

Annual Report 2019

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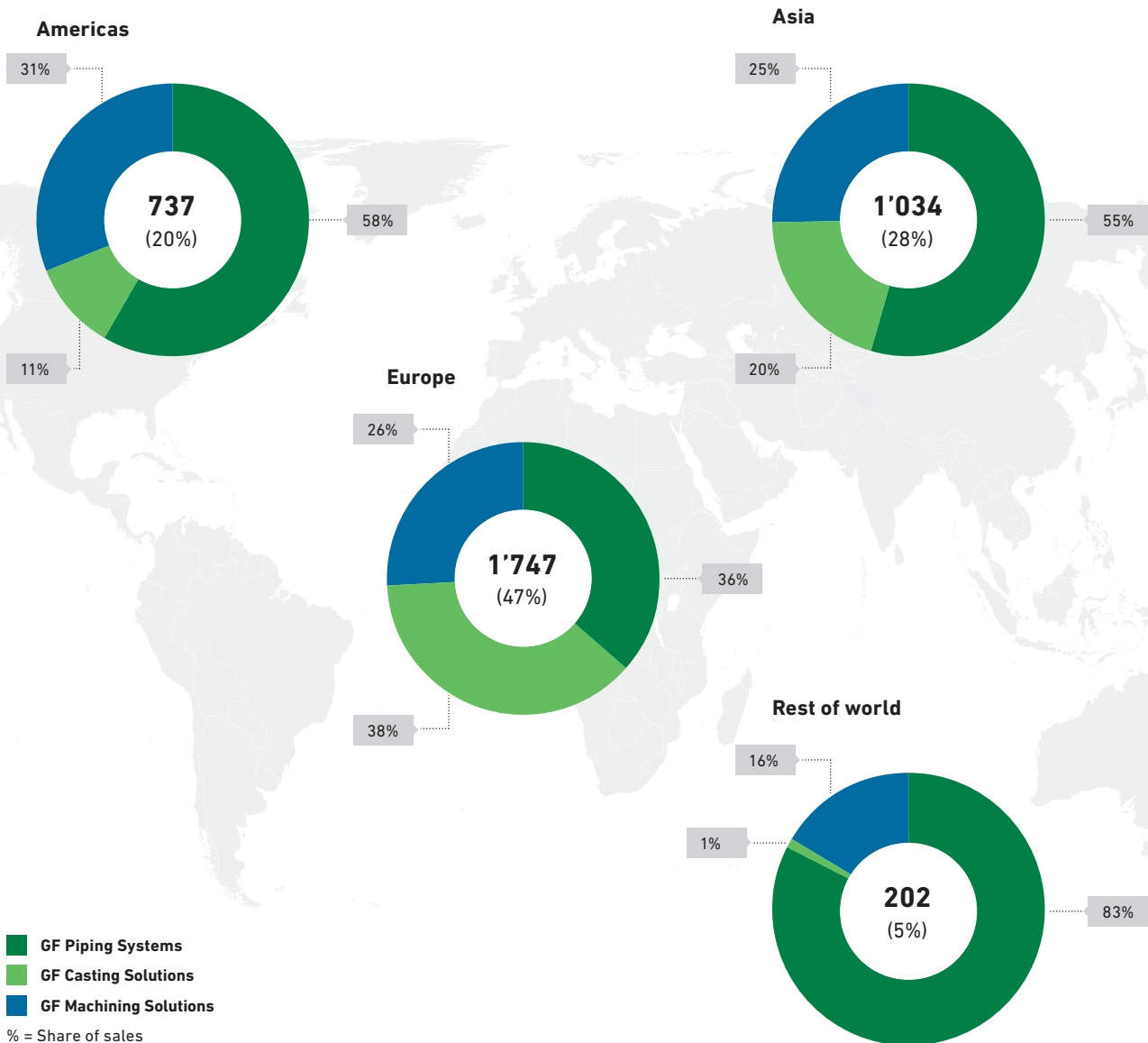
Passion for Innovation

At a glance

GF's key figures 2019

GF comprises three divisions: GF Piping Systems, GF Casting Solutions, and GF Machining Solutions. Founded in 1802, the Corporation is headquartered in Switzerland and present in 33 countries with 142 companies, 56 of them production facilities. GF's 14'678 employees generated sales of CHF 3'720 million in 2019. GF is the preferred partner of its customers for the safe transport of liquids and gases, lightweight casting components, and high-precision manufacturing technologies.

Sales outside Europe have risen above 50% for the first time
in CHF million

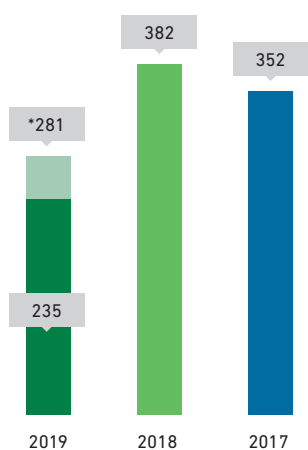
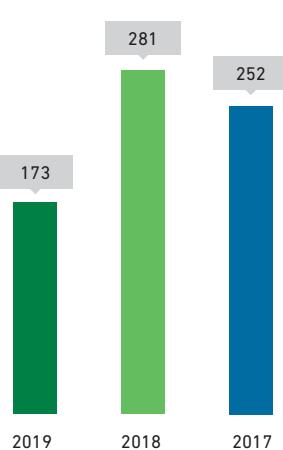
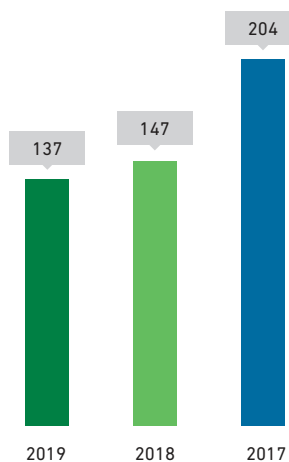



Sales

in CHF million

48%GF Piping Systems
1'802 CHF million**26%**GF Casting Solutions
949 CHF million**26%**GF Machining Solutions
972 CHF million**Key figures**

	Corporation		GF Piping Systems		GF Casting Solutions		GF Machining Solutions	
CHF million	2019	2018	2019	2018	2019	2018	2019	2018
Order intake	3'692	4'521	1'788	1'865	953	1'617	954	1'042
Orders on hand at year-end	563	623	119	134	267	289	177	200
Sales	3'720	4'572	1'802	1'821	949	1'687	972	1'066
Sales growth %	-18.6	10.2	-1.0	8.5	-43.7	13.8	-8.8	7.5
Organic growth %	-4.1	6.5	1.3	8.2	-9.7	5.2	-7.5	5.4
EBITDA	374	529	264	269	48	160	71	102
EBIT before one-offs	281	382	214	217	22	86	57	88
One-offs	46				46			
EBIT	235	382	214	217	-24	86	57	88
Net profit after minorities	173	281						
Free cash flow before acquisitions/divestments	137	147						
Return on sales before one-offs (EBIT margin before one-offs) %	7.6	8.4	11.9	11.9	2.3	5.1	5.9	8.3
Return on sales (EBIT margin) %	6.3	8.4	11.9	11.9	-2.5	5.1	5.9	8.3
Invested capital (IC)	1'473	1'494	676	688	477	531	256	262
Return on invested capital (ROIC) %	12.4	22.4	26.1	27.2	-4.4	16.1	18.4	27.5
Number of employees	14'678	15'027	6'892	6'852	4'336	4'693	3'358	3'394

EBIT***EBIT before one-offs**
in CHF million**Net profit****after minorities**
in CHF million**Free cash flow before acquisitions/divestments**
in CHF million



Letter to the shareholders

GF Piping Systems with strong performance – economic headwinds affect overall results

Andreas Koopmann, Chairman of the Board of Directors (left), and Andreas Müller, CEO, at the production site of GF Piping Systems in Schaffhausen.

