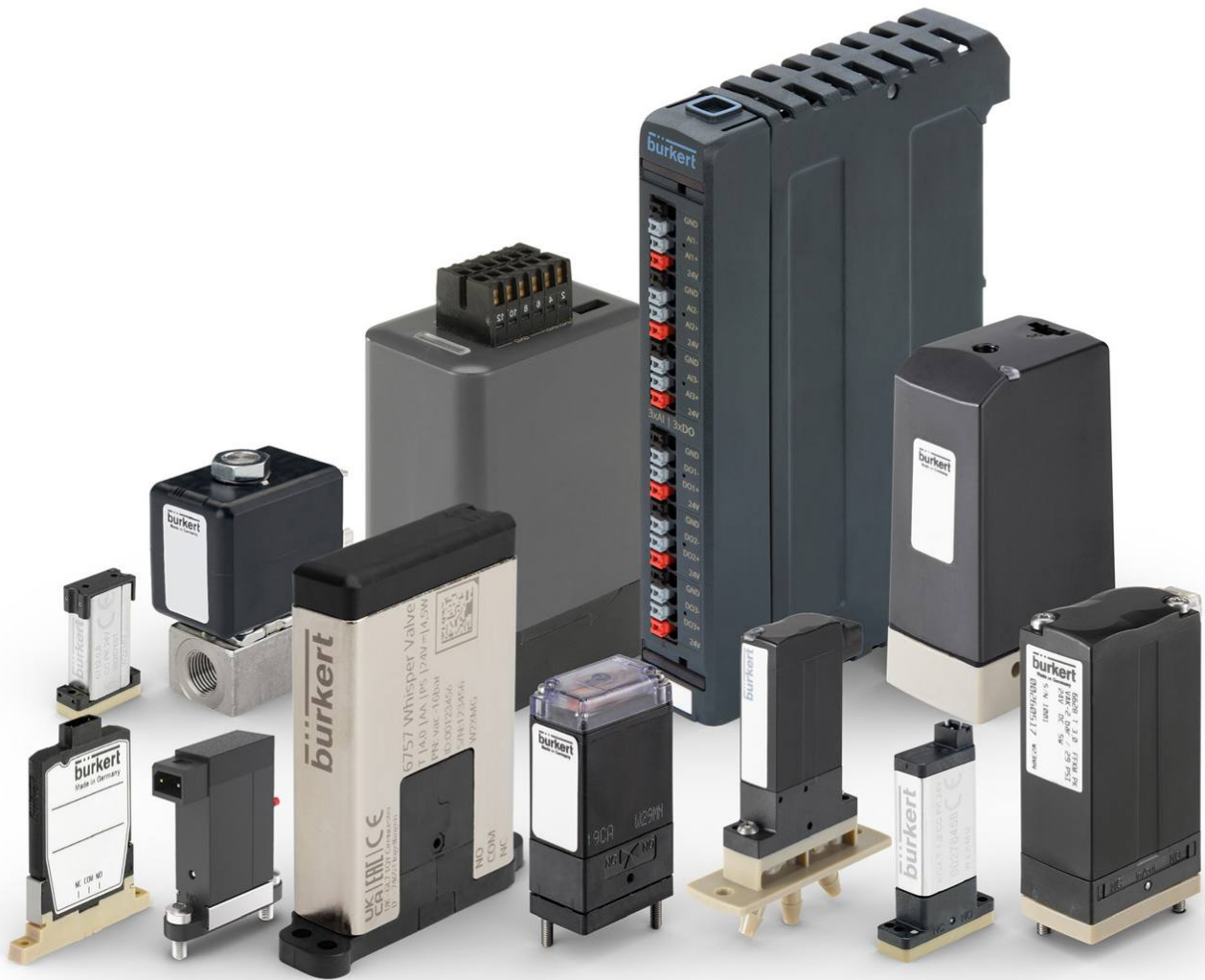




MicroFluidics

Product range overview

Pioneers of Flow.

bürkert
FLUID CONTROL SYSTEMS

Contents

How Bürkert technology benefits you	4
Valve actuator technology	6
Flipper valve	8
Technology innovation: ValveInsight	11
Rocker valve	12
Latching valve	15
Plunger valve	16
Proportional valve	18
Valve selection table	20
Technology innovation: Microsensors	21
Time-pressure dosing	22
System innovation: µLDC	25
Customisation & development	26
Automation & digitalisation	32



Bürkert: the right choice for your MicroFluidics.

Bürkert is one of the world's leading suppliers of measurement and control technology. No challenge is too large or too small for us when it comes to MicroFluidics. The knowledge we have gained in the field of laboratory and medical technology is combined with the innovative strength of our developers – more than one hundred of them in total – and a very high level of vertical integration.

All of this enables us to create the ideal solution for your specific challenge – with short development cycles, as a fully tested system that is perfectly tailored to your device. You can rely on us to do our job so you can focus your energy and capacity on what's important: your business.

How Bürkert technology benefits you

Bürkert has been working in the field of MicroFluidics since 1993, and the experience we have accumulated makes us an expert partner for solutions involving the smallest quantities of liquid. In order to take account of the specific challenges relating to miniaturisation and the application area, the following criteria are central to our work when developing new solutions:

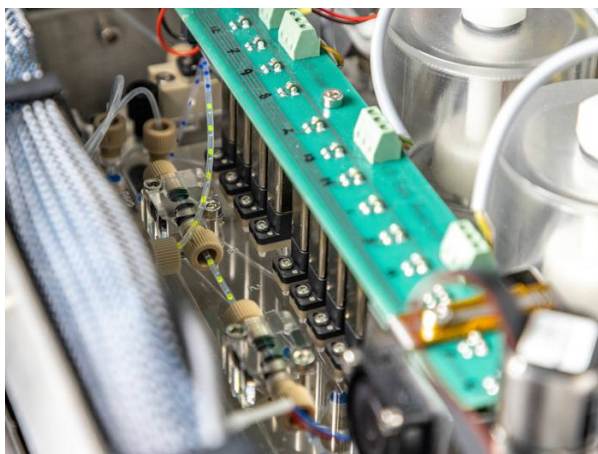
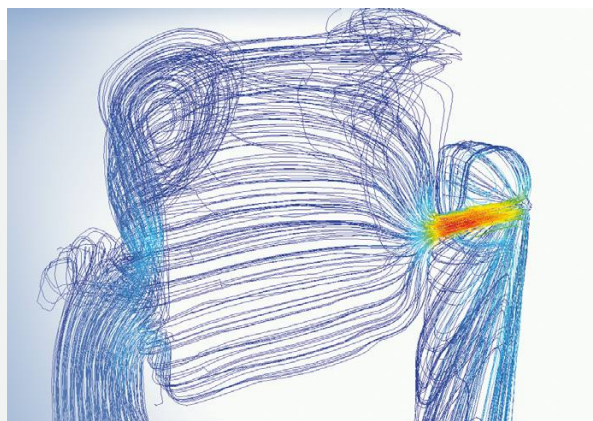


Optimum precision

In the world of microlitres, precision and reproducibility are a must. With innovative solution concepts and high-precision production, Bürkert is able to fulfil the requirement for fast and reproducible switching times as well as a long service life.

Excellent rinsability

Especially when handling biological media, it is important to prevent substances from being carried over and avoid contamination. Bürkert products offer excellent rinsability thanks to a design with minimum dead space, optimised flow and highly precise form construction.

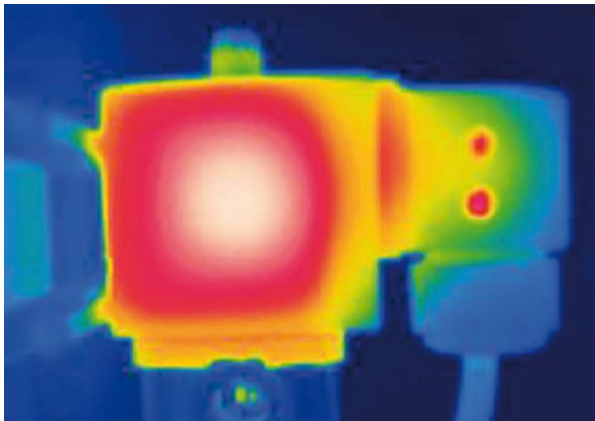


Low internal volume

The more valuable the resource, the more efficiently it needs to be used. When developing standard components and individual systems, Bürkert therefore focuses on minimising the internal volume. Not only does this allow us to improve the rinsability of the system, it also maximises the use of the fluid that flows through.

