

# Consolidated environmental statement with sustainability report

## 2014–2016

Wilkhahn





## Wilkhahn essentials.

When my grandfather Friedrich Hahne and his brother-in-law Christian Wilkening founded the Wilkening + Hahne chair factory in 1907 he could never have guessed that it would turn into a pioneering and globally successful family-run company. The regard in which they held the materials and craftsmanship had already back then earned the business a reputation for extraordinary quality. This is an aspect that lies at the heart of the brand until today. After the war, my father restructured the company. In addition to producing outstanding quality, he wanted the business to embark on a quest for new products that offered true added value, to embrace a passion for contemporary design and to tackle social and ecological issues proactively. This is the mind-set I grew up with. In 1989, those of us in the supervisory board decided to make responsibility for the environment a corporate objective. When the German Environmental Prize was awarded to Wilkhahn in 1996, I was a member of the management board. And when Wilkhahn contributed to EXPO 2000 I became chairman of the management board. From this position I pushed the expansion of and into international markets and made innovation, quality, design and responsibility core brand values. We're driven by our desire to enhance people's office environments and the belief that we can find the right balance between business demands, social responsibility and ecological issues.

Today, our research and development, production and marketing are concentrated on furnishing that's particularly important for people. Chairs are one of the Western world's oldest cultural relics and a vital piece of furniture in homes everywhere. So what could be more important than adopting healthy sitting postures if so much of our time is spent in offices and increasingly in front of computers after work too? Office chairs are considered the ultimate challenge in terms of chair production. For good reason. Components might appear arbitrary or much like any other – but in fact they are key components on the road to a feeling of well-being, good health, esteem and performance. Office chairs

are just as important to individuals as they are to meetings and conferences in order to forge a community, team spirit and identity, and to engender creativity. Which is why table and chair solutions in communications spaces are the second area we focus on and where we can really make a difference to working environments.

These developments went hand in hand with numerous socio-ecological systems and process innovations which you can read about on the following pages. One of my main objectives is to involve people at Wilkhahn in the development of the company. All the Wilkhahn team worldwide can see the results of this process so far. Together we've looked at why, what, how and for whom we do things, what values guide us in the process and then incorporated these in our corporate policy.

Our mind-set of design made in Germany embraces much more than just excellent product design with useful innovations and durable quality. It also includes contributions towards more resource efficiency, climate protection, global justice and long-term protection of our livelihoods. We're proud that we've been able to win over an increasing number of kindred spirits and customers across the world. People who share our convictions and who in many respects want to encourage a better design of spaces to live and work in. And we're very pleased that despite the fast pace of global developments, ethical business practices are still possible.

Dr Jochen Hahne  
President





## Corporate policy.

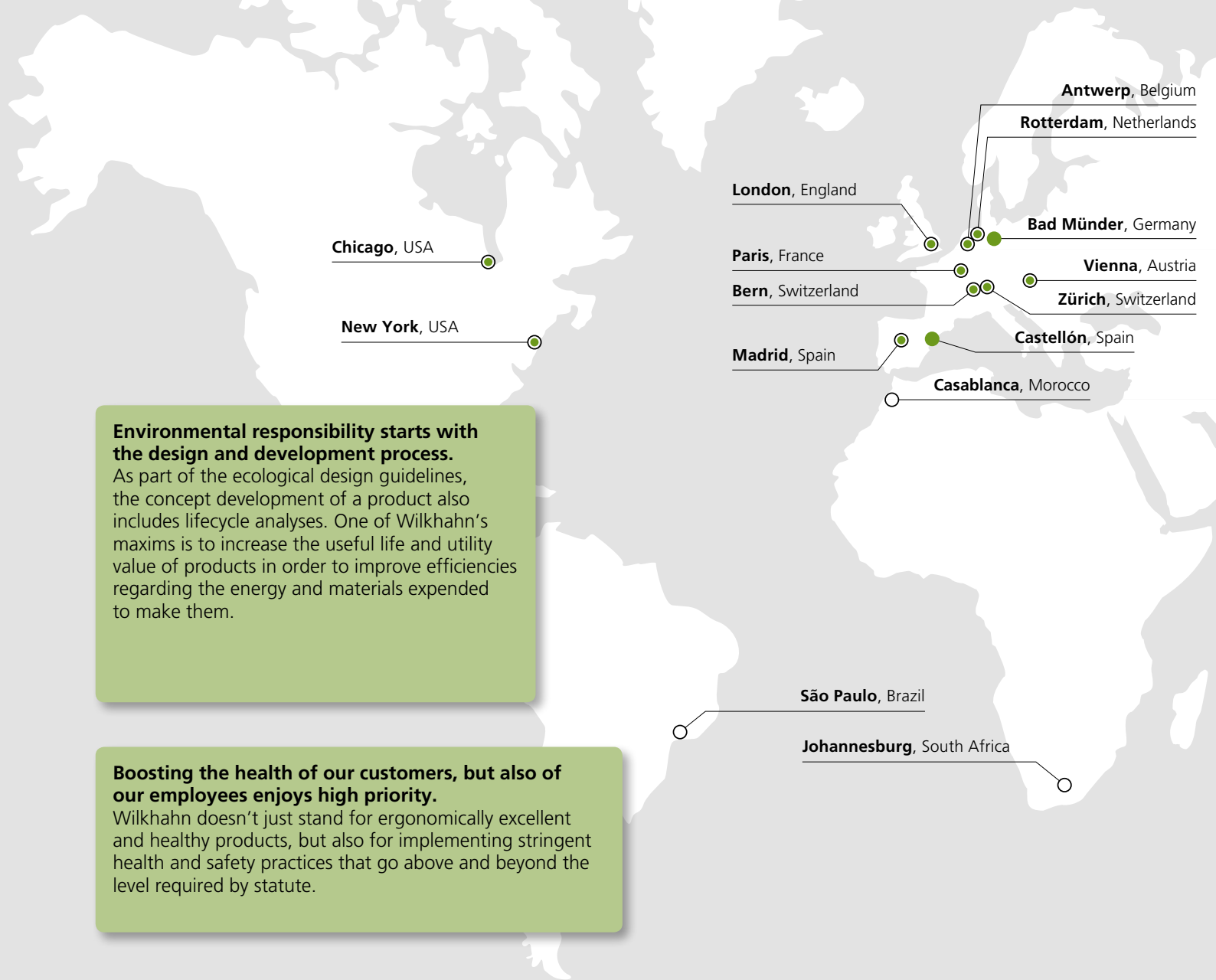
As a globally leading manufacturer of high-quality office chairs, seating and table solutions which foster health, a feeling of well-being, creativity and success, we reaffirm our status as a premium supplier each and every day. Wilkhahn inspires enthusiasm worldwide thanks to superb products, a motivated team and a value-based style of corporate management. Trust and reliability, listening to customers, commitment, simplicity, sustainability and the desire for what is new are guiding principles of Wilkhahn's corporate culture. We see these corporate values as joint fundamental convictions that are shared, practised and developed by the whole organisation worldwide.

Product design to last is our antidote to the throw-away society. Therefore, Wilkhahn products focus on maximum utility value, durability and protecting resources. This means top quality that can be experienced, is consistent and perfect. It delivers timeless, distinctive design that is fascinating due to its simplicity, honesty and appeal to all the senses. Pioneering innovations are included that really give our customers constant added value in terms of ergonomics and handling. The fact that our products are extremely practical, easy to disassemble and components are exchangeable, ensures they are resource-efficient.

Our approach is international. We guarantee excellent advice, presentation and availability of products and services in the relevant markets worldwide. And we consider working with other cultures a bonus and an opportunity to grow. We have clients all over the world who place high priority on the design of their working environments. Our business rationale's key objective is to support these people's needs professionally and engender enthusiasm for Wilkhahn. We also want to gain loyal partners, customers and friends by reliably fulfilling specifications.

We believe that fairness towards people and the environment belong together. Wilkhahn is committed to the principles of the UN Global Compact. This includes respecting and fostering human rights and keeping to and encouraging good international labour standards. We also take a stand against any form of corruption and constantly improve our company's environmental impact by taking precautionary measures and complying with current environmental legislation.





**Environmental responsibility starts with the design and development process.**

As part of the ecological design guidelines, the concept development of a product also includes lifecycle analyses. One of Wilkhahn's maxims is to increase the useful life and utility value of products in order to improve efficiencies regarding the energy and materials expended to make them.

**Boosting the health of our customers, but also of our employees enjoys high priority.**

Wilkhahn doesn't just stand for ergonomically excellent and healthy products, but also for implementing stringent health and safety practices that go above and beyond the level required by statute.

## A premium company and global player.

Wilkhahn was founded in 1907 at the company's headquarters in Bad Münster near Hanover, Germany. Today, the company's premises cover an area of 100,000 m<sup>2</sup> of which some 25,100 m<sup>2</sup> is built on, providing floor space of 33,000 m<sup>2</sup>.

The company's purpose is to develop, manufacture and market advanced, high-quality and superbly designed office chairs and table solutions which encourage a feeling of well-being, health, creativity and performance. The brand stands for first-class product quality, highly innovative ergonomics and cutting-edge design. Acclaimed worldwide, the durability and eco-friendly concept of products and services play a significant role in protecting resources.

In 2013, 571 employees generated sales of EUR 82.5 million, 75 percent of which were in international markets. The company has production facilities at the headquarters in Bad Münster (main factory), in Castellón in Spain and Sydney in Australia. At headquarters, annual production capacity is 100,000 office swivel chairs, 120,000 visitor and conference chairs, as well as 30,000 table tops and table

systems. Worldwide sales are made via the company's own subsidiaries and sales agencies. Retailers, export and licence partners are also part of the mix. As a result, Wilkhahn is present on all continents.

The self-financed, family-run company is privately owned. Current and former employees are shareholders of a sleeping partnership that has a seat and vote on the Wilkhahn supervisory board. Wilkhahn has holdings in wiege Entwicklungsgesellschaft mbH (design studio), Foresee™ GmbH for Human Active Spaces (Roomware®), as well as Wilkhahn Energie GmbH.

### Energy-efficient and material-saving production.

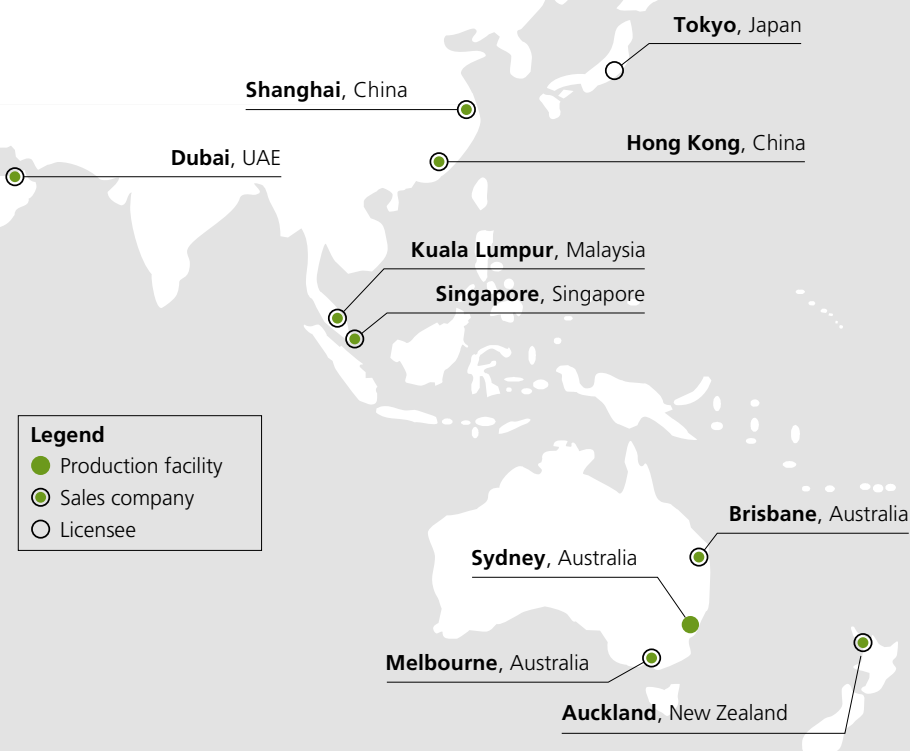
Keeping emissions and water consumption low, reducing hazardous waste and recycling waste materials are steps that are kind to the environment and help ensure Wilkhahn is successful by preventing waste.

### Sustainability in the supply chain.

Our environmental and social responsibility doesn't stop at the gates to our own factories. As far as possible, Wilkhahn demands and encourages fair and safe working conditions and that processes affecting the environment are harmless. Frequent assessment and on-site visits to top suppliers create trust and sustainability in the supply chain too.

### Continual improvement.

We're constantly driven by the desire to do better. Each and every person employed at Wilkhahn contributes their own capabilities and suggests ways of enhancing our customers' satisfaction and company's environmental performance. Continual improvement methods are used systematically and make Wilkhahn successful in the long term.



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# Design principles.

**“Poor and superfluous products stay poor and superfluous, even if they are produced on eco-friendly principles”.**

## Well-being as an objective

We work with and for people. What could be a better and more rewarding than to make major lasting contributions to the well-being of customers, partners and employees? Or improving the working practices and the day-to-day lives of people? In a world of increasingly knowledge- and communication-based interconnected global economies, office work – and therefore human beings as resources – are taking centre stage. People are no longer the objects but the subjects of value creation. There's one thing industry agrees on. If people enjoy being at the office, they won't just be more satisfied and identify more closely with their companies, but they will also be more motivated, efficient and creative. And in the competition for the best talents, soft factors like a sense of well-being are becoming more and more crucial. Aspects such as health, simplicity of processes, comfort, esteem and success are also vital.

## Essential innovation

Unlike virtually any other office-furniture manufacturer, Wilkhahn repeatedly manages to launch ground-breaking office chairs and tables that are new benchmarks. Sometimes it even creates totally new office-furnishing categories. Constantly questioning the utility value of furniture spawns ground-breaking solutions. The key question we ask ourselves is how can furniture improve the well-being, health, creativity and performance and productivity of office workers? Therefore, when developing a new product it's not about a new chair per se, but about better sitting, not about a new table, but about nurturing communication, not about a new sofa, but about relaxation. Or thinking about people's needs. Or informal communication. Today, the issue of added value in terms of usage is more pressing than ever before. Because there's no shortage of products, in fact there's a surfeit of them with no added value – which consequently wastes resources. Therefore, innovations at Wilkhahn are the result of a prudent and sometimes lengthy development process which starts by thinking outside the box and eliminating anything superfluous until the essence of the design concept emerges.

