

## Chronology of Georg Fischer

### 1802

On 3 June 1802, the 29-year old **Johann Conrad Fischer** (1773 - 1854) bought a water-driven mill in the Mühlfental valley near Schaffhausen (Switzerland). He used the mill as a copper smelting plant and development works for new alloys. These were the foundations of the Schaffhausen iron and steel industry and the global industrial corporation that is now Georg Fischer.

### 1805

Johann Conrad Fischer was probably the first person in continental Europe to manufacture **cast steel** successfully in crucibles. Until then, the cast steel works in Sheffield (England) founded by Englishman Benjamin Huntsman (1704 - 1776) in 1751 held a monopoly. In the years that followed, Johann Conrad Fischer invented many other alloys, including malleable cast iron in 1827.

### 1814

Johann Conrad Fischer's excellent reputation prompted the **Russian Czar, Alexander I.** (1777 - 1825) to visit the Schaffhausen metallurgist's works on a trip to Switzerland.

### 1827 – 1833

Johann Conrad Fischer and his son **Georg Fischer I** (1804 - 1888), founded two further steelworks – **Hainfeld** (1827) and **Traisen** (1833) – in the fast-growing market of Austria, where Johann Conrad Fischer also had all his inventions patented. Another son, Berthold Fischer (1807 - 1879), took over management of the Traisen works. Today, this is where production of Georg Fischer malleable cast iron fittings is focused. The company bought the works back in 1990, almost 100 years after it had been sold in 1894.

### 1864

**Georg Fischer II** (1834 - 1887), son of Georg Fischer I and grandson of Johann Conrad Fischer, acquired the Schaffhausen works. In 1864, he was the first in Europe to begin the commercial manufacture of **malleable cast iron fittings** (cast pipe connectors), thereby creating the basis of today's GF Piping Systems corporate Group. As public gas and water infrastructures expanded, the fittings business both at home and abroad grew very successfully. The first fittings brochure, containing 91 different items for the gas lighting sector, was published in 1865.

### 1877

In 1877, Georg Fischer II started the industrial-scale **production of cast steel** – a process invented by Johann Conrad Fischer in 1845.

### 1895

**Georg Fischer III** (1864 - 1925), who had taken over the company in 1887 on the death of his father, Georg Fischer II, started up a fittings factory in the German town of **Singen** in 1895. The factory was operated as a branch of the main works in nearby Schaffhausen. The move was prompted by high German customs duties and increasing competition from Germany.

## 1896

The growing need for capital caused Georg Fischer III to convert the private company into the "**Aktiengesellschaft der Eisen- und Stahlwerke von Georg Fischer**" ("joint stock company of the iron and steelworks of Georg Fischer"). The share capital of CHF 3 million was subscribed mainly by members of Georg Fischer II's extended family.

## 1902

Financial difficulties in the young company led to the intervention of the banks, which had become investors since the firm went public. **Georg Fischer III** reluctantly resigned from the company's executive and its Board of Directors. On 1 April 1902, **Ernst Homberger** (1869 - 1955) took over management of the company that he was to shape for the next 50 years. His appointment completed Georg Fischer's transition from a family firm to a commercially run enterprise. Meanwhile, Georg Fischer III founded a competing company – an electric steelworks in Schaffhausen – that he sold to Georg Fischer in 1917.

## 1903

The new "**+GF+**" trademark, with its characteristic crosses representing stylized fittings, was officially registered.

## 1918

To ensure that food supplies got through to its own staff, in 1918 Georg Fischer bought two farm estates, including that which belonged to the former Clarissan convent **Paradies** at Schlatt, near Schaffhausen, which had been closed in 1836. The Corporation opened its *Eisenbibliothek* iron library there in 1952 followed by its own training centre in 1974.

## 1921

With the acquisition of a majority stake in the **Maschinenfabrik Rauschenbach AG** engineering works in Schaffhausen, Georg Fischer entered the **engineering** and **gray cast iron** sectors. AT the same time it also took the step out of the narrow Mühlintal and into the newly industrial area of Ebnet. The production of machinery for weaving loom automation (1926), and the start of mass lathe production (1938) marked the beginnings of the GF Machine Tools Corporate Group.

