

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

Pure media distributed exactly

Hygienic design and precision for end products of the highest quality

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.



We make ideas flow.

bürkert
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**PERFECT PURITY
GUARANTEED
OUR SOLUTIONS
FOR CLEAN MEDIA**

Pure media must be manufactured to the highest possible quality in a preliminary process before being transported to the end product manufacturing process. Quite often the pure media themselves are part of an end product, for example in infusion solutions. With regard to all three requirements, automation guarantees reliable processes, which in turn are the basis for a consistently high quality of the product. Hygiene is absolutely essential, especially for pharmaceutical products that are mixed with the pure medium 'water'. The transportation of water or steam (clean utilities) to the manufacturing process must occur under constant general conditions: pressure, temperature, flow and flow rate. Faults result in immediate feedback, which enables rapid intervention and prevents the customer from losing valuable production time. Full documentation of the individual process steps is also guaranteed at all times with Bürkert solutions.

YOUR BENEFITS

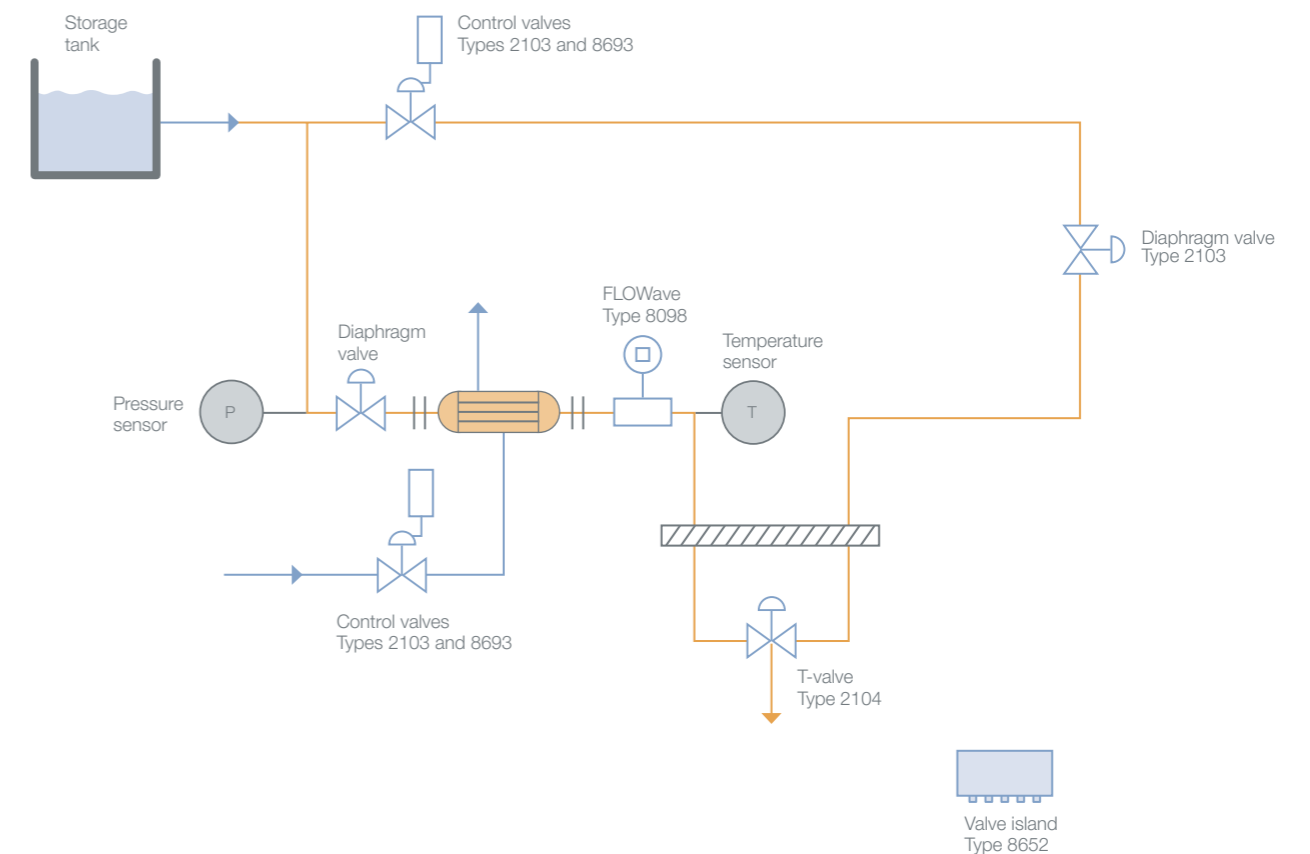
- Greater productivity through faster, automated processes
- Highest product quality thanks to the absence of contamination
- Reliable residue-free purity thanks to an easy-to-clean hygienic design



