

ADVANCED TECHNOLOGY WORLDWIDE

The Handtmann Group of Companies



GROWING TOGETH ER

with the focus on the individual



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Thomas Handtmann
is the head of the Group of Companies

THE HANDTMANN GROUP OF COMPANIES. ONE FAMILY.

Advanced technology, innovations and the focus on the individual are key aspects of the Handtmann Group of Companies. We are renowned worldwide for our strategic, dynamic and authentic approach.

The company has its roots in the Swabian town of Biberach where the Handtmann family has been managing the family enterprise for four generations: a symbiosis of modern and traditional elements, fascinating technology, a high sense of responsibility towards people and the company create an indivisible whole. Thomas Handtmann who has been head of the company since 1998 is shaping the future of the Handtmann Group of Companies. And Handtmann is to remain a family company – the fifth generation are already growing into their roles.

Autonomous management structures are established in a decentralised organisation in six divisions. At the head of the Group is a holding company with an Advisory Board which acts as the management, financing and holding company.

- → LIGHT METAL CASTING
- **→** SYSTEMS ENGINEERING
- → FILLING AND PORTIONING SYSTEMS
- **→ PROCESS TECHNOLOGY**
- **→ PLASTICS ENGINEERING**
- → E-SOLUTIONS













TECHNOLOGY BASE D ON PASSION

for tomorrow's markets



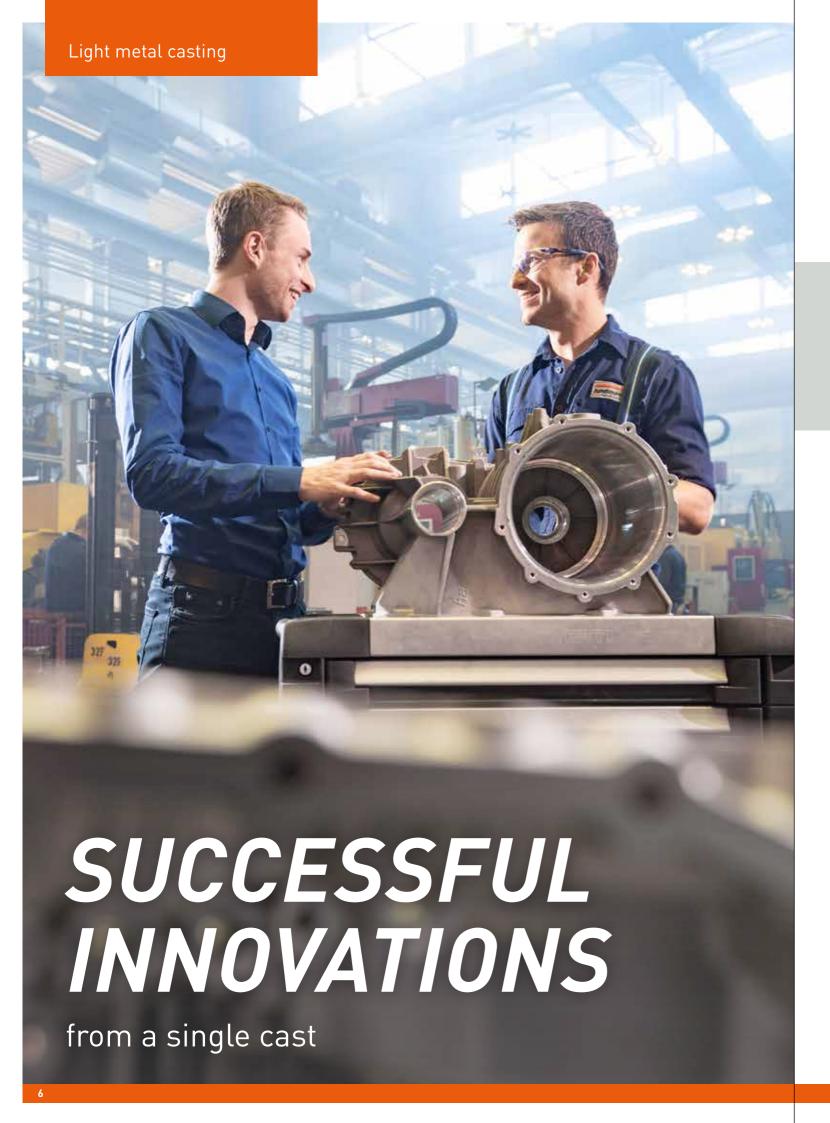
Arthur-Handtmann-Straße in Biberach

QUALITY WORLDWIDE DUE TO BINDING STANDARDS.

