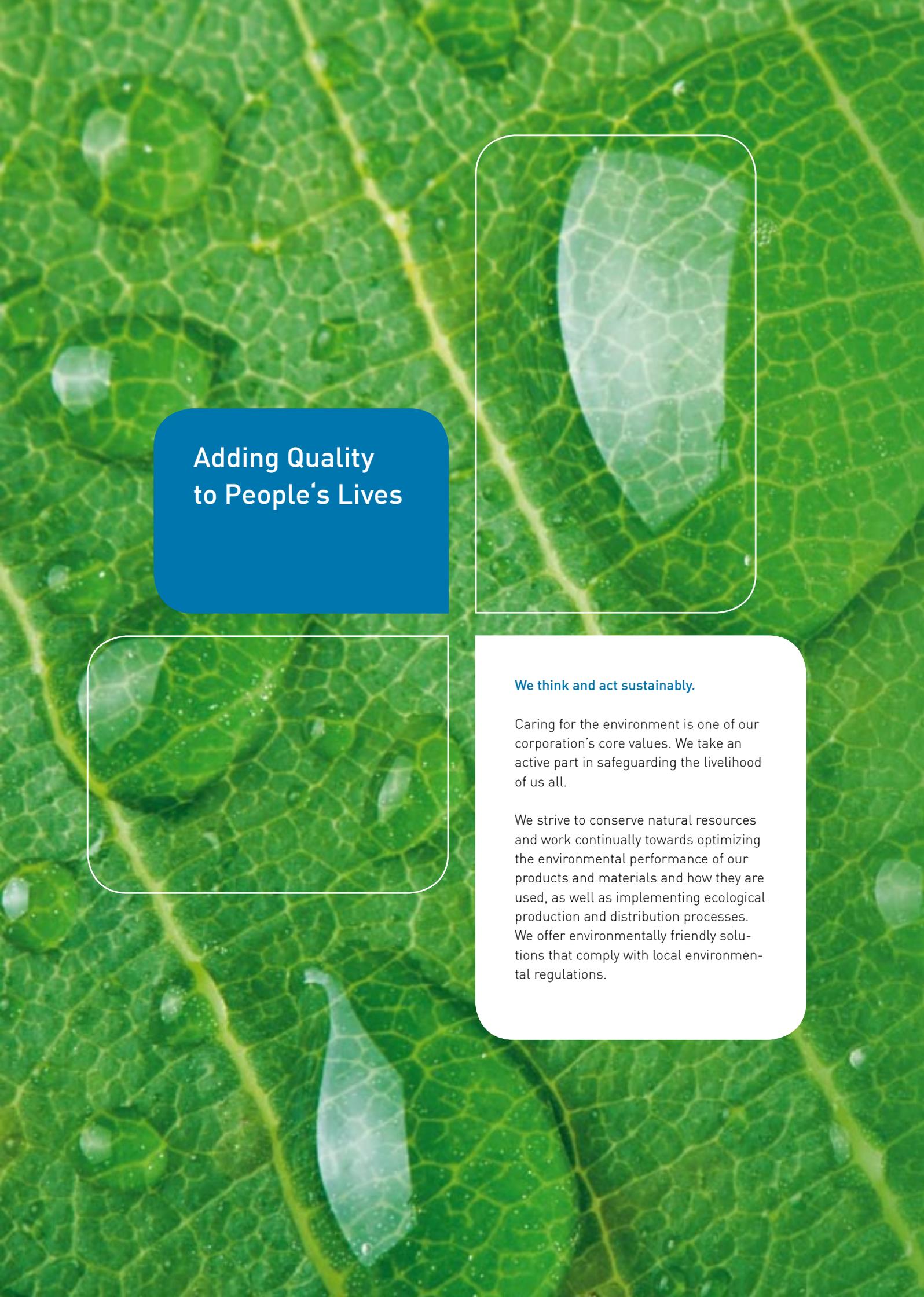




PIONEERING
GREEN SOLUTIONS



GEORG FISCHER
PIPING SYSTEMS

A close-up photograph of a vibrant green leaf with a prominent network of veins. Several clear water droplets of varying sizes are scattered across the leaf's surface, reflecting light. The background is a soft-focus continuation of the leaf's texture.

Adding Quality to People's Lives

We think and act sustainably.

Caring for the environment is one of our corporation's core values. We take an active part in safeguarding the livelihood of us all.

We strive to conserve natural resources and work continually towards optimizing the environmental performance of our products and materials and how they are used, as well as implementing ecological production and distribution processes. We offer environmentally friendly solutions that comply with local environmental regulations.

