

WKRONIOS

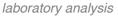
PROVIDES SAFE DRINKING-WATER

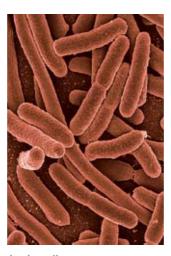
WATER - ESSENTIAL TO ALL LIFE!

KRONIOS™ - THE CONCEPT

Drinking water is the number one requirement for human life. However the conditions on board often cause the quality of the water to be insufficient for use or consumption. Wrong treatment, stagnant water or insufficient temperature control can cause contamination of the water on board. This contamination can be a serious health risk to you and your crew. Kronios™ provides the solution to keep your water healthy from production to consumption.







legionella

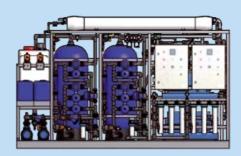
THE KRONIOS™ OBJECTIVE

High quality drinking water is the Kronios[™] objective and is achieved by:

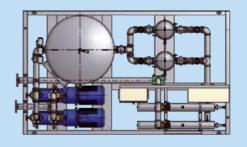
- Complete system engineering from equipment, piping and appendages
- Construction of the drinking water system from production to consumption
- Application of the best materials and technology
- Risk Analyses and Management of your entire drinking water system. The Kronios[™] Management Plan provides you all the information on how to keep your water healthy
- Testing your water and advice on required actions.
 Sampling and analyses provides you an up to date status of your water quality on board
- Audits of your management plan, insuring continuous high standards and maintaining your good name

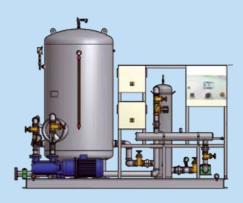
R.O. WATERMAKER





HOT & COLD FRESH WATER MODULE





GENERAL DRINKING - WATER SYSTEM SALT WATER BUNKER WATER AUTOMATIC HADEX® DOSING UNIT 0 0 FRESH WATER TANK(S) FINE FILTER ACTIVATED CARBON FILTER FRESH WATER: • SAMPLING **②** 7 ANALYSIS CONSULTANCY LEGIONELLA RA&MP U.V. WATER DISINFECTION UNIT 0 DRINKING-WATER COOLER USERS TAPPOINTS = =

KRONIOS™ – TOTAL CONTROL OF YOUR WATER SYSTEM

Kronios™ helps you to make important decisions regarding:

- Bunkering water or producing drinking water out of sea water
- Best available disinfection and post treatment of your water
- Water treatment required for special applications
- How to store the drinking water
- Pressurization, heating, distribution of hot and cold water
- Best available technologies for Legionella control
- Point-of-Use water treatment
- The choice of appropriate piping material
- Monitoring and control of the system in use



watermaker



KRONIOS™ - A LOGICAL FORMULA

The partners behind Kronios[™] combined have more than 400 years experience in providing drinking water and all technical equipment that is necessary for this process.

You benefit from:

- Extensive knowledge of water production and distribution on board ships and offshore installations
- The experience of thousands of Risk Analysis and Management Plans of on board water installations
- The use of top quality components, approved by leading maritime authorities such as: Lloyds Register, Germanische Lloyd, Bureau Veritas, DNV, ABS, etc.
- Worldwide available components
- Service around the globe
- Remote monitoring of the ship's water system
- A 10 year guarantee on all synthetic piping











THE PARTNERS BEHIND KRONIOS™:

Hatenboer-Water

Specialist in total water treatment and services

Minks Kunststoftechniek

Specialist in thermoplastic pipe systems

Georg Fischer

Manufacturer of thermoplastic pipes and fitting

Kemper

Manufacturer of sanitary valves

Econosto

Worldwide wholesaler of valves and fittings

APPLICATIONS



Cruise ships



Cargo ships



Marine vessels



Super yachts



Offshore installations



KRONIOS™ – GOOD PIPING SYSTEM ENSURES CLEAN WATER

To maintain a good quality water, clean pipes, constant flow and good temperature control, are key requirements.

Piping

Kronios[™] uses high quality synthetic piping, which provides you the following advantages:

- Smooth internal surface, preventing scaling and bacteria growth
- High thermal insulation, maintaining temperature (cold and hot), often without additional insulation
- High temperatures resistance (up to 95°C / 200°F)
- Low flow resistance, allowing smaller diameters or higher flow
- Low life cycle costs due to no maintenance and long lifespan

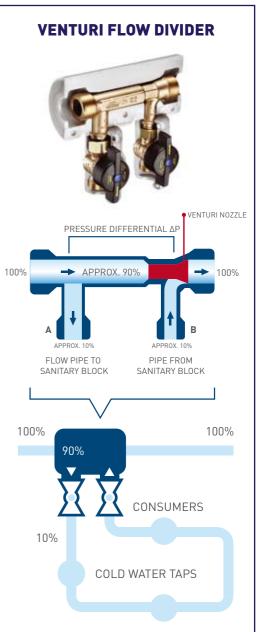
Constant Flow

To ensure constant flow in the piping system, Kronios™ applies the patented Venturi Flow Divider, keeping the water moving as far as the last tap. Combining constant flow with the correct disinfection, such as the latest maritime technology copper/silver ionization, prevents your water from Legionella contamination.

Monitoring

Close monitoring of the critical parameters with regard to your water quality is important to be able to react to incidents. Kronios[™] helps you with continuous monitoring of these parameters such as temperature, bacteriological condition and available disinfectant.







KRONIOS™

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 $Kronios^{\scriptscriptstyle{\mathsf{TM}}} \ is \ a \ joint \ venture \ of:$











