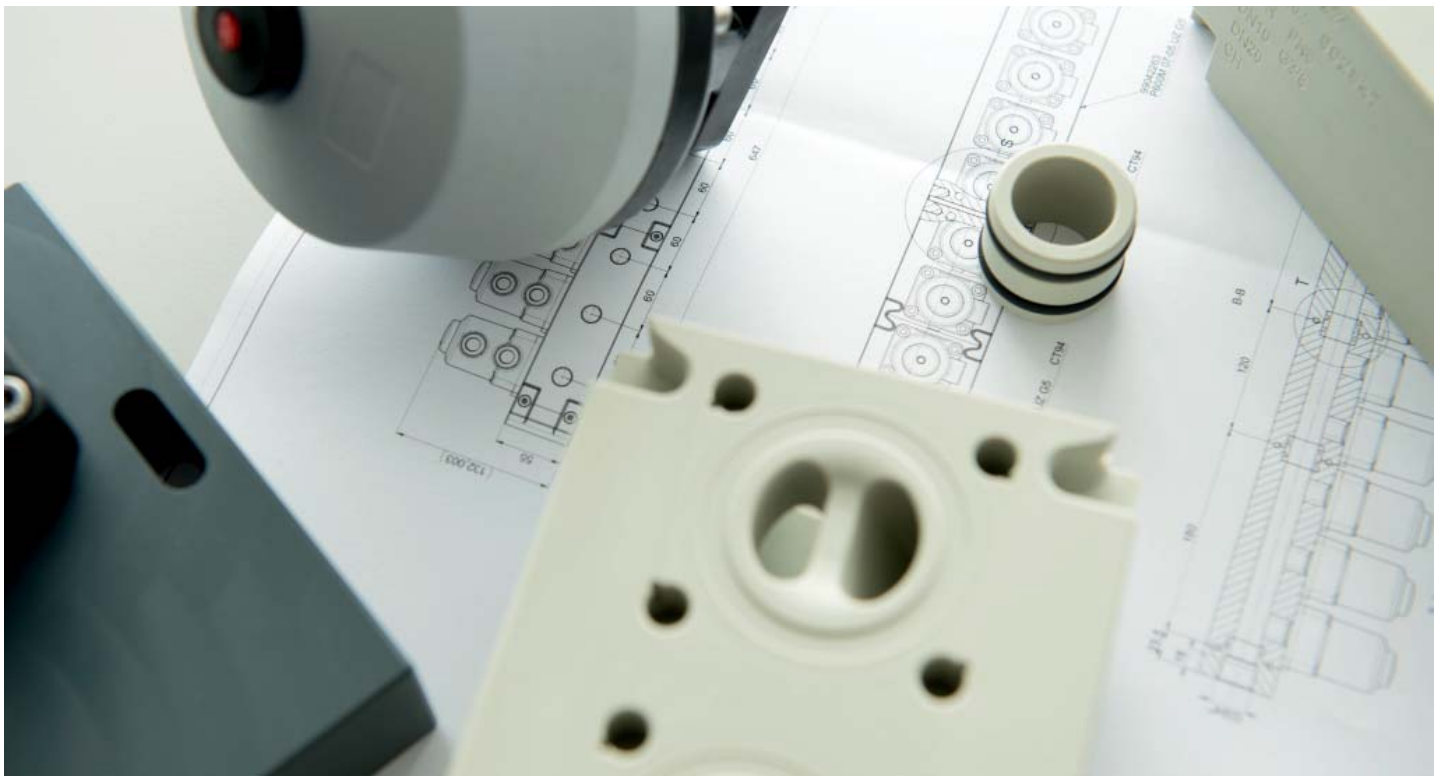


GEMÜ



Plastic Multi-Port Valve Blocks



Wide-ranging application in industrial processes

GEMÜ products are used around the globe in plant construction, water and waste water treatment, power stations, steel works, the paper industry, the petrochemical industry, basic and fine chemical industries, mining and in many other industrial areas. No other area subjects valve bodies to such a varied range of stresses as industrial applications. This is why GEMÜ valve designs are based on the expertise gained during decades of application experience. The specialized production processes and the precise geometric suitability of the material transitions make GEMÜ valve bodies a lasting, highly efficient application solution.

Customised solutions for your project business

GEMÜ provides the optimal solution from a single source.

As a system supplier of isolation, actuator and control technology, we can respond very flexibly to your individual project-specific needs.

