





Plastic Piping Systems

 $\rightarrow$  Solutions for Water Treatment

# **GF Piping Systems**

Throughout the world everyone demands a secure supply of clean water. GF Piping Systems is meeting this challenge by providing complete piping systems suitable for safe operation in virtually all environments. We have developed systems comprising pipe, fittings, valves, and measuring and control devices in high quality corrosion resistant thermoplastics for the transport of not only clean water, but also gas and other industrial media.

Whether installed above or below ground, in industrial, commercial or domestic applications, GF Piping Systems provides a solution.

# Innovation and technology.

GF Piping Systems, through focussed research, is continually developing new products and technologies, setting new global standards in quality and performance for our customers.

All from one source. GF Piping Systems covers the growing demand for complete solutions from a single source in a wide range of applications.

Quality management. All system components are stringently tested in accredited test laboratories. Management and production procedures are certified to ISO 9001 and ISO 14001 to guarantee form, fit, function and compliance in whatever application they may be used throughout the world.

# Sales and service – worldwide.

Our local sales companies and representatives in over 100 countries provide "one stop" shopping, including planning support, training and product availability.

Facts and Figures. GF Piping
Systems with its 3200 employees
achieves an annual turnover of
about CHF 800 million.
GF Piping Systems is part of
the Georg Fischer Corporation,
which was founded in Schaffhausen, Switzerland in 1802. Today
the corporation has more than
13,000 employees and an annual
turnover of CHF 3.3 billion.



# → Your benefits

- technological expertise
- "one stop" shopping
- premier quality
   and performance
- system solutions
- know-how and experience
- local support



Georg Fischer offers a complete, high quality line of piping systems and instrumentation products for the manufacturers of water treatment systems.

You will find piping products made from virtually every plastic material, offering a complete choice for the best solution for every application. GF offers the complete piping system, meaning that the fittings and valving are available in the same material as each type of pipe.

In addition, GF manufacturers the welding equipment necessary to form the connections for heat weldable piping, meaning that GF offers the total solution – and the system expertise for the state-of-the-art piping systems.

Beyond piping, GF also offers instrumentation (SIGNET) for flow, pH, ORP, conductivity, pressure and temperature monitoring and control in addition to valve actuators providing total fluid processing control.

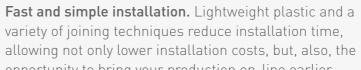
Our complete vertical integration offers the greatest return on quality, reliability and over-all value.

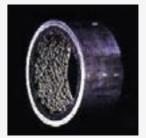
# Water Treatment

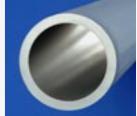
- Semiconductor and Electronic Industry
- Pharmaceutical, Cosmetics and Biopharm
- Food and Beverage Industry
- Paper and Chemical Industry
- Power Plants and Energy Production
- Automotive Industry
- Municipal, Pools and Aquariums
- Ship Building

# → Your benefits at a glance

**No corrosion problems.** Corrosion, which is an inherent problem for steel piping – even stainless steel – is not an issue with plastic piping systems. The rouging that primarily comes from the SS weld, is non-existent with plastic, resulting in higher purity and production reliability. And, longer service life as well.







Plasti



SYGEF® PVDF with BCF® welding in Electronics.



PVC-U for Municipal membrane system.



SYGEF® PVDF with BCF® welding in Pharmaceutical



PVC-C in Chemical Processing.



# Smooth welds. Compared to welded stainless steel – even automated orbital welding – the BCF° weld offers the smoothest piping connection available, minimizing piping wall abrasion and the potential for micro-biological growth. Beyond the smooth surface, the plastic connection does not require inert gas purging during the welding process and never requires passivation. Manually welded stainless steel Orbital welded stainless steel PVDF BCF\* welded PVDF BCF\* welded Third welded stainless steel Orbital welded stainless steel Orb

PVC-U for Ion exchanger in Automotive



Process cooling water with  $(\beta)$ -PP-H (Polypropylene) in **Power Industry**.



# → Applications - Materials - Systems

Electronics. With today's advanced semiconductor manufacturing technologies, the water used for rinsing and other critical purposes is more important than ever. GF SYGEF® (PVDF) and PP-H piping with GF fusion technologies makes it possible to produce and maintain the highest purity water; from an organic and inorganic chemistry and a biological stand-point. Completely inert materials such as SYGEF® allow the water treatment system to maintain its purity throughout the manufacturing facility, resulting in the highest quality product.

Pharmaceutical. New biotech products, cosmetics and pharmaceuticals are requiring higher quality water in the manufacture of a wide range of products from sun tan lotion to pharmaceutical products destined for injection directly into the human bloodstream. GF SYGEF® and PP-H piping with GF fusion technologies are creating the ability to produce USP grade water without stainless steel rouging and state-of-the-art welding technology (BCF®) that is smoother than an orbital weld.

Food and Beverage. The rapidly growing non-carbonated drink segment lead by fruit drinks, teas, isotonics and, most recently, water – both natural and purified, there is a greater need for sanitary and corrosion-free piping for the production and transportation of the largest component of these products – water. GF piping materials offer the solution for these "new age" drinks as well as the traditional carbonated drinks by eliminating corrosion and creating a more biologically free environment.

Paper and Chemical Processing. The production of chemicals, glass, paper and many, many other basic industrial products require treated water as part of the product, the rinse of the product or the heating and cooling of the product. In each case, the GF range of piping from SYGEF® to PVC offers economical corrosion-free piping to process the water used throughout industry.

Power Generation. High purity water plays a critical role in the production of electrical power, whether it is re-processing of condensate in a nuclear facility, a fossil fuel plant or NOx control in a gas turbine, it is critical to include piping that is capable of retaining its integrity for many, many years, without corrosion or attack from aggressive purified water. GF piping products offer clean, inert materials to ensure the highest grade of water for the use in the very critical processes of generating electrical power.

Automotive. As the cars of the 21st century are manufactured with the latest in corrosion control and painting technologies, the need for highly purified water is more important than ever before. Critical rinses after phosphatizing, caustic cleaning and electro coat painting are necessary to ensure the integrity of the overall coating process. GF PP-H, PVC-U and PVC-C products offer corrosion free designs at lower costs, ultimately providing a higher quality final automotive product.

Municipal, Pools and Aquariums. The key to success for municipal water distribution and processing systems is longevity. GF piping systems, made of materials such as ABS, Polyethylene (PE), PVC-U and PVC-C are "built to last" as a result of their resistance to corrosion, externally or internally. This is especially important for processing sea water at municipal desalination plants and saltwater environment aquariums.

Ship Building. The key to building a ship is to use the lightest weight materials. With the extensive piping systems that are found on all ships; especially cruise ships, GF piping materials are meeting the low weight demands, while eliminating the corrosion that is an inherent handicap to all products that are built to use on the water, whether fresh or seawater.

GF Piping Systems → worldwide at home

Our sales companies and representatives ensure local customer support in over 100 countries.



Numerous renowned international companies have years of good experience with GF Piping Systems. We would be pleased to demonstrate our competence in providing reference data on the basis of these real applications.

Please find more information concerning Water Treatment: www.piping.georgfischer.com  $\rightarrow$  Solutions  $\rightarrow$  Water Treatment

The technical data is not binding and not an expressly warranted characteristic of the goods It is subject to change. Please consult our General Conditions of Supply.

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