





Plastic Piping Systems → Solutions for Life Science



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 of 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.

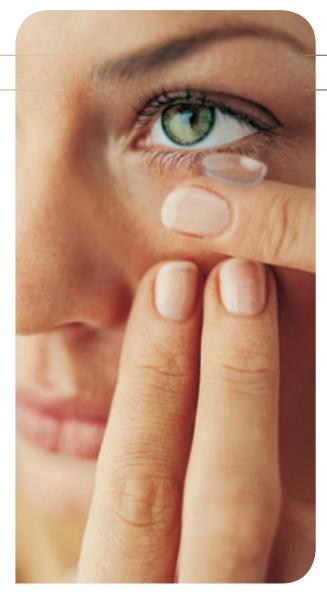
GF Piping Systems, through focussed research, is continually developing new products and technologies, setting new global standards in quality and performance for our customers.

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.



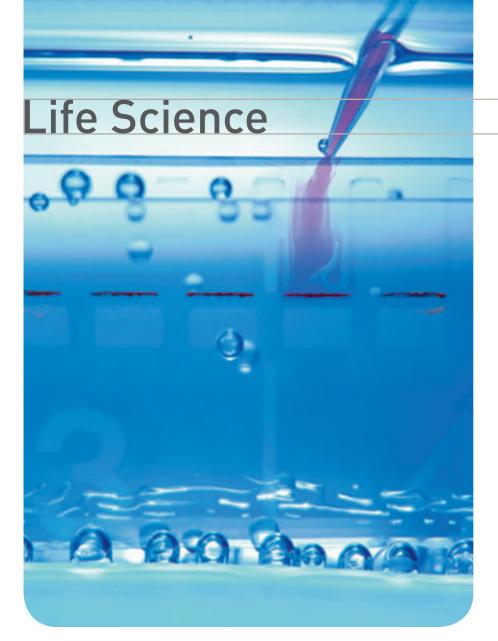
→ Your benefits

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

Comfort \rightarrow We bring you clean water

+GF+

GEORG FISCHER PIPING SYSTEMS Safety – Cleanliness – Hygiene These are the topics that relate to your daily work. You supply high-end quality for the end user, we supply high-end quality for you. Complete solutions dedicated specifically to your application and comprehensive support from a single contact person, that is how we work.



\rightarrow Plastics can do more

No corrosion problems. The corrosion problems, which ordinarily occur with steel, are not an issue with plastic. Product purity and production reliability are thus guaranteed. And the longer service life of your systems as well.

Fast and simple installation. Lightweight plastics and a variety of jointing techniques perfected to your application reduce installation time. By starting your production process sooner, you save on costs as well.

Easy cleaning and sanitizing. For your hygenic applications, we recommend the bead and crevice-free fusion technique. The smooth inner surfaces enable efficient cleaning and sanitizing with whatever validated method you use, whether chemicals, hot water or even steam.

The potential uses of plastics are virtually unlimited.

Process piping system for **biological fluids** in SYGEF[®] (PVDF) and PROGEF[®] Natural (PP-n).



Pharmaceutical water distribution in SYGEF® (PVDF).

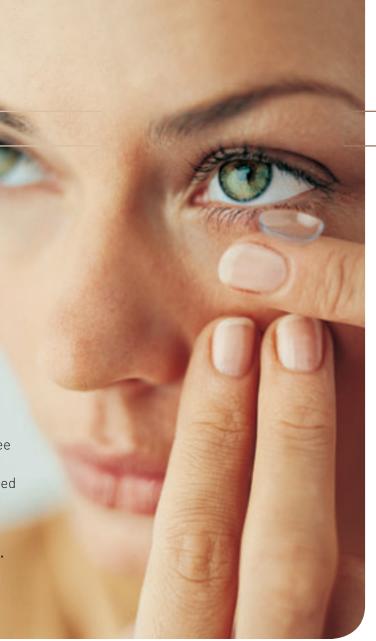


Water treatment in PVC-U, PVC-C, ABS and (β)-PP-H.

