





Plastic Piping Systems

→ Solutions for Microelectronics

# **GF Piping Systems**

Supplying the world with clean water is one of the major challenges of the 21st century. GF Piping Systems rises to this challenge by providing high quality piping systems.

We develop and produce pipes, fittings, valves, flow measurement devices and fusion machines. These application-oriented system solutions allow transporting water, gas and industrial liquids safely and reliably. Whether in industry, utilities or building technology – GF Piping Systems has the right solution for you.

### 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 3 200 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 circa 12 000
employees and an annual turnover of CHF 3.7 billion.



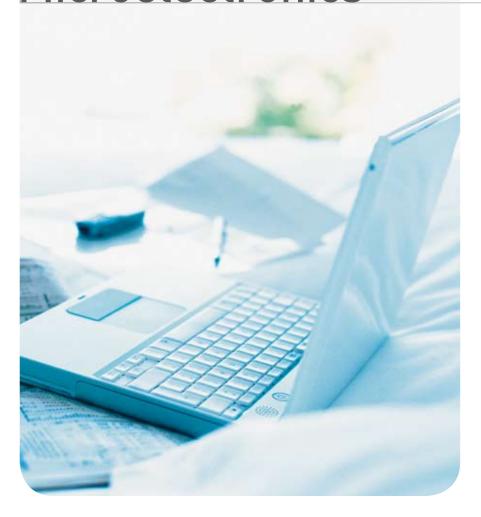
## → Your benefits

- local expertise
- cost effective solutions
- prefabrication
- individual system solutions
- sustainability
- environmentally friendly systems

Microelectronics

In addition to the semiconductor industry where we have supplied plastic piping systems solutions successfully for over 25 years, now TFT/LCD displays and the solar industry become more and more important.

Based on its wide experience, GF Piping Systems has developed comprehensive system solutions for these markets to meet customer needs in the best possible manner.



**UPW** in SYGEF® Plus.



**DI** water/specified water in PROGEF® Plus.



Process Cooli



# → Safety – Quality – Productivity At Georg Fischer we realize that your high tech factory runs 24/7. Having dependable, safe piping systems that can consistently deliver critical processing fluids is a must. Avoiding unnecessary shutdowns is a goal that we share. Our supply of quality plastic piping system products and welding technologies coupled with our dedicated and knowledgeable staff has kept factories like your own running 24/7 for more than two decades. During this time, end users like yourself have seen the added benefits of plastic piping systems and replaced other materials to achieve safety, quality and productivity.

ng Water (PCW)

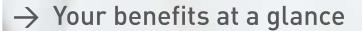


Chemical drain and waste systems in CONTAIN-IT Plus or FUSEAL® (PVDF/PP).

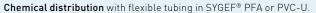


CMP/slurry process in PROGEF® Natural, SYGEF® PFA.





- widest range of plastic materials and components
- high purity products
- unique fluid applications
- unsurpassed installation equipment
- economic solutions
- global service standards





Process and house vacuum in (B)-PP-H.



Hot and cold water in IN





# → Applications - Materials - Systems



INTEL 2003 Supplier Continuous Quality Improvement Award (SCQI)



ΓAFLEX® (PB).



**UPW.** Ultrapure Water (UPW) and Hot Ultrapure Water (HUPW) are the lifeblood of semiconductor wet processing. UPW contacts the wafer at least 20% of the manufacturing cycle. The primary uses for UPW and HUPW are rinse water, humidification water, CMP and ultrapure chemical blending. SYGEF® Plus systems out of PVDF high purity material with the corresponding IR® Plus fusion technology offers an industrial benchmark solution.

DI water/specified water. DI or less demanding UPW water (e.g. used in the TFT/LCD industry) requires defined water qualities at different levels. PROGEF® Plus offers a high quality system solution with a favorable price/performance ratio, showing better leach out characteristics than any PVC clean.

Process Cooling Water (PCW). Temperature-controlled water is used extensively throughout high tech manufacturing processes to cool critical components in OEM, environmental and reclaim equipment.

The (B)-PP-H product line of GF Piping Systems offers a cost-effective solution versus stainless steel with an excellent, non-corrosive surface finish. In addition our products guarantee superior insulating properties compared to steel.

Chemical drain and waste systems. Chemical waste drain as well as water reclaim and recycle applications offer environmental challenges to any factory. All grades of plastics from the GF product list have found their way into this important worldwide role, offering cost-effective solutions to help mitigate pollution and maintain a clean environment for future generations. GF Piping Systems' FUSEAL® products in flame-retardant PP or PVDF and the double containment piping system CONTAIN-IT Plus provide you with a safe and efficient method of conveying corrosive fluids even at elevated temperatures.

CMP/slurry process. Chemical mechanical planarization and polishing, CMP, is a wafer flattening and polishing process that combines mechanical buffing with chemical removal. PROGEF® Natural can provide a fully welded system solution that meets all your requirements, possibly even eliminating the need of double containment.

GF Piping Systems is the only supplier who can truly offer a complete piping system solution for reliable slurry supply.

This added value for our customers is maximized by using PROGEF® Natural for large diameter slurry supply lines and SYGEF® PFA, our flexible High Purity Piping System Solution for the smaller hook-up dimensions.

Chemical distribution. GF Piping Systems is uniquely equipped to provide the proper material with excellent life span expectations for temperatures up to 140°C to meet your chemical delivery needs.

Our plastics in PVDF, PVC-U, PVC-C and [ß]-PP-H are top quality, reliable solutions, for various chemical media.

SYGEF® PFA completes the Total Plastic Solution for the distribution of high purity chemicals. The highly innovative PFA tubing, valves and Flaretype fittings sustain your

needs up to 200°C.

Process and house vacuum. Complete systems for use in applications down to finest vacuum, including valves in rigid plastics with low pressure loss, e.g. GF Piping Systems in [B]-PP-H and PVC offers high chemical resistance and virtually zero maintenance for process vacuum applications, but also for house vacuum systems.

Hot and cold water. Complete systems tailored to the customer's needs. Rigid or flexible systems for hot and cold water, heating, air conditioning and safety showers.

Whether traditional PVC and PP or sophisticated building systems such as INSTAFLEX®,
ALUPEX, iFIT or AQUASYSTEM, GF Piping Systems offers a cost-effective solution with excellent service life.



# GF Piping Systems → worldwide at home

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

### www.piping.georgfischer.com



The technical data is not binding. They neither constitute expressly warranted characteristics nor guaranteed properties nor a guaranteed durability. They are subject to modification. Our General Terms of Sale apply

## Adding Quality to People's Lives

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