

.water .gas .hygienic .micro

bürkert
FLUID CONTROL SYSTEMS

.water .gas .hygienic .micro

Our focus on gases derives from the commitment to our customers to work with the physical attributes of the application environments of your world. In this overview you will find examples which allow you to examine some of our core process competences.

We believe we have intimate knowledge of and significant insight into the application environments that traverse the broad spectrum of gases. We can collaborate with you in the real physics of stoichiometry, diffusion, and plasmas where we can share our experience in complete gas control loops.

We can assist you in determining the most effective gas control architecture to help you see and assess what is happening in your plant from the control room or the boardroom. Every member of our company listens to you with the aim of fluently presenting you with only the most appropriate solution in your daily application language. The inherent expertise we offer at Bürkert exists to make your life simpler.

Our versatile systems highlight our continuous customer-oriented innovation and are developed to make gas control and monitoring systems much easier, saving you time.

An otherwise unattainable synergy of hard-working valve elements, mass flow controllers, microcontrollers and networked communication represents a genuinely unique source of remarkably attractive systems, peace of mind, process safety and ease of use. In a world where application knowledge, reliability and quality are paramount.

Bürkert offers you unlimited modularity to control the invisible.

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Welcome to the Fascinating World of Fluid Control Systems.

Measurement and control: When it comes to working with fluids and gases, we are at your side—as a manufacturer of sophisticated products, as a problem-solver with an eye for the big picture, and as a partner offering you reliable advice. Since we started in 1946, we have developed into one of the world's leading suppliers of Fluid Control Systems. At the same time we have kept our status as a family-run business with a foundation of strong basic values to highlight the way we think and act.

What we build on: Experience

We bring together over 60 years of applied knowledge, theoretical expertise and all-round experience in the field of Fluid Control Systems. We at Bürkert have always taken care to ensure that the insights gained in working on innumerable products and projects are passed on, not only among our over 2,400 employees in various locations and divisions, but also from one Bürkert generation to the next. We focus all our curiosity, passion and commitment on one goal: to provide solutions that take your company that essential step forward.

What sets us apart: Closeness

To engineer expert solutions with added value, you need to be close to your customers and their problems—as we are. For us at Bürkert, closeness means personal closeness. We listen to your every word and do everything in our power to devise and implement the best solution for your needs. Closeness also applies in a technical sense. We know exactly what role our products play in your complex processes. Last but not least, we understand closeness in a geographical sense: Our global presence with over 35 branches and seven production sites allows our customers to draw on technological innovations from all over the world.

What drives us forward: Courage

We aim to surpass your expectations. To make it happen, one quality is vital: courage. The courage not just to look forward but to move forward, to challenge conventional wisdom, to do things differently, to tackle problems others think are impossible and to never give up when the going gets tough. We demonstrate this courage time and again. Our wealth of experience is the solid platform on which our courage is based. It allows us to turn courage into creativity, convert off-beat ideas into surprising innovations and put together individual components to create completely new systems that open up unexpected possibilities.





Good from Every Angle: Our Products.

Fluids are fascinating media and it is this very fascination with liquids and gases that drives us to develop ever new devices that can handle them even better. We are one of the few suppliers on the market to cover the complete control loop. Our current product range extends from solenoid valves through process and analytical valves to pneumatic actuators and sensors.

To meet our customers' ever-increasing demands, the people at our four research and development centers constantly work on improving both our individual products and our range as a whole. Products that solve a particular problem perfectly, that offer a true value-added benefit over other products, and that meet specific industry requirements.

