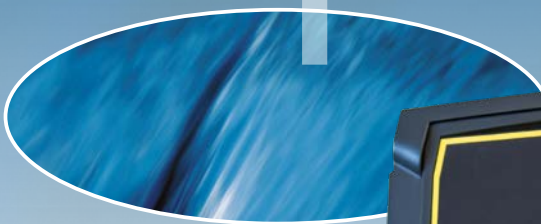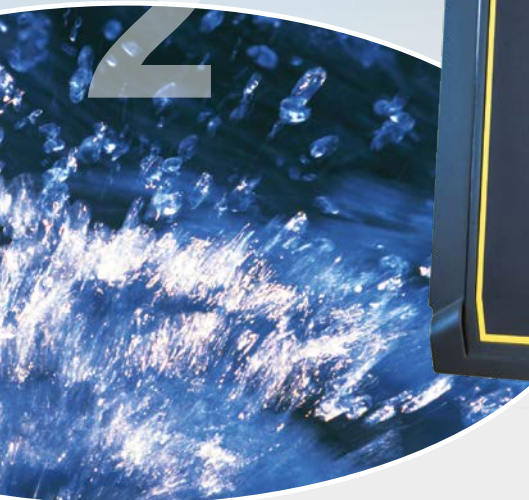dinotec
Water & Pool Technology

Inspiring functions.
Cost-cutting technology.

AquaTouch✛

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

ECO·PROOF

Simply enjoy the best water!

Everything included! Features and advantages at a glance

Best water quality,
measurement and control
of all hygiene parameters.

Shock 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.
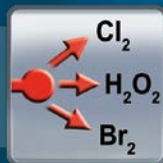
Adjustable dosing of flocculant.

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 dinowin.

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.

Multilingual.

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."

Retrofitable.

And
more
...

AquaTouch✛

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 a simple monitoring in one system.

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

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

Options

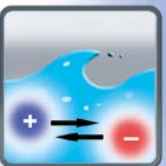ECO operation to DIN19643 and controllable via integrated time switch

Total chlorine measurement.

Conductivity measurement

Control of pool temperature

Accessible worldwide.
You can query and set current values as well as alarm messages of your system via E-mail

Network printer for connection to a LAN interface

WLAN router...

dinotec VPN box for secure Internet connectivity or use as UMTS modem

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

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."

Simply enjoy the best water!

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- 19643-1:2012-11
- E-mail notification
- Data transfer to fixed line network, telephone modem
- External network printer for for connection to integrated interface
- Connection to dinowin

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."
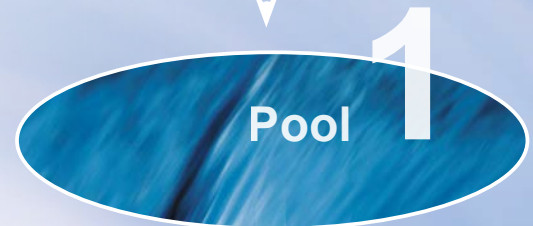
Pool 1

Measurement technology

- Measuring cell "universal fm" 5/3 for Cl, pH, ORP, temperature and flow measurement
- Measuring cell "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
- Container level measurement

Dosing

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

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+

Pool 2

Measurement technology

Measuring cell "universal fm" 5/3 for Cl, pH, ORP, temperature and flow measurement

Measuring cell "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

Container level measurement

Dosing

Peristaltic dosing pump dinodos START LEVEL BUS (incl. container fill level measurement)

Diaphragm dosing pump dinodos DDE and peristaltic dosing pump dinodos START up to 14l/h

Diaphragm dosing pump starting at 16l/h dinodos H221/H226

Servodos ergo chlorine gas regulator

Pool 3

Measurement technology

Measuring cell "universal fm" 5/3 for Cl, pH, ORP, temperature and flow measurement

Measuring cell "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

Container level measurement

Dosing

Peristaltic dosing pump dinodos START LEVEL BUS (incl. container fill level measurement)

Diaphragm dosing pump dinodos DDE and peristaltic dosing pump dinodos START up to 14l/h

Diaphragm dosing pump starting at 16l/h dinodos H221/H226

Servodos ergo chlorine gas regulator

The dinotec Eco concept

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

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

AquaTouch+

Float	Whirlpool
Cl 0.42 mg/l	Cl 0.40 mg/l
pH 7.18 pH	pH 7.20 pH
Rx 825 mV	Rx 820 mV
T 28 °C	T 32 °C

dinotec

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+ your save while operating your system:

- The Economy operation mode provides the basis for cutting down ongoing costs for energy and water treatment products.
- dinotec flocculents will reduce your input 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, one 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."

"... the initial investment is important, and so are also running costs. With the Eco operation mode we save every day."

