


Product overview 2024

Dosing technology, measurement, control and sensor technology, water treatment and water disinfection as well as digital solutions



Focus on
YOU

Right for your application: Innovations made by ProMinent

Top products developed and manufactured in house

We develop and manufacture the high-quality ProMinent products in house. The high product quality stems from decades of engineering competence, our solid application knowledge and a continual willingness to innovate. We therefore invest continuously in research and development. ProMinent also has a high degree of vertical integration at its twelve production sites worldwide, including Heidelberg, guaranteeing quality and ensuring our independence from fluctuations in supplier markets.

Kind on the environment and your wallet

ProMinent offers environmentally-sound and economical solutions for your water treatment. Our technology allows fewer chemicals to be used in numerous processes. This cuts operating costs and protects the environment. In more than 100 countries, around 2800 employees in our own sales, production and service companies work hard to deliver fast and reliable service for every product, day in, day out. Because our position as a global market leader means a continuous commitment to excellent products and services and an obligation to think and act responsibly.

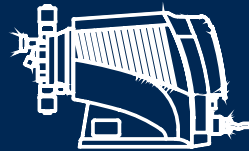
The right product for your application

The modular ProMinent range enables our customers in a wide range of industries to achieve high levels of safety and efficiency in their production processes, at all times and in any location. For us, customer proximity means working with you to achieve the right solution for your individual needs. Personal, practical advice and smooth project handling are as much a part of our offering as our worldwide customer service.

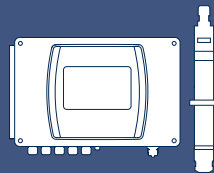




Digital solutions	4
DULCONNEX – IIoT solution for digital fluid management	4
DULCONNEX Platform	6
DULCONNEX Gateway	6
DULCONNEX API	6
DULCONNEX Blue	6
DULCONNEX Inventory Management	6



Metering technology	8
Low-pressure metering pumps	10
Peristaltic Metering Pumps	12
Motor-Driven Metering Pumps	13
Process metering pumps	16
Tanks and chemical transfer pumps	20
Peristaltic Pumps	23
Metering Systems	25



Measuring, Control and Sensor Technology	28
Sensor technology	30
Measuring and Control Technology	35
Panel-mounted measuring and control systems	40



Water treatment and disinfection	42
UV Systems	44
Ozone Systems	47
Chlorine Dioxide Systems	49
Electrolysis Systems	52
Metering Systems	55
Membrane Filtration Plants	59



Customer service	62
Customer service	62



Digital solutions

Location-independent system monitoring in real time

With DULCONNEX, you always have access to all the key data and measured values for your pump installations. Monitor the status of your system in real time and benefit from continuous documentation. Check your device data safely and reliably when you're out and about. Simply use the terminal device of your choice: smartphone, tablet or PC. Configurable alarms and notifications inform you of relevant events 24/7.

Be in a position to act promptly at all times with DULCONNEX. No matter whether you work with industrial and process water, cooling water, potable water or swimming pool water – DULCONNEX supports you in ensuring the reliable treatment of your fluids.

Products supported as standard

Pumps

- Solenoid-driven metering pump gamma/ X
- Solenoid-driven metering pump gamma/ XL
- Motor-driven metering pump sigma/ X
- Motor-driven metering pump sigma Hygienic
- Peristaltic metering pump DULCOFLEX DFx
- Peristaltic metering pump DULCOFLEX DFy
- Peristaltic pump DULCOFLEX DF4a

Controller

- DULCOMETER diaLog DACb
- AEGIS II
- SlimFLEX 5a

Radar sensor

- DULCOLEVEL

Water treatment and disinfection systems

- UV systems DULCODES LP | LP certified | LP-PE (plastic) | LP F&B
- UV system DULCODES MP
- Chlorine dioxide systems Bello Zon CDLb | CDLb H₂SO₄
- Chlorine dioxide system Bello Zon CDVd
- Chlorine dioxide system Bello Zon CDKd
- Electrolysis system CHLORINSITU IIa 60–300 g/h

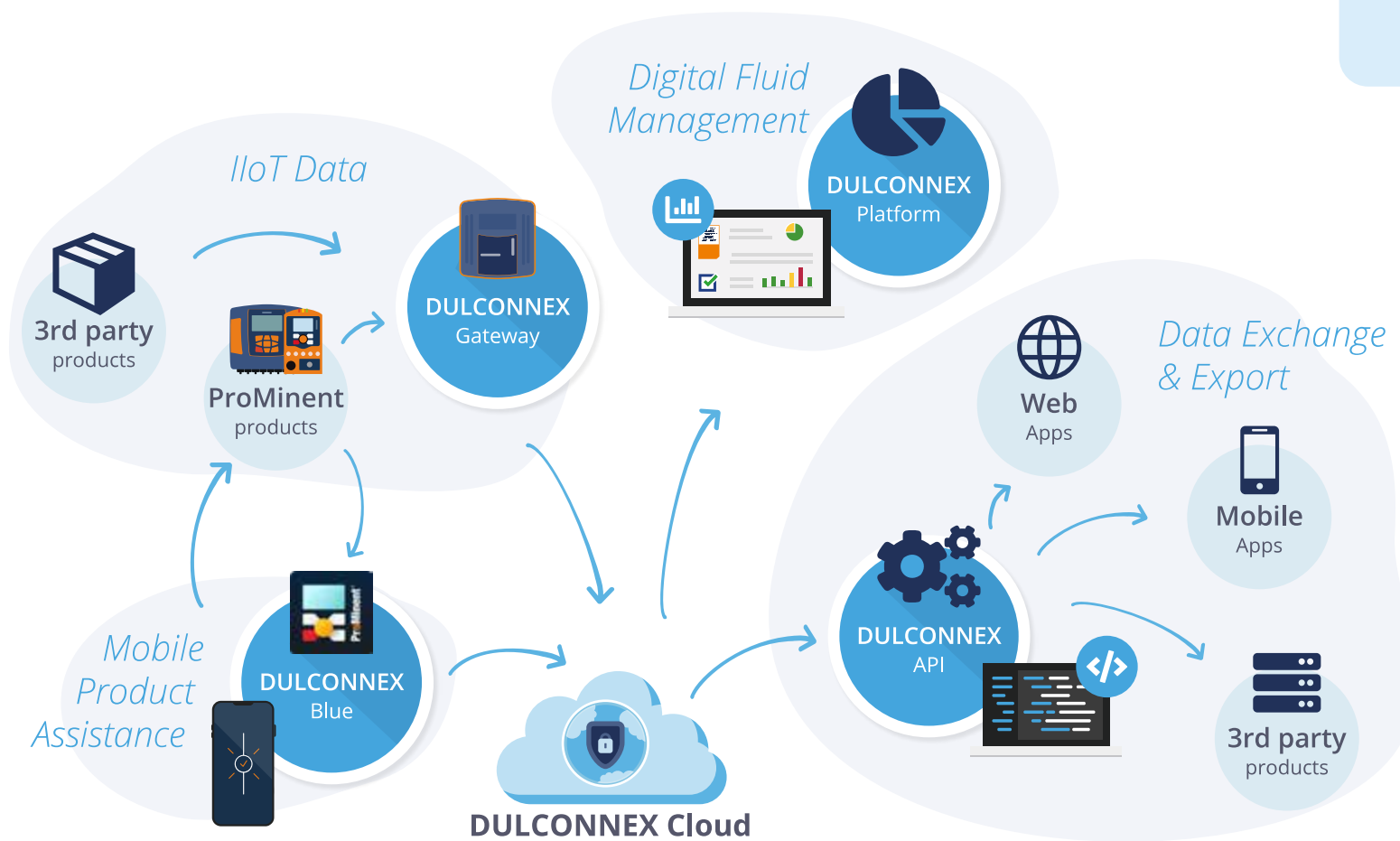
Industrial standard signals via dedicated I/O modules

- Digital inputs (relays, with counters too)
- Analogue inputs (4...20 mA)

The DULCONNEX platform can be accessed by going to

<https://www.dulconnex.com/welcome.html>.

Don't hesitate to contact us for free trial access.



DULCONNEX – IIoT solution for digital fluid management

ProMinent's DULCONNEX is a cloud-based IIoT solution for digitally networking your system components. DULCONNEX is based on robust, networked products that can be individually adapted to operating conditions. As all the components of a system are linked, metering pumps, disinfection systems, controllers and sensors can interact in an optimised manner – increasing process reliability and system efficiency.



DULCONNEX Platform

DULCONNEX Platform is a web-based IIoT platform for digital fluid management. The web application offers simple and location-independent access to all relevant system and process data and thus increases system availability. By continuously monitoring important parameters, the process quality can be optimized and the safety of employees increased. Comprehensive logging and automated generation of reports facilitate the fulfilment of documentation obligations.



DULCONNEX Gateway

The DULCONNEX Gateway safely and reliably transfers the data of all products supported as standard to the DULCONNEX Cloud



DULCONNEX API

With DULCONNEX API, you can access your data on request from the DULCONNEX Cloud. Use this for integration into existing process control systems, SCADA, mobile or online apps as well as MES or share data with other digital solutions.



DULCONNEX Blue

The next generation of mobile product assistance from ProMinent – DULCONNEX Blue. The smart app enables intelligent pumps to be conveniently controlled by Bluetooth.

- Mobile app for Android and iOS



DULCONNEX Inventory Management

The DULCONNEX Inventory Management add-on is an extension to the DULCONNEX Platform. It can be used to monitor tank levels and inventory levels of chemicals at various sites regardless of your location. Tank level monitoring is based on the data of the DULCOLEVEL radar level sensor.



The all-rounders: metering pumps and metering systems

Around 1.5 million ProMinent pumps are in use worldwide, delivering reliable, accurate performance under tough conditions. Our metering technology allows fewer chemicals to be used in numerous processes. For our customers, this means reduced costs, economical metering and environmental sustainability.

Our proven design principles guarantee a high standard of quality and precision. Sophisticated monitoring functions ensure reliability in operation. And minimal chemical consumption with optimum disinfection. Microprocessor technology allows the pumps to be controlled with accuracy. Interfaces integrate the pumps into a fully automated process.

Alongside individual components for metering liquids, we also supply complete metering systems. If requested, the entire system is supplied wired for use. Alternatively, the system can be installed and taken into operation on site by ProMinent technicians.

How do metering pumps work?