Dear shareholders,

The geopolitical uncertainties affected the global economy in the first half of 2019 and have become even more evident in the second semester of the year. The trade tensions between USA and China, the lengthy Brexit discussions, ongoing confrontations in the Middle East region and in particular, the transformational change in the automotive business led to economic headwinds. As a consequence, the business sentiment in key industries and markets was affected by these uncertainties, creating a more challenging environment for GF.

GF sales amounted to CHF 3'720 million (2018: CHF 4'572 million), a decline of 18.6%. The development was primarily due to the proactive withdrawal of GF Casting Solutions from the iron casting activities in the European automotive industry and negative currency effects of CHF 88 million. Organically, sales decreased by 4.1%. The organic decline in the second half of the year decelerated to 2.5% versus a 5.5% decrease in the first semester 2019. Whilst GF Piping Systems grew organically by 1.3%, sales of GF Casting Solutions and

GF Machining Solutions organically decreased by 9.7% and 7.5% respectively. GF increased the top line in the Americas, whereas markets in Europe and Asia recorded a lower sales volume.

The operating result (EBIT) amounted to CHF 281 million before one-off items compared to CHF 382 million in 2018, equal to an EBIT margin (ROS) of 7.6% (2018: 8.4%). Including one-off items amounting to CHF 46 million in connection with initiated structural adjustments of

GF Casting Solutions, the EBIT was CHF 235 million (EBIT margin 6.3%).

The return on invested capital (ROIC) reached 12.4%. GF Piping Systems achieved a remarkable ROIC figure of 26.1%.

As a result of the divestment at GF Casting Solutions, the number of employees at year-end fell to 14'678 (2018: 15'027).

GF's net profit after minorities amounted to CHF 173 million (2018: CHF 281 million). The free cash flow before acquisitions reached CHF 137 million, which is CHF 10 million below previous year's level. Earnings per share reached CHF 42 compared to CHF 69 in 2018. The Board of Directors will propose at the upcoming Annual Shareholders' Meeting a dividend per share of CHF 25 on strong previous year's level. GF is well positioned in its markets and the focus on less cyclical market segments has increased the resilience of GF to economic slowdowns. These efforts will be pursued in the years to come.

GF Piping Systems

GF Piping Systems grew by 1.3% organically and was able to keep its sales at CHF 1'802 million on previous year's level. Headwinds from currency movements affected sales negatively by CHF 45 million. All three business segments Utility, Industry and Building Technology showed a strong performance in Europe, whereas the Asian and the US markets suffered from the ongoing trade tensions. China was slightly below previous year's level, since major infrastructure projects such as the "coal to gas program" continue to remain on hold.

The operating result stood at CHF 214 million (2018: CHF 217 million), for a strong 11.9% ROS, at the level of previous year. The continuous shift to higher value businesses with more digitalized solutions bears its fruits. The demand for clean water solutions remains on a high level, the pre-insulated Cool-Fit product line, developed for the transport of cooling media, experienced high growth and strong demand for datacenter projects and from other industrial customers.

GF Casting Solutions

In 2019, the performance of GF Casting Solutions was impacted mainly by the structural changes and market turmoil in the European automotive industry. In order to ensure the competitiveness in this new environment, the division has been swiftly implementing comprehensive structural and operating measures. The iron foundry divestment in Herzogenburg (Austria) with negative one-time costs of CHF 9 million and the partial relocation of the site in Werdohl (Germany) with costs of CHF 37 million led to overall one-off costs of CHF 46 million for 2019.

The new high-pressure die casting facility from GF Linamar in the US is well positioned with its manufacturing

capabilities for lightweight structural components. The company was awarded with several large orders. The high order book required already an expansion of the operations, which was accomplished in June 2019. Consequently, the ramp-up costs for the new orders had a considerable impact on the result and amounted to CHF 16 million for the full year 2019.

Adjusted for divestments (CHF 633 million), sales fell organically by 9.7% to CHF 949 million. The significant drop of the automotive production in Germany (-7%) and China (-8%) is the main driver for the organic decline. The operating result before one-off items dropped as a consequence to CHF 22 million (2018: CHF 86 million), resulting in a ROS of 2.3%. Including one-off items amounting to CHF 46 million in connection with initiated structural adjustments, the EBIT was CHF -24 million (EBIT margin -2.5%).

The strategic transformation, including the optimization of the footprint in Europe and the shift in new market segments such as aerospace and energy, is on track. The completion of this transformation is expected in 2021.

GF Machining Solutions

In the second half-year 2019, the demand for capital goods in Europe, spearheaded by Germany, but also in the US dropped. The Chinese markets for machine tools remained on previous year's low level.

GF Machining Solutions generated sales of CHF 972 million, an organic decline of 7.5% compared to the previous year. Businesses in China and Western Europe have been impacted the most, whereas the division was even able to grow in the US, based on the division's strong position in aerospace and medical technology. Innovations and a strong focus on the defined strategic market segments allowed the division to clearly outperform the North American market.

The reduction in sales and the lower utilization of production capacities affected the operating result. It fell from CHF 88 million to CHF 57 million, resulting in a ROS of 5.9% compared to a strong 8.3% in 2018. Innovations in the field of new technologies such as laser texturing or additive manufacturing continued to see a high demand from our customers, growing 41% in 2019. The ramp-up of the new milling innovation and production center in Biel/Bienne (Switzerland) has been successfully accomplished. The focus on operational excellence and innovation will remain the main driver for the development of the division.

Last year of strategy 2020 cycle/outlook

In the last year of its strategy cycle 2016-2020, GF will continue to focus on the implementation of its strategic thrusts and the acceleration of the strategic transformation at GF Casting Solutions. The structural shift within the automotive industry from traditional powertrain systems to hybrid and e-mobility concepts shows that the focus on lightweight structural components and

parts for the energy and aerospace sector are the right moves. However, the transformation of the division is an ongoing part of the strategy and is anticipated to be finished in the year 2021.

GF Piping Systems will continue to shift its portfolio to higher value businesses. The broad global customer base and the focus on sustainable solutions resulted in a strong performance despite difficult market conditions. Innovations and solutions for the safe transport of liquids and gases will remain the key focus of the division.

At the world-leading machine tool fair EMO, GF Machining Solutions launched new digitalized solutions preparing the ground for further growth. The division's passion for customer-centric innovations remains the key driver for growth and profitability.

The economic and political uncertainties in the markets, including the operational and financial implications of the coronavirus, have grown and will most probably continue in the upcoming months. In 2020, GF will therefore strengthen its focus on innovation, speed and operational excellence and has proactively launched an agility program addressing these topics. These initiatives in the transition year 2020 will set a solid base for the new GF strategy cycle 2025. They will complement the initiated structural measures with the ambition to sustainably improve future results and thereby bring GF's performance back towards its strategic targets (EBIT margin 9–10%, ROIC 20–24%).

