



schumacher

2020



**INNOVATION
RESPONSIBILITY
SUSTAINABILITY**

**Corporate Social Responsibility
by Schumacher Packaging**

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Expert for tailor-made packaging solutions



WE TAKE RESPONSIBILITY

Schumacher Packaging is a family business, based in Ebersdorf (Bavaria, Germany) currently managed by the third generation. Despite expanding across Europe – far beyond our Upper Franconian parent plant – we always stayed true to our values. “Packaging from person to person” – that’s our motto. To us, this is not just an empty phrase, but a day-to-day reality. People are at the heart of everything we do: Our customers, our employees, our partners.

Since people play such a central role in our business, we are also acutely aware of the social responsibility a company like ours has towards them as well as the environment. This brochure will give you an insight into what we at Schumacher Packaging do as part of our corporate social responsibility: For the conservation of nature and the environment, the responsible consumption of resources and energy, for young people and their education and for sports and social projects.

Innovation, responsibility and sustainability: These values have paved the way into the future for our family business since the beginning.

Björn Schumacher
Management



CORRUGATED CARDBOARD: A NATURAL PRODUCT

As a manufacturer of corrugated and solid cardboard packaging, at Schumacher Packaging, we use natural renewable raw materials – with a correspondingly beneficial carbon footprint. After all, corrugated cardboard is made entirely of renewable raw materials and can be fully recycled. Thus, transported goods are packaged in an environmentally friendly way – and when it has served its purpose, the packaging can be recycled with the waste paper.

Corrugated cardboard is a sustainable packaging material:

Paper, the source material used in the corrugated cardboard material cycle, consists of renewable raw materials and originates in sustainably cultivated forests. Responsible forest management ensures that the sustainability concept is implemented. This ensures an adequate level of improvement to the biological diversity in the forest ecosystem.

Damaged wood and wood from thinned out trees is turned into corrugated cardboard:

While caring for cultivated forests, damaged wood and wood from thinned out trees is accumulated – the primary raw material for producing paper. The vast majority of the paper in Germany is made up of around 80 percent recycled material such as recovered paper, cardboard packaging and used corrugated cardboard. In contrast, fresh fibres make up a mere 20 percent of the raw material for corrugated cardboard on average and this figure is still falling.

Packaging materials made of paper and starch glue:

The adhesive we use to stick smooth and corrugated paper webs together is also a natural product – it is a glue based on starch from corn, wheat or potatoes. Being purely plant-based guarantees easy disposal of the corrugated cardboard: After use, the corrugated cardboard is simply disposed of with the waste paper and is thus reintroduced to the reusable material cycle. Corrugated cardboard is a genuine recyclable product.

RECYCLING

THE GOOD THINGS ALWAYS COME BACK

Almost 100 percent of all used transport packaging made of corrugated cardboard is recycled. It therefore remains in the raw materials cycle and can be used again in paper production. This makes sense both economically and ecologically.

Corrugated cardboard packaging is a type of single-material packaging. These kinds of packaging are easy to dispose of because they are made of only one material – after use, they are disposed of with the waste paper. And this does not just apply to private households. Supermarkets also sort the corrugated cardboard out from other waste, bundle it, store it in a space-saving manner and then return it to the recycling loop via a waste paper disposal company.

Guaranteed reuse thanks to RESY:

The RESY recycling system is a strong community of corrugated cardboard manufacturers, waste paper disposal companies and producers of raw paper for corrugated cardboard. If the RESY symbol is printed on the packaging, it is guaranteed to be recyclable: It will be fully disposed of by the partners of RESY Organisation für Wertstoffentsorgung GmbH and the materials will be reused.

A natural recyclable product:

Used corrugated cardboard is anything but rubbish. Due to its optimal recyclability, it is a substantial and valuable raw material in paper production. The utilisation rate of waste paper in the production of corrugated cardboard is correspondingly high. In the long term, this ensures that used corrugated cardboard continues to be a sought-after commodity.

Recycled material in corrugated cardboard:

A significant proportion of the corrugated cardboard is itself made up of used paper and paper products: Around 80 percent of the corrugated cardboard is made up of recycled material such as used corrugated cardboard,



waste paper or cardboard packaging. Collections of recyclable materials in municipalities, trade and industry add paper, card and cardboard to the recycling loop. Our punching waste, just like packaging remnants and office paper, are also new raw materials for new corrugated cardboard.