## 1933

Georg Fischer bought **Britannia Iron and Steel Works Ltd.** of Bedford (England) and began to produce malleable cast iron fittings in Britain.

## 1936

After an extensive development phase, the **TRILEX** wheel system for goods vehicles was launched on the market. The system comprises a cast spoke wheel centre and a three-part rim and is characterized by its robustness, low weight and the extremely easy way in which it is fitted. Over the years, TRILEX sales grew into a lucrative cornerstone of Georg Fischer's operations,

peaking in 1981 when the product accounted for 115 of total consolidated sales. The TRILEX wheel system is still manufactured by GF Automotive today.

## **1939 – 1945**

With its plants in Switzerland, Germany and England, Georg Fischer encountered enormous challenges during the **Second World War**. In connection with the discussion about forced labour in Georg Fischer's German plants, in 1997 the Corporation commissioned the independent historian Hans Ulrich Wipf to produce an academic report on the period. The study was published in 2001.

## **1947**

The company shortened its name to "**Georg Fischer Aktiengesellschaft**".

## **1948**

Georg Fischer founded the **Eisenbibliothek** iron library as a foundation of Georg Fischer AG. The library was opened in the restored west wing of the Paradies estate on the occasion of the 150<sup>th</sup> anniversary of Georg Fischer in 1952. It now holds some 40,000 publications covering the history of technology and the history of iron in particular. It is open free of charge to academics and students.

## **1952**

Georg Fischer holds an enormous gala on Herrenacker square in Schaffhausen to celebrate its first **150 years in business**.

Georg Fischer enjoyed great success with its venture to develop and manufacture **fully automatic casting and moulding systems** using the Bühler system.

## **1957**

After four years of research, the first production site for **PVC and PE fittings** went on stream in Singen (Germany). Georg Fischer owes its present lead in the plastic piping systems market to this move, which at the time was both innovative and courageous. In 1966, output began at another works, George Fischer Plastics Ltd. in Huntingdon (England), followed in 1971 by the opening of a plant producing plastic fittings in Seewis (Switzerland).

## **1963**

Working at Georg Fischer, Rudolf Merz developed the **PVC adhesive Tangit**, which has been made by Henkel since 1964. Tangit's properties as a filler make it easier to join PVC components. The product was a key part of Georg Fischer's breakthrough into the PVC fittings market.

## **1964**

Georg Fischer generated **more than half of its sales outside Switzerland** for the first time.

## 1968

Manufacture of enamelled Georg Fischer **kitchenware and cast iron cooking pots** ceased. This marked the end of a consumer product with a significant image value. The Georg Fischer name is still associated with these products today.

## 1970

Consolidated sales exceeded **CHF 1 billion** for the first time.

## 1971

The **magnesium converter process** was patented in 1971. It was developed by Anton Alt (1936 - 1994), who went on to become a member of the Executive Committee. The process facilitated a reliable procedure for the commercial production of highly durable cast iron with spheroidal graphite and formed the basis of the efficient mass production of cast iron components – today one of the core operations of GF Automotive.

## 1972

In 1972, Georg Fischer acquired the German Ravensburg-based company **Waeschle**. Founded in 1900 as millwrights, Waeschle relocated to Weingarten (Germany) in 1980. It is the global market leader in handling systems for powders and granulates. The takeover of Buss AG in Basel (Switzerland) followed in 1979. The company's specialist areas include chemical process technology, mixing and kneading, including the Buss Ko kneader. Buss, Waeschle and other companies in logistics systems (OWL), centrifuges (Heine) and foodstuffs (Mator) that have since been sold were combined to create the Buss Group in 1982 – the origins of **Georg Fischer Plant Engineering** (later Coperion).

## 1976

Georg Fischer Inc. was established in **Tustin**, California (USA) as the North, Central and South American sales company for the entire piping systems range.

## 1979

The Arabian Plastic Manufacturing Company **APLACO**, set up by Georg Fischer, opened in Riyadh (Saudi Arabia). The 26.3% holding in this successful and very profitable plastic piping system components factory was sold in 2004.