Most metering pumps are oscillating displacement pumps (diaphragm and plunger pumps) or peristaltic pumps. With oscillating displacement pumps, an exactly defined volume of liquid is drawn into the displacement body on the reciprocal stroke and forced into the dosing line on the compression stroke.

The pump settings can be changed to achieve consistently accurate metering. With a peristaltic pump, an exactly defined volume is pumped by clamping and squeezing a hose. Liquid is drawn in again by raising the hose into a neutral position.





Selection guide for low-pressure metering pumps

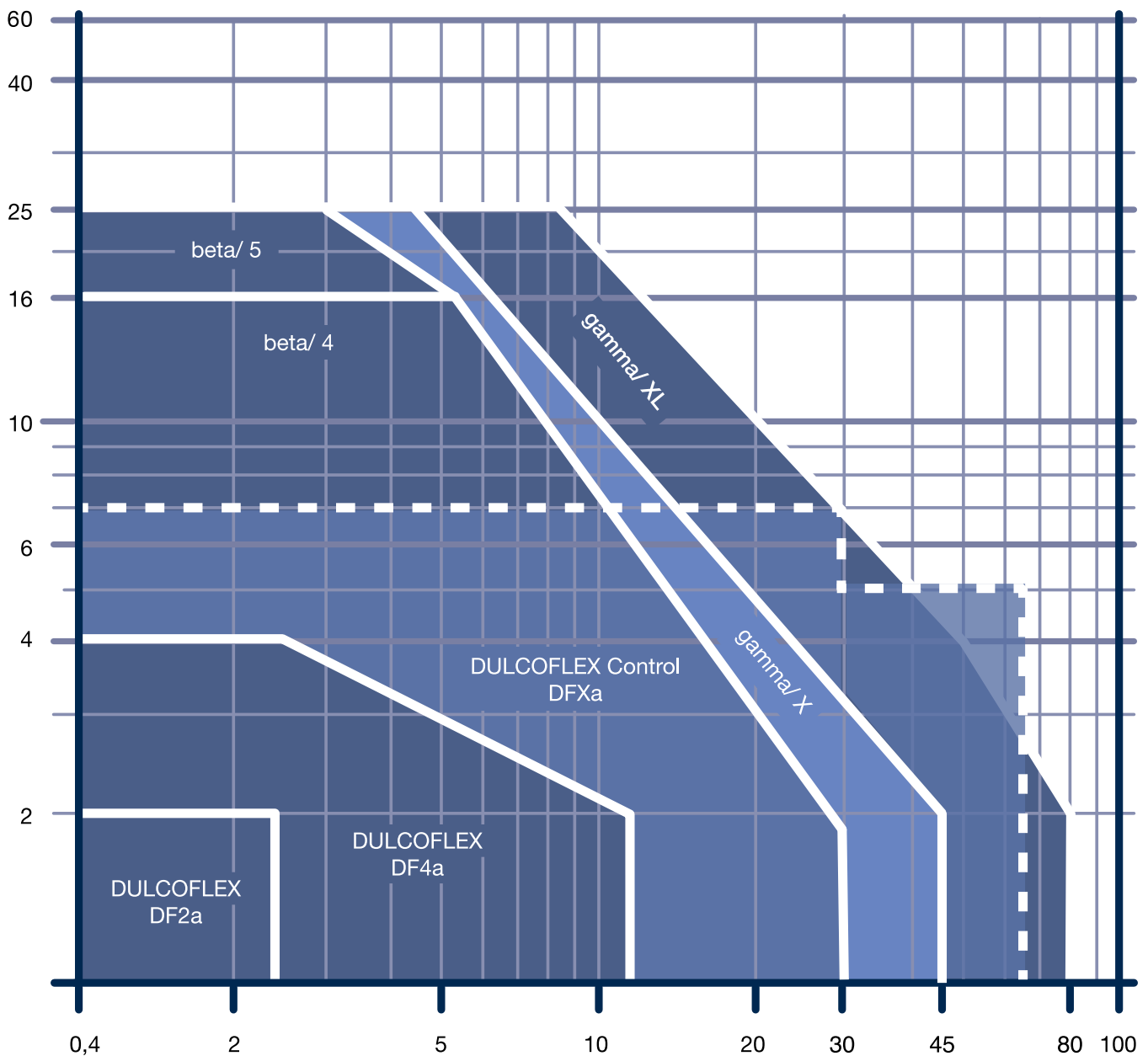
Find the right pump type in four steps

- Specify pump capacity in litres per hour [l/h]
- Specify back pressure in bar
- Find the intersection of these two values and select the pump type that lies nearest to it

Pump Guide

The choice of pumps is huge: 80 industries, 100,000 products and infinite applications. To make it easy to find your ideal metering pump, ProMinent designed the Pump Guide. In just a few clicks you will find a selection of suitable models.

www.pump-guide.com



Low-pressure metering pumps

Diaphragm metering pumps are available in capacities ranging from 0.74 to 80 l/h at a back pressure of 25 to 2 bar. To be able to meter almost any liquid chemicals, ProMinent uses a very extensive range of materials.



Solenoid-Driven Metering Pump beta

All-purpose solenoid-driven metering pump for metering liquid media in water treatment and chemical processes: Solenoid-driven metering pump beta. Cost-effective, overload-proof and adaptable to existing signal transducers.

- Capacity range 0.74 – 32 l/h, 25 – 2 bar



Solenoid-Driven Metering Pump gamma/ X

The solenoid-driven diaphragm metering pump gamma incorporates a wealth of eX cellent ingenuity! With integrated pressure measurement, it ensures the smooth running of your metering process. The gamma/ X is ideal for all metering work involving liquid media.

- Feed rate of product range 1 ml/h – 45 l/h; 25 – 2 bar



Solenoid-Driven Metering Pump gamma/ XL

The gamma/ XL is a smart, connectible solenoid-driven metering pump that is setting new standards in terms of productivity, reliability and cost-effectiveness.

- Feed rate of product range 4 ml/h – 80 l/h; 25 – 2 bar

Peristaltic metering pumps

Peristaltic metering pumps DULCOFLEX Control are used in a capacity range of between 10 ml/h and 410 l/h. They pump against a pressure of up to 8 bar. The incredible durability and broad chemical compatibility of the high-performance hoses used by ProMinent are particularly impressive.



Peristaltic metering pump DULCOFLEX DFXa

DULCOFLEX DFXa meters outgassing, viscous, abrasive or shear-sensitive media and is setting new standards in metering. Linear and reproducible metering ($\pm 1\%$) is guaranteed with this peristaltic pump under all process conditions. Hose replacement is a very simple process.

- Feed rate of 10 ml/h to 65 l/h at up to 7 bar back pressure



Peristaltic metering pump DULCOFLEX DFYa

The valveless peristaltic pump DULCOFLEX DFYa guarantees precise, linear and reproducible metering in all process conditions. It meters gaseous, viscous, shear-sensitive media, possibly containing particles, with ease – ProMinent is therefore setting new standards in metering with peristaltic pumps.

- Feed rate of 5.1 l/h to 410 l/h at up to 8 bar back pressure

Motor-driven metering pumps for all capacity ranges

Motor-driven metering pumps need to be robust, reliable and able to run on their own without supervision. Metering pumps with mechanically actuated diaphragms can be used almost universally in low pressure ranges. And what about servicing? Minimal. Precision? Uncompromising. Value for money? The best you can get.



Motor-Driven Metering Pump Sigma/ 1 (Basic type)

The Sigma/ 1 Basic is an extremely robust motor-driven metering pump with patented multi-layer safety diaphragm for excellent process reliability. It offers a wide range of power end designs, such as three-phase or 1-phase AC motors, also for use in areas at risk from explosion.

- Capacity range 17 – 144 l/h, 12 – 4 bar



Motor-Driven Metering Pump Sigma/ 2 (Basic Type)

Robust motor-driven metering pumps like the Sigma/ 2 Basic guarantee excellent process reliability with their patented multi-layer safety diaphragm. The diaphragm metering pump offers a number of power end versions, also suitable for use in areas at risk from explosion.

- Capacity range 50 – 420 l/h, 16 – 4 bar



Motor-Driven Metering Pump Sigma/ 3 (Basic Type)

The patented multi-layer safety diaphragm for excellent process reliability is just one feature of the extremely robust motor-driven metering pump Sigma/3 Basic. It also offers a wide range of power end versions, such as three-phase or 1-phase AC motors, also for use in ATEX areas.

- Capacity range 146 – 1,030 l/h, 12 – 4 bar

Motor-driven metering pumps sigma/ X

The new sigma X family – reliable, smart and with scope for networking.



Motor-Driven Metering Pump Sigma X Control Type – Sigma/ 1 - S1Cb

The Sigma control type is a smart motor-driven metering pump that is setting new standards in terms of productivity, reliability and safety.

- Capacity range S1Cb: 21 – 117 l/h, 12 – 4 bar



Motor-Driven Metering Pump Sigma X Control Type – Sigma/ 2 - S2Cb

The Sigma control type is a smart motor-driven metering pump that is setting new standards in terms of productivity, reliability and safety.

- Capacity range S2Cb: 61 – 353 l/h, 16 – 4 bar



Motor-Driven Metering Pump Sigma X Control Type – Sigma/ 3 - S3Cb

The Sigma control type is a smart motor-driven metering pump that is setting new standards in terms of productivity, reliability and safety.

- Capacity range S3Cb: 182 – 1,040 l/h, 12 – 4 bar



Motor-driven metering pump sigma Hygienic

The hygienic design version of the sigma diaphragm metering pumps is optimised in terms of dead space, features as few gaps as possible and has smooth, wetted surfaces for flexible and easy use in hygienically sensitive applications.

- Capacity range of the Sigma: 25 – 1,000 l/h, 10 – 4 bar

Accessories for metering technology

In addition to a correctly selected metering pump, individually combined accessories, installed in accordance with all pertinent regulations, are needed for the perfect operation of metering systems.



Radar liquid level sensor DULCOLEVEL

With the new radar level sensor DULCOLEVEL, your chemical inventory management is child's play.



Flow meter DulcoFlow

The flow meter DULCOFLOW reliably measures pulsating flows in the range above 0.03 ml/stroke based on the ultrasound measuring principle. The flow meter achieves maximum chemical resistance as all wetted parts are made of PVDF and PTFE.

