

**ProMinent – Professional solutions
for fluid processes.**



ProMinent®

INTRODUCTION TO PROMINENT: METERING IS THE FOUNDATION OF OUR SUCCESS.

Our company and its products are dedicated to the metering and preparation of fluids. 40 years ago Prof. Dr. Viktor Dulger founded this innovative company, and it has expanded steadily ever since. Starting with domestic water systems, the company later moved into the development and manufacture of a solenoid metering pump. Today these pumps and systems are in operation around the world, supplying the needs of numerous metering applications. The younger generation is now moving into the business. Both sons have become involved in the company management and are

taking the company concept forward in the best traditions of ProMinent.

Industrial and service companies from different sectors rely on the precision and reliability of our products.

The product range covers high performance standard devices to customer-specific individual solutions. Quality is the top priority in every case – one reason why we manufacture 80 % of our products in house. In-house diaphragm production and our own glass blowing works for our sensors ensure that we can deliver maximum quality and availability.

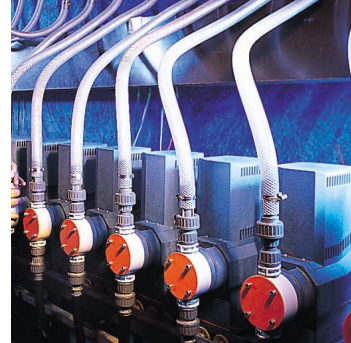


Viktor Dulger, the company's founder and his sons shaping the company for the future

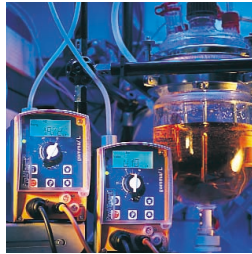
All our technical ideas are conceived at our headquarters in Heidelberg, where our creative team develops the technologies of the future. ProMinent has invested considerably in research and development – and the results speak for themselves.

Our teams can solve practically any metering problem





In the chemical industry: adapting flexibly to a wide range of processes



ProMinent's range of products delivers tailored

important fields of application. We are talking here not only about our daily drinking water and the purity of water in our swimming pools, but also about process water in industrial systems as

reliable solution; one which really pays off.

RECIPE FOR SUCCESS

In the swimming pool: crystal clear water for perfect bathing



solutions for transporting, mixing, metering and treatment of fluids in any situation. The application range of our pumps and systems is equally wide. Water treatment is, as ever, one of the most

well as the environmentally sustainable purification of wastewater.