## Essential quality

The whole undertaking is more than the sum of its parts. The quality of the details is pivotal to the standard of the finished result. An attention to detail is therefore evident in each product and each encounter with the brand. The almost proverbial Wilkhahn quality has made the brand successful internationally and a prime example of design made in Germany. In order to guarantee constant utility value, particular emphasis is placed on durability when selecting

materials. Perfection is required as regards dimensions, form-fit parts and the standard of finishes. The materials, finishes and craftsmanship are indications of quality at its best. The sizes and weight of the products also determine the materials' performance. What's the point of being able to recycle virtually all the product if it works less well as a result? Therefore, a careful balance is struck between availability, performance, costs and demands such as those made by material recycling. In addition to the standard of materials, particular attention is paid to first-rate craftsmanship and smart design principles that include the ability to repair and upgrade the products.

## Essential design

What's the point of state-of-the-art functionality and consistent quality if a product looks outdated after a short time? Or to put it another way: what shape must the form take to make it timeless? As design made in Germany, German modernism has developed design principles that are firmly anchored at Wilkhahn. This includes boiling down the design statement to the main product idea, creating distinctiveness of form to discount fast-paced trends and fads, toying with a fascination with what appears to be matter of fact, coming up with natural and astonishingly simple ideas, reflecting functions in the design and materials, and finally accentuating the design language that constitutes a typical Wilkhahn product.

Wilkhahn design gets to the heart of the matter, is appealing and allows room for personal interpretation. It's like a short story, where you can't leave out or add anything without impairing it. Wilkhahn design integrates with a diverse range of backdrops. It accompanies customers their whole lives long because it doesn't get boring, no longer function or lack aesthetics. Timeless ranges like the FS-Line, Stitz, Modus, Palette and Confair are proof and have become best-sellers and classic pieces of furniture. Logon, Aline, Chassis, ON and Graph show all the signs of joining their company.



# Product responsibility.

**Our antidote to the throw-away society is to provide products where form, function and materials have a purpose and are long lasting. Our product-responsibility concept therefore follows well-defined guiding principles:**

**1. "The longer the better"** – is the maxim of the products we develop. We achieve this thanks to:

- meaningful and useful innovations that make life easier and more pleasant in the long term;
- first-rate materials, surfaces and technical solutions that guarantee quality even after many years;
- distinctive, timeless and appealing designs with the potential to become classics.

**2. "Less is more"** – is not just a design principle to us, it means:

- we cut down on the materials used in order to make handling easier and to preserve resources;
- we use energy efficiently during production, for example by drawing on a combined heat and power plant and by recovering heat during the manufacturing process;
- we reduce emissions, by utilising solar power, climate-neutral energy sources (cutting CO<sub>2</sub>) and varnishing techniques that are low in solvents.

**3. "Reuse and recycle"** – in this case, the goal is to continue to use the whole product or parts of it and recycle it at the end:

- because the products are modular, expendable parts can be exchanged and features added or retrofitted (e.g. armrest types, covers, cushions, surfaces);
- connecting points in the product can be dismantled for easy repair;
- if possible, we use materials made of one component that are marked as such, making them ideal for recycling.

## **4. Fairness and responsibility for processes**

At Wilkhahn, environmental and social responsibility are inseparable from one another. Health and safety, training, active participation by and fair pay for employees have been integral parts of our corporate culture for decades. As a result, we actively encourage our suppliers and customers worldwide to improve working conditions. Wilkhahn joined Global Compact and was the first furniture manufacturer to sign an international framework agreement on global recognition and fostering of employee interests.





## International product and material standards.

During all phases of a product's development, we're demanding when it comes to the characteristics of our products, the quality of the materials and components, as well as the standard of our craftsmanship. Therefore, Wilkhahn products fulfil all relevant international office-furniture standards in terms of durability, safety and ergonomics. And what's more, many Wilkhahn products have also been awarded the GS symbol which rates them as being safe and Greenguard™ as suitable for interiors.

The materials processed by Wilkhahn, such as fabrics, leather, wood, plastics or metals, are primarily made by highly specialised suppliers. Our product-development department specifies the technical and aesthetic characteristics that the materials have to fulfil. Our specifications on for example strength, colour-fastness, durability and other characteristics that affect the quality of our products are clearly outlined by international material standards. Rules of thumb are as follows:

- the fabrics and leather used by Wilkhahn are low on emissions and help to provide good air quality in buildings and working environments;
- wherever possible, Wilkhahn works with ecological upholstery fabrics, such as wool fleeces, cork and coconut fibre;
- Wilkhahn's polyurethane foam has no halogenated flame retardants; this protects the climate and is important for recycling capabilities at a later date; nevertheless, Wilkhahn products can also fulfil special requirements as regards fire prevention in public buildings, for example by applying flame-retardant upholstery fabrics; additional flame-retardant materials are only added if required by our customers' stringent fire-prevention requirements;
- the powder-coated metal finishes of the table and chair frames are robust and made without any solvents or heavy metals;
- chrome-plated metal finishes have no harmful chrome compounds (as specified in EN 71-3).

Wilkhahn attaches huge importance to the fact that its products and the materials, procedures and processes applied to make them, are responsible in social and ecological terms. Therefore, integrated audits help us check that our partners in the Wilkhahn supply chain comply with these aspects too.

We check the quality of our products by inspecting incoming goods according to established criteria. Before being processed, materials are scrutinised by trained personnel and the finished results are checked again by trained staff before being forwarded to the next department.



### Low-emission leather

Leather is a particularly high-quality and long-lasting upholstery material which has been used in furniture construction for centuries. Wilkhahn primarily uses European cowhide which is treated in a multi-phase process from the rawhide to the blue skin to the top-quality finished product. The types of leather made for Wilkhahn are produced in selected tanneries in Germany and in countries bordering the European Union. Through regular audits of its leather suppliers, Wilkhahn also monitors compliance with stringent European environmental standards to ensure that the tanning agents and other substances used to produce leather don't harm the environment.

The leathers chosen by Wilkhahn are first class, robust and have pleasant haptics. Above all, due to suitable tanning agents and dyes, they don't have a strong smell and are non-toxic. When creating the Wilkhahn collection, in addition to the aesthetic appeal, special emphasis was placed on including no harmful substances. The two types of leather available are German-produced, low on emissions and have been awarded the Blue Angel RAL-UZ 148 label. This label of quality verifies that pollutants that can affect the environment and health have been minimised throughout the product's manufacturing process, its useful life and when it's recycled and disposed of. Leathers bearing this label and used in interiors are not harmful to health (because they are low on emissions), have been tested for harmful substances (i.e. chrome VI and preserving agents) and produced in an eco-friendly manner, especially with regard to water consumption and waste-water criteria.

### Fabrics for covers

The Wilkhahn collection offers our customers fabrics that are superbly well designed and suitable for professional environments. Depending on the fabric group, Wilkhahn upholstery fabrics consist of high-quality wool or durable synthetic fibres and are always made without azo dyes or other chemicals banned in the EU. As part of the standard collection, we offer a choice of different appealing designs and colours. Some upholstery fabrics also carry well-known labels of quality such as OEKO-TEX 100 or the Blue Angel. On request we can provide samples and data sheets for all

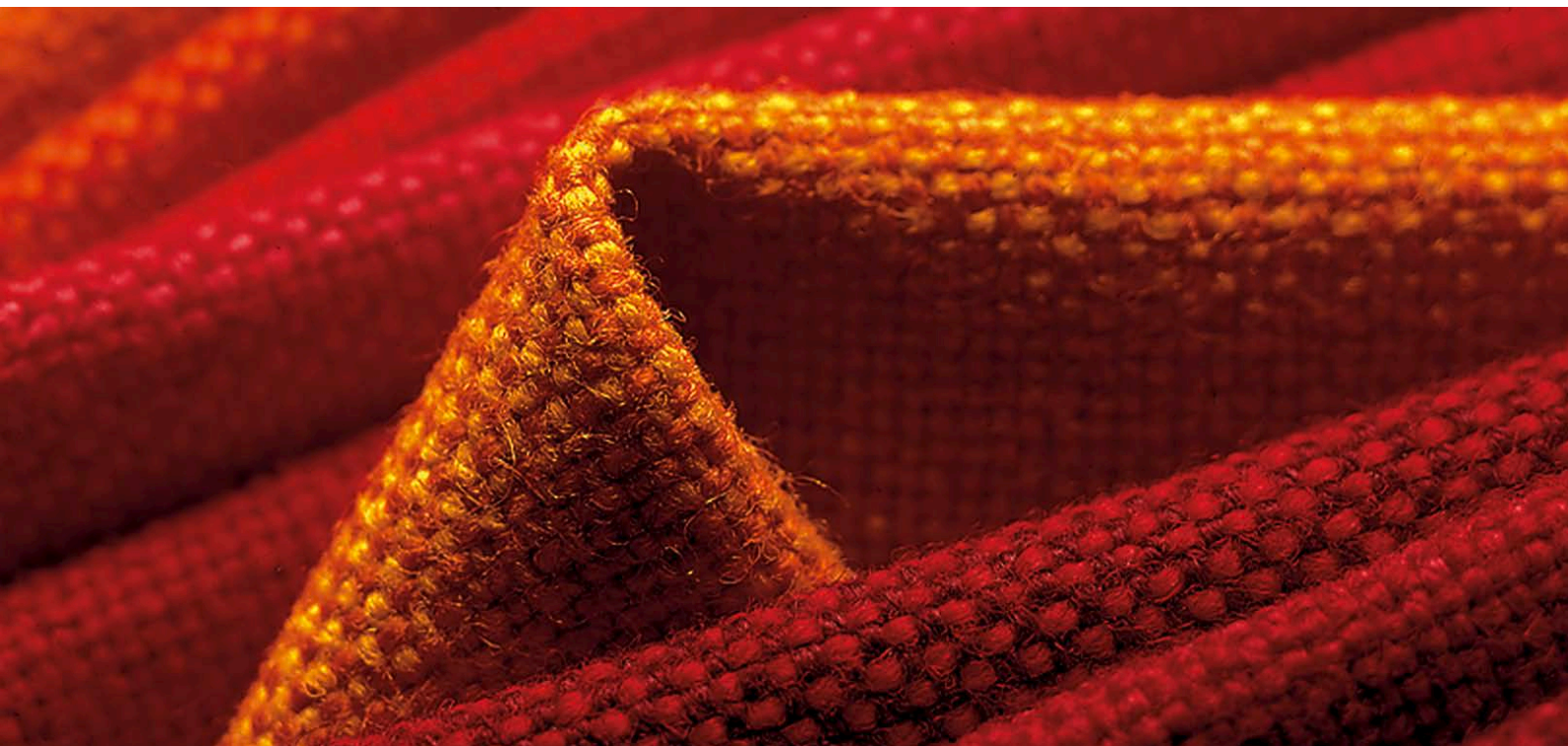


Wilkhahn fabric groups which contain information on their optical, haptic and technical characteristics in detail.

### Wood-based materials and solid wood from responsibly managed forests

To make high-quality Wilkhahn table ranges, Wilkhahn processes industrial wood-based materials like multiplex-, laminboard-, or wood-fibre panels (MDF, HDF). For the first-class Wilkhahn finishes and wide range of edge profiles in our table ranges, we also choose types of solid wood that tick all the boxes in terms of design, technology and environmental impact.

Wilkhahn veneers are fine natural products. Only high-quality trunks are turned into first-class veneer panels. Our experienced team only picks the best quality. Depending on the type of wood, the thickness of the veneer is between 0.6 and 1.2 mm. This is a pledge of high quality and kind to nature at the same time. Wilkhahn's offering also includes stained and synthetically made real-wood veneers. Therefore, we can also offer responsible alternatives to tropical timber to meet exclusive customer preferences.



The wood-based materials and solid wood are produced regionally and exclusively from wood sourced from responsibly managed forests. On the one hand this complies with the woodland and forestry acts in West-European countries from which Wilkhahn chiefly purchases its wood. Conservation goals and wood usage have been reconciled here for centuries and the forestry industry coined a term to describe the process – sustainability.



Wilkhahn also gives preference to partners who have been certified according to the criteria of leading quality labels for sustainable forestry management. For example the guidelines set by the Forest Stewardship Council (FSC) place high socio-ecological demands on the production and trade of wood. Wilkhahn believes that quality labels

such as the FSC allow us to prove to our customers that the wood we use is harmless, even in countries where forestry acts or poor enforcement of legislation are insufficient to prevent deforestation, illegal trading of timber or the displacement of indigenous peoples. Since 2013, Wilkhahn's headquarters in Bad Münden have also been certified according to the criteria of the Forest Stewardship Council – FSC – (licence code C118389, certificate number TUEV-COC-000462).

### Metals and decorative metal finishes

Wilkhahn's products consist of steel, aluminium or die-cast zinc alloys. Wilkhahn's product-development department chooses the materials based on the purpose the components serve and their technical characteristics. Wilkhahn uses different treatments to fulfil our customers' requirements for decorative finishes and to protect the metal components in the long term. At the same time, none of Wilkhahn's finishes harms human beings and the environment. All Wilkhahn metal finishes comply with the EN 71-3 European standard. Originally developed as a standard for babies' toys, it stipulates very stringent thresholds for chrome VI and other heavy metals.

When powder coating, the metal components are covered with a robust varnish. The coating systems applied by Wilkhahn consist of epoxy resins which are sprayed in a dry process onto the cleaned and electrostatic metal surfaces as a fine powder. The metal parts are then heated for a few minutes to approx. 180°C until a permanent coating with an even gloss is produced. At Wilkhahn, the powder-coating process is especially eco-friendly because surplus powder is recovered and energy consumption is cut due to short heating phases. The powder varnishes also contain no organic solvents or heavy metals.

During chrome-plating, in a galvanic refinement process very thin layers of precious metals are applied that protect the metal underneath from corrosion. Chrome-plated surfaces are timelessly elegant and extremely tough. Wilkhahn uses carefully selected partners to carry out the chrome-plating process. Regular inspections of the galvanising processes also ensure that strict environmental-protection and health-and-safety regulations are also kept to during chrome plating.