- For the measurement of pulsating volumetric flows within the range of 0.03 ml/stroke to 10 ml/stroke

Process metering pumps for all capacity ranges

There is no room for compromise in high-end applications in the petrochemical, oil and gas industries. Risks associated with the metering of toxic, corrosive and flammable liquids must be fully eliminated. Reliable metering pumps need to be able to withstand very high pressure levels and extreme temperatures. What could be a more obvious solution for very challenging applications than ProMinent cutting-edge technology?



Diaphragm metering pump EXTRONIC

The diaphragm metering pump EXTRONIC is perfectly suited to the sensitive application of liquid media in facilities at risk of gas explosions as it is approved in compliance with the EU EX Regulation 2014/34/EU (ATEX).

- Capacity range of single head pump: 1 – 60 l/h; 25 – 1 bar



Diaphragm Metering Pump Makro TZ

The modular construction of the diaphragm metering pump MAKRO TZMb with adjustable eccentric drive mechanism and mechanically deflected multi-layer safety diaphragm enables it to be outstandingly adapted to the performance requirements of the respective application.

- Capacity range of single head pump: 260 – 2,100 l/h, 12 – 4 bar



Hydraulic Diaphragm Metering Pump ORLITA Evolution E1Sa/E2Sa

As an extremely robust hydraulic diaphragm metering pump, the ORLITA Evolution E1Sa/E2Sa meets the most exacting safety requirements. It is characterised by its PTFE multi-layer diaphragm with integral diaphragm rupture warning / signalling system and unique diaphragm position control.

- Capacity range of single-head pump: 0.9 – 134 l/h, 260 – 30 bar



Hydraulic diaphragm metering pump ORLITA Evolution Mikro

The ORLITA Evolution mikro is an innovative micro-metering pump for high pressures. The hydraulic diaphragm metering pump is the first of its kind with an electronically regulated linear direct power end. The power end has few mechanical functional elements and thus operates with virtually minimal maintenance.

- Capacity range 0.01 – 18 l/h, 260 – 10 bar



Hydraulic Diaphragm Metering Pump HYDRO API

The HYDRO API 675 is an extremely robust hydraulic diaphragm metering pump, which meets the most exacting safety requirements and is designed in accordance with API 675. This is ensured by the PTFE multi-layer diaphragm with diaphragm monitoring, the full-motion drive and automatic bleeding, for example. Its modular construction makes it extremely versatile.

- Capacity range of single-head pump: 7 – 1,506 l/h, 100 – 7 bar



Hydraulic Diaphragm Metering Pump HYDRO Classic

As an extremely robust hydraulic diaphragm metering pump, the HYDRO range meets the most exacting safety requirements. Its modular construction, with either one or two dosing heads, 4 gear ratios, 2 dosing head sizes and 3 dosing head materials, offers a very high degree of flexibility in terms of areas of application.

- Capacity range of single-head pump: 3 – 1450 l/h, 100 – 7 bar



Hydraulic Diaphragm Metering Pump Makro/ 5

The robust hydraulic diaphragm metering pump Makro/ 5 guarantees outstanding process reliability. Its modular construction offers extremely good flexibility and a large range of drive versions are available.

- Capacity range of single pump: 450 – 6,108 l/h, 25 – 6 bar



Hydraulic Diaphragm Metering Pump ORLITA Evolution

The ORLITA Evolution meets the most exacting safety requirements as an extremely robust hydraulic diaphragm metering pump. It is characterised by its PTFE multi-layer diaphragm with integral diaphragm rupture warning/signalling and unique diaphragm position control.

- Capacity range of single-head pump: 3 – 7400 l/h, 400 – 10 bar



Hydraulic Diaphragm Metering Pump ORLITA MF

The hydraulic diaphragm metering pump ORLITA MF offers reliable dosing rates even under high pressure and has a modular construction, making it highly versatile. Thanks to its modular design, this pump is tailored to meet your requirements even at very high pump capacities.

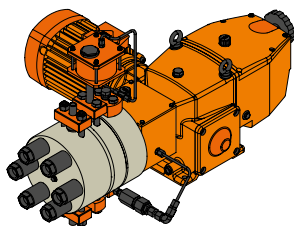
- Capacity range of single-head pump: 0 – 14,000 l/h; 450 – 30 bar



Hydraulic Diaphragm Metering Pumps with Metal Diaphragm ORLITA MH

The diaphragm metering pump ORLITA MH has a robust metal diaphragm. This permits precise pump capacities even at very high pressure. The ORLITA MH has a modular construction and is therefore very versatile. For example, a range of drive versions is available and drives and dosing heads can be freely combined.

- Capacity range of single pump: up to 320 l/h, up to 780 bar



Hydraulic Metal Diaphragm Metering Pump High-pressure ORLITA MHHP

The metal diaphragm metering pumps ORLITA MHHP are special pumps, which provide precise pump capacities even at maximum pressures of up to 3000 bar.

- Capacity range of single pump: 3 – 11 l/h, 3,000 bar



Plunger metering pump sigma SBKa

The plunger metering pump Sigma SBKa is an extremely robust plunger metering pump with high-performance plunger and the option to adjust the pump capacity in 0.2% increments. It offers a wide range of power end versions, such as three-phase or 1-phase AC motors, even for Exe and Exde areas with ATEX certification.

- Capacity range 2 – 76 l/h, 320 – 12 bar



Plunger metering pump ORLITA PS

The high-performance plunger metering pump ORLITA PS enables precise pump capacities even at maximum pressure and temperatures of up to +400 °C. The ORLITA PS pump has a modular construction and is therefore very flexible.

- Capacity range of single-head pump: 0 – 2800 l/h, 600 – 11 bar



ORLITA DR metering pump

The plunger metering pump ORLITA DR does not need valves and can therefore be operated within a broad stroke rate range. It is therefore suitable for use with high-viscosity and extremely high-viscosity media of up to 10⁶ mPas within a wide temperature range of -40 °C to 400 °C.

- Capacity range of single-head pump: 0 – 2000 l/h, 400 – 5 bar

Chemical transfer pumps

Chemical transfer pumps are used to pump liquids from tank A to tank B. Different media have very different chemical properties so the feed pumps need different functional principles. Liquid and pump must be fully compatible. The same ProMinent standards of maximum diligence and quality are applied to every single task.



Eccentric Screw Pump SPECTRA

The eccentric screw pump SPECTRA meters liquid polyelectrolytes in concentrated and dilute form. It can be used, for example, in wastewater treatment or sludge dewatering.

- Capacity range 2.4 – 12,000 l/h, 12 – 3 bar



Centrifugal Pump von Taine

The solenoid-coupled centrifugal pump von Taine for the pumping of liquid media works safely and reliably: liquid media are pumped leak-free.

- Capacity range up to 22,500 l/h, discharge lift up to 23.5 m WC



Air-Operated Diaphragm Pump DUODOS

Air-operated Diaphragm Pump DUODOS for pumping liquid media.

- Capacity range up to 12,000 l/h, discharge lift up to 70 m WC



Barrel pump DULCOTRANS

The field of application of DULCOTRANS depends on the chemical resistance of the materials used.

- Pump capacity according to size from 2,800 – 6,600 l/h



Rotary Lobe Pump ROTADOS

The compact rotary lobe pump pumps viscose and even abrasive media at up to 100 m³/h and also with reversible pumping direction thanks to its valveless construction. Housing, plunger and seals are available in different materials to match the medium.

- Capacity range 25–100 m³/h, 10–4 bar

Tanks and collection pans

Standard tanks for chemical storage and transfer are a fixed element of the ProMinent range. However, if you have specific requirements ProMinent can also supply tanks customised to a wide range of specifications.



Dosing Tanks

PE storage tanks produced in a rotation process. ProMinent metering pumps, suction lances and stirrers can all be added. The stackable PE collecting pans are available in matching sizes.

- Capacity 35 – 1,000 l



Storage Tanks

Our plastic storage tanks guarantee compliance with statutory specifications taking into account country-specific approvals, which regulate the production and operation of systems for storage and metering of environmentally hazardous substances.

- Useful capacity 500 l–50,000 l, indoor and outdoor installation

Peristaltic pumps

Peristaltic pumps DULCOFLEX are amongst the most adaptable pumps available from ProMinent. They are suitable for a very wide pump capacity range. The smaller pumps of types DF2 to DF4 have been specially designed for metering tasks in swimming pools, hot tubs or spa and wellness zones. The large peristaltic pumps DFBa, DFCa and DFDa are ideal for specific tasks using maximum pump capacities and pressures in the laboratory and in industry. All models are based on a simple operating principle and are extremely safe and easy to use.



Peristaltic Pump DULCOFLEX DF2a

The peristaltic pump DULCOFLEX DF2a meters chemicals functionally, cost-effectively and quietly – ideal for use in swimming pools, hot tubs, and in spa and wellness facilities.

- Capacity range 0.4 – 2.4 l/h at max. 1.5 bar back pressure



Peristaltic Pump DULCOFLEX DF4a

The peristaltic pump DULCOFLEX DF4a for metering flocculants and activated charcoal treats water precisely and accurately. It is ideal for use in swimming pools, hot tubs or spa and wellness facilities. An operating pressure up to 4 bar is possible.

- Capacity range 1.5 – 12 l/h, 4 – 2 bar



Peristaltic Pump DULCOFLEX DFBa

The peristaltic pump DULCOFLEX DFBa is designed for low and medium pump capacities of up to 800 l/h. Depending on application, the pump can be set for a back pressure of up to 8 bar.

- Pump capacity of up to 800 l/h; back pressures of up to 8 bar.



Peristaltic Pump DULCOFLEX DFCa

High pump capacities are not a problem with the peristaltic pump DULCOFLEX DFCa. It is equipped with extra rollers and fabric-reinforced hoses for industrial use.

- Pump capacity up to 25,000 l/h. Back pressure up to 8 bar.



Peristaltic Pump DULCOFLEX DFDa

The peristaltic pump DFDa is designed for maximum pump capacities and high pressures and is winning customers over with its noiselessness and long service life. It is fitted with shoes and fabric-reinforced hoses – perfect for industrial use.

- Pump capacity up to 35,000 l/h. Back pressure up to 15 bar.

Metering systems DULCODOS

The standard metering systems DULCODOS are the result of years of application-based development work at ProMinent. After all, you don't have to reinvent the wheel every time. With ProMinent you can reduce your costs by choosing carefully designed complete solutions.



