



dinotec
Water & Pool Technology
... a CORAM company ...

Inspiring functions.
Cost-cutting technology.



AquaTouch+

Measuring, control and dosing systems based on the latest bus technology



Simply enjoy the best water!

Everything included! Features and advantages at a glance



Best water quality, measurement and control of all hygiene parameters



Super chlorination - manual or activated via time switch



Control of a second and third pool



Remote maintenance, remote control via VNC visualization software. e.g. using iPad or iPhone.



Upgradable to meet future requirements



Adjustable dosing of flocculant



Graphic display, information visible at a glance, intuitive operation



Large colour trend display for measuring parameters from data log



A large number of interfaces for connection of Modbus TCP, PLC S7, EIB/KNX and dinwin



Free choice of water care method: chlorine, chlorine-free (Poolcare) or with bromine



All measured data is stored for more than 1 year



Pressure-resistant cell "universal fm" with flow compensation and automatic electrode cleaning (AER)



Connection to PC, routers, printers; direct data transmission via DSL possible



ECO operation via integrated time switch

Why do operators approve of the AquaTouch+?

"...my system must run, the AquaTouch+ concept supports the high demands of our overall concept."

"...wellness means top water quality. That's the success factor for us. With the AquaTouch+ we are on the safe side."

"...the remote maintenance allows me to reduce our maintenance costs considerably."

"...with the data logging function, we fulfil all documentation requirements of control authorities and need only one control measurement per day."



Multilingual



Retrofitable



And more

...



Everything in view, everything under control

The AquaTouch+ belongs to the latest generation of measuring, control and dosing systems. The device, developed on the basis of state-of-the-art bus technology, combines functionality, reliable and

modern measuring, control and dosing technology, intuitive operation and simple monitoring in one system.

Depending on requirements, it is possible to integrate the measurement and control for up to three pools in the system. Additional functional units are simply added to the control as new module and connected to the field bus.

The AquaTouch+ system was developed together with professional users, and is tailored to the requirements of swimming supervisors, operators, municipalities, hotels, plant engineers, designers and water technicians.

Wherever the water quality is of particular importance, the AquaTouch+ is used. Depending on the configuration, the system measures and controls pH, free chlorine, total chlorine, Poolcare, bromine, redox potential, conductivity and temperature.

The AquaTouch+ is flexible und freely scalable, it grows in line with the requirement of the operator.

Options



ECO operation to DIN19643 and controllable via integrated time switch.



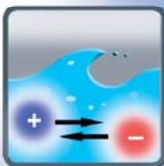
WLAN router...



Total chlorine measurement



dinotec VPN box for secure Internet connectivity or use as UMTS



Conductivity measurement.



Transfer/display of measured value from chlorine gas detector (0/4 - 20mA)



Control of pool temperature.



Accessible worldwide. Querying and setting of current values as well as alarm messages of your system via E-Mail



Network printer for connection to a LAN interface

Why do designers approve of the AquaTouch+?

"...the flexible, extendable bus technology means that my projects are future-oriented and 'sustainable'."

"...the cost-effectiveness does absolutely convince me."

"...the Eco operation allows me to meet the customers' expectations for low operating costs."

Measurement and control of up to 3 pools

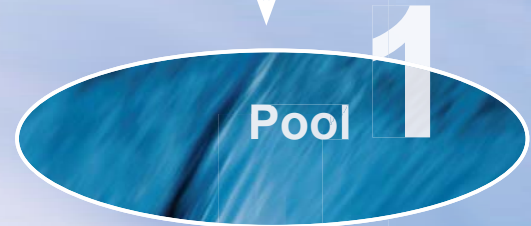


Planning and configuration of one pool at a time...

System-related options

Independent of the number of pools.
Once selected, they apply to the entire system.