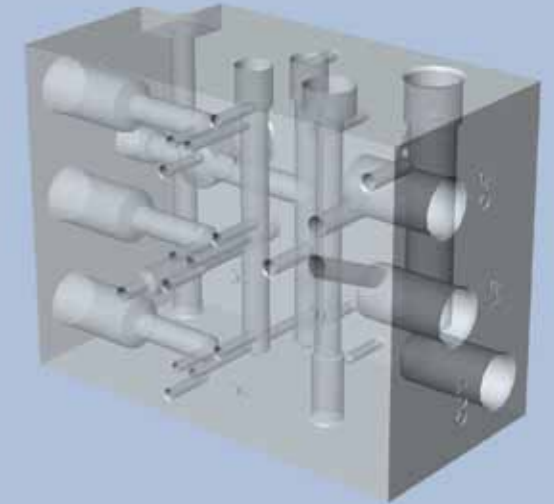
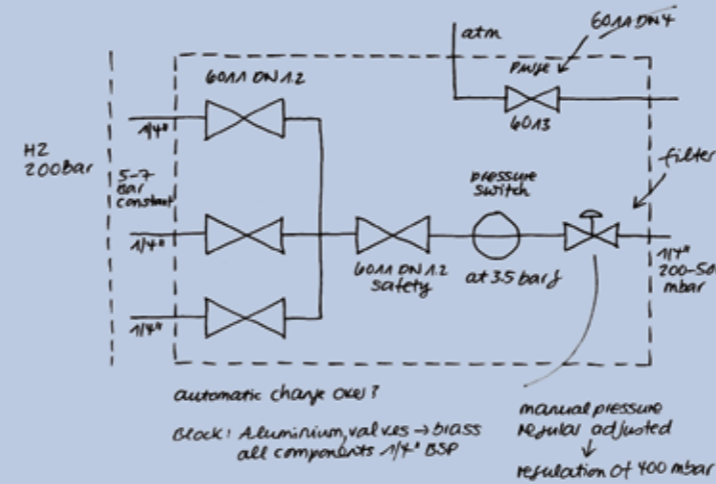
In all aspects of gas handling, we have always striven to steer the latest specifications and requirements, and to be involved with special interest groups that push the industry towards higher standards and improved value for their customers. We believe we have done the work that allows you to conduct your business with peace of mind. When you specify Bürkert you know you will receive real, verifiable, and consistent quality ... quickly.

Innovative, Value-added Solutions Combine the Best of All Worlds.

You can see Bürkert as a supplier who simply provides you with good products. We are happy to fill that role—but what really makes us proud is when you see us as a partner who joins you in getting the job done—however complex. Even if the problem seems irresolvable, challenge us. Put our courage to the test: It's the tough challenges that drive us, moving you and us forward.

Whether with an individual component or a groundbreaking new system for the entire process of measurement and control, we are at your side at all times with a seamless range of services, from consulting and engineering, to installation, testing and after-sales service.

We work with engineering consultants, integrators, contractors, original equipment manufacturers, and end users in a spectrum of industries from analytical devices to metal treatment. We offer expertise in optimized system solutions for laser cutting, powder coating, inert gas welding, glass forming, and gas blending ... in your application language. Speaking a common language eases communication and lays the foundation for your success.