Metering System DULCODOS eco (DSBa)

For storing and metering liquid chemicals use a selection guide (identity code) to quickly and flexibly adapt your metering system to your metering task.



Metering system DULCODOS universal

The metering system DULCODOS universal combines carefully selected standard components with the solenoid-driven metering pump you have selected. This is your convenient method for the reliable metering of liquid chemicals – and is available cost-effectively and extremely quickly thanks to the preconfigured modules.

- Pump volume depending on the selected pump up to 75 l/h, back pressure 10 – 2 bar



Metering system DULCODOS universal mini PE

The metering system DULCODOS universal mini PE combines reliable standard components, tailored precisely to your needs, in the most compact space.

- Up to 75 l/h (10 – 2 bar) pump volume depending on the pump selected



Metering System DULCODOS panel (DSWb)

DULCODOS panel is a complete metering system for reliable chemical metering. It is now even more space-saving and quickly available – our new standards ensure this. You can select perfectly coordinated components depending on material resistance, pump capacity and function.

- Pump capacity depending on the selected pump up to 1,000 l/h, back pressure 10 – 2 bar



Metering system DULCODOS compact (DSKb)

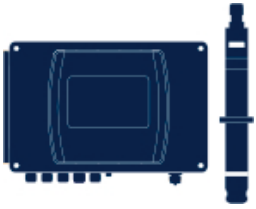
The ready-wired metering system DULCODOS compact is used for the ultra-precise metering of chemicals with a huge range of different motor-driven metering pumps. Thanks to its modular construction, the plug-and-play solution is ideal for replicable installations.

- Metering rate: 50 – 1040 l/h



Metering System DULCODOS Ammonia

Metering system DULCODOS Ammonia for the low-odour and safe handling of ammonia solution. For a stable pH value and reduced corrosion in the vapour system.



Measuring, Control and Sensor Technology

To keep water consumption as low as possible, industry and the public sector have to treat and reuse water thereby preserving resources. Water treatment is incredibly simple and user-friendly when using our intelligent measuring and control technology.

Achieving the desired water quality requires certain values, such as pH, conductivity and chlorine, to be monitored continuously. The sensors developed and manufactured in house at ProMinent measure with precision and reliability.

Manufacturing many components in house ensures good quality

Every year, we manufacture more than 150,000 high-quality sensors at ProMinent sites. Our high degree of vertical integration distinguishes us. It extends from in-house production of components and electronic parts to final assembly and quality checks on the finished products. Glass and plastic parts, which are used to produce electrochemical sensors and controllers, are manufactured at three European production sites with in-house glass blowing.

The complete solution for your processes

ProMinent is therefore a provider of complete solutions for optimum metering of liquids: from reliable pump capacity and the correct measurement of all relevant parameters to precise process control.





Overview of sensors

Monitoring a limit value or building a closed control circuit is easy with our sensors – in an enormous range of measuring applications. The product family DULCOTEST is application-based and ensures precise measuring of a wide range of values. These measured values are delivered in real time and can be flexibly connected to the various process interfaces via bypass, immersion or in-built fittings.



Potentiometric sensors DULCOTEST

From simple applications in water treatment through to industrial process applications under critical conditions, DULCOTEST pH and ORP sensors fulfil all measurement tasks.



Amperometric sensors DULCOTEST with analogue and digital output

The amperometric sensors in the DULCOTEST range deliver selective and precise measured values in real time for a very wide range of disinfectants for all important disinfectants and oxidising agents used in water treatment. The digital CAN bus sensors enable data storage and bidirectional communication with the measuring and control instrument.



Sensors for electrolytic conductivity

Conductivity sensors for optimum process integration: DULCOTEST sensors meet a wide range of measuring requirements and allow the best solution to any given measuring task to be achieved.

- Graduated measuring ranges 0.01 $\mu\text{S}/\text{cm}$ – 2000 mS/cm



Optical sensors

Very low-maintenance and reliable sensor for dissolved oxygen enables the processes involved in treating potable water and waste water and fish farming to be optimised. High-precision sensors for measuring turbidity based on various international standards ensure outstanding water quality the world over.



Sensor bypass fitting Modular BAMa

The modular bypass armature BAMa accommodates ProMinent sensors for water treatment. The armature is simply installed in a bypass of the main process line. It is available in various variants, each perfectly designed for special water treatment applications – from drinking water, water for pool & wellness to industrial water.

- Up to 9 functional modules can be freely configured in a single fitting.

Sensor technology

Monitoring a limit value or building a closed control circuit is standard practice for our sensors – in an enormous range of measuring applications. The product family DULCOTEST is application-based and ensures precise measuring of a wide range of values. In real time

Selection guide for DULCOTEST pH sensors

Sensor type	Typical applications	Remarks	Max. temperature and max. pressure	Loading with particles/solid matter in the application
PHES	Potable water, swimming pool water	-	60°C / 3 bar	None to low levels
PHEK	Swimming pool water, aquariums	Plastic sensor shaft for greater safety during handling, e.g. end customers in the private swimming pool sector	60°C / 3 bar	None to low levels
PHEP/PHEPT	Potable water, swimming pool water, process water	PHEPT with integrated temperature sensor	80°C / 6 bar	None to low levels
PHED	Process water, electroplating	Chemically contaminated water, e.g. Cr ⁶⁺ , CN-	-	-
PHEN	Chemically contaminated water, low-conductivity water $\geq 50 \mu\text{S}/\text{cm}$	Reference electrolyte is introduced into the sensor using external bottles and can be topped up	80°C / no overpressure	None to low levels
PHER	Industrial and public waste water, cooling towers	Dirt-repellent PTFE diaphragm	80°C / 6 bar	None to low levels
PHER-DJ	Reverse osmosis (conductivity $\geq 10 \mu\text{S}/\text{cm}$), acid and alkaline gas scrubbers (without fluoride, HF), general applications with chemical contamination that may attack the reference system	Dirt-repellent PTFE diaphragm and a double junction to protect the reference system	80°C / 6 bar	None to low levels
PHEI	Industrial and public waste water, cooling towers	-	80°C / 6 bar	None to low levels
PHEX	Suspensions, sludge, emulsions	Open ring diaphragm	25°C / 16 bar and 100°C / 6 bar	Medium to high levels
PHEF	Media containing fluoride with low pH values, e.g. etching solutions containing fluoride in electroplating	-	50°C / 7 bar	None to low levels
PHEF-DJ	Media containing fluoride with low pH values, e.g. gas scrubbers where gases containing fluoride are scrubbed	Special pH glass with increased resistance to HF	60°C / 6 bar	Low to medium levels
PHEP-H	Process water with high pH values (> pH 12)	Special pH glass with increased resistance to high pH values	80°C / 6 bar	None to low levels

Selection guide for DULCOTEST ORP sensors

Sensor type	Typical applications	Remarks	Max. temperature and max. pressure	Loading with particles/solid matter in the application
RHES Pt	Potable water, swimming pool water	-	60°C / 3 bar	None to low levels
RHES Au	Swimming pool water	ORP sensors with gold electrodes are not susceptible to hydrogen, which is produced through the generation of chlorine by open electrolysis systems. A gold electrode is also well suited to ozone applications.	60°C / 3 bar	-
RHEK Pt	Swimming pool water, aquariums	Plastic sensor shaft for greater safety during handling, e.g. end customers in the private swimming pool sector	60°C / 3 bar	None to low levels
RHEKL Pt	Swimming pool water, aquariums	Two diaphragms mean that horizontal installation is possible	60°C / 3 bar	None to low levels
RHEP Pt	Potable water, swimming pool water, process water	-	80°C / 6 bar	None to low levels
RHEP Au	Potable water, swimming pool water, process water	ORP sensors with gold electrodes are not susceptible to hydrogen, which is produced through the generation of chlorine by open electrolysis systems. A gold electrode is also well suited to ozone applications.	80°C / 6 bar	None to low levels
RHEN Pt	Chemically contaminated water, low-conductivity water $\geq 50 \mu\text{S/cm}$	Reference electrolyte is introduced into the sensor using external bottles and can be topped up	80°C / no overpressure	None to low levels
RHER Pt	Industrial and public waste water, cooling towers	Dirt-repellent PTFE diaphragm	80°C / 6 bar	Low to medium levels
RHER-DJ	Reverse osmosis (conductivity $\geq 10 \mu\text{S/cm}$), general applications with chemical contamination that may attack the reference system	Dirt-repellent PTFE diaphragm and a double junction to protect the reference system	80°C / 6 bar	Low to medium levels
RHEIC	Industrial and public waste water, cooling towers	Long service life thanks to large volume of reference electrolyte, double junction and large PTFE diaphragm, 3/4" NPT screw-in thread	80°C / 6 bar	Low to medium levels
RHEX	Suspensions, sludge, emulsions	Open ring diaphragm	25°C / 16 bar and 100°C / 6 bar	Medium to high levels

Conductivity sensor selection guide

Conductivity > 20 mS/cm and/or film-forming medium and/or chemically aggressive medium

Yes ↓

Inductive conductivity measurement

↓

Compact controller can be used in the application?

