



## Water treatment in swimming pools

GEMÜ valves, measurement and control systems for filtration and disinfection in swimming pool processes.

### Process description

The water in public swimming pools is subject to stringent quality criteria, which is regulated in various standards, such as DIN 19643, ÖNORM M6215 or SIA 385/9. In addition to microbiological requirements, this also includes chemical and physical requirements, such as a balanced pH value, limit values in the nitrate concentration, and for the concentration of free and bonded chlorine.

To meet the quality criteria, continuous, multi-stage treatment of the bathing water using filtration and disinfection is required.

GEMÜ valves, measurement and control systems are already reliably used in mixed bed filters, ultra-filtration or disinfection using chlorine, ozone or UV.

### Suitable GEMÜ product range

- GEMÜ R487 and R481 Victoria, metal butterfly valves
- GEMÜ S717, plastic ball valve
- GEMÜ R690 pneumatic and GEMÜ R677 manual diaphragm valve
- GEMÜ 805, flowmeter
- GEMÜ RSK, plastic check valve
- GEMÜ M75, process solenoid valve
- GEMÜ D457 and GEMÜ 417, plastic butterfly valves

### Process parameters

- Working medium: Fresh water, bathing water, flocculant, chlorine
- Temperatures: 20 °C–40 °C
- Pressures: Usually approx. 3 bar

# Benefit from GEMÜ's many years of expertise in water treatment

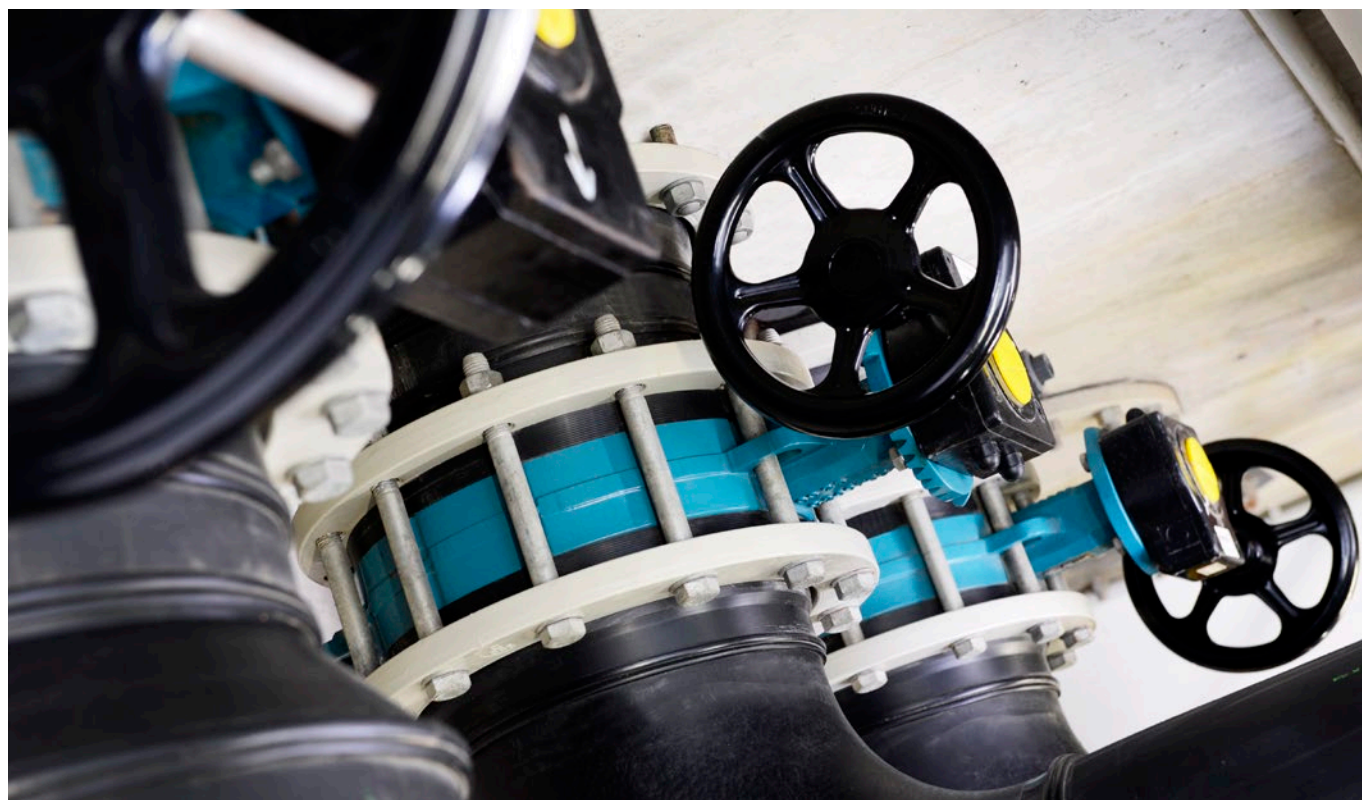
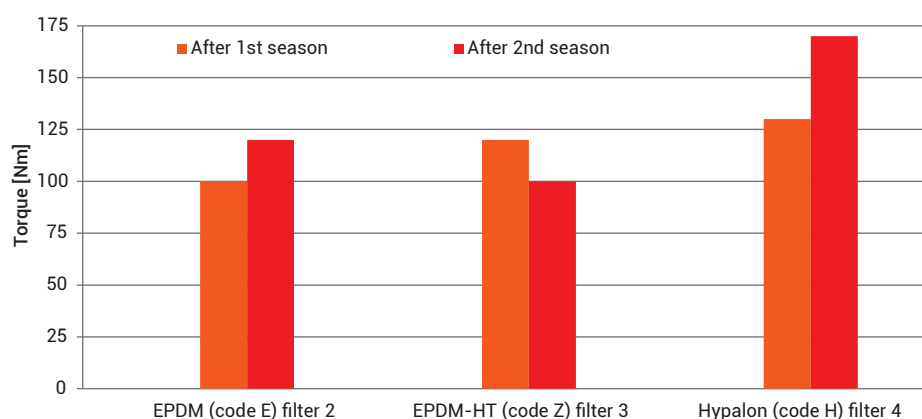
Having excellent references in the water treatment industry show that we clearly understand your requirements. Let us share our empirical values with you.