AquaTouch✚

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

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

dinotec bus system

Economy operation mode

When the defined hygiene parameters (to DIN 19643) are maintained over a specific period of time, the system signals that the circulation rate can be reduced, if required, and controls the water quality via an adapted set of setpoints. 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 accurately 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.
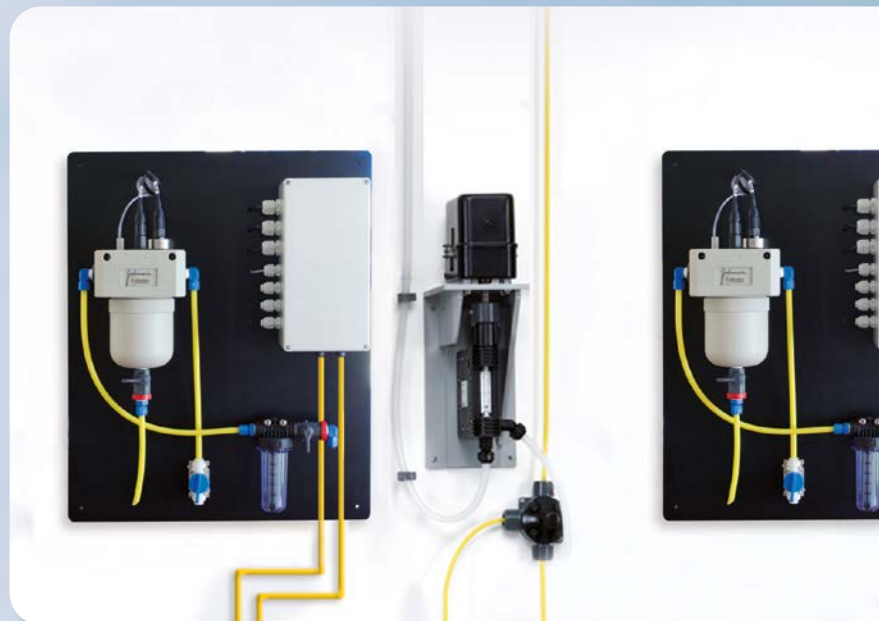
Safe and precise: dinotec chlorine probes can be serviced in about 2 minutes and are ready for operation immediately afterwards.
The selective measurement delivers precise results, unaffected by other media.

Simply enjoy the best water!

Dosing technology

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

Robust: dinodos START peristaltic dosing 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. Even in case of outgasing media, such as chlorine and the like, dinotec systems ensure a precise, optimal dosing and a continuous operation.

Accurately working dosing 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 dosing pumps dinodos DDE, specially suited for high pressures (up to 10 bar).

AquaTouch✚

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

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

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

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

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

Diaphragm dosing pumps with different performance levels.

Precise dosing of chlorine

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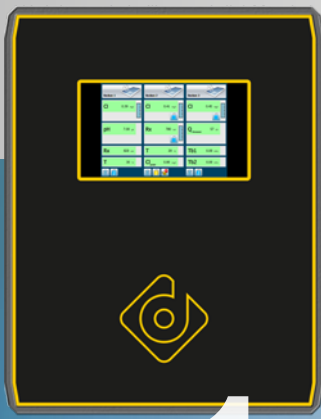
System unit features (in wall-mounted case) for disinfection and dosing equipment:

Central process manager

Control of up to 3 pools

Operation via 7" colour touch display

Logical menu structures for an intuitive operation

Password protection to prevent unauthorized 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 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 shock chlorination

ECO mode time-controlled or to DIN 19643 (version 2012) with DIN contact, setting of the ECO mode vial time switch

Transfer/display of measured value from chlorine gas detector (0/4 - 20mA). Setting of threshold values, integration in message list, data logger and alarm relays.

Container fill level measurement via dinotec START LEVEL BUS dosing 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 setpoints (or several setpoint sets) on USB flash drive.

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
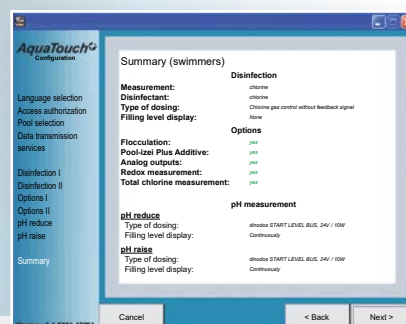- Network printer for printing of hygiene parameters

Optional analog outputs for output of hygiene parameters.

Pool **1**

Pool **2**

Pool **3**

Configuration

The configuration wizard allows configuration of three pools in the AquaTouch+ in just a few minutes.

Select, click, proceed.
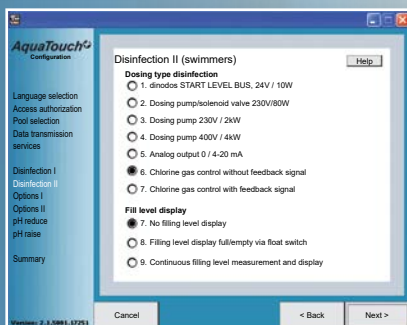
Final check of your selection in the summary.

Technical features

AquaTouch✛

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 mode	P, PI, or PID control optionally.
Controller outputs	proportional via bus
Digital inputs (per pool)	feedback actuator, empty signal 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 7"
Screen resolution	640 x 480 pixel.
Line voltage	85 - 265 V/AC, 48-63Hz.
Power Consumption	50 VA.
BUS voltage	24 V DC.
Ambient conditions	working temperature: 5 to +50° C. storage temperature: -20 to +65° C.
Rel. 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 drive my existing dosing pump via the continuous controller without any problems."

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CF.GROUP
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