Changes to the Board of Directors

Yves Serra will be proposed to the shareholders at the Annual Shareholders' Meeting on 15 April 2020 for election as Chairman of the Board of Directors. From 2008 to 2019, Yves Serra has been President and CEO of GF. Upon his retirement as CEO, he was elected to the Board of Directors and nominated as Vice Chairman. Roman Boutellier has reached the age limit and will retire as a Board Member at the next Annual Shareholders' Meeting. With his broad industrial, technological and scientific background, Roman Boutellier has contributed significantly to the successful development of GF over many years. We would like to thank him for his countless, very valuable and inspiring contributions he made to our company. The Board of Directors proposes Peter Hackel, CFO and Member of the Group Executive Management Board of Straumann Ltd, Basel (Switzerland) as new Board Member.

Mutual trust as key success factor

Our heartfelt thanks goes to all GF employees worldwide for their customer-centric efforts, team spirit and passion for GF. They will become even more an important key success factor for GF in the future.

Our customers are an ongoing source for inspiration and for generating new ideas. We are grateful for their support, their appreciation but also their constructive criticism. We also thank all our shareholders whose number has been increasing significantly over the last years, for their trust, as well as our banks for supporting GF over many years in all financial matters.



Andreas Koopmann
Chairman of the Board
of Directors



Andreas Müller
CEO

After ten years of service on the Board of Directors, of which eight years as Chairman, Andreas Koopmann has decided not to stand for re-election at the 2020 Annual Shareholders' Meeting. Andreas Koopmann has always led our Board in an open, competent and farsighted manner and has been a highly appreciated sparring partner for the CEO and the Executive Committee. Throughout his tenure, GF has benefited from his wealth of operational experience as well as from his valuable insights as Board Member in major listed companies. The Board of Directors and the Executive Committee of GF address their heartfelt thanks to Andreas Koopmann for his outstanding services on behalf of the Corporation.



Yves Serra
Vice Chairman of the Board
of Directors

Highlights

The year 2019 in brief

2019 was an active year for GF, characterized by successfully completed projects, site openings, as well as major events organized by highly motivated employees.



Shared competencies

GF pools its expertise in additive manufacturing in order to leverage its unique position on the market. A competence center established for this purpose has been operating since January under the name **"AMotion Center"** in Stabio (Switzerland) and is managed by GF Casting Solutions and GF Machining Solutions. The center has been successfully audited to obtain the NADCAP certificate, the highest possible level of certification in the aerospace industry. With the additive manufacturing process, highly complex components can be produced using metallic 3D printing.

A significant anniversary

GF's own "Iron Library" (Eisenbibliothek) celebrated its 70th anniversary in spring this year. It was founded on 31 December 1948 on the initiative of Ernst Müller, Director of GF at that time. The Iron Library in Klostersgut Paradies, near Schaffhausen (Switzerland), is dedicated to preserving the cultural and historical heritage of GF, together with the Corporate Archives. It is one of the world's largest specialist libraries for the history of iron and steel as well as the history of technology in general.

Newly formed GF Executive Committee

At the Annual Shareholders' Meeting on 17 April 2019, two changes took place in the **GF Executive Committee** (from left to right: Pascal Boillat, Carlos Vasto, Andreas Müller, Joost Geginat, Mads Joergensen): CFO Andreas Müller took over the position of CEO from Yves Serra, who has reached retirement age. Mads Joergensen, who served as CFO of GF Piping Systems for many years, became the new CFO of GF. Yves Serra was elected to the Board of Directors at the Meeting.





For the mobility of the future

If Tesla and SpaceX founder Elon Musk has his way, in future people will be transported around the globe at breathtaking speed. At the Hyperloop competition in Los Angeles (USA), among the many participants the **Swissloop team of the ETH Zurich** (Switzerland) showed how this vision could be realized with a transport capsule. GF, as a main sponsor of the Swissloop team, supplied the team with a casting component, developed by GF Casting Solutions, to cool the pod's drive system. During the competition in July, the transport capsule reached an impressive top-speed of 252 km/h in the vacuum tube – rushing straight to the 2nd place.

Expand presence in the marine business

In August, GF Piping Systems acquired Global Supply Co. Inc. in Hallandale (USA), a company specialized in services for the shipping industry, for example retrofitting cruise ships. This acquisition will allow the division to expand its presence in the promising US marine sector.



Investments at several sites

GF invested around CHF 100 million in the new innovation and production center of GF Machining Solutions in Biel (Switzerland). The divisional headquarters, opened in September, offers space for around 450 work-places and has more than 13'000 m² available for production and assembly. After about two years, in October, GF Casting Solutions opened a new administration building in Pitești (Romania) for about 40 employees. GF Piping Systems inaugurated its modernized headquarters and the new customer training center in Schaffhausen (Switzerland) in November. Within the same month, GF Casting Solutions celebrated the inauguration of the new **Tool Technology and Manufacturing Center** in Suzhou (China).

Half a million Swiss francs for clean drinking water

More than 1'000 GF employees and business partners from the **USA**, Germany, Indonesia, and Switzerland took part in GF's "Walk for Water" in September. The charity run brought in donations of around CHF 350'000, which GF topped up to CHF 500'000. This amount was donated to the "Water Mission" aid organization, a long-standing partner of GF. The money will be used for projects in Indonesia and Malawi.



Capital Market Day well visited

With the motto "Innovations for today and tomorrow", GF gave about 50 analysts and journalists in Biel (Switzerland) an in-depth insight into current innovative projects geared to sustainability and efficiency on the **Capital Market Day** in September. With various exhibits, the three divisions presented their latest applications in the areas of water hygiene, lightweight vehicle and engine components, as well as the additive production of complex and lighter products.

Strengthen competitiveness in Europe

In 2019, GF has swiftly undertaken actions to ensure its competitiveness in Europe and decided in July to shift approximately 300 jobs from the location in Werdohl (Germany) to Romania and Austria. The light metal casting plant in Werdohl has suffered from the changing market conditions and the shift by customers in their range of products. As part of the strategic focusing of its

portfolio, in October, GF Casting Solutions divested its iron foundry in Herzogenburg (Austria) to the company MRB FerCon GmbH which was founded by former GF managers. GF thus completed its withdrawal from the automotive iron casting business in Europe, which had already been announced in December 2018, in line with GF's strategy.

Joint venture in the Middle East

In November, GF established a joint venture with Corys Investments LLC in Dubai (UAE) and Egypt Gas, Cairo (Egypt). The new company Egypt Gas GF Corys Piping Systems will invest in a new production facility for plastic pipes and fittings near Cairo. It aims to participate in the rapidly growing market for gas and water distribution in Egypt. Start of the commercial production is planned for 2021.



More pictures and videos of the highlights can be found at annualreport.georgfischer.com/2019/en

At a glance

GF Piping Systems

GF Piping Systems is a leading supplier of piping systems made of plastics and metal. The division focuses on system solutions and high-quality components for the safe transport of water, chemicals and gases, as well as corresponding services. The product portfolio of fittings, valves, pipes, automation and jointing technologies covers all applications of the water cycle.

