

## HANDTMANN GROUP OF COMPANIES PRESS RELEASE

## **150 YEARS OF HANDTMANN. A SWABIAN SUCCESS STORY**

Biberach an der Riß, 19th April 2023. From an artisan brass foundry in the town centre of Biberach to a technology company with 4,300 employees and production sites, subsidiaries and agents in over 100 countries: Handtmann has written a true success story in 150 years. Things did not always develop in a straight line; the company had to live through tough times, especially in the first decades. But with a combination of sustained visionary strength and open-mindedness, coupled with Swabian down-to-earthness, Handtmann came out of all crises stronger than before.

Like many of today's global players in the industry, Handtmann also started out very modestly as a craftsman's business: In 1873, Christoph Albert Handtmann (1845-1918), known by his first name Albert, founded a mechanical workshop and brass foundry in the Bachmühle mill at Ehinger-Tor-Platz square 21 in Biberach. He had previously completed an apprenticeship at a local armourer and taken to the road as a journeyman for almost ten years, which first led him to Kempten, where he learned the trade of a bell-foundryman. There he not only learned about elaborate and costly bronze casting, but also gained experience in the more inexpensive brass casting, at the time also known as "yellow casting", which would be of great importance to the future company called Handtmann. He then moved on to Saxony, where, as a mechanic, he acquired knowledge in mechanical engineering and advanced to become a master mechanic.

With this know-how in hand, Albert Handtmann returns to his home town and sets up his own business in 1873. Apart from technical expertise, he also brings new ideas with him. For example, he has an oil-fired smelting furnace installed, which achieves the 1,000 °C required for smelting metal a lot quicker than the coal furnaces that were commonly used at the time.

#### It all started with brass casting

Initially, Handtmann still casts bronze and supplies plain bearings to railway repair works in the region. However, he quickly develops into a specialist for brass casting, and this with great variety. Brass is used wherever stainless fittings and screw connections that come into contact with liquids are required. Consequently, barrel taps are frequently ordered from the Handtmann foundry. Via the production of barrel taps, Handtmann moves on to becoming a supplier of brass screw connections and taps for a Biberach-based machine factory, which in turn equips breweries and mash houses: the starting signal for Handtmann's, to this day, uninterrupted work for the beverage industry.

And it is only a small step from the production for breweries to supplying taverns and inns. Handtmann manufactures iceboxes and refrigerated cabinets for them, as well as hand pumps and semi-automatic pumps to deliver the beer from the cellar to the taproom. A key product for decades will be caps, screw fittings, valves and encapsulated manometers for the distillation apparatus of distilleries in the fruit-growing regions of southern Germany. Soon Handtmann would also supply customers as far as the rivers Main and Rhine with these products.

Handtmann's clientèle also includes private households, for whom he operates a retail shop, and farmers. For more remote farms, Handtmann develops the so-called hydraulic rams, which raise water from a stream to a higher level and thus ensure consistent supply solely with the help of dynamic pressure. Water is an issue for Handtmann as



well: until 1894, the company uses the water power of the Bachmühle mill to drive its machine tools. When the town cancels the lease for the mill, the resourceful entrepreneur acquires a steam engine and uses its exhaust steam to run a laundry.

World War I, however, initially puts an end to this promising development. Brass is now needed for arms production, so that Handtmann has to discontinue fittings production and revert to manufacturing bronze plain bearings for locomotives and lubricating bearings for horse-drawn carriages. Together with his son Albert and five to six workers who have been exempt from military service, the founder and principal can just about keep the business going. Christoph Albert Handtmann should not live to see the war end; he dies on 16th June 1918 at the age of 73.

# The second generation from 1918 onwards: times of crisis

After the death of company founder Christoph Albert Handtmann, his mechanical workshop is passed on to his eldest son Karl Albert (1874-1951), known by his first name Albert, just like his father. He joins his parents' business in the 1880s and learns the trade of foundryman and mechanic, following in his father's footsteps. It is the younger brother Adolf Karl Handtmann (1884-1953), however, who would leave a lasting imprint on the company's fortunes.