Outstanding chemical resistance

Whether you are working with cell suspensions, acids or highly concentrated solvents, Bürkert's solutions cover a broad range of applications with a wide variety of materials. With its own chemical laboratory as well as application and tool specialists, the company can be relied upon to provide the right choice even in the case of critical applications.



Low input of heat into the medium

To prevent the uncontrolled entry of heat into the medium, our Bürkert products consistently isolate the coil and fluid chamber. The optional integrated power reduction can be used to reduce heat development.

Everything works together: the structure of a valve

Communication

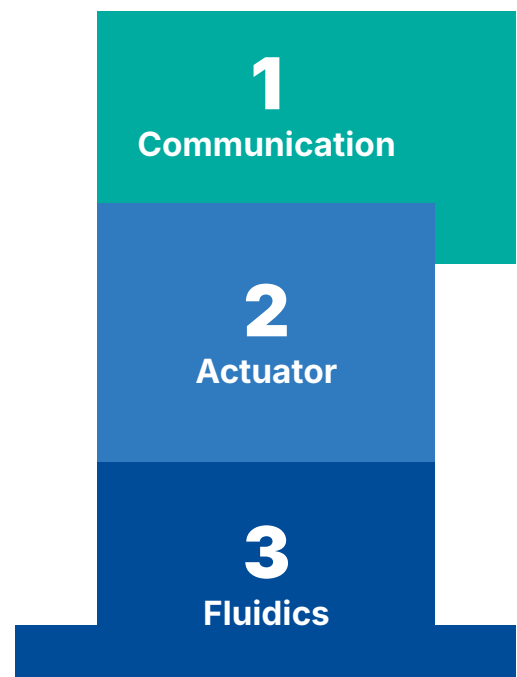
The valve is connected to the controller via a communication interface.

Actuator

The actuator technology opens or closes the valve.

Fluidics

The medium flows in the fluidic channel. The valve is a flipper, rocker or plunger valve depending on the fluidic functional principle.



Valve actuator technology

Whisper technology

Never before has it been possible to control solenoid valves so precisely. Never before have they been so fast. Never before have we been able to analyse so much data from the valve. All this is possible with the innovative Whisper actuator. High-precision valve control and diagnostic functions provide you with many new functions for your application.

Normally, solenoid valves in microfluidics are actuated by increased power, which is reduced in the holding phase by hit-and-hold electronics. The Bürkert Whisper Valve does not require a power reduction, as the power consumption is at a reduced level from the outset. Low power consumption also means less heat development in the coil. The Bürkert microfluidic valves are therefore designed for 100% continuous operation. As a result, you do not need to incorporate waiting times into the process.

Properties

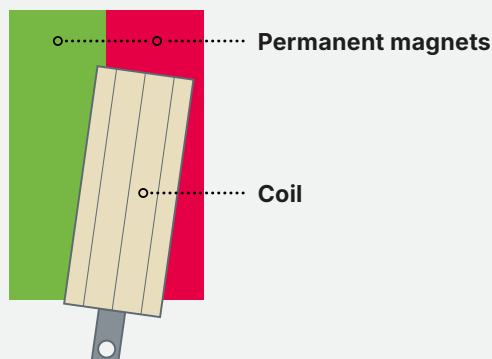
- Quiet
- Extremely fast switching
- Low power consumption
- Combined On/Off or proportional function
- Extensive diagnostic capability

Principle of operation

In Whisper Valves, the coil moves in a constant magnetic field generated by permanent magnets. The movement of the coil in the permanent magnetic field is proportional to the coil current.

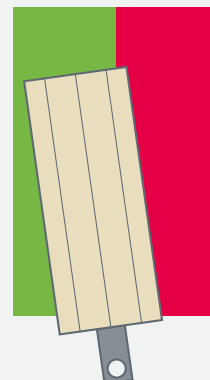
Normally closed

(held in place by a spring)



Valve open

(current flows)



Reluctance actuator

The classic coil enables reliable and economical switching of liquids in a wide variety of devices. The proven technology is used wherever the smooth operation of fundamental functions is required.

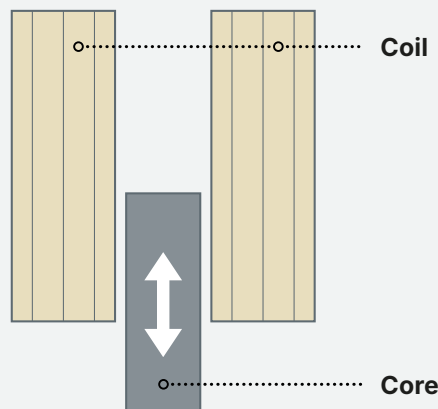
Depending on the application, it is possible to reduce the power consumption and especially the heat generation of the valves by means of pulse-width modulation. The classic solenoid valve actuator can be combined with various fluidic switching variants such as those with plunger, rocker or flipper designs.

Properties

- Economical
- Robust
- Reliable

Principle of operation

In classic solenoid valves, coils generate a magnetic field that sets a core in motion. This means that the valve has two defined states: "open" and "closed".



Flipper valve

The core of flipper valves is an elastomer-coated metal tongue. This “flipper” is rotatably mounted in the fluid chamber and alternately closes one of the two opposing valve seats.

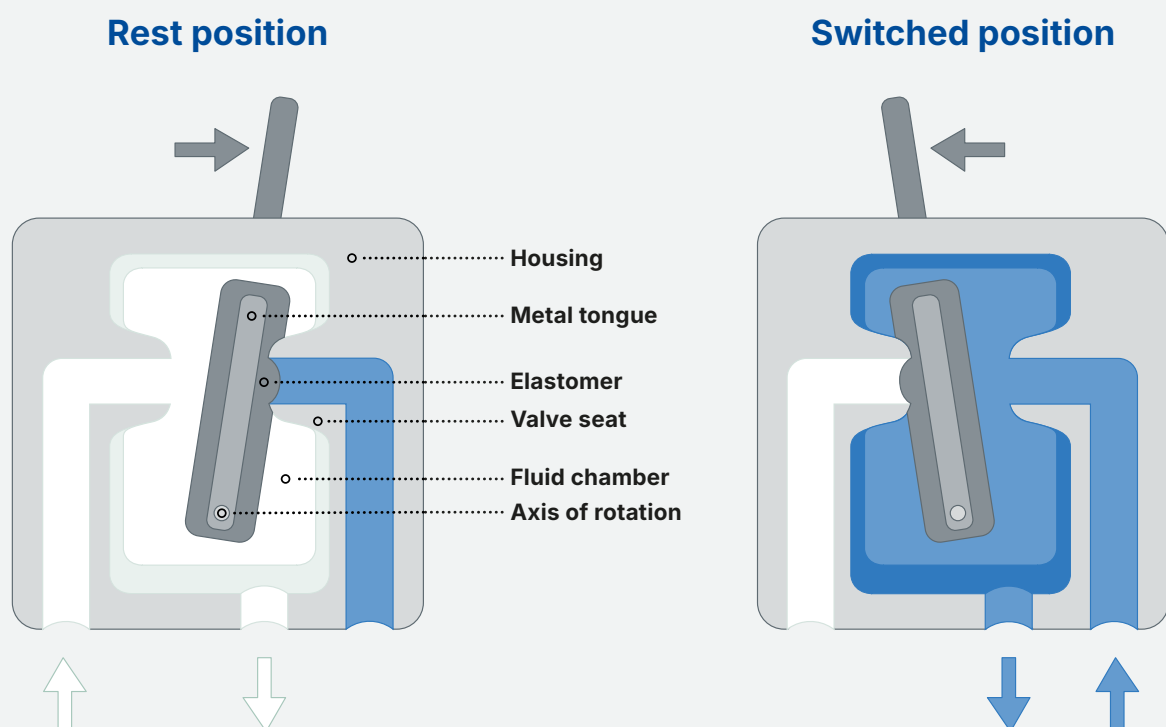
Like valves with a diaphragm, flipper valves offer complete separation of medium and actuator. However, there is no pumping effect when switching. Since there is no diaphragm flexing, the flipper technology enables particularly short and reproducible switching times and a very long service life.

This makes the valves ideal for applications where very precise dosing is required. Due to minimised elastomeric surfaces, flipper valves also reliably seal back pressures that are higher than the nominal pressure.