Yes ↓

**Do the following conditions exist?
Aggressive chemicals,
with the exception of lyes and/or
temperatures > 80 °C and/or
measured value < 200 $\mu\text{S/cm}$**

Yes ↓

Series ICT 2
Installation in pipes
with stainless
steel flange accessory
For immersion with
accessory: immersion
fitting IMA - ICT 2

↓ No

Type ICT 5
for installation in
pipes
Type ICT 5-IMA
for immersion

↓ No

Type ICT 8
for installation in pipes
with adapter accessory,
for immersion with
immersion fitting accessory

↓ No

Conductive conductivity measurement

↓

Further selection according to summary table:

- Measuring range
- Material (chemical compatibility)
- Temperature
- Hydraulic process connection
- Electrical connection
- Compatibility of measuring and control units

↓

Product ranges LF, LMP, CK, CCT

Selection guide for DULCOTEST® amperometric sensors

Measured variable	Typical applications	Graduated measuring range	Compatible controllers	Sensor type
Free chlorine	Potable water, swimming pools	0.01–100 mg/l	D1C, DAC	CLE 3-mA-xppm, CLE 3.1-mA-xppm
Free chlorine	Process and waste water	10–200 mg/l	D1C, DAC	CLR 1-mA
Free chlorine	Potable water, swimming pools	0.01–10 mg/l	DULCOMARIN	CLE 3-CAN-P-xppm, CLE 3.1-CAN-P-xppm
Free chlorine	Swimming pool, uncontaminated drinking and process water, in situ electrolysis, in the event of film formation together with hydrodynamic cleaning	0.02–10 mg/l	D1C, DAC, AEGIS II, AEGIS X	CLO 3-mA-xppm
Free chlorine	Swimming pool, uncontaminated drinking and process water, in situ electrolysis, in the event of film formation together with hydrodynamic cleaning	0.01–10 mg/l	DULCOMARIN	CLO 1-CAN-P-xppm
Free chlorine	Hot water up to 70 °C (legionella), in situ electrolysis, in the event of film formation together with hydrodynamic cleaning	0.02–2 mg/l	D1C, DAC, AEGIS II, AEGIS X	CLO 4-mA-2ppm
Free chlorine	Potable water, swimming pools	0.01–50 mg/l	DMT	CLE 3-DMT-xppm
Free chlorine	Potable water, swimming pool water (with integrated temperature sensor)	0.05–5 mg/l	COMPACT	CLB 4-µA-xppm
Free chlorine	Potable water, swimming pool water (without integrated temperature sensor)	0.05–5 mg/l	COMPACT	CLB 5-µA-xppm
Free chlorine	Cooling, industrial and waste water, water with higher pH values; seawater (free chlorine exists as bromine)	0.01–10 mg/l	D1C, DAC, AEGIS II, AEGIS X	CBR 1-mA-xppm
Total available chlorine/free chlorine	Swimming pool, uncontaminated drinking and process water, in situ electrolysis, in the event of film formation together with hydrodynamic cleaning	0.02–10 mg/l	D1C, DAC, AEGIS II, AEGIS X	CGE 3-mA-ppm
Total available chlorine/free chlorine	Swimming pool, uncontaminated drinking and process water, in situ electrolysis, in the event of film formation together with hydrodynamic cleaning	0.01–10 mg/l	DULCOMARIN	CGE 3-CAN-P-xppm
Total chlorine	Potable, industrial, process and waste water	0.01–20 mg/l	D1C, DAC, AEGIS II, AEGIS X	CTE 1-mA-xppm
Total chlorine	Potable, industrial, process and waste water	0.01–10 mg/l	DMT	CTE 1-DMT-xppm
Total chlorine	Potable, industrial, process and waste water	0.01–10 mg/l	DULCOMARIN	CTE 1-CAN-P-xppm
Combined chlorine	Swimming pool water	0.02–2 mg/l	DAC	CTE 1-mA-2 ppm + CLE 3.1-mA-2 ppm
Combined chlorine	Swimming pool water	0.01–10 mg/l	DULCOMARIN	CTE 1-CAN-P-xppm + CLE 3.1-CAN-xppm
Total available bromine	Cooling water, waste water, swimming pool water, whirlpool water, bromine with BCDMH	0.01–10 mg/l	D1C, DAC	BCR 1-mA (replaces earlier type BRE 1)
Total available bromine	Cooling water, swimming pool water, whirlpool water with organic or inorganic bromine compounds	0.02–10 mg/l	DULCOMARIN	BRE 3-CAN-10ppm
Free + bound bromine	Cooling, industrial, waste water, water with higher pH values (stable); seawater	0.02–20 mg/l	D1C, DAC, AEGIS II, AEGIS X	CBR 1-mA-xppm
Free + bound bromine	Cooling, industrial, waste water, water with higher pH values (stable); seawater	0.02–20 mg/l	DULCOMARIN	CBR 1-CAN-P-10ppm
Chlorine dioxide	Potable water	0.01–10 mg/l	D1C, DAC	CDE 2-mA-xppm
Chlorine dioxide	Bottle washer systems	0.02–2 mg/l	D1C, DAC	CDP 1-mA-xppm
Chlorine dioxide	Hot water up to 60 °C, cooling water, waste water, irrigation water	0.01–10 mg/l	D1C, DAC, DULCOMARIN	CDP 1-mA-xppm, CDR 1-CAN-xppm
Chlorite	Potable, wash water	0.02–2 mg/l	D1C, DAC, DULCOMARIN	CLT 1-mA-xppm, CLT 1-CAN-xppm
Ozone	Potable water, swimming pool water	0.02–2 mg/l	D1C, DAC	OZE 3-mA-2 ppm
Ozone	Process, service or cooling water	0.01–10 mg/l	D1C, DAC	OZR 1-mA-xppm
Dissolved oxygen	Aeration tanks, clarification plants, fish farming, potable water, surface water	0.1–20 mg/l	D1C, DAC	DO 3-mA-xppm
Peracetic acid	CIP, antiseptic food filling process	1–2000 mg/l	D1C, DAC, AEGIS II, AEGIS X	PAA 1-mA-xppm
Peracetic acid	Waste water, low concentrations	0.02–20 mg/l	D1C, DAC	PAA 2-3E-mA-xppm
Hydrogen peroxide	Process, swimming pool water	20–2000 mg/l	D1C, DAC	PER1-mA-2000 ppm
Hydrogen peroxide	Clear water, fast control	1–2000 mg/l	DAC	PEROX-H2.10
Hydrogen peroxide	Swimming pool water, plant irrigation water, low concentrations	0.2–500 mg/l	D1C, DAC	PEROX H-3E-mA-xppm

Selection guide for controllers for water treatment

The selection guide for the measuring and control technology DULCOMETER is divided into tables and applications to help you find the right solution for your application at a glance.

Function	DACb	Compact	D1Cb	D1Cc
Measured variables				
pH	+	+	+	+
ORP	+	+	+	+
Chlorine	+	+	+	+
Chlorine dioxide	+		+	+
Chlorite	+		+	+
Bromine	+		+	+
Conductive conductivity	+	+		
Inductive conductivity		+		
Conductivity via mA	+		+	+
Peracetic acid	+		+	+
Hydrogen peroxide	+		+	+
Ozone	+		+	+
Dissolved oxygen	+		+	+
Fluoride	+		+	+
Ion-selective sensors	+			
0/4...20 mA standard signal, general measured variables	+		+	+
Power supply				
90 – 253V~	+	+	+	+
24 V DC	+			
Method of installation, degree of protection				
Wall mounted IP 65			+	
Mounted on control panel IP 54, 1/4 DIN				+
Combination housing (wall mounted, pillar assembly) IP 66 + IP 67. Mounted on control panel IP 54	+	+		
Measurement				
Number of measuring channels	+, 2/3	1	1	1
Sensor monitoring for pH	+	+	+	+
Temperature compensation for pH	+	+	+	+
Temperature compensation for conductivity		+		
pH compensation for chlorine	+			
Control				
PID controller	+	+	+	+
One-way controller (e.g. with pH acid or alkali)	+	+		
Two-way controller (e.g. with pH acid and alkali)	+		+	+

Controllers for water treatment

Measuring and control instruments from ProMinent are adapted to the relevant application in virtually every process environment. They are available in different performance classes and can be integrated in every process environment.



Controller DULCOMETER diaLog DACb

Do you wish for a simple controller for water analysis? One that is easy to operate and with which you can freely select between all common measured variables per channel? There is one: our all-rounder DULCOMETER diaLog DACb! What is more, it is Ethernet-/LAN-capable and can be ideally integrated into existing networks.



Controller DULCOMETER D1Cb/D1Cc

The controller DULCOMETER D1Cb/D1Cc can be used for control tasks in potable water treatment, wastewater treatment and many other areas. Safe, convenient and clear, thanks to the large illuminated graphic display, plain text operating menu and pH sensor monitoring.



Controller DULCOMETER Compact

As a controller in water analysis, the DULCOMETER Compact is the correct controller for control tasks that require only a 1-way control.



Transmitter DULCOMETER DMTa

The transmitter DULCOMETER DMTa converts the sensor signals for pH, ORP value, chlorine concentration and conductivity into an interference-insensitive 4-20 mA analogue signal. Flexible, safe and always the optimum resolution of measured value.

Selection guide for controllers for cooling tower control

The selection guide for controllers suited to cooling tower applications provides an overview of the most important functions.

Function	AEGIS X	AEGIS II	SlimFLEX 5a	AEGIS S
Number of cooling towers controlled	6	2	1	1
Bleeding/desludging				
Conductive conductivity-dependent	+	+	+	+
Inductive conductivity-dependent (via mA)	+	+		+
Alternatively, dependent on the volume of water added	+	+	+	+
Alternatively, as a percentage based on a time base of 5 minutes	+	+	+	
Biocide metering	Free configurable	Up to 2 per cooling tower	Up to 2	Up to 2
Forced bleeding with timer-controlled biocide metering	Time-dependent and/or measured value-dependent	Time-dependent and/or measured value-dependent	Time-dependent and/or measured value-dependent	Time-dependent and/or measured value-dependent
Bleed lock after timer-controlled biocide metering	+	+	+	+
Metering of chemicals (inhibitors, dispersants)	Free configurable	Up to 4	Up to 2	Up to 2
Contact water meter-controlled	+	+	+	+
Alternatively, dependent on the bleed valve opening time	+	+	+	+
Alternatively, as a percentage based on a time base of 5 minutes	+	+	+	-
Controlled via fluorescence sensor	+	+	+	-
Control of metering pumps and bleed dampers				
Pulse frequency outputs for metering chemicals	4-12	4	-	-
Changeover contact output relay, with power supply, for controlling a bleed damper or metering pumps	3-9	2	2	1
Changeover contact output relay, potential-free for controlling metering pumps	3-9	3	3	4
Corrosion measurement				
For two different metals, e.g. stainless steel, copper, construction steel, admiralty metal	+	+	-	-
0/4...20 mA analogue outputs	Free configurable	Up to 4	Up to 2	2
Special functions				
Fieldbus, Modbus		+, RTU		+, RTU and TCP
PROFIBUS-DP, BACnet® via external gateways on request	+	+	-	-
Subsequent function upgrade via plug-in modules	+	+	+	-
LAN connector	+, web server	+, web server	+, web server	+
WLAN/Wi-Fi	+, web server	+, web server	+, web server	+
E-mail reporting/alerts	+	+	+	-
Graphic display of metering and bleeding on the web server	+	+	+	-
Data logger	+	+	+	+
Power supply				
100 - 230 V AC	+	+	+	+
Method of installation, degree of protection				
Wall mounting	IP 66, IP 67	IP 65	IP 65	IP 65

Controllers for cooling tower control

Controllers for evaporation cooling systems ensure that these systems are run as efficiently as possible. They contribute firstly to reducing cooling water consumption and secondly to improving the entire system's protection from corrosion, deposits and biological growth. The controllers are available in various performance classes.