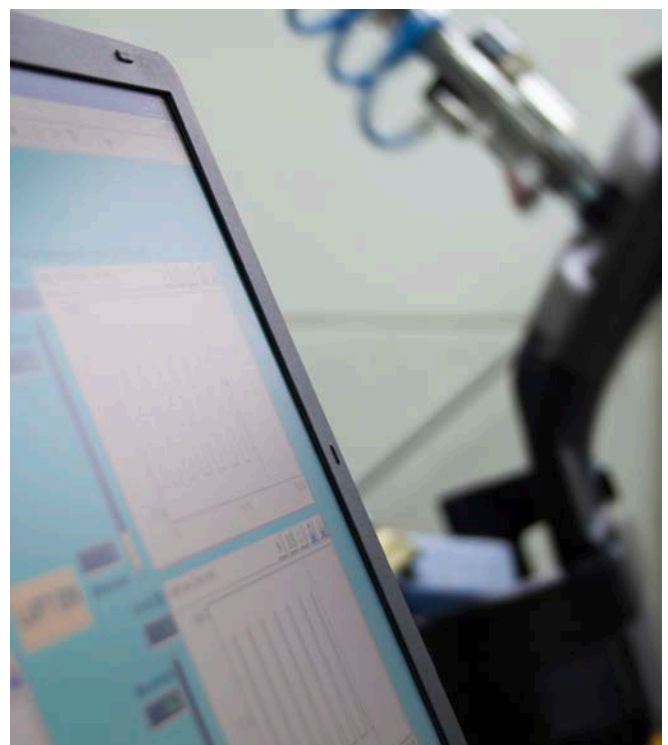
Wilkhahn also offers polished or anodised aluminium surfaces. Polished aluminium is created by carefully grinding and cleaning the source material. This purely mechanically refined aluminium is very environmentally friendly because little extra energy is used in the process. However, polished aluminium is less robust than for example anodised, coated or chrome-plated material.

During the anodising process, some of the aluminium is turned into aluminium oxide with the aid of an electric current. Oxidation renders the surface more scratchproof and gives it an even matt shine. As no additional coatings or heavy metals are applied, anodisation is considered an eco-friendly type of surface treatment.

### Labelling parts, materials and products

Thanks to their clever structure, Wilkhahn product-components are easy to take apart. Consistent labelling of the materials used guarantees that they can be recycled locally at the end of the product's life. At the same time, Wilkhahn complies with international labelling standards (e. g. ISO 1043). Consequently, regardless of regulations from specific countries or Wilkhahn's own stipulations on product return, the materials can be recycled according to type or properly disposed of locally. Energy-guzzling and ecologically unsound product returns over vast distances can therefore be avoided.

Each Wilkhahn product is clearly labelled as a whole. Consequently, the right spare parts can be used and ordered from Wilkhahn customer services even after many years have passed. By merely exchanging expendable parts, the useful life of a Wilkhahn product can often be extended – in the interests of our customers and with a positive impact on the environment.





## Ecological environmental product information

Our goal is to be transparent and open with our customers, so we publish eco-relevant information on the most important Wilkhahn ranges in clearly presented data sheets. These are compliant with ISO 14020 and (in addition to de-

tails on material composition and recycling proportions) also include information on the product's life cycle. They are also available from the media centre on the Wilkhahn website: [www.wilkhahn.com/de/service/mediacenter-cad-files/](http://www.wilkhahn.com/de/service/mediacenter-cad-files/)



## Testing parts and products

At Wilkhahn, internal controls and testing are the keys to making innovative and eco-friendly, high-end products in consistent quality.

Tests on dimensions and mechanical loads are carried out in our own lab in accordance with the relevant international standards. As part of the product development process, each product is tested according to pre-determined criteria. This also includes testing ecologically beneficial materials. In order to make no compromises on usage quality and product safety, the same testing specifications apply to all materials. For example, product parts made of materials with a high recycling content must pass the same endurance tests – otherwise there is no ecological gain.

Inspections of incoming goods in compliance with the AQL standard (Acceptable Quality Level) and inspections during manufacturing (in accordance with documented assembly and inspection instructions) ensure production quality remains constant. Before a product is delivered to the customer, it has to pass a final inspection. In the case of conference table systems, layout plans, detailed drawings and surfaces are checked again and any accompanying multimedia equipment is tested. Even with Wilkhahn swivel chairs, visual and functional checks on the finished product are an integral part of the quality programme.

## External tests

Independent controls guarantee objectivity and make us perform better. Therefore, Wilkhahn regularly adds external testing procedures to its own internal system. These inspections include product tests on whole tables and chairs and chemical and physical material tests. For example, we are interested in the level of shine on our varnishes, or whether our glues retain their adhesiveness. Microscopic analyses of metal structures, for example where particularly safety-critical metallic compounds are concerned, are part of the range of tests carried out by external experts.



### Greenguard™

Good indoor air quality is important to Wilkhahn. We verify that our products fulfil top demands by carrying out regular Greenguard™-compliant product testing. The test results are published in a data base in the public domain:

[www.greenguard.org](http://www.greenguard.org)



Back in 1996, the German Environmental Foundation presented Wilkhahn with an award for its impressive concept. The ecological and socially responsible management style is reflected in the architecture of the plant.

## Integrated quality and sustainability management.

Wilkhahn maintains an integrated management system at its Bad Münde headquarters. Based on our corporate policy, we use the system to define interim objectives and measures which optimise both the economic and socio-ecological impact of our business. Wilkhahn regularly checks that measures are put into practice as planned and gauges the extent to which these have helped achieve the corporate objectives set. Therefore, we can ensure that increasing customer satisfaction, improving our environmental footprint and maintaining our social responsibility are the strategic targets that our daily business decisions are driven by.

We establish internal quality standards and adapt our development, sales and manufacturing processes to the demands of the market and our customers. At the same time, we make sure that our products and processes are as eco-friendly as possible in order to minimise our company's ecological footprint.

In addition to a quality and environmental protection approach, corporate social responsibility is the third column of our integrated management approach. Our customers' feeling of well-being and state of health are one of our key concerns which we encourage by providing ergonomically beneficial functions, making our products easy to use and by ensuring materials used are harmless. We create safe and health-boosting working conditions for our employees too. Because our definition of a premium product is that

it's also produced in a fair manner. And to ensure that rules on fairness and fitness are followed outside our factory gates as well, Wilkhahn places stringent demands on partners and suppliers whose quality, environmental and social standards are regularly monitored by specially trained Wilkhahn personnel.

The EMAS- and ISO-14001-certified environmental management system and the ISO-9001-certified quality management system have been major pillars of our integrated management system for many years. Wilkhahn has voluntarily signed up to EMAS European environmental management system (EC regulation no. 1221/2009) since 2001. The Wilkhahn headquarters in Bad Münde are registered in the European Community's EMAS site register under D-133-00055.

Over the past few years, a health-and-safety management system following European regulations and product-chain certification that complies with the Forest Stewardship Council (FSC®) standards have complemented the integrated management system. The global FSC certification number of the Wilkhahn headquarters in Bad Münde is TUEV-COC-000462, license code C 118389.

### **Wilkhahn headquarters in Bad Münde**

Wilkhahn's headquarters are located in Bad Münde, about 50 km south west of Lower Saxony's capital Hanover.



In 2014 Wilkhahn employed 375 people in Bad Münden. The company's premises cover about 10 hectares and nestle in the expansive landscape of the Deister-Süntel Valley which is dominated by woodland and fields, but also by industrial buildings which have sprung up outside the villages since the years of rapid industrial expansion in Germany.

Wilkhahn's headquarters were developed when the company was founded in 1907 and are part of the industrial estate of Eimbeckhausen, a neighbourhood of Bad Münden. The vast Wilkhahn site has a natural appeal. In terms of its design and ecological value, the architecture is impressive and reflects the history of the company. Well-known modernist designers left their mark on the premises and include the student of Mies-van-der-Rohe Herbert Hirche (Wilkhahn office building 1959). Other examples are architect Frei Otto who is world famous for Munich's Olympic stadium (Wilkhahn production pavilions 1988) and architect Thomas Herzog who is considered a pioneer of ecologically responsible construction and whose production facilities (1992) indicate the socio-ecological change at Wilkhahn.

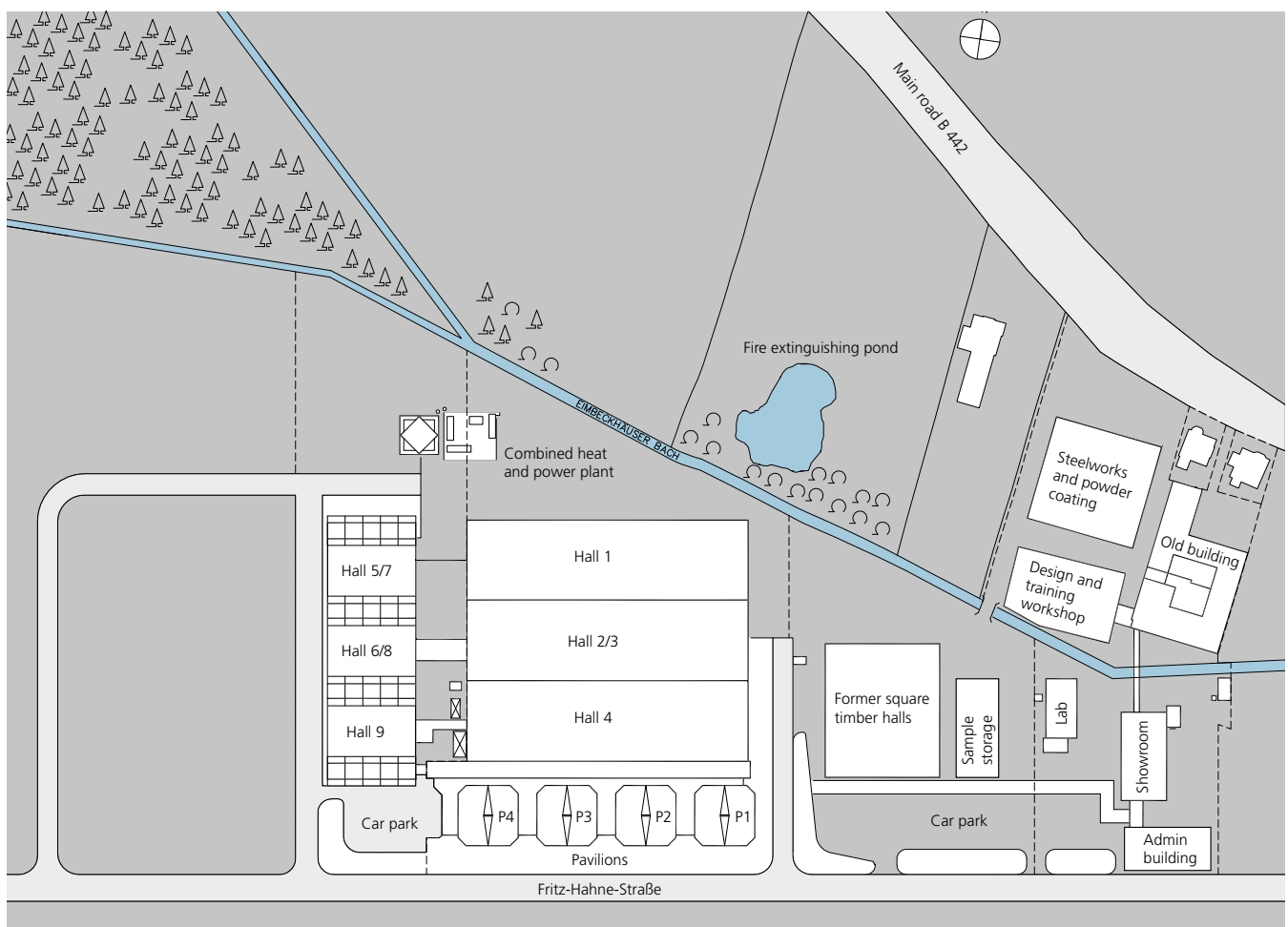
With plenty of open and green spaces and a fire-extinguishing pool created along ecological criteria, the Wilkhahn headquarters integrate harmoniously with the surrounding landscape. Thanks to their proximity to the A2 motorway and 442 A-road, Wilkhahn's headquarters have excellent traffic links to dispatch Wilkhahn office furniture world-wide. Bad Münden station provides services to the urban-light railway in the greater Hanover area.

In addition to the production buildings, the admin building with various other central services is based here, including product development, procurement, international communications, marketing, IT systems, controlling and accounts, HR and co-ordination of world-wide sales.

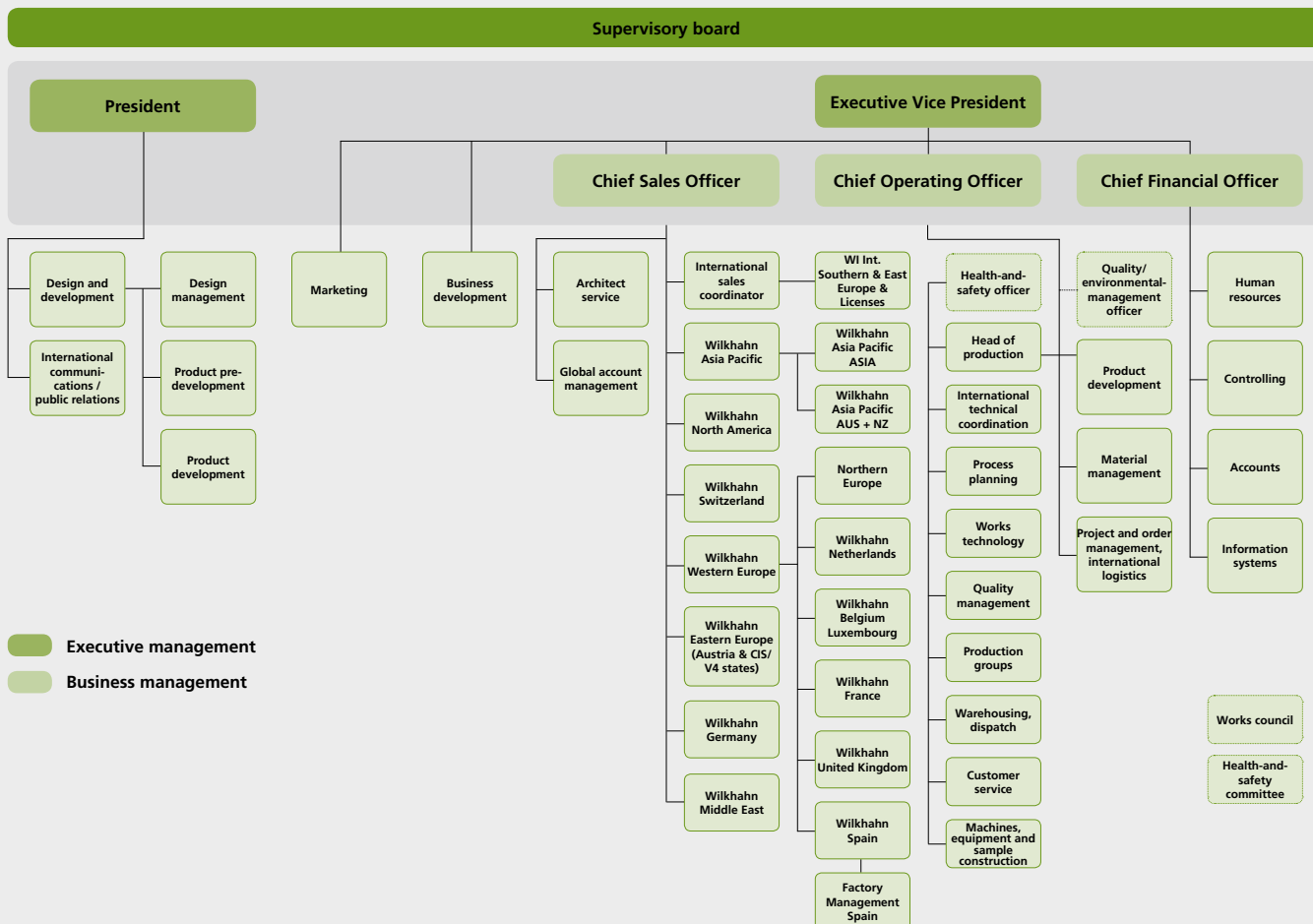
### Structure and management

Transparent and coordinated process standards complement the organisational structure (shown on page 14) in order to maintain the integrated management system, to achieve the results required and to fulfil statutory requirements.