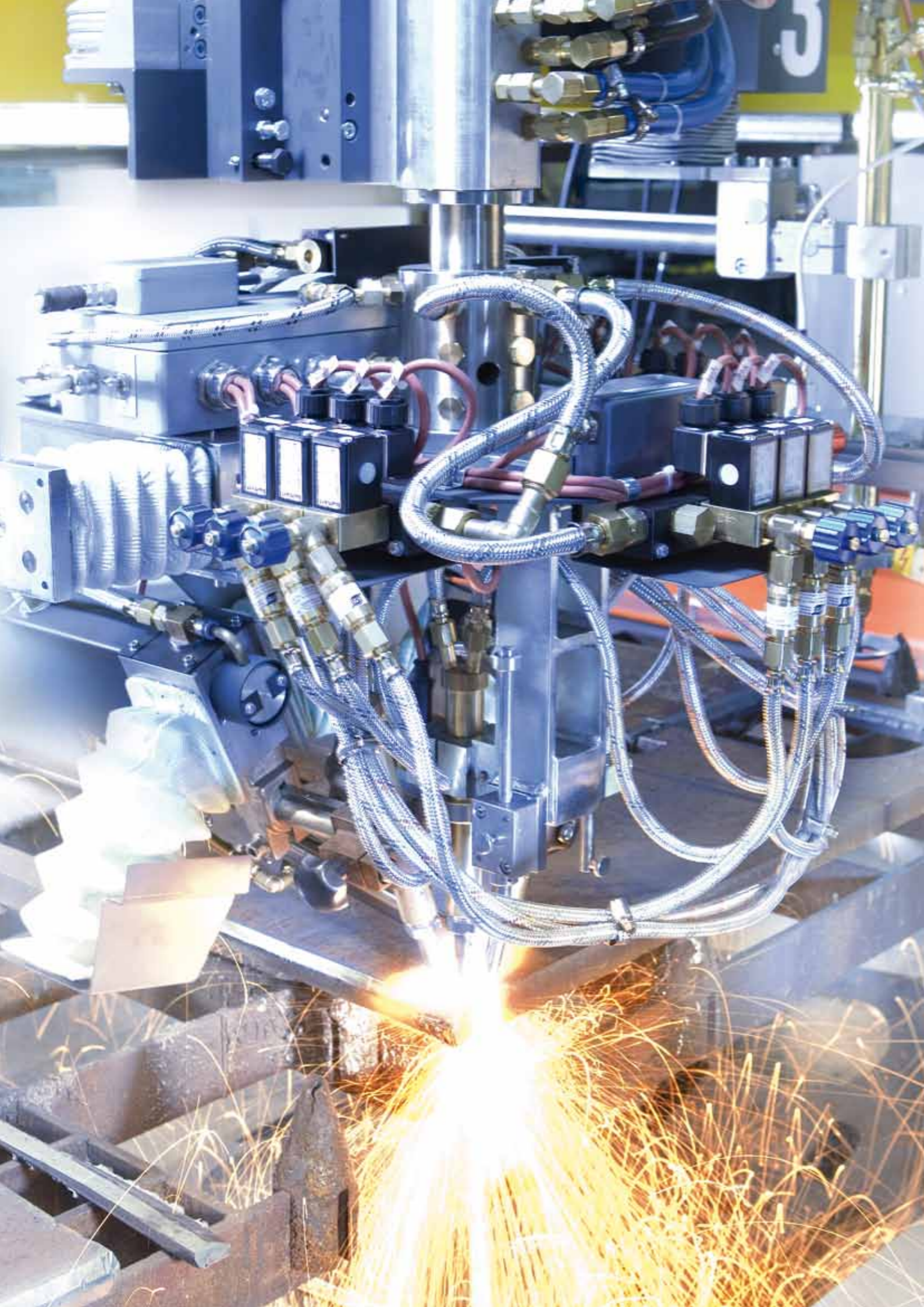
IDEAS & CONSULTING

SIMULATION & DEVELOPMENT

SYSTEM

PROTOTYPE





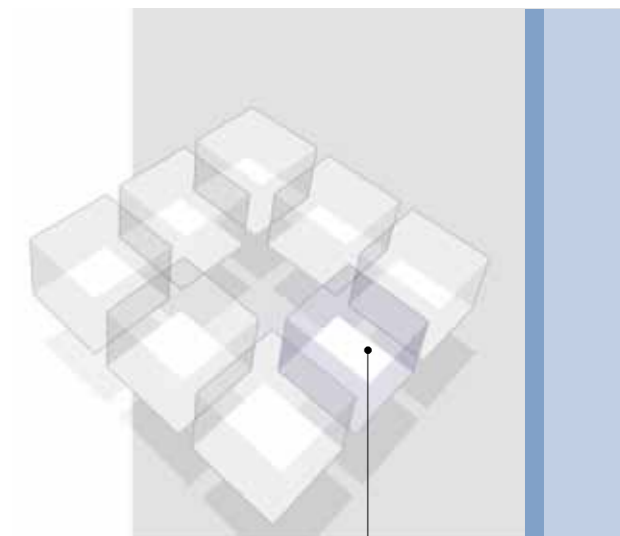
Cutting Edge Innovation.

Flames and plasmas are used in melting, forming, inert gas welding, cutting and brazing to alter the shapes and engineering properties of many different materials.

From machinery that shapes tiny medical glass tubes to heavy equipment for cutting nine-inch steel we have an assortment of technologies which can be introduced from the early design stage to give profitable results.

Through our long experience, we have developed a portfolio of efficient methods to control and monitor your most complex multi-channel processes. We have employed specific ramp functions and PID to control flames, developed the span of control for plasma applications and provided fast tight shut-off with the right approvals.