Way ahead of the packaging regulations:

The German Packaging Ordinance (Verpackungsverordnung, VerpackV) on the avoidance and utilisation of packaging waste, first came into force in 1991. This ordinance, which applies throughout Germany, prescribes recycling quotas for packaging. Since it was amended in 2001, 65 percent of packaging (based on mass) must be recycled. The corrugated cardboard industry, however, had already far outstripped this figure before the packaging ordinance even existed. Thanks to the high demand for recycled paper, the corrugated cardboard material cycle has been exemplary since the beginning – even without national regulations.



FORESTS FOREVER FOR EVERYONE

FSC® CERTIFICATION PROTECTS FORESTS

FSC® is the abbreviation for the Forest Stewardship Council®, an international non-profit organisation. The FSC®'s vision is the continuous growth of sustainable, FSC®-certified forests. These forests are cultivated in such a way that they satisfy the social, economic and ecological rights and requirements of today's generation.

To do this, a responsible forestry management system as per the above criteria is to be promoted across the world, a system which is:

- Ecologically adaptive and ensures that the removal of wood and non-wood products does not impact the species diversity, productivity or ecological processes of the forest.
- Socially conducive and therefore helps both the local population and society in general to feel the long term benefits of managing the forest this way. It also creates powerful incentives for the local population to preserve the forest resources and to follow the long-term management plans.
- Economically cost-effective. For forest operations, this means creating a structure and a management system that do not generate a profit at the expense of forest resources, the ecosystem or the people that live in or rely on the forest.

Schumacher Packaging supports the creation of globally uniform standards regarding forest management with its own FSC® certification. Our plants have been certified since 2011 and have banded together under the Multi-site Chain of Custody certification with the license number FSC-C108888 (see www.FSC.org). This is renewed every year in November via a follow-up audit.

As an example, all the sizes in which we make our corrugated cardboard at Schumacher Packaging – 2.80 meter-wide paper rolls weighing up to five tonnes – come from sustainable sources which meet the FSC® requirements for use in FSC®-certified products.



Das Zeichen für
verantwortungsvolle
Waldwirtschaft



Just like many industrial production processes, the manufacture of packaging made of solid and corrugated cardboard also requires a significant amount of energy. The less energy is required during production, the better. This applies from an ecological as well as an economic perspective. Since as early as 2014, Schumacher Packaging has therefore had its German sites certified in accordance with the ISO 50001 energy management standard. This certification is accompanied by a detailed audit carried out by TÜV Rheinland which we renew every year in May with follow-up audits.

ENERGY MANAGEMENT SECURES OUR FUTURE

We fulfil the ISO 50001 standard:

ISO 50001 is a globally valid standard issued by the International Organization for Standardization (ISO) which aims to support companies in systematically managing their energy consumption. To do this, the energy flows across the whole company – including energy sources, usage and consumers – are recorded and evaluated with regards to their energy efficiency. On this basis, we can derive technical, strategic and organisational measures to increase the energy efficiency of our systems and processes and significantly reduce our energy consumption.

Continuously reducing energy consumption:

The certificate verifies that the German Schumacher Packaging sites fulfil the current ISO 50001:2011 standard: These include Werk Ebersdorf Zentrale, Werk Ebersdorf Produktion, Werk Bielefeld, Werk Forchheim, Werk Greven, Werk Hauenstein, Werk Schwarzenberg and Werk Sonneberg. We use the Energo+ solution from BERG Energie as an energy monitoring system. By using our energy management system, we are able to consistently identify and utilise energy-saving opportunities.

LEDs instead of neon tubes:

One of the current ways in which we are trying to save energy is, for example, by gradually replacing the lighting at all our sites, switching from neon tubes to LED lights. At our headquarters in Ebersdorf, we are already half-way through the replacement, and at our new building, which will expand our plant in Greven, we are of course installing LED light sources from the start. The advantage: A neon light with the same light output consumes 116 W of power while an equally bright LED light requires only 35 W – reducing the electricity consumption by around 70 percent.