Controller AEGIS X

AEGIS X ensures that evaporation cooling systems are run as efficiently as possible. The controller is highly flexible and suited to large cooling systems with many parameters. Using digital communication options, cooling towers can be conveniently monitored and their data evaluated remotely.



Controller AEGIS II

Controller AEGIS II continuously measures and controls the conductivity and biocide concentration to keep pipe-work and heat exchangers clean.



Controller SlimFLEX 5a

The SlimFLEX 5a cooling tower controller continuously measures and regulates electrical conductivity and controls the dosing of biocides. This keeps the pipework clean and prevents legionella infestation.



Controller AEGIS S

AEGIS S is an easy-to-use water treatment controller for evaporative cooling systems. It is designed to keep the cooling process running reliably. AEGIS S measures conductivity and controls dosing of biocides and corrosion inhibitor, thus preventing biological growth and keeping pipelines and heat exchangers clean.

Controllers for swimming pool water treatment

ProMinent provides a complete range of measuring and control systems, which have been developed especially to treat water for swimming pools, spas and other leisure activities.



Measuring and Control System DULCOMARIN 3

The measuring and control system DULCOMARIN 3 is your digital link to the technology of the future. It controls the entire range of swimming pools – from adventure pools to private pools – and is used as a multi-pool system for up to 16 filter circuits.



Controller DULCOPOOL

The controller DULCOPOOL enables simple management of private swimming pools. It is operated using a touch display. DULCOPOOL uses two peristaltic pumps, which are integrated in the device, to control the pH and chlorine concentration totally automatically.

- Measurement parameters: pH, ORP



Controller DULCOPOOL Pro

The controller DULCOPOOL Pro controls various sizes of swimming pool ranging from private and hotel pools to Olympic-sized pools and all the attractions that come with them. Thanks to its touch display and web interface, the controller can be operated with ease and integrated into SmartHome systems or PLCs.

- Measurement parameters: pH, ORP, free chlorine, total chlorine, bromine, ozone and hydrogen peroxide

Measuring and control systems for cooling water, potable water, F&B and waste water

Monitoring and treatment of cooling water with DULCODOS Cooling Water – the compact measuring and control system specially designed for the treatment of cooling water in evaporation cooling systems and wet separators. Fully assembled online measuring units and online control units are suited to measured variables for potable water, food and beverage and waste water applications. They can be configured with a simple, application-based ordering system.



Measuring and control system DULCODOS Cooling Water

Monitoring and treatment of cooling water with DULCODOS Cooling Water—the compact measuring and control system specially designed for the treatment of cooling water in evaporation cooling systems and wet separators.



Measuring and control system DULCOTROL Drinking Water / F&B

Monitoring and treatment of potable and similar types of water with DULCOTROL Potable water/F&B – the compact measuring and control system specially designed for water treatment in waterworks and in the food and beverage industry.



Measuring and control system DULCOTROL Waste Water

Monitoring and treatment of wastewater with DULCOTROL Wastewater – the compact measuring and control system specially designed for applications in municipal and industrial wastewater treatment.

Metering systems for swimming pool water treatment

The metering systems DULCODOS are the result of years of application-based development work at ProMinent. After all, you don't have to reinvent the wheel every time. With ProMinent you can reduce your costs by choosing carefully designed complete solutions.



Metering System DULCODOS Pool Soft

Chlorine-free water treatment system for environmentally operated private pools. Safe water disinfection with active oxygen as a turnkey complete solution.

- Swimming pools with a circulation performance of up to 100 m³/h



Metering System DULCODOS Pool Basic

The chlorine metering system DULCODOS Pool Basic is a complete solution for private pools where the chlorine content is controlled using the low-maintenance measurement of the redox potential.

- For swimming pools with a circulation capacity of up to 100 m³/h



Metering System DULCODOS Pool Comfort

The chlorine metering system DULCODOS Pool Comfort is the convenient solution for pH adjustment and disinfection of swimming pool water with liquid chlorine products. Remote access to the in-built web server via Wi-Fi and LAN.

- For swimming pools with a circulation capacity of up to 225 m³/h



Metering System DULCODOS Pool Professional

Chlorine metering system for individual adjustment and monitoring of all common hygiene auxiliary parameters in public pools. DULCODOS Pool Professional ensures crystal-clear water quality and lowers operating costs thanks to Eco!Mode.

- For swimming pools with a circulation capacity of up to 350 m³/h



Water treatment and disinfection

ProMinent specialises in reliable solutions for water treatment and disinfection. Our modern metering technology removes bacteria, viruses and harmful substances in an effective and environmentally-friendly way. The result is hygienically clean water involving little effort and simple handling.

The right solution for every application

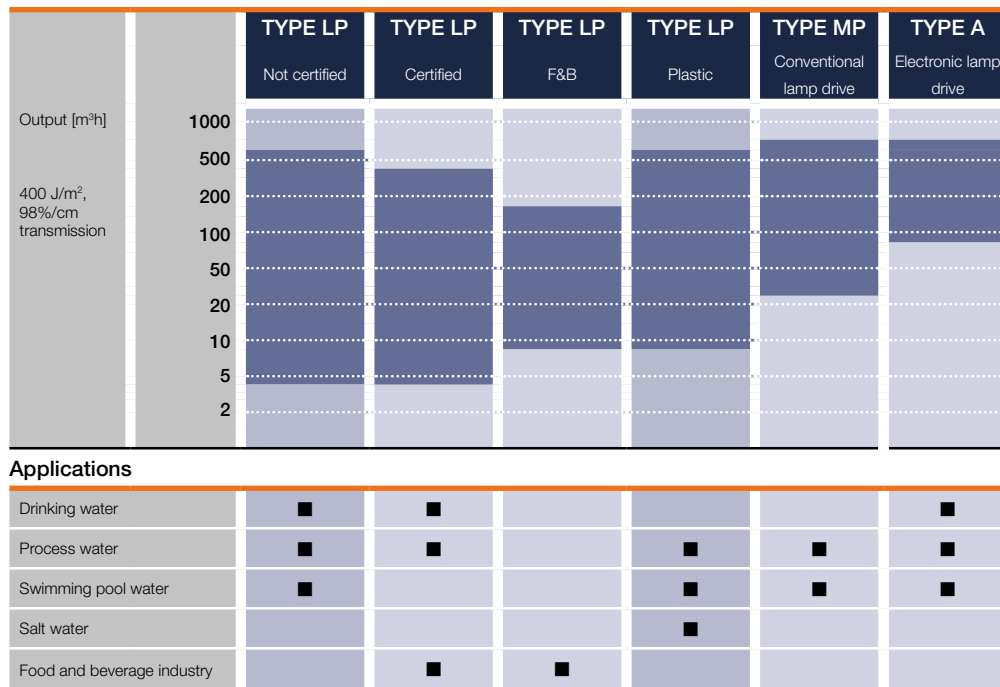
Our water treatment solutions are as individual as the industries we serve: the chemical industry, industrial and municipal water treatment, food and beverage industry, swimming pools, oil and gas as well as the process industry.

ProMinent experts put together the system that best supports your application. Our product offering extends from metering pumps for all capacity ranges and measuring and control technology to membrane filtration systems and established disinfection processes as well as digital fluid management. We deliver safe and high-performance complete solutions. And of course we also offer worldwide technical support.



Performance overview of UV systems

This overview shows the performance and typical applications of ProMinent UV standard systems. Need more details? Don't hesitate to contact us. We're here to help.



UV Systems

UV radiation is a safe, chemical-free and reliable method of disinfection in modern water treatment. DULCODES UV systems from ProMinent utilise the safety and reliability of UV disinfection in a wide range of applications. Scientific research and countless systems successfully in operation prove that UV is ideally suited to water disinfection.



UV System DULCODES LP TL

The UV system DULCODES LP TL for syrup disinfection declares war on heat-resistant germs. In instances when standard heat pasteurisation isn't up to the job, UV light provides a very quick and efficient form of disinfection without the need for heat.

- Flow up to 36 m³/h



UV System DULCODES LP

The unique UV systems DULCODES LP are synonymous with pioneering water treatment – efficient and free of chemicals.

- Flow up to 523 m³/h



UV System DULCODES LP-PE

Disinfection of saline/seawater or thermal water with corrosion-resistant reactor the UV system DULCODES LP-PE. The UV system consists of a reactor and a UV sensor made of highly UV-resistant plastic.

- Flow up to 505 m³/h



UV System DULCODES LP certified

UV system DULCODES LP for drinking water disinfection, comprehensively certified to internationally-recognised DVGW/ÖVGW/SVGW/UVDGM standards. Looking to the future, the systems have already been type-tested in accordance with the latest DIN 19294-1:2020-08 test regulation. Successful certification officially confirms the precise 50-100% control range of the highly efficient VAR-IO-Flux lamps with dynamic lamp heating.

- Flow up to 406 m³/h



UV System DULCODES LP F&B

UV system with hygienic design of radiation chamber. For reliable disinfection and constant quality in your production process.

- Flow up to 168 m³/h



UV System DULCODES MP

The UV system DULCODES MP is used for the efficient breakdown of combined chlorine in swimming pools, eliminating the typical swimming pool odour: no more irritation for eyes, nose and skin. Apart from improving the water quality, the lower investment costs and high fresh water and energy consumption savings result in shorter payback times.

