

WATCH® WATER MANAGEMENT



WATER
FILTRATION
KL

Dosing Chemicals
I-SOFT

**CLEAN
WATER**

WATER
SOFTENING
SP3

Disinfection
OXYDES



Reduce Waste with SPECIAL Filtration

Reduce the worst waste of bottles by using Special Filter, one watch filter can save 12,000 one liter plastic bottles from ending up in landfills.

Municipal Solutions



Municipalities depends on

- ❖ Good quality of Ground Water and
- ❖ Surface Water

And every municipality has problem with these two resources, every water has



- **Particles**
- **Turbidity**
- **Iron**
- **Manganese**
- **Arsenic**
- **Hydrogen Sulfide**

And they are all looking for high standard products, technologies to design and operate on lower costs but very high efficiencies. That is why we continually build engineers to learn our technologies to the highest standards.



Drinking Water Systems



Watch® introduces **Katalox-Light®**, Zeosorb based catalytic filtration and removal media, an alternative choice to remove heavy metals including Radionuclide without adding chlorine or KMnO_4 which creates bad taste/odors and disinfection byproducts. Katalox-Light® is a name for **ADVANCED FILTRATION**.



ADVANCED DRINKING WATER TECHNOLOGY

Worldwide safe drinking water with **Katalox-Light®**. We all need water to live. Industries need water to manufacture industrial products, foodstuffs as nothing can be done without water. However, there are considerable contaminants which lower the water quality and manufactured products. **Katalox-Light®** is an indispensable part of filtration process which remove impurities from the water. The high quality standard of the **Katalox-Light®**, its global availability and extreme efficiency explains why engineers throughout the world place their trust in Watch Water products for their drinking water plants.

Membrane Pre-Treatment



All RO (Reverse Osmosis) plants needs to remove Iron (Fe), Manganese (Mn), Arsenic (As), Hydrogen Sulfides (H₂S) and Katalox-Light® is the best for removal of organics and contaminants for RO treatment of water used in any process in the world.



ORGANIC FOULING



The effect of Iron or manganese bacteria on the surface properties of RO membranes is a very big factor which can account for the drastic change in membrane behavior and is observable on the very first day.

Boiler Water Treatment



As worldwide population increases, clean water and healthy ecosystems become very crucial to every economic viability and mandate as close to ZERO discharge as possible. It is absolutely not possible with

“The Dirty Dosing”

Acids, alkalis, Phosphates, Polyacrylates, Amines which are highly toxic. EDTA, NTA Phosphonates, Molybdates, Tolytriazols, Hydrazine these are called “The Dirty Dosing” (more on the section of **I-SOFT** Dosing)



But just for your knowledge

These combinations of dosing products produces bioaccumulation Pollutants of Phosphates (POPs) ascending up the food chain resulting in a variety of deleterious outcomes (i.e., increased cancer rate).

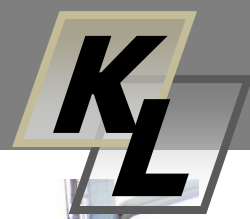
Heat Exchanger



Approximately, half the cost of operating heat exchanger systems to achieve industrial closed-loop energy recovery including a result of corrosion and bio-fouling (Iron and Manganese) or Hydrogen Sulfide (High Sulfates) in water. Any other conventional pre-filtration methods have had very less success in this application due to filter clogging and fouling caused by high molecular weight organic compounds. Katalox-Light filters developed by Watch Water in various field applications has extended Heat Exchangers life 10 to 20 fold while reducing downtime to operating time ratio from four to one to one to four.



Cooling Towers



Heavy metals, organics, bio-fouling are a major component of cooling water pollution. The need to reduce discharge of metals and organic pollutants from cooling towers, chillers and any other industrial process streams, waste water and discharges to publicly owned treatment works (POTW) has overwhelmed the capabilities of all current technologies. Our next section of I-Soft-Dosing and disinfection will address organic cleanliness requirements for waste water discharge and industrial closed and open loop processing as compared to the capability of existing organic pollution chemicals and dosing devices.



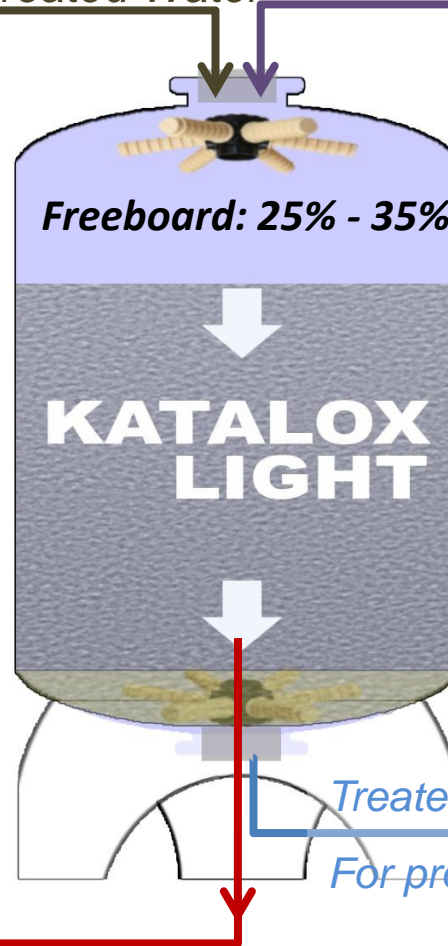
Katalox Light Systems



Saves millions of Cartridges

- Drinking Water
- Surface Water
- Ground Water
- Process Water
- Precipitation-Coagulation
- Particle Filtration
- Other