- ECO operation to DIN-1:2012-11
- E-mail notification
- Data transfer to fixed line network, telephone modem
- External network printer for connection to integrated interface
- Connection to dinowin



Measuring technology

- Measuring section "universal fm" 5/3 for Cl, pH, ORP, temperature and flow measurement
- Measuring section "universal fm" 4/2 for Cl/Poolcare, pH, ORP, temperature and flow measurement
- Conductivity measurement
- Total chlorine measurement

Options

- EIB/KNX, E-mail dispatch, dinowin
- Measurement of container filling levels

Dosing

- Peristaltic dosage pump dinodos START LEVEL BUS (incl. container fill level measurement)
- Diaphragm dosage pump dinodos dinodos DDE and peristaltic dosage pump dinodos START up to 14l/h
- Diaphragm dosage pump starting at 16l/h dinodos H221 / H226
- Servodos ergo chlorine gas regulator

Why do plant engineers approve of the AquaTouch+?

"...setting and changing any parameter is easy and made in no time."

"...more and more customers expect a remote control feature."

"...a look at the trend display and message list and I know what's going on."



Why do plant engineers approve of the AquaTouch+?

"... the larger the system, the greater the cost advantages we can realize for the customer."

"... it's great that the flocculant dosing can be adapted to the circulation capacity."

AquaTouch+



Measuring technology

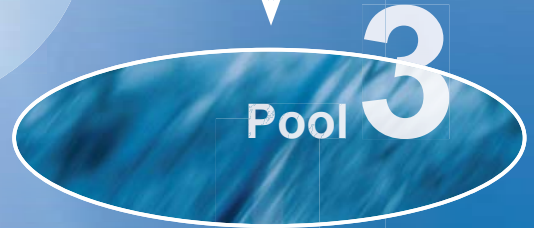
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Simply enjoy the best water!

The dinotec Eco concept



Plug in the bus cable - ready.
Connection of the measuring
section is completed within
seconds.



All important parameters
at a glance.
A colour "traffic light
system" highlights system
messages.



Investing in the AquaTouch+, means savings:

- ⚡ Superior cost-effectiveness.
- ⚡ The larger the system, the higher the savings.
- ⚡ Faster assembly due to easy bus technology.
- ⚡ Simple and fast commissioning.

With the AquaTouch+, you save while you operate your systems:

- ⚡ The Economy operation mode provides the basis for cutting down ongoing costs for energy and water treatment products.
- ⚡ With dinotec flocculant, you reduce your demand by up to 50 %. The dosing of flocculant is adjustable and can be adapted to the circulation capacity.
- ⚡ You save service costs with the remote maintenance feature and can reduce downtimes.
- ⚡ Less work: Due to a continuous measurement and recording, 1 control measurement per day is sufficient.

The AquaTouch+ means savings in the future:

- ⚡ The flexible system design means you can easily extend your system in the future.
You build on the investments made before.
- ⚡ As a rule, future technological developments can be retrofitted effortlessly and at any time.



You want to add a second pool?
Click the module in,
configure the system - done.

Why do municipal utilities approve of the AquaTouch+?

"... the first thing I make sure is that a system fulfils all standards and the specifications of our technicians. The AquaTouch+ is excellent in this respect."

"... we have several operations; with the remote control we can monitor these centrally."

"...because of the high operational reliability."

"... it is not only the initial investment that's important, but also running costs. With the Eco operation mode we save every day."

AquaTouch+



The system is protected by means of 3 access code levels.

Logical menu structures and illustrative pictograms allow an intuitive operation of the system.