Wilkhahn management assumes overall responsibility for complying with legal requirements in Bad Münden. This responsibility was transferred for key areas of environmental protection and work and safety to the technical management team. In this role it is supported by the Chief Operations Officer, the head of production, the quality and environmental officer and the health and safety officer.



Wilkhahn headquarters at Bad Münden have been consistently developed since the company's foundation in 1907. Today, on an area of 100,000 square metres, the headquarters produce premium furniture in ideal production conditions and offers superb architecture and natural outdoor areas.



## Environmental law and audits

Wilkhahn does of course comply with statutory requirements. As part of the integrated management system, the quality and environmental officer frequently monitors regulations specified by environmental law which serve to conserve water, the air or the soil or protect nature, as well as to maintain biodiversity. Legal compliance is a regular part of internal audits and checks on the supply chain.

Legal amendments are quickly recorded in a web-based database and regular environmental management audits ensure that all areas of the company observe and implement changes in environmental law. We document major specifications which apply to the development, manufacture or dispatch of Wilkhahn products in process standards and inform our employees about these in frequent training sessions.

When the annual EMAS validation takes place, Wilkhahn appoints an independent environmental expert to check compliance with requirements specified in environmental law. EMAS validation confirms that Wilkhahn abides by current environmental law.

## Environmental information

Wilkhahn believes that transparent communication is imperative for fairness and pivotal to fostering continual improvement. With a broad section of the general public we share environmental information on our products, on what motivates us and on the milestones and stumbling blocks encountered as part of our environmental management system. The consolidated environmental statement with its sustainability report plays a major role in this process. The Wilkhahn website also offers a great deal of information on our environmental performance, social responsibility (CSR), but also on environmental aspects of our products.

Catalogues, product data sheets and environmental product information give detailed information on materials, production and product stories. The "Der Wilkhahn" customer magazine and electronic newsletter also give customers and retailers regular updates on socio-ecological aspects in the Wilkhahn environment. And the "Wilkhahn aktuell" employee magazine also reports in a regular column on green topics at headquarters. This offering has been rounded off by the Wilkhahn Global Workplace since 2007. This is an intranet platform in several languages for about 500 Wilkhahn employees worldwide.





In-company communication to promote a sense of community and transparency in the international Wilkhahn world: The "Wilkhahn aktuell" employee magazine is published regularly in German and English.

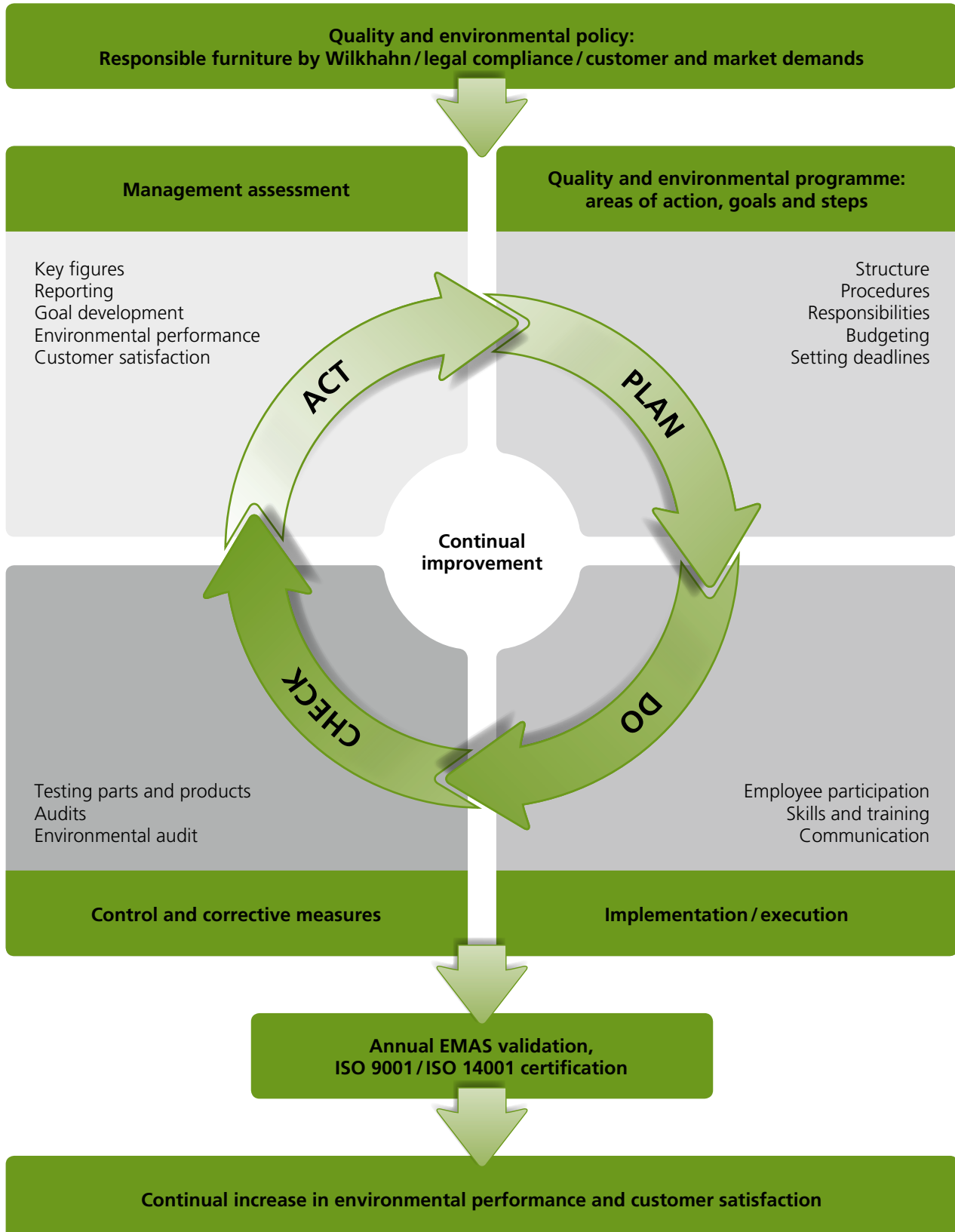


EMAS audits are voluntary, but Wilkhahn has taken part in them for many years. EMAS validation confirms that Wilkhahn abides by current environmental law.

### Management assessment

The Wilkhahn management team frequently analyses the performance of the integrated management system and the stage the agreed interim objectives and measures have reached. At the same time, progress of measures put in place and potential for improvement

are assessed along transparent criteria. On this basis, the quality and environmental management officer draws up proposals for new objectives and measures and presents these to the management team to decide on.







The fire-extinguishing pool, created along ecological criteria at the Bad Münders headquarters, has developed into a valuable biotope over the course of three decades. The water and the banks are an important habitat for wild animals and are a protected area today.



# Corporate history.

## **More than just furniture**

In 1907, brothers-in-law Friedrich Hahne and Christian Wilkening founded their own joinery near Bad Münden. Around 100 companies used the beech from the surrounding woodland to make chairs. The region was considered one of the hubs of German chair manufacture. The joinery grew and soon a factory was built for large-scale production of quality solid-wood chairs to the bourgeois taste of the time. After the Second World War, the founders' sons, Fritz Hahne and his cousin Adolf Wilkening, took over management of the company. Together they totally repositioned the company. Corporate architecture, a focus on employees and social responsibility, a green mind-set, product design and market cultivation progressively developed into a coherent whole, long before the idea of corporate social responsibility had become established in industry.

## **Modern product design with innovative added value ...**

By working closely with architects influenced by Bauhaus and the Ulm University of Design, Wilkhahn evolved into a pioneering company for modern furniture design. New materials like steel and plastic were combined with design devoted to the maxims of modernism. "The goal is to develop durable products, increase their utility value and reduce waste". This was the objective in Ulm University of Design's founding manifesto in 1952. In the following decades it became the guiding principle of Wilkhahn product development. In the 1970s, the company concentrated on office and contract furniture and in 1980 the legendary FS-Line was launched. Wilkhahn became a successful office-chair manufacturer the world over. In the early 1990s, the first ecological design guidelines for the industry were drafted and the conference-furniture segment developed into a second mainstay of the business. The world's first mobile, foldable conference table (Confair) in 1994 turned Wilkhahn into a pioneer here too. As part of a research and development consortium, in 1999 Wilkhahn designed the world's first interactive tables and walls with integrated touchscreens for hyperconnected teams in different places. In the new millennium, multi-purpose chairs Aline (2004) and Chassis (2010) became new benchmarks in the third segment of informal communication. In 2010, office chair ON tapped into a new category of three-dimensional dynamic sitting and the Graph conference range (2010/2012) is already considered a classic today.

## **... and international potential.**

The design principles won international acclaim and soon the export business began to flourish and was systematically expanded in the following years. It was primarily due to the FS-line office chair range that Wilkhahn was able to establish itself internationally as a premier manufacturer of innovative, design-driven, high-quality office furniture. Various subsidiaries and sales companies were founded, initially focusing on Europe. Wilkhahn Asia Pacific was founded in 1998 in Australasia. The company's headquarters were in Sydney and became the base for market expansion to Singapore, Hong Kong and Shanghai. In 2005, the sales office was opened in Dubai and Wilkhahn Inc. with headquarters in New York was founded in 2008. Today Wilkhahn achieves around 75 per cent of sales in international markets. With its own branches and licensed partners in Japan,

Morocco and South Africa, the company is in a position to serve its customers worldwide at a standard of quality that matches Europe and to gain new customers at the same time. In order to uphold its responsibility in an increasingly global sales and supplier market, Wilkhahn joined Global Compact in 2008. In 2009 the company also signed a framework agreement with the international trades unions on worldwide recognition of socio-ecological standards and employee interests.

## **Employee focus...**

It was also Fritz Hahne who put forward his ideas for a new type of inter-personal relationship in the company. "Don't give orders without a reason" stood for a new management style that was shaped by regard and respect for employees, regardless of their social ranking and position in the company. The adoption of social responsibility policies was evident back in the 1950s, when affordable company loans were given to employees wishing to build homes. The company pension scheme was also introduced. Cooperative management and profit sharing caused quite a stir in the outside world. Within the company itself, it encouraged high levels of motivation and identification of people with Wilkhahn. The traditional foreman structure was replaced in the 1990s with the introduction of new types of working that included partially autonomous group work and project work. Personal involvement in the company's development took centre stage. The massive crises in the industry after 9/11 and the global economic and financial crisis in 2009 were beaten due to the combined forces of the management team, works council and bodies in the collective-bargaining process. Much of what was agreed at a corporate level was later incorporated in general wage agreements. The company's 100th anniversary saw the creation of the Wilkhahn 2017 strategy development process with people across the world involved. Currently they are working on implementing the Wilkhahn 2020 programme together.

## **... architecture and ecological change.**

At the end of the 1950s, construction was understood as playing a role in responsibility for the future. Herbert Hirche, a former student of Ludwig Mies van der Rohe at Bauhaus, a member of the Berlin reconstruction commission and later professor in Weissensee and Stuttgart, didn't just develop modern furniture for Wilkhahn, but also designed the office building which was completed in 1959. In the 1970s and 1980s, ecological concerns increasingly became the third pillar of Wilkhahn's corporate culture. Together with architect Professor Frei Otto, four pioneering manufacturing pavilions were built. They were constructed on the principle that at Wilkhahn "no bricks were to be laid before it was clear whether the building was a sound economical prospect, aesthetically durable and eco-friendly. It must also help make the world of work better for people". (1984).

In 1989, ecological change was decided by the administrative board and became an integral part of the company's goals. Wilkhahn also turned out to be an industry pioneer in this field. The next factory extension was designed in 1992 by architect Thomas Herzog and became a visible symbol of the change in values. Its wooden design featured living roofs, smart usage of daylight and a porch where high-tech solar technology was used for the first time. Even after over 20 years, the facilities are still considered

ground-breaking and exemplary. At the same time, the old factory was converted into an office building, but the historical materials dating back to 1910 were retained. Frequent and simple conversions of the pavilions and the facilities over the past few years are evidence of the sustainable usage quality of this architectural corporate culture.

In line with its aim to take product responsibility from the cradle to the grave, Wilkhahn implemented eco criteria in the design and development process. The Picto office chair was presented in 1992 and became an example of ecologically responsible product design. And an environmental controlling and waste management concept was produced and implemented for the first time worldwide in the office furniture industry.

In addition to many other awards, in 1996 Wilkhahn was the only company at the time to win the prestigious German Environmental Prize from the German Environmental Foundation for its corporate responsibility concept. In the satellite project entitled "The future of work in the conflict between people, nature, technology and market" during EXPO 2000 in Hanover, the host of interactions between innovation, social responsibility, ecological responsibility and business success were displayed to a wide section of the global public. Called "Added value at Wilkhahn", the company produced one of the first sustainability reports compiled by a medium-sized company.

In 2008 Wilkhahn founded Wilkhahn Energie GmbH with a local farmer. It started up a combined heat and power plant that reduced CO<sub>2</sub> emissions and consumption of renewables by three quarters. At the same time, the most important Wilkhahn ranges received Greenguard®-compliant certification which is an American standard that certifies indoor air quality. Sustainable investments, for example in a new table top varnishing machine, strengthened Bad Münster as a manufacturing hub. It increased reliable quality, encouraged healthy practices and at the same time achieved further ecological progress with heat recovery. The interaction of the various sustainability aspects was evident in the office chair ON. After garnering prestigious international design awards, including the "Best of NeoCon 2010" and the "German Design Award 2011", ON quickly established itself as the new global benchmark for healthy sitting. It was also the first office chair to be awarded the Federal Ecodesign Award from the German Minister of the Environment in 2012.