Untreated Water



Removes

- Iron
- Manganese
- Hydrogen sulfide
- Arsenic
- Zinc
- Copper
- Lead and Other Heavy Metals
- Radium, Uranium and Radio nuclides

Katalox Light Filtrates and removes

Down Stream Technologies

- Ion Exchange
- Softening
- Demineralization
- Ultra Filtration
- Reverse Osmosis
- Neutralization
- Clay / Carbon Adsorption
- Water Reuse
- Others

Katalox Light Systems

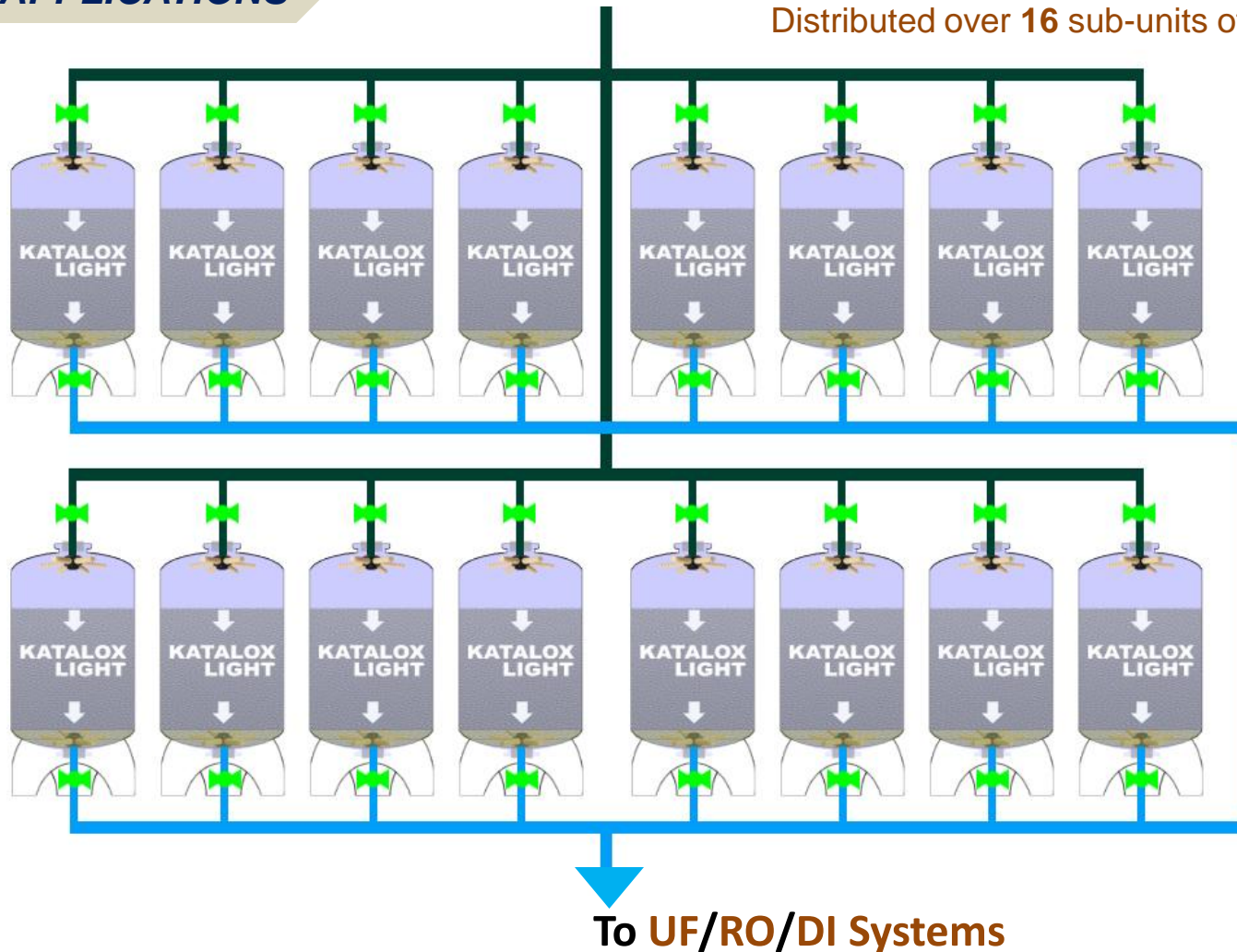


Standard Systems flow from 0.5 m³/h - 50,000 m³/h

INDUSTRIAL
APPLICATIONS

Flow rate: 560 m³/h

Distributed over 16 sub-units of KL 4882



Each unit treating a flow rate of **35 m³/h**, providing a contaminant free filtration down to **3 micron**

Each unit is loaded with **40 ft³** (approx. 1132 L) of **Katalox Light** media

Total **Katalox Light** volume used in the system is **16 x 40 ft³ = 640 ft³**

Which is available in a standard 20 ft³ container

Conclusion



We are Bridging the Gap!

- ✓ High flow rate – Small Foot Print
- ✓ **Katalox-Light**® media is highly efficient (single – pass @ 97%) and will not release the pollutants it captures
- ✓ Exhibit low differential pressure (Saves Energy)
- ✓ Protect very expensive Ion-Exchange and membrane technologies from contaminants
- ✓ Non –toxic and approved by WQA to meet **NSF/ ANSI 61** standard
- ✓ Best suitable for *California Proposition 65* against Quartz Silica (carcinogenic)
- ✓ Easily and inexpensively changeable against all existing technologies
- ✓ No Regeneration with chlorine or KMnO_4 as both produce Disinfection by Products (DBP)

OXYDES

A novel technology based on **INSTANT** Hydrogen peroxide (H_2O_2) chemistry is the **ONLY Way to bridge the gap**



Definitive Dosing Solution for **GREEN THINKING**