Karl, by which name the third of the Handtmann sons is known, completes a commercial apprenticeship at the renowned Otto Schlee hardware factory in Biberach, where he gains insight into the English correspondence of the company which exports as far as the USA and Japan. This sparks his interest to discover the world. No sooner has he finished his apprenticeship than he gathers up his savings and sets off for England, where he successfully applies for a job at a textile wholesaler in Manchester. He quickly works his way up and becomes an authorised signatory, marries and, after five years, moves on to France. There, Karl Handtmann also works in the textile wholesale business until he returns with his family to Biberach in 1914.

After the war, the father of three daughters and widower since 1916, enters the family business of Handtmann, where he should soon prove to be a moderniser. To provide for growth in the difficult post-war years, dynamic Karl takes up wholesale trading in taps and pipe connectors for plumbers in addition to the traditional business of fittings for breweries and distilleries.

Despite this expansion of business, inflation in 1923 and the world economic crisis in 1929 take a heavy toll on the company. At one point, the workforce is reduced to five employees only. To make matters worse, Handtmann is forced out of the town centre because of the unpleasant odours from the smelter's oil furnaces and has to give up its established company premises at Ehinger-Tor-Platz square. The brothers find a new location on the site of a former wire weaving mill and a marble factory on Brühlstraße and Fabrikstraße. The site is to be the home of Handtmann for the next 40 years.

Meanwhile, Karl Handtmann married a second time: another English girl, the sister of his deceased wife. Son Albert Arthur Georg (1927-2018) is born in 1927 and grows up to lead the company to international renown from the 1950s onwards. Owing to the precarious economic situation, the mother has to give private English lessons and the family lives in the attic rooms above the newly set up foundry for the time being.



It is not until 1932 that the company starts to prosper again, and by 1939 the workforce has increased to 35. When World War II breaks out, all employees but five men are drafted. Brass once again becomes wartime material, which puts an end to the production of fittings once again. Instead, Handtmann now has to pre-machine steel parts for the armaments industry on the existing lathes. By the time the war ends, the factory equipment is run down, the only two modern lathes are dismantled by the French occupying forces, and Handtmann is on the brink of going out of business.

# The third and fourth generation from 1950: with improvisational power to the economic miracle

A fresh start after the war is difficult for Handtmann. To ensure the company's continued existence, Karl Handtmann, the sole owner of the company since 1944, systematically grooms his son Arthur as his successor after his return from captivity in 1946. In order to be admitted to engineering studies in Constance, Arthur completes a two-year internship at his father's, where he learns to mould, turn and cast. Improvisation is everything in the postwar years. At first, only the business with brass fittings for the rural distilleries is doing well. The Handtmanns dig up fox holes and use the fine sand as special sand for moulding castings. They cut wood to fire the ovens. Since metals are also hard to come by, they cannibalise destroyed aircrafts on the airfields in the area and cast them into waffle irons and spaetzle presses.

For all its makeshift character, this marks a groundbreaking step: Handtmann's entry into aluminium casting. Arthur Handtmann, who graduates as a mechanical engineer in 1950 and takes over the reins of the company, relies entirely on the light metal because it is easier to process, has a lower melting point and produces fewer harmful exhaust gases. And his instinct should prove him right, like so many other times thereafter in the 47-year era as corporate leader. In 1952, he starts casting aluminium burner parts and fan housings for Weishaupt, based in the nearby town of Schwendi. This is the breakthrough for Handtmann. In 1952, sales revenues for the first time exceed the threshold of one-million Deutschmarks – the economic miracle, the Wirtschaftswunder, has arrived for Handtmann.

The headcount is also on the rise. In 1949, Handtmann already employs 51 people, more than ever before. In 1950, it is already 56 and one year later 65, the beginning of a continued upward trend.