GF Piping Systems supports customers in the fields of utility, industry, and building technology in over 100 countries through its own sales companies and representative offices. The division operates more than 30 production sites in Europe, Asia, and the Americas.

Employees

6'892

2019



2018



2017

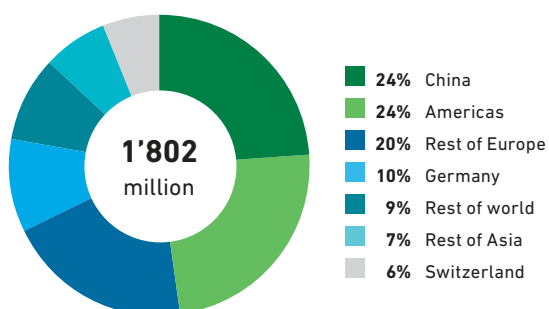


Key figures

CHF million	2019	2018
Order intake	1'788	1'865
Orders on hand at year-end	119	134
Sales	1'802	1'821
Sales growth %	-1.0	8.5
Organic growth %	1.3	8.2
EBITDA	264	269
EBIT	214	217
Return on sales (EBIT margin) %	11.9	11.9
Invested capital (IC)	676	688
Return on invested capital (ROIC) %	26.1	27.2
Number of employees	6'892	6'852

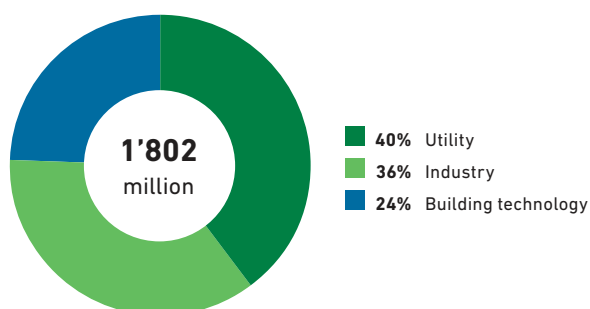
Sales per region

in CHF



Sales per segment

in CHF





Joost Geginat, President of GF Piping Systems, showcased the Hycleen Automation System for perfect drinking water quality at GF's Capital Market Day in September.

Innovation

Groundbreaking customer solutions

GF Piping Systems sees digitalization as a key pillar in developing innovative products and solutions for its customers. The Hycleen Automation System is an excellent example of this and the drive to accelerate the development of pioneering technologies.

The showcase solution

The Hycleen Automation System prevents harmful bacteria from multiplying in the piping installation, and ensures perfect drinking water quality. This is a revolution for water installations in hotels, hospitals, and residential buildings, as well in the marine segment. Hycleen ensures safe water supply and the automated operation of drinking water installations. The state-of-the-art circulation control system is quick to install and operate. It allows all customer data to be logged, evaluated, and displayed. Hycleen offers GF Piping Systems exciting growth opportunities worldwide.

Innovation strategy

Customer centric innovation is essential for the future differentiation of GF Piping Systems. To further increase its competitive advantages, the division's innovation initiatives depend on listening to and quickly acting upon customer needs. The innovation strategy is built on four core elements:

- Empower all regions to innovate
- Open organization for internal and external collaboration
- Focus on strategic innovation fields
- Improve learning culture and decision making velocity

Strategy 2020 recap

The key pillars of GF Piping Systems' strategy are strengthening the existing market segment organization, linking the innovation process to identified customer needs, expanding the global presence and adapting the footprint, as well as shifting portfolio towards higher margin businesses and services. GF Piping Systems is well on track in the implementation of these thrusts.



"We chose GF Piping Systems as partner because we were searching for a well-known company with proven products," says Aaron O'Donnell, Senior Vice President Engineering of Biwater Inc (left).

Success Story

Sustainable support for California

In many regions of this world, water is a luxury, although it shouldn't be. For around 50 years, the British company Biwater has been working to provide clean water and wastewater treatment with over 25'000 projects in more than 90 countries. GF Piping Systems cooperated with the Californian Biwater subsidiary in the construction of a modern water treatment plant in Pico Rivera (USA).

It's only a 60 kilometer drive from Los Angeles to Rancho Cucamonga, California (USA). The 175'000-inhabitant city is well known as an important industrial site in steel production and it is home of the North American headquarters of Biwater Inc, a subsidiary of the British company Biwater International.

The company works for industrial and municipal clients and delivers advanced treatment systems that provide safe, reliable and energy efficient water desalination or reuse systems with low life cycle costs. Treated water is an important topic – especially for California, where severe droughts are a recurring problem. Therefore, more than a decade ago, the Water Replenishment District

of Southern California (WRD) – the largest groundwater agency in the State of California, managing and protecting local groundwater resources for four million residents – announced a program for Southern California to become 100% independent of imported water in the future. Therefore, a new advanced water treatment facility was needed. The plant in Pico Rivera has been built with the expert support of GF Piping Systems. It is one of many projects by WRD to manage the replenishment of groundwater in the Los Angeles central basin. The plant helps to reduce reliance on imported water from the environmentally sensitive mountain lakes and rivers in Northern California and the drought-stricken Colorado River.

A strong partner nearby

"We chose to work with GF Piping Systems because we were looking for a partner with a proven track record, a well-known company with proven products," says Aaron O'Donnell, Senior Vice President Engineering of Biwater Inc. The geographical proximity was also an important factor for close and easy collaboration: GF has a site in Irvine, only about 60 kilometers from Biwater's headquarters in Rancho Cucamonga. From Irvine, the GF Piping Systems team supplies hundreds of different customers in different markets like microelectronics, life science, food and beverage and water treatment – an ideal starting point also for the Biwater project. The Irvine location has expertise in the production of high-density polyethylene (HDPE) pipe and fittings used for the conveyance of liquids needed for the Biwater construction in Pico Rivera.

From theory to practice

Biwater started with the first plans as early as 2013, with GF Piping Systems joining in May 2017 during the early design and concept phase. "Our products and expertise played a central role until the plant was completed," says Scott Stringfellow, Area Sales Manager of GF Piping Systems in Irvine. "As we are specialists in HDPE components, we were responsible for the design, manufacture and pre-fabrication of custom components including the unique manifolds critical to the system's successful operation. Our engineering team analyzed the plant requirements and created custom components to be utilized in the water treatment system in CAD, later to be assembled in our fabrication facilities in Irvine." He added: "The offsite fabrication allowed Biwater to take delivery of pre-assembled components, which saved labor and time during construction." The order from

"We chose GF Piping Systems because we were looking for a partner with a proven track record."

Aaron O'Donnell, Senior Vice President Engineering, Biwater Inc

Biwater included custom-made pipe and manifolds that form the heart of the ultrafiltration and reverse osmosis system at the Pico Rivera plant. But of course, in such a big project, things don't always go smoothly – and "especially then speed and flexibility are of utmost importance." "Our teams went the extra mile to ensure immediate supply of the newly fabricated assemblies. Biwater recognized this customer service and ability to act fast," Scott Stringfellow says. The hard work was worth it.

Aaron O'Donnell and Scott Stringfellow are already planning further joint projects. The focus will be on water treatment and groundwater replenishment again. "All interactions with Biwater and Aaron have evolved from a business relationship to a very close working relationship, which helps projects go smoothly for all involved," says Scott Stringfellow describing the atmosphere between the two companies. Good prospects for the joint projects!



