ECM ECO Monitoring

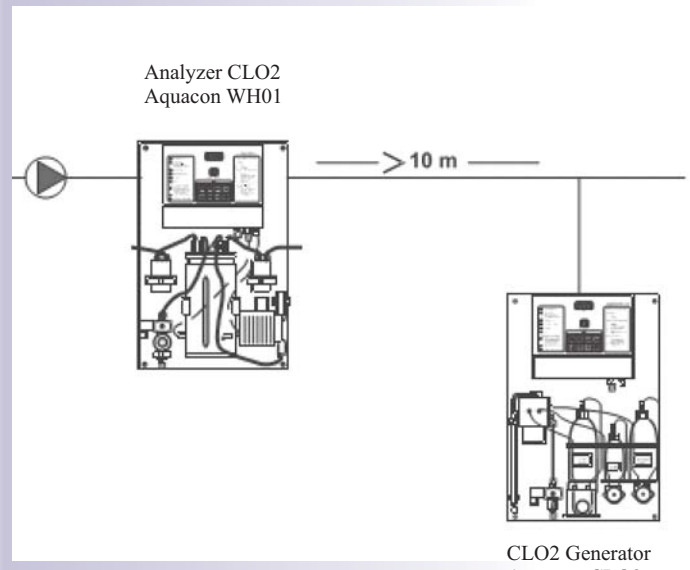
Environmental & Process Monitoring instrumentation & systems

CLO2 Water Treatment

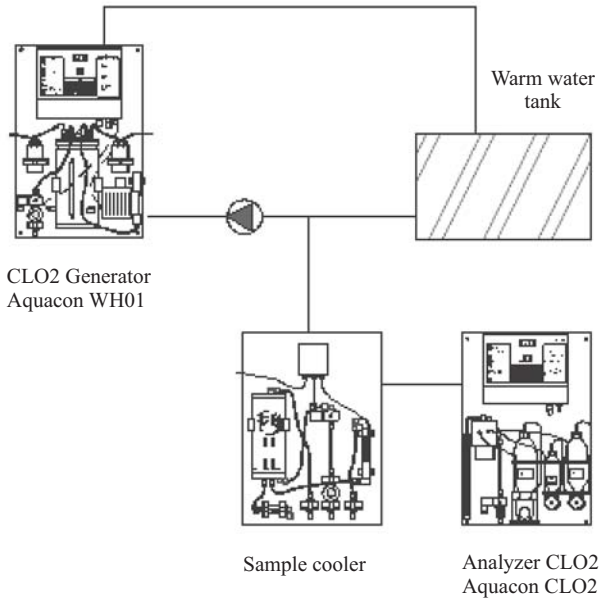
The drinking water systems are normally disinfected by chlorine. Using the common heating systems with warm-water tanks, the chlorine evaporates and there is danger of virus reproduction, bacterias and mushrooms / generally known are legionella, salmonella and water-grass /. Normally we attack against to bacterias by using expensive water heating to temperature up to 60-80°C. The Aquacon devices WHO1 are assigned for protection of warm-water distribution systems by CLO_2, that is considerably more active and stabile in compare with normally used chlorine. Is necessary to take the water temperature on the optimal value / it is about 40°C/.The energy saving is remarkable higher in compare with the purchasing and operation costs of the CLO_2 generator.

Device layout for drinking and warm water treatment

Portable water treatment by CLO2



Warm water treatment by CLO2



Using a high effective disinfection by CLO_2 has been stopped until now, because of the analytical method that enables the control of feeding generated gas was not accessible.

Connection the WHO1 generator with the Aquacon CLO_2 calorimetric analyzer creates an effective system, that keeps the necessary concentration of CLO_2 above 0.05 ppm level.

CLO_2 disinfects water but removes biofilms from piping and walls of tanks as well.