## Arthur Handtmann: to international renown with strategic vision

Karl Handtmann dies in 1953 at the age of 63. Arthur Handtmann is now sole owner of the company. With strategic vision, he would transform a craftsman's business into a company with 4,300 employees to date and annual sales revenues of 1.1 billion euros. Arthur Handtmann's era as company owner sees the conversion of his father's brass foundry to the sustainable material of aluminium from 1950 onwards and the founding of the mechanical engineering business for portioning machines as an independent business division in 1954. In 1967, he takes the bold step of investing in a greenfield site and relocates his company to premises with growth potential on the outskirts of town. Step by step, he turns his foundry into an industrial metal casting plant, expands aluminium casting to include all state-of-the-art and innovative casting methods and thus opens up the large supplier market of the automotive industry from the 1980s onwards.



#### 1982: Thomas Handtmann joins the company management

Since 1982, he has been supported in company management by his son Thomas Handtmann (born 1953). Handtmann employed 630 people at the time. Thomas Handtmann completed his industrial engineering studies at the Swiss Federal Institute of Technology ETH in Zurich only two years earlier and gained first professional experience at Liebherr Verzahntechnik in Kempten. In 1982, after his start in his father's company, he assumes the responsible position of head of development at the Maschinenfabrik. Nevertheless, he decides to go to Japan as an exchange engineer in 1986 to gain experience abroad. During this time, the company's individual business sectors are divided into independently operating units so that potential liability issues in one business division would not affect other sectors.

Just as the company management officially passes from the fourth to the fifth Handtmann generation in 2023, on the occasion of the company's 150th anniversary, Arthur Handtmann officially steps down from the management in 1998, on the occasion of the company's 125th anniversary, and becomes President of the Advisory Board. This leaves Thomas Handtmann as the managing director responsible for Handtmann Holding. Under his leadership, the headcount increases from 1,592 to 4,265 in 2022. Following the acquisition of the Leichtmetallgießerei Annaberg in Saxony (Germany) in 1992, further production sites in Germany (Reutlingen and Zittau), Slovakia (Košice and Kechnec), China (Tianjin) and Czech Republic (Hluk) as well as further sales companies are established.

In honour and recognition of his outstanding services to business and for the public welfare, Arthur Handtmann is awarded the Order of Merit of the Federal Republic of Germany – 1st class in 2015. The senior principal passes away on 14th April 2018 at the age of 91.



Development of the business divisions from the 1950s until today

One company, six divisions

The Handtmann Group of Companies is made up of six independently operating divisions. In addition to its traditional sectors of light metal casting and process technology, the Biberach-based company has expanded its spectrum over time to include the sectors filling and portioning systems, plastics engineering, systems engineering and e-solutions.

Light Metal Casting division: focus on light metal

As the volume of orders rises, Karl Handtmann increasingly mechanises sand casting in the years after 1953. From 1955 onwards, the company also develops gravity die casting suitable for series production. In the process, the melts are poured into metal permanent moulds, the so-called gravity dies, under the effect of gravity or low pressures. Unlike sand casting, where the mould is lost after a single use, these moulds can be reused. In 1961, Handtmann finally introduces industrial die casting, suitable for high volumes. Once again, Weishaupt is the first customer to commission die casting. Handtmann starts off with two die casting machines with closing forces of 120 and 250 metric tonnes. A 400 metric tonnes machine is already added in 1964.

This was also the time of first contact with the German automotive industry. At first, Handtmann receives only small subcontracting orders from BMW for engine support blocks and carburettor parts. Now that the company has a connection with BMW in Munich, the Metallgusswerk applies to BMW in Berlin for the production of drive parts for motorbikes – and is successful: In the 1970s and 1980s, there is no BMW motorbike on the road without a Handtmann part installed. The Biberach-based company produces wheel hubs, cylinder head covers, transmission housings, oil pans and swing arms.

