

## Responsibility all along the line

**2023 – 2025** Sustainability Report  
with EMAS Environmental Statement





## A Holistic Approach

Founded as a joinery in 1907, family-run Wilkhahn has become a globally successful premium brand in the office and contract furniture sector. It stands for German-made design like virtually no other.

And there are plenty of good reasons why. Because, very early on, Wilkhahn joined forces with leading architects and designers of the modern era to develop the foundations for key innovations and a design approach based on responsibility. The combination of first-class quality, pioneering functionality and timeless design was our response to the practices of the throw-away society.

Social responsibility has also been part of the company's DNA for decades. For a long time now, it has not just concerned the workforce at our own sites, but also in supply chains, business, and customer relationships and much more.

Buildings constructed by architects Frei Otto and Thomas Herzog at Wilkhahn's headquarters triggered the company's ecological transformation some 35 years ago already. As a result, Wilkhahn was no longer merely a design pioneer, but a multi-award-winning environmental one too.

Our endeavors to turn offices into places of collaboration, encourage physical activity, design furniture to show appreciation of those using it, embrace sustainability and digitalization, reflect demographic change, provide answers to the skills shortage and climate change are now aspects that our industry as a whole is grappling with. If we believe marketing messages, everything's now environmentally friendly and sustainable all of a sudden.

But in our opinion, sustainability remains first and foremost a question of quality. The longer and better our products can be used, the better the reconciliation of financial, social, ecological and cultural factors. What's

more, we follow the principles of a circular economy wherever practical. We've had annual EMAS certification since 2001. To reduce consumption and the impact on environmental resources, we constantly improve the way we use materials, our procurement channels, production and service processes. Our Wilkhahn Academy allows us to invest in training and expertise, which are vital to achieving exceptional performance.

So the title of our sustainability report says it all. In a dynamically changing environment, we and all our employees interpret the high standards of yesterday and today to meet the challenges of tomorrow's world. Our responsibility toward nature and the environment means we strive to produce the best possible, contemporary solutions that offer real added value.

We believe that the expertise and skills of people in the land of poets, thinkers and inventors are the most important assets in the global competition for future-proof solutions. We're delighted that our commitment toward a better and more sustainable design of office environments the world over is being recognized. And we consider it a challenge to keep following this path.

Thomas Mänecké  
CEO

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## A family-run company with a global reputation

Wilkhahn was founded in Bad Münden in north Germany in 1907. The self-financed, family-run company is privately owned. The works council chairman has a seat and vote on Wilkhahn's supervisory board. The company's purpose is the development, manufacture and worldwide marketing

Family-run company – managed by the 3rd generation  
 Design rooted in modernism  
 People's needs take center stage  
 Identity, collaboration and well-being are fostered  
 Wilkhahn design makes an internationally recognized contribution to sustainability  
 Focuses: Seating for the workplace, conference and collaboration spaces, informal spaces for people to interact  
 Exports account for 60% of business on all continents  
 Three Wilkhahn production sites: Bad Münden, Poznań, Sydney. Licensing partners in Tokyo, Casablanca, Johannesburg, Toronto

of advanced, high-quality and superbly designed furniture and furnishing solutions for attractive workspaces to encourage well-being, collaboration and allow people to identify with their company.

The Wilkhahn brand stands for first-class product quality, highly innovative functionality, and pioneering design. Under the banner of improving life sustainably, people-friendly design, durable and ecologically responsible product concepts and services make exemplary contributions to preserving resources and have won acclaim worldwide. We focus on furniture and interiors that offer the greatest potential for future-proof workspaces:

- Office chairs that make digital workers more healthy by encouraging movement.
- Conference, seminar and innovation spaces that boost decision-making and processes of learning and change.
- Informal areas for people to meet or withdraw to, such as cafeterias, lounges and areas in the middle of rooms that help to engender a community spirit, or be places to unwind at the same time.

In 2022, 457 co-workers generated sales of just under EUR 90 million, almost 60 per cent of which stemmed from international markets. Annual production capacity at Wilkhahn's headquarters in Bad Münden, Germany, is around 150,000 office task chairs, 120,000 visitor and conference chairs, as well as 30,000 tables and table systems annually.





## Brand values and corporate policy

**We believe in the power of good design.** Which is why we're passionate about sustainable office furnishings worldwide that boost health, foster well-being and creativity and empower people to do their jobs well.

**Form and function** on an equal footing. The Wilkhahn brand stands for first-class product quality, highly innovative ergonomics, and pioneering design. We define a contemporary premium brand as aiming for superior solutions with genuine added value. Being contemporary means understanding current circumstances and developments and creating pioneering solutions to meet future needs.

**We pass knowledge on.** Because knowledge is the future's most important commodity. As a company, our competitive edge is underpinned by our workforce's expertise. Which is why we see learning as a personal development opportunity. To build on our joint success, we share that expertise in the company and with business partners. As a result, in terms of expertise, skills and communication, we're better than our competitors.

**We provide impressive products and service** that go that extra mile. The whole is more than the sum of its parts – but it's the quality of all the details that governs the quality of the finished product or service. Which is why excellence along the whole spectrum of issuing quotes, producing and shipping our products is one of the core brand values. It's evident in every product and process and every encounter with the brand.

**We take responsibility and help shape the future.** We operate a policy of fairness toward each other and our suppliers, customers, and the environment. We take responsibility for nature and the environment and are driven by the requirements of people today and tomorrow. We comply with laws and regulations at all times.

**We take a proactive approach to identifying opportunities and avoiding risks.** We regularly review what we do and constantly strive for improvement. We pursue our corporate goals systematically and consistently to ensure the lasting success of our company.

The combination of business success, socio-ecological responsibility and involvement in cultural activities makes us an exemplary company worldwide that we continue to develop sensitively.

All Wilkhahn employees keep the brand promise. We're passionate about what we do and pull out all the stops to achieve objectives. Our customers sense our commitment, which makes us their preferred partner in global markets.

# Social responsibility

We practise a collaborative style of management where employees are invested in the company's success. Our group- and project-driven methods of working, which allow a high level of initiative, have been typical at Wilkhahn for decades. Since 2000, a potential-driven approach has been applied in the organization: "The company is organized to harness potential. The purpose is to harness synergy, pool skills and give individuals greater freedom to act".

## Transparency

As part of the long-term corporate strategy, all processes and the associated roles and responsibilities of managers and their co-workers have been precisely and transparently defined. Each month, managers and co-workers update the members of the management board on the key performance indicators set by the management board for their departments. A newsletter on the intranet entitled Wilkhahn Aktuell provides reports on international Wilkhahn events, successful reference projects, co-worker affairs, the activities of the works council and the status of corporate development projects. In blue-collar departments where there's no access to computers or the internet, intranet posts are displayed on large monitors in recreational areas.

## Personal development and HR management

Wilkhahn's employees are pivotal to achieving added value in the company worldwide. Which is why Wilkhahn systematically invests in upskilling and personal development programs, modern management methods, fair pay systems and developing an attractive corporate culture.

### • Wilkhahn Academy

At Wilkhahn, the workforce's skills and abilities are key to the company's success today and tomorrow. Each department's management team is responsible for identifying training module requirements, providing content and training capacities, and ensuring staff take part in training sessions. Training is coordinated with the human resources department, which is responsible for organizing and managing the training modules.

Under the banner of Learning from Each Other, the Wilkhahn Academy has five key goals:

- To make learning part of our daily working lives
- To safeguard, prepare and convey the wealth of expertise and skills the company already has and that result from corporate development projects
- To become acquainted with new tools and IT systems and learn how to use these
- To find and foster talented people
- To boost attractiveness as an employer and ensure that departments and skills interact at a high level compared with the rest of the industry.

If training modules can't be provided from within the company, external trainers are also used as required.



Wilkhahn, German trade union IG Metall and the global BHI Building and Wood Workers International union are committed to ensuring that fair working conditions prevail in Wilkhahn's supply chains and that employee rights are encouraged. Wilkhahn has been committed to this goal via a framework agreement it entered into voluntarily since 2009. From left to right: Former IGM chairman, Berthold Huber, today's chairman of the Wilkhahn supervisory board, Dr. Jochen Hahne, BHI general secretary Anita Normark and chairman of the Wilkhahn works council, Ralf Olaf Stender.

### • Vocational training

Well-trained employees are pivotal to a company developing successfully. Which is why, alongside personal development programs at the Wilkhahn Academy, the company provides vocational training in white-collar and blue-collar professions to young people, or collaborative higher education options. Those completing their training or courses are regularly some of the best in their year.

### • Active participation as the key to continual improvement

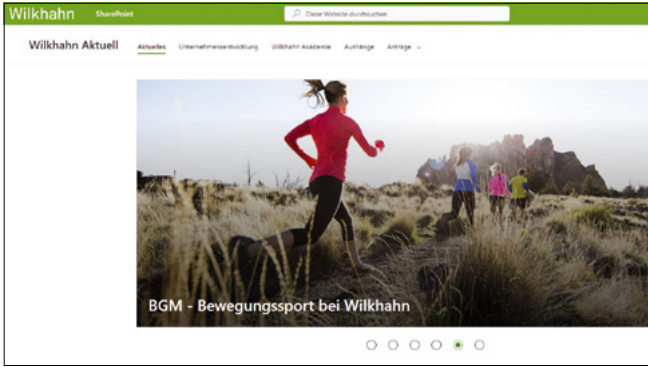
Wilkhahn actively involves its staff in the way the company is shaped. Alongside the management representative, the works council and the health and safety officer provide important stimuli to help improve social sustainability and responsibility for the environment. They often get the workforce involved through works meetings and the quarterly health and safety and environmental committee. Wilkhahn's ideas management system allows any co-worker to suggest ideas to make the company even better across all departments. Any good idea is also rewarded financially according to a transparent method.

The culture of ensuring employees are involved in shaping the company's future includes collaboration with the works council that has grown over decades to ensure reliability and continuity through company agreements, independently of those concerned. The chairperson of the works council has a seat and vote on the Wilkhahn supervisory board.

### Corporate values during collaborations

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. Wilkhahn





In-house communications to create a team spirit and provide news about what's going on at Wilkhahn internationally: The Wilkhahn Aktuell newsletters are published in German and English frequently.

views these corporate values as joint fundamental convictions that are shared, practised and developed by all the workforce worldwide. They underpin the way we act, particularly our leadership and participatory culture at Wilkhahn.

**• Equal opportunities, anti-discrimination, fair pay**

All apprenticeships, vacancies and management positions are advertised and awarded without any discrimination towards a particular gender. The principle of equal pay for the same job has applied regardless of gender and ethnic group at Wilkhahn for many decades. The abilities of people with special needs are respected at Wilkhahn. And these people are integrated into standard day-to-day operations. The regulations on pay, vocational training and equality are also set out in company agreements. Wilkhahn has appointed an anti-discrimination and equal opportunities officer who acts as a point of contact and mediator alongside the works council.

The remuneration system is transparent, based on the agreements of the collective bargaining partners and includes additional voluntary social benefits, such as company pension schemes, meal allowances and benefits as part of the company's program to encourage healthy employees.

**• Bonus scheme**

A new bonus scheme was developed for blue-collar workers 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 to encourage people's sense of responsibility and motivation to carry out quality control.

**Social responsibility**

Wilkhahn is a member of several clubs, associations and networks dealing with sustainability, which the management team and co-workers are actively involved with during working hours.

- Potential-driven
- Objectives agreements
- Wilkhahn Academy
- Fostering talent
- Participation-driven
- Fairness
- Excellent vocational training
- Equal pay for the same job
- Open to higher education colleges

**Social Commitment**

Wilkhahn is also committed to public education, with employees supervising bachelor's or master's theses. On request, the company hosts and supervises high-quality excursions for various colleges of higher education in areas such as architecture, design, and sustainability several times a year.

We also regularly report on our cultural and social activities in our blog, during talks at higher education colleges, associations and institutions and in trade publications on new work, office ergonomics, design and sustainability.



Architectural symposium 2019 at Wilkhahn: The Bauhaus 100 - Lessons for a digitalized world?



