S}/\text{cm}$
pH	5 - 7
Hardness	0,02 mmol/l
Salinity	10 ppm
Phosphate	0,5 ppm
Silicate ( $\text{SiO}_2$ )	1 ppm
Chloride	2 ppm



To meet the demand of hospitals, we have developed the Testomat 808 SiO<sub>2</sub>, a simple and reliable measuring device. This device can measure Silicates in the range of 0.3 to 1.2 ppm and therefore perfectly meets the specifications of DIN EN 285

## WATER FOR MEDICAL PROCESS (DIALYSIS)

Dialysis regulations and requirements are approximately the same in all countries. Most of our European and international partners have made the choice to automate and especially to secure the process of monitoring the water quality, to meet the requirements beyond what is required, but above all to ensure a process mastered from A to Z for the success of treatment therapies.



Our devices - **Testomat 2000 - TH** (Water Hardness) and **Testomat 2000 CLT** (Total chlorine) are now available in **SEFICLEAN** versions. These special versions are equipped with an additional dosing system to clean and disinfect the measuring chamber and the evacuation circuit. The parameterizable and automatic "SEFICLEAN" mode is carried out using 1 specific product.

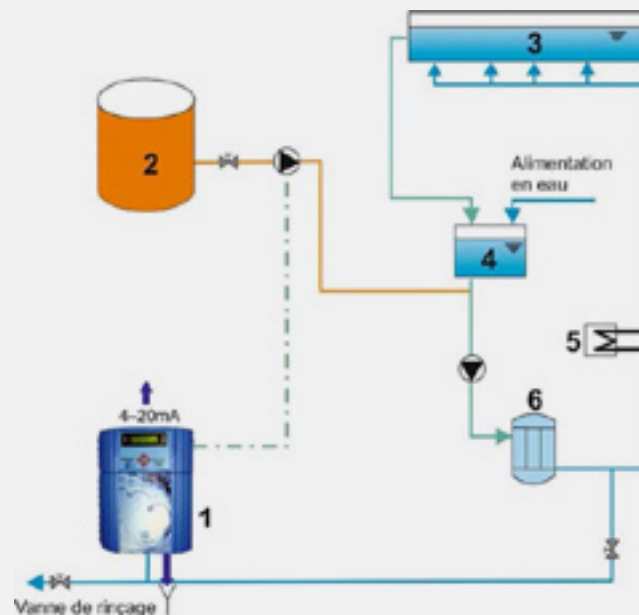


## WATER FOR SWIMMING POOLS

Too low alkalinity has various and often neglected effects on water treatment facilities and on the quality of the water itself. It makes pH stabilization difficult in swimming pool waters. In turn, the pH has a significant influence on the filtration efficiency and therefore on that of disinfection.

**MORE  
ALKALINITY  
IS LOW,  
MORE WATER  
IS AGGRESSIVE**

- 1 Contrôle de la dureté carbonatée  
Testomat ECO® C
- 2 Augmentation dureté  
hydrogénocarbonate de sodium
- 3 Piscines
- 4 Réservoir d'eau
- 5 Système de chauffage
- 6 Filtration



To ensure the water quality and condition of materials in contact with it, the DIN 19643 standard recommends weekly monitoring of alkalinity.

This standard recommends a minimum limit value of 0.3 mmol / l for Jacuzzis and 0.7 mmol / l for swimming pools.

In our experience, optimal values are between 1.5 and 2.0 mmol / l.

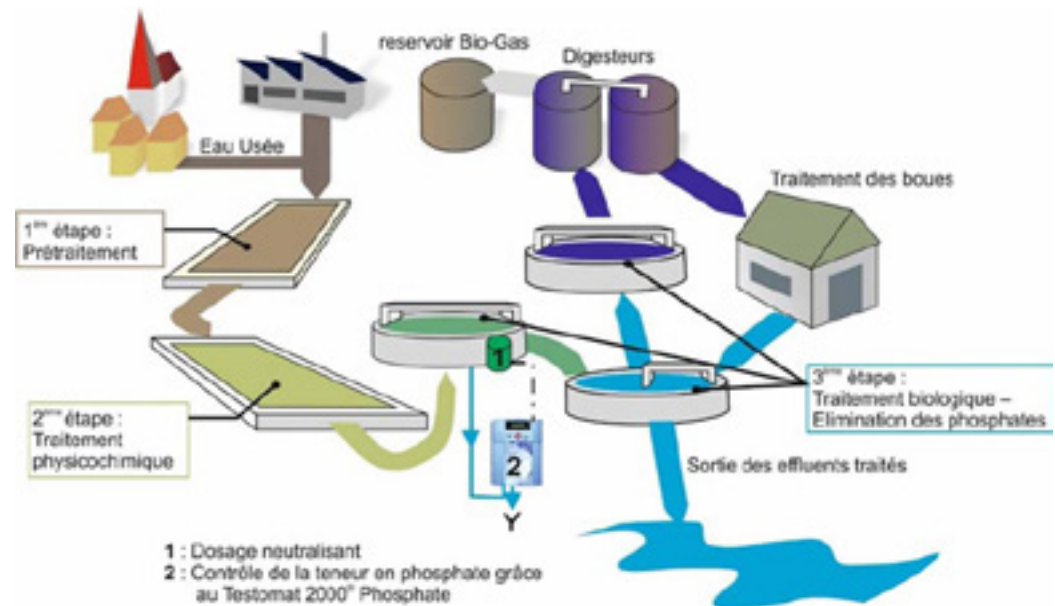
With on-line analysis performed by the TESTOMAT® ECO C, alkalinity can be automatically stabilized