Handtmann subsequently advances to become a recognised specialist for aluminium casting, with a consistently growing order volume. Be it corner brackets for window frames or heating plates for the twisting process of synthetic fibres, the company from Biberach demonstrates great versatility while working in increasingly cramped conditions on its established factory premises on Fabrikstraße. The relocation of Handtmann to the new, spacious company premises on Birkenallee takes place from 1968. The foundry is moved to the new location in stages between 1973 and 1978.

#### Growing automotive business from the 1980s onwards

At the time, Handtmann has not yet specialised in supplying the automotive industry to the extent that it does today. This should change in the 1980s, when the automotive industry increasingly replaces steel with aluminium. Thomas Handtmann has just joined the company management when in 1984 Handtmann receives a major commission from Teves to manufacture cast parts for ABS brake systems. In order to be able to handle the high volumes, the company installs a universally applicable casting carousel with eight casting systems for automated gravity die casting, the most advanced solution at the time in terms of technical rationalisation. When the demand for aluminium components for ABS brakes dwindles as a result of technical developments, the solution is consequently used to cast injection nozzles for Bosch as a successor product.



Given the frequent product changes in the automotive industry, Handtmann's corporate structure as a mediumsized and family-owned company, where investments can be made quickly and flexibly, proves to be a major advantage over competitors who are often integrated in group structures. Such investments include high-risk investments in automated die casting machines from the early 1990s onwards, which make Handtmann a highly productive partner to the automotive industry. The largest of these machines at Handtmann today achieve closing forces of up to 4,000 metric tonnes, ten times as much as 60 years ago.

As a particular product highlight, Handtmann develops an aluminium oil pan with different degrees of hardness for Volkswagen from 1991 that would also deform when hitting high kerbs, as they are common in the United States, for example, without ever losing the connection to the engine block, leaking or spilling oil. The production method is patented in 1993.

### New locations in Germany and abroad

Handtmann acquires Leichtmetallgießerei Annaberg GmbH in 1992, which was founded in 1926 by the Zschopauer Motorenwerke DKW, to be able to handle the growing automotive business. With the Treuhand state holding company, the Biberach-based group of companies agrees on job security for 100 employees and an investment amount totalling ten million Deutschmarks. Up until 2004, Handtmann invests more than 40 million Deutschmarks in the Saxon location. Today, more than 20 state-of-the-art die casting machines with closing forces of 420 to 1,300 metric tonnes are available at Annaberg for the production of aluminium components. High-quality casting finishing and CNC machining are integrated into the fully automated production process.

In order to relieve the Handtmann Light Metal Foundry in Annaberg and the Metallgusswerk in Biberach of simple die-cast parts, Handtmann acquires a former steelwork plant in Košice (Eastern Slovakia) in 2005, and converts it into a new die casting foundry. The new foundry starts production in 2009. Today, 200 employees in Košice manufacture blanks, including an end-to-end value chain for premium manufacturers operating worldwide.

2019 sees the groundbreaking ceremony for another factory for aluminium die casting and mechanical machining in Kechnec, Slovakia. At the new location, Handtmann operates what is currently the most state-of-the-art foundry with mechanical machining in Europe. The latest, technologically most efficient equipment and an innovative, energy-saving heating and cooling concept are installed at Kechnec. What's more, the plant is operated 100 per cent free of process waste water. The "Green Foundry" project sets new standards in terms of sustainability, with state-of-the-art die casting technology for economical and environmentally friendly production. In recognition of this achievement, the Handtmann Group of Companies receives the "Sustainability Award in Automotive" in the "Operations" category, jointly awarded by the trade journals ATZ and MTZ and management consultancy Roland Berger.

## **Expansion to the Far East**

In 2012, Volkswagen starts construction of a transmission plant in China and requires Handtmann to also take the leap to the Far East. A gigantic leap for the family business from Biberach. Wanting to stay in business with the Wolfsburg-based corporation, Handtmann agrees and builds a foundry for the production of transmission and clutch housings on a 52,000 square metre site on the outskirts of the Chinese metropolis of Tianjin for around 80 million euros, the largest single investment in company history. Handtmann Light Metal Foundry (Tianjin) Co., Ltd., already starts operations in November 2014.