## The right liner – Hypalon or EPDM

As a resistant elastomer, Hypalon is preferred for use as a sealing material for butterfly valves in swimming pool processes. In close cooperation with our customers, we continuously collect empirical values regarding the use of various materials.

This is how we know, for example, that the of EPDM liners are in no way inferior to the Hypalon version. On the contrary: When using the peroxidic EPDM liners (liner code Z), we were able to observe a positive effect on the valve's torque during measurements.

Torque of the GEMÜ butterfly valves – liner comparison



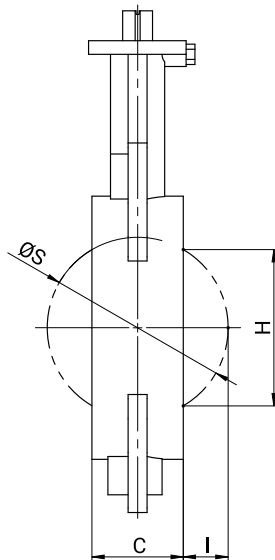
## Metal butterfly valves in plastic piping

For the piping systems in the swimming pool industry, due to their great resistance, PVC or pipes, fittings, and moulded parts are usually used.

Since plastic piping has a higher wall thickness than metal pipes, the butterfly disc may collide with the flange's short stub end during the installation of the metal butterfly valves.

This is why the modification of the short stub end must be observed during installation.

Our datasheets contain precise information on the diameter of the disc outlet dimension for this case in order to facilitate this modification.



## Cast iron or aluminium?

Our standard body material for our GGG40 butterfly valves stands out thanks to a corrosion-resistant epoxy coating (comparable to C5).

The fact that this material has been used in the municipal water treatment for decades is testament to its high level of reliability.