Properties

- Very short and reproducible switching times
- Pulsation-free
- Low power consumption
- Media separation
- Long service life

Flipper technology for 3/2-way valves





Type 6650

- Only 4.5 mm width per station
- Media-separated, for aggressive media
- Direct-acting
- Vacuum up to 7 bar
- Reproducibly fast switching



TYPE 6650

2/2-way flipper solenoid valve with media separation

With its small width per station of 4.5 mm, Type 6650 sets a new standard in the miniaturisation of media-separated solenoid valves. With the two nominal diameters of 0.4 and 0.8 mm, the valve is ideally suited for applications that have the highest fluidic performance demands in the smallest space.



Outstandingly precise dosing thanks to fast and reproducible switching



Very long service life



Uniquely compact installation width



100% continuous operation possible with power reduction



Type 6144

- Direct-acting
- 0 to 10 bar
- Low electrical power consumption
- Standard, Ex-ia version
- 10 mm installation width / 11 mm width per station



TYPE 6144

3/2-way flipper solenoid valve, direct-acting

Type 6144 is a direct-acting 3/2-way solenoid valve designed for neutral gases and liquids and is particularly suited to use in pneumatics. Thanks to a pressure resistance of up to 10 bar, it is suitable for many different applications and also offers many other options including a latching version and an Ex-ia explosion protection type.



Uniquely long service life



Latching variant available



Huge range of variants for customised solutions



THE pneumatic valve



Type 6757

- Large pressure range up to 16 bar
- High back pressure tightness
- Proportionally controllable
- Very fast switching at a low noise level



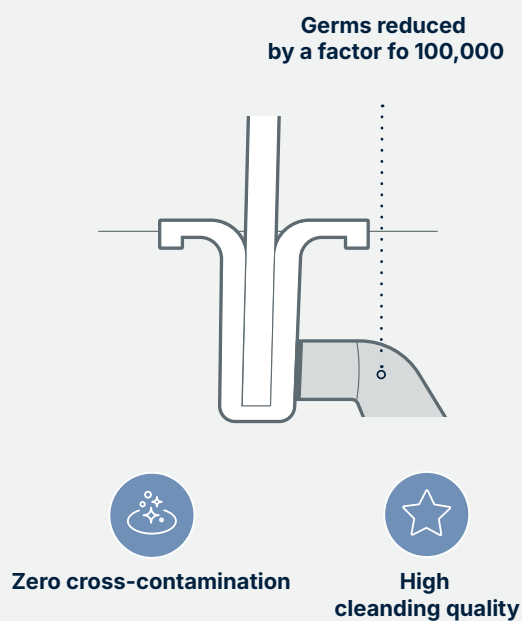
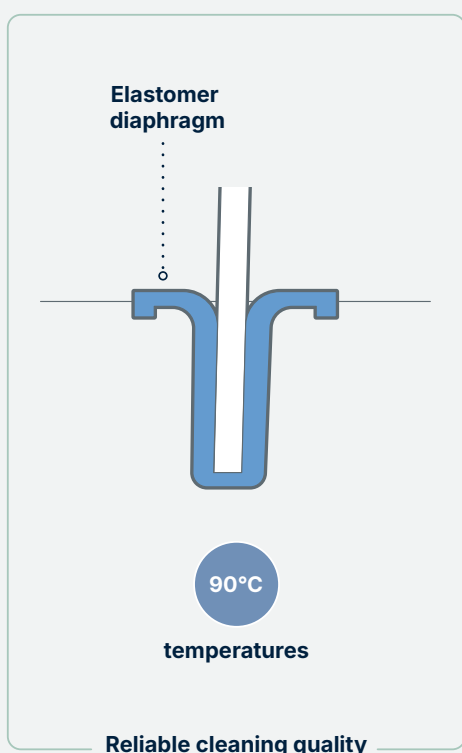
TYPE 6757

2/2 or 3/2-way Whisper Valve with media separation

Our Type 6757 flipper valves can be used reliably at high temperatures. Rinsing and disinfection cycles can thus be carried out in a time-optimised manner without compromising on quality and performance. Depending on the variant in question, the switchable pressure range goes up to 16 bar – opening up new possibilities in fluid control.

 Disinfection at 90°C possible (CIP)	 Very high pressure range
 4 mm nominal diameter with outstanding flow rate values	 Extremely fast switching

Can be used in high temperature ranges



Technology innovation

ValveInsight

In medical and analytical technology, the operation of devices must be monitored, as malfunctions can have serious consequences. As a partner for innovative and sustainable fluidic solutions, we support the entire control loop. Thanks to their innovative actuator technology, our Whisper Valves now offer the option of valve diagnostics for reliable processes. ValveInsight encapsulates these valuable diagnostic functions.

Medical diagnostics and treatments are often based on blood tests carried out in a laboratory. Therefore, these analyses must be absolutely reliable. If the wrong volumes of reagents are dosed, this will distort the analysis results. However, it is not easy to detect such errors, especially if the dosing valve switches only with a slight delay because crystallisation has occurred in the device.

This is where ValveInsight comes in. AI-supported analysis of the input current can provide information about the switching behaviour and switching duration of the valve.

This makes it possible to detect anomalies in the process (e.g. cable break and unusual behaviour) as well as altered process conditions (e.g. viscosity changes due to temperature changes or a sudden pressure drop). Countermeasures can therefore be initiated quickly to ensure normal process quality.

With ValveInsight, our Whisper Valves can perform tasks that can otherwise only be performed with additional sensors. This provides greater safety in your device – as well as in other medical applications where the switching behaviour is crucial for the safety and reliability of the devices.



Whisper Valves series (Types 6712, 6724 and 6757)

Find out how you can make the most of ValveInsight!

Our white paper explains the technical and physical background:

➔ www.burkert.com/ValveInsight



Monitor switching behaviour



Improve the reliability and quality of analyses



Ensure process quality through early detection of errors



Benefits of unique actuator technology

Rocker valve

In rocker valves, the valve seats – which lie in one plane here – are closed alternately by means of a rocker construction. Due to the rocker principle, the valves demonstrate particularly high back pressure tightness.

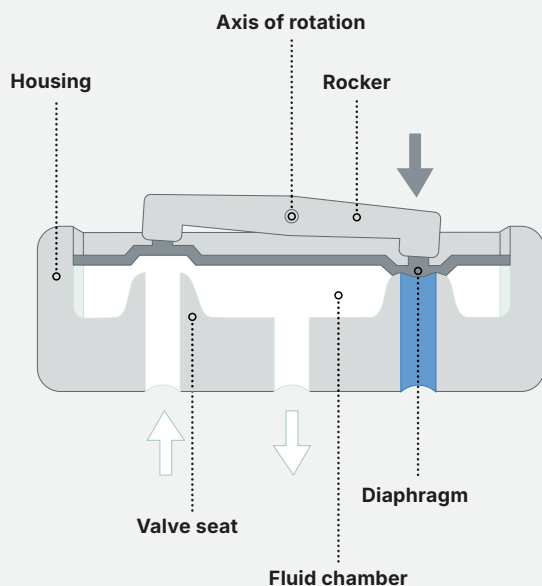
In addition to non-media-separated valves for pneumatic applications, the principle also allows the reliable separation of medium and actuator using a diaphragm. In contrast to other diaphragm valves, the design principle enables the valve seats to be securely closed even at high back pressure. Thanks to their tolerance-optimised design, small internal volume and the excellent rinsability of the fluid chamber, the media-separated Bürkert rocker valves are particularly suitable for use with biological media.

Properties

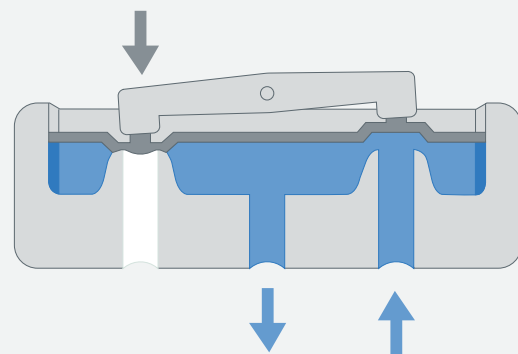
- Excellent rinsability
- Minimum internal volume
- High back pressure tightness
- Media separation

Rocker technology for 3/2-way valves

Rest position



Switched position





Type 0127

- Compact design measuring 16 mm in width per station
- Proven reliability since 1993
- Flexible design for custom-er-specific applications
- High back pressure tightness and 100% duty cycle



TYPE 0127

2/2-way or 3/2-way rocker solenoid valve with separating diaphragm

Our pioneer of media-separated rocker valves has been setting the standards in the field of laboratory, medical and analytical devices since 1993. The valve guarantees precise switching of tiny volumes of even aggressive media with the lowest possible temperature input. It is also very easy to rinse and is characterised by its minimal internal volume and lack of dead space. This valve offers you maximum flexibility through a variety of material and component variants.