Today, the Handtmann Light Metal Casting division with its locations in Biberach, Annaberg, Košice, Kechnec and Tianjin is the fourth-largest aluminium foundry in Germany and the largest family-owned foundry in Germany with over 2,150 employees and sales revenues of around 597 million euros in 2022. The annual output amounts to over 65,000 metric tonnes of light metal castings, of which 99 per cent are automotive parts.

## Systems Engineering division: full-service provider for the automotive industry

In order to stay in direct cooperation with the automotive companies and to secure the future as a supplier partner, today it has become increasingly important to supply manufacturers with complete ready-to-install systems on the production line, not just castings. Handtmann therefore sets up the new Systems Engineering division, based at the tradition-rich Biberach location, in 2003. In close collaboration with the automotive companies, this full-service provider designs and produces, among other things, complex suction systems and intelligent exhaust gas guiding and cooling concepts for its customers. The intake manifold module with integrated supercharge air cooling for a new Volkswagen diesel engine generation with 1.6 and 2.0 litre displacement, which Handtmann develops and builds from 2012 onwards under a 62 million euro contract, serves as an example of this collaboration. In 2022, Handtmann Systems Engineering employed 182 people, who generated sales revenues of around 178 million euros.

A pioneering product of Handtmann Systems Engineering is the innovative thermal management system for conventional drives and modern electric drives. Via complex control actuators, it directs coolant flows specifically to where they are needed in the current operating state. Handtmann Systems Engineering is also preparing for the transformation towards electric mobility in other ways. In collaboration with its automotive customers' research and development departments, for example, the division develops water-cooled housings for electric motors, batteries and electric compressors as well as complete traction battery systems. This is where the many years of experience in light metal casting pay off.

## Filling and Portioning Systems division: from five-man operation to world market leader

Alongside the reorientation towards light metal casting, mechanical engineer Arthur Handtmann also decides to establish his own mechanical engineering business in order to diversify the company, and hence put it on a more stable footing. The trigger for this, in early 1953, was a question from an old school friend asking whether he could build a hand-operated sausage filling and portioning machine. Handtmann then designed the first manual portioning and linking machine with much enthusiasm: the R 12.

It soon becomes clear, however, that only a motorised device could simplify the difficult, monotonous work of sausage portioning and bring about real progress. Handtmann therefore recruits a fellow student, who then fits the R 12 with an electric motor. With the proceeds from the sale of this machine, named the R 25, to England, he sets up his machine factory, the Maschinenfabrik, in 1954, in a shack on the company premises. In addition to his designer, he has a lathe operator and three locksmith apprentices at his disposal as staff. The beginnings are tedious and full of mishaps. From 1959 to 1961, after various unsuccessful attempts, the FA 40 and FA 70 portioning and linking machines as well as the F 20 to F 70 piston fillers are built. And they bring the breakthrough: At the leading exhibition for the international meat sector IFFA in Munich in 1962, Handtmann surprises the experts and sells in an instant 152 of its innovative automatic filling machines to customers throughout Europe.



The Handtmann portioning machines are the right system at exactly the right time, because a rich diet is highly popular in the years of the economic miracle. This also includes a high consumption of meat. Consequently, the Handtmann Maschinenfabrik experiences a boom from this point on. By 1964, 80 people work there and 60 per cent of the production is exported. The FA 40 and FA 70 portioning machines, in particular, prove to be real bestsellers in the meat industry: in 1968, Handtmann sells the thousandth FA 70. The very promising development of the Maschinenfabrik is also reason to embark on the relocation of the entire company to the outskirts of town. In 1968, the mechanical engineering section would thus be the first unit to take up operations on the company's new premises on Birkenallee.