PIONEERING GREEN SOLUTIONS

With a history spanning 200 years, Georg Fischer is easily one of the oldest industrial groups in Switzerland. Our long tradition emphasizes the fact that sustainability has not only been embedded in our strategy since today. The many changes and challenges in the past two centuries could namely never have been mastered without a management that pursues a long-term strategy. We conserve natural resources by setting concrete goals in the framework of our environmental management system. Implementation and regular monitoring of the progress are considered managerial responsibilities. We subject our operations to external audits in support of this process.



Company

Green thinking and action is a tradition at GF Piping Systems. Climate change and a clean drinking water supply are the major ecological and social challenges of the future. We aim to develop and manufacture products and services in such a way as to keep the environmental impact to a minimum.



Material

Selecting the right materials is crucial. GF Piping Systems trusts in environmentally friendly plastic systems for numerous applications, for example in building services, water treatment and distribution as well as cooling.



Products

GF Piping Systems consciously cultivates an innovative environment. The result of these efforts are numerous products and patents that meet customer needs accurately and effectively. In addition to technical specifications, we focus on energy efficiency – in the manufacture and use – of our products.



Applications

As a leading supplier of plastic piping systems, we contribute to the research and development of energy-efficient uses of raw materials and resources. Our innovative solutions help to shape the future and protect the environment for future generations.



Clean Water Foundation

The Clean Water Foundation, established in 2002, sponsors projects aimed at supplying clean drinking water to people in developing countries and disaster areas. Clean Water supports specially selected projects that involve the local population and, if possible, make use of local techniques and materials.

Corporation

We think and act sustainably.

Climate change and a supply of clean drinking water are the most important ecological and social challenges of the future. GF Piping Systems makes an important contribution to resolving these issues with its products and applications.

Sustainable use of resources

Using energy more sustainably on a global scale requires effective measures in all areas of a company. This is why we have the same high standards at all our plants throughout the world. Moreover, the GF Corporation has invested millions in solutions aimed at safeguarding environmental resources worldwide.

Cooperation with suppliers

The social and ecological responsibility of a corporation encompasses the choice of business partners, notably the suppliers. GF Piping Systems expects its suppliers to have a certified quality and environmental management system in place and to adhere to the "Supplier's Code".

Over the past 200 years Georg Fischer has made it their ambition to create sustainable value in a balanced way for their employees, shareholders, business partners, customers and the public. Industrial leadership and financial success necessitate and bring forth excellence, competitive strength and sustainability.

Milestones in Sustainability

- 1992 Georg Fischer signs the ICC Charta (International Chamber of Commerce).
- 1998 The Georg Fischer Corporation aims to have all its production and logistics-related subsidiaries under a certified environmental management system.
- 2000 First Corporate Environmental Report.
- 2002 Creation of the Clean Water Foundation.
- 2006 Georg Fischer publishes the first Sustainability Report
- 2008 Introduction of a reporting which enables employees to report infringements of laws and internal guidelines.
- 2009 The Supplier's Code becomes effective.

Dealing responsibly with resources is our concern



Climate and energy: At GF Piping Systems energy consumption has the highest environmental priority. By optimizing our production processes, we strive to improve our energy efficiency, thereby reducing carbon dioxide emissions.



Fossil fuels and water are at the beginning of our products. At the same time, we manufacture systems that transport these two elements safely and without loss, whether in industrial applications or for the water utilities. Dealing responsibly with these resources is our concern.



Local logistics: GF Piping Systems operates local production facilities around the globe. Thanks to this production concept, we can save vast amounts of energy which would normally be used for transports. The benefit is twofold: we protect the environment and are close to our customers.

Material

Plastic is corrosion-resistant, long-lived and ecological.

The world faces major challenges in the area of energy. Specifically, these are the growing demand for energy, the finiteness of fossil fuels, increasing energy prices and climate change. Plastics can help overcome these challenges.

Plastic saves energy

Besides the technical advantages we are all familiar with, e.g. corrosion resistance, plastics also have ecological advantages. Because of their light weight and insulating properties, plastics are virtually predestined for a multitude of energy-efficient applications – in vehicles, packaging, insulation and of course piping systems.

