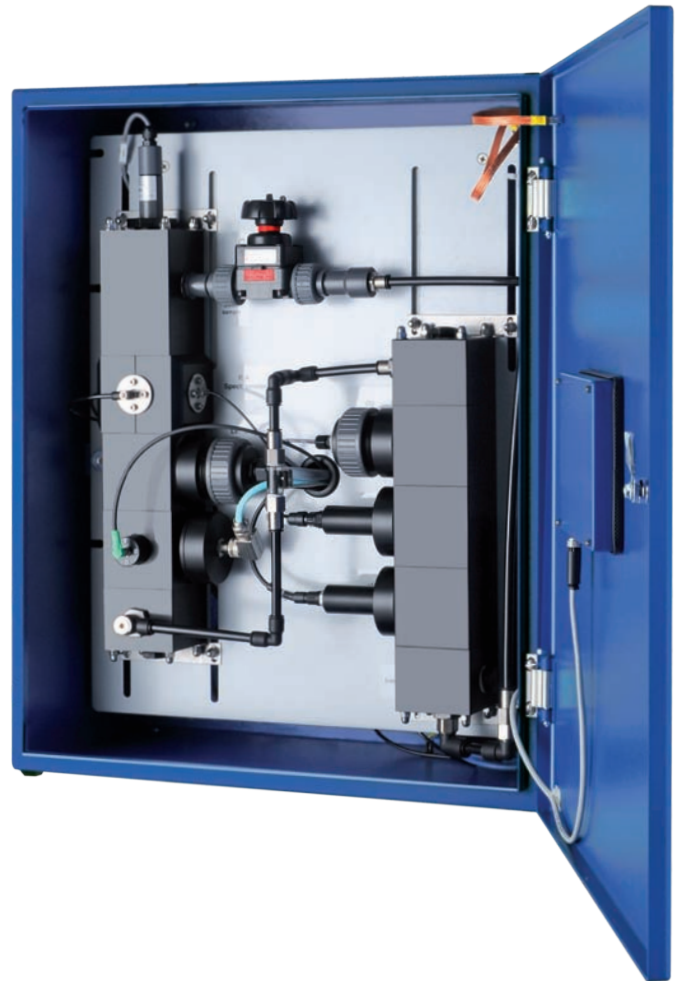
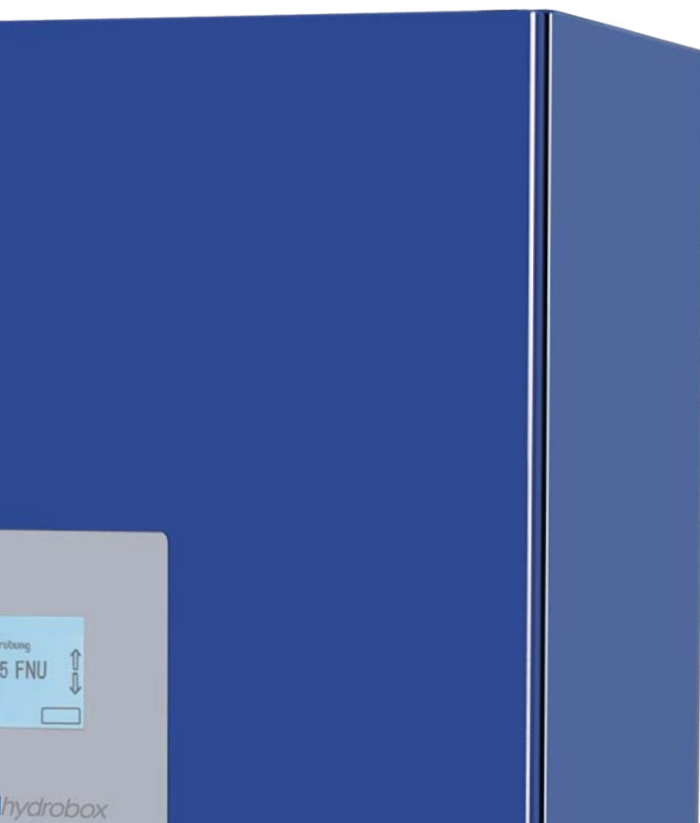