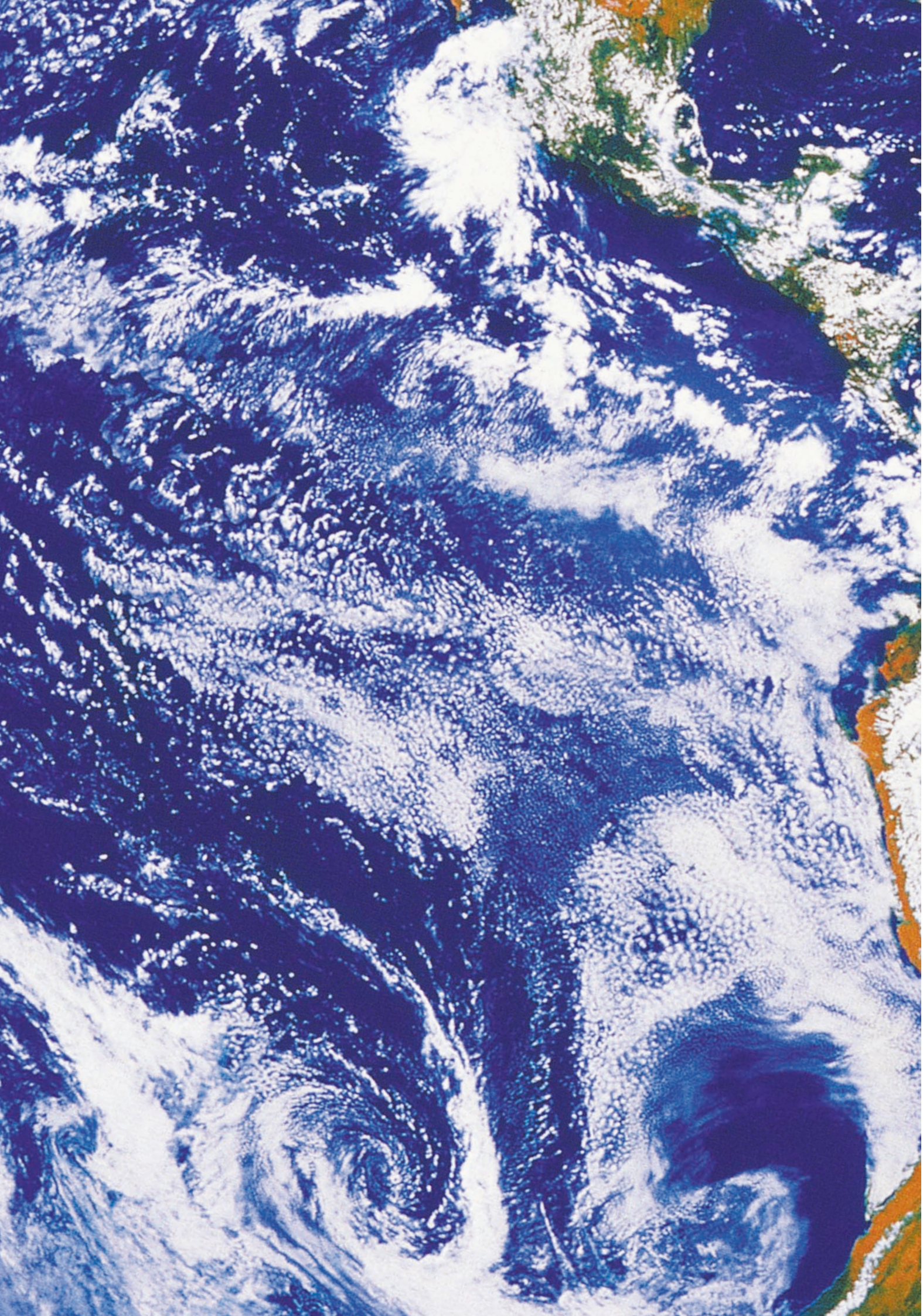
There are equally varied challenges in industry, especially in the chemical industry. The food industry demands precise and hygienic metering, as do brewing and bottling processes in the brewing and beverages industries.

Our specialists are well equipped with the expertise and knowledge to find the best solutions. Our customers get a complete, long term



In the beverages industry: meeting the demand for purity in production and bottling







ON SITE – WORLD-WIDE: ALWAYS CLOSE TO OUR CUSTOMERS.

Locating our operations around the world and close to our customers is becoming increasingly vital. We decided early on therefore to establish our presence in the industrial centres around the world,

stay in close contact with 35 subsidiary companies with marketing, storage, production and service operations. We maintain equally close relations with over 60 authorised dealers around the

for on-site maintenance and service. Operating globally also means being familiar with relevant national conditions, standards and regulations, but it also enables us to have