Huge range of variants for customised solutions



Universal valve



Variance in materials that come into contact with media



Reliable quality leader



Type 6624

- Ultra-compact design measuring 10.3 mm in width per station
- DN 0.8 (5 bar), DN 1.6 (2 bar)
- Integrated hit-and-hold electronics
- High back pressure tightness with excellent rinsability



TYPE 6624

2/2-way and 3/2-way Bürkert TwinPower rocker solenoid valve with separating diaphragm

The TwinPower actuator concept enables a drastic reduction in installation space while maintaining the same performance data. Hence, the 10 mm wide media-separated rocker valve, with 1.6 mm nominal diameter and a pressure resistance of 2 bar, provides the same performance as a traditional 16 mm device. In addition, the integrated power reduction decreases energy consumption by 75%.



Best flow rate in this installation width range



Integrated power reduction



Small installation space



Suitable for use with aggressive chemicals



Type 6724

- Maximum chemical resistance
- Compact design: 8.9 mm installation width
- Nominal diameter (vacuum): 0.8 mm (up to 5 bar) and 1.2 mm (up to 3 bar)
- Very fast, almost silent switching with < 20 dB (A) and very low power consumption
- High back pressure tightness, excellent rinsability and 100% duty cycle



TYPE 6724

2/2 or 3/2-way Whisper Valve with media separation

A diaphragm separates the fluid chamber from the actuator, enabling the switching of aggressive media. Its practically silent switching makes this valve perfect for use in the laboratory or in medical devices, because the patient is not bothered by obtrusive switching noises. Thanks to its modular design and the possible material variants, the valve can be used universally.



ValveInsight
and proportional
control with media
separation



Latching version
available for
non-measurable
media heating



HCR variant for
maximum chemical
inertness



The latest
generation
of universal
valve



Type 6628

- 22 mm compact design up to DN 3.0
- Separating diaphragm for high chemical resistance
- Back pressure tightness achieved by rocker principle
- Minimum internal volume with good rinsability



TYPE 6628

2/2-way and 3/2-way Bürkert TwinPower rocker solenoid valve with separating diaphragm

This direct-acting, media-separated rocker solenoid valve is ideal for controlling aggressive liquids and gases in medical analysis technology, the food industry and the chemical industry during dosing, filling, mixing and distribution. Due to the separating diaphragm, the medium in question only comes into contact with the housing and seal material. With the TwinPower actuator, robust fitting and 22 mm width, this valve meets the most stringent requirements.



Material conformity
in line with UPS
(Chapter 87) with
PEEK/PPS and
EPDM



Best rinsability
in its class



Excellent flow rate
for its size



Full back
pressure
tightness

Latching valve

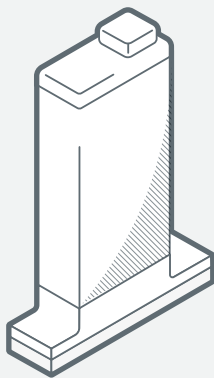
The Bürkert latching valve requires only a brief electrical pulse to open and close. The switching positions are held without current by means of a permanent magnet.

Because the switching positions are held without current, there is no need for our Type 6724 latching valves to be permanently supplied with power – as is the case with conventional solutions. This saves energy during battery operation and prevents heat input during precise measurements. In this way, even temperature-sensitive media can be safely controlled.

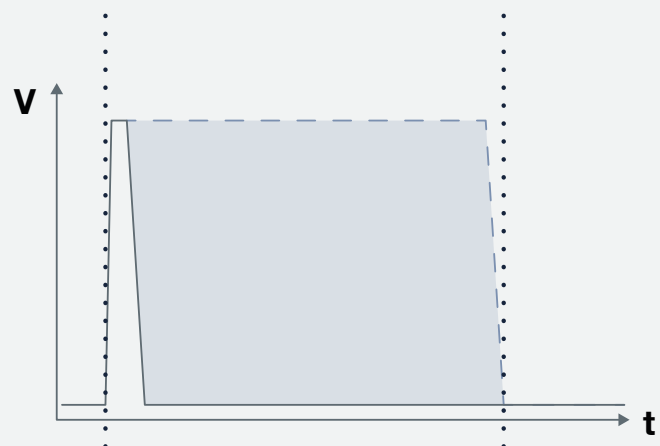
Properties

- Low power consumption
- No heat input into the fluid
- No downtimes

Low power consumption



1 pulse = 500 ms x 1.25 W = 0.625 Wsec
Hold for 100 sec = 0 W



100 sec x 1.25 W = 125 Wsec

Plunger valve

The main components of this valve type are a coil, a closing spring, a valve body cover and the valve body with valve seat.

Without power, the path from the inlet to the outlet is blocked (normally closed) because the closing spring presses the core onto the valve seat.

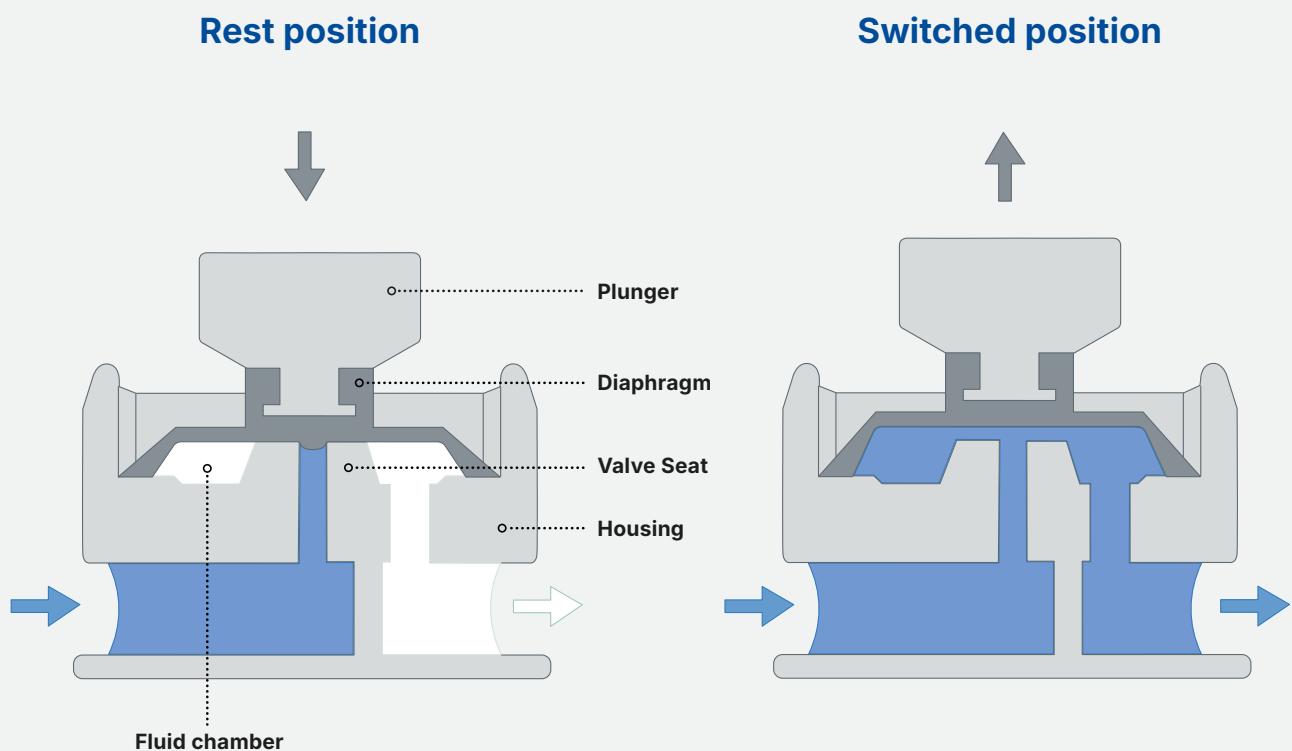
When current flows through the coil, it generates a tightening force that pulls the core and seal upwards against the spring force and the media pressure. The path is cleared for the medium.

With a separating diaphragm, these valves are used to control gases and liquids in analytical applications. With particularly high-quality sealing and body materials and a separating diaphragm, these valves are ideal for switching aggressive and high-purity media.