T E C H N O L O G Y W I T H A F U T U R E



vonRollhydrobox

The online system
for the permanent
monitoring of water
quality

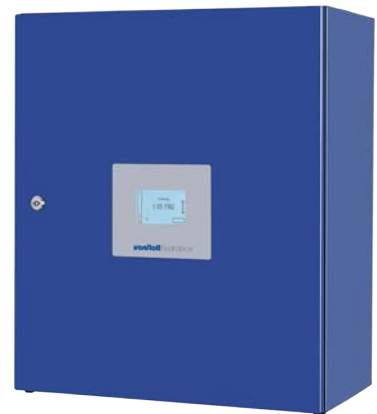


vonRollhydrobox – the online system for the permanent monitoring of water quality

The vonRollhydrobox is a robust, compact and modular online system for permanent monitoring of the chemical and physical parameters of water. A Biosentry option can also be added that uses the latest laser-light scattering technology to quantitatively and selectively detect microbiological impurities such as E-Coli, Giarda, Cryptosporides and spores according to their type. The instrumentation and configuration of the vonRollhydrobox can be adapted to suit the particular risk profile of any drinking water supply.

The central processing unit has PLC functionality making it suitable for the use of process parameter data such as water level, flow and pressure to allow control of peripherals as well as pumps, fittings and other equipment. Complex custom monitoring and control functions can be configured additionally to suit changing requirements.

The vonRollhydrobox can be easily integrated into existing remote control systems.



Multi-parameter measurement block hydraulics section



A touch screen LCD display with back lighting allows clear display of all parameter and system information in both numeric and graphic format.

(Optional is a panel available, which enables to operate internally and externally)