ROUTE TO SUCCESS

Our consultants and technicians can be found in all industrial centres

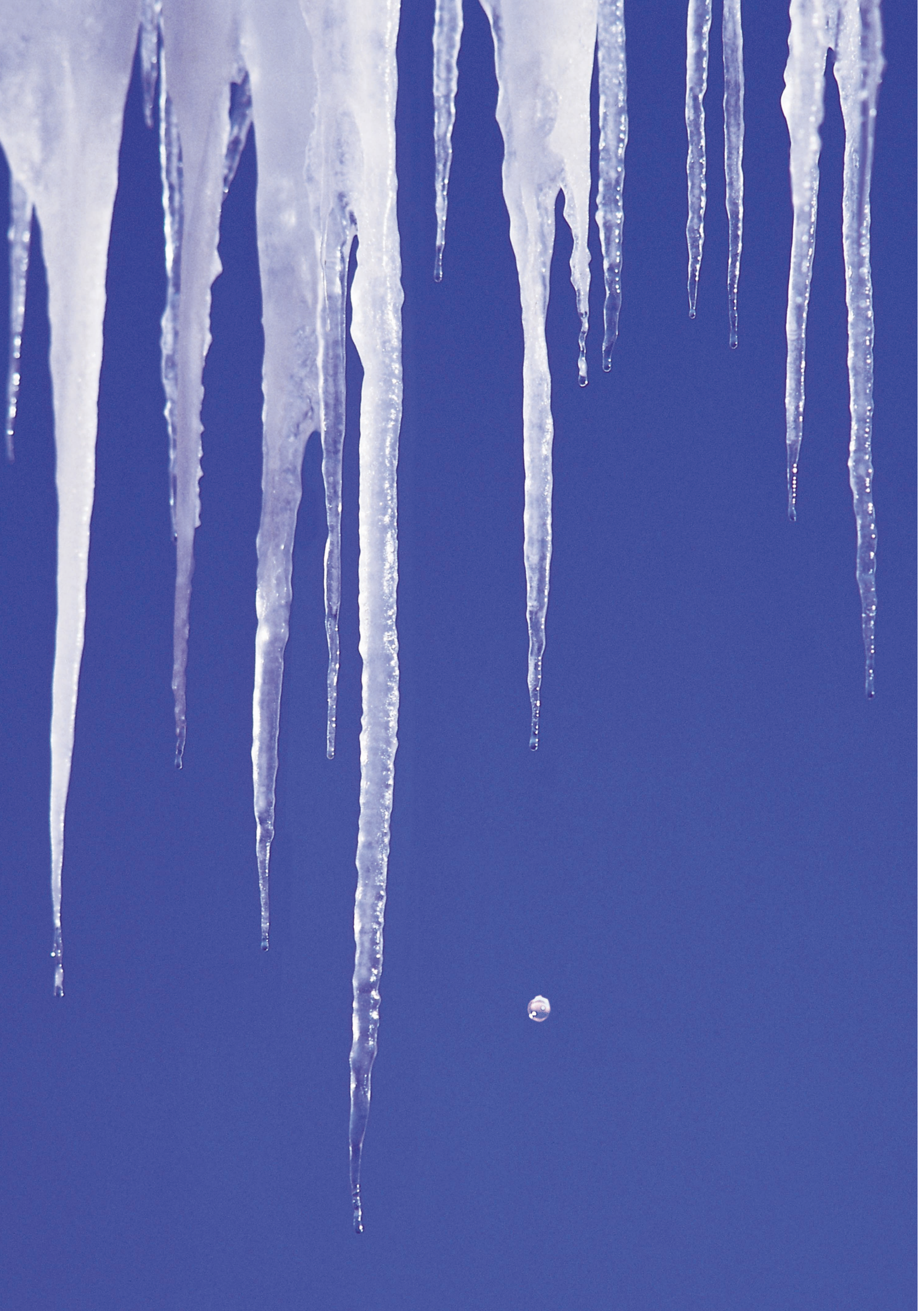


and have continued to expand on that concept. From our company headquarters in Heidelberg we

globe. We have over 1,400 employees world-wide. ProMinent's global strategy is, in this way, realised in terms of geographical proximity and rapid availability – both for the design and production of new customer proposals and

a unified approach to achieving a clean, sustaining environment. We are indebted to our watery planet, and we take our debt seriously.







FOR THE RIGHT DOSE IN ALL SORTS OF SECTORS: PROMINENT® METERING PUMPS.

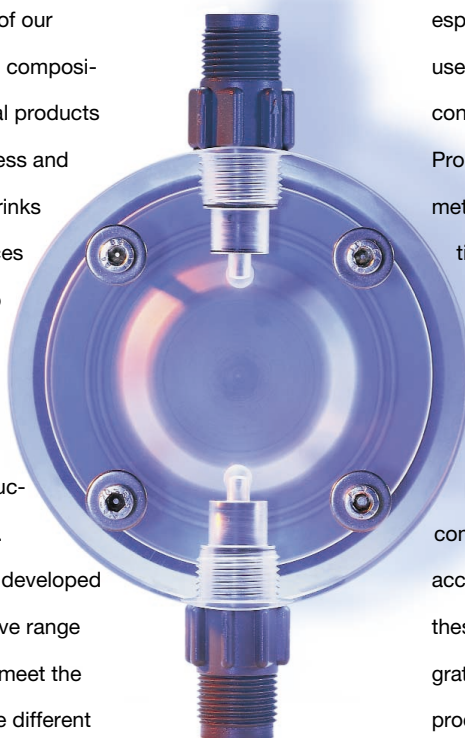
Correct dosage is the deciding factor for the success of the most varied of processes. It determines the quality of our drinking water and the environmental sustainability of our wastewater. It ensu-