Tomorrow will require higher levels of safety and only the best quality. Bürkert is ready to help you tackle the future, to help you out-design your competition.



Sparking new ideas—oxyfuel.

Segment Gas teams in 35 countries are ready to help you.



2835 solenoid control valve with up to 8mm orifice size



Customised oxyfuel cutting control system



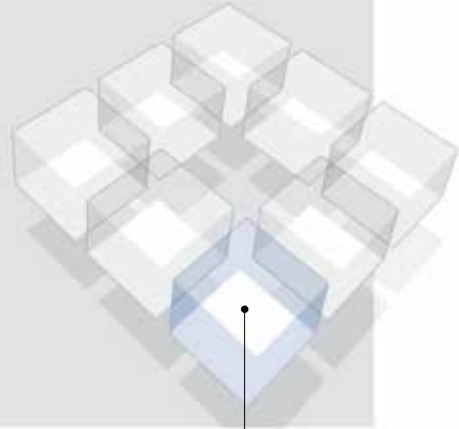
5404 rugged, reliable solenoid valve

A middle-aged man with grey hair and a beard, wearing a light blue button-down shirt, stands in a factory or industrial setting. He is holding a black electronic component with orange connectors. The background is filled with industrial machinery and bright lights, creating a blurred effect.

EXPERIENCE

There are things which are not inherently yours. You have to gather them bit by bit, you receive them from others, and you constantly have to acquire them anew. That is what makes them so valuable. Experience is one of those things. For instance, because of our many years of experience with gases, we can provide our extensive services to you—from consulting, development, and installation to testing and after-sales service. Be it with individual product solutions or a pioneering new system for the entire measurement and control process: Benefit from our experience!

Protect and Serve.



Diffusion depth control.

In heat treating, melting, nitriding, and carburising, throughput and reliability are key drivers. Lean, just-in-time operations demand process security, subsystem feedback and flexibility.

As industry trends push equipment manufacturers from manual to automatic control to fulfill requirements in terms of traceability, documentation and reproducibility Bürkert can be counted on to help you lead the way.

As well-established gas control partners we can optimize the integration of specific system solutions and help you deliver better results. In ammonia control, sintering, or endogas production we take on your most complex applications to assist in your operations to change material properties.

Protective gas production and use.



6027 corrosion resistant solenoid valve



8626 low Δp mass flow controller



8719 liquid flow controller e.g. for methanol or de-mineralized water





Stoichiometric Perfection.

Working hand-in-hand with a host of international clients we have developed some of the most advanced gas blending equipment in the world.

We control protective or reactive mixtures by combining various in-house technologies including thermal mass or differential pressure flow and precision solenoid control valves to form perfect loops. Each of these loops or subsystems offers documented ratio control with millisecond reaction times and importantly, fewer sealing points.

Our customers have made lasers burn brighter, made food look better and have delivered ground-breaking equipment to fine chemical and biotech industries. The system operator benefits from high levels of repeatability and flexibility without the cost of expensive, less stable pre-mixed gases.

Mix our technologies to create your perfect loop.



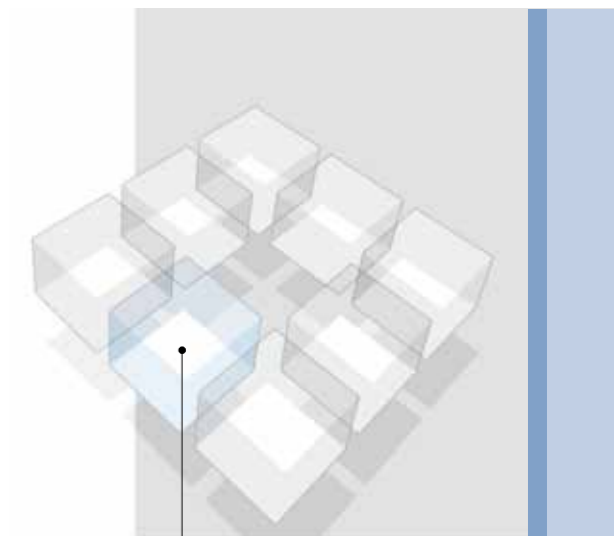
Integrated and electronic blending system