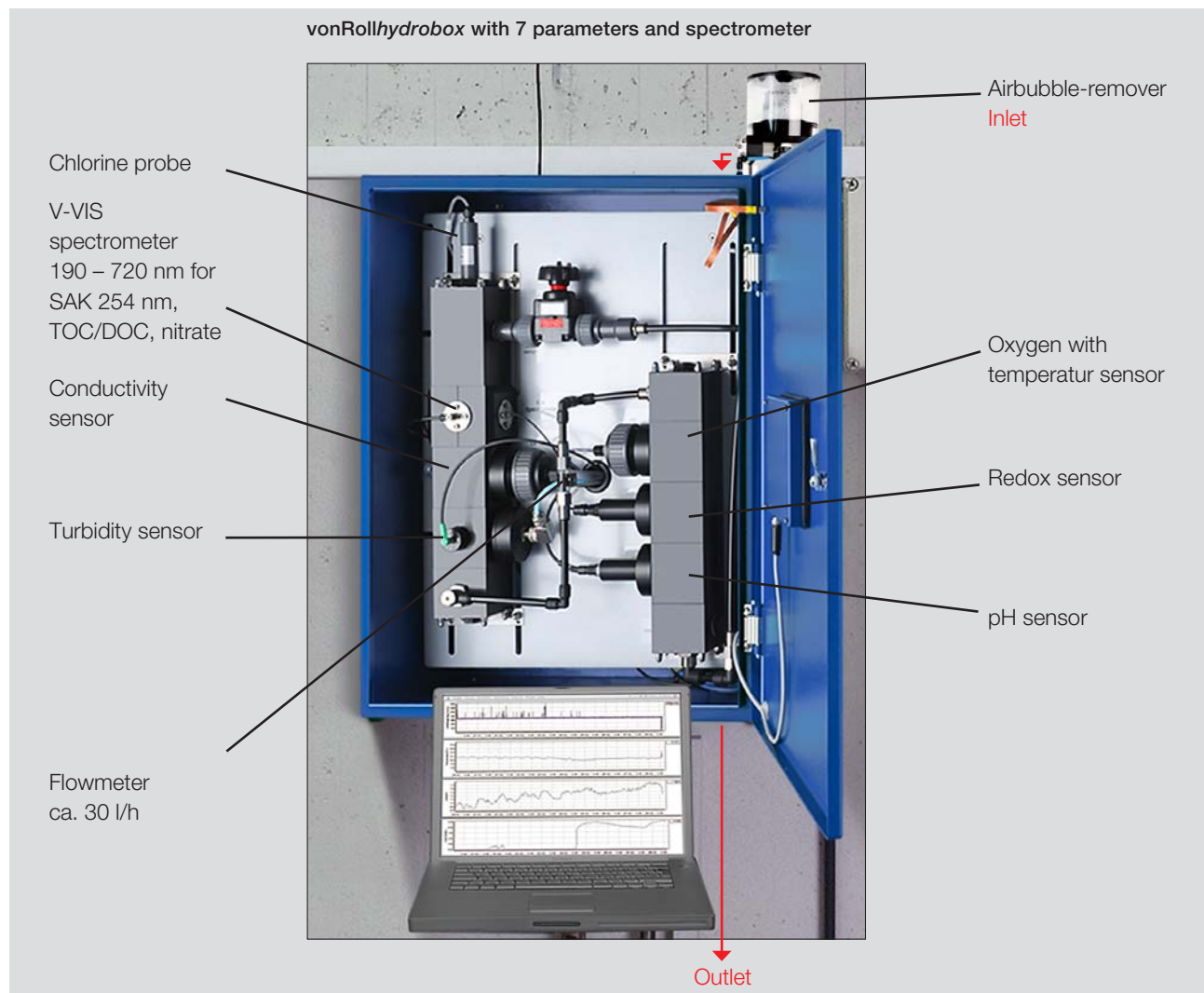
Applications

- Drinking water supply systems
- Industrial process water supply
- Pharmaceuticals and chemical industries
- Food Industry
- Aqua Culture