- Flow up to 853 m³/h



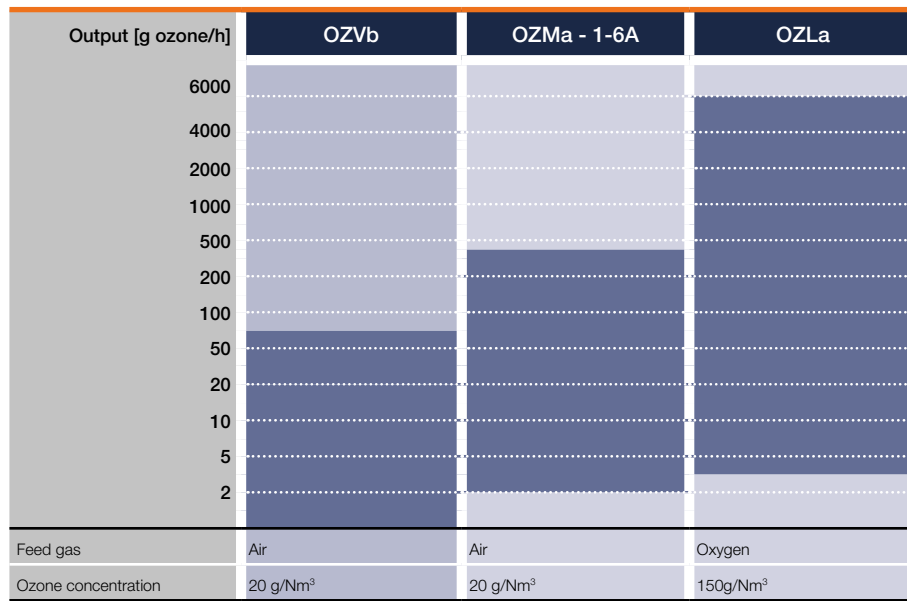
UV System DULCODES A

The UV system works cleanly and with efficient use of energy, based on continuously variable medium pressure lamps, and can therefore automatically compensate for variations in the water quality or level of contamination.

- Flow up to 809 m³/h

Performance overview of ozone systems

The feed gas and the desired ozone concentration are key here. In this performance overview you can discover which ozone system is best suited to your purposes.



Ozone Systems

Ozone systems are normally used for the treatment of potable water, swimming pool water, water in the food and beverage industry, aquarium and pool water in zoos as well as cooling water and process water.



Ozone System DULCOZON OZLa

DULCOZON OZLa is an ozone generator with low life cycle costs. It combines a high ozone concentration with unbeatable efficiency.

- Ozone capacity 380 - 6,080 g ozone/h



System Solution OZONFILT Compact OMVb

OZONFILT Compact OMVb is a complete, ready-to-use system solution for the generation and metering of ozone.

- Ozone capacity 20 – 70 g/h



Ozone System OZONFILT OZVb

OZONFILT OZVb is powerful and compact and is ideal for efficient ozone generation from compressed air in the output range of up to 70 g/h. The turnkey ozone system including mixing equipment offers everything you need for safe and seamless operation.

- Ozone capacity 10 – 70 g ozone/h



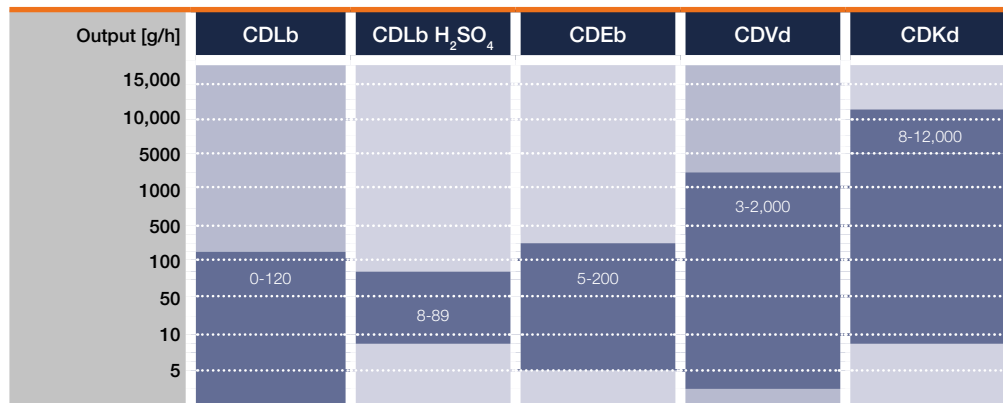
Ozone System OZONFILT OZMa

OZONFILT OZMa is synonymous with maximum operational safety and minimal operating costs. The ozone generator is maintenance-free and generates up to 420 g/h of ozone from compressed air.

- Ozone capacity 70 – 420 g ozone/h

Performance Overview of Chlorine Dioxide Systems

In the performance overview you will find the right system for every application. Can't find your application? No problem! Our specialists love a challenge.



Production process

System	CDLb	CDLb H ₂ SO ₄	CDEb	CDVd	CDKd
Production process	Sodium chlorite (diluted) 7.5 % NaClO ₂ + 9 % HCl	Sodium chlorite 7.5 % NaClO ₂ + 25 % H ₂ SO ₄	Sodium chlorite (diluted) 7.5 % NaClO ₂ + 9 % HCl	Sodium chlorite (diluted) 7.5 % NaClO ₂ + 9 % HCl	Sodium chlorite (concentrated) 24.5 % NaClO ₂ + 25 - 37 % HCl

Applications

Application	CDLb	CDLb H ₂ SO ₄	CDEb	CDVd	CDKd
Combating Legionella	■				
Food and beverage industry	■	■	■	■	
Municipal drinking water and wastewater treatment	■		■	■	■
Industry (cooling tower wastewater/process water etc.)	■	■	■	■	■

Chlorine Dioxide Systems



Chlorine Dioxide System Bello Zon CDLb

Chlorine dioxide system for production of a chlorine-free chlorine dioxide solution, especially suitable for multiple points of injection. Bello Zon CDLb produces ClO_2 discontinuously using the acid/chlorite process with diluted chemicals.

- 0 – 120 g/h capacity with storage of up to 60 g of chlorine dioxide for peak metering. Max. flow rate at 0.2 ppm ClO_2 metering capacity of 600 m^3/h



Chlorine Dioxide System Bello Zon CDLb H_2SO_4

Bello Zon CDLb H_2SO_4 especially for applications critical with regard to corrosion for the production of low-chloride chlorine dioxide liquid. With the chlorine dioxide system, ClO_2 is produced discontinuously following the acid/chlorite procedure.

- 8 – 89 g/h chlorine dioxide generation



Chlorine Dioxide System Bello Zon CDLb with Multiple Points of Injection

Flexible solutions for the production and metering of ClO_2 adapted to our customer's tasks, requirements and anticipated pricing.

- 0 – 120 g/h capacity with storage of up to 60 g of chlorine dioxide for peak metering. Max. flow rate at 0.2 ppm ClO_2 metering capacity of 600 m^3/h , up to 6 points of injection possible as standard



Chlorine Dioxide System Bello Zon CDEb

Chlorine dioxide system, which continuously produces ClO_2 according to the acid/chlorite method with diluted chemicals. Extremely simple operation, clear construction, analogue control, manual control or via contacts.

- 5-200 g/h chlorine dioxide. Max. flow at 0.2 ppm ClO_2 metering is 1,000 m^3/h



Chlorine Dioxide System Bello Zon CDVd

Chlorine dioxide system for the metering of chlorine dioxide with diluted starting chemicals. The certified yield guarantees efficient chlorine dioxide production. Bello Zon CDVd can be easily and safely integrated into any water treatment process.

- 2.5 – 2,000 g/h chlorine dioxide. Maximum volume of water that can be treated with metering of 0.2 ppm ClO_2 , depending on the size of the system: 50 - 10,000 m^3/h



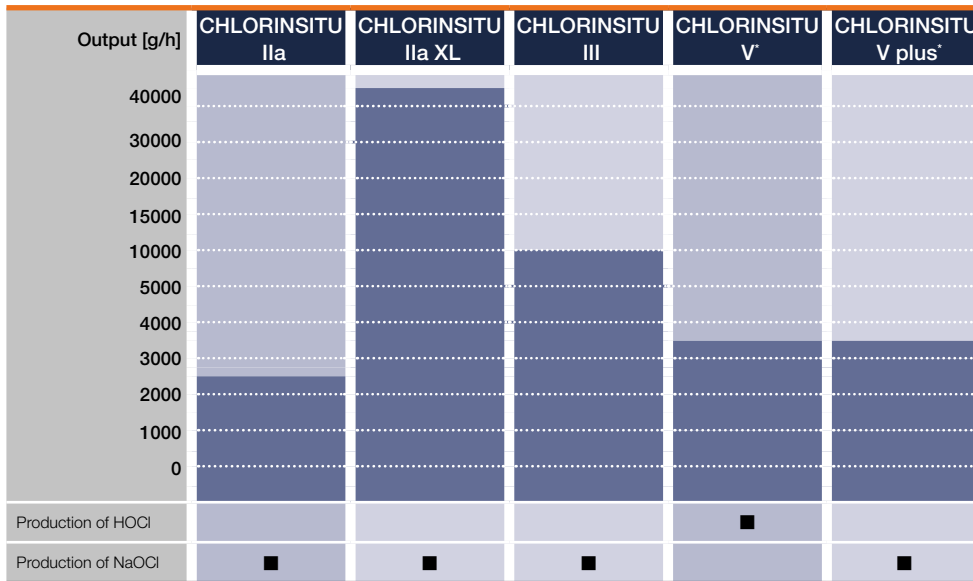
Chlorine Dioxide System Bello Zon CDKd

Chlorine dioxide system for the metering of chlorine dioxide with concentrated starting chemicals. The proven safety concept protects people and the environment. The certified yield guarantees efficient chlorine dioxide production. Bello Zon CDKd can be easily and safely integrated into any water treatment process.

- 7.5 – 12,000 g/h chlorine dioxide. Maximum volume of water that can be treated with metering of 0.2 ppm ClO_2 , depending on the size of the system: 60,000 m^3/h

Performance overview of electrolysis systems

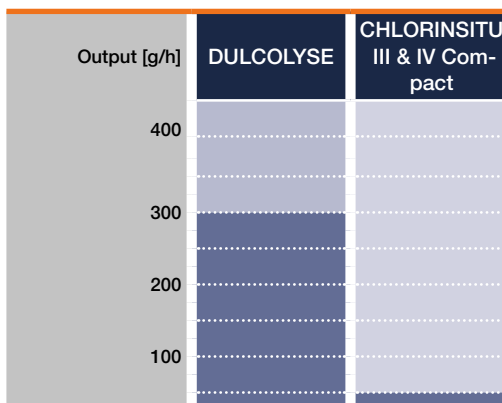
What a great idea: no chemicals to be transported and no need to store and handle hazardous substances. Instead: sophisticated systems use harmless sodium chloride – ordinary salt – to produce chlorine, hydrogen and sodium hydroxide solution.