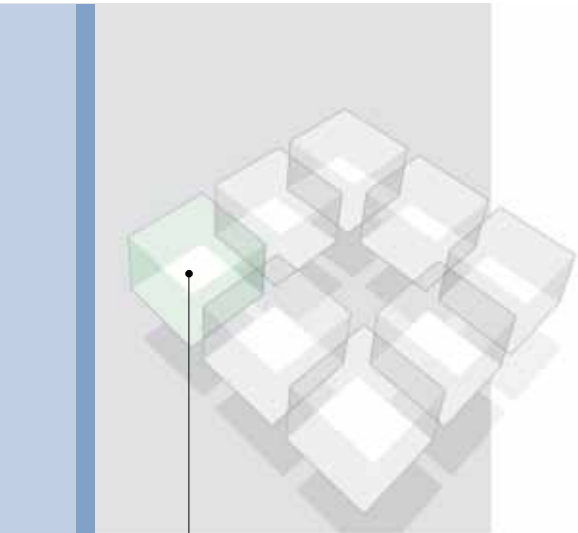
Electronic five channel gas blender



Mass flow controller type 8711 on a standard three channel manifold



*Fermentation—
A culture for innovation.*



*From target to substrate.
We are on hand and on call.*

Form and Function Together.

The most basic definition of quality is that a system should be "fit for purpose". To that end we constantly aim to improve the characteristics of our available materials to meet the challenges as they arise.

To improve quality, material surfaces can be altered to display the correct hardness, conductivity, wear behavior, friction or aesthetics.

Parts for mobile phones, aircraft, glasses, displays, beverage bottles and cars can be modified with a range of technologies from PA-CVD and thermal spraying to PVD and powder coating. For these systems, Bürkert offers the complete spectrum of components and sub-systems to handle a wide range of both gases and vacuum.

Closeness is the key to building superlative systems. We are one team with you wherever you are. Global expertise ... locally.

We work in a range of industries applying our broad-ranging knowledge.



*2833 solenoid control valve
with control electronics 8605*



*8644 WAGO process
control center*



*8711 fieldbus enabled
mass flow controller*





COURAGE

Those who only work toward optimizing things that already exist will eventually reach the limits—technically, financially, or personally. In order to overcome these limits, courage is needed: The courage to be different and trust one's own ideas; the courage to venture into the unknown, searching for new ways to develop products that have never existed before. We have this courage. By pooling and utilizing our competencies across all sectors, you benefit from our cumulative knowledge of gas management—whether it is in nitriding or coating cola bottles.

Healthy Attitude.



*Health—
under control.*

Just as an anaesthetist or a surgeon needs practice and experience, we have over the years gathered gaining expertise in a wide range of medical applications, from respirator technology, dentistry and anaesthesia to insufflators for keyhole surgery.

We have direct experience in a range of applications from gas mixing and distribution to systems for sterilizing and endoscope testing.

For every client, fully customized products and systems are created from our wide range of standard technology. Fast, clean facilities house both engineering and tool design. Rapid prototyping and 3D printing allow you to integrate complex ideas and modules with simple approval, validation and traceability into your next great medical advance.

Reliable health care through perfect electronic support.