Properties

- Long service life
- High pressure and temperature range
- Increased switching frequency

Plunger technology for 2/2-way valves





Type 6712

- Optimal chemical resistance combined with minimum internal volume
- Compact design with 7 mm installation width
- DN 0.8 mm (3 bar) and 0.4 mm (5 bar)
- Switching noise < 36 dB
- For dosing applications with excellent rinsability



TYPE 6712

2/2-way Whisper Valve with media separation

Fluidic applications close to use, for example on the pipetting arm in bioanalysis, have special requirements. The media-separated Whisper Valve Type 6712 was developed precisely for these applications. Thanks to its modular design and the possible material variants, this valve can be used with virtually all liquids and gases in life science and industrial applications.

 Excellent rinsability	 Very low internal volume
 Outstandingly precise dosing thanks to fast and reproducible switching	 Compact design with 7 mm installation width



Type 7011

- Direct-acting and compact small valve up to a nominal diameter of DN 2.4
- Slipped over coil system
- Simple and fast flange or manifold mounting
- Quick coupling (push-in fitting) for push-in connectors



TYPE 7011

2/2-way plunger valve, direct-acting

Type 7011 is particularly suited to applications where media separation is not necessary and a reliable worker is needed in the background. The valve is a direct-acting plunger valve. The stopper and the plunger guide tube are welded together to increase pressure resistance and security against leaks.

 Simple flange or manifold mounting	 Robust
 Pressure resistance and security against leaks	 Explosion-proof variants

Proportional valve

The switching solenoid valves (shut-off valves) form the basis of Bürkert's electromagnetic proportional valves.

When no power is supplied, the plunger – which is connected to a spring – presses directly on the valve seat. The valve remains closed. When current flows through the coil, magnetism is generated which lifts the plunger against the spring force. This causes the valve to open.

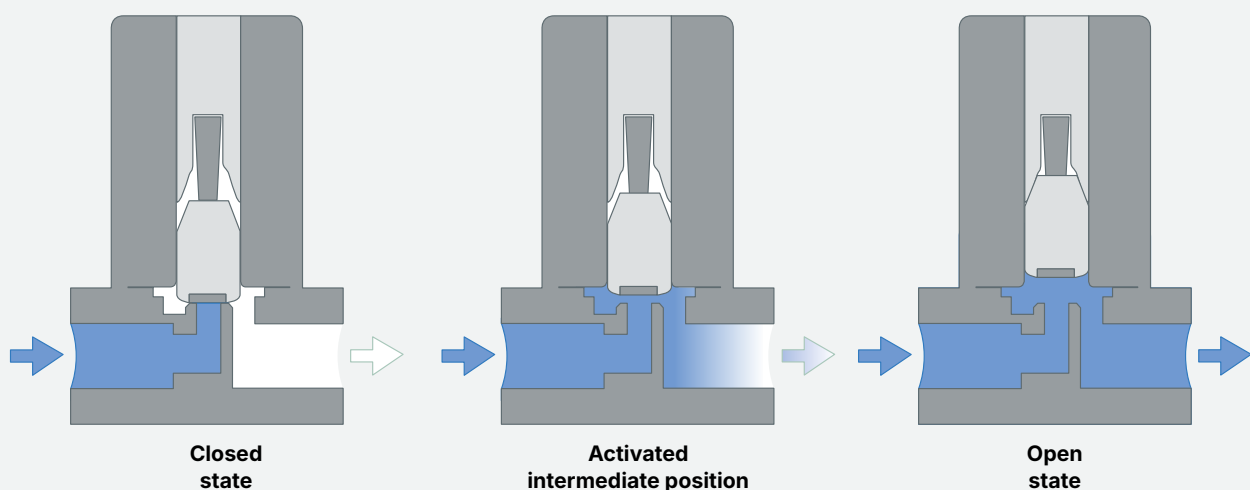
By altering the design of the switching solenoid valves, it is possible to establish an equilibrium between the spring force and magnetic force for any coil current. The intensity of the coil current and of the magnetic force influences the stroke of the plunger and the extent to which the valve opens. Ideally, there should be a linear correlation between the valve opening (flow rate) and current (activation signal).

In the case of direct-acting proportional valves, the flow direction is below the seat. The medium (fluid) which flows in from below (in the case of direct-acting valves) presses – together with the generated magnetic force – against the clamping force of the return spring pressing from above. For this reason alone, it is advisable to set the minimum and maximum flow rate value of the operating range (coil current) under operating conditions. Bürkert proportional valves are closed when de-energised (NC, normally closed).

Properties

- Proportional switching behaviour
- Robust
- Excellent responding behaviour
- Compact

Functional principle of direct-acting proportional solenoid valves





Type 2852

- Excellent setting range
- Flange and plug-in connection for integration into valve blocks
- Operating pressure up to 7 bar (g)



TYPE 2852

2-way proportional valve with pressure compensation

Our new proportional valve 2852 is pressure-compensated and therefore offers a high pressure level with low power consumption at the same time. The total dimensions of this valve were kept low with regard to integration in devices where compactness and low heating are required for each individual valve. Nevertheless, it still offers comparatively high flow rates. The valve is designed for installation in analytical and medical devices, but can also be used in similar industries. It features two kinds of mechanical integration and three different electrical connection types (strands, plugs and soldered contacts), all of which support good integration options in mechatronic systems.



Low power consumption



Compact design with small footprint



Higher operating pressures than conventional valves of a comparable size



Low heat input



Type 2871

- Excellent setting range
- Excellent responding behaviour
- Nominal diameters DN 0.05 to 2.0 mm
- Port connection 1/8" or flange



TYPE 2871

Direct-acting 2-way standard proportional valve

The Type 2871 direct-acting proportional valve is used as an actuator for process control loops. Due to an elastomeric seat seal, the valve closes tight up to the DN-specific nominal pressure (integrated shut-off function). The actuating armature of the valve is mounted without friction, which results in outstanding positioning behaviour. This valve is especially suitable for challenging control tasks (high setting range, dry gases, etc.).



For challenging control tasks



Compact design



Quick integration



Increased safety

Valve selection table

Installation width	Nominal diameter	Max. pressure in bar														
			Vac	1	1.5	2	3	3.5	4	5	6	7	8	9	10	12
4.5 mm	0.4 mm	6650														
	0.8 mm	6650														
7 mm	0.4 mm	6712														
	0.8 mm	6712														
9 mm	0.8 mm	6724														
	1.2 mm	6724														
10 mm	0.6 mm	6144														
	0.8 mm	6624														
	1.6 mm	6624														
11 mm	0.8 mm	6164														
	1.0 mm	6164														
16 mm	0.8 mm	0127														
	0.9 mm	6106														
	1.2 mm	6106														
		0127														
	1.6 mm	6106														
		0127														
18 mm	2.0 mm	6106														
	1.4 mm	6757														
	2.0 mm	6757														
	3.0 mm	6757														
20 mm	4.0 mm	6757														
	1.2 mm	7011														
	1.6 mm	7011														
	2.0 mm	7011														
22 mm	2.4 mm	7011														
	2.0 mm	6628														
32 mm	3.0 mm	6628														
	2.0 mm	0330														
	4.0 mm	0330														
	5.0 mm	0330														

Vac = Vacuum

The pressure ranges are dependent on the circuit function, power supply and materials. The values may therefore deviate from those in the table. The precise pressure ranges can be found in the valve data sheets.

Technology innovation

Microsensors

Medical devices are becoming increasingly complex. The more functions a device incorporates, the more components it must have. We support precisely this requirement with compact, highly integrated systems. With our innovative microsensor technology, we can take medical devices to a new level: we measure conductivity, ISE (specific ions such as Ca^{2+} , K^{+} , Mg^{2+}), pH value, chlorine, turbidity and continuous flow with exceptional precision within the space of just a few millimetres.

In a dialysis machine alone, the applications for microsensors are varied:

- Analysis of the quality of the incoming water to determine whether further water treatment steps are necessary before mixing the dialysate
- Subjecting the dialysate mixture to a two-stage conductivity measurement to ensure that acid concentrate and bicarbonate concentrate are mixed in the correct ratio
- Measuring the ion concentration in the bloodstream to determine whether the patient has received enough nutrients and dialysis can be stopped
- Monitoring of the dialysate to detect changes in electrolyte composition, leaks and blood entering the dialysate circuit



Prototype ISFET sensor



Prototype conductivity sensor

Did you know?