Photovoltaics, district heating and a steam turbine:

At our sites in Forchheim and Sonneberg, we use photovoltaic systems which produce a total of 600,000 kWh of electricity each year, saving around 330 tonnes of CO₂ when compared with fossil fuels. We heat the Greven plant via district heating from a nearby airport. At the Schwarzenberg site, we operate a pulverised lignite combined heat and power plant with cogeneration. Here, a steam turbine generates electrical energy and the exhaust steam is used to dry the solid cardboard.



THE EMAS ENVIRONMENTAL MANAGEMENT SYSTEM

At the Schwarzenberg plant, we manufacture packaging made of solid cardboard. Since the manufacture of solid cardboard is relatively energy-intensive, measures for saving energy and resources at the Schwarzenberg site are particularly noticeable – in a positive way. In 2013, this was honoured by the German Federal Minister of the Environment when he marked the Schwarzenberg plant out as part of our application for the European EMAS Award for environmental protection.



EMAS standard for energy, water and waste:

EMAS, an abbreviation of “Eco Management and Audit Scheme”, is the name of a voluntary environmental management system as per Regulation (EC) No. 1221/2009 – which also contains the ISO 50001 certificate for energy management. We renew our voluntary EMAS certificate every year with new audits. The Schwarzenberg plant had already implemented the requirements of the 2017 EMAS amendment in the 2017 validation.

Reduced energy usage per net tonne:

For years, we have been working towards steadily reducing the amount of resources we use in all departments at Schwarzenberg, including energy, water and production waste. Thus we set our own strict energy usage standard in EMAS: For one net tonne of produced goods, we must consume no more than 1800 kWh of electricity. Since 2014, we have managed to keep significantly beneath this limit value – in 2017, our energy requirement was just 1.773 kWh. We are also consistently working towards further reducing the electricity requirements per produced net tonne.

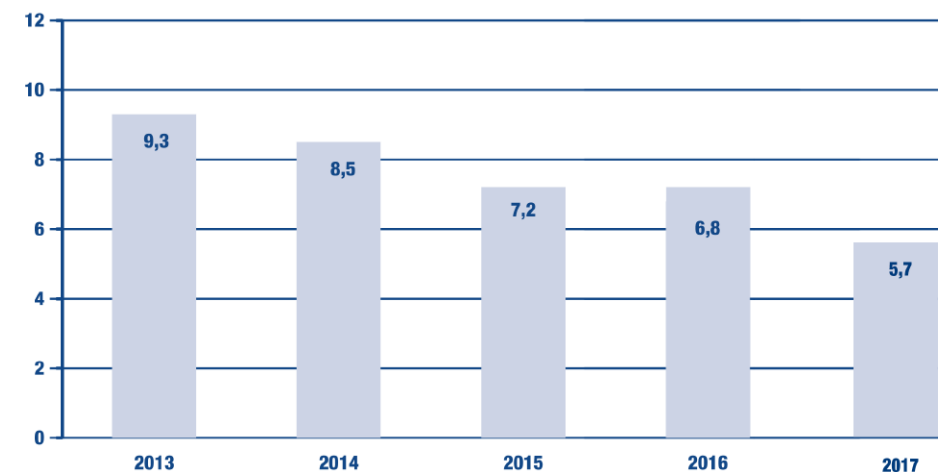


Diagramm 5: spezifische Abwassermenge in m³/t_{netto}

26 percent less waste:

In 2017, we succeeded in significantly reducing the amount of waste produced during cardboard packaging production – by 26.1 percent. Additionally, in 2017, we made sure that the specific amount of waste water produced per net tonne of product was reduced from 6.8 cubic metres in the previous year to our current level of 5.7 cubic metres.