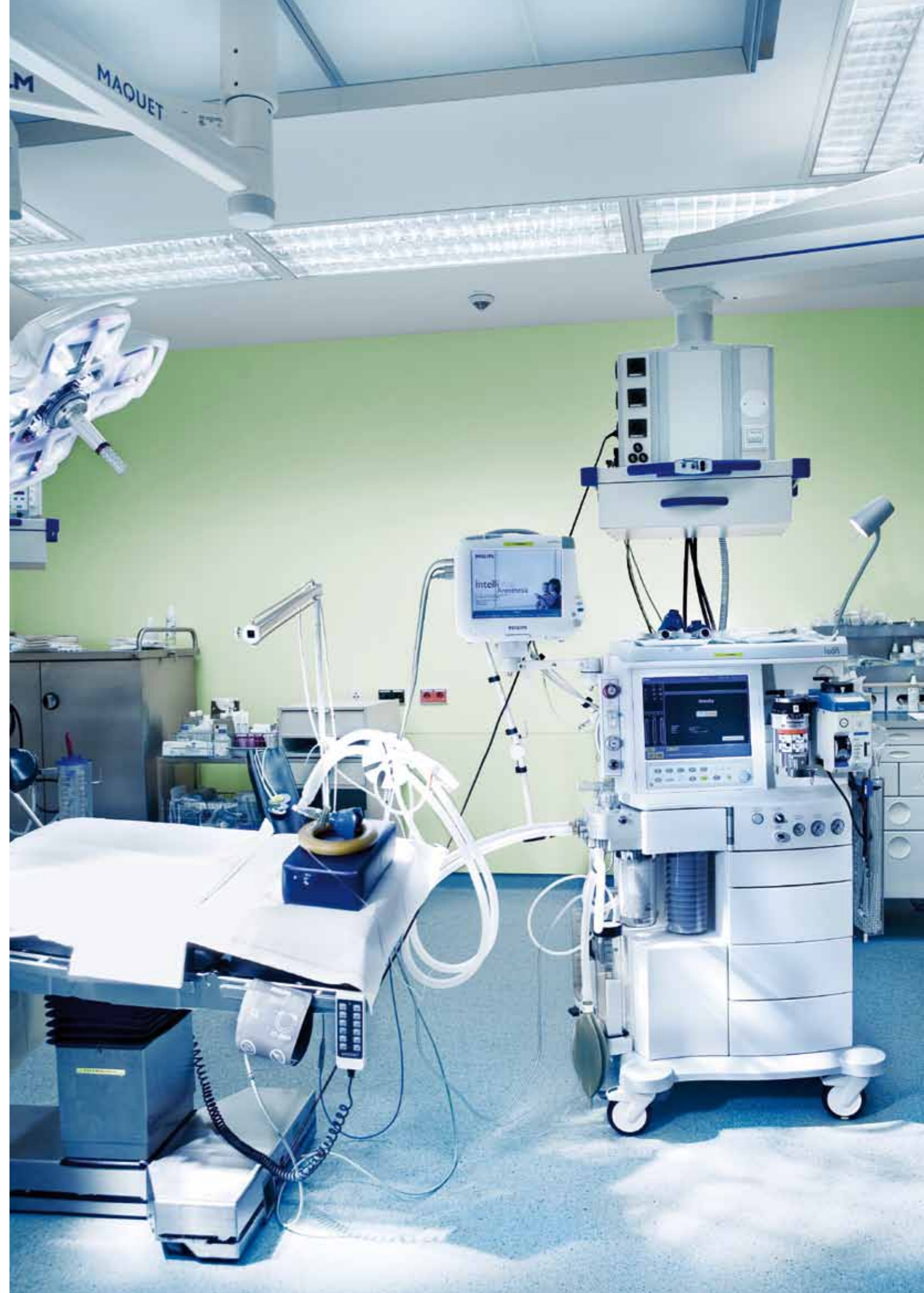
*DIN rail electronics for
miniature control valve*



*Control valve block solution
for dental applications*



*Diaphragm isolated
solenoid valves*



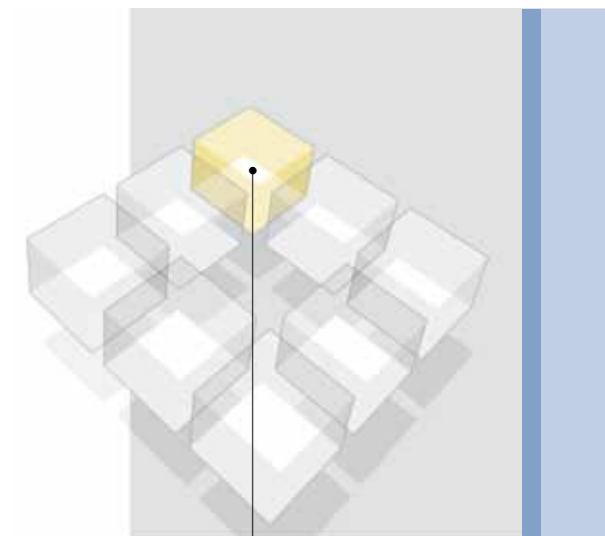
Discover the Future.