- Sports facilities

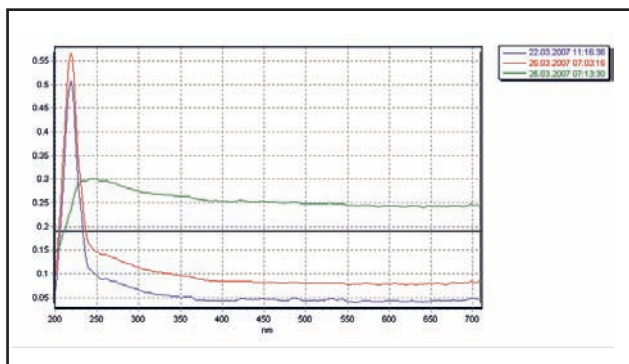
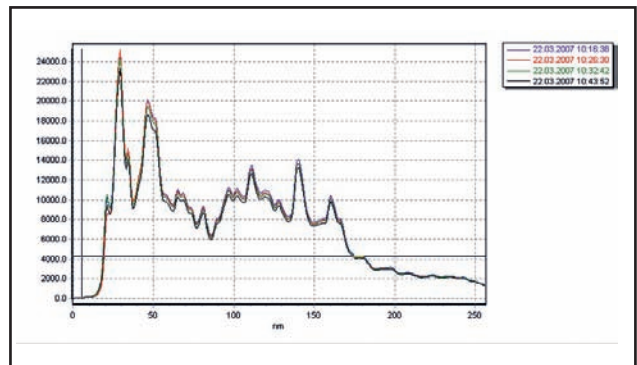
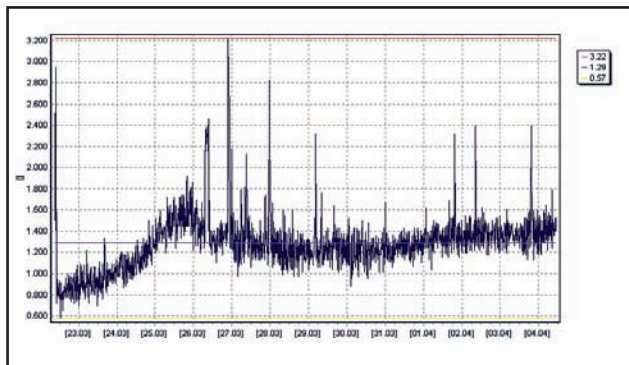
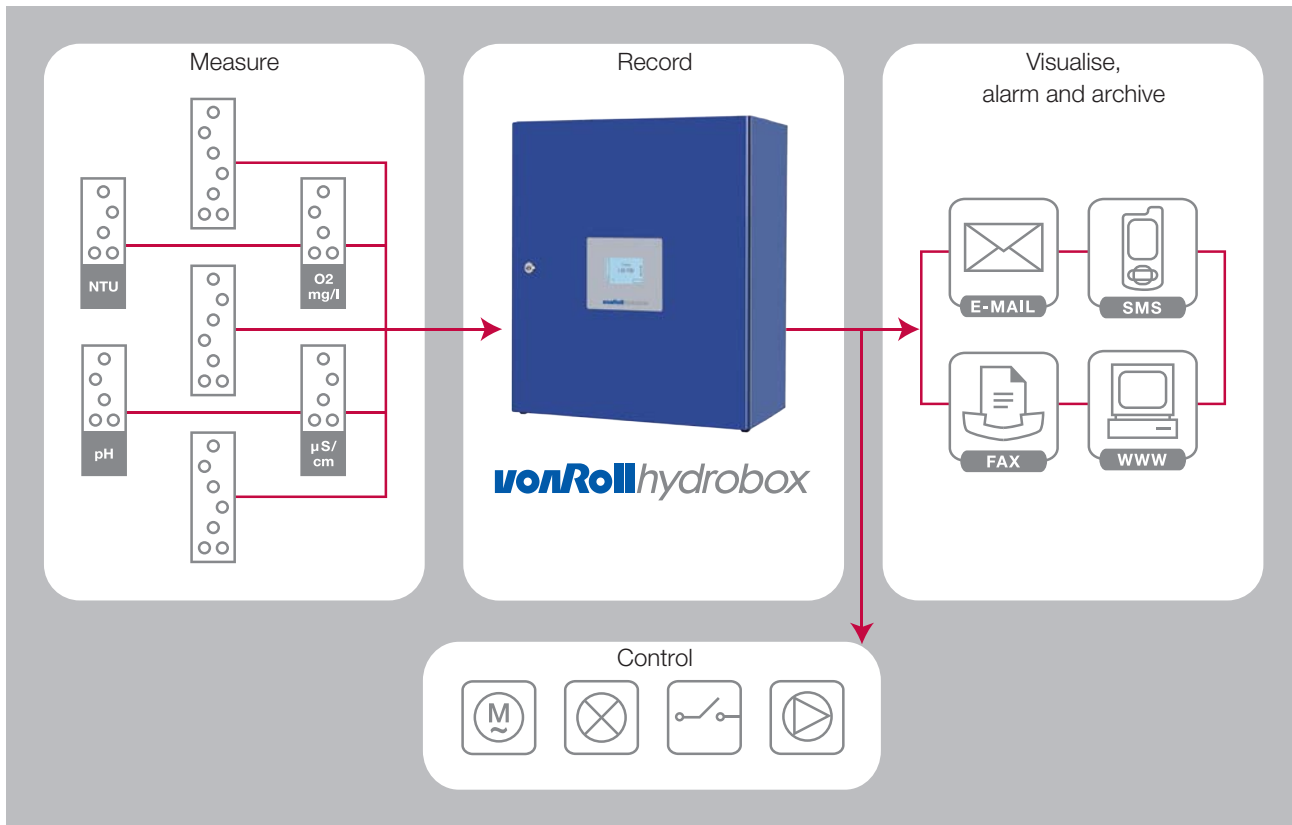
Characteristics