PURE MEDIA EXACTLY DELIVERED

Subsequent filling in the actual production process is prepared during the preliminary process. The key thing here is that the water is available in the right quantity and at the right temperature for the next process step. The main requirement is the absolute purity and high quality of the water, as it is often added to the end product (infusion solutions). To guarantee this level of quality, use of the most effective and suitable products (e.g. valves or sensors) is crucial. As the pure water flows from the storage tank to the various production locations within the plant, ultra-precise components assume various roles, such as constantly measuring and monitoring the temperature, pressure and

flow: FLOWave, for example, provides feedback on whether the target flow has been achieved. Valve islands control the process valves, ensuring they open and close properly to allow water to flow precisely to where it is needed at that exact moment in time. They additionally control the volume of water. For instance, to kill off bacteria, the water is heated up and then cooled down inside a heat exchanger, with a temperature sensor ensuring it has the exact temperature required for the next process step.



HYGIENIC SOLUTIONS FOR YOUR APPLICATION COMPONENTS FOR DISTRIBUTING PURE MEDIA



Ideal solutions for process optimisation:

- Rapidly deployed thanks to easy integration into the existing plant
- Modularity enables flexibility with regard to various demands
- Universal application also in harsh environments

Components:

- Process valve ELEMENT (Type 8801) consisting of a diaphragm valve (Type 2103) and a control head (Type 8691)
- Process control valve ELEMENT (Type 8802) consisting of a diaphragm valve (Type 2103) and a digital electropneumatic positioner (Type 8692/3)
- Pneumatically operated Robolux multiway multiport diaphragm valve (Type 2036)
- Multifunction block and welded solution (Type 2034)



Quality control with reliable test equipment:

- Designed for challenging, hygienic applications
- Time saving due to less maintenance needs
- Easy digitisation thanks to simple software solutions

Components:

- FLOWave SAW flow meter (Type 8098)
- multiCELL – multichannel/multifunction transmitter/controller (Type 8619)
- Conductivity meter (Type 8221)



Process automation with harmonised components:

- Smooth procedures thanks to digital, perfectly harmonised components
- Reliable switching for clean and error-free processes
- Status display provides all the data at a glance – also on-site

Components:

- Control head for distributed automation of process valves from the ELEMENT series (Type 8691)
- AirLINE Quick (Type 8652) for a central automation solution



Hygienic is the first priority during the filling process of infusions

COMPLEX FILLING PROCESSES UNDER CONTROL

Modern medicine is inconceivable without infusion solution therapy. But first of all, the infusion solutions have to be filled into 'bags'. The required filling process is anything but trivial: accuracy and hygiene are the top priority and place huge demands on processes. The valve technology in the filling heads should not only switch quickly and precisely over long life spans but also be easy to clean and sterilise. Needless to say, full documentation of the materials and process steps required for manufacturing filling heads and their respective certification are available. As a result of joint development work, there are six compact valve blocks, each with four valve functions, available for the filling process. It is designed around a modified pneumatic 2/2-way valve with a bellows seal which can be easily incorporated into the system. The inner volumes and flow rates were optimised at the same time to enhance accuracy and enable cleaning. The convenient space allowed for the integration

of a pressure sensor in the filling system, thus supporting the implementation of a process monitoring option. When handling oxygen-sensitive products, the nitrogen supply can be monitored and recorded during the filling process.

AT A GLANCE

Application	Filling of infusion solutions
Requirement	Documentable process procedures with easy-to-clean components
Solution	Digitised, reliable solution enables ideal filling and documentation
Added values	Time saving due to easy cleaning, maximum plant utilisation due to process optimisation