

# Water treatment that is cost-effective and reliable

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Customised complete swimming pool solutions

**ProM aqua**<sup>®</sup>  
a ProMinent Company





# Is it **carefree** swimming you want?

Then take a dive into our **world of solutions!**



Swimming is only really fun when you can float away without a care. When you don't have to worry about the water and it is only pure relaxation or the buzz from intense sporting activity that counts. Well now, with us as your partner, it's plain sailing. As one of the leading experts in pool water treatment, ProMaqua offers customised complete solutions from single pools, whirlpools and saunas right through to large-scale wellness and swimming-pool facilities.

Consistent customer orientation and partnership-based cooperation are the keys to optimum solutions where we are concerned. We're with you over the entire life-cycle of your system – from advice and planning by way of assembly and commissioning through to exemplary after-sales service. The basis for the perfect pool experience and unlimited customer satisfaction are our long years of experience and fundamental industry knowledge. Are you a global player? Our global presence guarantees that you will enjoy perfect advice and service plus maximised availability of your facilities wherever they happen to be.

As a complete water treatment service provider, we offer the full range: from conventional chemical treatment through to chemical-free processes which protect both the pool user and the environment. Whether flocculation, filtration, pH-value correction or water disinfection, all systems are matched to each other and can be combined individually. This means you are always sure of optimum safety and can exploit the important efficiency and value added advantages.



# Innovative solutions for healthy swimming

## The focus: optimum water quality

Whether large pool facilities or private pools, disinfection/oxidation with chlorine, ozone or UV systems, ProMaqua can guarantee the right solution for pool water treatment, whatever your requirements. As a one-stop shop, we offer you a complete product range, from disinfection and oxidation systems through to dosing stations, hose/measuring pumps and innovative measurement and control technology, all from a single source, and always optimally matched to each other with the highest economy and reliability.

The innovative CAN bus technology (Controller Area Network) in the DULCOMARIN® II swimming pool controller combines decentralised control units, sensors and pumps with each other to form a single, interactive, communicating unit. As a result of the continuous measurement of the relevant hygiene parameters, you benefit from noticeable money-saving options, such as automatic lowering of the circulation load.

- Flocculation
- pH correction
- Chlorine disinfection
- Oxidation and disinfection using UV systems
- Oxidation and disinfection using ozone
- Water softening

## Swimming pool



## Therapy pool



## Brine pool



## Waterwall

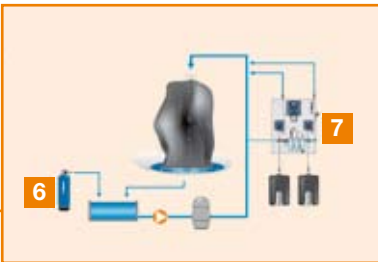
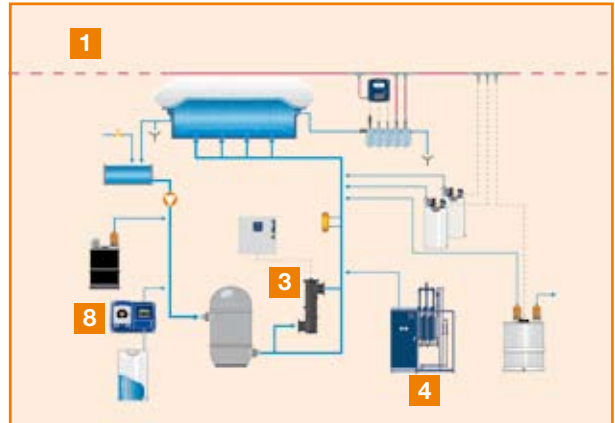
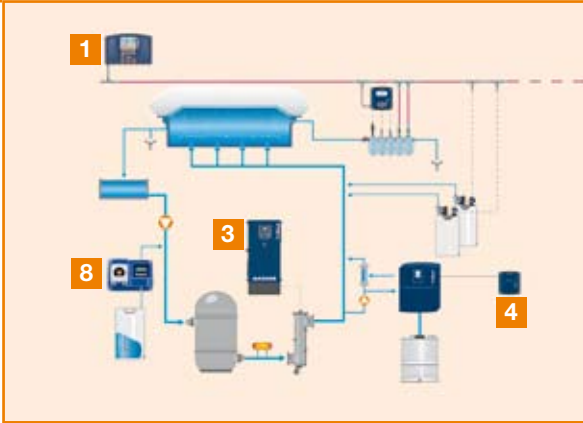


## Plunge pool



## Saunas





- 1** Swimming pool controller DULCOMARIN® II
- 2** Ozone generation system Bono Zon®
- 3** UV disinfection system Dulcodes S
- 4** Electrolysis system CHLORINSITU®
- 5** ProMinent® dosing station
- 6** Water softening system DOUCEMAT®
- 7** Metering system DULCODOS®Pool
- 8** Hose pump DULCO®flex

# The full range for carefree pool-time pleasure

## Control, measurement and sensor technology

### The swimming pool controller with the highest ease of use

#### **DULCOMARIN® II**

Simple optimum control: DULCOMARIN® II compact for single pools and DULCOMARIN® II DULCO®-net for central monitoring of several pools with a single control unit. Thanks to continuous measurement of all hygiene parameters, high safety is always guaranteed. You can enjoy maximum ease of use by controlling the system via a touch-wireless unit (e.g. iPhone or iPad) via the Internet.