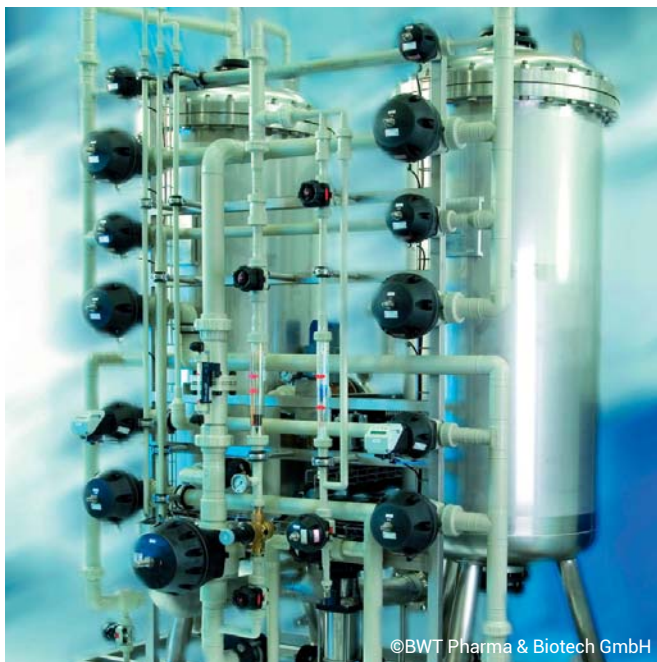
Our worldwide sales network provides fast reaction times, customer oriented service and a committed project management team.



Multi-port valve blocks save space and mounting time

Lightweight, taking up less space, quick to fit and multipurpose – these requirements are becoming increasingly important for system components. Complex control of liquids and gases are generally carried out by means of numerous individual valves. These are connected to one another by similar numbers of fittings and piping. But this takes up a lot of space and assembly is time-consuming because of the much higher number of individual parts. Also, every assembly point and pipe connection is a potential leak, which increases the safety risk.

Compact plastic multi-port valve blocks are the ideal components here. They can perform various functions while saving space. Our experience with producing thousands of versions within the pharmaceutical industry is now being transferred to plastic multi-port valve blocks for other industrial sectors. Today we are the market leader worldwide for multi-port valve blocks in stainless steel for the pharmaceutical industry. GEMÜ can also offer customers multi-port valve block solutions made of high performance thermoplastic materials such as PTFE for wet processes in the semiconductor industry and solar cell production as well as for controlling cleaning media and chemicals.



©BWT Pharma & Biotech GmbH
Ion exchanger - classical design



Ion exchanger - compact design with multi-port valve blocks

Intelligent, compact system components

Multi-port valves or multi-port valve blocks unite a variety of functions in the smallest of spaces thanks to their individual design, such as:

- mixing
- dividing
- diverting
- draining
- feeding

They can also fulfil safety functions, double shut-off (double block and bleed), cross connections and control functions. These individual functions serve very specific purposes in individual situations, such as the taking of samples, the distribution of chemicals, the connection of cleaning media (CIP) and ensuring a minimum flow rate. There are also numerous more complex functions in connection with process automation. Pressure or temperature sensors can be integrated for example. Intelligently designed, multi-port valve blocks can be developed into compact system components with a high degree of functionality.



6-way manifold



2-way manifold



Distribution rail with manual operators and flowmeters



iComLine block solution with manual and pneumatic operators, positioner and sensor system

Advantages of multi-port valve blocks

- Individual customised and very flexible design
- Very compact
- Fewer fittings, welds or solvent cemented joints
→ fewer potential leakage points
- Lower assembly and installation costs
- Low hold-up volume, smaller wetted area
- Operators and diaphragms/seals from the proven GEMÜ modular system
- Produced from a single block of material (standard materials PVC-U, PP, PP natural, PVDF and PEEK); further materials on request
- Standard connections: threaded sockets, solvent cement spigots, butt weld spigots, union ends and flanges



