

WE LEARN FROM YOU EVERY DAY –
AND THINK OUTSIDE THE BOX.

When it comes to dealing with liquids and gases, Bürkert has become a sought-after partner all over the world. Why? Probably because we have been learning for and from our customers for more than 70 years now. This enables us to always think that crucial step ahead – or even sideways.

For your added value. Let us prove it to you – we look forward to your challenge.

Industrial inkjet printing

Precise ink supply for more process reliability and best print image quality



We make ideas flow.

bürkert
FLUID CONTROL SYSTEMS

Bürkert Fluid Control Systems

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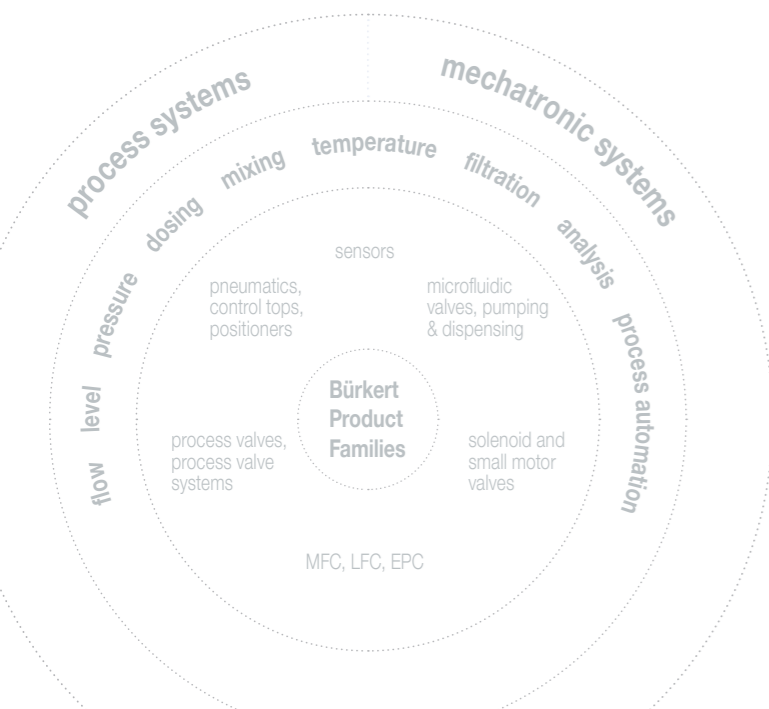
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WE SPEAK YOUR LANGUAGE. FLUENTLY.

We love a good challenge. That is because we are simply fascinated by everything that flows. No matter if our customers require solutions for measurement, control or both – we always find unconventional ways of developing individual solutions.

Whether it is about flow, level, pressure, dosing, analysis, filtration, temperature, mixing or the automation of processes – liquids and gases have to be measured and controlled. These are the fundamental fluidic variations upon which industrial process technology is based, and Bürkert's specialty with its expertise and entire range of solutions and services.

What makes us special? At Bürkert, we start with your fluidic challenge and draw on the basic physical principles. This way we make use of the fluidic relationships and our experience with physics, duplicating them across the most diverse applications and industries and hence solving the same or similar challenges. You in turn benefit from a deep pool of expertise, which we accumulate from multiple industries and apply individually to your needs. For the ideal solution to your specific challenge.



PROFESSIONAL INK TREATMENT FOR INDUSTRIAL APPLICATIONS

The many imprints on packages or decorative items that are designed to be helpful, informative or simply appealing to consumers demand a high level of precision, know-how and experience in the field of industrial inkjet printing. Be it continuous inkjet (CIJ) or drop-on-demand (DOD) printing – the ideal mixture and precise amount of ink must always be directed towards the substrate. As a leading provider of fluid management systems, Bürkert has been supporting the manufacturers of industrial printing machines for decades to make the most of each and every droplet of ink.

4 Perfect ink management

Modern inkjet printing meets the ever increasing complex requirements of the printing and marking industry.

5 The right printing process to cater for every need

Purely industrially-related, single-colour continuous inkjet printing with characteristic dot-based characters or drop-on-demand.

6 Your solution

The versatility and quality of the individual components are the prerequisite for perfectly tailored individual systems.

7 Systemhaus

Where systems take shape. This is where customer-specific solutions are crafted according to your requirements and ideas.

PERFECT INK MANAGEMENT THE ANSWER TO THE MARKET CHALLENGES

Industrial inkjet printing is used on almost all substrates, materials and shapes. The challenges facing printing are becoming ever more complex as it is increasingly integrated in industrial production processes. Texts printed at top speed and in the highest quality or multi-line codes are now the rule instead of the exception. High-contrast, permanent codes must remain in place throughout the entire product life cycle. They must be resistant to high temperatures for steam sterilisation, to minus degrees when flash freezing and to moisture. They frequently also have to be suitable for direct contact with food items. Furthermore, digitisation is driving the trend towards customising standard products. As a result, the market continues to grow but faces a balancing act between greater productivity and the highest possible level of flexibility. Industrial inkjet printers are so adaptable that frequent changes to the print image can be made efficiently. Our experts develop ingenious solutions – from individual components to systems developed to a customer’s specification – as a direct response to the specific challenges of ink management.