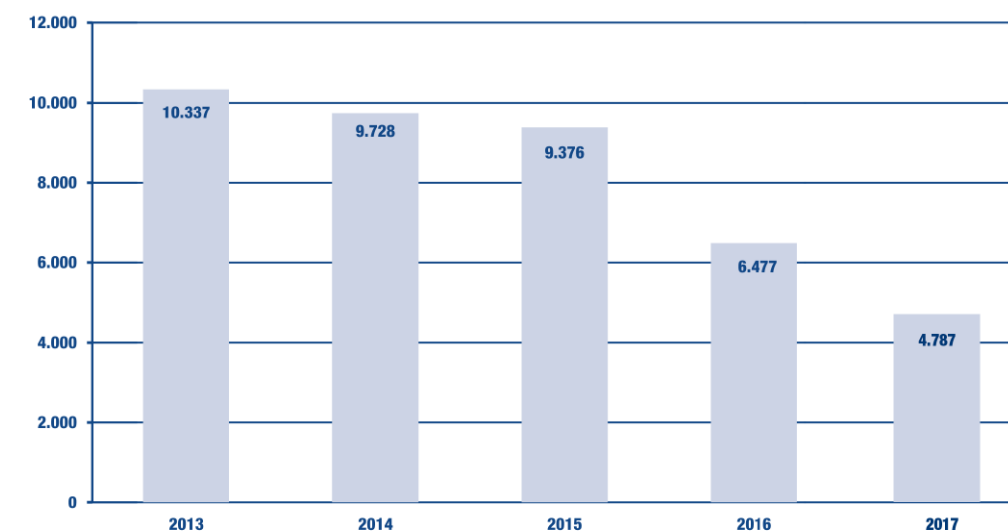


Diagramm 9: Abfallbilanz in t/a

Increased material efficiency:

We were also able to increase the material efficiency per tonne of product when using waste paper in comparison to the previous year – by 1.7 percent in cardboard packaging production. In fact, we even recycle punching waste from other plants in Schwarzenberg. Another factor which has a positive effect is higher customer satisfaction: Minimising complaints and products being sent back increases our material efficiency.



PRODUCING ELECTRICITY WITH STEAM AND PULVERISED LIGNITE

Back in 2010, we put a state-of-the-art steam turbine into operation at our Schwarzenberg plant. The advantage is that the steam which we require to produce solid cardboard at the Schwarzenberg plant is now routed through a turbine first, where we use it to generate energy. In this way, we increase the energy efficiency of solid cardboard production while simultaneously reducing production costs. We have had a pulverised lignite combined heat and power plant in operation in Schwarzenberg ever since 2007.

Saving 500 tonnes of CO₂:

Our investment in the steam turbine – almost three quarters of a million euros – was ecologically and economically worth it. With the steam turbine, we produce 1 million kWh of electricity ourselves every year – in contrast with fossil fuel-based power generation, this entails a saving of 500 tonnes of CO₂. We chose a SST-060 series turbine from Siemens Turbomachinery Equipment in Frankenthal. We route the entirety of the fresh steam which is produced in the boiler at the Schwarzenberg plant through the turbine first to generate electricity before it becomes available to the cardboard packaging making machine.

Using steam pressure wisely:

Previously, the steam would be injected with water to bring it in line with the operating parameters and make it useful to the cardboard packaging making machine. Now this happens via cogeneration in the steam turbine. The fresh steam produced by the boiler has a temperature of 210° C and a pressure of 10.7 bar. In the exhaust steam exiting the turbine, these values are reduced to 170° C and 2.5 bar.

Pulverised lignite as an energy source:

Also at the Schwarzenberg plant, we set up a combined heat and power plant based on pulverised lignite in 2007 with an output of 9.22 MW. At the heart of our heating plant is an upright model of a fire tube/flued boiler fuelled by pulverised lignite. It has an output of 12 tonnes of hot steam per hour at 230° C at 13 bar of permitted working overpressure. The flue gas cleaning system has a very high deposition rate so that dust – as it used to be called – no longer escapes. Our pulverised lignite combined heat and power plant keeps to all emission values specified by the law. In addition, the energy source comes from Germany, making it independent from increasingly scarce mineral oil and natural gas resources.



LOGISTICS WITHOUT NITROGEN OXIDE

Our own logistics fleet, with more than 100 lorries, has complied with the newest strict Euro 6 emission standards for years now. We use modern AdBlue technology: Using this additive in our lorries' diesel fuel allows us to use special SCR exhaust gas catalysts which transform environmentally harmful nitrogen oxide into harmless nitrogen and water.

AdBlue® for the environment:

AdBlue (ISO 22241/DIN 70070/AUS32) is the brand name of a synthetic solution which is as clear as water, has a concentration of 32.5 percent ultrapure urea dissolved in demineralised water and is used to treat exhaust gases in an SCR catalyst. During this process, selective catalytic reduction (SCR) reduces the output of nitrogen oxide (NOx) by around 90 percent. What has only just been picked up by the newest version of the Euro 6 standard for the passenger car sector, has been successfully in use for many years in our fleet of lorries every day.