Tomorrow's analytical equipment will demand faster, more precise and less expensive solutions. Bürkert is ready to help you tackle the future.

Manufacturers of analysers (AAS, GC, ICP, MS ...) know that their reputation is key. High throughput systems allow more samples to be taken but are also the basis for faster and more efficient analysis.

Precision, reliability, repeatability, and flexibility are the cornerstones of gas analysis and from concept to production Bürkert is committed to the success of your latest highlight instrument.

We help you explore the boundaries of science.



The flame tells the story.



Simple isolated manifolds

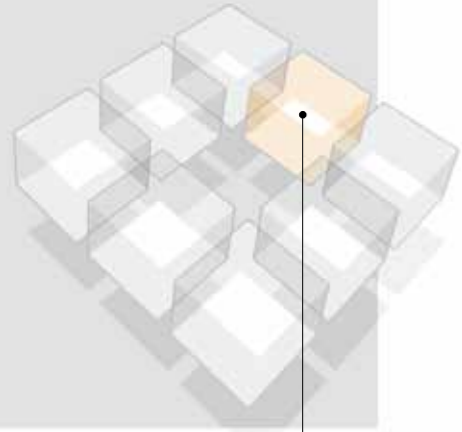


Gas control block



8713 manifold mount MFC

Clearer Future.



*Bürkert inside ... embedded
in many new energy systems.*

Bürkert has been involved in many innovative fuel ideas from biofuels to wind energy and we have always been closely involved in fuel cell technology. Our isolated solenoid valve technology was at the heart of the first solution to successfully tackle harsh water conditions.

Both inside the automobile industry and out we have dealt with the demands of reformers and uninterruptible power supplies, deionized water and high pressure gases to meet our clients' next generation requirements. Gases like silane need high leak tightness and serve the more efficient production of solar cells or panels for photovoltaics. System technology including tools, molded parts, manifolds, ultra-low power coils, sensor technology, lightweight valves and control electronics have sprung from numerous development partnerships.

We are glad to be able to contribute to lowering emissions and providing a clearer future for our children.

New, clean energy requires a whole new infrastructure.