The enriched article with a customer interview and a video can be found at annualreport.georgfischer.com/2019/en

The new Biwater plant will support the Water Replenishment District of Southern California to be 100% independent from imported water. It has a capacity of 56 million liters per day.



At a glance

GF Casting Solutions

GF Casting Solutions is one of the leading solution providers of lightweight components in the mobility and energy industry. As a future-oriented company, GF Casting Solutions acts as a driving force for innovation in the foundry and additive manufacturing world and wants to take the lead in shaping the development of sustainable mobility.

GF Casting Solutions manufactures at 13 production sites in Germany, Austria, Romania, Switzerland, China, and the USA. The division supplies the global automotive industry, aerospace and energy markets, and provides components for off-highway vehicles as well as for industrial applications.

Employees

4'336

2019



2018



2017

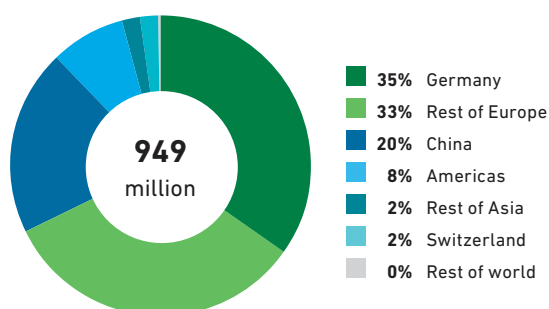


Key figures

CHF million	2019	2018
Order intake	953	1'617
Orders on hand at year-end	267	289
Sales	949	1'687
Sales growth %	-43.7	13.8
Organic growth %	-9.7	5.2
EBITDA	48	160
EBIT before one-offs	22	86
One-offs	46	
EBIT	-24	86
Return on sales before one-offs (EBIT margin before one-offs) %	2.3	5.1
Return on sales (EBIT margin) %	-2.5	5.1
Invested capital (IC)	477	531
Return on invested capital (ROIC) %	-4.4	16.1
Number of employees	4'336	4'693

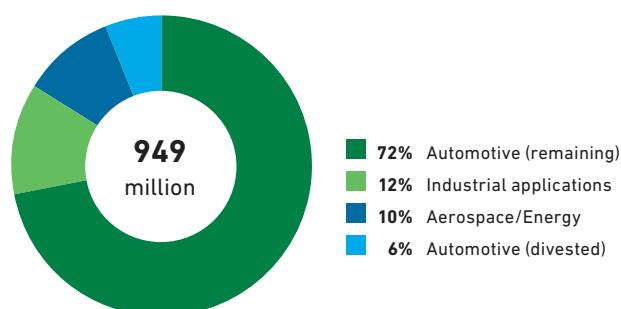
Sales per region

in CHF



Sales per segment

in CHF





Carlos Vasto, President of GF Casting Solutions, presented at GF's Capital Market Day a Turbine Rear Vane for an aircraft turbine, one of the largest additively manufactured parts on the market.

Innovation

Driving future technologies

GF Casting Solutions is a leading manufacturer of cast and additive manufactured components. With innovative products like the Turbine Rear Vane for aero engines, which is manufactured using an additive process, the division makes revolutionary steps in the aerospace industry.

The showcase product

It is about saving time, gaining design freedom, and reaching all quality standards: The new Turbine Rear Vane (TRV) represents the Additive Manufacturing portfolio of GF. This complex part – one of the largest additive components ever manufactured for an aircraft turbine – is printed within only 48 hours. The TRV is perfectly executed in a combination of GF technologies in the new "AMotion Center" in Stabio (Switzerland), led by GF Casting Solutions and GF Machining Solutions. The combination of 3D printing and the new horizontal EDM technology – provided by GF Machining Solutions – is unique in the additive manufacturing world.

Innovation strategy

GF Casting Solutions keeps the focus on operational excellence and innovation with mobility of the future in mind – these in its strategic segments automotive, aerospace, off-highway, and energy. The division strives for making mobility more sustainable through innovative lightweight design, the use of new materials and new processes for lighter and consequently more fuel-efficient components. Key customer pains are the reduction of CO₂-emissions and fuel consumption. Through GF's lightweight design and cast solutions, customers can be continuously supported from the first concept to ready-to-mount components, systems, and modules.

Strategy 2020 recap

Key pillars of GF Casting Solutions' strategy are the expansion into higher margin businesses, provide global solutions, and ensure profitability in Europe. In these fields, the division has taken important steps: The promising aerospace and energy segments have been expanded successfully. In line with the trend towards lighter vehicles, the division focussed on its competences in lightweight components made of aluminum and magnesium. The divestment of the sites in Singen and Mettmann (Germany) and Herzogenburg (Austria) completed the withdrawal from the automotive iron casting business in Europe.



Aiways and GF Casting Solutions work very closely together in developing new materials and manufacturing techniques for electric cars.

Success Story

Taking the fast lane

Electric car manufacturers in China need suppliers with strong R&D capabilities and great operational efficiency. GF Casting Solutions has both. Through its successful partnership with emerging carmaker Aiways, the division demonstrated that a global company can be a great partner for a startup in the Chinese market.

China's auto sector has been cooling down, but it is still one of the fastest growing markets for electric cars. In the first half of 2019, about 490'000 electric cars were sold in China, a 56.6% increase from last year, according to the China Association of Automobile Manufacturers.

Aiways is one of the emerging carmakers trying to tap into the growing pie. The startup recently launched its first electric SUV called U5, with a reach of up to 503 kilometers. The SUV is equipped with six lightweight structural parts (2x front shock towers and 4x torque boxes) produced by GF Casting Solutions. The aluminum components were developed and produced in less than 12 months.

"Global player with extensive experience"

The GF parts are crucial for Aiways due to their light weight and consequently because they make the car more energy efficient. That's why the carmaker looked precisely into potential suppliers, one of them GF Casting Solutions. Aiways' chief casting expert, Wang Xuefeng, says: "GF Casting Solutions won the contract after a six-month evaluation period for its wholesome capabilities to help design these innovative products." That was the start of a profitable partnership with Aiways.

The even more important reason for choosing GF Casting Solutions was that the team demonstrated great efficiency in working with startups. An example: Both sides had

“GF is a global player with extensive experience working with carmakers around the world.”

Wang Dongchen, Chief Technology Officer at Aiways

started exploring manufacturing methods together, even before the designs were frozen. Together they were able to complete the trial production of five dies within five months, which was a strong support to the debugging process of Aiways' production lines. “GF is a global player with extensive experience working with carmakers around the world. It meets our requirements entirely and has done quite a few prospective researches, which has proved to be very helpful to us,” says Wang Dongchen, Chief Technology Officer at Aiways.

Daniel Hu, Sales Director China of GF Casting Solutions, agrees: “The partnership is successful because both sides put great value on commitment and efficiency. The GF team was passionate to meet Aiways' tight schedule. A close and professional collaboration between the Aiways and GF team was a prerequisite to succeed.”

Many growth opportunities

In past years, government subsidies played an important role in promoting the growth of China's electric mobility market. Today, as politicians start to tighten monetary support, the industry is entering a phase of consolidation.