## Encouraging health and safety

### Workplace health and safety

“Health is a very important issue, both to individuals and the company. Which is why protecting, maintaining and actively encouraging the good health of our workforce is one of our company’s most important goals.”

Wilkhahn is committed to encouraging good health for two reasons:

- To ensure the company survives, we need to look at the links between motivation, maintaining productivity, coping with demographic change and people working longer.
- As a developer, manufacturer and marketer of furniture for contemporary working environments, we want to foster our employees’ well-being and health and ensure successful outcomes.

### Company health-management system

The company health management team consists of the chairperson of the works council, the human resources manager and staff, as well as the health and safety officer. They proactively create incentives to encourage good health that complement the risk-avoidance approach of occupational safety management. See box for core goals.

### Behavioral and structural approaches for systematic health and safety based on ISO 45001

These include:

- Planning safe procedures and workspaces
- Organizing and defining responsibilities
- Defining and implementing health and safety and fire safety measures
- Providing information and training on hazards in the workplace and correct approaches

### Core company health-management system goals

- To reflect demographic change in an aging workforce
  - To boost awareness by managers
  - To ensure everyone takes responsibility for their health
  - Familiarization management
  - To take preventative action
  - To incentivize fitness by providing a monthly subsidy
  - Activity days
  - Physiotherapy and sports offerings
- Making frequent safety inspections of the workspaces
  - Holding quarterly consultations in the occupational health and safety committee, in which the occupational health and safety interests of all Wilkhahn employees at the headquarters are represented
  - Providing frequent updates of the workspace risk assessments
  - Offering frequent training courses for the safety officers and first responders

The health and safety officer is consulted early on during the planning phase and ensures that physical and mental stress is minimized. Wilkhahn provides equipment for physically demanding tasks, such as lifting table tops or turning task chairs during assembly: Lifting equipment and electric lifting and turning machines have been used for many years, as have safety devices on machines and height-adjustable tables.



If possible, no hazardous substances or materials are used. Where unavoidable, for example when degreasing or bonding items, quantities are optimized and protective measures taken so that safe handling of the hazardous substances is guaranteed.



Wilkhahn gives its co-workers practical and in-depth information on current health and safety issues during frequent activity days.

Wilkhahn co-workers are only permitted to carry out risky jobs if they've been informed about the relevant rules governing safety and conduct beforehand.

It goes without saying that Wilkhahn provides free personal protective equipment, such as safety shoes or ear protectors to staff. A company physician also gives advice during recurrent surgeries and offers check-ups.

The mental strain that both staff in the production departments and offices can be subjected to is a relatively new area of health and safety. As part of a pilot project with professional associations, Wilkhahn was one of the first companies in Lower Saxony to include psychological stress when assessing the risk in all workspaces. Special acoustics components were purchased to cut down on noise-related stress in offices and managers were made aware of various types of psychological stress.

Wilkhahn invests consistently in health and safety maintenance. The low number of accidents incurred by our co-workers at our Bad Münde headquarters proves that professional health-and-safety management is worthwhile.

Wilkhahn invests consistently in health and safety maintenance.

Frequent risk assessments effectively reduce the risk of accidents and long-term illness.

Occupational health and safety management complies with the German Occupational Health and Safety Act, which is based on the ISO 45001 standard (formerly OHSAS 18001).



To minimize strain on production employees and to improve workspaces consistently, Wilkhahn uses various lifting and transport equipment.

# Certification



As a multi-award-winning manufacturer, Wilkhahn is virtually unparalleled in the office and contract furniture sector when it comes to meeting stringent requirements on design, function and sustainability. Various external certificates for companies, as well as products and materials, guarantee safe, durable, pollutant-free, low-emission products manufactured under fair conditions – and, therefore, sustainability according to globally recognized standards.

## Company certificates

### ISO 9001:2015 quality management system

In order to safeguard and continually optimize the high quality of products and processes at Wilkhahn, a comprehensive quality management system was set up as early as 1996. Since then, it has been certified for compliance with the ISO 9001 Quality Management Standard of the International Standardization Organization. Quality management is all about customer focus, management responsibility, the participation of all employees involved, ensuring and improving process safety and relationships with suppliers.

### ISO 14001:2015 environmental management system

Wilkhahn is also certified to the ISO 14001 international environmental management standard, which defines globally recognized requirements for environmental management systems, such as environmental performance indicators and assessments.

### EMAS

This is an acronym for EcoManagement and Audit Scheme, developed by the European Union. As a combined environmental management and auditing system, its purpose is to verify companies are improving their environmental performance. At its north German headquarters in Bad Münde, Wilkhahn has been regularly certified to the latest version of EMAS since 2001. In the environmental statement, corroborated by annual audits, Wilkhahn gives a public account of the company's environmental performance. The environmental statement can be downloaded from the Wilkhahn website. Detailed environmental product information about each product can also be downloaded.

### FSC®

The Forest Stewardship Council® (FSC®) quality label indicates compliance with stringent socio-ecological requirements in terms of wood production and trading wood products. The Wilkhahn headquarters in Bad Münde meet the criteria of the FSC and are entitled to process and sell FSC®-certified products (license code C118389, certificate no. TUEV-COC 000462).

### FISP

The UK Furniture Industry Sustainability Programme (or FISP for short) wants to foster effective environmental protection, social progress, careful usage of natural resources, economic growth and employment. FISP was developed by the British Furniture Industry Environment Committee (FIEC) whose members include major trade as-

## Wilkhahn supports the UN Global Compact

Wilkhahn is committed to sustainable development goals throughout the company.

Wilkhahn joined the UN Global Compact in December 2007, therefore making the policy of responsible corporate management binding for all areas of the company. Wilkhahn defines corporate responsibility as a management philosophy that strives to achieve an acceptable balance between the requirements of all stakeholders.

## The ten principles of the UN Global Compact

### Human rights

- Principle 1: States that businesses should support and respect the protection of internationally proclaimed human rights and
- Principle 2: Make sure that they are not complicit in human rights abuses.

### Labor

- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining
- Principle 4: Eliminate all forms of compulsory and forced labor
- Principle 5: Abolish child labor
- Principle 6: Eliminate discrimination in respect of employment and occupation.

### Environmental protection

- Principle 7: Businesses should support a precautionary approach to environmental challenges
- Principle 8: Undertake initiatives to promote greater environmental responsibility
- Principle 9: Encourage the development and diffusion of environmentally friendly technologies.

### Anti-corruption

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.





Green Tick  
Product  
Certification



sociations and furniture manufacturers. Since 2006, FISP has become an international network of over 60 members, one of whom is Wilkhahn.

### Product certification

#### GS mark

Many Wilkhahn products bear the globally recognized GS mark. During the inspection, the products are tested for quality and safety standards and examined for harmful substances. Compliance with domestic and European requirements guarantees safe products.

#### ANSI/BIFMA X5.1 and X5.5

In addition to the GS mark, which is the leading label in Europe, some Wilkhahn products are also certified for compliance with the US standards X5.1 and X5.5 (which were developed jointly by ANSI and Bifma) for their safety, durability and functional suitability.

#### Blue Angel

The German government's Blue Angel is an independent benchmark for exceptionally environmentally friendly products. Wilkhahn uses various materials that have been awarded this label. Wilkhahn products often meet the UZ-117 requirements for low-emission, upholstered furniture. Some models have Blue Angel certification.

#### Greenguard

Virtually all Wilkhahn ranges undergo Greenguard testing and certification. The Greenguard Environmental Institute is an independent institution in the US that primarily certifies products with regard to their suitability for interiors. Besides environmental aspects, special focus is placed on ensuring that products don't emit any pollutants that might be harmful to health.

#### AFRDI Green Tick

The Australian Furnishing Research and Development Institute's Green Tick product certificates are specifically adapted to the requirements of the furniture industry. The certificate takes an integrated approach to the product and examines the procurement of the materials all the way to the design. Wilkhahn was the first company to achieve the certificate's platinum level. Many Wilkhahn ranges have the Green Tick.

### Other product and environmental information

#### Environmental product information

During development, the environmental impact of all Wilkhahn products is assessed via an analysis of the whole product life cycle. Our environmental product information transparently outlines the materials used, recycling proportions, recyclability and product certificates for many products.

#### LEED

Leadership in Energy and Environmental Design (LEED) is a rating system used by the US Green Building Council to evaluate the environmental and social compatibility of buildings. LEED certification awards extra credit points if Wilkhahn office chair and table ranges are used.

#### Fire safety

Wilkhahn products meet various national and international fire safety regulations for upholstered furniture. The European EN 1021-1 standard is the definitive one. Customers can request compliance with other standards too. Wilkhahn strives to ensure fire safety without any collision with ecological issues and to achieve the standards without special chemical substances where practical.

#### REACH

Wilkhahn products meet the requirements of the REACH regulation on the registration, evaluation, authorization and restriction of chemicals in the EU. Neither Wilkhahn nor its suppliers use unauthorized substances in production.

#### RoHS

The electronic components installed in Wilkhahn ranges comply with the EU's RoHS directive. Wilkhahn ensures maximum recyclability of materials by ruling out hazardous substances in electronic components.

Wilkhahn office furniture fulfills the relevant international standards regarding durability, safety and ergonomics in workspaces and is often awarded the GS mark.

To ensure that the air in buildings is healthy, Wilkhahn furniture is low in emissions. Which is verified by recurrent Greenguard™ emissions tests.



# Product creation – concept and design

“A poor and superfluous product will remain poor and superfluous, even if it’s produced in an ecologically friendly manner”.

## Three important factors

Because the world’s population is growing and people justifiably want a share in the wealth created, strategies that are only concerned with the ecological quality of products are heading up a blind alley. Since the middle of the last century, less is more has been a design goal that focused on the less aspect and making products better. The famous Ulm University of Design’s founding manifesto back in the early 1950s already indicated Wilkhahn’s direction of travel. Its aim was: “... to develop durable products, increase their utility value and reduce waste”. Three factors above all govern how long a product will last: Perfect functionality that’s still up to date many years later; quality design, materials and surfaces which are geared to users and to be impressive for a long period of time; and a timeless design language that doesn’t just appeal to people’s minds but to their hearts as well.

## Pioneering innovation

The key question we ask ourselves is: How can we improve people’s lives sustainably through the way their workspaces are furnished and fitted out? 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. Which is the reason why innovations at Wilkhahn are the result of a careful development process, which starts by thinking outside the box and truly making things better.

## Durable quality

The quality Wilkhahn is famous for has made the brand internationally successful. Precise dimensions, form-fit parts and surface quality convey perfection and the high-quality nature of the product. What’s the point of being able to recycle virtually all the product if it’s less attractive, heavier and works less well as a result? Therefore, a careful balance is struck between availability, performance, material costs and recycling requirements for instance. In addition to the standard of materials, particular attention is paid to smart design principles that include the ability to repair and upgrade the products.

## Timeless, attractive design

Wilkhahn’s design language typically gets to the heart of the matter, conveys the product’s natural aspects and its ease of use. The integrative design concept lends products a transparent, attractive and consistent look. The products harmonize with all sorts of backdrops without dominating them. In other words, a Wilkhahn product can accompany its owner a life long because it doesn’t become boring, lose functionality or its aesthetic appeal.

A practical purpose as the basis for eco-friendly product design

Real added value in terms of product use

Functionality that’s sustainable

Appropriate material selection and superior craftsmanship

Timeless, integrative design

Wilkhahn had already introduced an all-embracing ecologically responsible design concept back in 1991. Today, the design management and product development departments follow the criteria of the Federal Ecodesign Award, which was initiated by the Federal Environment Agency and the International Design Centre Berlin with the Eco Institute in Freiburg.





**Modus office chair**

Design: Klaus Franck, Werner Sauer

Since 1994, it's been a blueprint for using resources effectively. It offers exceptional, dynamic comfort, uses materials sparingly and has easy-to-replace expendable parts. Modus can also be disassembled completely by just removing eight to 12 screws.

## 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. Avoid waste – “the longer and better”**

is the remit to our product development team.