sectors of industry. Its product palette comprises a range of metering pumps, with feed rates ranging from 0.1 ml/h to 100,000 l/h. It also incorporates reliable measuring and control tech-

nologies and complete systems for water treatment and water disinfection. Two drive options are available for the metering pumps: the ProMinent® solenoid metering pumps are universally applicable,

SUCCESS IN CONTROL

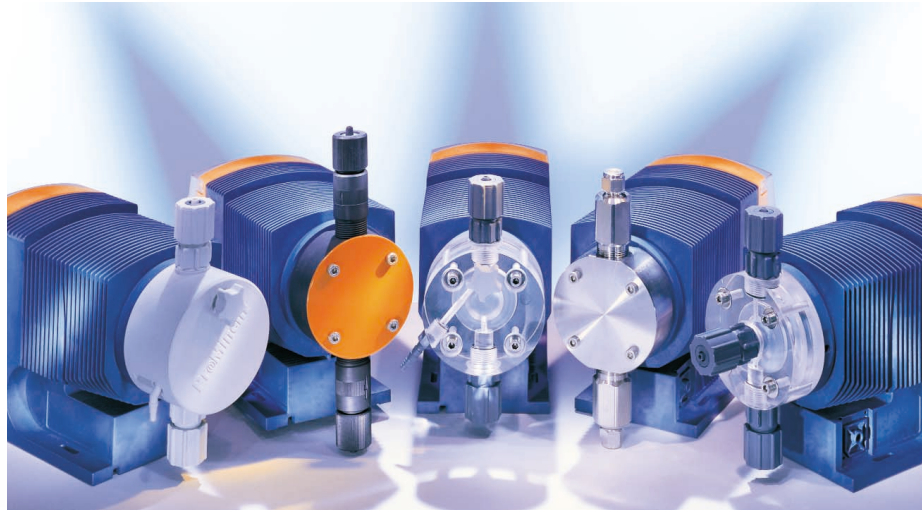
res the quality of our food, the exact composition of chemical products and the freshness and shelf-lives of drinks and its influences extend right up to the economical and precise running of industrial production processes. ProMinent has developed a comprehensive range of products to meet the demands of the different



especially with optimised use of microprocessor controllers, while the ProMinent® motor-driven metering pumps are distinguished by their high performance rates. They are designed to be robust in action while maintaining precise feed rates. The comprehensive range of accessories means that these pumps can be integrated into practically any process design.

UNIVERSAL APPLICATIONS: OUR RANGE OF LOW CAPACITY PUMPS.

Adaptable for a
variety of processes:
ProMinent®
gamma/L



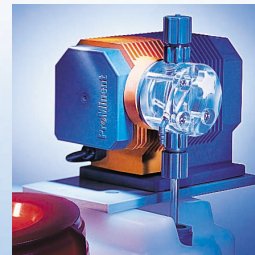
Precision for
the smallest
quantities:
ProMinent®
mikro g/ 5



The ProMinent® mikro g/ 5, a solenoid driven piston pump with microprocessor controller, was developed for laboratory and industrial use. It is a high-precision pump working in the micro-litre range from 0.1 to 1500 ml/h. The pumps in the ProMinent® alpha series feature robust, uncomplicated

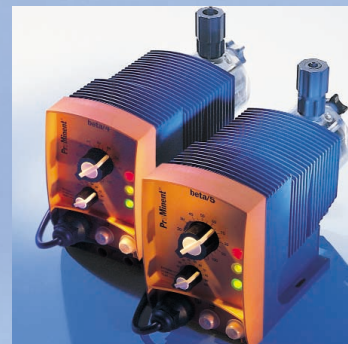
functions. They are used in many sectors of industry for simple metering applications with constant feed rates. As motor-driven diaphragm pumps their capacity ranges from 0.5 to 18.5 l/h.