d i n o t e c b u s s y s t e m

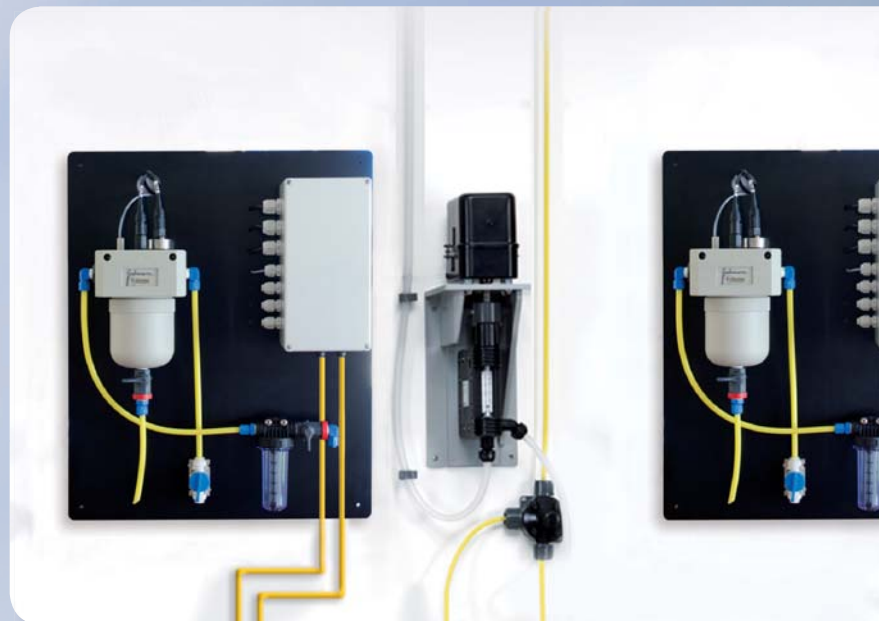
Economy operation mode

When the defined hygiene parameters (to DIN 19643) are maintained over a specific period of time, the system signals the possibility to reduce the circulation rate, if required, and controls the water quality via an adapted set of set points. This means considerable savings in energy and water treatment agents, especially in the night, during holidays and in times with low bather loads.

Proven measuring technology

The technology used in the AquaTouch+ allows the use of open and closed measuring cell systems. All important parameters like pH, free chlorine, total chlorine, Poolcare, bromine, redox, conductivity and temperature are exactly recorded.

The potentiostatic measurement (3-electrode principle) is one of the best and leading measurement methods in the market and is characterised by a high stability of zero point and measured value.



Safe and precise: dinotec chlorine probes can be serviced in about 2 minutes and are ready for operation immediately afterwards. The selective measurement delivers precise results, unaffected by other media.

Simply enjoy the best water!

Dosing equipment



Intelligent: dinodos START LEVEL BUS peristaltic dosage pump with permanent level measurement.



Robust: dinodos START peristaltic dosage pump with stepper motor suitable for continuous operation.

Dosing methods of the professionals

The most important factor in dosing is reliability and precision. A continual supply of the system with treatment agents ensures an uninterrupted operation of the system. Even in case of outgassing media, such as chlorine and the like, dinotec systems ensure a precise, optimal dosing and a continuous operation.

Precisely working dosage systems are an essential prerequisite for a perfect water quality. In addition, they are an important factor in reducing the input of water treatment products. dinotec systems are characterized by a wide range of delivery rates from 1 ml/h up to 210 l/h, thereby allowing considerable savings.



Silent: Geared synchronous motor dosage pumps dinodos DDE, specially suited for high pressures (up to 10 bar).





Powerful:
Diaphragm dosage pump
H 221 / H 226, for high flow
rates up to 210 l/h.



Compact:
Chlorine gas dosing
system Servodos
STEPTRONIC, precise
dosing, easy assembly.



Make use of flocculation to improve filtration performance!
Flocculant dosing station,
bus-controlled, 0 – 1,200 ml/h



Container filling level measurement (in cm).
Alarm via system bus



**dinodos START LEVEL BUS peristaltic dosage pumps
with integrated container fill level measurement (in cm).**
Alarm via system bus



**Diaphragm dosage pumps
with different
performance levels**



**Accurate
dosing of chlorine gas.**

Why do pool supervisors approve of the AquaTouch+?

"...I can see all parameters at a glance."

"...the operation is self-explanatory."

"...the trend display over a 1 year period is
important for the health authorities."

"...thanks to the container filling level measurement
I don't have to walk to the plant room for checking."

"...the remote control allows me to control the
system without violating my responsibility for
supervision."