* Larger capacities available on request

Applications

	CHLORINSITU IIa	CHLORINSITU IIa XL	CHLORINSITU III	CHLORINSITU V	CHLORINSITU V plus
Drinking water	■	■	■	■	■
Wastewater	■	■	■	■	■
Process water	■	■	■	■	■
Swimming pool water	■	■	■	■	■
Cooling tower			■	■	■



Applications

	DULCOLYSE	CHLORINSITU III & IV Compact
Food and beverage industry	■	
Drinking water		■
Cooling tower		■
Swimming pool		■

Electrolysis Systems

What a great idea: no chemicals to be transported and no need to store and handle hazardous substances. Instead: sophisticated systems use harmless sodium chloride – ordinary salt – to produce chlorine, hydrogen and sodium hydroxide solution.



Electrolysis System CHLORINSITU IIa 60 – 2,500 g/h

CHLORINSITU IIa is a compact on-site electrolysis system for the production of a low-chlorate hypochlorite solution from salt and electricity. Key advantages are its simple process management and excellent system safety through integrated ventilation and bleeding.

- Output 60 – 2,500 g/h of chlorine



Electrolysis System CHLORINSITU IIa XL

CHLORINSITU IIa XL is the tubular cell electrolysis system for on-site production of large quantities of hypochlorite. Users cannot fail to be impressed by its ease of operation and outstanding efficiency combined with optimum process stability for the reliable disinfection of large volumetric flows.

- Output 5 – 45 kg/h of chlorine



Electrolysis System CHLORINSITU III

Ultra-pure or low-chloride and low-chlorate sodium hypochlorite requires specialist plant engineering. The electrolysis system CHLORINSITU III is the solution for you.

- Output 100 – 10,000 g/h of chlorine



Electrolysis System CHLORINSITU III Compact

Generation of sodium hypochlorite solution for smaller swimming pools and pools.

- Output 25 – 50 g/h of chlorine



Electrolysis System CHLORINSITU IV Compact

Produce high-purity chlorine gas in a vacuum process. Cost-effective, robust and compact.

- Output 25 – 50 g/h of chlorine



Electrolysis System CHLORINSITU V

Electrolysis systems of type CHLORINSITU V take the place of the chlorine gas system in the swimming pool and only need salt, water and electricity to do so.

- Output 100 – 3,500 g/h of chlorine



Electrolysis System CHLORINSITU V Plus

Electrolysis systems of type CHLORINSITU V Plus generate ultra-pure chlorine gas directly on site and only need salt, water and electricity to do so. Peaks in demand can be covered by this system (Plus system). They are especially well suited to systems for disinfecting potable water, wastewater, process water and water in swimming pools and cooling towers.

- Output 100 – 3,500 g/h of chlorine



NEW

Electrolysis System DULCOLYSE

Efficient production of the highly effective disinfectant DULCOLYT 400 with an exceptionally low chloride and chlorate content. Ideal for particularly sensitive applications in the beverage and food industry, e.g. for the production of baby food. Maximum protection against corrosion and very good cost efficiency.

- Output: up to 800 g/h

Metering Systems for Polymers

The elimination of solids from liquids requires the use of liquid or powder polymers. This is achieved using polymer preparation and metering systems. The experts in waste water treatment at ProMinent understand how to provide the efficient technology to implement this specialist application. Our metering systems were developed for the most stringent requirements, and are also especially easy to assemble and operate.



Metering System ULTROMAT ULFa

Polymer preparation station ULTROMAT ULFa (continuous flow system): This metering system can be used to batch flocculation aids for the preparation of a ready-to-use polymer solution. The system was designed for the fully automatic batching of polymer solutions.

- Extraction rates of up to 8,000 l/h



Metering System ULTROMAT ULPa

The metering system ULTROMAT ULPa (oscillating system) is ideal for batching flocculation aids for the preparation of a ready-to-use polymer solution.

- Extraction rates from 400 to 4,000 l/h



Metering System ULTROMAT ULDa

The ProMinent metering system ULTROMAT ULDa is an automatic polyelectrolyte preparation system. It is useful wherever polymers need to be automatically prepared as polymer solutions to act as flocculation aids.

- Extraction rates of up to 2,000 l/h



Metering System DULCODOS UL1a (Inline System Liquid)

The polymer preparation system DULCODOS UL1a is an inline system and processes liquid polymers to produce a fully activated solution. It is ideally equipped for your application with integrated mixing and maturing chamber and novel peristaltic metering pump.

- Extraction volume 100 – 400 l/h against 4.5 bar



Metering System ULTROMAT MT for Batch Operation

Manual polymer batching station ULTROMAT MT: Perfect metering system for the processing of small quantities of liquid and powdered polymers: extremely robust and cost-effective.

- Capacity range 120 – 3,800 l/h



Metering System PolyRex

The metering system PolyRex is a double-decker batching station for the processing of liquid and powdered polymers. It consists of the feed and mixer unit and the two stainless steel double-decker tanks. The polymers used are ideally utilised.

- Capacity range of up to 8200 l/h



Metering System POLYMORE

The metering system POLYMORE is an inline batching station in which the liquid polymer is introduced into the pressure-encapsulated multi-zone mixing equipment with the dilution water through a peristaltic pump. The result is a prepared and homogeneous polymer solution.

- Capacity range of up to 18,000 l/h

Tanks, metering and emptying station

DULCODOS SAFE-IBC is a special metering and emptying station for Intermediate Bulk Containers (IBC) with almost complete residual drainage.



Metering and emptying station DULCODOS SAFE-IBC

The metering and emptying station DULCODOS SAFE-IBC provides your process with chemicals interruption-free. It conforms to the modified legislature for liquids harmful to water in accordance with the German Ordinance for Systems Handling Substances Harmful to Water AwSV.

- Storage and drainage of IBCs up to 1,000 l – metering of chemicals up to 1,000 l/h



Storage Tanks

Our plastic storage tanks guarantee compliance with statutory specifications taking into account country-specific approvals, which regulate the production and operation of systems for storage and metering of environmentally hazardous substances.

- Useful capacity 500 l–50,000 l, indoor and outdoor installation

Metering Systems for Solids

ProMinent supplies everything you need for metering and treating solids in your production process. We even have cost-effective solutions for problematic applications, for example substances with noticeable weight fluctuations or problems with bridging.



TOMAL® Big Bag Emptying Unit

This emptying unit is used to accommodate and empty Big Bags weighing up to 1,000 kg. The Big Bags are suspended in the frame with the aid of a lifting cross bar. The 30-litre powder storage tank is used to transfer the powder into a feed unit.

- Emptying of Big Bags up to 1,000 kg



TOMAL® Multi-Screw Feeder

Its unique construction makes the multi-screw feeder ideally suited for metering powders and granulates.

- Capacity range 0.4 – 215 m³/h

Membrane Filtration Plants

ProMinent is an expert in membrane filtration and supplies a wide range of high-quality plant engineering. Combined with the extensive ProMinent product range, made-to-measure solutions can be developed. ProMinent membrane technology covers ultrafiltration, nanofiltration and reverse osmosis, including pre- and post-treatment precisely matched to the membrane system.



Ultrafiltration system DULCOCLEAN UF

Ultrafiltration system DULCOCLEAN UF reliably and safely uses membrane technology to remove turbidity, particles and microbiological contamination.

- 8 – 75 m³/h filtrate output



Nanofiltration System DULCOSMOSE NF

As a nanofiltration system, the DULCOSMOSE NF, a compact and value-for-money unit, can handle partial desalination in industrial applications. Maximum permeate output at low operating pressures ensures low operating costs thanks to the “ultra low pressure” diaphragm.

- Permeate outputs from 1 to 50 m³/h, higher outputs possible on request



Reverse Osmosis System DULCOSMOSE TW

Reverse osmosis system DULCOSMOSE TW is the all-purpose model for modern potable water desalination. Maximum permeate output at low operating pressures ensures low investment and operating costs.

- Permeate output 0.1 – 50 m³/h



Reverse Osmosis System DULCOSMOSE BW

Reverse osmosis system DULCOSMOSE BW is the standard model for the modern desalination of brackish water. Equipped with the latest generation of 'high rejection low-pressure' membranes, this system achieves maximum permeate output with moderate operating pressures, thereby lowering investment and operating costs.

- Permeate output 2,000 – 50,000 l/h



Reverse Osmosis System DULCOSMOSE SW

The reverse osmosis system DULCOSMOSE SW is the standard model for modern desalination of salt water. Equipped with the latest generation of 'high rejection low-pressure' membranes, this system achieves maximum permeate output with moderate operating pressures, thereby lowering investment and operating costs.

- Permeate output 780 – 29,000 l/h

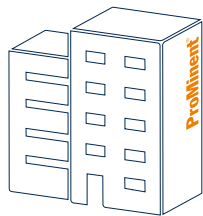


Customer services

ProMinent provides an expert full-service for all products, solutions and systems. Our experts will help you with everything from commissioning, maintenance and repairs to technical product and process advice.

Our experts work tirelessly to improve our services in order to provide rapid and targeted assistance. No matter whether you want assistance on-site at your plant, by phone, e-mail or remotely via the new ProMinent Smart-Support – we will quickly and expertly help you find the right solution.

And all this according to the principle of customer services – unlimited. Ready for you – any time. Anywhere.



50+
service centres
worldwide



200+
service staff
worldwide

40+ 
service staff
throughout Germany



20+
different
services



CUSTOMER SERVICE - UNLIMITED

Recycling

Recycling
Disassembly and disposal

Shutdown
Decommissioning the system

Transport
Relocation service

Upgrades
System enhancements

Process optimisation
Improved performance

Calibration
Resetting the system

Repairs
Local assistance

Optimisation

Smart support
Service via
smartphone



Start up

Installation
Individual setup

Commissioning
Ready-to-use system

Training
Optimum use

Inspection
Regular system checks

Maintenance
Reliable processes

Tailored service
Individual service agreements

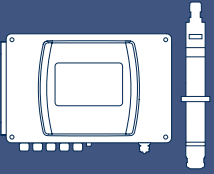
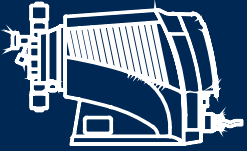
Spare parts service
Original parts as spares

Support hotline
Rapid support

Ongoing operation

ce for
YOU

rt
ia
e



You will find more information about our products at
www.prominent.com

ProMinent GmbH

info@prominent.com
www.prominent.com