We achieve this thanks to:

- Useful innovations that make life easier and more pleasant in the long term;
- Durable quality of materials, surfaces and technical solutions, which guarantees quality, even years later;
- Distinctive, timeless and appealing designs with the potential to become classics;

**2. Reduce – “less is more”**

Is more than 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 in manufacturing efficiently, for example by drawing on district heating and heat recovery in manufacturing;
- We reduce emissions, by utilizing solar power and climate-neutral energy sources (cutting carbon emissions).

**3. Recover – “Reuse + 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.
- Where possible, we use mono-materials that are marked as such, making them ideal for recycling and for achieving the goal of a circular economy.

**4. Fairness – responsibility all along the line**

At Wilkhahn, environmental and social responsibility have an equal weighting. Health and safety, training, active participation by and fair pay for employees are integral to our corporate culture. As a result, we actively encourage our suppliers and customers worldwide to improve working conditions. Which is why Wilkhahn joined Global Compact and signed an international framework agreement with the International Labor Organization (ILO) on global recognition and fostering of employee interests.





## Sustainable, certified materials

Wilkhahn items of office furniture are true quality products. Wilkhahn pays attention to detail and applies first-class materials and top craftsmanship to make its products. Upholstery materials, leather, composite wood, foam, plastics and metals are some of the materials Wilkhahn uses. They are primarily made by specialized suppliers according to specified technical and aesthetic standards.

Wilkhahn places huge emphasis on consistently high quality. Therefore, it checks incoming goods according to specific criteria.

### **Low-emission leather**

The leathers chosen by Wilkhahn are first class, robust and have pleasant haptics. Above all, suitable tanning agents and dyes mean they don't have a strong smell and aren't toxic. When creating the collection, in addition to the aesthetic appeal, the company made a point of including no harmful substances.

Wilkhahn uses European cowhide, which is primarily manufactured in Germany and Austria. The tanneries only use tanning agents and additives that comply with European laws on the environment and chemicals. Wilkhahn performs regular on-site audits to ensure that the stringent European health and safety and environmental standards during leather production are complied with.

Wilkhahn leather is currently available in two leather categories and in various colors. The two types of leather available are German-produced premium leathers and have been awarded the Blue Angel label. They contain no harmful substances, are low on emissions and, in terms of water consumption and waste-water criteria, are particularly eco-friendly.

Wilkhahn only uses low-emission textiles and leather. Some upholstery materials in the Wilkhahn collection have OekoTex 100, the EU Ecoflower or Blue Angel certification.

Natural materials, such as fabrics and fleeces made of virgin wool, cotton, cork and coconut fibers are some of the exceptionally ecological materials Wilkhahn applies.

Wilkhahn foams are comfortable, durable and can be recycled because none contains halogenated flame retardants. Our foams are CFC and halogen free.

Wilkhahn tables and office chairs are available in several standard colors, which are made in an energy-efficient way in our own powder-coating machinery and contain no solvents or heavy metals. Customized colors are also possible on request.

### **Vegan leather**

Wilkhahn can also offer upholstery material in imitation leather as a vegan alternative to real leather. These polyurethane-based artificial leathers are hard-wearing and particularly easy to clean. We recommend choosing imitation leather in areas subjected to heavy usage where hygiene is also critical. Because its surface has no pores, it can repel liquids much better and is easier to clean compared with leather and woven upholstery materials. Wilkhahn's artificial leather is made in a resource-friendly manner and low on harmful substances. It also has OekoTex 100 certification.

### **Upholstery materials**

Wilkhahn offers upholstery materials that fulfill superior demands on design and are ideal for professional use. Depending on the fabric group, the upholstery materials





are made of high-quality wool, some of which is recycled, long-lasting synthetics or a blend of natural and synthetic fibers. In the case of synthetic fibers, covers made of up to 100 percent post-consumer recycled plastic are used, which consists of up to 50 percent plastic from oceans.

All upholstery materials at Wilkhahn are made without azo dyes or other chemicals banned in the EU. Some upholstery materials also have well-known quality labels, such as the OekoTex 100 or the Blue Angel. If required, samples and data sheets can provide detailed information on all Wilkhahn fabric groups.

Mesh fabrics or knitted fabrics made of durable synthetic fibers, of the type used for the IN office task chair, are particularly efficient when it comes to materials and are environmentally friendly. When covers are knitted, virtually no production waste occurs at all because their contours are created by special patterns. Therefore, contouring is not required by the need to cut rolls of fabric.

### Plastics

Modern product design is inconceivable without plastics. Wilkhahn uses robust polyamide, polypropylene and polyurethane plastics that are as pure as possible. If required, fiberglass-reinforced plastics are also applied. To enable subsequent recycling, Wilkhahn labels all plastic components with clear details about the materials. Plastic components can also be made of recycled materials as long as aesthetic and technical requirements are met. Which is why Yonda's seat shell is made of an innovative, food-safe biocomposite where 70% of the material consists of post-consumer recycled polypropylene and 30% locally sourced waste wood. The two are combined to produce a solid, durable but elastic material. After a long period in use, it can be turned back into granules to make new products without any quality loss.

### Foams

Wilkhahn uses polyurethane foams of different densities to achieve optimum comfort in each case. All standard foams are CFC-free and don't contain halogenated flame retardants. As a result, they can be recycled once the product has reached the end of its useful life.

Wilkhahn meets fire safety requirements in a manner that's as environmentally friendly as possible. Special upholstery materials from the Wilkhahn collection protect



the foams from becoming ignition sources. In order to meet particularly stringent requirements, Wilkhahn also offers upholstered types that come with additional fire-resistant padding fabrics or flame retardant foams.

### Composite wood and solid wood

Wilkhahn uses industrial composite wood for its high-quality table ranges that is low on emissions and ensures a consistent standard of craftsmanship. For the first-class and wide range of wooden edging, we choose strips of veneer and solid wood that tick all the boxes when it comes to the design, technology and environmental impact.

The composite wood materials and solid wood in Wilkhahn's tables are primarily produced regionally and from responsibly managed forests. This is guaranteed by European regulations on forest management and traceability of the origin of the wood.



Wilkhahn also gives preference to partners who have been certified to international sustainable forestry management standards. For example, the guidelines set by the Forest Stewardship Council (FSC®) place high socio-ecological demands on the production and trade of wood.



### **Genuine-wood veneers**

Wilkhahn veneers are sophisticated natural products. Only the best-quality tree trunks are turned into fine veneer leaves and, in turn, experienced experts only select the best ones. 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 range of veneers includes flowery and stripy veneers made of oak, maple, walnut, elm, ash and beech and many other European wood species. Wilkhahn frequently procures and processes special veneers for exclusive customer requirements.

Wilkhahn has also been using synthetically made genuine wood veneers as responsible alternatives to tropical types of wood for years. These imitate the look of wood such as Makassar or zebrano, protect the rain forests and also exhibit very good technical qualities.

### **Metals**

Many components in Wilkhahn's office furniture are made of metals. Tubular steel, spring steel, metal sheets and screws with different alloys, but also tubes and parts made of die-cast aluminum and zinc alloys are used. Wilkhahn's product development department specifies the materials, which are chosen to fit the purpose and the components' required technical characteristics.

Some of the metal components at Wilkhahn are made of recycled materials. Some aluminum components are made exclusively of recycled material. Clearly labeling the metals ensures that they are easy to recycle at the end of a long product life.

### **Decorative and sustainably produced metal surfaces**

Wilkhahn offers product components that optionally come with chrome-plated, anodized, powder-coated or polished metal surfaces. None of Wilkhahn surfaces is harmful to people or the environment.

During the chrome-plating process, the surfaces are refined by electroplating them. Chrome-plated components are timelessly elegant and particularly resistant



to scratches and corrosion. Wilkhahn uses carefully selected partners to carry out the chrome-plating process. Regular inspections of their galvanizing processes also ensure that strict environmental-protection and health-and-safety regulations are also kept to during chrome plating.

During powder coating, the metal components are covered with a hard-wearing varnish. At the Wilkhahn headquarters, the powder-coating process is especially eco-friendly because surplus powder is recovered. The powder varnishes Wilkhahn uses also contain no organic solvents or heavy metals.

During the anodizing process, some of the aluminum is turned into aluminum oxide with the aid of an electric current. Oxidation renders the surface more scratch proof and gives it an even matte shine. The decorative surface isn't varnished and contains neither solvents nor heavy metals.

Wilkhahn offers almost all aluminum components as matte-polished, polished or high-luster-polished versions. The high-quality, decorative surfaces are achieved mechanically by repeatedly polishing and cleaning the aluminum components. As this process requires less energy and no chemicals, polished surfaces are very kind to the environment.

All materials are made in a fair and ecologically friendly manner. Frequent audits in the Wilkhahn supply chain ensure this is the case.

Wilkhahn uses wood from responsibly managed forests for tables and with the FSC® seal of quality on request.

Good design and first-class materials make Wilkhahn products durable. And many items of Wilkhahn furniture have extended five-year guarantees.

Chrome-plated metal finishes contain no harmful chrome compounds or other heavy metals (as specified in EN 71-3).

# Production

Wilkhahn office furniture is manufactured according to specific customer requirements. Based on a standard model, customers can choose from lots of features. Furniture is only produced to order at Wilkhahn once we've discussed all the details with our customers. Perhaps customers have special requirements in terms of electrical conductivity or fire safety, or want covers in fabric or leather, metal surfaces that are polished or coated in different colors, or casters for a task chair that are suitable for carpets or parquet flooring, or other special features. As a result, we can guarantee a high level of customer satisfaction and prevent waste because furniture has been produced unnecessarily.

## Production planning

To ensure that errors are systematically prevented during all areas of production every day, each order from a customer is divided into a number of documented production orders. Workflows and material requirements are planned in advance and then scheduled automatically to a large extent. Therefore, alongside the material they need, employees always have the information about the order to hand so that they can make and assemble the products by themselves to the greatest extent possible. To reduce



paper consumption, Wilkhahn provides information electronically on energy-saving screens in an increasing number of departments.

## Internal checks, component and product audits

Wilkhahn developed a system of frequent internal controls and audits to make products for discerning demands and in consistent quality.

All materials used to manufacture Wilkhahn furniture are tested and inspected several times beforehand to ensure that they meet the specific defined characteristics. Extra inspections of incoming goods are carried out on pre-materials and components that Wilkhahn has manufactured by suppliers. The random sample inspection is based on the AQL standard ISO 2859 (Acceptable Quality Limit).

In production, based on the principle of people inspecting their own work, results are checked before the product is passed on to the following department. Products have

Wilkhahn's office furniture is made to order so that customized requirements can be met and excess production prevented.

Planning production orders ensures all workflows are transparent and people can work independently during production.

A comprehensive control and inspection program ensures that the products are made to consistently high quality.

to pass one final control stage before shipment to the customer. All technical functions, such as the ability to lock the backrest or adjust the height of task chairs, are also checked before the product is packaged.

In the case of conference table systems, layout plans and detailed drawings are compared with the finished product and the surfaces and general production quality are assessed. Any relevant multi-media fixtures and fittings are also checked as required. If desired, an additional inspection and acceptance of the furniture by the quality control team can be specified in the order.



## External audits

Wilkhahn regularly adds external testing procedures by renowned testing institutes to its own internal system. This includes product audits on a case-by-case basis on whole tables and chairs, as well as chemical and physical inspections of materials. For example, the level of shine on Wilkhahn varnishes or the bonding force of the adhesives are examined. Over the past few years, periodical checks on harmful substances were also added to the checks and carried out by external testing labs.

## Customized materials

In addition to standard materials, Wilkhahn also uses customized materials, purchased at the customer's request. Materials provided by the customer can also be used. However, in this case, material must be suitable for its intended use and special materials are also tested first before processing.





## Ecologically relevant activities and machinery

### **Sewing and upholstery departments**

Right up until today, sewing, upholstering and covering seating are manual jobs in chair manufacture. Experience, dedication and precision are required every step of the way to achieve a perfect result. The seat cover with its underlying foam body and the load-bearing seat shell are connected with each other during the upholstery process. When covering task and visitor chairs, Wilkhahn uses sophisticated made-to-measure covers which, depending on the range and model, have reinforced layers and non-wovens to provide cushioning.