Entrepreneurial boldness and vision provide the basis for Handtmann innovations. Our highly-qualified team develops complex solutions for the benefit of our customers. Technology orientation, professional innovation management and continual market success shape the entire company. Our filling and portioning systems for the food industry lead the global market. Handtmann thermal management systems, high-volume drive and chassis parts made from aluminium and magnesium casting as well as patented filtration processes are making technological history, as are the double-seat valves from Process Technology, the Lauramid® engineering material from Elteka and the power electronics from e-solutions.

The internationalisation of the company enables local presence and proximity to customers in all important markets throughout the world. Best possible service on the one hand and application experience from all parts of the world on the other hand make Handtmann strong and diverse. We incorporate all the experience gained and the results of permanent international benchmarking into our development processes. Our extensive network provides global expertise on a local basis - from the first customer contact to individual support in the application. Guidelines issued by the headquarters ensure uniform standards with regard to technology, quality and service. In individual cases, however, the customised solution has priority. Your satisfaction counts.





Albert Handtmann Metallgusswerk GmbH & Co. KG
Handtmann Metallgusswerk Produktions-GmbH & Co. KG
Handtmann Leichtmetallgießerei Annaberg GmbH
Handtmann Leichtmetallgießerei Annaberg Produktions-GmbH & Co. KG
Handtmann Light Metal Foundry (Tianjin) Co., Ltd.
Handtmann Slovakia, s.r.o.
Handtmann Kechnec s.r.o.



FASCINATING LIGHTWEIGHTS WITH PRECISE OPERATION.

Handtmann is your strategic system partner for aluminium and magnesium casting, in particular for the automotive industry. Renowned manufacturers and suppliers rely on our expertise: not only on the sophisticated process and machining skills but also on our qualities and many years of experience in the field. With over 2,300 employees, we are the largest German aluminium casting foundry that is still family-owned.

We place great importance on being the development partner for our customers. We bundle our skills, pool our ideas and set standards from the very beginning and have been your experienced contact partner for four generations. We are your dedicated companion in all areas of ICE, structural and chassis components as well as in the transformation to PHEV, BEV and fuel cell components.

Our five plants worldwide (Biberach (DE), Annaberg (DE), Košice (SK), Kechnec (SK) and Tianjin (CN)) thus produce complex aluminium high-pressure die cast parts on systems with closing forces of up to 4,000 MN and lightweight magnesium parts. At our Biberach location, we furthermore produce gravity die-cast components for highest load requirements as well as uniquely flexible shapes of expandable polystyrene (EPS) using the lost foam method.

A modern, highly automated machine park provides maximum flexibility. It guarantees the precise further processing and assembly of all parts: Our company has aligned all process chains for transformation and developed a strategy for a successful future. We are the right partner for your effective process of transformation.





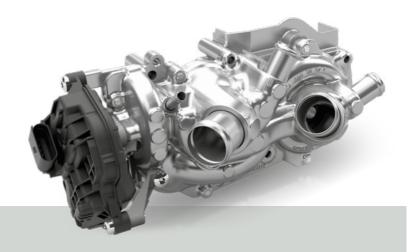






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Segmented electric motor housing





MORE EFFICIENT SYSTEMS FOR TOMORROW'S MOBILITY.

Contract development is a skill – strategic planning clearly defines the company's mission: Handtmann Systemtechnik is your contact for shaping the future. We turn visions into goals, assess ideas, realise projects and benefit from the experience and the strength of the Handtmann Group of Companies and its decades of expertise in lightweight construction from a wider range of materials.