At this time, Georg Fischer also embarked upon the stage-by-stage acquisition of an **iron foundry in Lincoln** (England) which belonged to Ley's Foundries & Engineering Ltd.. The foundry was sold in 2004 after several unsuccessful attempts to generate a sustained improvement in the output and earnings of the Lincoln plant.

## 1982

After thirteen eventful years, the Rütli engineering works' **power loom business** was sold to Sulzer. This marked Georg Fischer's final withdrawal from the manufacture of weaving machinery that had begun in 1926.

## 1983

Georg Fischer acquired 51% of the shares of the electric discharge machining division of Ateliers des Charmilles in Geneva (Switzerland). The operation was renamed **Charmilles Technologies SA** and the remaining shares acquired by Georg Fischer in 1988. Electric discharge machining (EDM), developed in the early 1950s, was the foundation over the years to come of what is now GF Machine Tools.

## 1987 – 1991

Under the auspices of the CHF 250 million **Schaffhausen-Singen structural project** – the largest in the company's history – foundry operations were centralized in Singen (Germany), while plastic piping systems were concentrated at Schaffhausen (Switzerland). At the same time, the Corporation's properties were systematically refurbished, assigned new uses or sold. Furthermore, the GF Piping Systems distribution centre, plastic products plant and a modern testing laboratory were all set up in Schaffhausen.

## 1989

The once-prestigious **lathe business** was sold.

## 1990

Georg Fischer AG was restructured into a **holding company** and the industrial operations of the parent company made legally autonomous. The face of the Georg Fischer Corporation underwent a metamorphosis in the years that followed. Hand in hand with the **strategic focus on the core activities** of automotive products (now GF Automotive), piping systems (now GF Piping Systems), manufacturing technology (now GF Machine Tools) and plant engineering (subsequently) went the sale or spin-off of many of the Corporation's traditional second-string operations such as electrical hardware, wear parts, rail traffic engineering and locking systems.

## 1991

After 114 years of steel casting, Georg Fischer announced the **closure of the long-established steel foundry in Schaffhausen**. The last day of operation was 1 November 1991. The foundries unit now concentrated on the development and manufacture of components for the automotive industry. Closure of the German steel foundry in Worms followed in 1993.

## 1994

The activities of the **Services** division at the Schaffhausen site in Switzerland were spun off and subsequently sold in 2004 to form Georg Fischer Immobilien Service AG (subsequently HSG/Bilfinger/Berger), Georg Fischer Speditionslogistik AG (subsequently Rhenus Contract Logistics AG) and Georg Fischer Logimatik AG (subsequently Capgemini Schweiz AG). Georg Fischer Treuhand AG was closed in 2004.

## 1995

Georg Fischer bought the **Leipzig** (Germany) foundry Schubert & Salzer Eisenguss GmbH, a manufacturer of components for heavy goods vehicles and construction plant.

## 1996

Georg Fischer acquired the majority of the Losone (Switzerland)-based listed manufacturer of electric discharge machines (EDM) **Agie SA**, founded in 1954. Agie stands for AG (Aktiengesellschaft or limited company) for industrial electronics. The two well-known brands of market leaders AGIE and Charmilles Technologies were retained and combined with all the other companies in what was then the Manufacturing Technology Corporate Group (now GF Machine Tools) under the common umbrella of **Agie Charmilles Holding AG**, a listed company headquartered in Zug. Georg Fischer held around 80% of Agie Charmilles Holding AG up to 2006, when it submitted a takeover bid for the remainder of the shares to Agie Charmilles Holding AG shareholders.

In 1996 Georg Fischer also joined forces with the Danish DISA (Dansk Industrie Syndikat) to create the 50:50 foundry plant engineering joint venture **Georg Fischer Disa**. Four years later, in 2000, Georg Fischer withdrew from foundry plant engineering and sold its stake to DISA.

The takeover of the R&G Sloane Manufacturing Company in Little Rock (USA) and the foundation of **George Fischer Sloane Inc.** gave Georg Fischer its own North American production site for plastic fittings and pipes for the first time.

## 1998

The Singen and Leipzig foundries, both in Germany, were awarded the coveted **environmental prize** from the CIATF (Comité international des associations techniques de fonderie). Alongside the foundries in Mettmann (Germany), Lincoln (England) and Herzogenburg (Austria), Singen and Leipzig are among the first ten foundries world-wide to introduce a certified environmental management system.