## Success in food processing: with vacuum fillers to the top

And the product range keeps expanding: In 1967, Handtmann Maschinenfabrik launches the first vacuum filler with the special feature of a vane cell feed system for precise portioning. In the years that followed, the vacuum fillers offered in various performance levels should advance to become the company's primary source of sales. They make Handtmann the world market leader in filling and portioning technology in 1980, and it still maintains this position to this day. In 1979, the Maschinenfabrik reaches a headcount of 300 and sales revenues of 38 million Deutschmarks. In 2022 it is 1,373 employees and around 340 million euros in sales revenues. Filling and portioning technology thus is the second largest division at Handtmann.

Handtmann once again creates a stir in 1986 with the presentation of the first microprocessor-controlled vacuum filler worldwide, the VF 80. The same year, Handtmann Maschinenfabrik sets up the first foreign subsidiary in England for the sale of meat processing machines: Handtmann Ltd. More sales companies in the USA (1990), Italy (1991), Canada (1991), France (1997), Brazil (2000), China (2006), Russia (2014), Mexico (2015), Spain (2019), Thailand (2021), the Netherlands (2021) and Columbia (2021) are to follow.

## New millennium construction of the Maschinenfabrik

Handtmann subsequently extensively digitises both its machines and procedures. Automatic linking, cutting and hanging lines would supplement the product range. In response to changing dietary habits, Handtmann now also supplies variants of its machines also suitable for fish, dough, dairy or cheese products, salads, vegetarian and convenience products.

CNC-controlled machining centres have been standard in the Maschinenfabrik since the 1990s. Innovation is given yet another boost in 1998, when Handtmann decides to construct whole new facilities for the thriving Maschinenfabrik in the new Biberach-Aspach industrial estate. The facilities are inaugurated in 2000.

The new facilities allow the restructuring and perfecting of the manufacturing processes. Turning, drilling, milling and grinding in metal working today happens simultaneously, using multi-function machining centres. Components of high-alloy stainless steel are machined with an accuracy of up to one thousandth millimetre. In 2003, Handtmann also introduces group work at the Maschinenfabrik, enabling an increase in productivity of up to 50 per cent, due to the gain in personal responsibility and motivation. The next step in 2004 is the installation of a fully automated high-bay warehouse for centralised spare parts logistics for the global Handtmann Service. In 2017, a second, even larger 30-metre high-bay warehouse with 7,500 pallets and a fully automatic small parts warehouse with 65,000 storage bins is installed. And even the factory, only inaugurated in 2000, is expanded by over 50 per cent to 30,000



square metres in 2009. The Handtmann Forum for customer training, inaugurated in 2010, sees a similar development and a new forum follows in 2016.

In 2020, Handtmann acquires Inotec GmbH with its four locations in Reutlingen and Herzebrock-Clarholz (Germany), Hluk (Czech Republic) and Saverne (France) in order to further diversify and be able to offer integrated process solutions for the food processing industry. The acquisition of this manufacturer of innovative mixing and grinding technology as well as tying machines for the food processing industry puts Handtmann in a position to offer end-to-end production lines from a single source. Then, in 2021, Handtmann acquires Verbufa, Dutch supplier of machinery, devices and components for the food industry.

#### Process Technology division:

### from supplier of fittings to engineering partner to the beverage industry

While aluminium casting and the thriving Maschinenfabrik show the future in the 1950s, process technology, which emerged from the fittings factory, embodies tradition at Handtmann. In the years of the Wirtschaftswunder, the traditional business of brass fittings is once again expanded. In the early 1960s, however, customers increasingly ask for more durable materials. Stainless steel is the solution, but it raises a new problem: the effort of making steel is much too high and cannot be realised on the company premises in Fabrikstraße. The solution to the problem is to mill and turn the solid material to carve the stainless steel fittings out of it and to drill and weld the pieces to give them a finish. Initially, this procedure would require some experimenting.