Despite taking a more cautious stance, China will continue to encourage the development of new electric cars because of environmental challenges predominantly in large cities. According to a guidance policy issued by China's top politicians in 2017, by 2025, new electric cars will account for 20% of new car sales in the country, which translates to at least 4 million cars every year – more than twice the number in 2018. Whereas the share of electric vehicles in Europe is expected to be at 9%, according to a recent projection by JP Morgan.

Compared with established automotive brands, electric car manufacturers need much more development support from suppliers, says Steffen Dekoj, Head of R&D Asia of GF Casting Solutions. “If you have enough resources and R&D capabilities, you definitely have a bigger advantage over low-cost, pure casting suppliers.” For example, Dekoj says, GF Casting Solutions is using a unique design approach called Bionic Design during the R&D process, which, compared to traditional sheet metal design, contributes to a weight reduction of up to 45% of car bodies, successfully meeting clients' goals to reduce emissions and create more sustainable cars.



The enriched article with a customer interview and a video can be found at annualreport.georgfischer.com/2019/en

Steffen Dekoj, Wang Xuefeng, and Daniel Hu (from left to right) agree: “The partnership is successful because both sides put great value on commitment and efficiency.”



At the glance

GF Machining Solutions

GF Machining Solutions is one of the world's leading providers of complete solutions to the tool and mold making industry and to manufacturers of precision components. The portfolio includes Milling, wire-cutting, and die-sinking EDM machines. Moreover, the division offers Spindles, Laser texturing, Laser micromachining, Additive Manufacturing, Tooling and Automation, as well as digitalization solutions.

GF Machining Solutions is present in more than 50 countries with its own sales companies. The key customer segments are the aerospace, Information and Communication Technology (ICT), electronic, medical, and automotive industries.

Employees

3'358

2019



2018



2017

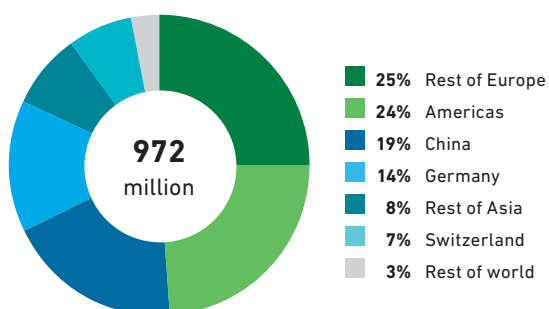


Key figures

CHF million	2019	2018
Order intake	954	1'042
Orders on hand at year-end	177	200
Sales	972	1'066
Sales growth %	-8.8	7.5
Organic growth %	-7.5	5.4
EBITDA	71	102
EBIT	57	88
Return on sales (EBIT margin) %	5.9	8.3
Invested capital (IC)	256	262
Return on invested capital (ROIC) %	18.4	27.5
Number of employees	3'358	3'394

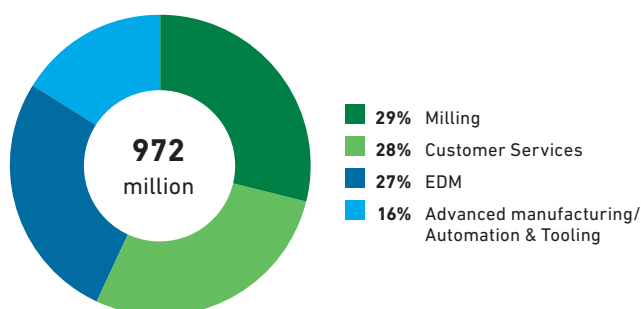
Sales per region

in CHF



Sales per segment

in CHF





Pascal Boillat, President of GF Machining Solutions, explained at GF's Capital Market Day how a Fir Tree Disk, a part of an aerospace turbine, can be manufactured even more precisely with a Spark Track technology.

Innovation

Focus on digitalization

GF Machining Solutions develops new digital solutions and highly precise machines. The EDM, Milling, Laser and Additive Technology strengthen the division's role as innovation partner.

Innovation Strategy

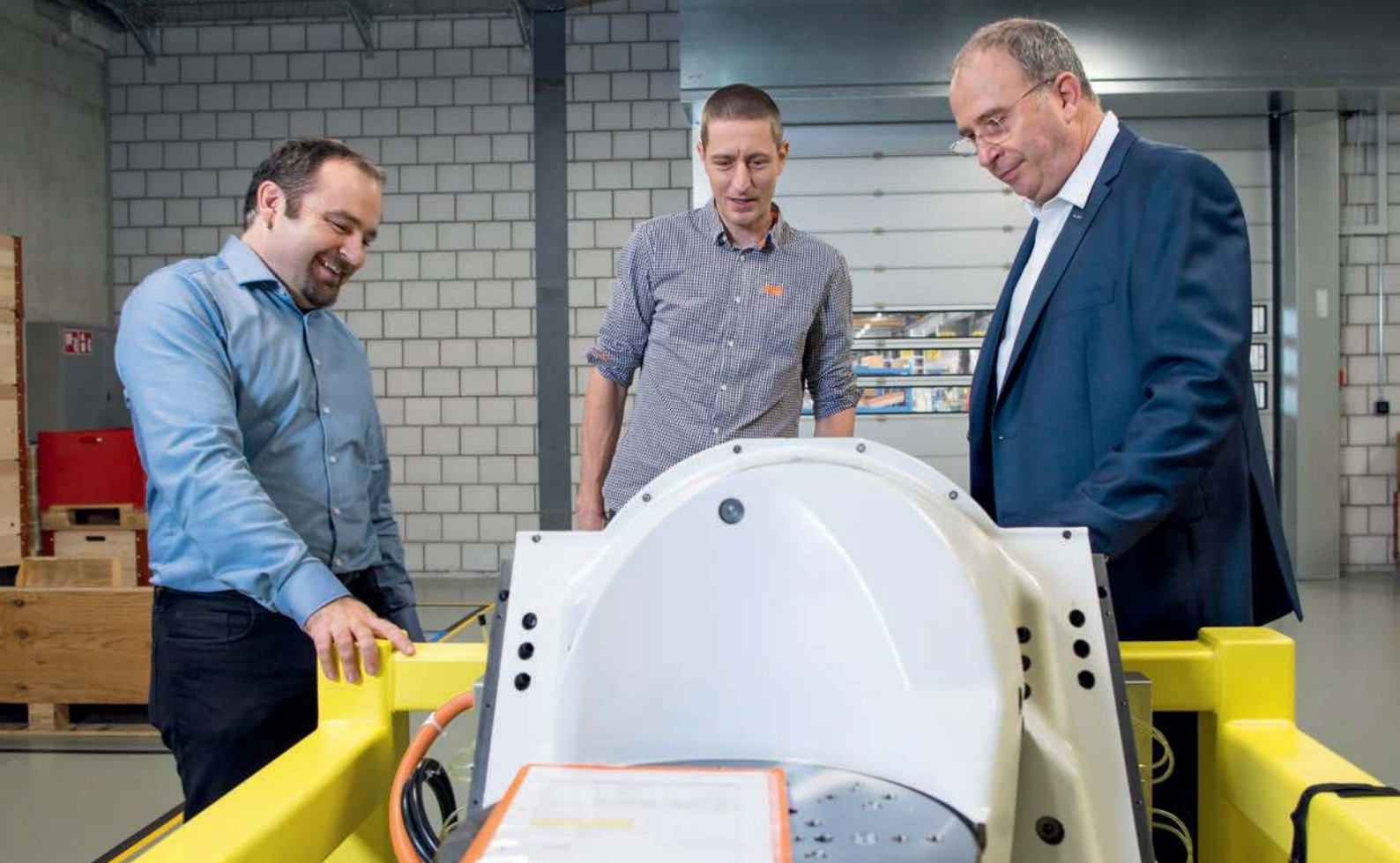
The showcase product

One of the innovative solutions shown by GF Machining Solutions at the word-leading machine tool fair "EMO" 2019 was the new AgieCharmilles CUT P 550 Pro. This new wire Electrical Discharge Machine (EDM), to be officially launched in 2020, offers a new human-machine interface, which ensures a higher flexibility and simplifies tasks such as programming or changing the machining strategy. Moreover, it also features GF Machining Solutions' revolutionary Spark Track technology. Thanks to that, the Fir Tree Disk, a part of an aeroengine, can be manufactured more precisely.