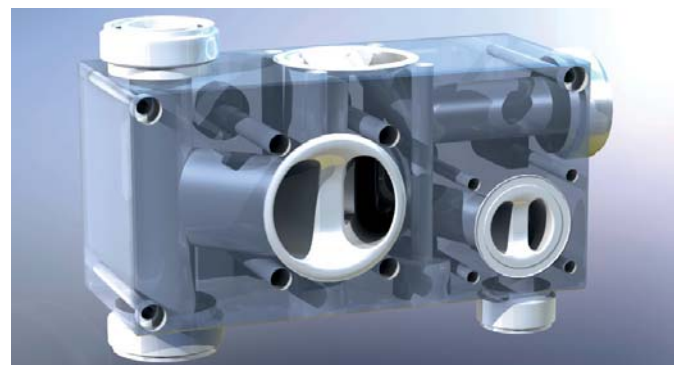
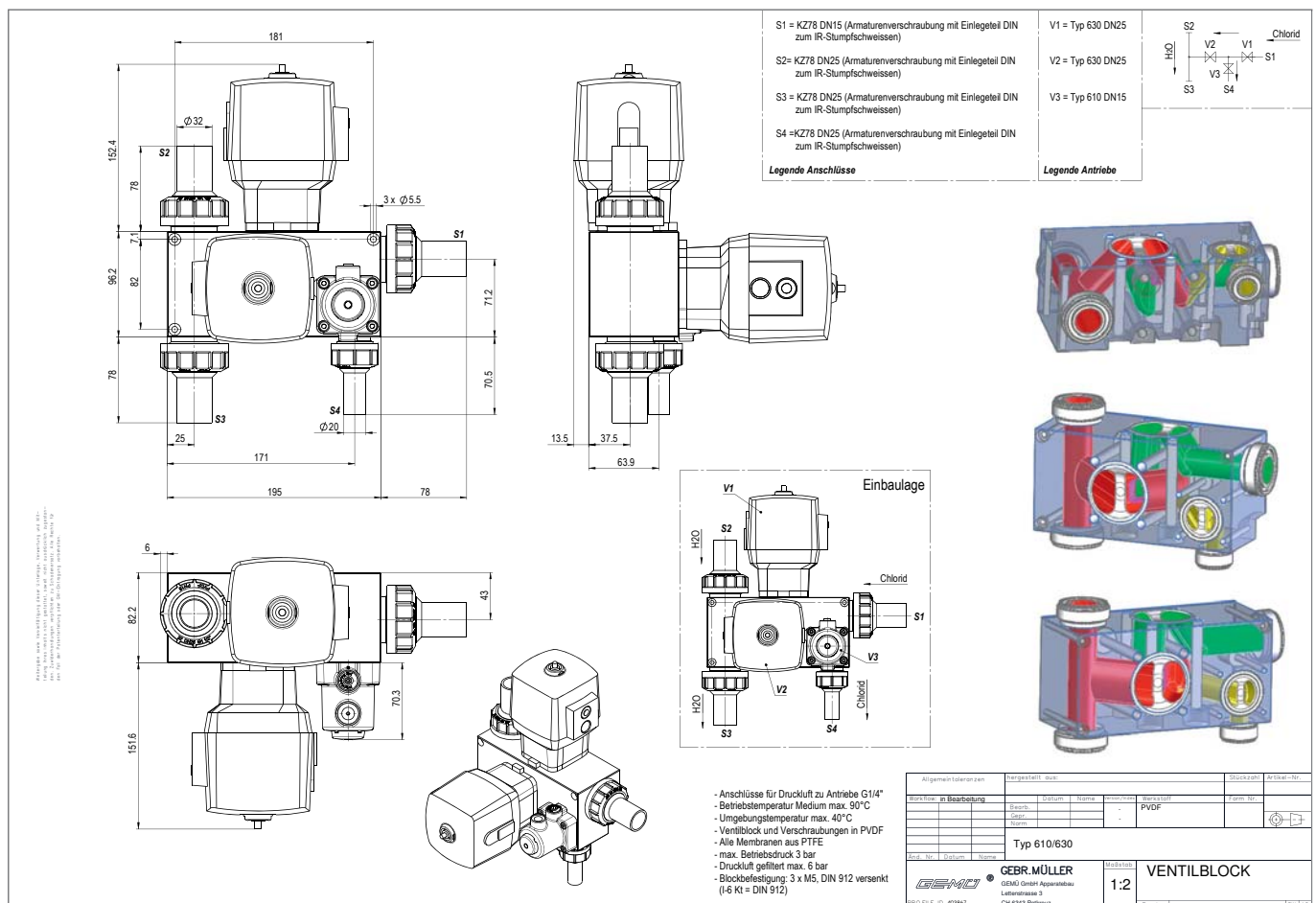
Engineering capability

Solutions are developed together with the customer

GEMÜ supports its customers at the planning phase with ideas and initial drafts. The drafts are laid out for design purposes in the 3D CAD system, agreed in close cooperation with the customer and finally processed in a state of the art efficient machining centre. Every day, our Design Centre turns out new customised block designs. Whatever you envisage or we work out together with you and which is technically feasible becomes reality at GEMÜ.