The ProMinent® Beta® is a range of microprocessor controlled solenoid diaphragm pumps. Its few control elements make installation easy, a "traffic light display" signals the operating status at a glance. Beta® is the reliable choice in



For straight-
forward
applications:
ProMinent®
alpha

water treatment and in many processes in industry. It has a capacity range of between 0.74 and 32 l/h.



Reliable and flexible:
the solid state
ProMinent® Beta®

Pneumatically
operated:
ProMinent®
Pneumados



ProMinent® Pneumados is available complete with a

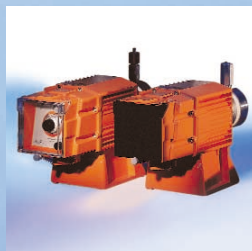
in lacquering systems, in greenhouses and in car wash systems. The pumps have capacities of between 0.9 and 15 l/h. The ProMinent EXtronic® metering pumps were developed specifically for

gamma/ L series. Due to their high-precision metering capability these pumps are used in research and development in the chemical and pharmaceutical industry, in the food and drinks



SERIAL SUCCESS

metering pump with pneumatic power end. It is the right choice when there is a compressed air system present – e.g. for handling animal feeds,



Safe metering
in EX proof
areas:
ProMinent
EXtronic®

Zone 1 explosion-proof applications and storm-proof mining operations. They have capacities of between 0.23 and 60 l/h. Feed rate display in l/h, flexible control and installation options and clear, simple operating prompts are the benefits of the solenoid diaphragm pumps in the ProMinent®



More control
options:
ProMinent®
gamma/ L

industry and in brewing. Capacity: 0.74 to 32 l/h.

Lower capacity range

ProMinent® mikro g/ 5	0.1 to 1500 ml/h
ProMinent® Pneumados	0.9 to 15 l/h
ProMinent® alpha	0.5 to 18.5 l/h
ProMinent® Beta®/ 4	0.74 to 19 l/h
ProMinent® Beta®/ 5	4.1 to 32 l/h
ProMinent® gamma/ L	0.74 to 32 l/h
ProMinent EXtronic®	0.23 to 60 l/h

THE MID CAPACITY RANGE: COMPACT METERING PUMP VARIATIONS.

The motor-driven ProMinent® Hydro/ 2 and Hydro/ 3 with hydraulically actuated diaphragm can perform precise metering operations even at high pressures, meeting the same high safety requirements. Reproducibility is guaranteed. The pumps perform equally well in many processes within

the chemical industry, the petrochemical industry and in industrial production systems. Pump capacity is 60 l/h at back pressures of up to 64 bar and up to 150 l/h at 25 bar.

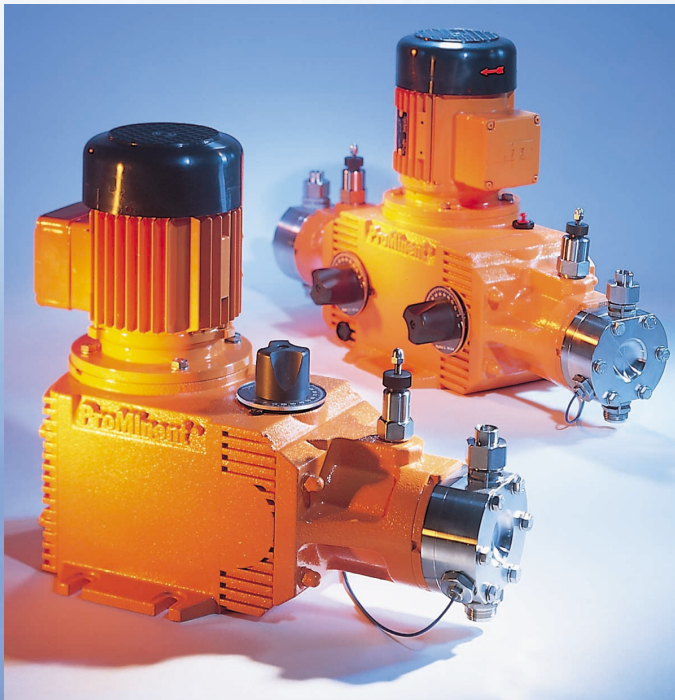
The pumps in the ProMinent® Vario series have been designed on a modular basis: with



**ProMinent®
Vario –
variable
modular
system**

interchangeable electronic controller and monitoring inserts, the Vario pumps can be adapted for any process requirement.