The results of our intensive cooperation with the top OEMs in the automotive sector play a significant role in their value chain and during strategic planning. In addition to complex suction systems and intelligent exhaust gas guiding and cooling concepts, a good example of this is the Handtmann thermal management system which reduces CO₂ effectively, irrespective of the type of drive and the material used.

High-voltage battery cases and complete traction battery systems are further contributions of Handtmann Systemtechnik to the mobility of tomorrow.

As a full service provider, we support you from the idea to market maturity. Our development and design activities cover everything from prototypes to overall systems. Handtmann Systemtechnik also defines the processes required for the production of highly automated and interlinked assembly facilities. We initiate progress, provide consultancy services and assume project supervision and responsibility. We break new ground.











Albert Handtmann Maschinenfabrik GmbH & Co. KG Handtmann Maschinenvertrieb GmbH & Co. KG

Handtmann do Brasil Ltda.

Handtmann Machinery Trading (Shanghai) Co. Ltd.

Handtmann France SAS Handtmann I td

Handtmann Italia s.r.l

Handtmann Canada Ltd.

Handtmann Machinery Mexico, S. de R.L. de C.V.

000 Handtmann Machine Factory

Handtmann Iberia S.L.U.

Inotec GmbH Maschinenentwicklung und Vertrieb

NIOB, spol. s.r.o.



TECHNOLOGY AND DIGITAL SOLUTIONS FOR PREMIUM FOOD.

Filling, portioning, separating, dosing, forming, co-extruding, mixing, grinding: the Handtmann Maschinenfabrik and Inotec supply vacuum fillers, portioning systems and complex line solutions for food production worldwide. Whether for the production of traditional sausage and meat products, fish, delicatessen, dough, dairy or cheese products, salads, vegetarian or convenience products: we develop innovative solutions based on portioning technology. For example, vacuum fillers with patented vane cell feed system, ConPro systems for products with an alginate skin instead of casing, the HCU production control software as well as robot systems for product handling.

Thanks to intensive, demand-based market development, Handtmann today takes a leading position in the area of portioning systems for food production. We are in close

dialogue with the customer regarding product development, based on the motto of "My idea. My solution". Our communication platform for this purpose is the HANDTMANN FORUM customer centre, which offers the ideal setting for project talks, presentations, seminars and specialist conferences.

Our demand on the machine components and control technology ensures maximum product quality and process reliability for the customer. The best employees, state-of-the-art production technologies with high vertical integration, sales partners and subsidiaries in over 100 countries supported by service technicians worldwide contribute to this. The factory overhaul and re-marketing of used machines with manufacturer's warranty in our second-hand machine centre underline the Handtmann commitment to quality. Your success is our motivation.









HANDTMANN PROCESS TECHNOLOGY KEEPS PRODUCTION MOVING.

Handtmann Process Technology specialises in the safe and reliable distribution, filtration and separation of liquid and gaseous media in the food industry and is one of the leading providers of fittings, valves and processing plants. The components are also used by companies who need hygienic operational processes, such as the beverages, dairy, food, organic products and cosmetic industries.

A particular strength of Handtmann Process Technology are our tailored concepts for systems that are used for producing beer and craft beer. With components and valves, filtration and separation technologies, system construction and a comprehensive range of consultation services, Handtmann Process Technology meets industry requirements. Examples of this are cleaning air-valve combinations and tank dome caps for effective tank protection, as well as individually devised yeast management systems. Process Technology's beer stabilisation system ensures safe, long-term and economic stabilisation.

Process Technology's caustic filtration significantly increases the usage time of cleaning and production caustic, with considerable cost savings for the customer. Process Technology's RFC columns are used worldwide to effectively adsorb proteins and other valuable components from liquid media.