## Reduced weight

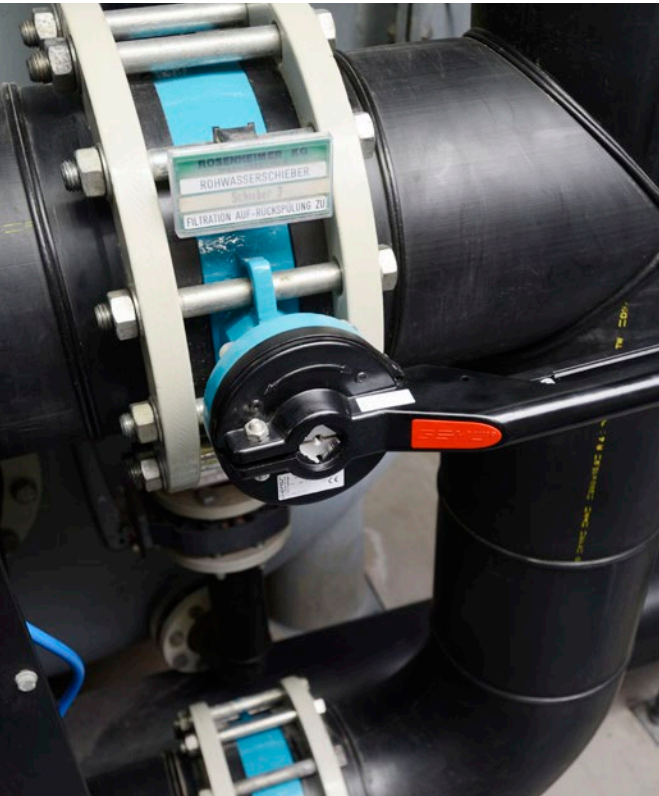
With the redesign of our soft-seated butterfly valves from the GEMÜ R480 Victoria series, we were able to achieve design advantages. We have therefore been able to further reduce the weight of the metal valves by using a sleek yet robust body design, for example.

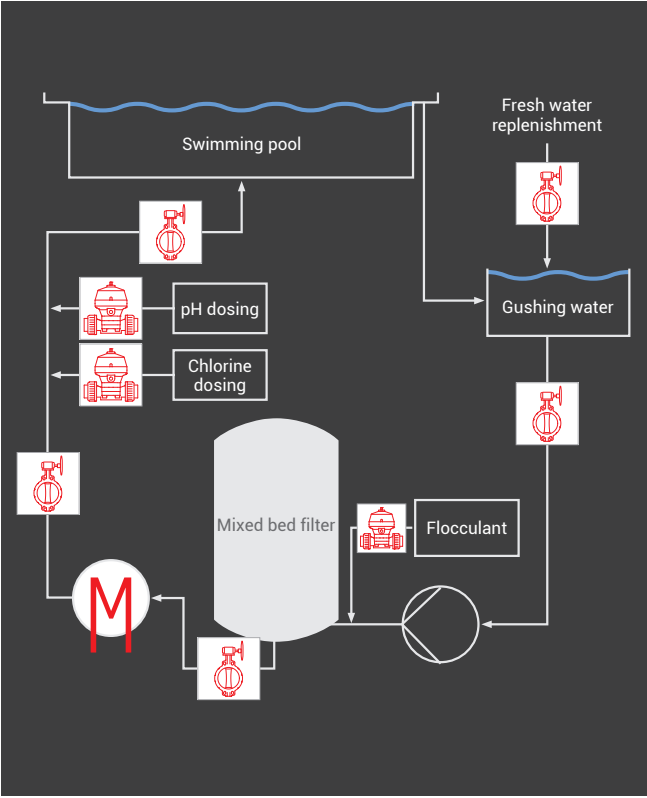
If required, we also offer alternative materials, such as aluminium or plastic.



# Overview of valve designs / valve finder

Medium or process step	Features	GEMÜ type	Selection of materials
Swimming pool water	Chlorine content < 5 mg/l	R481/R487	Disc: Stainless steel* or Rilsan-coated, *A reduced-diameter disc for optimizing the torque is available Liner: EPDM
Salt-water pool	Chlorine content < 5 mg/l, increased salt content >1000 mg/l	R481/R487	Disc: Duplex or Rilsan-coated Liner: EPDM
Drinking water	Top-up water	R481/R487	Disc: Stainless steel or Rilsan-coated Liner: EPDM
Hot water	Heating water to the heat exchanger	R481/R487	Disc: Stainless steel Liner: EPDM
Ultra-filtration	With chemically enhanced flushing (acidic, alkaline, chlorine)	R481/R487	Disc: Halar coating Liner: EPDM
Flocculant dosing	Polymer solution, or similar	R690/R677, 717, M75	Body: PVC/PP Seal: EPDM/FKM/PTFE
Chlorine dosing	Sodium hypochlorite or injector cir- cuit for chlorine gas	R690/R677, 717	Body: PVC/PVDF Seal: FKM/PTFE
pH dosing	Acid/alkali	R690/R677, 717, M75	Body: PVC/PP Seal: EPDM/FKM/PTFE





### Why GEMÜ?

For valve designs in swimming pool processes, GEMÜ offers technically advanced solutions that are tailored to each process step. With a wide range of valve types, materials and accessories, we supply complete valves, as well as suitable measurement and control systems, from a single source.

Whether when providing advice about the suitable material selection, for support during the installation or in the case of maintenance: Our specialists are always by your side to guarantee that plants operate safely and reliably.