YOUR BENEFITS

- Absence of particles in the valuable ink due to high quality manufacturing
- Outstanding print image quality due to reliable and precise switching of the valves
- Safe start-up as the complete solutions are tested in advance
- Process reliability due to application know-how and project experience

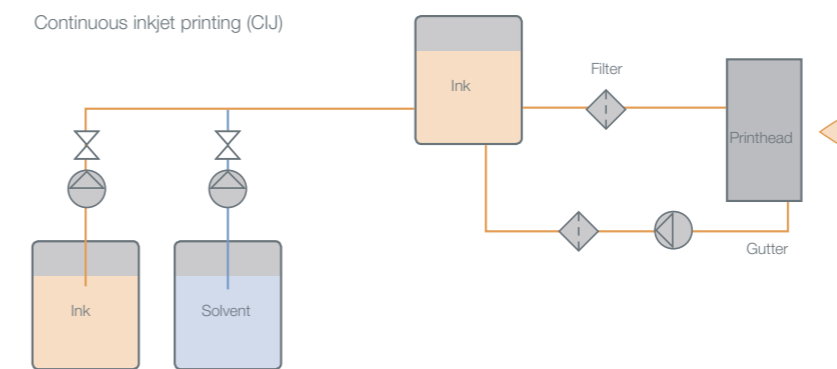
THE RIGHT PRINTING PROCESS TO CATER FOR EVERY NEED

The continuous inkjet process (CIJ) is used in industrial applications to apply the ‘best-by’ date to beverage cans or to decorate finished parts with a company name, thus protecting them against imitations. The non-contact CIJ process enables the permanent printing of information on almost all materials. There are also no limits to the possible geometries of products or packaging. It is fast and economical, both in terms of the initial outlay and ink consumption, can be operated with many types of ink and is easy to integrate into production lines.

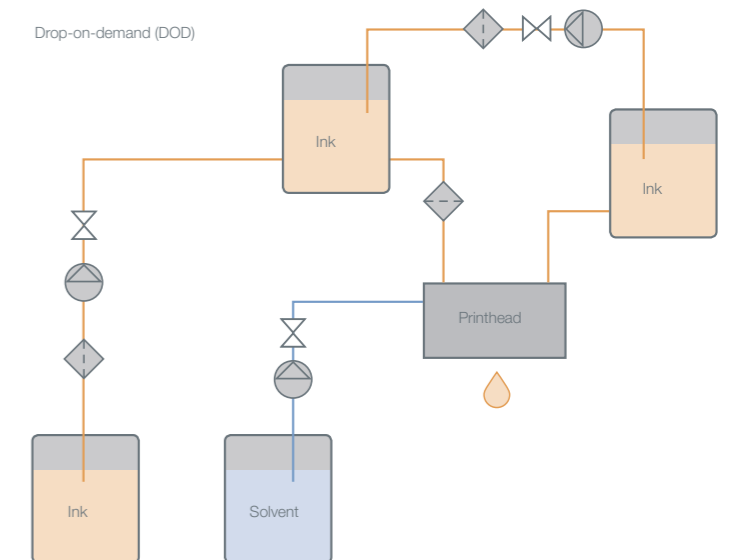
In contrast to CIJ, the drop-on-demand process (DOD) can

also be used for high resolution packaging printing. DOD works with a valve and plunger system or with thermal inkjet technology. Where CIJ produces a continuous flow of ink, DOD deposits droplets of ink only when and where they are needed at frequencies of up to 15,000 Hz.

Continuous inkjet printing (CIJ)



Drop-on-demand (DOD)



PRODUCTS AND SYSTEMS FOR YOUR INK SUPPLY

Our valves guarantee perfect ink management in front of the printhead and deliver outstanding print quality with the highest level of precision. It is possible to flush residue out of all the fluid channels: There are no blockages caused by dried

ink particles. The valves are lightweight, compact, maintenance free and easy to replace. Moreover, we develop high-quality, bespoke systems that are more than a sum of their individual parts.



Types 6011 and 6012
Plunger valves

- Ideal for water-based inks
- Long product life cycle due to tried-and-tested technology



Type 0331
Pivoted armature valve

- Suitable for higher flows thanks to larger orifice
- Guaranteed leak tightness despite ink particles due to the pivoted armature principle



Type 6144
Flipper valve

- Up to 100 million switching cycles possible thanks to flipper principle
- Particularly suitable for pneumatic applications in the printer



Type 0127
Rocker valve

- No dried ink particles, as it can be flushed perfectly
- Reliable media separation thanks to membrane switching cycles



Type 6628
TwinPower rocker valve

- Saves space thanks to its compact design
- Also available as an energy-saving variant



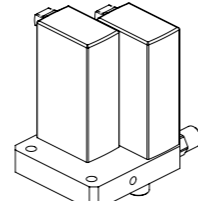
Type 6624
TwinPower rocker valve

- Requires 50% less space and 75% less energy than comparable valves
- LED feedback



Type 6724 WhisperValve
Rocker valve

- Reliable dosing thanks to fast switching time
- Valve can be opened and closed proportionally



Your customised system solution

- Design tailored to the application to reduce complexity of assembly
- Reduced part costs and increased functionality

WHERE SYSTEMS TAKE SHAPE THE BÜRKERT SYSTEMHAUS

Bürkert has established an international engineering network that understands the challenges of your market and translates them into tailored system solutions based on concentrated competences. For you as a systems customer, Bürkert is not simply a developer of fluid technology, but also an expert in various other fields such as mechanical production, plastics technology and software development. This means that many areas of expertise are concentrated under one roof, resulting in valuable savings for you regarding time and money.

From the idea, development and initial testing, all the way to the production phase, the teams from various specialist departments work in an interdisciplinary way. They act autonomously in terms of technology to create your system solution. This way, cooperative partnerships produce solutions that exactly meet your requirements.

Application experience gained over decades, combined with our comprehensive product range, forms the basis for innovative and customer-specific solutions. An existing platform hence serves as a basis for creating a customised solution quickly and efficiently – consequently reducing your time to market considerably.

For Bürkert, offering customer-specific answers means not only developing individualised systems, but also covering the associated production and logistics processes. This makes a Bürkert Systemhaus the ideal location to develop and produce tailor-made solutions efficiently and with a high level of creativity.