Good aerodynamics saves fuel:

In 2017, Schumacher Packaging logistics purchased 30 new semi-trailer trucks. The model: Mercedes Actros Euro VI. A whole ream of technological innovations lowers the consumption here: From the ecologically advantageous aerodynamics of the streamlined cabs to the low-consumption engine cooling water pump. Thus, the newest generation of Mercedes Actros semi-trailer trucks consumes 5 to 6 litres less fuel to drive 100 km compared with its predecessor. In comparison with other modern semi-trailer trucks, this one still takes up to 3 litres less to drive 100 km.

QUALITY MANAGEMENT - SUSTAINABLE AND RESOURCE-SAVING

At Schumacher Packaging, we ensure the quality of the packaging we produce via consistent quality management. We integrate quality checks as an essential task for all employees involved in production processes. This provides reliability, reduces energy consumption and material usage and saves valuable resources.

Certified quality assurance as per ISO 9001:

Schumacher Packaging is certified in accordance with the ISO 9001 quality management system. At our company, ISO 9001 supports the entire value-added chain – from the request to order processing, right through to the individual inspection facilities on the production lines. This quality assurance system at Schumacher Packaging makes sure that the packaging is produced in an environmentally friendly and sustainable way and ensures the required reliability regarding logistics and recycling.

HACCP for food safety at the Schwarzenberg plant:

The HACCP concept (Hazard Analysis and Critical Control Points) requires us to analyse all risks regarding the safety of food that might exist within the area of responsibility of our company and identify those aspects which could be critical to food safety. In addition, intervention limits must be defined for the critical control points, processes for the continuous monitoring of the critical points must be introduced, corrective measures must be defined for cases of deviations and it must be checked whether the system is suited to guaranteeing food safety.





FOR THE PEOPLE

Whether our customers, our employees or our partners are concerned: People are always at the centre of what we do. We have taken a great interest in topics such as providing a good education for young people and supporting social projects from the outset. Schumacher Packaging has also been committed to supporting competitive sports for a long time.

Young people are the future:

The Schumacher Packaging Group employs 3000 people at 29 sites. Currently, 85 young people across all professional groups are training with us. In 2017, we were also once again involved in the “Education for refugees” project at the Coburg IHK (Chamber of Commerce and Industry). In the DEUTSCHLAND TEST 2017 “Top career opportunities for engineers” category we even received first place in the packaging industry. At Schumacher Packaging, we offer all trainees

high-quality, well-structured and comprehensive training while also offering individual challenges and support. This is why we quickly introduce our trainees to demanding and responsible tasks and provide them with an established position in our team right from the outset so that they are happy to continue working for us once their training is complete. And thanks to our rapid growth, we have been able to offer every successful trainee a job in past years.





FOR THE PEOPLE

The significance of social projects:

The topic of communal projects, especially in the field of youth work, has been of great importance to us from the outset. We support nurseries, schools and clubs, especially in our home region of Upper Franconia. To give you a taste of the many other projects we support, we will present an educational circus initiative called the Don Bosco Jugendwerks in Bamberg below. Back in 1994, people in Bamberg began drawing on circus ideas for their educational and remedial work with children and young people: The “Zirkus Giovanni” was formed. In particular, young people who are limited or disadvantaged in certain aspects of their lives were to be given the opportunity to experience what it means to set yourself goals and then to achieve them. Even though the “Zirkus Giovanni” project does not have the intention of training people to become professional artistes, some of the children and young people there demonstrate some astonishing talent and a huge amount of willingness to perform, almost like professional circus performers.

We support nurseries and schools with donations all year round. This includes enabling the children to take part in a cultural event once a year: Visiting a theatre, performances by the Bamberg Symphony or taking part in cinema projects. We also regularly donate to the Klinikum Coburg hospital, especially for children suffering from cancer and the “KlinikClowns” project.





Patrons of professional judo:

For a long time, the family who owns Schumacher Packaging has been a particular patron of judo – one reason is its own history of being actively involved in this sport. We therefore still support Bavarian judo clubs as well as the Post SV Bamberg, TSV Großhadern and TV Erlangen, along with Olympians and aspiring Olympians from Bavaria. For example, Laura Vargas Koch, who competes in the 70 kg class at the TSV Großhadern, is a very promising Olympian candidate for the Games in Tokyo in 2020. One of her greatest achievements thus far was winning a bronze medal at the 2016 Olympic Games in Rio de Janeiro.