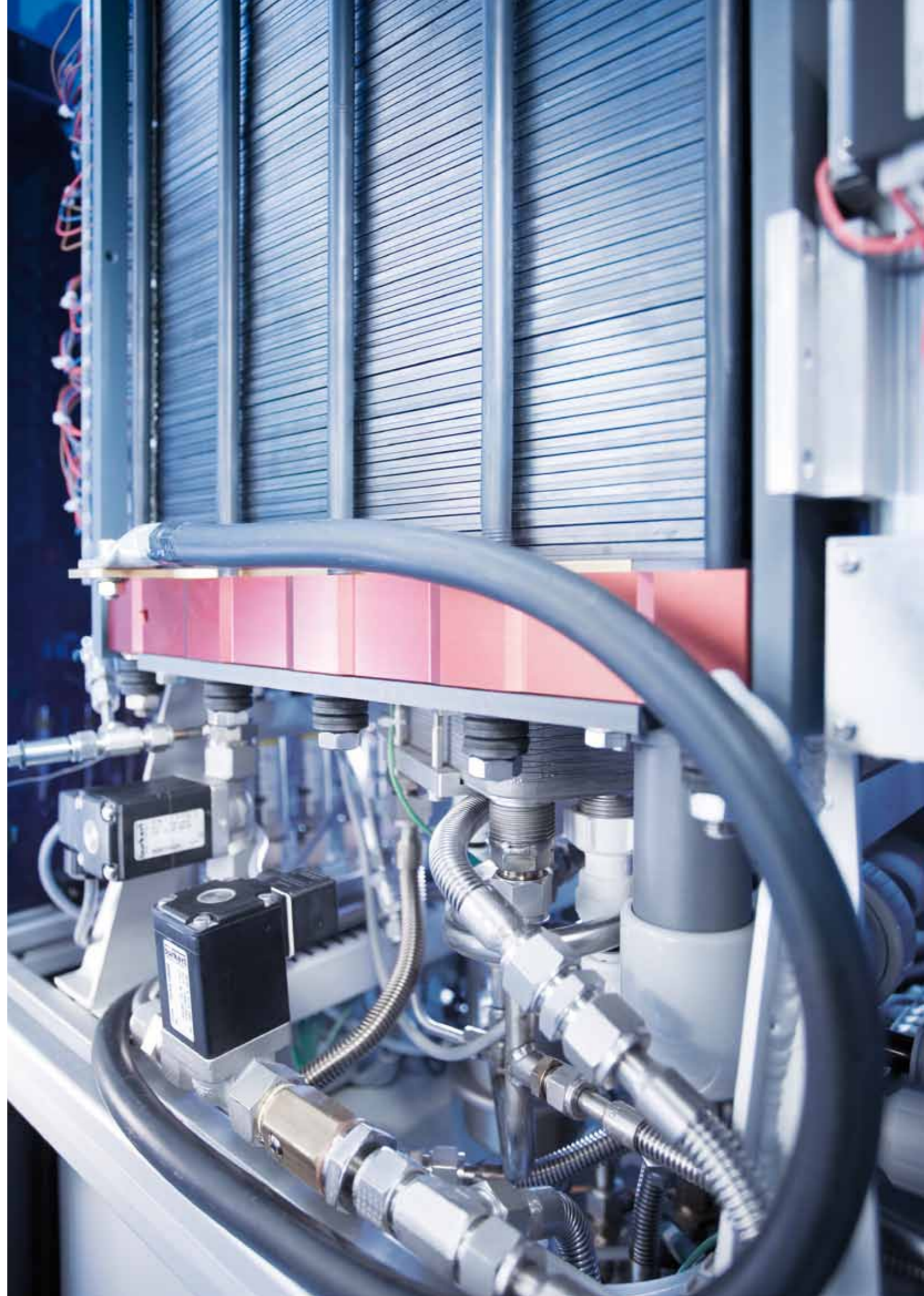
330 isolated valve
technology



8718 liquid flow controller
for low flows



6608 rocker valve 22mm



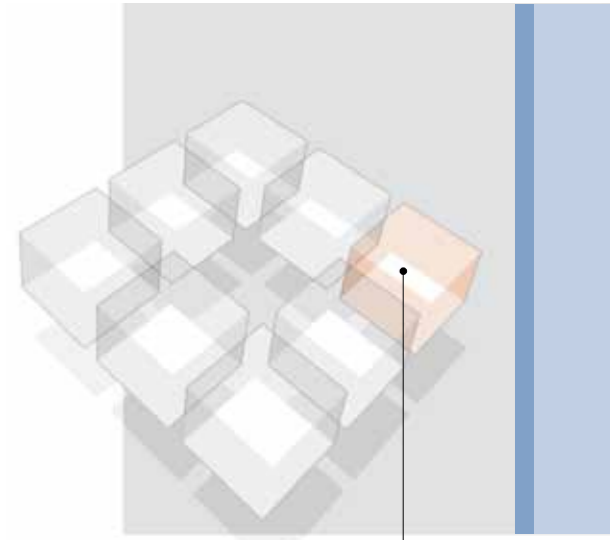


Air ... Simpler.

Bürkert's continuous innovation has produced a range of equipment which has become the standard for compressors and dryers. Our intelligent, space-saving engineered solutions, coupled with supply-chain services, are relied on by top-level international manufacturers, offering process security and peace of mind.

We speak the language of adsorption, purification, compression, blowdown and separation and our valves, sensors and controllers are deployed in a wide range of sizes with the right certifications, norms and standards.

When the pressure is on Bürkert, personnel are on hand to help you design the optimum solution.



Taste the success.

Pneumatic conveying with chocolate manufacture.



8006 large mass flow meter



8750 flow controller for conveying



8611 air controller



CLOSENESS

There are things we simply take for granted. Only when they are gone, do we realize how important these things really were. This applies in particular to closeness. Without closeness, it is very difficult to build relationships and a good understanding of one another. As an established medium-sized company, we know that. That is why we are always there for you. Working with you, we develop the best possible solutions for your projects in the world of gases. Our global presence in 35 locations enables us to press ahead with technical innovations for our customers around the world.

Bürkert – Close to You

For up-to-date addresses
please visit us at
www.burkert.com.



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