Wilkahn covers have an exceptional eco-friendly design. In many areas, precise and long-lasting stitching prevents the use of adhesives. Piping and deep top stitching to create contours guarantee the upholstered sections stay comfortable. Should a cover become worn and torn after a long period of heavy use, the chair's useful life can be

extended in an eco-friendly manner by simply replacing the cover.

Wilkahn chooses adhesives that comply with stringent health and safety requirements and are approved based on the European regulations for hazardous substances. Solvents from adhesives are an important health and safety aspect. However, because of the low quantities emitted from just approx. 15 kg of solvents per day, they play a minimal role in environmental protection at Wilkhahn. Smart product design means Wilkhahn only uses very little adhesive and keeps to emission-protection regulations, despite the rising amount of adhesives applied in the upholstery department every year.

Further environmental aspects of upholstering are moderate energy consumption due to ventilation and compressed-air-driven tools.





### Steel workshop

Frames for standard tables and customized table frames are made to customer specifications in Wilkhahn's steel workshop. Machining steel alloys and aluminum metals includes cutting, drilling, turning as well as welding and grinding. This produces low levels of emissions (welding gases) and noise.

In this case, significant environmental aspects are the energy consumption of the machines and the safe handling and storage of oils, greases and cooling lubricants.

### Powder coating

The powder-coating machinery at the Wilkhahn headquarters in Bad Münde coats various metal components such as table frames, tubes and star bases with different colors to suit customer preferences and protects them from corrosion at the same time.

Before the varnishing powder is applied, the metal parts are checked to ensure they are in perfect condition before they are cleaned in the water basin. After degreasing and rinsing in the water basin, industrial drying follows and the powder is then fired at 190°C.

The machine's energy consumption is therefore the key environmental aspect. The process water required and its proper disposal are also major environmental aspects.

Over the last few years, Wilkhahn has invested in enhanced insulation of the sheds and optimized heating circuits to cut down on heat loss. For years, aqueous waste has been reduced to the absolute minimum by recycling and treating the cleaning water.

Virtually all superfluous varnishing powder can be recovered and used again directly. Altering the coating color is now possible without changing the powder chamber, therefore further slashing energy consumption. Powder varnishes used at Wilkhahn contain practically no solvents or heavy metals.

### Table assembly

About 15,000 tables are assembled at headquarters in Bad Münde annually. Alongside a wide array of standard frames and table top formats, Wilkhahn also assembles customized tables. In this case, the most relevant environmental aspect is the use of materials for parts of frames and table tops, which have been made and varnished externally by specialized partners since 2020. Wilkhahn carries out complex incoming goods audits to ensure that table tops are only assembled if they comply with customers' specifications. What's more, recyclable packaging is applied so that the tables reach customers in perfect condition.





Other environmental aspects are moderate energy consumption for lighting and electric manual tools and devices.

#### **Chair assembly**

About 160,000 task and visitor chairs are assembled annually. The assemblies and single components used are supplied by upstream departments, such as the powder coating and upholstery departments at headquarters, or by external suppliers via the material warehouse. Key environmental aspects are energy consumption for lighting, electrical and compressed-air-powered ergonomic assembly equipment and hand-held tools, as well as energy consumption of the vehicles used to transport the materials and finished chairs. Overall, the environmental impact of chair assembly is very moderate.

#### **Energy and heating technology**

At the Bad Münders site, Wilkhahn operates a photovoltaic plant, two solar-thermal power plants and other small combustion systems for liquid and gaseous fuels. Since 2012, a district heating pipeline has been supplying the Wilkhahn headquarters in Bad Münders with climate-neutral heat from biogas, which is generated in a neighboring biogas plant.

By regularly maintaining and inspecting the systems, sulfur dioxide and nitrogen oxide emissions constantly fall below the statutory thresholds (in line with section 1 BIm-SchV – The Federal Emissions Protection Act). Emissions of SO<sub>2</sub> and NO<sub>x</sub> are comparatively low. Pollutants in the air have been cut drastically since eco-friendly heat from district heating has been used. Which is why the Wilkhahn environmental management system considers them environmental aspects of secondary importance. Wilkhahn places huge emphasis on consistently limiting carbon dioxide emissions by maximizing the proportion of heat from district heating and employing energy-efficiency measures.

#### **Delivery and shipping logistics**

The regional, domestic and international transport associated with supplying materials and shipping products consumes energy and causes emissions of carbon dioxide,





fine dusts and nitrogen oxides. If reconcilable with the requirements of international customers, Wilkhahn uses truck, rail-bound and seaborne transportation, which cause fewer greenhouse-gas emissions than planes.

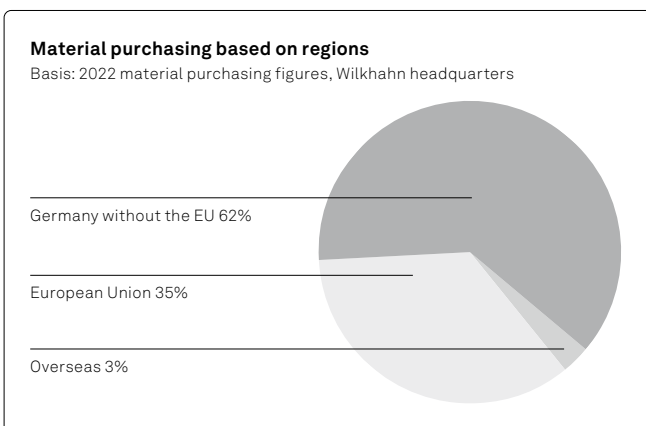
Wilkhahn improves the emissions associated with transport in the supply chain by optimizing drivers' routes and increasing the loading capacity per truck. Wilkhahn collaborates with logistics partners who use energy-efficient vehicles that produce low quantities of harmful substances. For deliveries from key suppliers, Wilkhahn also increasingly encourages returnable packaging to reduce material and energy consumption even further.

When shipping Wilkhahn office furniture to international customers, Wilkhahn only uses the maximum packaging required for items to be delivered reliably to the customer. In addition to protective film made of recyclable polyethylene and appropriately sized cardboard boxes, blankets and wood-based materials are frequently chosen. In addition to protective film made of recyclable polyethylene

and appropriately sized cardboard boxes, blankets and wood-based materials are frequently chosen. Our own production of customized, specially designed packaging guarantees cardboard boxes are produced in perfect sizes. To minimize the quantity of material used, various grades of cardboard, some of which is recycled, are used. To safeguard shipments, the very few cut-offs are used as filling material and can be recycled.



Sustainability included: Wilkhahn developed a special backrest fastener for worldwide shipping of the ON® task chair range. Knock-down shipping creates a compact size that reduces transport-related emissions.



At the Bad Münde headquarters, items required for production are mainly procured regionally: Well over half of the materials come from suppliers in Germany, and another third from partners in Europe. Only a small proportion of materials are sourced from countries far away overseas.

### Wilkhahn vehicle fleet

The Wilkhahn vehicle fleet consists mainly of sales reps' cars and Wilkhahn's customer service team's vehicles. Special vehicles like fork lift trucks are also part of the mix. All Wilkhahn cars comply with the Euro 6 exhaust gas standard at least and most have eco-friendly extras such as automatic start-stop systems or enhanced aerodynamics.



# Usage – product innovations, sustainability included



FS-Line, design: Klaus Franck, Werner Sauer, 1980

## The product is the proof of the message

Each and every Wilkhahn product is a prime example of practical functionality, quality and design as the key to sustainability. Milestones such as the classic FS-Line and Modus office chairs, which are still cutting edge, are impressive for their excellent dynamic comfort, top quality design and longevity. Thanks to the cost-effective replacement of upholstery and covers as well as technical wear parts, the chair models can be brought up to date at any time, even after long period of heavy usage.

The ON office chair with its patented 3D synchronous adjustment technology called Trimension® has become an award-winning benchmark for healthy and excellently designed three-dimensional dynamic seating worldwide. Alongside the key design accolades worldwide, it has also received the Federal Ecodesign Award. And the athletic IN office chair with its direct control, high-tech seat and back, as well as its waste-free 3D form-fit knitted cover on the backrest, is even more dynamic but has fewer separate components. And the AT product family with its automatic weight adjustment feature and wide choice of models ensures that this new type of movement can also be applied in hot-desking workspaces.



Modus, design: Klaus Franck, Werner Sauer, 1994

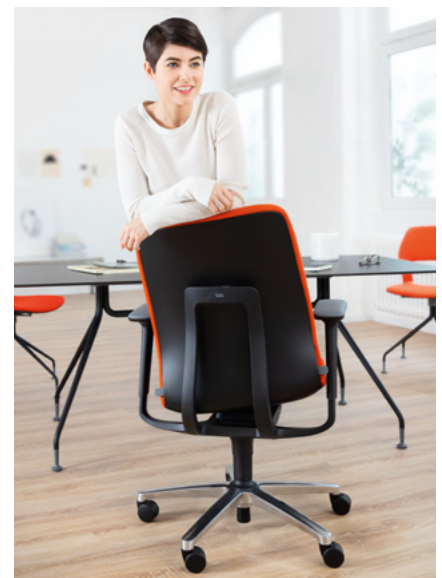
The Confair folding table, for dynamic conference shapes that encourage interaction and participation, consists of one-type, recyclable materials, and repair-friendly connecting parts. It also allows much better use of space, cuts the time and costs spent on facility management and saves on resources, emissions and maintenance costs when setting up and operating conference and seminar spaces. This eco-friendly approach goes above and beyond what can be achieved through the ecological concept behind a product. The same applies to our Aline multipurpose chair that combines a minimalist approach to the materials used to make it with maximum transparency, a compact size when stored away and easy handling.



ON, design: wiege, 2009



IN, design: wiege, 2015



AT, design: Wilkhahn, 2018

### Innovative concept milestones

Office chairs for healthy dynamic sitting

Dynamic tables for participation in processes of innovation and change

A modular principle to combine variety with identity and reduce the number of parts

Development studies with 3D printing based on biopolymers like lignin as a renewable resource

With 192 basic designs, the Occo multipurpose chair range is a modular solution for all types of meetings. It combines comfort and variety with a sense of identity that easily allows subsequent modifications and conveys the fascination with natural materials with optional solid wood frames and panels. The studies on PrintStool One evaluate how the latest 3D printing technologies can produce a new aesthetic with a minimum use of materials and no waste, how local production can lead to savings on logistics and how a biological plastic like lignin is chosen as a source material that doesn't compete with food production.

The innovative Yonda range is an archetypal, spacious shell-structure chair that has been translated to mirror current and future requirements. Yonda's a comfortable chair family with a whole host of design options for both homes and workplaces. But it doesn't stop there. Its design, materials and surface finishes meet the future-proof requirements of a circular economy. The seat shell made of BioComposit® offers exceptionally pleasant comfort even without additional padding and is made exclusively of recycled material.

In terms of daily usage, minor contributions can make a real impact on extending the life of all products. Wilkhahn offers instructions on cleaning, sanitizing, and caring for the various materials to download from the website.



Confair folding table, design: Andreas Störko, 1994

Wilkhahn products set standards for product design that is sustainable in the best possible sense of the word. Which is why we give a five-year manufacturers' guarantee, allowing customers to plan reliably (refer to the relevant guarantee policy for details). An issue we feel responsible for, regardless of our products' long useful lives. We consider guarantees way beyond these periods as selling the future short. Wilkhahn guarantees it will carry out repairs on discontinued furniture for at least two years after production has ceased.



Occo, design: jehs+laub, 2016, 2018, 2020



Yonda, neunzig° design, 2022





### **After-sales service extends product life**

Spare parts are available for many of Wilkhahn's tables and task chair ranges many years after purchase. By exchanging expendable parts, the useful life of a Wilkhahn product can often be extended at a fair cost for many years. Refurbishing furniture is attractive financially and good news for the environment because energy-guzzling parts of frames made of aluminum or metal in particular can be reused.

Wilkhahn's customer service team consists of well-trained personnel who often have longstanding experience in providing support on Wilkhahn ranges and replacing spare parts. Wilkhahn's after-sales service team liaises with customers to find the right solution, which, alongside exchanging parts, such as plastic casters, armrests or covers, can also include cleaning upholstery, professional inspection of the furniture, providing a quote for a rehaul of the item, or even servicing the whole item of furniture for a flat rate. Wilkhahn will always offer a perfect solution to increase the ecological life of the ranges.