In close collaboration with you, we can optimally tailor our prototypes to your application in terms of materials, connections, design, measuring range and much more.

We're here to help! Feel free to reach out to us at:

➔ microsensors@burkert.com



Flexible adaptation to your requirements



Ideal fit within your device



Extremely compact design



Continuous measurement and documentation

Time-pressure dosing

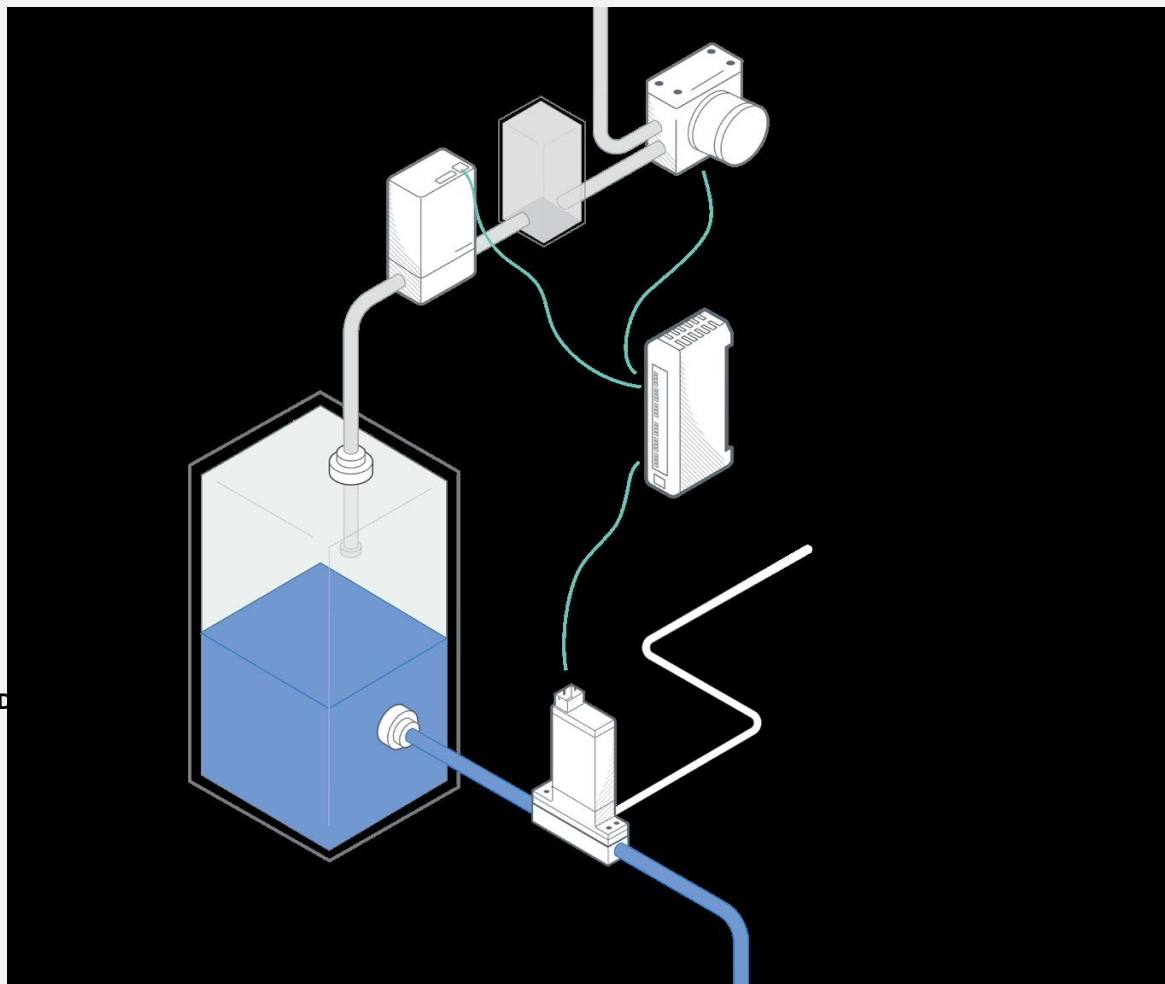
Bürkert offers a standardised solution for liquid dosing in an open control loop based on the time-pressure dosing principle. The core components of our system consist of an ME44 dosing electronics assembly with communication gateway and a dosing head with needles.

This standardised solution, which is characterised by its compact footprint and easy installation, can be seamlessly integrated into a wide range of dosing applications.

Properties

- Economical
- Flexible
- Adaptable
- Expandable

Dosing system platform Type 5120





Type 8763

- Digital communication for easy integration into your fieldbus network
- Extended functionality through additional sensor input and actuator output, e.g. for a pump or an additional pressure sensor
- Active vent valve to minimise consumption of costly carrier gas



TYPE 8763

Pressure controller for precise time-pressure dosing

If dosing quantities are very small and the pressure differences between dosing cycles are therefore minimal, pressure control becomes a challenge. This is just the job for pressure controller Type 8763, which was specially developed for low flow rates and the resulting small dosing quantities. The controller features short reaction times and precise pressure control. There are no downtimes or waste at the beginning of dosing cycles. The digital interface makes it possible to access the various parameters at any time in order to change settings and read out data.



**Excellent precision
at very low flow
rates**



**Analogue and
digital version
available**



**Bidirectional
control**



**Specifically
intended for
time-pressure
dosing with very
small quantities**



Type ME44 LDO

- Precise timing control of the dosing valves
- Dosing in the μl range
- Resolution of less than 0.1 ms



TYPE ME44 LDO

I/O module

The I/O module in combination with a communication gateway forms the core element of the dosing platform Type 5120.

The module and the integrated software enable precise control of the dosing valves to meet the most stringent of requirements – even without a sensor.



**Very high
accuracy**



**Precise
control**



Digital communication



**High level
of flexibility**



Type 7615

- For the most stringent chemical resistance requirements
- Dosing quantity 5 µl/stroke up to 8 ml/min
- Dosing accuracy $< \pm 3.5\%$
- Self-priming
- Simple control through integrated electronics



TYPE 7615

Micro dosing unit for precise dosing in the microlitre range

Our micro dosing unit is used for dosing liquids in the µl range. It combines the highest dosing accuracy with extreme chemical resistance. The unit consists of three valves that can be opened and rinsed simultaneously if necessary. In addition, the unit can convey liquid in both directions and thus mix liquids in the hose or channel or keep them moving constantly. Furthermore, the unit is safe to run dry.



Bidirectional conveying/pumping



Variable electronics with regard to pump speed



Self-priming



Smallest dosing quantity of 5 µl per stroke



Type 8756

- Flow measurement/control up to 150 kg/h
- Very high accuracy
- High long-term stability, no zero-point adjustment necessary
- Highly resistant wetted materials



TYPE 8756

Mass flow controller (MFC)

The mass flow controller (MFC)/mass flow meter (MFM) Type 8756 is particularly suitable for the very precise measurement or control of small liquid quantities in batch or flow operation.

The measurement principle is based on the Coriolis effect and is completely independent of the medium. Pressure and temperature deviations have no impact on the measuring accuracy. In addition to the flow rate, the density and temperature of the liquid are also measured. The device design enables a stable flow measurement that is immune to external influences and does not require a zero-point adjustment when the process conditions change.



High precision



High efficiency, as no separate calibration is necessary



Robust against shock and vibration



High flexibility due to wide turndown ratio

System innovation

μ LDC Liquid dosing controller (LDC) as a closed-loop system in the μ l range

Dosing applications can be found in laboratory devices and medical technology as well as many other industries. They require reliable, reproducible and absolutely precise dosing in the μ l range, which is something that the existing devices on the market have so far been unable to provide.

In such applications, manual dosing is not reliable enough – and conventional solutions made up of individual components reach their limits too. Ultimately, even minimal differences in the viscosity of the dosing medium can quickly lead to imprecise dosing in the μ l range.

As a fluidics specialist, we decided to take on this challenge and developed the μ LDC as a system made up of proven and perfectly coordinated standard components. Regardless of the primary pressure of the dosing medium, it ensures precise dosing, drop by drop. The speed of the measurement is the key to its success.

The μ LDC contains a dosing sensor, a dosing valve and an electronics assembly with software and a communication interface to enable the μ LDC to be incorporated into your process.