## Sustainability management milestones

**1990** Analysis of weak points by the Gerling Institute

**1991** Company agreement on an alcohol ban on the entire premises

**1992** Eco controlling started with the Institute for Ecological Economy Research (IÖW); adoption of Wilkhahn eco-design guidelines and catalogue of materials, market launch of the Picto office chair range (first ecological office chair)

**1993** Creation of the product-responsibility service concept and guideline on eco controlling in medium-sized enterprises in the office-furniture industry (IÖW)

**1994** Wilkhahn waste-management concept based on the maxim of recycling; publication of "Wilkhahn green. A company undergoing ecological change".

**1995** Presented with the "Healthy working practices" prize by the Federation of German healthcare insurers; development of eco-friendly packaging

**1996** Picto presented with the Dutch environmental award Milieukeur and the German Environmental Prize by the German Environmental Foundation

**1997** Winner of the Corporate Conscience Award, Council on Economic Priorities (CEP), US

**2000** Winner of the European Good Practice Award in Safety and Health at Work from the European Agency for Safety and Health at Work, "Added value at Wilkhahn" sustainability report, EXPO 2000 – the future of work; presented with the European Good Practice Award in Safety and Health at Work

**2001** EMAS II certification

**2004** Modernisation of the company pension scheme with profit sharing

**2007** Company joins Global Compact; company agreement on "Smoke-free operations" with smoking ban in all buildings and service vehicles

**2008** Construction of the combined heat and power plant, powered by renewables

**2009** Signing of the ILO/IFA framework agreement


**2010** Dr Jochen Hahne awarded the title of Entrepreneur of the Year in Hanover (Family Entrepreneurs Association)

**2011** EMAS III certification; solar power for hot-water supply


**2012** A biogas plant is connected to the district heating grid; office chair ON given the Eco Design Award; joined and became active members of the "SME professional network" on company health management in SMEs

**2013** Commissioning of a packaging machine for the production of tailor-made cardboard boxes on demand

Architecture



Today, the oldest section of the building is still integrated in the old boiler house. As part of the conversion of the old factory into an admin building in the early 1990s, it was redeveloped and turned into a communications centre.




The admin building (1959) by Herbert Hirche is inspired by Bauhaus and was designed as a concrete structure with a clinker brick façade.


1969: the showroom and the boiler house are built (today called the “lab”).

Manufacturing halls are constructed (brick with a bonded wood design).

1984: “At Wilkhahn, no two bricks are to be laid unless a building’s produced that satisfies all ecological, economic, aesthetic and best-practice working requirements”.





More people-friendly working environment: in 1988, Frei Otto’s pavilions became a deliberate embodiment of corporate culture and an integrated understanding of product design, social partnership and responsibility for the environment.



1992: The production hall is designed by Thomas Herzog to enable ecological change.


A business with a human face

1907: the company is founded by brother-in-laws Christian Wilkening and Friedrich Hahne as one of over 100 firms in Deister-Sünteltal, at that time a hub of the German chair industry to the south west of Hanover.



Fritz Hahne and Adolf Wilkening define and adopt a new strategy for the company.

Co-operative management (Bad Harzburg model)



1969: the company’s ideas management scheme is launched.


Profit sharing for employees and Mitarbeitungsbeitelungs GmbH

Employees are involved in the design of the new production pavilions (e.g. the sewing department with underfloor heating).

Wilkhahn launches corporate social responsibility initiatives: a company pension plan and low-cost company loans to employees are introduced.

Wilkhahn’s green approach

Start of the partnership with Ulm University of Design along the following principle: “The goal is to develop durable products, increase their utility value and reduce waste.”



The ability to repair Wilkhahn furniture ensures long product lives.

In 1989 the administrative board voted to make ecological change an official part of the company’s manifesto – a pioneering step by the company.

1907

1950


1960

1970


1980

1990


Product design




Solid wood chairs are produced in different styles for mainstream, middle-class tastes.




Wilkhahn develops into a pioneering company for modern furniture design. New materials like steel and plastic become more popular. Renowned architects and designers develop product ranges.




1961: laminated wood range 400 – a lightweight, flexible and unbreakable multi-purpose chair by Wilhelm Ritz.




1965: Hans Peter Piehl’s stackable slatted chair is born.




Development of business segments  
Creation of transit areas and objects for backdrops where people meet




Product development concentrates on designing ergonomic office chairs. 232 range, design: Wilhelm Ritz




1976: Delta-Design’s 238 product range is way ahead of its times. Design: Klaus Franck, Werner Sauer




1980: the FS office chair line is launched and aims to take the complexity out of seating. Today it’s a modern classic. The synchro-adjustment creates a new benchmark for healthy seating.




1982: innovation: sitting on mesh (O-Line by Herbert Ohl).



1988 Wilkhahn identifies Conference as a segment and second strategic pillar.






The Picto swivel chair range is launched as the first office chair worldwide to consistently integrate ecological criteria in its design concept. Design: ProduktEntwicklung Roericht



1992: The Picto swivel chair range is launched as the first office chair worldwide to consistently integrate ecological criteria in its design concept. Design: ProduktEntwicklung Roericht


Markets

From 1907: in the early years products are sold regionally.




From the 1950s: products are sold nationwide in Germany and international business operations are launched (e.g. US, the Netherlands).


1960: the export department is founded.



1968: production facilities are set up in Castellón with a sales office in Madrid, Spain.




1973: subsidiary is founded in France.




1974: subsidiary is founded in the Netherlands.

1980: the company adopts a more international approach. Foreign business is a declared strategy.



1983: Wilkhahn Switzerland is founded.





1985: the Wilkhahn design department is turned into a subsidiary called wiege.

1989: Wilkhahn UK is founded.

From 1985: markets in the Middle East are developed.

1990s: markets in north, east, south and south-east Europe are opened up and expanded.



1991: Wilkhahn Austria and Wilkhahn Belgium are founded.





h facilities built  
become a symbol of



2008: a high-tech combined heat  
and power station based on  
renewable raw materials is built.



2012: The info container explains  
the energy concept and  
dimensions of the environmental  
management system.

"Projects drive the company":  
group- and project-work are  
new forms of work (1994).

The ISO 9001 quality  
management system is  
established.

1998: the company health  
management system is initiated  
in partnership with German  
healthcare insurer AOK:  
a pilot project offering bonuses  
to companies who can  
demonstrate a good health  
management system.

A showcase as part of the  
world exhibition Expo 2000:  
"The future of work in the  
conflict between people, nature,  
technology and market".



A Good Practice Award in  
Safety and Health is presented  
by the European Commission.

2004: a new  
version of the  
company pension  
plan is drawn up.

2002 / 2008: a contract  
to safeguard jobs and  
the German site as a  
manufacturing hub is  
signed.

2007: The "Responsible furniture  
for a professional life" core  
statement is established.



2007: the company's  
100th anniversary is  
celebrated with  
"100+" as its slogan.

2007: Wilkhahn  
gets into shape for  
the future and  
starts the  
"Wilkhahn 2017"  
strategy  
development  
process (involving  
employees  
worldwide).



2008: Wilkhahn  
becomes a  
member of  
"UN Global  
Compact".



2009: an international  
framework agreement  
is signed with German  
trades union IG Metal  
on compliance with  
minimum working  
conditions across the  
globe.



2010 Dr Jochen Hahne  
is awarded the title of  
"Entrepreneur of the  
Year" by the "Family  
Entrepreneurs Association"



2013: Michael Tritschel  
is an internationally  
experienced manager  
and as CEO is responsible  
for market strategy and  
operational management.

An environmental controlling  
and waste management  
concept is implemented.



1996: Wilkhahn is awarded with the  
German Environmental Prize by the  
German Environmental Foundation for  
its corporate responsibility concept.



2001: the EMAS European  
Environmental  
Management System is  
launched.



2001: a new powder-coating machine  
is installed with a closed processing  
water cycle and power recovery.



2009: a new wood surface treatment  
with heat recovery is created.



2011: hot water is  
now produced by  
solar collectors in  
the whole of the  
old building and  
the four pavilions.



A biogas plant nearby is connected  
to the district heating grid



For office chair ON

2000

2010



an  
ne.  
twicklung



The Modus office  
chair range becomes  
a blueprint for the  
21<sup>st</sup> century.  
Design: Klaus Franck,  
Werner Sauer



Confair creates a global  
benchmark for conference rooms.  
Folding table design:  
Andreas Störiko



1999: interactive conference  
furniture, such as  
InteracTable®, InterWall®  
and CommBoard®, is  
developed with digital  
equipment integrated into  
walls and tables.



Timetable: in 2000 the  
transportable table with swivel  
tabletop complements the  
conference business sector.



2004: Aline, a light and  
transparent multi-  
purpose chair, is born.  
Design: Andreas  
Störiko



2006: the offering for  
informal communication  
areas is expanded.  
Design: Eric Degenhardt



Dynamic seating: in 2009 ON  
revolutionises the market for  
office swivel chairs with its  
three-dimensional range of  
movement. Design: wiege



2010: automotive  
progress meets  
chair design –  
multi-purpose chair  
Chassis. Design:  
jehs + laub



2013: aesthetically and ergonomically  
Graph defines a new standard for  
conference furniture. Design: jehs+laub



ustria  
gium are



1995: a licensing  
partnership is signed  
in Japan.



In 1998, Wilkhahn Asia-Pacific is  
founded in Sydney. It is to be a sales  
and manufacturing site to tap into  
new markets in Australia, New Zealand,  
Singapore, Hong Kong and China.



2005: Wilkhahn Middle East is founded  
in Dubai. The sales company also looks after  
the southern Mediterranean.

2005: foresee becomes  
an independent subsidiary.



2008: Wilkhahn Inc. is founded in  
New York City. Today the company  
is present on all continents.

2008: Wilkhahn Energie GmbH  
founded

2009: the sales network  
in North Africa and  
Israel is shored up.

# Management responsibility and employee participation.



In February 2009, Wilkhahn and trades unions IG Metall and Building and Woodworkers International (BWI) signed a framework agreement on social responsibility and encouraging employee rights. From left to right: IGM chairman Berthold Huber, Wilkhahn president Dr Jochen Hahne, BWI general secretary Anita Normark and Wilkhahn works council chairman Ralf Olaf Stender.

## Wilkhahn supports the UN Global Compact

Across all areas of its business, Wilkhahn is committed to sustainable development objectives.

In December 2007, Wilkhahn joined the UN Global Compact, making the policy of responsible management mandatory for all areas of the company. Wilkhahn perceives corporate responsibility as a management philosophy which strives to strike an acceptable balance between the requirements of the various stakeholders.



WE SUPPORT

## The ten principles of the UN Global Compact

### Human rights

Principle 1:

Companies are to support and observe international human rights within their spheres of influence and

Principle 2:

ensure that they are not guilty of complicity in infringing human rights.

### Labour standards

Principle 3:

Businesses are to uphold the freedom of association and the effective recognition of the right to collective bargaining as well as under

Principle 4:

eradicating all forms of forced labour,

Principle 5:

stopping child labour and

Principle 6:

eliminating discrimination when recruiting and employing people.

### Environmental protection

Principle 7:

Businesses are to support a precautionary approach to environmental problems,

Principle 8:

and adopt initiatives to generate a greater sense of responsibility for the environment and

Principle 9:

to encourage the development and spread of eco-friendly technologies.

### Fighting corruption

Principle 10:

Businesses should stand up against corruption in all its forms, including extortion and bribery.

Wilkhahn has a longstanding tradition of adopting an employee-driven approach and involving employees actively. In this respect the company is also repeatedly considered exemplary for its cooperative management style, profit-sharing schemes, or in rolling out new, partially autonomous styles of working with a high level of initiative and responsibility in employees' own workspaces. Since 2000, a potential-driven approach has applied in the organisation:

"The company is organised to exploit potential. The purpose is to harness synergy, pool skills and give individuals greater freedom to act".

As part of the long-term corporate strategy, the roles and responsibilities of managers and their employees have been precisely defined as regards implementing the strategy.

### Management and development

Key management tools to achieve corporate goals are as follows:

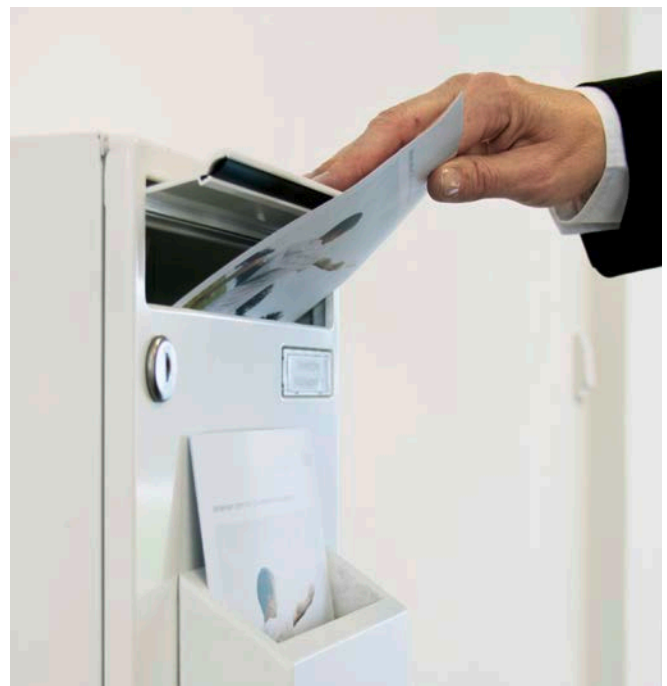
- **Objectives agreements – setting, measuring and assessing goals, as well as learning:**  
The principle of objectives-based management is transferred to employee level too. Criteria are participation-driven agreement on interim goals, objective assessment, transparency across departments and commitment.
- **Skills model**  
In order to improve management at Wilkhahn, a new skills model was launched in 2012 that embraces entrepreneurial, management, social and personal skills. Tools are for example feedback from each employee that is given at least once a year.
- **Development of the next generation**  
One of the tasks of long-term business planning is looking out for likely successors in the medium term. Considering demographic change and the lack of skilled professionals, the next generation of managers is identified at an early stage and fostered via personal development plans and training, such as project-manager courses.
- **On-going training**  
The recurrent planning and budgeting process, required to develop the company, includes company-wide identification of requirements, planning and implementation of training measures. Participation in these types of measures can also be an integral part of objectives agreements in order to foster change processes.
- **Bonus scheme**  
For blue-collar workers a new bonus scheme was developed at the suggestion of and in partnership with the works council. In addition to incentives to consistently improve productivity, it also includes a quality bonus in order to strengthen people's responsibility and motivation to carry out quality control.

### Active participation and continual improvement

Wilkhahn views the active participation of all employees as a driving force in encouraging continual and successful improvements in the environmental sector too. As early as 1996, this concept was laid down in a company agreement between the management and works council. In ecology committees, Wilkhahn employees made use of their rights early on to become involved in environmental protection issues.