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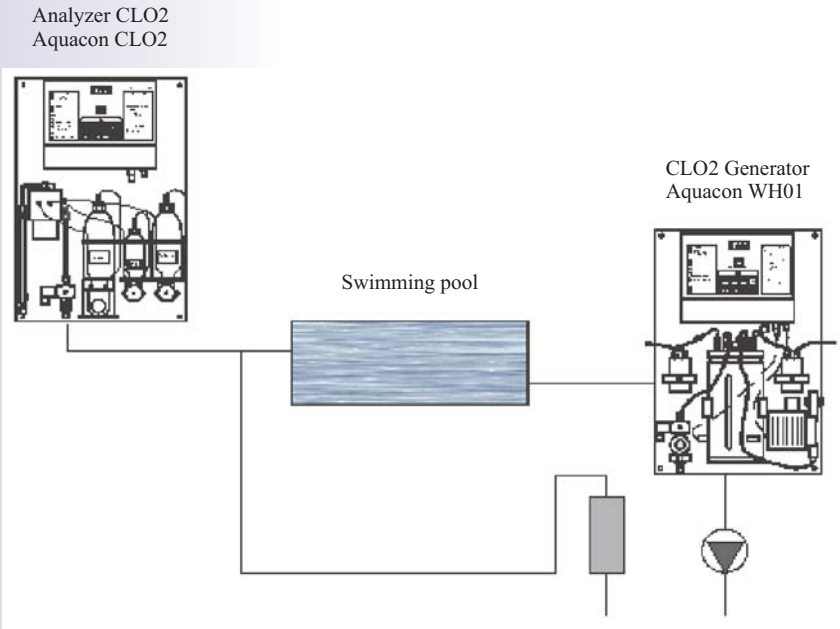
Use of CLO_2 for swimming pools



AQUACON WHO1

Chlorindioxid generator

CLO2 is a reliable medium for water disinfection in swimming pools and drinking water distridution systems because of has an intensive influence to liquidation of bacterias, viruses, and water-grass. Aquacon WH01 device is assigned for automatic generation of CLO2 by acid chlorine method. Volume proportional feeding, using external calorimetric analytical equipment ensures exact keeping of required level of disinfect means.

- generation of CLO2 by acid natrium method chlorine
- reaction runs directly in water, unpleasant and dangerous gas chlorine does not leak
- electronic control of feeding and filling of reagents enables safety operation
- reliable operation with minimal maintenance

The next advantages are a high CLO2 efficiency for water disinfection within a very low concentration and that chlorine does not occur in ambient air / does not leave the typical aroma of swimming pool /.

Aquacon WHO1

Functional description

The generator is consist of reactor, feeding pump, two peristatic pump for reagents feeding and conductivity and level monitoring sensors as well.

The reactor is filled with water by the magnetic valve. Then the peristaltic pumps feeds necessary components in order to proper reaction. Filling and feeding is controlled by conductivity level sensor. After some time the complete reaction will be done. The reaction result is required CLO2 concentration.

The peristaltic pump feeds the chlorinedioxin solution step by step into the water distribution system. Feeding is controlled taking into account the water-flow in order to reach the optimal value of concentration.

Is possible to deliver the volume-proportional control and the feeding control with using external calorimetric analyzer as well.
All components are assembled to the compact instrumentation set.

Operation with device is simply:

- changes of feeding process are carried out in dialog mode by keyboard
- routine operation is fully automatic including reaction phase
- we deliver the system ready for operation after simple connection to distribution systems

Technical specification

Reagents number	2
Marking	ClO_2 solution 1
	ClO_2 solution 2
Storage temperature	5 - 30° C
Quantity	14 ml per a charge
Display unit	3 place LED for measured value
	1 place LED for functions
Contact outputs	1 alarm voltageless (230V/50-60 Hz, 3A)
External switches	galvanic separated ca.18VDC, ca.4mA
Operational temperature range	5 - 30°C
Power supply	230V/50-60 H2
Input power	max. 16VA
Dimensions	570 x 350 x 175
Weight	approx. 6,8 kg

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