Capacities reach 144 l/h.



**ProMinent®
Hydro –
safety at
high pressures**



**ProMinent®
Sigma –
optimum precision
and durability**



Inside the ProMinent®
Sigma there is a proven,

industry, in the chemical
industry, and in the
paper and textiles indus-
tries. Sigma has capa-
cities up to 420 l/h. All
this applies equally to
the Sigma/ 3, whose only
difference to the Sigma

the Sigma/ 3 is between
145 and 1030 l/h.

PLAN FOR SUCCESS

durable mechanism
guaranteeing the high
level of reproducibility of
the feed rate. Sigma is
available in diaphragm
and piston versions for
use in water treatment, in
the food and beverages

is an even higher capa-
city. A microprocessor
ensures numerous inter-
nal and variable external
control options.
An illuminated LCD dis-
play makes operating
easier. The feed rate of



**ProMinent®
Sigma/ 3 –
power combined
with control
versatility**

Mid-capacity range

ProMinent® Hydro/ 2	7 to 60 l/h
ProMinent® Vario	17 to 144 l/h
ProMinent® Hydro/ 3	19 to 150 l/h
ProMinent® Sigma	50 to 420 l/h
ProMinent® Sigma/ 3	145 to 1030 l/h

THE HIGH CAPACITY RANGE: THE MOST POWERFUL OF THE METERING PUMPS.



**ProMinent®
Makro/ 5**
high performance, simplex,
duplex or
sequenced

The ProMinent® Makro TZ takes us into the highest performance class in the ProMinent® pump range.

These pumps are available in piston, diaphragm and hydraulic diaphragm versions. The diaphragm version has a capacity of up to 2500 l/h. With Makro/ 5 we offer high performance and long term reliability in motor-driven metering pumps with feed rate capacities of up to 6000 l/h.

The principle of the piston metering pump maintains

feed capacities even at high back pressures.

Makro/ 5 was conceived from the start as a double-headed metering pump. It can be modified at any time, however, to form a simplex or multiplex metering system.

With two liquid ends it has a capacity of 12000 l/h at a back pressure of 6 bar. Several power ends can be combined to reach a capacity of up to 40000 l/h.

The metering pumps from ORLITA Dosiertechnik GmbH, a subsidiary of ProMinent, cover the top end of the capacity range in the ProMinent product spectrum. There are four series of high precision metering pumps available. The Mf pump range

is fitted with a hydraulically driven PTFE double diaphragm. The diaphragm discharge stroke is actuated exclusively by the hydraulic fluid, while the priming stroke is supported, as necessary, by means of mechanical coupling. The result is extremely high priming capacity. The operating pressure



**ProMinent®
ORLITA® DR:**
valve-free
for highly
viscous fluids

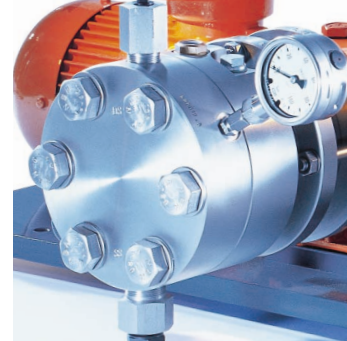
can reach 400 bar, the pump capacity a max. of 40000 l/h.



**ProMinent®
Makro TZ –**
high performance
and reliable

Upper capacity range

ProMinent® ORLITA® Mh	1.2 to 810 l/h
ProMinent® Makro TZ	8 to 2500 l/h
ProMinent® ORLITA® DR	1 to 3310 l/h
ProMinent® Makro/ 5	38 to 6000 l/h
ProMinent® ORLITA® PS	1.2 to 39600 l/h
ProMinent® ORLITA® Mf	4.9 to 39600 l/h



The Mh pump series works up to an operating pressure of 4000 bar.

The pumps in the PS series – the classic piston metering pump with the best possible hydraulic efficiency rate for one

reach 400 bar.