Today, the quality and environmental officer, the health-and-safety officer and Wilkhahn works council are integral parts of the organisation. They continue the work of the previous ad-hoc bodies in a structured manner and organise active involvement through the health-and-safety and environmental committee which is convened every quarter.

Wilkhahn continues to count on the direct involvement of all employees. Whether it's a question of avoiding hazards in the workplace, of new manufacturing technologies, or of saving materials and energy – all employees can contribute their ideas on improving Wilkhahn at any time via the company's ideas management process. An important incentive is that any good idea is also rewarded financially according to a transparent method.



Post box for the company's ideas management system: After all, who knows better where improvement potential lies than the workforce?

### Corporate values, actively practised

The overarching maxim is fairness and aspects like trust and reliability, listening to customers' needs, commitment, simplicity, sustainability and the desire for innovation that shape Wilkhahn's corporate culture. We see these corporate values as joint fundamental convictions that are shared, practised and developed by all employees worldwide. They underpin the way we act, particularly our culture of management and employee participation.





## Health management at Wilkhahn.

“Health is one of the most valuable assets, both for individuals and for companies. Therefore, protecting and actively encouraging the health of our employees plays a pivotal role in the company”.

In terms of protecting health and company health management, Wilkhahn wears two hats:

- as a company that has to grapple with different interacting factors like motivation, maintaining performance, coping with demographic change and the fact that people are living longer in order to ensure it can survive in tomorrow's world;
- as a developer, manufacturer and marketer for creating modern working environments that boost the feeling of well-being, health and success of the people using them.

### **Background, objectives and principles of the company health-management system**

The company health-management team consists of the chairman of the works council, the head of human resources and employees from the same department, as well as the health-and-safety expert. Vocational trainees are involved in organising the activity days so that the experience they gain in organising the event plants a seed of awareness where their own health is concerned. Improvements made in working conditions by the company health-management system maintain productivity in the company and cut days lost to sickness.

#### • **Reflecting demographic change and an ageing workforce**

The average age in the company is on the increase and therefore so is the average age of the Wilkhahn workforce. Blue-collar workers today are almost 46 and white-collar workers 42 years of age.

At the same time, the pension age has been increased and the length of a working life is rising. The company's health-management system deals with the resulting

challenges. The goal is to foster productivity and a good working environment with the cooperation of both younger and older employees.

#### • **Raising awareness in managers**

Health means so much more than the absence of any illness, a holistic approach is required. Good working conditions have a lot to do with good management. The company health-management system encourages managers to take their responsibility for health in the company seriously.

#### • **Improving ergonomics in the workplace**

Healthy working practices result from an ideal combination of postures and movement in workspaces, the way immediate surroundings are designed, the materials and equipment provided, the tasks set and the demands made on performance. The company health-management system constantly works on developing healthy working conditions.

#### • **Encouraging personal responsibility for health**

Nobody can take responsibility for the health of other people: for their diets, the way they spend their leisure time, for consumption of stimulants and their private affairs. The company health-management system gives tips and advice on how to take on more personal responsibility.

#### • **Taking preventative action**

It costs relatively little to maintain your state of health, but recovery is expensive, both for the individual and the company. Once complaints occur it's often almost too late. Which is why the company health-management system's principle is that prevention is better than cure.

## Measures

At Wilkhahn, company health-management tools have been developed over the years, often with external partners. This process is an ongoing one.

- **Company job reintegration management after sick leave**

Company job reintegration management after sick leave has been popular and has a good track record. When people have been off sick for a long time, it helps them find their way back into their jobs.

- **Monthly allowance for fitness programmes**

Anyone wishing to improve their own health, will receive an allowance from Wilkhahn for a gym and wellness park nearby.

- **Regular training courses**

The safety officers and first-aiders are trained frequently to prevent accidents at work and to reduce the impact of any injuries by providing the right first aid.

- **Analysis of accidents at work**

In the health team, the works council, human resources employees and the health-and-safety officer decide on measures to encourage healthy practices at Wilkhahn. The statistics are analysed according to frequency and measures are quickly taken. For example, a new safety cutter knife was purchased after several people had cut themselves.

- **Occupational healthcare advice and examination**

We partner with a company physician service. The company doctor also has a duty of confidentiality, just like any other doctor. His job doesn't just consist of treating illnesses, but also of maintaining standards of health.

- **Activity days**

The health activity days are new to the company's health-management system. Since 2013, certain topics and aspects related to health and safety have been presented to the company's workforce. Wilkhahn allows employees to take part during paid working hours.

- **Physiotherapy**

We've been working together with physiotherapists since 2013 who visit employees in their environment in order to do specific exercises to alleviate complaints and prevent muscle and skeletal illnesses. Other programmes include company sports, Pilates and back exercises.



During regular activity days Wilkhahn gives practice-driven, in-depth advice on current health and safety issues.



In the health team, the works council, human resources employees and the health-and-safety officer decide on measures to foster health at Wilkhahn.

## Social responsibility

Wilkhahn is a member of several clubs, associations and networks dealing with sustainability that the management team and the rest of the workforce are actively involved with. Some of these include:

- German Sustainable Building Council e. V. (DGNB)
- The German Association of Environmental Management e. V. (B.A.U.M.)
- Das Institut für Markt-Umwelt-Gesellschaft (imug e. V.) (Institute for the market, environment and society – imug e. V.)
- Die Vereinigung future e. V. – Verantwortung unternehmen (association that initiates eco-management projects)
- Die Niedersachsen Allianz für Nachhaltigkeit (The Lower Saxony Sustainability Alliance)

The company was actively involved in the following bodies in 2013:

- In the Federal Ministry for Labour and Social Affairs' CSR forum that advises the German government on sustainability strategy issues
- Member of the board for sustainability communications at B.A.U.M. e. V.
- The Bertelsmann Foundation's CSR expert workshop
- The environmental committee of Büro-, Sitz- und Objekt-möbel e. V. (BSO)
- The Hanover Region's industry strategy group for the achievement of climate-protection targets
- The judging panel of North-Rhine Westphalia's Efficiency Prize

We also hold various presentations at universities, associations and institutes and write articles on design and sustainability.



# Systematic safety management at Wilkhahn.

Wilkhahn office furniture supports our customers' productivity and standard of health in their working environments. And when making the tables, office swivel chairs and conference-, seminar- and visitor-chairs, we ensure we maintain our employees' standard of health too. Wilkhahn uses a wide range of measures to ensure that workspaces in the Wilkhahn production department are safe and allow as risk-free an approach as possible. This is achieved by:

- planning safe procedures and workspaces;
- organising and defining responsibilities;
- informing people about the risks the workspace entails and measures to avoid these;
- regularly inspecting working environments to maintain safety and cleanliness in all areas;
- using the health-and-safety committee to frequently discuss risk potentials and systematically avoid accidents.

Health-and-safety management at Wilkhahn starts when new workspaces are planned. The health-and-safety officer, the hazardous-goods officer, and if necessary the environmental officer, are all involved regularly at an early stage. If required in order to protect employees, Wilkhahn carries out special measurements and takes into account the results when planning workspaces. As a result, potential risks are systematically recorded and analysed in order to take measures to avoid or cut down on risks.



Pneumatic lifting equipment at Wilkhahn helps our employees to move table tops. This systematic support when lifting and carrying objects prevents back complaints.

If possible, the usage of hazardous materials at Wilkhahn is avoided. Where unavoidable, for example when varnishing wood, quantities are optimised and protective measures taken so that safe handling of the hazardous substances is guaranteed. In the varnishing department, overspray is efficiently suctioned off and filtered over the floor so that anyone working there isn't exposed to harmful vapours.

Wilkhahn invests regularly in comprehensive measures to protect its workforce. Back in 2000 Wilkhahn was presented the European Good Practice Award in Safety and Health at Work by the European Agency for Safety and Health at Work. The low number of accidents incurred by our employees proves that professional health-and-safety management is worthwhile. In the working environment, technical aids such as lifting equipment, swivel-mounted assembly equipment, circuit breakers, light barriers and height-adjustable worktops cut the risks of health complaints and injury. These technical health and safety factors are complemented by appropriate organisational steps. Therefore, Wilkhahn employees are only permitted to carry out risky jobs if they've been informed about the mandatory rules governing safety and conduct beforehand.

Wilkhahn does of course provide its workforce with protective clothing free of charge, for example safety shoes, gloves, ear muffs or protective goggles. Wilkhahn partners with a health-and-safety service to look after its employees. In regular consulting hours, the company doctor gives advice and offers tailor-made courses for each job.

## Sustainability in the Wilkhahn supply chain

Wilkhahn's principle of fairness doesn't just end at its own factory gates. We encourage exemplary production conditions at our suppliers' sites as well. Wilkhahn consequently signed a framework agreement in 2009 with the international unions which primarily fosters good working conditions and employee rights based on the principles of the International Labour Organization (ILO) of the United Nations. In signing the agreement Wilkhahn undertakes to carry out recurrent controls of its supply chain and to assess the corporate social responsibility (CSR) and the environmental performance of its suppliers and partners. By deploying a transparent tendering procedure and a six-monthly integrated assessment of suppliers, Wilkhahn uses all the options possible to ensure the high standards required of health and safety and environmental protection are maintained and improved consistently.





## Training at Wilkhahn.

Well-trained employees are pivotal to a company developing successfully. Wilkhahn offers meticulous and thorough vocational training to young people in the blue-collar or white-collar sector, or as part of a course at university with a strong leaning towards periods of practical experience. But more experienced, long-standing employees are also encouraged to obtain additional qualifications.

### Vocational training

The numbers of people undergoing vocational training is very high. Some 25 young women and men are prepared for skilled careers as part of vocational training or a university course with a strong practical element. Technical product designers, upholsterers, wood mechanics, industrial managers or business managers are just some of the professions offered. Wilkhahn ensures a solid combination of theoretical expertise through a technical college or a university and practical learning of skills in the company. The company's own training workshops ensure that content and skills can be acquired outside the demands of day-to-day operations. A special aspect of vocational training is also that trainees are given an in-depth overview of cross-department relationships in the company. Wilkhahn apprentices repeatedly win special awards from examination bodies.

Soft skills are also cultivated systematically during the vocational training period. The organisation and implementation of events that are well known in Germany, such as the "World of work in the future", encourage people to take responsibility for their lives and foster communications skills and a team spirit. Exemplifying and experiencing democratic values is also a solid part of vocational training – for example by electing a representative body for young people, a group that looks after the interests of apprentices.

### Training in ongoing skills

Wilkhahn's requirements as regards training in ongoing skills are provided due to regular feedback from each employee and analysed, assessed and included in training planning. New requirements arise again and again, even where experienced employees are concerned. New demands are placed by customers and markets, rising globalisation, innovative manufacturing methods, new communications technologies, or because new areas of responsibility and challenges are taken on in the company.

### Equal opportunities, anti-discrimination, fair pay

All apprenticeships, jobs and management positions are advertised and awarded without any discrimination towards a particular sex. The principle of equal pay for the same job has applied regardless of sex and ethnic group for many decades.

The abilities of people with special needs are respected at Wilkhahn and they are integrated into standard day-to-day operations. The number of people with special needs is way above the minimum required by statute.

The regulations on pay, vocational training and equality are also set out in company agreements. If individuals have any grievances they can contact a dedicated anti-discrimination and equal-opportunity officer.

# Environmental management.

## Assessing environmental factors

The purpose of Wilkhahn assessing its environmental performance is to reduce the impact on the environment and at the same time to strengthen positive aspects. In terms of the impact of our activities, we make a distinction between direct and indirect environmental aspects of different importance. Direct impact on the environment is a direct result of our activities, products and services. As these activities are directly controlled by us, we can take technical and organisational measures to make improvements.

We also assess effects on the environment that are associated with our activities but which we can only influence to a certain extent. Examples include material and energy consumption for exploiting and transporting feedstock, or adhering to environmental legislation within the Wilkhahn supply chain. At the product-development phase, Wilkhahn already strives to enhance the indirect impact on the environment by selecting materials that are as environmentally friendly as possible and using these efficiently. This approach is also reflected in professional supplier management which involves us requiring our suppliers to comply with environmental and social responsibility standards.

The assessment of Wilkhahn’s impact on the environment as a result of furniture production is based on a whole host of information: We capture quantitative data on the use of material and consumption of energy, on waste generated, but also on values measures, inspection documents and other technical information. To calculate emissions and environmental costs, Wilkhahn also uses standard factors.

But collating data on all environmental factors is neither possible nor practical.. This quantitative approach is complemented by qualitative assessments. Guidance is provided by Wilkhahn’s Quality and Environmental policy, its signing of the UN Global Compact, the guidelines of the Forest Stewardship Council® (FSC) and Wilkhahn’s product guidelines which are described in Wilkhahn’s Responsible Furniture concept.

When assessing environmental impact, Wilkhahn doesn’t just look at standard day-to-day operations, but also at any potential environmental risks that could occur due to emergencies such as forest fires or floods. The key environmental factors that apply to Wilkhahn are summarised clearly in the following outline. The traffic light system takes into account both the relevance of the environmental aspects and the opportunities to make an impact by taking specific steps. Green boxes indicate low, yellow indicate average and red indicate big improvement potential and the need to act.



## Eco-relevant activities and machinery and equipment.



The Modus chair's intelligent fastening method means that covers can be exchanged after years of use. As a result, chairs last longer and resources are protected.



Since 1995, the Modus chair range has met top demands on quality and ecology: Thanks to precise sewing and fastening methods for the piping, virtually no adhesive is required for the upholstery.

### **Sewing and upholstery departments**

Until the present day, sewing, upholstering and covering are manual jobs in chair manufacture. Experience, dedication and precision are required every step of the way to achieve a perfect result. In the upholstery process, covers or leather hides are connected with foam bodies and elements like seat shells and frames. When covering swivel and visitor chairs Wilkhahn uses sophisticated made-to-measure covers which, depending on the range and model, have reinforced layers and nonwovens to provide cushioning. This means parts of the upholstery are joined together permanently but in an eco-friendly manner at the same time. Later on covers can be exchanged easily. As a result, Wilkhahn chairs are given a new lease of life after years of use and feedstock is used efficiently.