- Permanent measurement and recording of; pH values, redox potential, free chlorine, dissolved oxygen, turbidity, conductivity, temperature, UV-Vis spectrometer 190 – 720 nm for the definition of SAK-254. TOC/DOC and nitrate content using the correlation method.
- Integrated control functions are programmable as required.
- Easy integration with commercially available sensors and actuators.
- Integration and connection to existing or higher level remote control systems.
- Option for the installation of a measurement network.
- Latest data transfer technology for telemetry using GPRS, W-LAN, LAN, UMTS.
- Data-Logging to PC with on screen visualisation.
- Alarms via mobile phone when limit values are exceeded.
- Modular system, extendable and adaptable to meet changing requirements.

vonRollhydrobox with 7 parameters and spectrometer



Measurement – recording – visualisation – control



Technical data

Selectable parameters

	Measurement principle	Measuring range	Resolution	Accuracy
pH value	Galvanic, glass electrode	0.00 ... 14.00 pH	0.01 pH	0.1 abs.
Redox potential	Galvanic, platinum electrode	- 2'000 ... + 2'000 mV	1 mV	0.25 % FS
Free chlorine	Galvanic, double-membrane electrode	0.04 ... 2.00 mg/l	0.01 mg/l	5 % FS
Ozone	Galvanic, double-membrane electrode	0.00 ... 2.00 mg/l	0.01 mg/l	1 % FS
UV-VIS spectrometer	Optical, Xenon 180° photo-array	190 ... 720 nm	2 nm / 256 pixels	5-10 % FS
Turbidity 0-2 or 0-10 FNU	Optical, infrared LED	0.00 ... 10.00 FNU	0.01 FNU	1 % FS
Dissolved oxygen	Galvanic, special alloy electrode	0.00 ... 20.00 mg/l	0.2 mg/l	1 % FS
Temperature	NTC resistance measurement	- 10.0 ... + 60.0 °C	0.1 °C	0.3 abs
Conductivity	Inductive with compensation	40 – 4'000 uS/cm	1 uS/cm	0.25 % FS
SAC 254	Correlated to the UV-VIS spectrometer at 254 nm	0.0 ... 20.0 E/m	0.1 E/m	5 % FS
TOC / DOC	Correlated to the UV-VIS spectrometer at 254 nm	0.0 ... 20.0 mg/l	0.1 mg/l	5-10 % FS
Nitrate	Correlated to the UV-VIS spectrometer at 254 nm	0.0 ... 100.0 mg/l	0.1 mg/l	5-10 % FS
The precision is dependent on the calibration and the change of the medium. Please ask for more information concerning your specific application.				

More parameters available on request

Signal inputs/outputs additionally available

Digital signal inputs	1 x 4-20 mA	Further sensor modules can be connected via the CAN-bus interface as desired, further parameters can be measured in this way.
Digital signal inputs	2 x potential-free 2 x impulse	
Analogue signal outputs	2 x 4-20 mA	
Digital signal outputs	2 x relay 230 VAC 2A	

Technical Data Central Processing Unit

CPU	32-bit processor with 128 MB memory card and LINUX operating system
Display	LCD graphical display 240 x 128 pixel with touch-panel
Interfaces	CAN-Bus; Ethernet 10 / 100 MBit; RS 385; Modbus, SDI 12; SPS-System; USB; GPRS; UMTS; more on request
Alimentation	24 VDC 2 A

Mechanical and electrical data

Measurements (L*H*D)	600 x 700 x 320 mm (without airbubble-remover)
Weight	48 kg
Power supply	230 VAC 50/60 Hz or 24 VDC
Protection class (DIN 40050)	IP65 for electronic system
Power consumption	max. 150 Watt
Water connections input /output	10 mm / 10 mm (without airbubble-remover); 10 mm / 25 mm (with airbubble-remover)
Working pressure	0,1 - 4,0 bar
Operating temperatur range	5 - 35 °C

Subject to change

The Service Contract for continuous maintenance

During the development of the vonRollhydrobox the requirement for user friendly maintenance was considered from the start.

The hydrobox utilises self cleaning probes which are arranged simply in a multi parameter measuring block enabling easy accessibility. Simple tasks such as calibration of the pH and redox electrodes using calibration solution may be performed easily by the operator.

Using the highly efficient data transfer module calibration characteristics based on laboratory measurements are loaded automatically, the correct functioning is then constantly checked on line.

Long term efficiency of the hydrobox can be best guaranteed with a maintenance contract with vonRoll hydroservices ag that is tailored to the customers requirements.