## End of usage

Wilkhahn identified the importance of durable and recyclable products at a very early stage. It was back in 1993 that the Picto model was launched, a chair designed and built according to the comprehensive ecologically responsible design concept. Which is why, at its launch, mono-fraction sorting of the materials used to make Picto was possible 30 years ago already.

These principles are consistently implemented in all Wilkhahn office furniture. Thanks to their clever structure, Wilkhahn office furniture is easy to take apart. The aim is always to repair the item first so that only some components have to be recycled.



If repair of single components is no longer possible, consistent labelling of materials to international standards ensures that recycling or proper disposal is possible at the end of the product's life. This means that the materials can continue to be fed into the cycle if possible. At least 90 percent of the material used to make Wilkhahn office furniture can normally be recycled and used again at the end of the product life.

Wilkhahn guarantees to take back all products at the end of their lives at the headquarters in Bad Münde or recycle them in the customer's locality. As the design of Wilkhahn office furniture makes it ideal for refurbishment, decisions on what to do with the product are made on a case-by-case basis. The transport routes of the furniture no longer required are also taken into account.

At Wilkhahn headquarters, trained personnel disassemble the furniture, mono-sort the materials and recycle them properly. If recycling the furniture in the customer's vicinity could cut carbon footprints, Wilkhahn can help disassemble it by providing films showing how to do so. Take-back agreements are currently concluded on a customer-specific basis and always geared toward reconciling ecological and commercial requirements in the best possible way.

Today, Wilkhahn's office furniture does already have a certain amount of recycled material. But only if it doesn't impair the functionality, durability, and aesthetic of the furniture. Up to 100% of the exceptionally robust and durable die-cast aluminum parts are made of recycled material. Wilkhahn's environmental product information provides details of the materials used, recycling proportions and recyclability of many products.





## Sustainability management

To consistently improve customer satisfaction (quality), its environmental performance and other social sustainability aspects, Wilkhahn maintains an integrated management system at its Bad Münde headquarters.\* This system is based on four pillars:

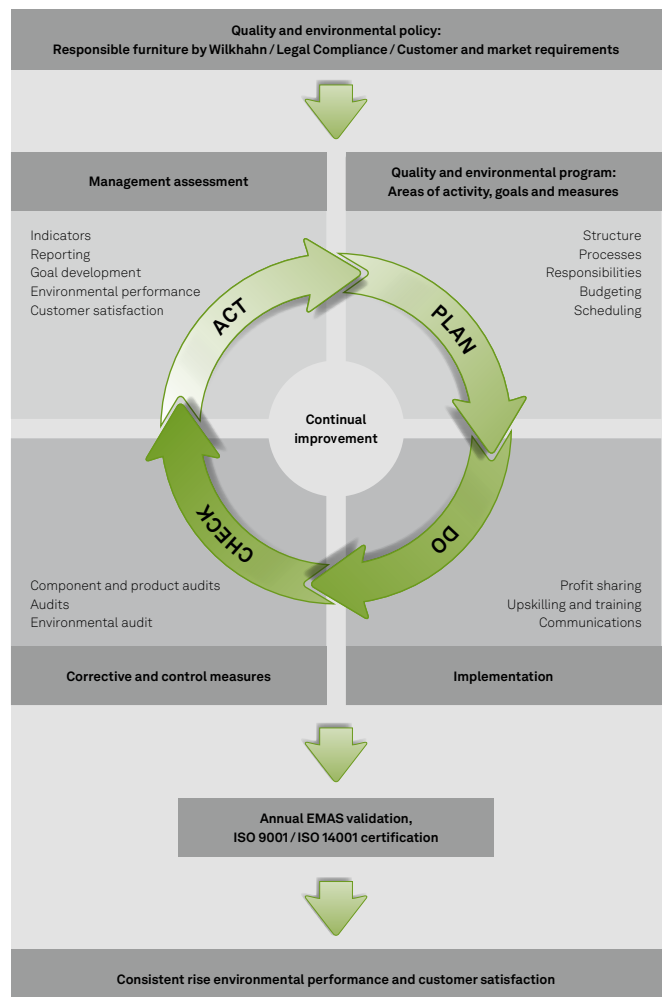
- At Wilkhahn, the international ISO 9001 standard is the framework within which customer satisfaction and product quality is improved.
- To enhance its environmental performance on a consistent basis, Wilkhahn implements the requirements of ISO 14001 and the voluntary European EMAS regulation.

Wilkhahn's headquarters in Bad Münde have been listed in the European Union's EMAS register under D-133-00055 since back in 2001.

- Since 2009, the international framework agreement to advance employees' rights and environmental protection has been stipulating ecological and social fairness requirements within the supply chain.

- With product chain certification to the standards prescribed by the Forest Stewardship Council (FSC®), Wilkhahn supports a sustainable wood industry under FSC® license code C118389.

\* Other Wilkhahn production sites and sales agencies are also required to follow the principles of customer satisfaction and sustainability and act based on comparable standards. However, the certification mentioned below only applies to the Wilkhahn headquarters in Bad Münde.





### Wilkhahn headquarters in Bad Mnder

Wilkhahn’s headquarters are located in Bad Mnder, north Germany, about 50 km south west of Lower Saxony’s capital Hanover. The premises have been extended and developed several times since the company was founded in 1907. Today, the site covers some 10 hectares in an industrial park outside the village of Eimbeckhausen, a district of Bad Mnder. On December 31, 2022, Wilkhahn employed 338 people there.

About half of the site consists of green spaces and stretches of water. The fire-extinguishing pool was created based on ecological criteria and invaluable biotopes have emerged around it and the Eimbeckhausen stream that runs through the campus. All in all, the office buildings, development workshops and production areas only pose very low environmental risks. Which is why, no German Emission Control Act permits are required to operate the machines and equipment. The goals and results on the following pages primarily concern the Wilkhahn headquarters.

### Other production sites

To ensure superior customer service, Wilkhahn furniture is also produced at other locations. Some 30 employees currently manufacture high-quality upholstered furniture and components for task and visitor chairs near Poznan, (Poland). Because the site operates under the same model, the environmental processes are comparable to those at the Wilkhahn headquarters.

In Sydney (Australia), 20 employees currently manufacture high-quality task and visitor chairs as well as tables for the Asia-Pacific markets. The environmental processes at this production site are comparable to those at Wilkhahn headquarters. Wilkhahn furniture is also manufactured by licensed partners in Casablanca (Morocco), Japan and Canada.

### Organization

To achieve its goals and comply with regulations, Wilkhahn organizes its structures and procedures accordingly. In terms of occupational health and safety and environmental protection, the president, the chief operations

Areas of (environmental) law	Regulations
Building law	Building permits, industrial construction directive, Lower Saxony building code
Water	Federal Water Act, Plant Ordinance AwSV
Emissions	Federal Emissions Act, 1st BImSchV, 31st BImSchV
Hazardous substances	GefStoffV (Hazardous Substances Regulation), regulation (EU) 514/2014, ChemOzonSchichtV (Chemical-Ozone Layer Regulation, TRGS (Technical Rules for Hazardous Substances)
Waste, recycling	Closed Substance Cycle Waste Management Act, GewAbfV
Health and safety	ArbSichG (Health and Safety Act), DGUV (Statutory German Accident Insurance), ArbStättV (Workplace Regulation), BetrSicherheitsV (Operational Safety Regulation)
Conservation	Lower Saxony Nature Conservation Act

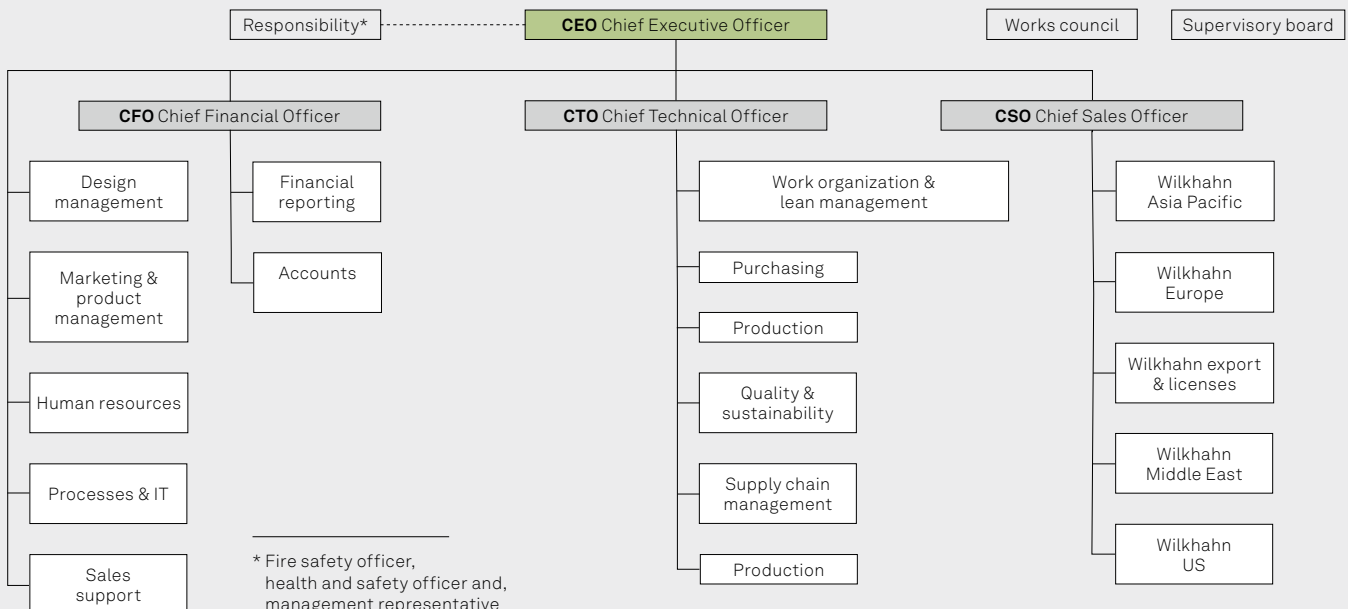
officer, the head of production and quality and sustainability head have special responsibilities. Other people with key responsibilities ensure that company operations are safe at all times. Some of these people are fire safety officers, first responders and evacuation personnel. The organizational chart outlines the current structure of the company.

### Environmental law

The overview at the top indicates particularly relevant regulations. Wilkhahn often, but at least once a year, comprehensively assesses the extent to which changes in the legal framework require alteration of processes. Important specifications are anchored in Wilkhahn’s process standards and the workforce is notified about these during frequent training sessions and briefings.

### Environmental audit

In frequent environmental audits at least once a year, Wilkhahn examines whether environmental regulations are fully reflected in the company’s processes and that there is no negative impact due to operation of machinery that could harm the environment.



# Sustainability aspects

Wilkhahn's sustainability management system ensures that any negative impact on the environment and society is minimized and any positive impact is maximized if possible. To do so, Wilkhahn identified sustainability aspects associated with the development, manufacture, and sales of office furniture.

## Direct environmental aspects

A major impact on the environment, originating at Wilkhahn headquarters in Bad Münde, is the emission of pollutants into the air, in particular carbon dioxide, which occurs during energy generation and from vehicles, including during shipping. Low quantities of organic solvents are still emitted in the upholstery department.

Consumption of natural resources has another major effect on the environment. Wilkhahn helps save resources by making durable, repair-friendly products and using recycled materials. Electricity consumption in the production facilities and offices also has an impact on the environment. Key consumers of electricity are the lighting in the production facilities and offices, circulation pumps and other items in the infrastructure, such as cooling devices and air conditioning, compressors to create compressed air and IT hardware.

Water-pollution control is another environmental aspect. Substances such as heating oil, which pollute water, are also stored at the Wilkhahn headquarters in Bad Münde. Frequent checks, inspections and maintenance ensure that all machines and equipment are operated in a low-emission and energy-efficient way.

Further direct environmental aspects with low or undetectable effects on the environment are a moderate occurrence of non-toxic production waste and low quantities of hazardous waste. Fresh water for the powder

coating machinery and the sanitation areas is also used. No negative impact on biodiversity has been detected. At Wilkhahn, soil would only be dug up or land sealed if headquarters were to be extended. This is not planned in the foreseeable future. Therefore, no key figure is reported in this case.