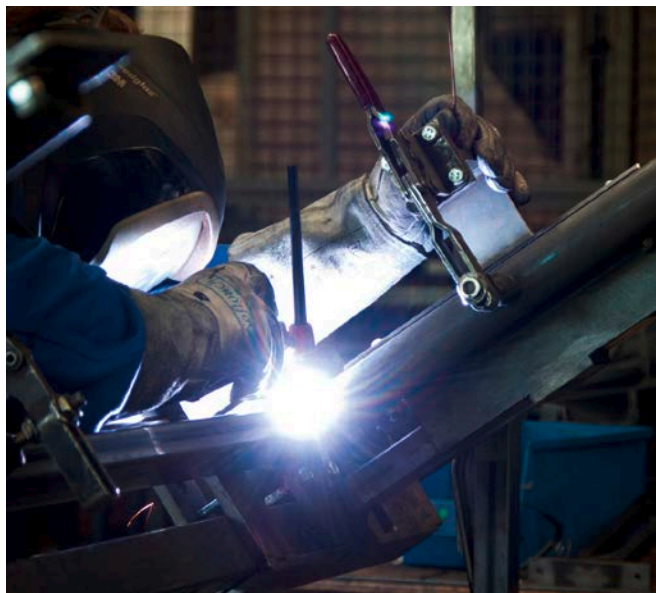
But to guarantee the durability of some cover-to-upholstery connections, even the Wilkhahn upholstery department cannot totally do without using adhesives. In this case emissions of organic solvents are an important health and safety issue, but are only of average relevance in terms of environmental protection. By applying adhesives sparingly, creating safe storage rooms and keeping annual consumption under five tonnes, Wilkhahn is able to maintain emissions of organic solvents at a constantly low level. We safely comply with the statutory emission protection requirements, despite the annual rise in production in the upholstery workshop. Thanks to ecological design specifications, extra environmental steps such as cleaning waste air by after-burning are currently not necessary. Further environmental aspects of upholstery are moderate energy consumption due to compressed-air-driven equipment and ventilation.





## Steelworking

In the Wilkhahn steelwork department, frame parts are made for standard and customised tables. Iron steel and aluminium are processed manually and by machine. Low levels of emissions (welding gases) and noise occur when cutting, drilling, grinding and welding metals. Environmental aspects that need to be taken into account here are energy consumption and the safe storage of oils, grease and cooling lubricants.



The steelworking department produces precise and durable frames from tubes and sheets for Wilkhahn tables. The special equipment ensures safety while welding, maintaining and inspecting the machinery protects the environment.

## Varnishing workshop

In 2009 Wilkhahn commissioned a new staining and varnishing workshop. The modern machinery produces first-class results when varnishing the table tops and boosts environmental protection and health and safety at the same time. Staining, mixing the varnish, varnishing and drying the table tops are carried out in air-conditioned and particularly low-dust areas. The particles of varnish in the area are suctioned and filtered off to render them safe for employees and the environment.

Wilkhahn creates the superb quality of the varnished surfaces in several phases. Between multiple coats, special grinding procedures in a separate grinding room ensure the varnish is equally glossy all over. During grinding, efficient suctioning ensures excellent results and that working practices are safe. Similarly to the actual varnishing process, the waste air, polluted with particles of dust, is cleaned via a dry filter. Coarse residues from the grinding process are collected in cassettes at the sides and are disposed of as a harmless substance. As a result, no aqueous waste is generated in the varnishing process.

Computer-controlled mixing and cleaning procedures cut the waste during varnishing to a minimum. Compared with the manual application of varnishes in the past, varnish consumption is reduced substantially. No unused varnish needs to be disposed of because only the quantities actually required are provided fully automatically.

During the priming process, Wilkhahn also uses varnishing systems that cure with UV light. These are virtually free of organic solvents (VOCs) and help provide good health and safety and environmental conditions.

Furthermore, varnishing at Wilkhahn is energy efficient. Due to an additional investment in air extraction, two thirds of the heat have been recovered since 2009. The recovered energy corresponds to the heating value of about 20,000 litres of heating oil. As a result, Wilkhahn can prevent the emission of about 60 tonnes of the greenhouse gas carbon dioxide per year.

## Powder coating

At the Bad Münden headquarters, Wilkhahn has eco-friendly powder-coating machinery. Various metal components such as table frames, tubes and star bases are coated with different colours to suit customer preferences and at the same time protected from corrosion.

Before the powder is applied, preparation is carried out beforehand. To start with, Wilkhahn employees inspect the metal parts to ensure they are in a perfect condition before they are transported to a water basin by a shuttle. After degreasing and rinsing in the water basin, industrial drying follows and the powder is then fired at 190°C. The process water and energy consumption required here are key environmental aspects. Over the last few years, Wilkhahn has invested in enhanced insulation of the facility and it optimised heating circuits. Aqueous waste – a further environmental aspect of the machinery – has for years been cut to the absolute technical minimum by recycling and treating the cleaning water.

A new control system for the machinery and new suction system in 2013 have improved material efficiency even further. As a result, virtually all superfluous varnishing powder can be recovered and used again directly. Altering the coating colour is now possible without changing the powder chamber, cutting energy consumption again. Powder varnishes used by Wilkhahn have contained no solvents or heavy metals for many years.



Each part is checked to ensure the surface and other quality features are perfect before the powder varnish is applied.



The powder varnishes used by Wilkhahn are practically free of solvents and heavy metals and come in colours to suit customer preferences.

### Energy and heating technology

At the Bad Münde site, Wilkhahn operates a photovoltaic plant, two solar-thermal systems and other small combustion systems for liquid and gaseous fuels. By regularly maintaining and inspecting the systems, sulphur dioxide and nitrogen oxide emissions constantly fall below the statutory thresholds (in line with German legislation on emissions). Emissions of SO<sub>2</sub> and NO<sub>x</sub> are relatively low and the Wilkhahn environmental management system assesses these as environmental aspects of secondary importance.

### Procurement – supply chain management

Wilkhahn has developed and nurtured long-standing business relationships with its partners for many years. Clear technical specifications and an open style of communication ensure that product quality and the safety of production processes are always possible when working together with selected suppliers. At the same time, Wilkhahn's definition of quality includes much more than keeping to dimensions and components functioning perfectly at all times. Fair labour conditions and environmental protection are important goals in the Wilkhahn supply chain at all times.

The goal is also to achieve eco-friendly packaging design and cut transportation traffic by coming up with the right packaging concepts. We assess our suppliers regularly and carry out on-site audits, we indicate potential for improvement and increase mutual trust with our selected partners.

### Logistics – sales and dispatch

Customers in over 90 countries appreciate Wilkhahn office furniture. The office swivel chairs, conference and stand-alone tables leave the production facilities in Bad Münde, Castellón and Sydney by different modes of transport and head for their destinations. In the process, Wilkhahn only uses as much packaging as required for safe delivery to the customer. In addition to dust-protection sheets made of recyclable polyethylene and cardboard boxes, blankets and other reusable and returnable packaging are frequently chosen.

Regional, domestic and international dispatch of the products consumes energy and causes emission of carbon dioxide, fine dusts and nitrogen oxides. If reconcilable with the requirements of international customers, Wilkhahn uses rail-bound and seaborne transportation which cause fewer greenhouse-gas emissions than planes.

When products are transported by road, Wilkhahn plans tours in such a way that the loading space is used to a full capacity. In this way, Wilkhahn has been cutting transport-related emissions for years. Wilkhahn works with logistics partners who use energy-efficient vehicles that produce low quantities of harmful substances (primarily waste-gas standard Euro 5). And the vehicles in Wilkhahn's own fleet are also particularly low on emissions and kind to resources. All Wilkhahn vehicles comply with emission standard Euro 5 and most of them have eco-friendly extras such as automatic start-stop systems or enhanced aerodynamics.



Sustainability included – to dispatch the ON® swivel-chair range worldwide Wilkhahn developed a special attachment at the back. The knock-down dispatch method produces a compact size that cuts transport-related emissions.



# Environmental performance.

Ecological responsibility has been the guiding principle of our company and the development of Wilkhahn office furniture for 25 years. The supervisory board's resolution in 1989 stating that if in doubt ecology and social responsibility were to be valued more highly than fast profit signalled the beginning of "Wilkhahn Green". Today, at Wilkhahn we're planning on improving our environmental performance (but not just that) in a three-yearly cycle as part of our environmental management system which is ISO-14001-certified and EMAS-validated. The following text and graphics outline the successes scored and obstacles faced by the environmental programme from 2011 to 2013. By supplying the Wilkhahn headquarters in Bad Münden with climate-neutral district heating, a huge step was taken towards achieving a sustainable energy supply.

In the 2014-2016 Wilkhahn environmental programme we have again set ourselves ambitious goals and developed actual steps to reduce Wilkhahn's ecological footprint further. By optimising the use of feedstock, increasing energy efficiency again and by checking on high environmental and social standards in the Wilkhahn supply chain, we want to continue the sustainable development of our office furniture and our company (see page 34).

## Obstacles

In December 2012, a technical fault led to a permanent outage of the combined heat and power plant. Its climate-friendly provision of electricity and heat, based on vegetable oils, was an integral part of the Wilkhahn climate-protection strategy until that date. Wilkhahn then had to alter the climate-protection target for the Bad Münden headquarters.

In the future however, renewables will remain very important to Wilkhahn. Due to climate-neutral district heating from biogas, Wilkhahn has been able to compensate to a large extent for the failure of the combined heat and power plant since 2012. Therefore, our amended, but still ambitious climate goal, is for renewables, including photovoltaics and solar thermal energy, to cover at least 50 per cent of the energy requirements at the Wilkhahn headquarters in Bad Münden by 2016.

For now, the usage of solvent-free primers at Wilkhahn will be restricted to table tops up to a standard width of 120 cm. As the situation on global office furniture markets is so critical, Wilkhahn decided not to invest in a new varnishing roller. In the next few years Wilkhahn will be pursuing a different strategy of avoiding solvents by carrying out trials with a low-solvent, water-based varnish and by recycling solvents. For years total emissions at the Wilkhahn headquarters in Bad Münden have been at less than 40 kg of VOCs per working day and are therefore at a low level which is safe for human health and the environment.

To date it has only been partly possible to meet the target of increasing environmentally relevant information on Wilkhahn products: In 2013 the Wilkhahn website was completely redesigned and the search for environmental product information was made more user-friendly. Revision of lifecycle analyses for selected products has not yet been completed.



Customised cardboard packaging helps transport high-quality Wilkhahn products safely and is kind to the environment.

## Milestones

### Energy efficiency and climate protection

Since 2011 two solar-thermal systems have been heating the water required for sanitation purposes at the Wilkhahn headquarters in Bad Münde. Consequently, from spring to autumn fossil fuels are no longer required for generating hot water. The electric circulation pumps otherwise needed are switched off during those months. By using solar heat, about 3,000 litres of heating oil are saved per year. So solar-thermal power makes a vital contribution towards energy efficiency and to protecting the climate.

The Wilkhahn headquarters have been receiving district heating from a biogas plant since August 2011. To do so Wilkhahn laid an underground heating pipe several kilometres long and integrated a multi-boiler control system into the Wilkhahn power system. The district heating obtained from biogas is primarily used for heating the buildings, but also delivers process heat for table-top manufacture.

### Material efficiency

Cardboard packaging is made from renewable feedstock. It can be used again and again and the cellulose it contains can easily be recycled. For many years Wilkhahn has been harnessing these positive technical characteristics of cardboard when protective and eco-friendly packaging is required to ship Wilkhahn office furniture worldwide. Since 2013 Wilkhahn has been making tailor-made packaging itself with a special machine. All Wilkhahn products, even those made in customised sizes, are therefore delivered in an eco-friendly manner and are protected perfectly. Thanks to this packaging-on-demand system, Wilkhahn uses much less packaging material overall. Wilkhahn is also now mostly replacing oil-based protective films and foam with honeycomb cardboard in order to protect table edges for example.



At Wilkhahn, cut-offs from cardboard boxes are made directly into cardboard mats and as eco-friendly filling material they also increase material efficiency in packaging.



Over the past few years, the Wilkhahn power plant has been adapted to convert to renewables.

### Biodiversity

Planting a fruit orchard upgraded the natural value of the Wilkhahn headquarters in Bad Münde. The fruit orchard consists primarily of regional and old crops and improves the diet for insects and songbirds. Wilkhahn has also supported an initiative to preserve the dwarf beech (*Fagus sylvatica suentelensis*) since 2011. This special regional tree only grows in the dense woodland areas of the Deister and Süntel hills. Wilkhahn supports the cultivation and release of the dwarf beech into the wild as an important contribution to protecting biodiversity.



The dwarf beech initiative supported by Wilkhahn uses reproduction of the species in open spaces and in the lab to preserve a special regional type of red beech.



### Even more eco-friendly Wilkhahn table manufacture

We use industrially produced wood-based materials to make Wilkhahn tables which we cover with genuine-wood veneers, linoleum or laminates. The table tops are heated and pressed to bond the layers together permanently. In 2013, Wilkhahn invested in an even more energy-efficient table-top press. This is not heated up electrically, but connected to the hot-water system for heating the building. This aspect was particularly important to Wilkhahn in order to avoid energy losses due to the conversion of electricity into heat. And Wilkhahn makes a special contribution to climate protection because the hot water for heating the press is previously heated from climate-neutral district heating from biogas.



Eco-friendly table manufacture at Wilkhahn: During pressing, the water which has been heated previously in a climate-neutral manner, ensures energy-efficient and lasting bonding of adhesives.

### Solvent emissions still low at Wilkhahn

Volatile organic compounds (VOCs) are used in many process materials and improve their technical characteristics. They are mostly found in varnishes and adhesives. For many years, Wilkhahn has used relatively few solvents, resulting in correspondingly low emissions.



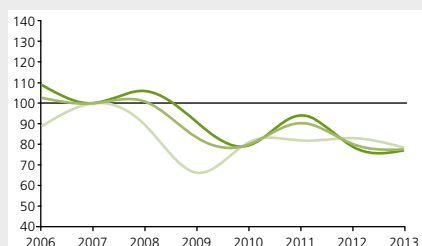
Efficient and sophisticated varnishing: by automatically mixing the varnish, applying underfloor suction and additional heat recovery, Wilkhahn makes top-quality conference and standalone tables that comply with high health-and-safety and environmental standards.

This is possible on the one hand due to eco-friendly varnishing processes that use materials efficiently. On the other hand Wilkhahn systematically avoids applying adhesives when upholstering furniture. In so far as technically possible, Wilkhahn office furniture is made without any harmful substances and by applying mechanical connecting elements. And there's a metric for measuring the success of this Wilkhahn philosophy.

When varnishing Wilkhahn tables, fewer than five tonnes of organic solvents annually have been emitted for years. At under 3.5 tonnes annually, the solvent emissions caused by adhesives are at an even lower level. Despite an increase in the number of Wilkhahn chairs made in Bad Münde, all statutory emission thresholds have been easily complied with (as specified by regulation no. 31 of the German Act on Emissions).