### Process-safe measurement, control and sensor technology

#### **DULCOMETER® and DULCOTEST®**

DULCOMETER® controllers and DULCOTEST® sensors ensure maximum process safety combined with a comprehensive range of use: from pH-value, ORP/redox, conductivity and chlorine through to chlorine dioxide, chlorite, ozone, hydrogen peroxide and other parameters.



### Tailor-made swimming pool PCBs

#### **DULCODOS® Pool**

The board-mounted DULCODOS® Pool metering and control systems take charge of pH-value adjustment and disinfection using chlorine or active oxygen. Different versions and a comprehensive add-on range offer the flexible basis for tailor-made metering systems.



## Ozone and UV systems

### Crystal-clear water – ozone systems

#### **OZONFILT® and Bono Zon®**

High operating reliability but minimum operating costs: Irrespective of the initial situation, with the ozone systems OZONFILT® and Bono Zon®, you'll always enjoy optimum water quality. The compact system design guarantees simple installation while low energy consumption comes as standard.



### Chemical-free UV systems

#### **Dulcodes S**

For reliable, safe and chemical-free water disinfection. Thanks to its special lamps, the Dulcodes S UV systems break down those unwanted substances in the swimming pool water, which can cause unpleasant odours or skin irritation.



## Electrolysis systems

### Environmentally friendly electrolysis systems

#### CHLORINSITU® IV compact

The compact and user-friendly electrolysis systems are perfectly suited to small swimming pools or whirlpools. Electrolysis provides an economically viable and simultaneously safe alternative to the use and storage of dangerous chemicals. In the vacuum process, it produces high-purity chlorine gas from simple common salt and water, which can then be used as a disinfectant.



### High performance electrolysis systems

#### CHLORINSITU® IV plus

These systems also produce highly pure chlorine gas in the vacuum process and enable the metering of hypochlorous acid and simultaneous pH-value correction. As an additional bonus, excess chlorine gas can be combined with caustic soda to form sodium hypochlorite which is then temporarily stored ready to cover peaks in the demand.



## Metering pumps

### High-precision metering pumps

#### Beta®

#### delta®

#### Sigma

The solenoid metering pumps Beta®, delta® and the motor-driven metering pump Sigma are a standard choice for any swimming pool, wherever there is a need for exact metering – be it for disinfectant metering or one of many other applications.



### Efficient hose pumps

#### DULCO®flex DF2a

#### DULCO®flex DF4a

The hose pump series DULCO®flex offers optimum solutions for chemical metering for use in private and public pools (DULCO®flex DF2a and DULCO®flex DF4a) as well as with fragrance metering system (DULCO®flex DF3a). The pumps are almost noiseless, simple and safe to use and highly efficient.



# First class control technology for exclusive wellness enjoyment



## “A premium class spa”

The Dolder Grand Hotel & Curhaus in Zürich is amongst the most beautiful Swiss wellness hotels. The water treatment provided by ProMaqua is a major contributor to ensuring that the exclusive experience in this breathtaking spa remains unforgettable.

Pumps and measuring and control instruments from ProMaqua ensure effective disinfection and neutralisation of the bathing water in the gigantic 4,000 m<sup>2</sup> spa.

The water for the swimming pool, whirlpools and aroma pools is efficiently treated in multiple stages using seven separate circuits. The control signals to all the metering pumps are sent via the LAN from the central control unit, the DULCOMARIN® II DULCO®-net, which forms the “brain” of the water treatment system.

In an interview, Carsten Behr, Director of Engineering for the spa area, gives his assessment of the control system.

Mr Behr, what is the purpose of the DULCOMARIN® II DULCO®-net?

**Carsten Behr:** “The control system from ProMaqua is responsible for the precise control of all the metering pumps contained in the system.”

How does that affect the water quality?

**Carsten Behr:** “The safe and controlled neutralisation and disinfection in the Aqua Zone of the Dolder Grand, ensures premium pool water quality around the clock.”

Do you benefit in any other ways?

**Carsten Behr:** “Our running costs are reduced in two ways: firstly due to the minimal use of chemicals and secondly due to automated water care, which is achieved through the integration and connection of intelligent measuring, control and metering technology within the higher-level process control system.”