## Indirect environmental aspects

The production and global marketing of Wilkhahn office furniture also has an impact on the environment. Examples are the requirements in terms of materials, energy, and space to exploit and transport resources and the associated emissions and encroachment on natural ecosystems. Within the Wilkhahn supply chain, further energy requirements and emissions also occur when manufacturing pre-products such as metal and plastic parts and foams for seats. When refining the surfaces of metals, water-pollution control and resulting waste are also important.

Further emissions occur during transportation within the supply chain. Since 2019, delivery of ready-to-assemble table tops has also caused a rise in emissions when they are transported. And shipping the furniture also requires energy and causes carbon emissions. Wilkhahn's goal is to reduce the negative impact on the environment resulting from these indirect environmental aspects. Therefore, when developing new products, Wilkhahn tries to use materials that are as environmentally friendly as possible. When it selects its suppliers, it ensures that environmental and social standards are kept to as well.

Specific environmental aspect	Relevance	Environmental impact/reason	Environmentally relevant activities and machinery
CO <sub>2</sub> emissions (except for electricity)	average	Climate relevance	Heating, vehicle fleet, shipping logistics, powder coating
Material used	average	Consumption of natural resources, climate relevance, use of soil, water consumption, waste	Design and development, production, Suppliers' energy consumption, emissions and waste, shipping logistics
Electricity consumption	average	Climate relevance	Lighting, compressed-air generation, suction, IT hardware
Solvents (VOCs)	low	Health	Upholstery dept.
Waste	low	Health, emissions/water/soil protection	Production, offices
Water	low	Drinking water conservation, waterway conservation, water usage	Powder coating, sanitation areas Oil and hazardous substances warehouse

The overview lists the environmental aspects and their impact relevant to Wilkhahn in descending order of importance.

At Wilkhahn, social and environmental aspects are systematically captured and assessed based on a defined standard

Carbon dioxide and solvent emissions were halved at the Bad Münde site

Wilkhahn ensures that sustainable standards are adhered to in the supply chain

Resources are conserved due to the modular design of the products and the use of recycled materials

- Annual material consumption, divided into key material types
- Waste generated annually, divided up into hazardous and non-hazardous waste, as well as the quantities and proportion of remaining materials recycled
- The number of environmental and safety incidents
- The degree to which the defined sustainability goals have been achieved

The data are regularly discussed by the CTO, the head of quality management and sustainability, and managers of the other areas in the company shown in the spreadsheet. The criteria requiring action and priority in terms of the environment are as follows:

- Fully compliance with compulsory regulations (Environmental law)
- Avoiding harmful impact on the environment under normal conditions
- Reducing environmental risks in emergencies by taking suitable precautionary measures
- Voluntarily reducing avoidable impact on the environment in harmony with the company's long-term business requirements

### Social sustainability aspects

What's more, Wilkhahn strives to achieve exemplary social standards in its own production facilities and in the supply chain. To do so, Wilkhahn regularly assesses health and safety and health management systems and conducts audits, also on suppliers, to ensure that other social criteria are adhered to. This process is underpinned by the framework agreement concluded with international trade unions to promote environmental protection and employee rights in 2009.

To assess the environmental aspects, Wilkhahn frequently analyzes data and produces key performance indicators from these. Some of these data are:

- The monthly and annual energy consumption by the production department and offices
- The quantities of sustainably generated energy consumed
- The share of renewables in total energy consumption
- The annual emissions of carbon dioxide and solvents
- Electricity consumption and rises in energy efficiency

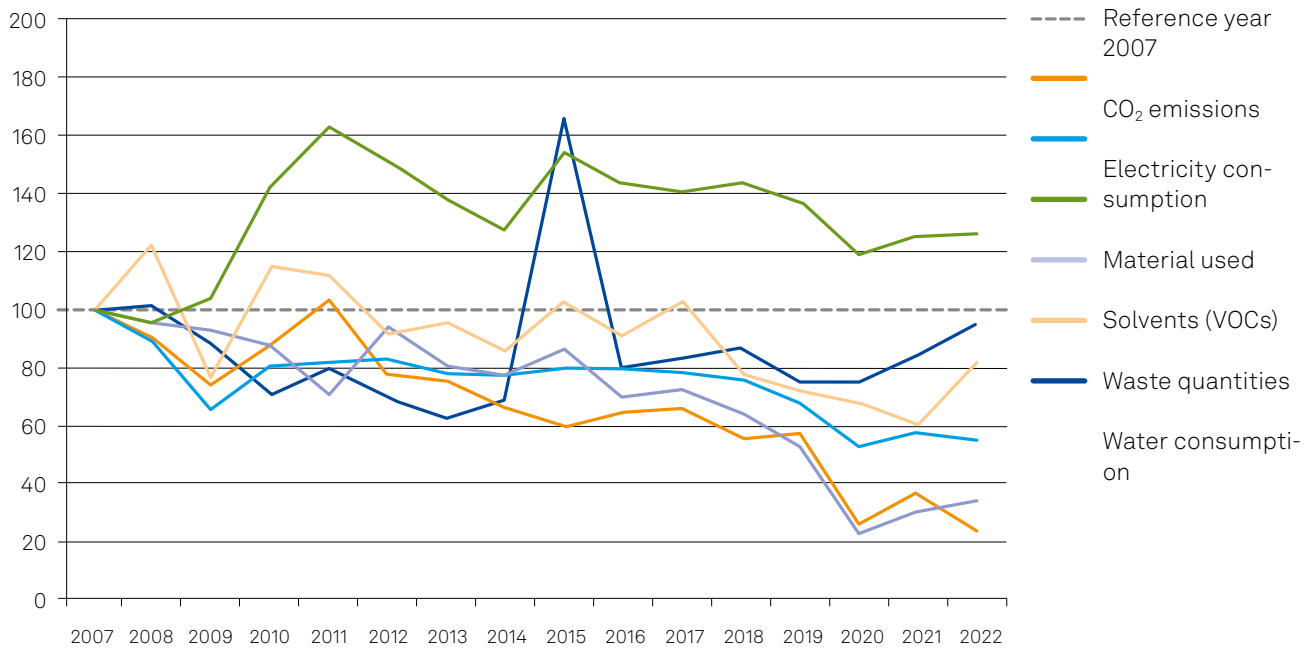
Depending on the area of the company, effects on the environment are rated with a number between 1 and 9 and allocated low, average or high priority. The traffic light system below shows the areas of the company where the relevant environmental effects have been identified in green, amber, and red. The purpose of this matrix is to ensure that concrete steps are taken in the case of areas with high or average improvement potential as part of the Sustainability Action Plan (page 36).

Sustainability aspects	Areas of the company							Production areas								Infrastructure					
	Design, development and further product development	Sales, marketing	Customer service	Material management (supply chain)	Office workspaces, management	Production areas (in total)	Infrastructure (in total)	Cutting, sewing depts.	Upholstery dept.	Table assembly	Steel and powder coating depts.	Chair assembly	Warehouses, intralogistics	Training workshop, production equipment and prototype construction	Packaging, shipping	IT systems	Compressed air	Heating equipment	Lighting	Vehicle fleet	Buildings, factory premises, other facilities
Energy	Yellow	Yellow	Green	Yellow	Green	Green	Yellow	Green	Green	Green	Yellow	Green	Yellow	Green	Green	Green	Green	Green	Yellow	Green	Yellow
Emissions	Green	Green	Green	Yellow	Green	Green	Yellow	Green	Green	Green	Green	Yellow	Green	Green	Yellow	Green	Green	Green	Green	Yellow	Green
Waste	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Material efficiency	Yellow	Green	Green	Yellow	Green	Green	Green	Green	Green	Green	Green	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green
Water	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Customer and market, quality	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Biodiversity, soil consumption	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Social responsibility (CSR), health and safety, health	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green



## Specific environmental aspects developed at the Wilkhahn headquarters in Bad Münde from 2007 to 2022

Index values (reference year 2007 = 100)



The long-term view clearly shows that Wilkhahn has reduced the ecological footprint at its headquarters in Bad Münde. The index view shows that consumption was reduced significantly compared with 2007.

## Sustainability goals and sustainability performance

In 1989, Wilkhahn's supervisory board made the ground-breaking resolution that, if in doubt, ecology and social responsibility were to be valued more highly than a quick profit. Since then, Wilkhahn has been developing office furniture that stands apart for practical innovations and appealing design, but that's sustainable at the same time. To Wilkhahn, sustainability primarily means practicing fairness toward people and the environment by preventing any negative impact on both to the greatest extent possible and if financially feasible. Which is why, alongside financial criteria, Wilkhahn has integrated ecological and social ones into its core business.

Wilkhahn has been implementing an integrated management system certified to the international ISO 9001, ISO 14001 and EMAS standards at its Bad Münde headquarters in Germany for over 20 years. Since the 1990s, the focus has been on consistently improving the company's environmental performance. Other social criteria were also successively integrated, so that today all essential aspects of sustainability are reflected. In 2007, Wilkhahn joined the UN Global Compact, whose 10 princi-

ples on environmental protection, employee rights and anti-discrimination play a key role at Wilkhahn. In 2009, Wilkhahn signed a framework agreement with the Metalworkers' Industrial Union and the Federation of International Building and Woodworkers (BHI) to systematically monitor environmental protection and workers' rights in increasingly international supply chains. And since 2013, the FSC® certification of Wilkhahn's headquarters has ensured that the wood products it uses are responsibly produced and traded.

Wilkhahn repeatedly sets itself specific sustainability targets and defines measures to achieve them. Wilkhahn shares these with the workforce and members of the public in the form of a compact Sustainability Action Plan. The following information and graphics outline the successes scored and obstacles faced over the past few years and states the sustainability goals and measures up to 2025.

## Results of the 2020 – 2022 Sustainability Action Plan

Over the past three years, Wilkhahn has implemented the Sustainability Action Plan's measures as shown. Electricity consumption, carbon and solvent emissions were cut again at Wilkhahn headquarters.

No.	Goal	Measure/comment	Status	Deadlines	Responsibility
1	<b>Climate-friendly heating:</b> From 2022, at least 60% of the heat required at the Bad Munder headquarters came from renewables	A concept to decrease the district heating's return temperature, implemented in 2021	● implemented	2020	Head of works technology
2		2a: Use of the existing solar-power systems 2b: Integration of an external warehouse	🔄 ongoing ○ canceled	2022	Head of works technology
3	<b>Using heating energy efficiently:</b> – heating requirements at the Bad Munder headquarters A 5% reduction by 2022 compared with 2019.	Continued decrease in emissions from the Wilkhahn vehicle fleet through low-emission, energy-efficient vehicles.	● implemented	2022	Vehicle fleet manager
4		Draw up a usage concept so that the Wilkhahn charging stations can also be used by Wilkhahn co-workers – to be pursued further in 2023.	🌓 started	<del>2020</del> 2023	Head of quality and sustainability
5	<b>Encourage green modes of transport, avoid emissions:</b> – A 5% reduction in carbon emissions from Wilkhahn's vehicle fleet compared with 2019. – Continued optimization of carbon emissions from shipments.	Logistics partners are only to use energy-efficient, low-emission vehicles (Euro 5 emission standard or higher).	🔄 ongoing	ongoing	Material management
6		Analyze outgoing shipments to increase the load volume by at least 10%.	● implemented	2021	Material management logistics manager
7		Sustainable product design, optimum packaging units and packaging free of harmful substances enable environmentally friendly and safe logistics that are fit for purpose.	🔄 ongoing	ongoing	Heads of product development, material management, logistics
8	<b>Using energy efficiently:</b> Cut relative electricity consumption by a further 10% by 2022 (compared with the reference year 2019).	Dismantle the central suction system and convert to single, local suction systems	● implemented	2020	Head of works technology, mechanic
9		Replace fluorescent strips with LED lighting in some areas of table and chair assembly.	● implemented	2020	Head of works technology, mechanic
10		Cut grid pressure by 1 bar, decommission a compressor.	● implemented	2020	Head of works technology
11		Green IT – dismantle a physical server and integrate an energy-efficient, external cloud server.	● implemented	2020	Head of information systems
12		Green office – reduce existing single workstation printers by at least 30%, replace with energy-efficient and resource-friendly multi-functional devices.	● implemented	2020	Head of information systems
13	<b>Optimize use of materials:</b> Long-lasting and repair-friendly products, materials low in pollutants, less packaging used in shipping, fewer remnants, and less waste during production.	Develop innovative, long-lasting, and repair-friendly office furniture and use eco-friendly materials and production methods low in pollutants.	🔄 ongoing	ongoing	Heads of product development, Head of further product development
14		Use recycled plastics in some selected components, increase the proportion of recycled plastics.	● implemented	2021	Heads of product development
15		Permanently cut down on material waste in manufacturing by introducing a quality bonus incentive system.	🔄 ongoing	ongoing	Chief Operations Officer
16		Update sustainability criteria for materials to be procured – a work in progress for 2023.	🌓 started	<del>2022</del> 2023	Head of quality and sustainability
17	<b>Sustainability, fairness, health:</b> Encourage a high degree of ecological and social responsibility in Wilkhahn's production facilities and partners in the supply chain.	Sustainable supply chain: Make regular checks on the top 20 suppliers concerning quality, health and safety and environmental protection as well as fair working conditions.	● implemented	2022	Head of quality and sustainability
18		Maintain chain-of-custody certification in line with the specifications of the Forest Stewardship Council® (FSC®) and increase the proportion of FSC®-certified products.	● implemented	2022	Head of quality and sustainability
19		Carry out a social audit with trade union representatives to implement the ILO core work standards at the Wilkhahn plant in Poznań and at a further supplier's premises.	● implemented	2021	Head of quality and sustainability
20		Maintain and develop frequent information events and health-boosting programs for Wilkhahn employees.	🔄 ongoing	2021	Company health management team
21		Turn 10,000 m2 of the company's site into a flower orchard to protect bees and other insects.	● implemented	2021	Head of works technology