FOR THE PEOPLE

Sponsoring sport from handball to basketball:

Schumacher Packaging is also committed to sponsoring sports in the region by supporting a wide variety of clubs and different kinds of sport. This includes the HSC 2000 Coburg, which is currently competing in the second handball Bundesliga, as well as the BBC Coburg, which is currently competing in the second basketball Bundesliga (ProB). Brose Bamberg is even represented in the highest German basketball division in the easyCredit basketball Bundesliga. The same applies to the s.Oliver club in Würzburg, which we also support. And finally, we also contribute to Upper Franconian motor sport through our donations.

Sponsorship of equestrian sports:

Our company also has a long tradition of sponsoring show jumping and dressage in Oberfranken (Germany) and neighbouring regions. Senior Director Wulf Schumacher, who sadly passed away in 2017 after having led our company on the road to success over many decades, was an enthusiastic equestrian in his youth. This is why Schumacher Packaging has always supported horse shows through sponsorship, right up to difficult S category show jumping trials. The tradition of sponsoring a major riding club from the region has also become established at our

company. We have been associated with the “Reit- und Fahrverein Sonnefeld und Umgebung e.V.” riding club for some time now. We make a significant contribution to the club by renovating its equestrian centres and halls and supporting its youth work. The club dedicated its spring tournament in April 2018 to its long-term honorary member by declaring it the “Wulf Schumacher Memorial Tournament”. The highlight of the event was a class S* show jumping trial with jump-off – the “Wulf Schumacher Memorial Show Jump”.



QUALITY POLICY

OF THE SCHUMACHER PACKAGING GROUP

The Schumacher Packaging Group is a large, owner-run packaging manufacturer from Germany with customers across central Europe. As such, we are seeking to expand our market presence to achieve a leading position in the international market through organic, sustainable growth. We see quality as a central factor in our long-term success.

Our claim to leading the packaging industry in terms of productivity and innovation stems from our continuous investments and ongoing improvement of visionary technologies and processes.

We offer our customers and partners current solutions that correspond to their individual requirements. The quality of our products and services is of paramount importance for our company as well as all other interested parties. To us, quality means meeting every demand and fulfilling all agreements we make with our customers. In addition, we are committed to continuously improving our quality management system.