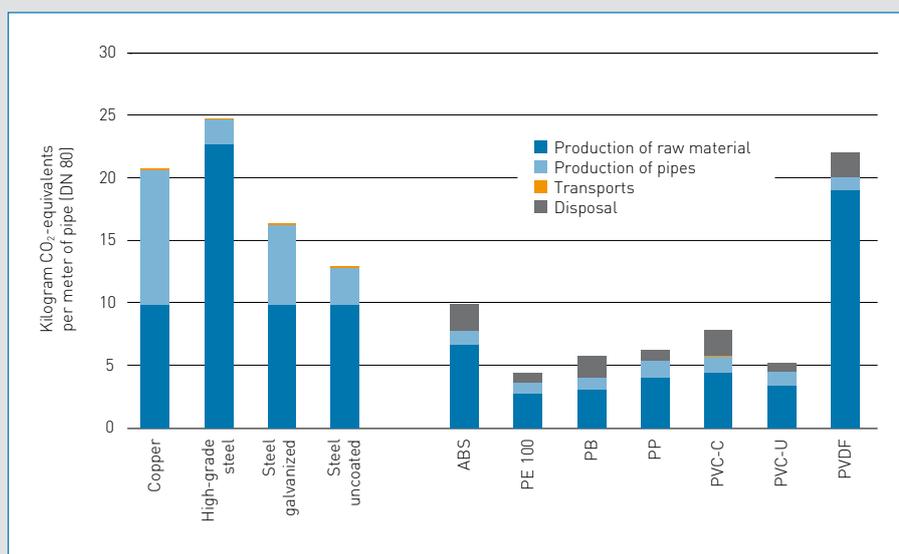
Every kilo saved is important

Key factors for a life cycle assessment of pipes are the type and quantity of materials used. Per kilogram of material, many plastics as well as copper and stainless steel have a comparably high energy demand. In relation to a meter pipe, however, the results are very different. Because they are much lighter, plastic pipes have a better life cycle assessment than metal pipes, especially for the small and mid-range dimensions.

Plastics manufacturing requires, as we all know, crude oil. Approximately four percent of the crude oil produced worldwide goes into plastics. Efforts to reduce the consumption of crude oil and other fossil fuels do not, however, mean renouncing plastics – on the contrary, using plastic saves energy!

Plastic pipes from GF Piping Systems have a very good CO₂ footprint due to their low weight. For instance, the cumulated greenhouse gas emissions during production, transport and disposal of a PE pipe one meter in length are approx. five times lower than for a comparable stainless steel pipe.*

Good life cycle assessment of plastic pipes



Recycling: Plastics are stored energy. We are continually optimizing our production processes to the effect that raw materials are used as efficiently as possible. Unavoidable waste created along the whole production chain is recycled at all GF Piping Systems manufacturing plants. Out of the recycled materials we produce components of lower quality and hygiene requirements than piping systems and fittings, such as handles for valves or positioner housings.

* Life cycle assessment of pipes – Comparison of various piping materials for building services, industry and utilities. Study by S. Büsser and R. Frischknecht, ESU-services Ltd. on behalf of Georg Fischer Piping Systems, 2008.

Products

Eco-efficiency with the right dimensioning.

The right choice of materials and meticulous system layout have a profound effect on sustainability. The large range of products on offer at GF Piping Systems – pipelines, fittings, valves, flow measurement devices and extensive jointing technology, etc. – enable precise and efficient dimensioning, even of highly complex systems.

Sustainability is unthinkable without innovation. GF Piping Systems has always cultivated an environment conducive to innovation, and what's important, in all areas of business: product development, process control, logistics and employee development, to name but a few. The results of this philosophy are numerous patents and new products. One shining star is the COOL-FIT system for refrigeration technology and secondary cooling. Recognizing a latent demand and translating it into a practicable and economical solution for customers, while at the same time creating stable production processes, have created long-term added value for customers and GF Piping Systems alike.

GF Piping Systems attaches a great deal of importance to energy efficiency and the reduction of water consumption in the manufacture and the application of products. The sustainability of products from GF Piping Systems is also fostered by their longevity, their uninterrupted availability and their diversity. Besides new installations, products from GF Piping Systems are highly valued for expansions, repairs and retrofitting of existing systems.

Online CO₂ calculator



Calculate the CO₂ savings potential compared to metal pipes with our CO₂ calculator.

www.piping.georgfischer.com/go/green

Symbiosis of ecological and economical benefits: COOL-FIT

Cool calculation: Eco-efficient product made of plastic. One example of our energy-saving solutions is the fully pre-insulated COOL-FIT system for secondary cooling and cold storage plants.

The system is based on the ABS plastic system from GF Piping Systems, which comprises pipes, fittings, valves and transition fittings. COOL-FIT is used exclusively in secondary cooling systems.

The quantity of refrigerant can be reduced in this type of system compared to conventional systems by 80 to 90 percent. Consequently, COOL-FIT undercuts the TEWI (Total Equivalent Warming Impact) of other systems by over 50 percent.

COOL-FIT saves resources. The system has clear advantages over conventional metal pipes, both in view of energy consumption as well as resource conservation. This applies to



the materials selection, production and the customer's application.

Practically maintenance-free. The functionality of the pipes is neither impacted by corrosion nor by lime deposits; the pipes stay practically maintenance-free over their entire lifetime.

Energy efficient. Thanks to the complete pre-insulation and the low weight, the patented jointing system achieves a high energy efficiency. COOL-FIT uses roughly 50 percent less energy in operation than conventional copper systems.

Applications

Easy installation and maximum safety.