GF Machining Solutions continued to be strongly focused on technologies and services that are currently gaining momentum: Additive Manufacturing (AM) and Intelligent Manufacturing. Together with its partner 3D Systems, GF Machining Solutions offers an optimized and integrated metal AM workflow, easier factory Automation, as well as dedicated post-processing solutions such as Milling and EDM. In terms of Intelligent Manufacturing – which adds great value to customers – the division is already deploying the infrastructure for the future using edge computing and digital hubs while building up its service platform at the same time. Software solutions like rConnect offer customers a fast, digital overview of their production and provide them with access to expert service, wherever they are.

Strategy 2020 recap

By 2020, GF Machining Solutions will be the trusted partner of the global precision machining industry during all phases of the lifecycle. Key pillars of GF Machining Solutions' strategy are ensuring professional and efficient organization, providing complete solutions, and keeping its innovation leadership characterized by Swiss quality.



Andreas Signer (left) and Thomas Brauen (right) worked closely with Pascal Meier from Zimmer Biomet (center).

Success Story

Growing further in the medtech sector

GF Machining Solutions is developing tailor-made solutions for its customers in the booming medical technology market. The implant manufacturer Zimmer Biomet particularly relies on the precision of GF machines.

Medical implants improve the quality of life for many people. Given the high demand and rapid technological progress, for example in artificial joints, the medtech sector is flourishing: global revenue increased from USD 339 billion to USD 468 billion between 2014 and 2019. According to forecasts, it will grow to as much as USD 522 billion by 2022 (Source: Statista).

It's all about precision

GF Machining Solutions is well positioned with various technologies – from Laser to Milling – in automated manufacturing machines for implant production technology. The division works with its customers across the entire machine life cycle, from the initial design to the maintenance. Thomas Brauen, Head of Sales at GF Machining Solutions International in Biel (Switzerland), looks after seven customers in the Swiss medtech sector. Zimmer Biomet is one of them.

The US company operates in 24 countries worldwide and has more than 1'000 employees in Switzerland. About two million shoulder, hip, knee, trauma, and back implants leave the factory in Winterthur each year.

Five new Milling machines from GF Machining Solutions have been in use at Zimmer Biomet since 2019—three MILL S 600 U machines to produce knee and hip implants, plus one MILL S 400 and one MILL E 700 U for mold construction. Zimmer Biomet has already had two further machines in its 2'000 square meter production hall since 2006. “Our expectations for the new GF machines are very high, and automation plays a key role for us,” says Pascal Meier, Manufacturing Engineer at Zimmer Biomet with joint responsibility for procurement of the five GF machines. “The GF machines perfectly meet our needs.”

“Our requirements are high. The machines from GF offer us exactly the right quality.”

Pascal Meier, Manufacturing Engineer at Zimmer Biomet

Pascal Meier worked closely with GF Machining Solutions from the order to delivery and testing of the new machines – both with Thomas Brauen, Head of Sales, and Andreas Signer, Project Manager and Key Account Manager. “Depending on the intensity of the project, we were in contact on an almost daily basis. This was necessary to discuss the customer’s special requirements,” remembers Andreas Signer. “For Zimmer Biomet, for example, we put the Milling machines’ chip ejection on the opposite side of the machine due to space requirements,” he explains. “Whenever possible, we are happy to meet our customers’ special wishes, whether these are specific clamping solutions or requirements for the chip or tool management system.”

GF wants to increase medical market revenue

GF Machining Solutions has been developing solutions for the medtech sector for decades, starting with Milling machines and subsequently adding Laser texturing, Laser drilling and Additive Manufacturing machines.

They are embedded in an automated concept. These solutions enable clients to produce flawless hip and knee joints, dental implants, plates for bone fractures, and instruments for surgeons. GF Machining Solutions is taking advantage of these great market opportunities in the medtech sector to expand its range and technological profile. This means a wider customer portfolio and solutions that are more advanced. GF Machining Solutions has its sights set on the global medical market, where it plans to significantly increase its sales volume in the coming years. The division is broadly based for this, offering a short time to market, highly precise machines with repeat accuracy, and decades of experience.

The medtech sector is developing fast, and requirements are becoming more and more demanding, which means that producers must always be up to date. Pascal Meier believes that “the degree of automation and digitalization in the production process will rise, also at Zimmer Biomet.” The medtech specialist has already shown interest in solutions for surface processing with laser systems and other machining centers. GF Machining Solutions will solve with passion these future needs.



The enriched article with a customer interview and a video can be found at annualreport.georgfischer.com/2019/en

Around two million shoulder, hip, knee, trauma, and back implants leave the factory of Zimmer Biomet in Winterthur each year. Pictured is a hip implant.



Consolidated income statement

For the years ended 31 December 2019 and 2018, CHF million	2019	%	2018	%
Sales	3'720	100	4'572	100
Other operating income	34		56	
Income	3'754	101	4'628	101
Cost of materials and products	-1'758		-2'255	
Changes in inventory of unfinished and finished goods	55		71	
Operating expenses	-665		-776	
Gross value added	1'386	37	1'668	36
Personnel expenses	-1'012		-1'139	
Depreciation on tangible fixed assets	-133		-142	
Amortization on intangible assets	-6		-5	
Operating result (EBIT)	235	6.3	382	8.4
Interest income	5		2	
Interest expense	-26		-31	
Other financial result	-4		-6	
Share of results of associates	-13			
Ordinary result	197	5	347	8
Non-operating result	6		1	
Profit before income taxes	203	5	348	8
Income taxes	-31		-69	
Net profit	172	5	279	6
– Thereof attributable to shareholders of Georg Fischer Ltd	173		281	
– Thereof attributable to non-controlling interests	-1		-2	
Basic earnings per share in CHF	42		69	
Diluted earnings per share in CHF	42		69	

The consolidated balance sheet and cash flow statement of the consolidated financial statements of the GF Annual Report are presented in a condensed form. For a complete presentation in accordance with the current guidelines according to Swiss GAAP FER, please refer to the full version of the consolidated financial statements, which are available online.