### Energy efficiency (production + admin)

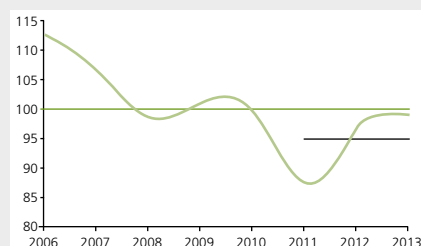
Index value (reference year 2007 = 100)



— Heat consumption (seasonally adjusted)  
— Electricity consumption  
— Total energy consumption (seasonally adjusted)  
— Reference year 2007

### Development of relative electricity consumption

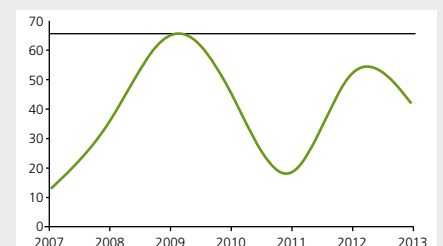
Index value (reference year 2010 = 100)



— Electricity consumption (based on sales, 2010 = 100)  
— Reference year 2010  
— Environmental goal: 5% less electricity consumption (related to sales)

### Share of energy from renewable sources

Index value (reference year 2007 = 100)



— Environmental goal: at least 66% of energy requirements from renewables in the long term  
— Share of renewables in total consumption

### Wilkhahn manufacturing: less hazardous waste and a high recycling rate

In 2013 some 4% less waste was generated than seven years previously at the Wilkhahn Bad Münde site (reference year: 2007). By sorting unavoidable waste according to type, Wilkhahn has been recycling valuable material from waste for years. In 2013, 97.5% of our waste was recycled or used in an eco-friendly way as alternative fuels.

At Wilkhahn hazardous waste is avoided on a large scale. For the fifth year in succession it accounted for less than 5% of total waste. In 2007/2008, about 60 tonnes of hazardous waste was still being produced, but today Wilkhahn has managed to cut this amount to only about 20 tonnes per year. One of the reasons is that the company has invested in a table-top varnishing method that applies materials more efficiently.

### Climate-friendly manufacture due to 42% renewables

For many years Wilkhahn has been trying to make its energy consumption at the Bad Münde headquarters as climate neutral as possible. To achieve this goal Wilkhahn invested in photovoltaics (1992), a combined heat and power plant driven by vegetable oils, solar-thermal systems (2011) and district heating from biogas (2012). In 2012, Wilkhahn increased the proportion of renewables to 52%. In December 2012 the company suffered a severe blow. The combined heat and power plant that was driven by vegetable oils came to a permanent standstill due to a technical fault.



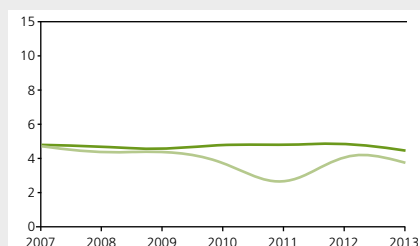
Since 2012, at the Bad Münde headquarters Wilkhahn has been using eco-friendly district heating which comes from climate-neutral generation in a biogas plant.

As a result, the proportion of renewables used at the Bad Münde headquarters dropped to 42% in 2013 – but it was still a very positive contribution to climate protection. However, we've had to adjust our ambitious climate-protection target due to the failure of the combined heat and power plant. In the future, we'll be endeavouring to obtain 50 per cent of the energy used at the Wilkhahn headquarters in Bad Münde from renewables.

### Energy efficiency: Wilkhahn cuts energy consumption by 20 per cent

Over the past seven years, Wilkhahn has cut the annual energy consumption at the Bad Münde headquarters by over 20 per cent. Power required for heating and electricity consumption both dropped due to specific measures to increase efficiency. Some 23 per cent less energy was required to heat the office and manufacturing buildings than in the reference year of 2007 (adjusted to allow for weather conditions). Since 2012 a massive jump in efficiency has been made thanks to district heating. Since then, the conventional boilers have remained almost completely switched off from spring until autumn. As a result, inefficiencies caused especially in the transitional months by boilers alternating frequently between full and idle modes have been successfully eliminated. Furthermore, older heating circulation pumps were replaced by special energy-saving Stratos pumps. In the current Wilkhahn environmental programme our goal is to convert completely to energy-saving pumps. Over the last few years, electricity consumption was also cut. Electricity is primarily required for lighting the office and manufacturing buildings which we have been optimising for years. When using IT hardware such as telephones, computers and screens, Wilkhahn makes sure it uses energy-efficient models where possible. Consequently, in 2013 23 per cent less electricity was consumed at the Wilkhahn headquarters in Bad Münde than in 2007.

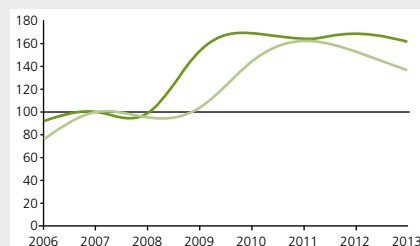
Emissions of organic solvents (VOCs)



— Solvents (VOCs) from varnishes and thinners in t/a  
— Solvents (VOCs) from bonded coatings in t/a  
— Varnishes (VOC) threshold specified in regulation no. 31 BImSchV

Development of material used 2006–2013

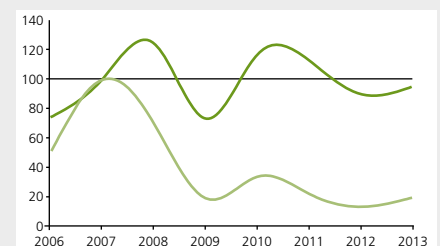
Index value (reference year 2007 = 100)



— Relative material consumption (in relation to sales)  
— Annual quantities of production material by comparison

Development of waste 2006–2013

Index value (reference year 2007 = 100)



— Total waste quantity  
— Hazardous waste  
— Reference value 2007



## Environmental programme 2014–2016: goals and measures.

No.	Goal	Measure	Status	Date	Responsible
1	<b>Climate protection:</b> To increase the proportion of renewables at the Bad Munder headquarters to 50% by 2016.	Use CO <sub>2</sub> -neutral district heating and maximise its share in the total heating requirements.	 started	2016	Head of works technology
2		Support hot-water generation in a climate-neutral manner due to solar-thermal systems.	 started	ongoing	Head of works technology
3		Generate electricity from solar power (continued usage of the photovoltaic plant).	 started	ongoing	Head of works technology
4		Reorganise customer service (with a more regional structure) to cut travelling times and reduce CO <sub>2</sub> emissions.	 started	2014	Head of customer services
5	<b>Energy efficiency:</b> to cut relative electricity consumption by 2016 by 10 % (in relation to sales, reference year 2007).	Exchange all spotlights and lighting outside by LED lighting by 12/2015.	 started	2015	Head of works technology, company technicians
6		Replace cooling devices (snack vending machines) with more energy-efficient devices by 7/2014.	 started	2014	Head of the canteen
7		Replace electric water circulation pumps with high-efficiency, energy-saving Stratos pumps.	 started	2016	Head of works technology
8		Draw up a concept for recording electricity consumption better (smart metering).	 started	2014	Head of works technology
9	<b>Material efficiency:</b> continue to optimise the use of materials per product unit.	F'S 219/220 swivel chair range: save at least 20 % aluminium by optimising the star base.	 started	2014	Product development
10		Launch and implement an incentive system to cut down on remnants and scrap material in the production department.	 started	2016	Head of technology
11	<b>Low-solvent manufacturing:</b> keep VOC emissions at the Bad Munder headquarters at a constantly low level.	Carry out trials with low-solvent wood varnishes and assess their usage in volume production.	 started	2014	Varnishing department (surfaces)
12		Recycling: Purchase a distiller to recover solvents (wood varnishes).	 in planning	2015	
13	<b>Keep health and safety and environmental protection at a high level at headquarters and internationally.</b>	Sustainable supply chain: Make regular checks on the top 20 suppliers re quality, health and safety and environmental protection as well as fair working conditions. Identify the key suppliers and sustainability issues by 6/2014.	 started	ongoing	Sustainability manager, head of the purchasing dept.
14		Carry out annual checks and certify the Wilkhahn headquarters in Bad Munder in line with the specifications of the Forest Stewardship Council® (FSC)	 started	2016	Sustainability manager
15		Organise activity days on health at the Bad Munder headquarters and maintain and increase health-promotion programmes.	 started	2016	Company health-management team
16		Reconstruct the varnishing section in the training workshop: Integrate a manual spraying stand with safe and eco-friendly, dry-filter technology.	 started	2014	Head of technology, training workshops
17		Biodiversity: Continue support of the dwarf beech initiative and plant a dwarf beech on the company's premises	 started	2015	Environmental management

## EMAS core indicators.

EMAS core indicators		2010	2011	2012	2013
Total value creation <sup>1</sup> (€ millions)		20.3	25.5	24.1	21.8
<b>Material efficiency</b>	Total consumption of raw materials/consumables/supplies (t/€ millions)	144.3	131.3	128.8	130.2
	Total waste (t/€ millions)	29.0	22.5	19.4	22.5
	Hazardous waste (t/€ millions)	0.5	0.8	0.6	0.9
<b>Energy efficiency</b>	Electricity and heat consumption (MWh/€ millions)	433.0	330.6	324.7	359.7
	Energy from renewable sources (MWh/€ millions)	197.6	61.9	170.2	152.7
<b>Emissions</b>	CO <sub>2</sub> emissions from production and admin (t/€ millions)	66.6	104.0	64.8	100.9
<b>Biodiversity</b>	Area used (m <sup>2</sup> /€ millions)	936.0	744.0	788.4	869.9
	Change of sealed area compared with previous year (%)	0.0	0.0	0.0	0.0
<b>Water</b>	Total consumption (m <sup>3</sup> /€ million)	169.3	141.2	131.6	141.9

<sup>1</sup> Total value creation was calculated as the sum of the revenue minus costs for material, depreciation and amortisation and other advance costs.

## Material and energy flows: input/output.

Input	2008	2009	2010	2011	2012	2013
<b>Material efficiency – raw materials, consumables and supplies</b>	<b>(t)</b>	<b>(t)</b>	<b>(t)</b>	<b>(t)</b>	<b>(t)</b>	<b>(t)</b>
Ferrous metals	544.9	634.0	753.0	766.4	1010.7	666.6
Aluminium	333.7	492.0	793.0	958.0	614.4	615.6
Zinc	N/S	N/S	N/S	55.4	39.2	54.6
Wood	459.8	385.6	385.8	382.7	346.8	381.3
Laminates (HPL)	N/S	N/S	N/S	37.3	24.6	33.5
Plastics	427.3	385.8	561.8	796.9	695.9	548.4
Fabrics for covers	46.6	22.5	30.2	68.1	49.5	22.8
– percentage of natural fibres (wool)	N/S	N/S	20.4	11.8	36.9	14.4
Leather	20.8	31.3	32.5	46.7	40.6	19.7
Packaging (cardboard/wood)	96.8	170.7	294.7	179.9	249.3	465.1
Packaging (plastics)	32.6	21.4	53.2	54.2	68.6	33.6
Powder varnishes	9.1	1.9	4.3	6.3	4.8	3.3
<b>Energy efficiency (production + admin)</b>	<b>(MWh)</b>	<b>(MWh)</b>	<b>(MWh)</b>	<b>(MWh)</b>	<b>(MWh)</b>	<b>(MWh)</b>
Heat	7,188	6,267	6,495	6,120	5,470	5,635
Electricity	2,538	1,865	2,296	2,321	2,356	2,221
Total consumption	9,726	8,132	8,791	8,441	7,826	7,857
<b>Share of energy consumption from renewable sources</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>
Heat (vegetable oils + biogas)	24	40	31	16	58	49
Electricity (vegetable oils + photovoltaics)	74	153	86	25	40	25
Share in overall consumption	37	66	46	19	52	42
<b>Water</b>	<b>(m³)</b>	<b>(m³)</b>	<b>(m³)</b>	<b>(m³)</b>	<b>(m³)</b>	<b>(m³)</b>
Water (total)	4,717	4,239	3,436	3,606	3,171	3,100
– for sanitation	4,173	4,127	3,386	3,556	3,121	2,900
– for processing water	544	112	50	50	50	200
<b>Output</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
<b>Waste</b>	<b>(t)</b>	<b>(t)</b>	<b>(t)</b>	<b>(t)</b>	<b>(t)</b>	<b>(t)</b>
Mixed municipal waste	220.8	95.9	143.0	112.6	94.6	131.5
Paper/cardboard	159.0	97.9	150.7	145.8	126.7	138.3
Wood and sawdust	122.0	108.7	202.7	230.8	154.6	123.0
Ferrous metals	34.5	30.1	28.0	25.0	21.3	36.0
Leather	10.8	6.5	9.3	11.5	14.4	10.8
Packaging film	8.7	7.1	9.0	9.7	11.4	7.4
Aluminium	6.9	3.5	8.5	6.9	14.4	15.6
Textiles/fabrics	3.7	3.5	2.3	4.6	2.3	2.3
Solvents and solvent mixtures	13.0	14.7	2.7	1.1	1.7	1.3
Paint and varnishing waste, aqueous waste, halogen-free treatment emulsions	32.5	12.6	23.4	9.0	7.0	11.5
Batteries	1.1	0	1.0	1.5	0.9	0
Others	13.2	11.8	8.6	7.1	19.4	12.9
<b>Total amount</b>	<b>626.2</b>	<b>392.22</b>	<b>589.1</b>	<b>573.9</b>	<b>468.7</b>	<b>490.6</b>
<b>Total of hazardous wastes</b>	<b>27.3</b>	<b>18.8</b>	<b>27.6</b>	<b>20.7</b>	<b>15.4</b>	<b>19.1</b>
<b>Emissions</b>	<b>(t)</b>	<b>(t)</b>	<b>(t)</b>	<b>(t)</b>	<b>(t)</b>	<b>(t)</b>
Volatile Organic Compounds (VOCs)						
– from varnishes and dilutions	4.7	4.5	4.9	4.9	5.0	4.3
– from bonded coatings	4.3	4.3	3.3	1.7	3.8	3.3
Dusts (PM)	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen oxides (NO <sub>x</sub> )	0.4	0.3	0.3	0.4	0.2	0.2
Carbon dioxide (CO <sub>2</sub> )	1,743	231	1,356	2,657	1,561	2,203
<b>Biological diversity</b>	<b>(m²)</b>	<b>(m²)</b>	<b>(m²)</b>	<b>(m²)</b>	<b>(m²)</b>	<b>(m²)</b>
Area built on	19,000	19,000	19,000	19,000	19,000	19,000



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With its EMAS-validated and ISO 14011 certified environmental management system, Wilkhahn is taking responsibility for sustainably protecting our environment.

In the consolidated environmental statement that covers 2014 – 2016, Wilkhahn reports on the company's environmental performance and other aspects of sustainability.

The next update will be published in April 2015.

This 40-page brochure is available in German and English in print and as a PDF to download from the Wilkhahn website.

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