The fire-extinguishing pool, which was created at the Wilkhahn headquarters in Bad Münde based on ecological criteria, provides protection of and a habitat for waterfowl and other wild animals.

## Successes and stumbling blocks

### Renewables

For many years now, Wilkhahn has been using renewables such as district heating from biogas, solar power and photovoltaics to meet the demand for heat and electricity at its headquarters in Bad Münde in the most environmentally friendly way possible. In 2022, the proportion of renewables in the mix was 75 percent for the first time! One hundred percent of the electricity purchased had been converted to green electricity in 2020 already.

In 2022, 67 percent of heating requirements were supplied by eco-friendly, biogas district heating. Compared with previous years, this proportion was increased by making improvements to the heat exchanger and multi-boiler control system. A mild winter also ensured that the conventional boilers had to supply less heat. Wilkhahn achieved its target of generating at least 60 percent of its heat from renewables, therefore saving 325,000 liters of heating oil.

### Carbon dioxide emissions cut by 22 percent, 75 percent of headquarters are climate neutral

In 2022, 494 tonnes of carbon dioxide were emitted at the Wilkhahn headquarters while the production departments and offices in Bad Münde were supplied with light, heat

and electricity. Compared to the previous year, emissions fell by 22 per cent because the proportion of district heating generated from renewables increased. The Wilkhahn headquarters were therefore 75 per cent climate neutral in 2022.

By using renewables and making energy efficiencies, Wilkhahn halved the carbon footprint at the Bad Münde headquarters from 4,000 to below 1,000 tonnes per year.

Since 2012, climate-neutral district heating generated from biogas has ensured that year for year, 300,000 liters of heating oil were saved.

Energy-efficiency measures reduced electricity consumption by 19%.

Since 2018, 6,000 items of returnable packaging have replaced lots of disposable packaging from suppliers.

The raw materials left over from production at the Wilkhahn headquarters are valuable resources. Over 95% are recycled.





In January 2018, the company also opened its first electricity charging station at the Wilkhahn headquarters in Bad Münde.



Wilkhahn has been increasingly using reusable packaging for material deliveries since 2017, therefore reducing the consumption of resources.

A further 334 tonnes of carbon dioxide were emitted by the Wilkhahn vehicle fleet in 2022. It wasn't possible to achieve the goal of cutting their carbon emissions by 5 percent compared with the 2019 reference year. After the vehicle fleet's carbon emissions fell in 2020 and 2021, 10 per cent more emissions occurred in 2022 compared with 2019. This development was despite regular investments in new energy-efficient vehicles with start-stop functionality, better aerodynamics and with electric and hybrid drives in some cases.

One reason was that part of the Wilkhahn fleet was converted to larger car models that are more suitable for frequent shipping of furniture. Emissions per kilometer therefore increased by 5 percent. And when Covid 19 restrictions were lifted, on-site visits to customers rose again in 2022. Compared with 2019, the total distance travelled increased by 5 percent to 1.55 million kilometers.

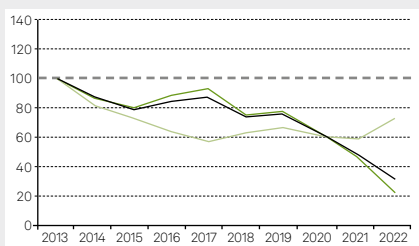
### Material consumption

In 2022, Wilkhahn used 2,600 tonnes of material. A total of 1,126 tonnes of metals were processed, of which 600 tonnes were ferrous metals and about 500 tonnes aluminum. The proportion of metals in overall consumption was therefore 43 percent. Plastics totaled 1,104 tonnes and accounted for just under 43 percent of total consumption. Purchased wood parts totaled 310 tonnes, and upholstery materials and leather 40 tonnes.

To maximize resource efficiency, Wilkhahn strives to optimize the proportion of materials already recycled in new parts. While recycling 20 to 100 percent of metal components has been possible for years, this is not consistently the case for plastics yet. Wilkhahn's Yonda shell-structure chair is its first product whose eco-friendly biocomposite shell only consists of recycled plastic and wood fibers.

### Carbon emissions development 2013 – 2022

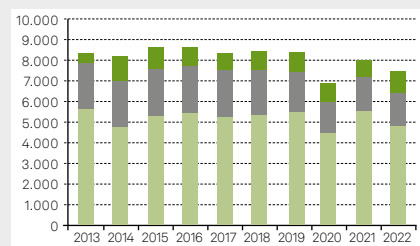
Index value (reference year 2013 = 100)



- Carbon emissions vehicle fleet
- CO<sub>2</sub> emissions production and management
- Total carbon emissions
- Reference year 2013

### Energy consumption at Wilkhahn's headquarters 2013 – 2022

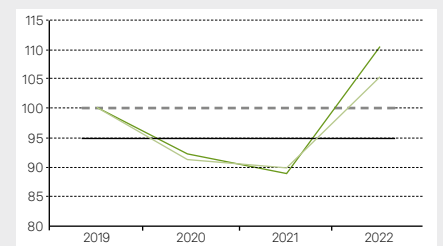
In megawatt hours (MWh)



- Energy consumption vehicle fleet
- Electricity consumption
- Heat consumption

### Wilkhahn vehicle fleet Carbon emissions development

Index value (reference year 2019 = 100)



- Goal: -5 % carbon dioxide
- Carbon dioxide emissions (vehicle fleet) Index figure
- Annual kilometers (vehicle fleet)
- Reference year 2019



### Electricity consumption at headquarters was cut by 19 percent.

The goal to cut relative electricity consumption at the Wilkhahn headquarters by at least 10 percent compared with 2019 was achieved. Compared with the reference year, absolute electricity consumption dropped by 19 percent. This was made possible by the conversion of all production sheds to LED lighting and the replacement of older compressors with more efficient equipment, or cutting the number of printers in offices.

In 2022, 1559 megawatt hours of electricity were consumed at Wilkhahn headquarters to generate light, compressed air and to operate other machinery. All of the electricity was sourced from eco-friendly hydropower.

### Solvent emissions remained low.

In 2022, 3.2 tonnes of organic solvents from upholstery adhesives and cleaning agents were emitted at the Wilkhahn headquarters in Bad Münde. The emissions, which rose by 10 percent compared with the previous year, correlate with the significant rise in sales of upholstered chairs (e.g. the FS-Line and Occo models). For each product, solvent emissions remain low and indicate no negative impact on the environment. The company was comfortably below the statutory emissions threshold of 15 tonnes per year in 2022 too.

By outsourcing production (table tops, upholstered components), solvent emissions have also been partially transferred to partners. Via frequent audits, Wilkhahn ensures that production throughout the supply chain is safe, environmentally friendly and complies with legal requirements.

### 95 percent of raw materials recycled

In 2022, the quantity of waste materials rose by a third to 414 tonnes compared with the previous year. Increased sales meant that waste from manufacturing also rose. Remodeling of offices and production departments, as well as remodeling, also caused a rise in waste generated. Remodeling of the outside of the premises produced approx. 60 tonnes of green waste and soil. The replacement of an evaporation plant meant that more aqueous waste was produced in the powder coating area than



At the Wilkhahn headquarters, waste is sorted according to type and recycled if possible. Films and cardboard are compacted into bales to reduce transport emissions.

planned, as it proved impossible to reduce wastewater during the construction phase.

The drop in waste wood to just 56 tonnes is remarkable. Due to the very widespread switch to reusable packaging by main suppliers, way fewer single-use pallets had to be recycled, despite a rise in production. In total, 95 per cent of production and office waste generated was recycled or thermally treated in 2022.

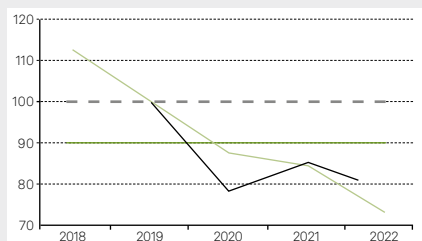
Wilkhahn's office furniture is produced with a low solvent content and doesn't emit any harmful quantities of volatile organic compounds.

Adhesives are avoided in upholstery as far as possible because mechanical fixtures are used instead.

Frequent tests to Greenguard® standards verify that Wilkhahn office furniture meets the very high demands of indoor air quality.

### Development of relative electricity consumption

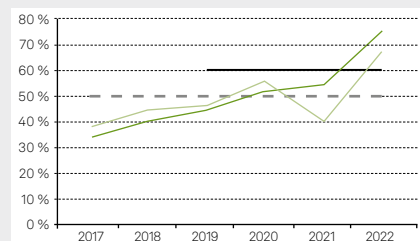
Index value (reference year 2019 = 100)



- Goal: 10% less electricity consumption (compared with consumption + sales 2019)
- Electricity consumption index 1 (consumption figures 2019 = 100)
- Electricity consumption index 2 (consumption/sales 2019 = 100)
- Reference year 2019

### Heating energy from renewables

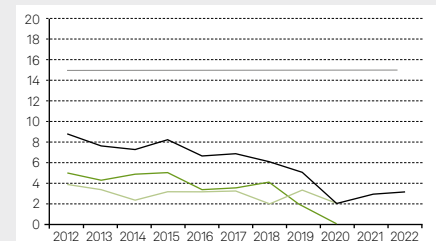
In percent



- Goal: 60% heat from climate-neutral biogas
- Goal: 50% energy from renewables
- overall
- Heat from climate-neutral biogas
- Renewables (heat + electricity)

### Emissions of organic solvents (VOCs)

In tonnes / year



- Solvents (VOCs) from coating wood/composite wood materials
- Solvents (VOCs) from bonded coatings
- Total solvent emissions (VOCs)
- Emissions threshold (31st BImSchV)



Wilkhahn combines production and sustainability as a matter of course. This approach is apparent on the green campus.

### Recyclable packaging geared to the quantity shipped

In 2022, Wilkhahn only used as much packaging material as necessary to ship office furniture to customers so that it arrived safely. Only polyethylene protective films, and in some cases cardboard boxes, are normally used to ship products within Germany and Europe. To prevent damage, wooden boxes are used for shipments overseas. The quantity of wood, cardboard and plastics for packaging dropped by 75 percent to just 255 tonnes compared with the previous year. Because our sales have increased internationally, twice the number of wooden boxes were shipped compared with the previous year. Some 73 percent of the packaging materials used were made of renewables, which can be fully recycled.