The pumps in the DR series operate without valves. An overlapping oscillating and rotating piston action opens and closes the control pistons on the priming

metering of liquids with the highest levels of viscosity, up to 1,000,000 m Pas, and even of those containing suspended solids.

MOTOR SUCCESS

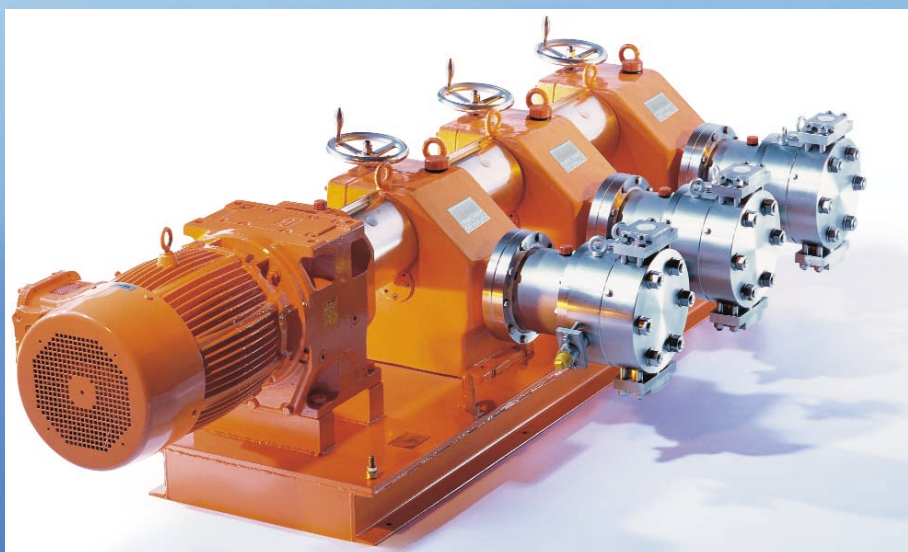
liquid end – are robust and easy to maintain.

Operating pressures can

and discharge sides. This

means that these pumps

can carry out precise



ProMinent® ORLITA®
Mf3S 600/65
robust and
easy to maintain





**PRECISE MEASUREMENT, INTELLIGENT PROCESSING,
EXACT METERING: THE CIRCLE OF CONTROL IS COMPLETE.**

One of the greatest	sourced solutions at	precisely tailored to your
control systems is found	every stage. Using our	individual requests and
in nature: the tides. With	program of optimally	requirements. The easy-
never-changing precision	interactive systems, we	to-read monitor means
the level of the sea rises	can provide you with real	that the process is always
and falls in the cycles	process reliability and	in view and under control.
dictated by the moon.	precision.	Numerous applications
The DULCOMETER®	A perfect control system	in process technology,

RULES OF SUCCESS

measurement and control
technology, the
DULCOTEST®
sensor technology
and ProMinent®
metering pumps
offer equally precise
cycles of control.
Measurement –
control –
adjustment –
metering. Single



research and production
depend on this level of
security: industrial
process control,
chemical waste-
water treatment,
beverage process
water treatment and
the food and drinks
industries – to name
but a few.

MAKING PROCESSES TRANSPARENT: PROMINENT® MEASUREMENT AND CONTROL TECHNOLOGY.



**DULCOMETER® –
flexible installation**

DULCOMETER® stands for a comprehensive, fully interactive product system of measurement and control technology for many areas and applications. Measurement transducers graphically display a range of measured variables. The control range features a choice of several application-orientated control features.

Wall-mounted or installed in a control panel – even the external form can be adapted to your requirements.

DULCOMETER® D1C is a versatile measurement transducer and controller

incorporating micro-processor technology for a range of measured variables.

The two-channel controller of the DULCOMETER® D2C measures and controls two measurement parameters. Measured variable options are pH/pH, pH/chlorine and pH/redox.

The DULCOMARIN® swimming pool controller was designed especially for swimming pool applications. It is supplied with factory-set reference and threshold values.

It is simple to operate, guiding the operator through the necessary settings tasks with clear text prompts. ProMinent® DULCOMETER® D_4a is a controller and metering pump in one. This combination is ideal for laboratory, pilot system, swimming pool and

drinking water system applications. Particularly compact and equally intelligent is the DULCOMETER® DMT two-wire measurement transducer.