Handtmann Armaturenfabrik makes a breakthrough and gains considerable reputation with a contract from Wicküler brewery in Wuppertal for hundreds of shut-off valves. Consequently, the Armaturenfabrik completely switches production from brass fittings to stainless steel fittings in 1968. In 1969, Handtmann launches its first stationary cleaning system for beer tanks, routing pipes along existing tanks and feeding inlets into the tank at specially defined intervals. Spray spheres are attached to the end of the inlets that can clean any point inside the tank. The Armaturenfabrik process technology activities should develop from these cleaning systems.

Next, Handtmann tackles the fully automatic supply of the tanks with liquids for the beverage industry through a closed system of pipes, including pumps, valves and controllers. In the process, process technology conducts pioneering work with regard to welding. The outcome are reliably homogeneous weld seams that ensure maximum hygiene. In the 1970s, German breweries are not very receptive to the introduction of automated systems, so Handtmann initially takes the export route, for example, equipping the Polar brewery in Caracas, Venezuela, with valves and piping from 1972 onwards.

#### Innovative filter systems for shelf-stable beer

In 1988, the Process Technology division introduces a stand-alone product, the Multi Micro System filter for the filtration and degermination of beer. The success of the MMS filters again spurs Handtmann's interest in ways to make beer shelf-stable. To this end, the Armaturenfabrik develops a new method, the Combined Stabilization System, or CSS, in 2000. In the CSS system, filtered beer flows through modules filled with an adsorbent to which dissolved substances attach. A contact time of only a few seconds suffices to extract proteins and tannins from the beer. No substances enter the beer in the process. This innovative technology is also suitable for other fields of application in food technology and biotechnology.

#### Systems for the largest breweries in the world



The Handtmann Process Technology division, however, generated the majority of its sales revenues from being an engineering partner to the beverage industry and increasingly also to the chemical-pharmaceutical industry in the design of entire processing plants, for example, by planning complex pipe systems. Handtmann is operating worldwide in this field with an export share of sales of close to 100 per cent in 2016. The year 1993 marks a milestone, when Handtmann is commissioned by the Mexican brewery Grupo Modelo with the design, construction and installation of the piping system for the largest brewing facility in the world in Zacatecas, Mexico. Altogether, we are talking about 30 kilometres of pipes. Further major contracts for two of Modelo's breweries should follow in 2003 and 2008.

In 2013, the American company Constellation Brands acquires the former Modelo brewery in Piedras Negras, for which Handtmann had shortly before supplied the entire process technology from brewhouse to bottling, and expands it to become the new largest brewing facility in the world by 2017. And Handtmann is on board again this time. The process technology company from Biberach has also managed to establish itself as a supplier in the craft beer sector, which is booming worldwide. Today, around half of all craft beer breweries in the USA work with Handtmann fittings. In 2022, the Process Technology division employed 98 people and generated sales revenues of around 32 million euros.

### Plastics Engineering division: material innovation in the long run-up

While Handtmann was previously a pure metalworking company, this should change in 1968 when the company enters into plastics development and establishes Handtmann Elteka. The name is derived from the German pronunciation of the idiom LTK for "Lauramid<sup>®</sup> Technischer Kunststoff", or engineering plastic – and this is exactly what this newly established company is all about. Once again, Arthur Handtmann demonstrates pioneering spirit and instinct for technological transformation. Some background details: In the 1960s, it is apparent that the metal industry could face competition from innovative plastics and that it is important to prepare for this development. Yet another opportunity to broaden the company's base.

However, with Elteka, Arthur Handtmann has to demonstrate endurance. In the end, it would take 15 years for the promising material to reach production maturity and attract new clientèle. The early 1980s bring the breakthrough with the production of vat propellers for waste paper and woodcut processing for Voith, the paper machine manufacturer based in Heidenheim. At the same time, a series of independent studies, including one by the Technical University of Munich, attests to the excellent suitability of the Lauramid<sup>®</sup> casting material for the manufacture of toothed wheels. In 1984, Handtmann Elteka takes up the manufacture of golf club heads made of Lauramid and sets up Handtmann Sports Int. Corp. in Niceville, Florida. In spite of prominent support from German athletes, the subsidiary is dissolved again in 1996 due to lack of contact to the American golf scene.