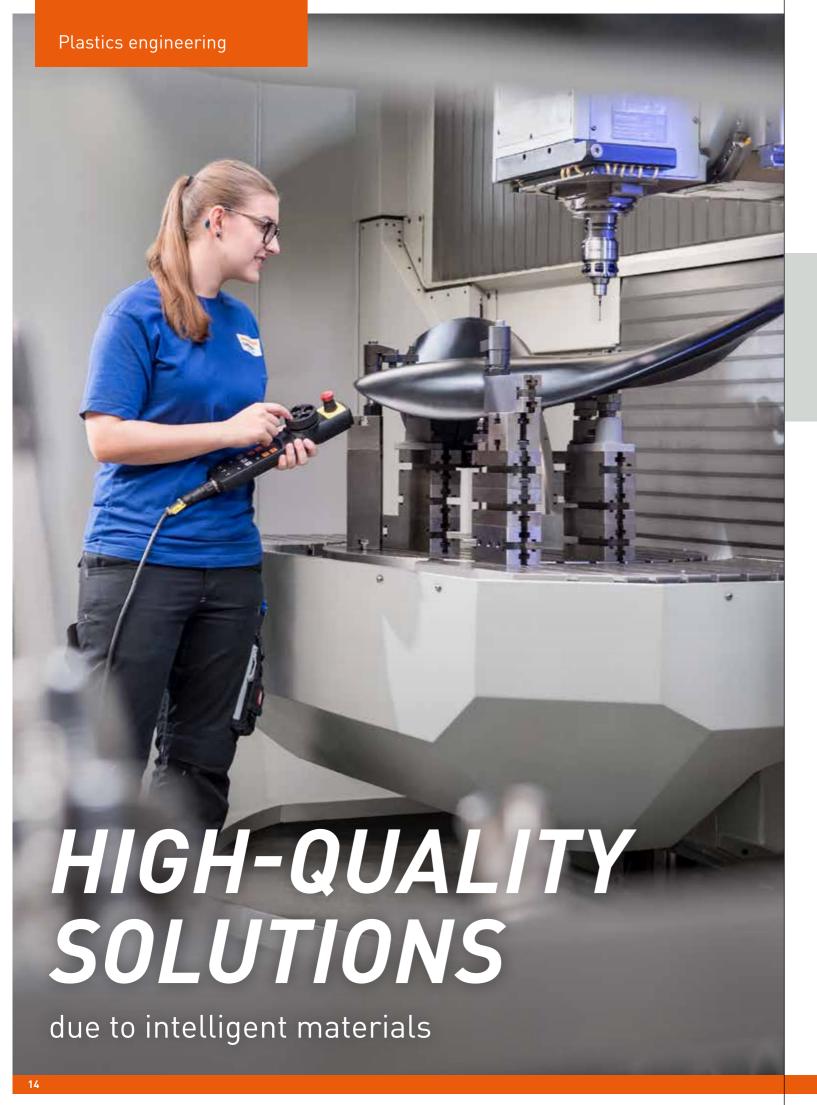
Whether piping systems for liquids and gases, CIP cleaning systems, filtration and absorption technology, pressure control devices or prefabricated assemblies: Handtmann process technology is built to customer's requirements. During the construction and manufacture of specific projects we comply with the principles of "Hygienic Design". We assemble complete systems and supply customised software solutions with central visualisation for process control and monitoring.

Convincing developments, reliable and high-quality components and plants. To the smallest detail. Sturdy. Safe. Tailor-made.











HIGH-PERFORMANCE COMPONENTS AND COMPLETE SYSTEMS MADE FROM PLASTIC.

They are deployed not only in mechanical engineering: the high-performance engineering plastics produced by Handtmann Elteka optimally combine mechanical, physical and chemical properties.

Lauramid® PA12C, the international market leader, is a pressureless cast, heavy duty, dimensionally stable polyamide. It is also available as Lauramid® FPM for use in the food, pharmaceutical and medical sectors with the corresponding certificates. The encapsulated metal core in Lauramid® with metal combination significantly improves the stability and performance in machine components. The Lauramid® C PA6/12C mixed polymer and the Lauramid Inject® injection moulding material round off the product portfolio of Handtmann Elteka. Hicompelt® is the fibre-reinforced advancement of Lauramid®. It can be used to realise complex structural components with a high fibre volume content, arbitrary fibre orientations and great lightweight construction potential. Lauramid® 3D Filament was developed on the basis of Lauramid® for industrial 3D printing.