The two joint ventures set up by Agie (1991) and Charmilles (1995) to manufacture EDM machines in China resulted in the foundation of the **Beijing-based Agie Charmilles Industrial Electronics Ltd.** In 1999 the company began to produce low-cost entry-level EDM machinery under the new **Actspark** name. The plant was awarded ISO 14001 environmental accreditation in 2001.

## 1999

GF Automotive quadrupled its **light alloy** (aluminium and magnesium) casting capacity with the acquisition of the German companies mb-Guss (Friedrichshafen) and the Mössner Group (Munich).

GF Machine Tools acquired trademark and distribution rights to the die-sinking EDM unit made by the Brazilian company **Engemaq**, gaining access to the entry-level segment of the fast-growing Latin American EDM market.

## 2000

The year 2000 saw the publication of the Georg Fischer Corporation's first **environmental report**.

**Coperion** Holding GmbH, headquartered in Konstanz (Germany), was created from the merger of the two Georg Fischer companies Buss and Waeschle with the Stuttgart-based Krupp Werner & Pfleiderer. The newly formed company is the market and technological leader in plastics processing. Georg Fischer initially held 50.1% of Coperion. The Düsseldorf-based Westdeutsche Landesbank and West Private Equity of London owned the remaining 49.9%. In 2006 Georg Fischer sold its remaining shares in Coperion to West Private Equity. The sale marked the end of Georg Fischer's plant engineering activities.

GF Piping Systems acquired the Sydney (Australia)-based Industrial Pipe Systems Company (IPS), which was active in the gas and water supply segments in Australia and China. As part of the deal, Georg Fischer also acquired from IPS a 50% stake in **Chinaust**, a 50:50 joint venture set up in 1987 with the Chinese Lingyun Group. The holding in Chinaust is a very important strategic step into the fast-growing Chinese market.

GF Machine Tools acquired the high-speed million (HSM) division of the **Mikron** Technology Group of Nidau (Switzerland). This move reinforced its leading position in the tool and mould construction sector.

## 2001

GF Machine Tools took over **System 3R** in Stockholm (Sweden). System 3R is a leading global provider of tooling and automation systems.

GF Automotive received its biggest-ever **single order**, worth CHF 470 million, from Peugeot/Citroen.

## 2002

Georg Fischer celebrated its **bicentenary** with a series of local festivities around the world. At the Corporation's headquarters in Schaffhausen (Switzerland), the highlights were an exhibition on the history of Georg Fischer and the bicentenary gala in the former steel foundry.

The shareholders of Georg Fischer AG waived their bicentenary dividend, opting instead to create a **bicentenary foundation**, "Community Benefit". This kicked off the highly praised "**Clean Water**" project, with which GF aims to help bring clean drinking water to people all over the world.

GF Machine Tools purchased **Step Tec AG** in Luterbach (Switzerland), which develops and manufactures motor spindles for machine tools.

GF Piping Systems announced the foundation of a **production joint venture with Simona AG** in Kirn (Germany) to manufacture pipes and mould parts from fluorine plastics.

## 2003

Georg Fischer launched a comprehensive **restructuring programme** to increase its earnings power and lower net debt. The three core areas were streamlined, involving a reduction in the number of production sites in Europe and the sale of activities and shareholdings which were not part of the core business. The programme resulted in the loss of around 1,000 jobs. The restructuring programme resulted in the sale of the foundries in Bedford (GB), Bitterfeld (D), Apc (HU) and Lincoln (GB) and the closure of the plants producing plastic products in Genua (I) and Huntingdon (GB). The service companies at the Schaffhausen site that had been spun off in 1994 were also sold.

## 2004

The Corporation launched a revamped **brand policy** and an attractive new **corporate design**. The emphasis was on strengthening the GF trademark. Meanwhile, the motto "Adding Quality to People's Lives" – applied to the three specific areas of mobility, comfort and precision – becomes part of corporate communications. At the same time, the three Corporate Groups were given new names: GF Automotive (formerly Automotive Products), GF Piping Systems (formerly Piping Systems) and GF Machine Tools (formerly Manufacturing Technology). GF Machine Tools was renamed GF AgieCharmilles in 2007 after being wholly acquired by Georg Fischer.