Service

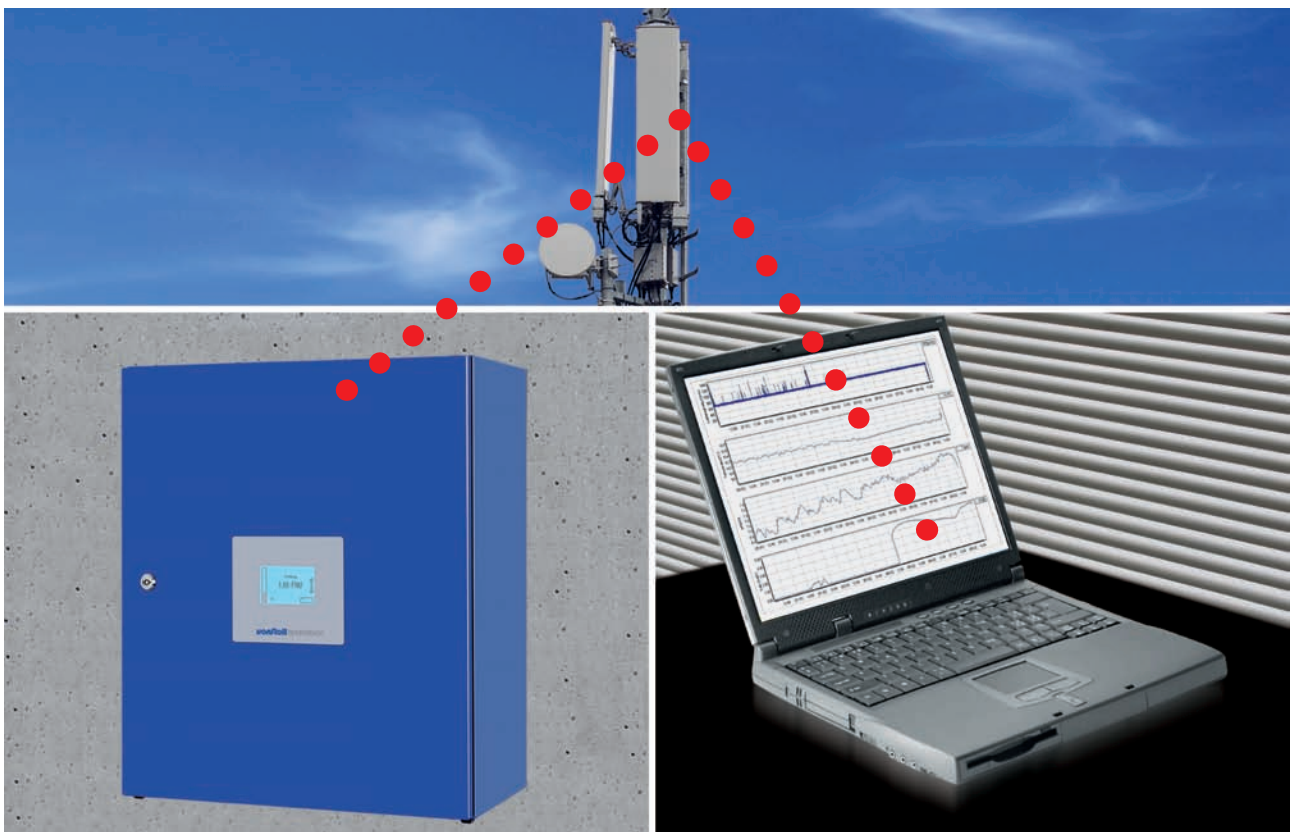
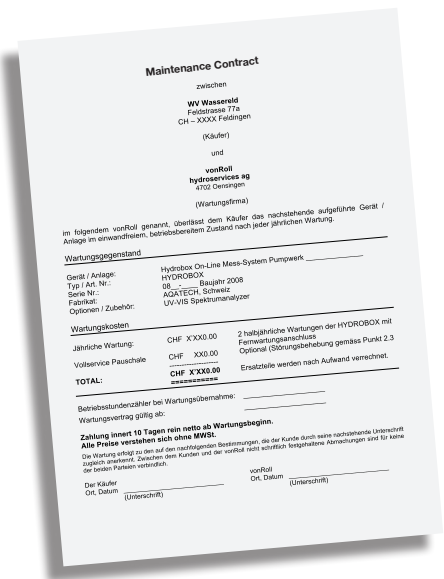
- Annual on-site inspection
- System cleaning and calibration

Service plus

- Periodic inspection and maintenance
- Transfer of measured data via GPRS modem
- Secure storage of the measured data in an SQL database
- Remote maintenance and adjustment of the installation via GPRS or UMTS

Options

- Preparation of the results according to customer's requirements
- Data transfer to an Internet host server via GPRS
- Programming of remote control functions and setting of boundary values on the basis of the measured data



vonRollhydrobox

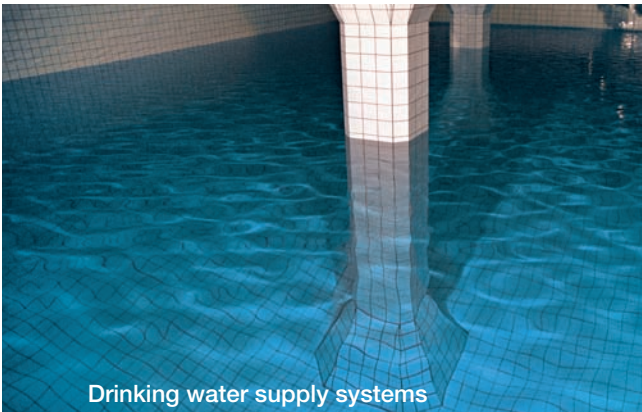
Water quality for us and our environment



Prevention of water pollution



Fish farming



Drinking water supply systems



Sports facilities



Industry



Sewage treatment plants



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