Time and cost optimized

The bodies of plastic multi-port valves are made as standard of PVC-U, PP, PP natural, PVDF, PEEK and PTFE but designs are also possible using other materials. Multi-port valve blocks are generally produced by machining from a solid block of plastic material. In the case of larger quantities, GEMÜ develops individual solutions together with the customer based on an injection moulding process. This leads to substantially lower unit costs. Of course we also develop and manufacture the moulding tools for this ourselves. We therefore have control over the whole process, which is fast, flexible and in line with our high quality requirements.



Planning and partnership

Good planning is critical in valve design. Errors in the planning of production plant can result in substantial consequential expense. Delays and extra costs due to problems during the process, late commissioning, contaminated batches, later modifications to the plant are just a few of the examples in favour of precise planning. Implementing complex process sequences requires a varied range of compact valve designs. We put great emphasis on providing our customers with the optimum valve block solution for their specific application. A number of aspects are considered when designing and arranging multi-port valve blocks. Top priority is given to the safety of applications and processes in the system in which the valve unit is to be integrated. Essential specifications include the function of the block, the number, dimensions and function of the pipe connections, the number and size of the valve seats, the installation position and draining direction of the block, the space requirement, the type and function of the operators and the type of material. In order to facilitate this we have developed a specification sheet which serves as a basis for discussing your requirements.

Please send this specification sheet to your GEMÜ contact.

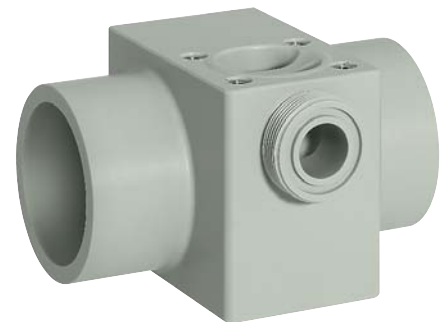
1. Enter the operating conditions and desired materials.
2. What function should the multi-port valve fulfil?
3. Draw a pictogram and make a sketch in the specification.
4. Label all connection types with S1, S2, ...
5. Assign the necessary features to every connection in the table and add explanatory remarks where necessary.
6. Specify the necessary operator, type and control function for every connection.
7. For extra remarks and descriptions, please use an additional sheet.



Plastic block in PTFE



Multi-port valve block for media mixing



Plastic block for removal of media from the main pipe



7-way manifold in PVC-U, with hose connectors, pneumatic actuators GEMÜ 630

Specification – Plastic valve blocks for industry

Please complete this form and return it to your nearest GEMÜ office or to the address listed below.

Customer: _____
 Contact: _____
 Application: _____
 Medium: _____
 Comment _____

Medium operating pressure: min: norm: max: bar
 Medium temperature: min: norm: max: °C
 Ambient temperature: min: norm: max: °C
 Max. operating pressure at
 max. medium temperature: bar

Multi-port valve block material:

PVC-U, grey (Code 1)
 PP-H, grey (Code G5)
 PVDF (Code 20)
 Other

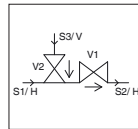
Seal material:

EPDM (Code 14)
 NBR (Code 2)
 FPM (Code 4)
 PTFE (Code 52)
 Other

Special requirements (e.g. cleaning, packaging):

Certificates ☐
 Modular extendable solution ☐
 Fixing ☐
 Draining required ☐
 Other ☐

Example:



Please draw functional diagram.

Important: Please observe
 correspondence of table
 and functional diagram.

Operator version: ☐ optional
☐ acc. to specification

Valve seat: V1, V2, ...

Spigot: S1, S2, ...

Preferred installation position: Horizontal/Vertical

Flow direction (medium): →

Valve seat:

Quantity / batch sizes:

Price:

Connection + operation:

Spigot	Connection		Valve seat	Operator			Other
Spigot no.	DN	Code	Seat no.	Operation	Control function	Kv value	Comment/accessories/measurement device
S1			V1				
S2			V2				
S3			V3				
S4			V4				
S5			V5				
S6			V6				
S7			V7				
S8			V8				
S9			V9				
S10			V10				

The technical details of each enquiry must be checked by GEMÜ.

Contact (GEMÜ): _____

Phone: _____

E-mail: _____

Customer address: _____

Remarks:

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In addition to these
subsidiaries, GEMÜ has a
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Contact details:

https://www.gemu-group.com/en_GB/kontakte/



 GEMÜ manufacturing site

 GEMÜ subsidiary