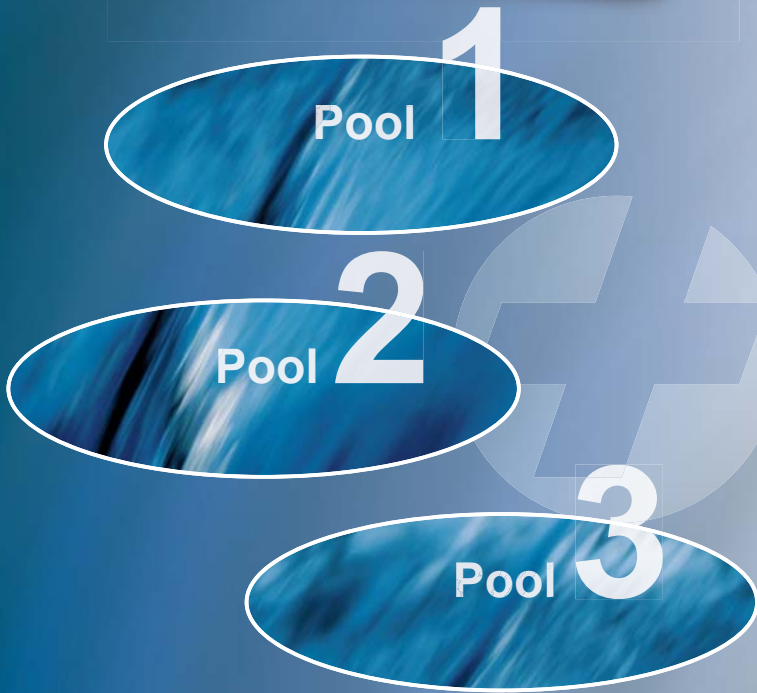
"...the system must work,
the AquaTouch+ really convinced me."

Functions and options

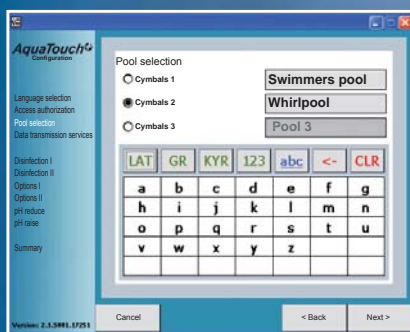


System unit features (in wall mounting case) for disinfection and dosing equipment:

- Central process manager
- Control of up to 3 pools
- Operation via 5.7" colour touch display
- Logical menu structures for an intuitive operation
- Password protection to prevent unauthorised operation
- Configuration menu for selection of measuring values, dosing equipment and other functions
- Measurement of free chlorine, Poolcare, pH, ORP, conductivity, total chlorine and temperature
- Automatic electrode cleaning ASR / AER (NEW) of potentiostatic measuring probe
- Temperature, pH value and flow compensation (universal fm) of chlorine value, temperature compensation of pH value
- Time-controlled or manually activated super chlorination
- ECO mode time-controlled or to DIN 19643 (2012 edition) with DIN contact, setting of the ECO mode vial time switch
- Transfer/display of measured value from chlorine gas detector (0/4 - 20mA). Setting the threshold values, integration in the message list, data logger and alarm relays
- Container fill level measurement via dinotec START LEVEL BUS dosage pumps or CLM module
- Parameter setting for flocculant dosing via dinotec START LEVEL BUS pumps
- Log for recording of measured values and messages for a 1 year period
- Large colour display of trend lines for hygiene parameters
- Storage of the setpoints (or several setpoint sets) on the USB flash drive



Configuration



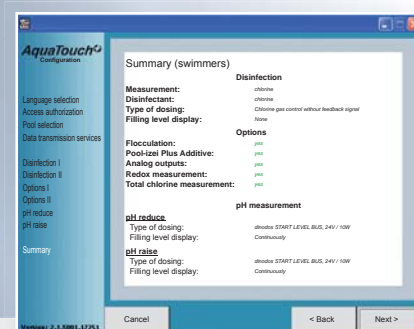
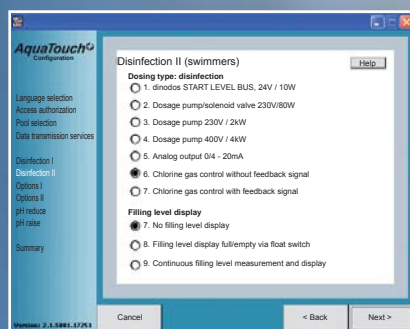
With the help of the configuration wizard, the AquaTouch+ can be configured for 3 pools in just a few minutes.