The devices all feature clear text operator prompts, informative displays, numerous internal monitoring functions and are all rapid to install.

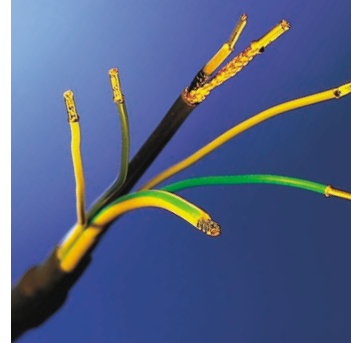


**Measuring intelligence,
compact format:
DULCOMETER®
DMT**



**DULCOMETER® D_4a
two functions
in a single housing**

DULCOMETER® DMT	pH Redox Conductivity Temperature Chlorine
DULCOMETER® D1C	pH Redox Cl ₂ Conductivity ClO ₂ O ₃ Temperature Analogue signal H ₂ O ₂ Peracetic acid
DULCOMETER® D2C	pH/Cl ₂ pH/redox pH/pH
DULCOMARIN®	pH/redox/Cl ₂ /°C
DULCOMETER® D_4a	pH redox Cl ₂



All together:
DULCOTEST®
sensors with in-line
probe housing



Sensor technology is a
key factor for the pre-

precise measurement
results.

The sensors form an
optimally interactive unit

when combined with
DULCOMETER® control

technology, and so offer
total process safety to

and other accessories for
a complete, turnkey
measuring and control
system.

SUCCESS CONCEPT

DULCOTEST®
sensors: rapid and
precise detection
of measured
variables



cision of measured varia-
bles. We therefore prod-
uce essential components
such as the DULCOTEST®
sensors in house. Our
years of experience in
glass working guarantee
consistently high quality
standards and equally

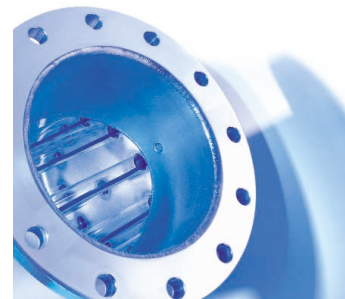
the user.

We supply individual
sensors for the following
parameters: pH value,
redox voltage peracetic
acid, H₂O₂, temperature,
chlorine, chlorine dioxide
and ozone. We also
provide lead combinations



Mounted to your
specifications:
complete control
and metering
systems for
swimming pools





COMPLETE SYSTEMS IN COMPACT FORMAT: PROMINENT WATER TREATMENT SYSTEMS.

ProMinent offers a whole range of systems especially for water treatment, all of which can operate within the smallest space: Bello Zon® is a series of systems for the production of chlorine dioxide,

OZONFILT® OZVa sets the standard in the ozone generating technology for crystal clear swimming pool water. Dulcodes, the UV disinfection system using UVC radiation, is a chemical-

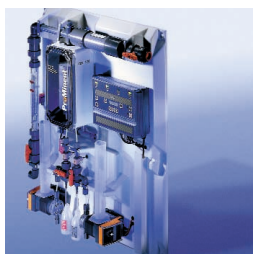
up to 99 % of dissolved salts from water, and are therefore highly suitable for desalinating seawater, but also for treating process water. Ultromat® polyelectrolyte batching stations allow

KEY TO SUCCESS

an alternative to chlorine for disinfecting drinking and process water. Under the name Bono Zon® we manufacture high performance ozone generating systems for odour-free disinfection and oxidation of water.

free system for eliminating bacteria from water. Dulcoclean® – the compact waterworks – recovers high quality drinking water from contaminated tap water and brackish water. Dulcosmose® reverse osmosis systems remove

maturation of organic flocculent. Essential in purification systems, economical in water treatment systems.



Chlorine dioxide instead of chlorine: water disinfection with Bello Zon®



Large ozone capacity in the smallest space: more pleasure from swimming pools with OZONFILT® OZVa



Dulcosmose® reverse osmosis systems, can be transported in a container



WORLD-WIDE ACCESS TO PROMINENT - SUCCESS HAS NEVER BEEN CLOSER!

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SURETY FOR SUCCESS

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