Handtmann Elteka manufactures complete systems, components, castings and semi-finished products for use in, for example, mechanical engineering, the automotive industry, the packaging and food industry, in medical engineering and materials handling or in the area of renewable energy. Extensive engineering services, consulting and calculation in the development of components represent the core competence of the services. In close cooperation with customers, suppliers and research institutes we develop economical, highly precise and reliable applications. **We stand for progress in plastics.**

Our range of services:

- Lauramid® PA12C
- Lauramid® FPM (Food-Pharma-Medical)
- Lauramid® with metal combination
- Lauramid® C PA6/12C
- Lauramid Inject®
- Hicompelt®
- Lauramid® 3D Filament
- Complete systems, components, castings, semi-finished products
- Application-specific design and development



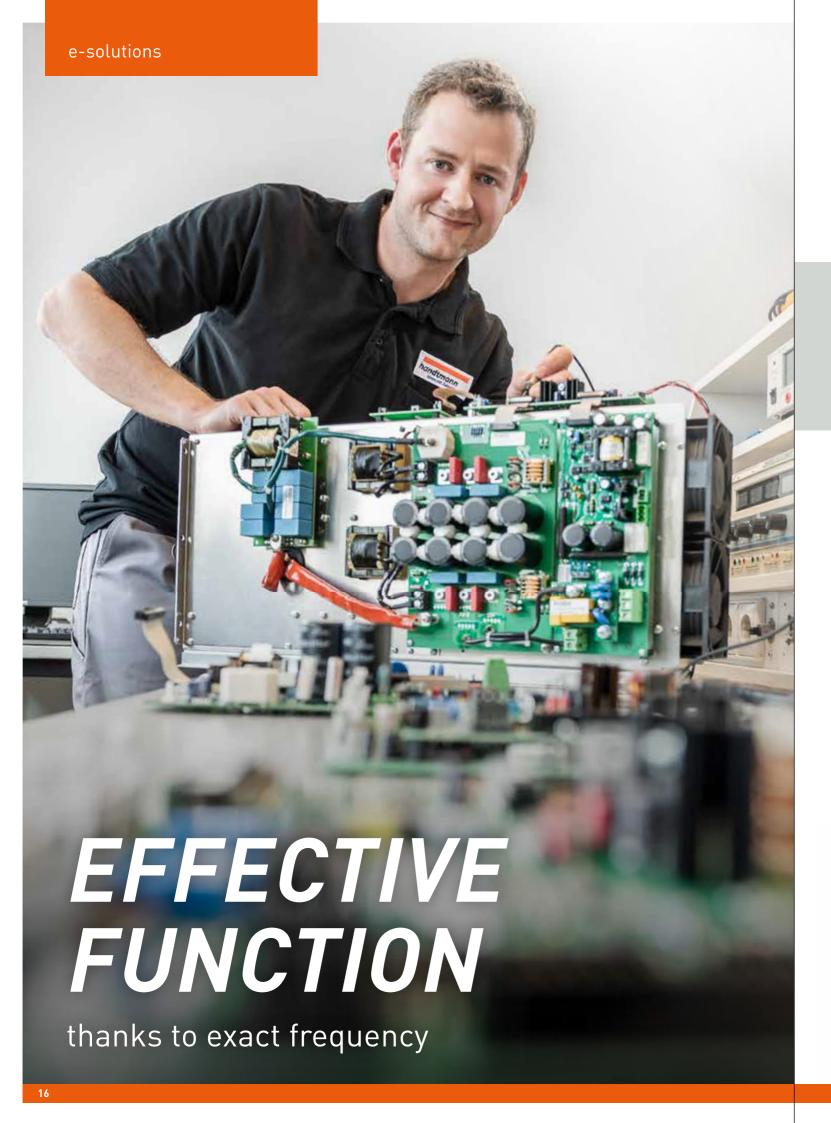
Double taper roller made from Lauramid® with motor, gear and support stand



Lug made from Hicompelt®



Freeform part printed usin Lauramid® 3D Filament





INTELLIGENT POWER ELECTRONICS UP TO SERIES PRODUCTION.