Consolidated balance sheet

As of 31 December 2019 and 2018 (condensed), CHF million	2019	%	2018	%
Cash and cash equivalents and marketable securities	530		542	
Trade accounts receivable	597		697	
Inventories	751		779	
Other current assets	121		110	
Current assets	1'999	60	2'128	62
Property, plant, and equipment and investment properties	1'131		1'130	
Other non-current assets	214		186	
Non-current assets	1'345	40	1'316	38
Assets	3'344	100	3'444	100
Trade accounts payable	466		498	
Interest-bearing financial liabilities	108		148	
Provisions	52		38	
Other current liabilities and accruals	386		440	
Current liabilities	1'012	30	1'124	33
Interest-bearing financial liabilities	654		632	
Pension benefit obligations	50		47	
Provisions	103		111	
Other non-current liabilities	87		102	
Non-current liabilities	894	27	892	26
Liabilities	1'906	57	2'016	59
Equity attributable to shareholders of Georg Fischer Ltd	1'396	42	1'382	40
Non-controlling interests	42	1	46	1
Equity	1'438	43	1'428	41
Liabilities and equity	3'344	100	3'444	100

Consolidated cash flow statement

For the years ended 31 December 2019 and 2018 (condensed), CHF million	2019	2018
Net profit	172	279
Depreciation and non-cash income/expenses	272	269
Use of provisions	-25	-27
Changes in net working capital	-10	-77
Changes in other receivables/liabilities and accruals	-14	32
Interest and income taxes paid	-77	-79
Cash flow from operating activities	318	397
Cash flow from investing activities	-186	-404
Free cash flow before acquisitions/divestments	137	147
Free cash flow	132	-7
Cash flow from financing activities	-134	-65
Net cash flow	-12	-91

Georg Fischer Ltd income statement

For the years ended 31 December 2019 and 2018, CHF 1'000

	2019	2018
Dividend income	173'970	155'731
Income from services provided to Corporate Companies	57'254	67'407
Financial income	10'544	7'280
Commission income from Corporate Companies	9'278	11'167
Other income	2'032	2'945
Income	253'078	244'530
Value adjustment on investments	41'122	20'000
Other expenses for investments	3'486	2'128
Financial expenses	13'320	13'378
Cost of services provided by Corporate Companies	2'405	2'239
Personnel expenses	20'794	20'619
Other operating expenses	17'511	16'452
Direct taxes	2'835	5'346
Expenses	101'473	80'162
Net profit for the year	151'605	164'368

Georg Fischer Ltd balance sheet

As of 31 December 2019 and 2018, CHF 1'000

	2019	2018
Cash and cash equivalents and short-term investments with a quoted market price	132'333	157'050
Other current receivables due from third parties	9'203	1'804
Other current receivables due from Corporate Companies	24'478	19'785
Accrued income and prepaid expenses	4'987	2'147
Current assets	171'001	180'786
Loans to Corporate Companies	129'553	246'944
Other financial assets	72'306	8'148
Investments	1'393'753	1'278'312
Equipment	114	132
Non-current assets	1'595'726	1'533'536
Assets	1'766'727	1'714'322
Current liabilities with third parties	4'904	12'982
Short-term interest-bearing liabilities due to Corporate Companies	139'007	123'659
Accrued expenses and deferred income	13'115	11'137
Current liabilities	157'026	147'778
Long-term interest-bearing liabilities	202'592	206'048
Long-term provisions	22'030	24'218
Non-current liabilities	224'622	230'266
Liabilities	381'648	378'044
Share capital	4'101	4'101
Legal capital reserves		
– Other capital reserves	89'506	89'506
Legal reserves		
– Other legal reserves	59'234	59'234
Statutory retained earnings		
– Available earnings carried forward	1'089'626	1'027'428
– Net profit for the year	151'605	164'368
– Result from treasury shares	–2'408	334
Treasury Shares	–6'585	–8'693
Equity	1'385'079	1'336'278
Liabilities and equity	1'766'727	1'714'322

Proposal by the Board of Directors

Proposal by the Board of Directors for the appropriation of the retained earnings 2019, CHF 1'000

	2019	2018
Net profit for the year	151'605	164'368
Earnings carried forward	1'089'626	1'027'428
Result from treasury shares	-2'408	334
Retained earnings	1'238'823	1'192'130
Dividend payment CHF 25 per registered share ¹	-102'522	-102'504
To be carried forward	1'136'301	1'089'626

¹ No distribution will be made for treasury shares held by Georg Fischer Ltd. The amount distributed will be reduced accordingly at the time of distribution.

The Board of Directors will propose to the Annual Shareholders' Meeting of 15 April 2020 to pay out a dividend of CHF 25 per registered share out of retained earnings.

In the previous year, a dividend of CHF 25 per registered share out of retained earnings was paid out according to the decision of the Annual Shareholders' Meeting of 17 April 2019.

Schaffhausen, 20 February 2020

For the Board of Directors
The Chairman



Andreas Koopmann

Five-year overview of the Corporation

CHF million	2019	2018	2017	2016	2015
Order intake	3'692	4'521	4'274	3'749	3'662
Orders on hand at year-end	563	623	773	614	612
Income statement					
Sales	3'720	4'572	4'150	3'744	3'640
EBITDA	374	529	491	443	422
Operating result (EBIT) before one-offs	281	382	352	311	296
One-offs	46				
Operating result (EBIT)	235	382	352	311	296
Net profit/loss after minorities	173	281	252	216	188
Cash flow					
Cash flow from operating activities	318	397	410	400	328
Cash flow from investing activities	-186	-404	-280	-265	-140
Free cash flow before acquisitions/divestments	137	147	204	231	190
Free cash flow	132	-7	130	135	188
Balance sheet					
Assets	3'344	3'444	3'610	3'202	3'083
Liabilities	1'906	2'016	2'241	2'002	1'953
Equity	1'438	1'428	1'369	1'200	1'130
Net working capital	856	926	899	838	819
Invested capital (IC)	1'473	1'494	1'466	1'333	1'279
Net debt	232	238	183	214	238
Key figures					
Return on equity (ROE) %	12.0	19.9	20.1	19.3	17.7
Return on invested capital (ROIC) %	12.4	22.4	20.3	19.3	18.9
Return on sales before one-offs (EBIT margin before one-offs) %	7.6	8.4	8.5	8.3	8.1
Return on sales (EBIT margin) %	6.3	8.4	8.5	8.3	8.1
Asset turnover	2.5	3.1	3.0	2.9	2.8
Cash flow from operating activities in % of sales	8.5	8.7	9.9	10.7	9.0
Employees					
Employees at year-end	14'678	15'027	15'835	14'808	14'424
Europe	8'373	8'721	9'658	8'845	8'783
Asia	3'545	3'725	3'807	3'713	3'502
Americas	1'922	1'740	1'503	1'348	1'262
Rest of world	838	841	867	902	877

Online Annual Report 2019

Find out more about financial figures, information on GF's strategy, and business segments at www.annualreport.georgfischer.com/2019/en



Important dates

15 April 2020
Shareholders' Meeting for fiscal year 2019

21 July 2020
Publication of Mid-Year Report 2020

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Disclaimer

The statements in this publication relating to matters that are not historical facts are forward-looking statements that are not guarantees of future performance and involve risks, uncertainties, and other factors beyond the control of the company.

The Financial Report 2019 of GF is also available in German. In the event of any discrepancy, the English version shall prevail.
We thank our customers for their consent to publish the joint success stories.