## WASTEWATER

The wastewater, called "waste" or "polluted" consist of all the water that may contaminate the environments in which they are discharged. They are usually formed by-products of human use, either domestic or industrial. These waters affected by human activities in the wake of domestic, industrial, craft, agricultural or otherwise, are considered contaminated and must be treated

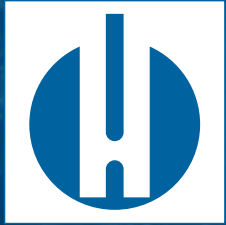
The main harmful components to the highest quality of water are the **phosphate ( $\text{PO}_4$ )** and **nitrate ( $\text{NO}_3$ )**. But there are also heavy metals, **PCBs (polychlorobiphenyl)**, hydrocarbons and medications.

High concentrations of phosphates and nitrates in groundwater causes an overabundance of nutrients in streams, rivers and lakes. Therefore, algae are increasing and the concentration of oxygen in water decreases. The ecological balance is then permanently disturbed.



In all these processes, it is important to control the concentration of one-time or continuous manner as to ensure maximum effectiveness of the treatment cycle. To carry out on-line phosphate analysis, we designed the Testomat 2000  $\text{PO}_4$ .





**HEYL & WATER**

*Fields & References*

# Fields & References

For the best Water Quality



## MONITORING THE WATER QUALITY FOR

- Industrial process water
- Boiler and cooling water
- Drinking water
- Treatment plants
- Desalination plants - seawater
- Reverse osmosis units
- Water softening and / or decarbonation units
- Medical Treatments (Dialysis)
- Surgical Sterilizations
- Industrial power supply
- Breweries / Drinks
- Meat processing plants
- Dairy farms

## INDUSTRIES WE PROVIDE

- Hospitals / clinics
- Metallurgy
- Automotive
- Chemicals and pharmaceuticals
- Construction materials
- Mining
- Microelectronics / Semiconductors
- Food
- Energy production



Active in all sectors, we personally support our customers in finding the optimal operation of their facilities, either by offering the best product or by creating individual solutions for their applications.



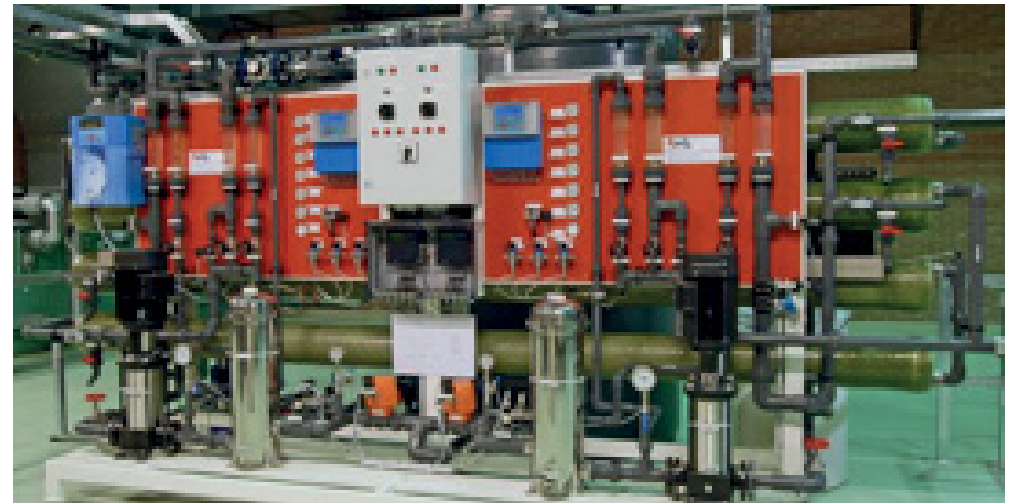
# Fields & References

For the best Water Quality



## SOME ACHIEVEMENTS

*Microelectronics & Food & Beverage*



# Fields & References

For the best Water Quality



## SOME ACHIEVEMENTS

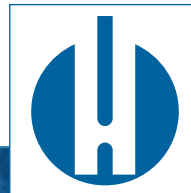
### *Medical & Pharmaceutical*





# Our Distribution Network

Where to find us



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9, rue d'Alembert Techniparc  
91240 Saint-Michel-sur-Orge

Tél : +33 (0)1 69 46 17 17 • [contact@hey-l-at.com](mailto:contact@hey-l-at.com) • [www.hey-l-at.com](http://www.hey-l-at.com)