Ethernet connection for:

- Remote maintenance, remote control via Intranet LAN, WLAN/ Internet (DSL, UMTS, etc.)
- Data transmission via P24 protocol to Siemens S7
- Data transmission via Modbus TCP
- Connection to EIB / KNX
- Network printer for printing the hygiene parameters

Optional analog outputs for output of hygiene parameters

Select, click, proceed.



Final check of your selection in the summary.

Measurement parameters/ranges and resolution	Chlorine	0.01 - 4.00 ppm	0.01 ppm
(per pool with max. 3 pools)	Total chlorine	0.01 - 4.00 ppm	0.01 ppm
	pH	0 - 14 pH	0.01 pH
	Redox	0 - 1000 mV	1 mV
	Conductivity	0 - 200 ms	≤ 0.5 % of measured value
	Temperature	0 - 60 °C	1 °C
	Sample water deficiency		
	Temperature compensation of pH measurement		
	Temperature, pH and flow compensation (universal fm) of chlorine measurement		
Control response	P, PI, or PID control optionally		
Controller outputs	proportional via bus		
Digital inputs (per pool)	Feedback actuator, empty warning chlorine, pH, flow monitor / dosing stop, ECO operation		
Digital outputs (per pool)	5 voltage-free output relays for chlorine (actuator, pulse frequency, pulse length, On/Off), pH reduce and raise (pulse length, pulse frequency, On/Off), alarm.		
DIN contact (optional)	DIN contact for activation of the ECO mode to DIN 19643 (2012 edition)		
Analog inputs (per pool / optional)	4 analog inputs for recording the circulation rate (for adjusting the dosing of flocculant), total chlorine measurement, conductivity measurement and transfer/display of measured value from a gas detector (only in pool 1 module).		
Analog outputs (optional)	for transmission of measuring values for chlorine, pH, ORP, temperature.		
Measurement of container filling levels (optional)	Measurement of filling levels in chemical containers up to a level of 1.50 m, resolution 1 cm.		
Modules	RM5, UIM8 amongst others (refer to technical data, enclosed with each module) – space for optional extension modules.		
Interfaces	Ethernet for connection to Intranet (LAN/WLAN), Internet, router, for data transmission via Modbus TCP, EIB/KNX, P24 protocol. USB port for archiving of data and storage of setpoint settings		
System housing	plastic housing, protection class: IP 65.		
Dimensions system housing	500 x 300 x 150 mm (w x h x d).		
Weight	approx. 2.5 kg.		
Operation	via colour touch display 5.7"		
Screen resolution	640 x 480 pixel.		
Line voltage	85 - 265 V/AC, 48-63 Hz.		
Power consumption	50 VA.		
BUS voltage	24 V DC.		
Ambient conditions	working temperature: 5 to +50° C. storage temperature: -20 to +65° C.		
Relative humidity	max. 90 % at 40 °C (non-condensing)		

Why do operators approve of the AquaTouch+?

"...we want to continue growing, the AquaTouch+ is capable of growing with our demands. This means substantial savings in money and effort at a later time."

"...because the Eco mode allows me to reduce running costs without having to accept a reduced water quality."

"...what convinced me was the fact that I can convert the AquaTouch+ from working as a mere measuring, control and dosing system to an overall control facility for my entire plant."

"...it has even been possible to perfectly drive my existing dosage pump via the continuous controller."



Your dinotec specialist dealer:

dinotec GmbH
Water and Pool Technology
Spessartstr. 7
63477 Maintal/Germany
Phone: +49(0)6109-6011-0
Fax: +49(0)6109-6011-90
E-mail: mail@dinotec.de
www.dinotec.de
www.niedrig-energie-pool.de
www.PoolsForHotels.com

Subject to technical changes. Errors excepted. 10/2013