# Intelligent water treatment to match the highest demands



## “**Enjoyment** whatever the weather”

Since spring 2010, a particular attraction of the holiday park „Klein Vaarwater“ on the Dutch island of Ameland are seven luxurious holiday villas, each equipped with their own indoor-pool at ground level alongside the living room.

Each villa is equipped with its own filter system and heat exchangers. Furthermore, sauna, infrared and steam cabins as well as two sunbeds form part of the “as-standard” facilities. Heat and power originate from a combined heat and power plant designed specially for all the villas together. The sophisticated water-treatment technology is supplied by ProMaqua.

All the swimming pools of the holiday villas are centrally controlled by a DULCOMARIN® II DULCO®-net central control unit. The instrumentation, the disinfection system and the 14 metering systems provided for the houses are located in a separate plant room, which has been hidden away in the

dunes. This is where the raw material salt can be centrally dissolved and the instrumentation centrally maintained. The membrane electrolysis system CHLORINSITU® from ProMaqua produces hypochlorous acid, which is used for disinfection and simultaneously lowers the pH-value.

Gerrit Backers, Managing Director of the company Backers, responsible for installing all the technology, gave his opinion about the solution in an interview.

**Mr Backers, what was the challenge in this particular project?**

**Gerrit Backers:** “A typical problem was the integration of the swimming pool in the living area, this meant that there couldn't be any odours. Simultaneously, it had to be ensured that no chemicals could be transported or stored in the cellars of the houses. Good access for servicing and maintenance had to be guaranteed.”

The latter was achieved by provision of an external plant area?

**Gerrit Backers:** “All of the plant and technology were centrally organised here. Due to the directives which apply in the Netherlands, measurement of the water parameters several times per day is required. For this reason measurement systems were installed per villa and swimming pool. One is used for measurement and control, the other for monitoring. Courtesy of a PC with a connection to the existing network ProMaqua and ourselves can access the system remotely and, if necessary, take action.”

**And your conclusion?**

**Gerrit Backers:** “We are talking about technology which fully meets the high quality standard of this housing project in general. An expansion to include other villas is already planned. Of course with DULCOMARIN® II DULCO®-net up to 16 pools can be integrated!”

## Fragrance metering with DULCO®flex DF3a



### “Fragrant heat is a pleasant sensation”

Whether steam bath or Finnish sauna, once you enter a heated cabin you immediately smell whatever is in the air. Which is why it is highly beneficial, if the operator can guarantee a pleasant fragrance and a refreshing skin invigorator, just what you get thanks to fragrance metering with DULCO®flex DF3a.

Steady and safe fragrance metering are simply child's play with the hose pump DULCO®flex DF3a whether it is a new installation or an upgrade. Equipped with similar functions to a modern PLC, the device is even more compact and can be operated by all.

Not only is the temperature-triggered automatic start function attractive to the sauna user, but also the possibility of metering various fragrances. Jürgen Weinert, Industry Segment Manager Pool & Wellness at ProMaqua, explains the system.

Mr Weinert, what is so special about the DULCO®flex DF3a?

**Jürgen Weinert:** “Once the operating temperature is reached, the pump starts to release a fragrance. It meters the concentrate and, in a dry sauna, also controls the dilution water. If there is nobody in the sauna for a long time or if the door has not been opened, then the pump switches to miser mode. Also, two further fragrances can be released in a time controlled manner.”

What else does the pump offer?

**Jürgen Weinert:** “For example, the mixing ratios can be set individually with the dilution water, dependent on the required fragrance effect. To prevent metering without dilution water, a flow control can be used to check the dilution. By no means least, there is no need for any complex integration in the existing control, the fragrance metering is easily integrated.”

# Service



## Global service locally

We already offer our service to you even if you are not yet our customer.

Our pre-sales services ensure that you get the optimum solution for your individual needs:

- Advice in choosing the products
- Application and process optimisation
- Project planning

However, our commitment does not end with delivery. We offer you a comprehensive after-sales service, which lasts for the entire service life of your equipment. That maximises your productivity and minimises your operating costs:

- Assembly/installation
- Commissioning
- Maintenance
- Spare parts service
- Repair
- Troubleshooting

Thanks to our worldwide presence in over 100 countries, our service is available wherever you need it.

## Worldwide contact

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### Experts in Chem-Feed and Water Treatment

ProMaqua is at home in more than 100 countries of the world. This guarantees worldwide availability of the products and short distances to the customer. We offer you the same high quality

standard in products and services worldwide. For you at your location: experience and know-how in water treatment and chemical fluid handling are available worldwide.

#### ProMaqua GmbH

Maaßstraße 32/1  
69123 Heidelberg  
Germany

Telefon: +49 6221 6489-0  
Telefax: +49 6221 6489-400

info@promaqua.com  
www.promaqua.com