As part of the "**EDM Futura**" project, GF Machine Tools presented the first die-sinking EDM based on the new platform for electric discharge machines.

Georg Fischer won an award from the International Chamber of Commerce ICC for its bicentenary foundation's **Clean Water project**.

The special exhibition showcasing **Peter Mettler's images of the Rhine Falls** opened at the Paradies estate.

## 2005

**GF Piping Systems** opened a new Schaffhausen **training centre**, comprising classrooms and workshops, a product showroom and an attractive reception area.

Georg Fischer made a new and modern **corporate film** with which to present itself to its customers, shareholders, guests and employees.

GF Automotive announced the **closure of the die casting foundry in Munich**. Production will be relocated to existing die casting foundries in Germany and Austria.

Georg Fischer held its first-ever Technology Day for financial analysts and journalists from the daily and business press. It was held at the new GF Piping Systems training centre in Schaffhausen under the banner "Innovation: The Value Driver".

GF Automotive opened a **die casting foundry** in the **Suzhou** Industrial Park (China), around 100 km west of Shanghai. With the new facility, Georg Fischer is able to supply the local

automotive industry from a local base. In early 2006 GF Automotive announced its first order from a Chinese automotive company: In future it will be producing engine blocks for **Chery**.

## **2006**

The **CEO's delegate in China** represented the Corporation's interests in finance, legal and human resources issues.

Georg Fischer sold its remaining **shares in Coperion** to West Private Equity. The sale marked the end of Georg Fischer's plant engineering activities.

The first issue of the **GLOBE international group employee magazine** was published in 2006. Appearing in German, English, French, Italian and Chinese, it is distributed to all employees world-wide.

**GF Machine Tools** announced that it would be **focusing on manufacturing in Switzerland**. Mikron set up a new production site for high-speed milling machines in Schaffhausen. Meanwhile, the manufacture of EDMs in Switzerland was concentrated at the plants in Losone and Meyrin. The mechanical manufacturing activities of Charmilles Technologies Maschinenbau AG, Schaffhausen, were sold as of mid-2006 to the Winterthur (Switzerland)-based engineering company Rieter AG. Charmilles Technologies Maschinenbau AG, Schaffhausen and Mikron Agie Charmilles AG, Nidau merged in early 2007.

The first **Sustainability Report** was published, summarizing Georg Fischer's commitments to the environment, its employees and society in general.

In August Georg Fischer submitted a takeover bid to the shareholders of Agie Charmilles Holding AG for the remaining 20% of Agie Charmilles stock that it does not already hold. The acquisition bid was successful. Agie Charmilles Holding AG was delisted on SWX Swiss Exchange in December. At the same time, the dual designation Agie Charmilles / GF Machine Tools gave way at the end of the year to the single name **GF AgieCharmilles**.

As per the end of the year, Georg Fischer acquired the **Canadian die casting firm E.D.C. Inc.** in Montreal with 85 employees. GF Automotive thereby strengthened its presence in the NAFTA area, creating a third pillar of operations outside the European and Asian markets.

## **2007**

GF AgieCharmilles founded a company for the worldwide replacement, parts and service business and centralized its installed base business for the brands Agie, Charmilles and Mikron at the logistics hub in Geneva.

GF Piping Systems opened a sales company in Mexico.

The sales companies of the Agie, Charmilles and Mikron brand domiciled in Switzerland were merged into Agie Charmilles Sales Ltd, Losone. In mid-year the sales companies in Germany were also merged.

Good **figures for the 2006 business year**: for the first time sales topped 4 billion Swiss francs (CHF 4.05 billion). EBIT reached CHF 327 million, corresponding to an EBIT margin of 8.1%.

Georg Fischer announced it would **build an iron foundry in China**. The investment for the plant in Kunshan is expected to come to around CHF 50 million. The plant is to be commissioned in spring 2009.

GF Automotive was awarded the "**Volkswagen Group Award 2007**" as one of the 25 best Volkswagen suppliers.

The Industry/Utilities segment of GF Piping Systems was restructured. A **Technology Centre** for the development of materials and jointing and production technology was established.

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