#### Success with rollers for "Bulli" sliding doors and aerial cableways

The relationship with the automotive industry, by contrast, has lasted. In 1989, Volkswagen starts production of its T4 van, the so-called "Bulli", with Lauramid<sup>®</sup> rollers in place for the sliding doors on the side. All successor models are also equipped with it. Today, other automotive manufacturers also rely on this type of plastic. In 2015, the automotive business of Elteka already accounts for 42 per cent of its total sales. Since 1993, Elteka has also produced coupling rollers, castors and bearing rollers for aerial cableways from a modified, particularly cold-resistant type of Lauramid<sup>®</sup>. What's more, the Handtmann Plastics Engineering division is collaborating with Degussa to develop a Lauramid<sup>®</sup> formulation for a food-grade material that can be used to produce rollers, dosing pistons, sliding guides and seals for the food industry.

In light of the multifaceted and consistently growing range of applications for Lauramid<sup>®</sup>, Handtmann starts construction of a plastics factory three times the size of the former facilities in Biberach-Aspach in 2012. A production area covering 8,000 m<sup>2</sup> and an office building of 1,900 m<sup>2</sup> is constructed on a 23,000 m<sup>2</sup> plot in just one year. Eight newly developed casting systems can now cast five to six metric tonnes of Lauramid<sup>®</sup> parts every day, which can then be machined on state-of-the-art turning and milling centres. In 2022, Elteka has a total workforce of 122, generating sales revenues of around 25 million euros.

#### e-solutions division:

## partner in the development and manufacture of custom power electronics and control technology for the industry

The newest division is Handtmann e-solutions, which was established by acquisition in 2018. This acquisition gives Handtmann access to expertise and over 30 years of experience in important future technologies in power electronics.

Its product portfolio focuses on the core competencies of inverters for the conversion and control of electrical energy, in particular for demanding electrical and electrochemical processes. The latest solution in this field is a modular system for the decentralised production of green hydrogen, offering customers from industry and trade a complete solution that enables them to use renewable energies in an economically sensibly way across sectors.

Another focus is on drive and control technology. This competency complements the product portfolio and is primarily used in the agricultural industry in attachments as well as for smart and precision farming applications. The range of inverters, drive and control technology and digital offerings provides customers with a complete suite of solutions to support the transformation in the agricultural sector towards sustainable, ecological and economically efficient food production.

The overall expertise is rounded off by in-house electronics manufacturing and assembly for optimum operability and speed. Close collaboration of development and manufacturing ensures quality and economical, productionoptimised products right from the start. Further synergies are exploited by working closely in partnership with all other divisions to provide a comprehensive end-to-end range of solutions to all customers.

In 2022, Handtmann e-solutions employed 51 people, generating sales revenues of around 5 million euros for the division.



#### About the Handtmann Group of Companies

The Handtmann Group of Companies is a globally active technology company operating in the processing industry with 4,300 employees, 2,700 of whom work at the headquarters in Biberach an der Riß. Cutting-edge technology, innovation and a strong focus on the individual are at the core of the business run by the founding Handtmann family from Biberach. Handtmann is decentrally organised in six divisions with autonomous management structures: Light Metal Casting and Systems Engineering for the automotive industry, Filling and Portioning Systems and Process Technology for the food industry, Plastics Engineering and e-solutions. At the head of the group of companies is a holding, which acts as the management, financing and holding company. In 2022, Handtmann generated sales of 1.1 billion euros. A high degree of investment in research and development and production facilities is facilitated by a strict reinvestment policy on the part of the owners of the company to be able to sustainably support qualitative growth. The Group of Companies is currently represented in over 100 countries with its own production sites, subsidiaries and agents. Established in 1873 as an artisan brass foundry, Handtmann will be celebrating its 150th anniversary in 2023.

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