GF Piping Systems is dedicated to designing, manufacturing and marketing piping systems for the safe and secure conveyance of liquids and gases. Our comprehensive plastic systems are ideal for countless applications.

When developing and enhancing products and applications, GF Piping Systems works across national borders together with other companies, universities and reputable institutions, for example the Technical University in Aachen (RWTH) and the Swiss Federal Laboratory for Materials Testing and Research in Zurich.

System solutions from GF Piping Systems are implemented by customers for years, often for decades. Even the smallest increases in efficiency can have a significant impact on the life cycle assessment. GF Piping Systems develops products along the lines of a holistic approach. Sustainable solutions are only possible when the entire life of applications and products is taken into consideration. In this light, the Life Cycle Assessment (LCA) is becoming a key factor. The LCA is used to determine the effects of new applications on the environment – from raw materials and supplier selection, production and implementation at the customer's to end-of-life recyclability.

GF Piping Systems offers complete solutions in diverse plastic materials for the following segments:

- Building services
- Chemical process industry
- Shipbuilding
- Microelectronics
- Water and gas utilities
- Food industry
- Water treatment

Easy and fast installation, low running costs, compatible components, innovative jointing technology as well as a reduction in weight – all thanks to plastics. With systems from GF Piping Systems you save time and money, while also protecting the environment.

Sustainability in the interest of our customers

Practice-oriented development. Our experts know the special fields our customers work in and speak the same language. We develop our solutions in close cooperation with our customers, so they are ideally oriented toward practical applications. We also continually monitor the status of our performance and we adapt our services wherever possible to the needs of our customers.

Customer support and training worldwide. We advise and train our customers in the use of our products and applications. Thanks to our global sales network, we are always available to offer on-site support and answer any queries our customers might have.

Tested quality. Our products guarantee maximum reliability and safety in all application areas. Depending on the intended use, such factors as longevity, material purity, resistance



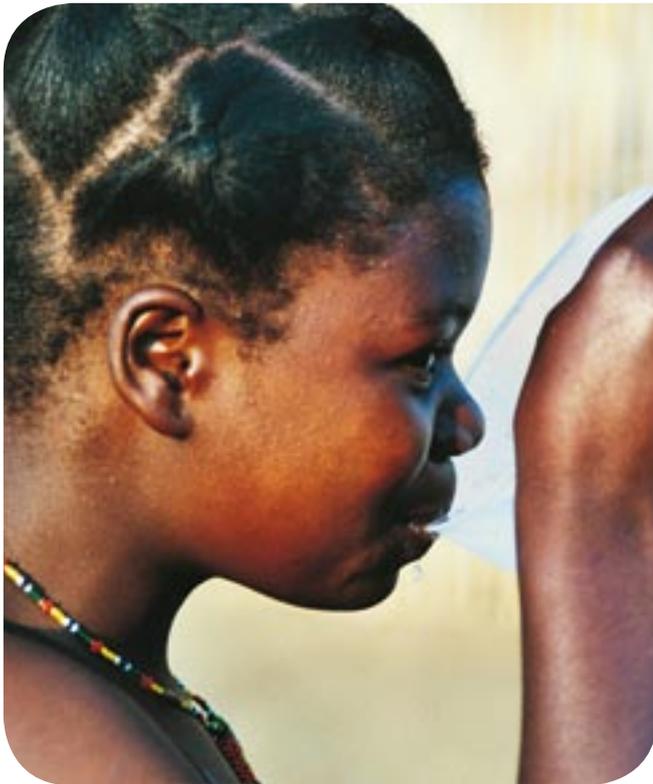
to chemical substances or resistance to large temperature fluctuations are crucial when selecting a piping system. We test materials and products in our own ISO/IEC 17025 certified test laboratory.



Sustainable corporate development: The demands placed on piping systems differ just as greatly and are just as challenging as the applications in which they are used. High purity water, chemicals or coolants are but a few examples of media transported in our piping systems. You can bank on our more than 50 years of know-how in plastics.

Clean Water Foundation

Clean water for the world.



Over one billion people worldwide do not have access to clean water and 2.6 billion people lack basic sanitation. This potentially life-threatening situation was reason enough for Georg Fischer to offer assistance.

With its Clean Water Foundation, Georg Fischer has been working since 2002 on projects to improve water supply in developing countries and disaster areas. Since then, Georg Fischer has injected over CHF 5 million into the Foundation and has thus funded the implementation of more than 70 projects in 40 countries on four continents. In 2009 seven projects were completed. Five projects in Indonesia, Brazil, Tadjikistan, Southern Sudan and Bangladesh have received additional funding in the amount of approx. CHF 350 000. We ensure that experienced partners assist the local population in all the projects to improve the supply of drinking water sustainably. Georg Fischer continues to contribute significant sums to the Clean Water Foundation every year.

→ www.cleanwater.ch



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