This allows for automatic and precise monitoring and control of the dosing process combined with rapid response times in the event of an error or a change in the process. Thanks to its many variants and modular design, the μ LDC will fit perfectly into your process – as a ready-to-use solution requiring very little maintenance and no complicated manual intervention or teach-in process.



Did you know?

The μ LDC from Bürkert is the first solution on the market that is able to dose μ l volumes precisely and reliably in a closed control loop. This unique precision makes it possible to develop new tests or diagnostic procedures in the field of laboratory and medical technology.

We would be delighted to discuss your microfluidic dosing requirements with you so we can find a solution together:

➔ microsensors@burkert.com



Maximum precision regardless of the primary pressure of the dosing medium



Simple start-up as plug-and-play solution with no need for teach-in



Sustainable use of expensive reagents



Monitoring and documentation of dosing process

Customisation & development

THE BÜRKERT SYSTEMHAUS FACILITIES ARE RESPONSIBLE FOR THE EFFICIENT, INNOVATIVE AND COST-EFFECTIVE DEVELOPMENT OF YOUR FLUIDIC SOLUTIONS



Our state-of-the-art Systemhaus facilities specialise in developing fluidic assemblies and solutions according to your precise requirements. A motivated and dedicated team of sales consultants, industry specialists and engineers will work hand in hand to make your project a success – with every aspect of the process under one roof! All of our production infrastructure is located on site, which allows us to respond quickly and flexibly. This combination and concentration of expertise and resources in one place translates into huge gains in efficiency and quality for you.

Why choose Bürkert as your solution partner?

- Interdisciplinary collaboration between Bürkert experts ensures seamless communication and prevents loss of information – for exceptionally efficient processes.
- All process steps, ranging from development, prototype assembly and tool construction through to production, take place in one location – for fast-paced development and seamless quality.
- We don't think in terms of narrowly defined industry contexts; we are always exploring new possibilities with regard to handling liquids and gases – for new, original solutions that surpass the standards in your industry.
- We will use suitable system platforms for your individual solution – for a short time to market and significant cost savings.

With our extensive capacity and full range of services, we will take responsibility for as much of the development process as you want us to and will coordinate all interfaces in order to provide pioneering, integrated solutions.





FRESENIUS MEDICAL CARE

"During the development phase, we worked closely with Bürkert and received excellent support from the fluidics specialists, so that after a short time we had an assembly available as a functional model, which we were then able to use for the start of series production with minor adjustments. I particularly appreciated the fact that not only products but also complete solutions were offered, from the functional model to the cost-optimised series part."

Günter Wabra

Senior Engineering Project Manager, Value Stream Machines at Fresenius Medical Care

Application scenario:

Pneumatic flow control in a dialysis machine

Further information about
this project can be found here



Germany





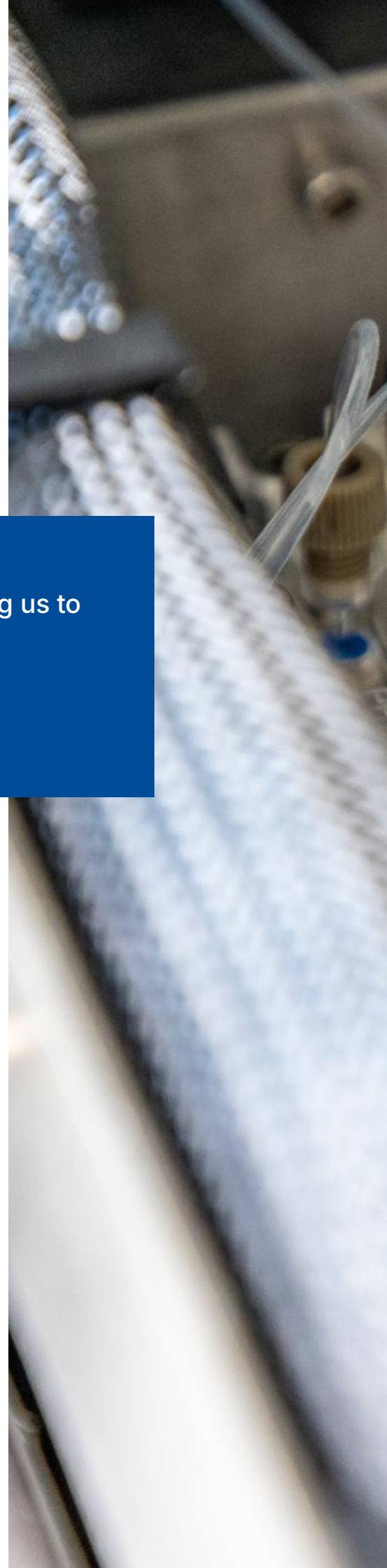
"Bürkert gave us a whole new experience by enabling us to customise our system in this way."

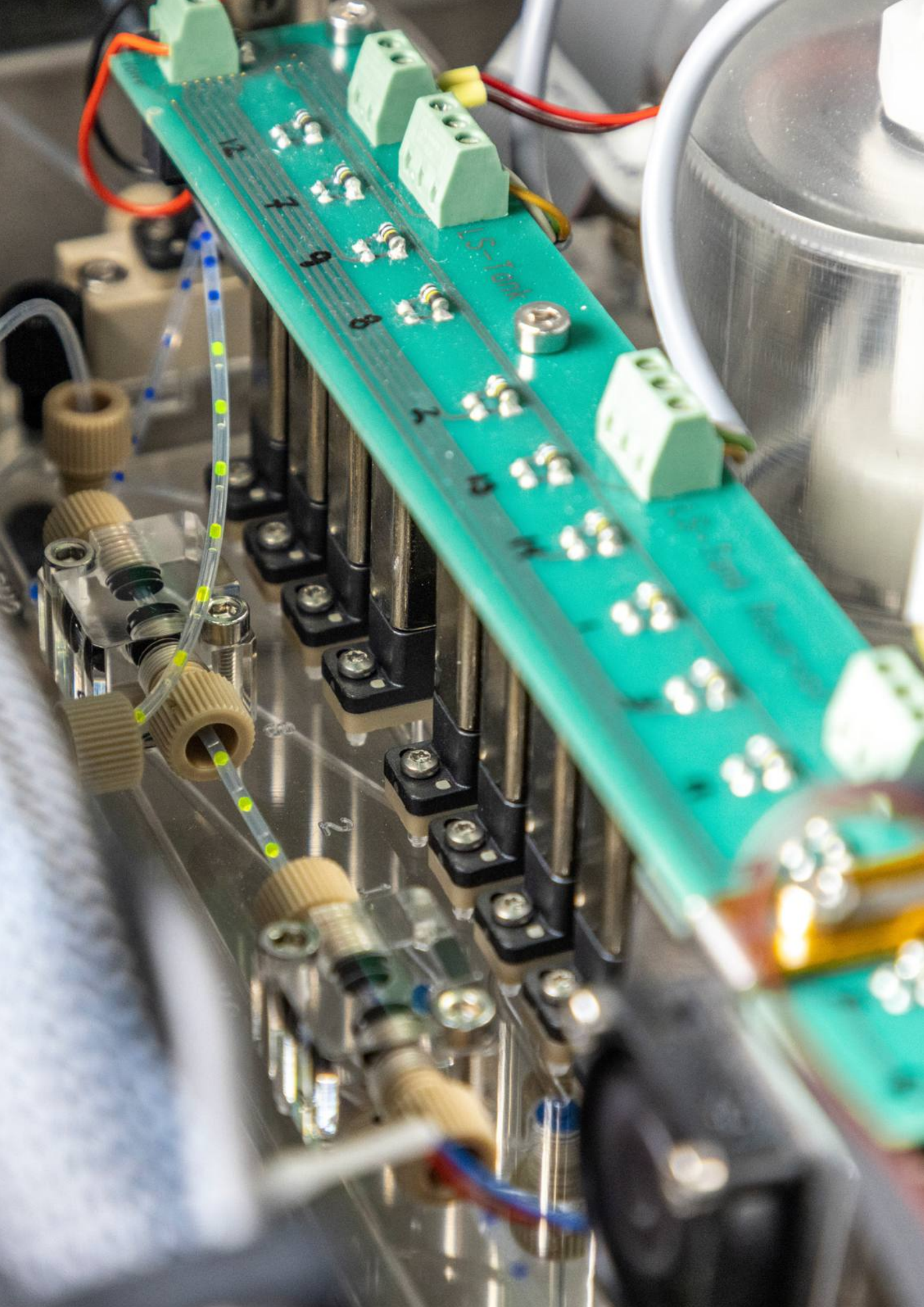
Jairo Garnica
Technical Director and Co-Founder of MilliDrop