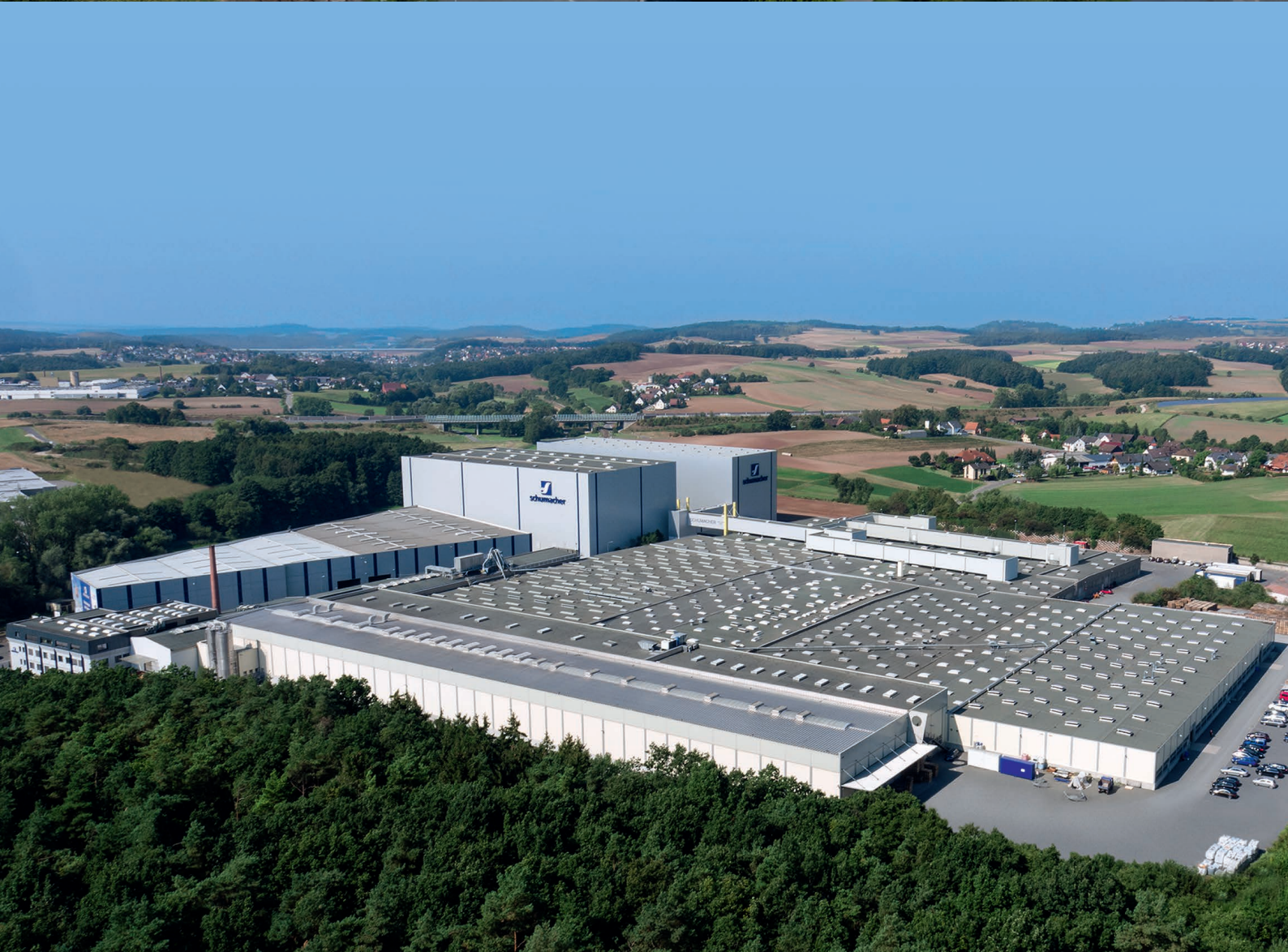
For us, the functionality and reliability of our products and services are a top priority. At the same time, we are always striving to improve even further. In this way, we can guarantee our customers and other interested parties that we meet the highest standards for quality and conformity and commit to fulfilling all applicable requirements.

A lasting and trusting relationship with our employees, customers, suppliers and partners is especially important to us. At our company, quality is not just a concern for one single department, but rather for each and every employee and all functions within the entire process. We thus focus our activities on sustainability and being fit for the future.

Björn Schumacher

Hendrik Schumacher

Managing Directors



SCHUMACHER PACKAGING: A SHORT PROFILE

The Schumacher Packaging Group (www.schumacher-packaging.com), based in the Bavarian town of Ebersdorf near Coburg, is an expert for tailor-made packaging solutions made of corrugated and solid cardboard. The medium-sized, owner-run company has been one of the productivity and technology leaders in the packaging industry for many years. Thus Schumacher Packaging is currently once again one of the leading innovators on the major topic of digital printing for packaging in the German-speaking region, for example.

Europe-wide growth:

The company has been located in Ebersdorf near Coburg since it was founded in 1948. Other German production sites of Schumacher Packaging are located in Bielefeld, Forchheim, Greven, Hauenstein, Schwarzenberg and Sonneberg. Five other business establishments are operated in Poland: One each in Bydgoszcz and Grudziądz and two in Wrocław; in 2016, the Group also took over a complete paper factory in Myszków. The Breda plant in the Netherlands is a production site for displays, the Nýrsko plant in the Czech Republic manufactures special and composite packaging, and the German site at Lehrte provides co-packing services.

High standards across the board:

One important strategic advantage is that Schumacher Packaging combines a wide presence on the European market with uniformly high technology, quality and service standards at every location. The extensive product portfolio satisfies the packaging needs of many different industries and extends from packaging for transport, automatic machines and sales, as well as folding boxes and trays through to gift packaging and displays. Schumacher Packaging also develops and produces customer-specific, turnkey packaging solutions. In its capacity as a full-service supplier, it provides extensive services for all stages in the supply chain.

An annual turnover of half a billion:

In the 2019 financial year, Schumacher Packaging posted an annual turnover of EUR 648 million. The Group currently has a workforce of around 3,500 employees. The large number of renowned reference customers include Bosch-Siemens Hausgeräte, IKEA, Lindt and Würth.





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