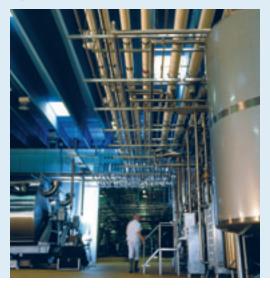


Chemical distribution with PVC-U.





Refrigeration and cooling system in pre-insulated ABS with COOL-FITTM.



\rightarrow Your benefits at a glance

- FDA- and USP-conform material
- Bead and crevice-free fusion
- No corrosion problems
- Smooth surface
- Quality performance
- Economic solutions
- Reduced maintenance



Vacuum system in (β)-PP-H.



Chemical drain and waste system in FUSEAL[®] (PVDF/PP).



Hot and cold water piping system in INSTAFLEX® PB.



ightarrow Applications – Materials – Systems

Biological fluids. Complete high purity piping solutions made of inert and corrosion-resistant SYGEF® or PROGEF® Natural with excellent surface roughness for good cleanability. All components are made of FDA-listed and USP-conform materials with very low metallic contamination guaranteeing long-term and consistent quality.

The excellent chemical resistance of plastics even to the lowest pH values produce a highquality, cost-effective alternative to stainless steel. Let GF Piping Systems recommend a solution for your medium.

Pharmaceutical water distribution.

Pharmaceutical-grade water is the most frequently used ingredient in drug manufacturing. For cleaning purposes as well, quality water is the lifeblood of the industry. SYGEF® and PROGEF® Natural in conjunction with BCF® (bead and crevice-free) fusion technology, ensure top quality water to USP standard at the point of use due to low microbiological attachment, excellent leach-out values and no rouging.

Water treatment. For the generation of de-ionized, drinking, process or cooling water, plastics are the material of choice. GF Piping Systems offers specialized components designed to allow compact construction with modular automation and SIGNET measurement systems for flexibility and efficiency.

Chemical distribution. Plastics offer excellent chemical resistance with excellent life-span expectations for temperatures up to 140 °C. GF Piping Systems plastics in PVDF, (β) -PP-H and PE 100 are top quality, reliable solutions, even for 33% HCL and 95% H₂SO₄. GF Piping Systems offers written guarantees of life-span and chemical resistance on request, just ask.

Refrigeration. For chilled or ice water, cooling water and secondary refrigeration from -40 °C to +60 °C. GF Piping Systems offers a standard plastic system in ABS or a pre-insulated version, COOL-FITTM ABS, with excellent efficency ($\lambda = 0.026$ W/m.k). COOL-FITTM ABS offers pre-insulated fittings as well as pipes to reduce the running costs of your system and reduce maintenance to a minimum.

Process cooling. In accordance with your wishes or building restrictions, GF Piping Systems can adapt the solution to meet your needs. Smooth bore plastic pipes with zero corrosion and zero encrustation on the internal pipe surface guarantee long-term, efficient performance of your cooling systems.

Vacuum. Complete systems for use in applications down to absolute vacuum, including valves in rigid plastics with low pressure loss, e.g. GF Piping Systems in (β) -PP-H and PVC offer high corrosion resistance and virtually zero maintenance.

Compressed air & gases. Improved efficiency with smooth bore plastics. Reliable and simple installation technology. Complete systems in PB and PE with application-oriented components and dedicated engineering support.

Chemical drain and waste system. Specialty piping has become a key term for stronger and more reliable waste lines. GF Piping Systems' FUSEAL® products in flame retardant PP or PVDF provides you with a cost-effective and safe method of conveying corrosive fluids even at elevated temperatures.

Hot and cold water. Complete systems tailored to the customer's needs. Rigid or flexible systems for hot and cold water, heating, airconditioning and safety showers. Whether traditional PVC and PP or sophisticated building systems such as INSTAFELX®, ALUPEX, iFIT or AQUASYSTEM, GF Piping Systems offers a cost-effective solution with excellent life-span.

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 Life Science: www.piping.georgfischer.com \rightarrow Solutions \rightarrow Life Science

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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