Application scenario:

Extremely quiet flow control and exceptionally reliable pressure control for cost-effective high-throughput cultivation and analysis of microorganisms in research laboratories

Further information about
this project can be found here

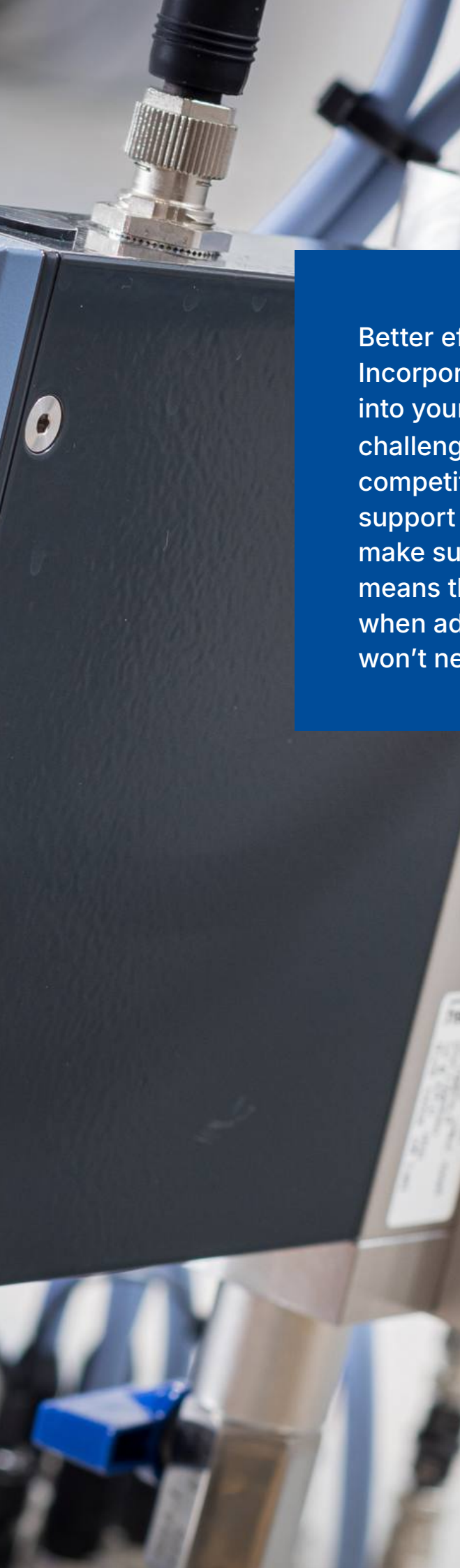




Automation & digitalisation

FLEXIBLE, NEUTRAL,
COMPLETE: OUR APPROACH
TO FIND THE BEST SOLUTION



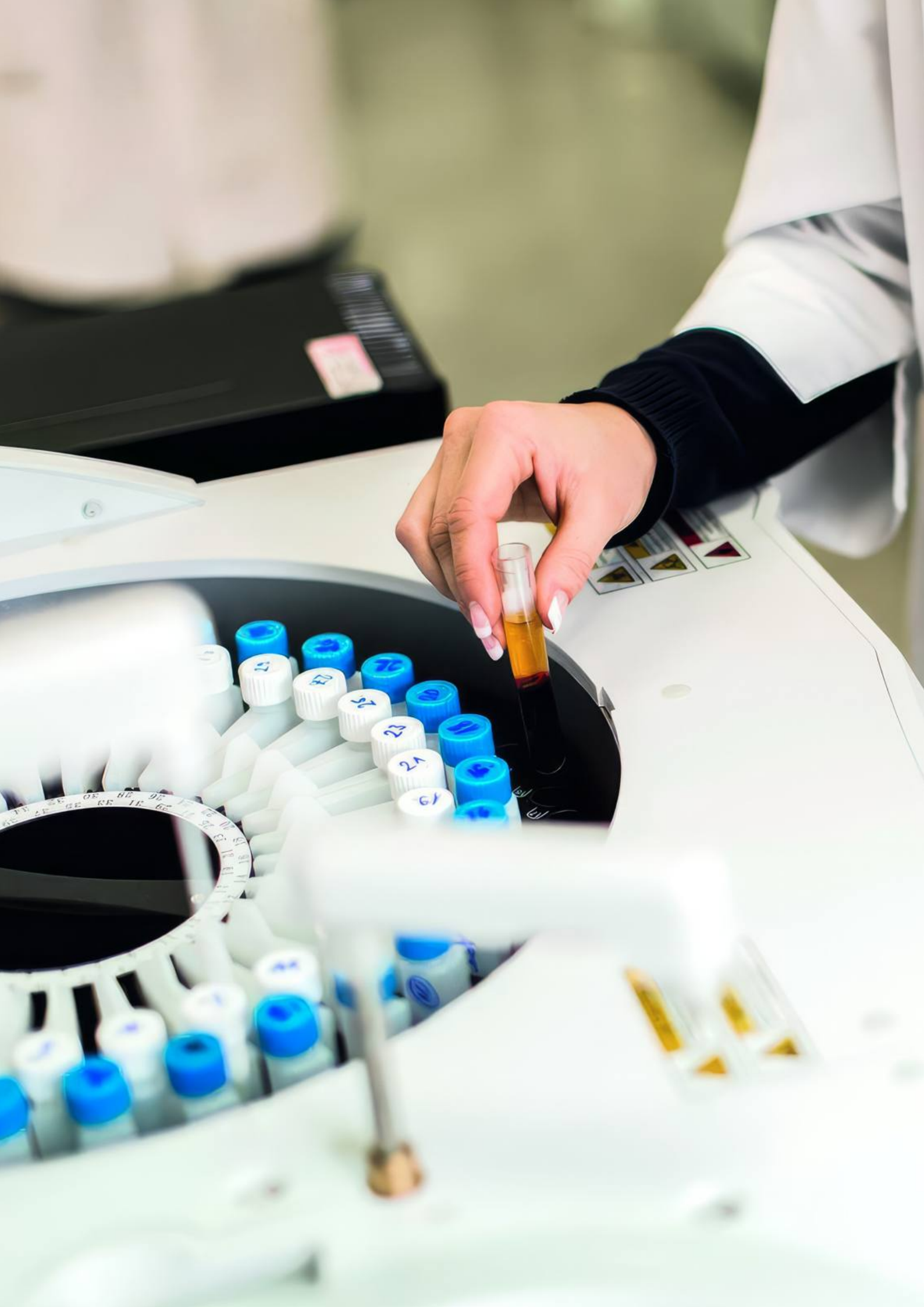


Better efficiency, quality and cost-effectiveness: Incorporating optimised automation and digitalisation into your processes, applications and fluidic challenges will ensure that you stay ahead of the competition. As your expert partner, Bürkert will support you every step of the way. Our priority is to make sure you achieve the best possible results. This means that we will consider different manufacturers when advising you – the components we recommend won't necessarily come from us.

Why choose Bürkert as your solution partner?

- We understand your processes, applications and challenges – and will use these insights to develop automation solutions perfectly tailored to your tasks.
- Our advice is neutral and objective – which gives us the freedom to truly find the perfect solution for you.
- Our experts will use innovative approaches and select creative solutions to keep you one step ahead of the competition.
- Unlike other partners, we are not just here to supply components – we will work with you to ensure your success by means of a complete automation and digitalisation concept.
- If you wish, we can take care of the concept, planning and implementation – all from a single source. You won't have to worry about interfaces, compatibility or fine tuning.

When it comes to finding the best solution, we always give 100% – whether you want to assign individual subtasks to us or entrust us with the entire automation and digitalisation process from initial advice right through to start-up.



Bürkert eShop



Click here
to go to the
Bürkert eShop!

Your benefits at a glance:

- 24/7 availability of the eShop
- Documents such as data sheets, CAD drawings, operating instructions and EU declarations of conformity always at hand
- View current prices, conditions, delivery times and stock levels at any time
- Download and track orders, delivery notes, invoices at any time
- Create shopping lists and save shopping carts
- Order common items via quick order

Discover these and many other advantages in our Bürkert eShop!



Bürkert Fluid Control Systems
Christian-Bürkert-Strasse 13-17
74653 Ingelfingen
Germany

Telephone: +49 7940 10 0
info@burkert.com

burkert.com

bürkert
FLUID CONTROL SYSTEMS