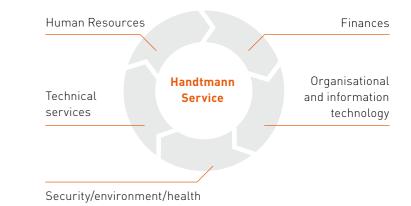
Expertise in the development and assembly of complex, custom-fit power electronics systems makes Handtmann a much sought-after partner for pioneering products and applications in the area of electric mobility, among other things. We have specifically trained skills perfected over decades and the experts associated with them. Hardware and software solutions developed by us exactly meet all requirements and, in addition, contribute to optimising the performance, reliability and economy of your products Intelligent development is followed by precise implementation: We mount the circuit boards, assemble all components and test the complete systems.

Our portfolio includes control electronics and high-voltage devices just as much as battery modules for electric vehicles. Our regulated power sources with currents up to 4,000 A and a specific output up to 500 kW are in use worldwide, especially in the areas of arc, stud and plasma welding, in electroplating, surface coating and medical engineering. In the field of industrial electronics, we develop and manufacture, among other things, digital motor controls with custom-fit interfaces, HMI solutions and other made-to-measure assemblies. SMD and THD mounting systems, wave soldering systems, coating systems and EMC testers qualify us for fast and high-quality prototype and series production. **Digital solutions from a single source.**





Chopper system



POOLING OF COMPETENCES AND SYNERGIES THROUGH CENTRALISED SERVICES.

Five efficient corporate divisions – one strong team:
Handtmann Service provides highly qualified consultation
and services to the Group of Companies, including finance
and accounting, human resources, organisational and information technology, technical services, security, environment,
health and many more.

The central and technical services ease the burden for the Handtmann companies operating on the market so that they can concentrate on their core competences and exploit expert know-how and synergy potentials. This also results in higher-quality processing of general tasks and the highest possible cost efficiency coupled with flexible staff deployment.

Vocational training is one of the core competencies. Handtmann Service is responsible for managing the training of around 100 young people in varying commercial and technical professions as well as training activities and training programs for individual employees or employee groups. The philosophy is to secure already existing jobs and to create new ones and we invest substantial sums each year for this very purpose.

A further excellent example is our Handtmann Finance financing service: we support investments in Handtmann technology by financing on attractive terms which in turn facilitates realisation. Existing credit lines and securities at house banks remain untouched and our customers profit from additional entrepreneurial freedom and liquidity. We invest in the future today.







WE ARE HANDTMANN

A strong Group

TECHNOLOGIES IN HARMONY WITH SOCIETY AND THE ENVIRONMENT.

Shape success and act responsibly – that is the message that Thomas Handtmann wishes to convey. And it applies to us all: we want each employee working in the family enterprise of Handtmann to have a sense of wellbeing and thus enjoy doing a good job with confidence. Occupational health and safety is a major cornerstone in this. We offer the latest technologies and modern machinery. Flexible work and working time models support this philosophy, as do modern remuneration and salary schemes. We focus on independent decision-making, short communication channels and an intercultural, informal working atmosphere. All employees are offered learning and training programmes that promote professional but also personal development.

What is important is remaining reliable. Our employees can count on us - long-term. Permanent learning offerings and our efficient company pension scheme clearly show: It pays to be part of the Handtmann family!

all aspects of the Handtmann Group of Companies. Thus we act in the interests of economic success, but not at any cost. Regardless of location, we secure our job offerings by constantly striving for customer satisfaction, and in doing so we stand for fair competition and integrity. The Handtmann Values and Code of Conduct form a guiding principle that defines our actions.

With regard to the environment, acting responsibly also means thinking long-term. We strive to use natural resources respon-

Taking responsibility is the fundamental basis for success in

sibly to ensure the preservation of an intact environment.

Our energy and environmental management systems integrate environmental protection into all processes and we promote innovative solutions to reduce energy consumption and emissions in campaigns and projects. We are successfully leading the way - in our region and around the globe.





WE ARE AT YOUR S ERVICE

in our worldwide locations



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