### Water, soil, biodiversity

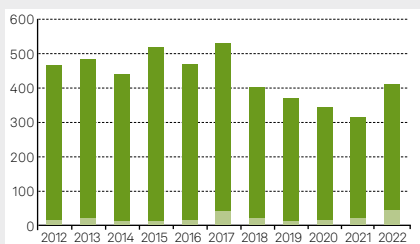
Water at the Bad Münde headquarters is primarily used for sanitation and only a very small proportion as process water for powder coating. In 2022, 4258 cubic meters of water were consumed.

To prevent pollution of water and soil, maintenance is carried out frequently on all machinery at our headquarters, for instance boilers and oil tanks that could impact the water and soil and these are checked to ensure compliance with statutory regulations. No new soil sealing has occurred at the Wilkhahn headquarters over the past 20 years. No negative impact on the water or soil at the Wilkhahn headquarters in Bad Münde was identified.

What's more, Wilkhahn is committed to protecting biodiversity. With its green spaces, ecologically designed fire-extinguishing pool, and fruit orchard, Wilkhahn's headquarters have a particularly natural appeal. Seeds are sown on existing green spaces to turn them into flower meadows and create better habitats for insects. Wilkhahn also supports a regional initiative to save the dwarf beech (*Fagus sylvatica* var. *suentelensis*) from extinction.

### Development of waste 2012 – 2022

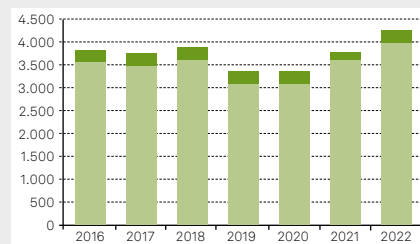
In tonnes / year



■ Hazardous waste  
■ Non-hazardous waste

### Water consumption at Wilkhahn's headquarters

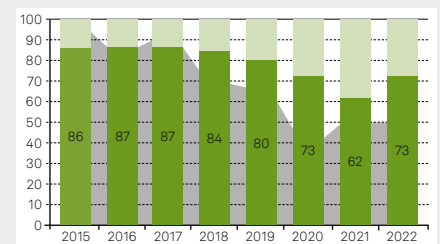
In cubic meters



■ Sanitation areas, cafeteria  
■ Powder coating

### Shipping packaging Proportions and quantities compared

Index value (reference year 2015 = 100)



■ Transport packaging made of plastics  
■ Transport packaging made of renewable materials (wood, cardboard)  
■ Development of packaging quantities (2015 = 100)



# Sustainability Action Plan

For many years, sustainability at Wilkhahn has meant much more than developing innovative, durable, and well designed office furniture by using low-emission materials and production methods. The new Sustainability Action Plan is based on the Wilkhahn approach that commercial success can only be achieved in the long term by being fair toward people and the environment. The Action Plan applies to 2023 – 2025. Its objective is to make further strides on climate protection, energy and material efficiencies, supply chain sustainability and encouraging good health.

No.	Goal	Measure/comment	Status	Deadlines	Responsibility
1	<b>Circular economy:</b> Wilkhahn develops innovative, recyclable products and offers new resource-saving, after-sales services.	It develops innovative, long-lasting, and repair-friendly office furniture made of eco-friendly materials and uses sustainable production methods.	 ongoing	ongoing	Product development
2		It wants to increase the proportion of recycled metal and plastic furniture components and achieve a recyclability level of at least 90 percent for new products.	 ongoing	ongoing	Product management, product development
3		It wants to add attractive, exceptionally sustainable upholstery materials made of natural fibers, or recycled materials to the Wilkhahn collection.	 started	2024	Design management, product management
4		It wants to develop and actively market after-sales services to increase product life.	 started	2024	Head of customer service, head of customer service

## Strategic goal: Wilkhahn headquarters to be at least 80% climate-neutral from 2023.

5	<b>Energy-efficient and climate-friendly heating:</b> Heating requirements at headquarters will continue to be cut (-5 percent compared with 2022) and 70 percent will be generated by renewables.	The company will continue to use carbon-neutral district heating from biogas and maximize the proportion used for heating requirements overall.	 ongoing	ongoing	Head of works technology
6		Solar thermal systems help produce hot water.	 ongoing	ongoing	Head of works technology
7		A conventional burner replaced by a more efficient new one.	 started	2023	Head of works technology
8	<b>Electricity savings and green electricity:</b> Relative electricity consumption will be cut further (-5% compared with 2022 to 2025) and 100% eco-friendly electricity generation	All of the electricity purchased was sourced from renewables (hydropower).	 ongoing	ongoing	Head of works technology
9		LED lighting in some areas of production.	 started	2025	Head of works technology
10		LED lighting in some office areas.	 planned	2025	Head of works technology
11		Frequent checks on the compressed-air equipment for leaks.	 ongoing	ongoing	Head of works technology
12	<b>Emission-optimized vehicle fleet:</b> The vehicle fleet's carbon emissions will be reduced again (-5 percent compared with 2022 to 2025).	A further reduction of the Wilkhahn vehicle fleet's absolute fuel consumption through low-emission, energy-efficient vehicles.	 ongoing	ongoing	Vehicle fleet manager
13		Creation of a concept to increase existing charging stations for electric cars.	 started	2023	Head of works technology, head of quality and sustainability
14	<b>Eco-friendly shipping:</b> Emissions caused by shipping will be recorded systematically and cut (-5 percent compared with 2022 to 2025).	Route-optimized production will increase the load volume per truck to an average of 80 percent by 2025.	 started	2025	Chief Operations Officer, Supply chain manager
15		Broadening of the sustainability indicators to include regular key figures on transport-related emissions.	 started	2023	Head of quality and sustainability Supply chain manager
16		Our own vehicles and service providers' trucks are energy efficient and low on emissions (at least the Euro 6 emissions standard).	 ongoing	ongoing	Strategic purchasing, supply chain manager
17	<b>Sustainable supply chains:</b> Encouragement of quality, health and safety, environmental protection, and fairness vis à vis workers in stable supply chains.	The top 20 suppliers are audited locally on quality, health and safety and environmental protection as well as fair working conditions.	 started	2025	Head of quality and sustainability
18		Maintenance of certification of Wilkhahn's headquarters based on the specifications of the Forest Stewardship Council® (FSC®).	 ongoing	2023	Head of quality and sustainability
19		Update of the sustainability criteria that apply when purchasing materials and services.	 started	2024	Chief Operations Officer, head of quality and sustainability
20	<b>Encouraging a healthy workforce, biodiversity</b>	Maintain and develop health-boosting programs for Wilkhahn employees.	 ongoing	ongoing	Company health management team
21		Continued support of the dwarf beech initiative to protect biodiversity.	 ongoing	ongoing	Head of quality and sustainability

# Material- and energy-flows: Input/output

Input	2021	2022
<b>Use of raw materials, consumables and supplies (t)</b>		
Ferrous metals	634.2	601.3
Aluminum	505.9	498.5
Zinc	23.4	26.2
Wood	153.9	122.6
Plastics	1,063.6	1035.8
Textiles/upholstery materials	41.4	40.6
Leather	13.2	11.2
Shipping packaging (cardboard/wood)	90.5	186.9
Transport packaging (plastics)	54.6	68.0
Powder varnishes	3.5	7.9
Fuels (heating oil, diesel)	339.2	224.2
Total	2,923.4	2,823.2
<b>Energy – production and offices (MWh)</b>		
Heat	5,550	4,852
Electricity	1,641	1,559
Total energy consumption	7,191	6,411
<b>Water (m<sup>3</sup>)</b>		
Water (sanitation area, process water)	3,787	4,258
<b>Output</b>		
<b>Residues and waste (t)</b>		
Industrial waste	75.5	92.5
Paper/cardboard	118	115.4
Waste wood	58.7	55.7
Ferrous metals	20.6	20.4
Aluminum	3.6	6.9
Packaging film	8.5	10.4
Compounds containing solvents (VOCs)	0	22
Aqueous waste, halogen-free machining emulsions	19.1	48.6
Others	8.3	90.9
<b>Total quantity of residues and waste</b>	<b>312.3</b>	<b>414.3</b>
<b>non-hazardous waste</b>	<b>21.7</b>	<b>40.1</b>
<b>Core EMAS indicators</b>		
Total added value (million euros)	26.6	28.5
<b>Emissions</b>		
Carbon dioxide emissions (t/million euros)	64.9	17.3
<b>Energy efficiency (MWh/millions of euros)</b>		
Electricity and heat consumption	270.4	225.0
Energy from renewables	116.0	108.3
<b>Material efficiency (t/million euros)</b>		
Total consumption of raw materials, consumables, and supplies	109.9	99.1
<b>Recycled (t/million euros)</b>		
Total waste	11.7	14.5
Hazardous waste	0.8	1.4
<b>Water (m<sup>3</sup>/millions of euros)</b>		
Total consumption	142.4	149.4
<b>Energy from renewable sources (%)</b>		
Heat	40	67
Electricity	100	100
Total	54	75
<b>Emissions (t)</b>		
Carbon dioxide (CO <sub>2</sub> ) from production and offices	1,726	494
Carbon dioxide (CO <sub>2</sub> ) mobility (vehicle fleet)	269	334
Solvents (VOCs)		3,2
Dust (PM)	<0,01	<0,01
Nitrogen oxide (NO <sub>x</sub> )	0,58	0,6
<b>Recycled (%)</b>		
Recycled waste substances	51	58
Substitute fuel	43	37
Waste in landfill	6	5

# GRI standards on sustainability reporting

This report is drawn up based on the EMAS regulations and following the standards on sustainability reporting specified by the Global Reporting Initiative (GRI). The following table shows which pages of this sustainability report contains information that complies with standardized GRI descriptions. The column on the left shows the GRI standard referred to. The content matter relevant to EMAS has been validated by an independent environmental expert.



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102-14	Declaration by the top decision maker	2
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## ENVIRONMENTAL VERIFIER'S DECLARATION ON VERIFICATION AND VALIDATION ACTIVITIES

in accordance with the  
**REGULATION (EC) No 1221/2009 OF THE EUROPEAN  
PARLIAMENT AND OF THE COUNCIL of 25 November 2009**  
on the voluntary participation by organisations in a Community eco-management  
and audit scheme (EMAS)

Mr. Thomas Bunge, accredited or licensed for the scope "NACE-Code 31.01 - Production of furniture", declares, to have  
verified whether the whole organisation as indicated in the environmental statement of the organisation

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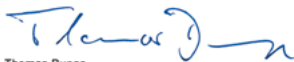
with registration number D-133-00055 meets all requirements of Regulation (EC) No 1221/2009 of the European  
Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community  
eco-management and audit scheme in the version amended by regulation (EU) 2017/1505 and regulation (EU) 2018/2026  
are fulfilled (EMAS).

**By signing this declaration, I we declare that**

- the verification and validation has been carried out in full compliance with the requirements of Regulation (EC) No 1221/2009,
- the outcome of the verification and validation confirms that there is no evidence of non-compliance with applicable legal requirements relating to the environment,
- the data and information of the environmental statement of the organisation reflect a reliable, credible and correct image of all the organisations activities, within the scope mentioned in the environmental statement.

This document is not equivalent to EMAS registration. EMAS registration can only be granted by a Competent Body under Regulation (EC) No 1221/2009. This document shall not be used as a stand-alone piece of public communication.

Hannover, 02.04.2023



Thomas Bunge  
Environmental Verifier  
DE-V-0122

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The EMAS audit is voluntary and has been conducted at Wilkhahn for many years. The EMAS validity declaration confirms that Wilkhahn complies with the relevant environmental legislation.

Wilkhahn accepts responsibility for sustainably protecting our environment through its EMAS-validated and ISO 14001-certified environmental management system.

The sustainability report and environmental statement for 2023 – 2025 allow Wilkhahn to provide information about: The company's environmental performance and further sustainability aspects.

The next update will be published in April 2024.

A PDF version of this brochure can be downloaded from the Wilkhahn website.

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