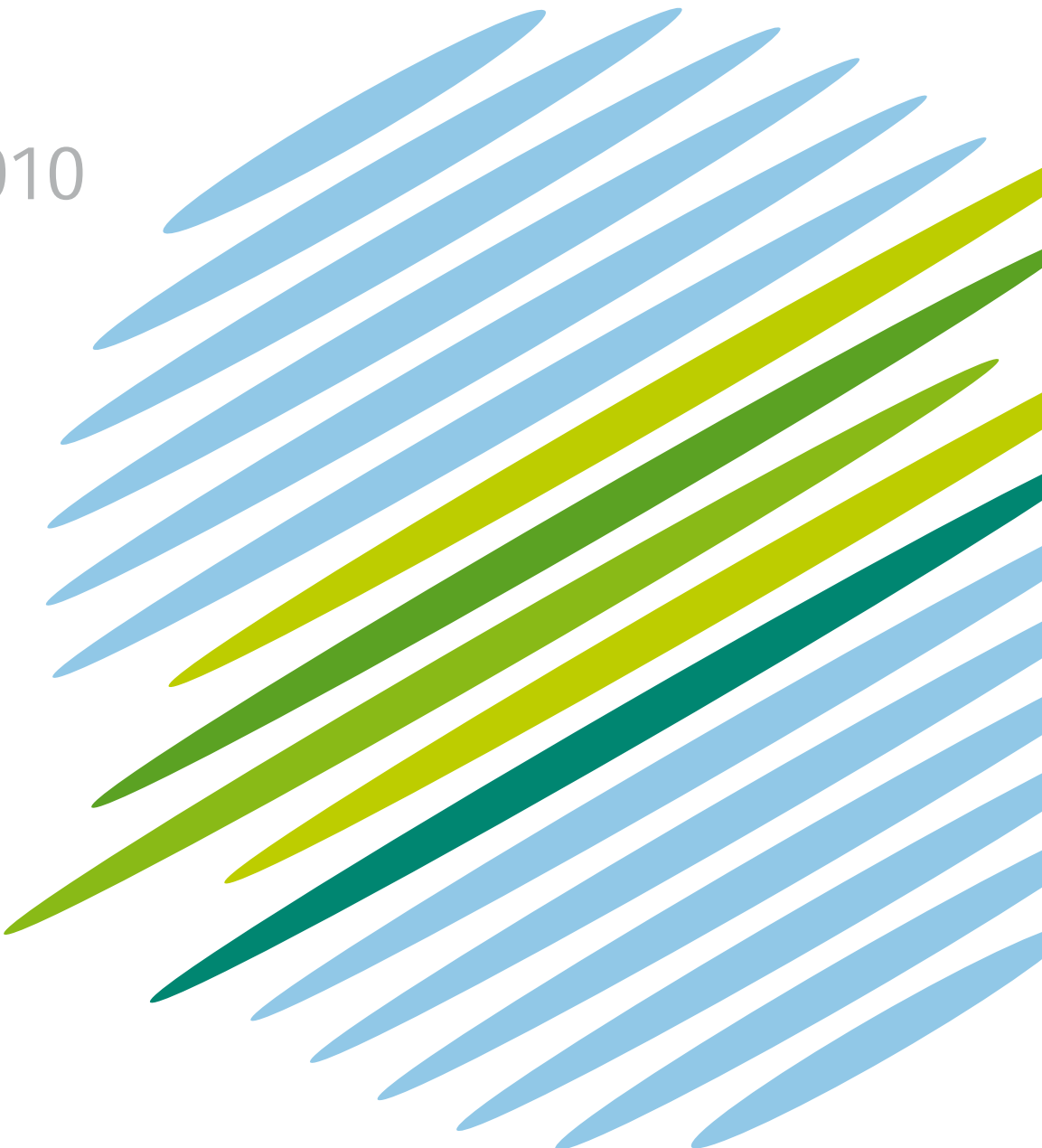


# VAILLANT GROUP

Sustainability Report  
2010



We want to be the leader in simple, eco-friendly and energy-saving solutions for heating, cooling and hot water to support the sustainable and profitable growth of our family-owned company.

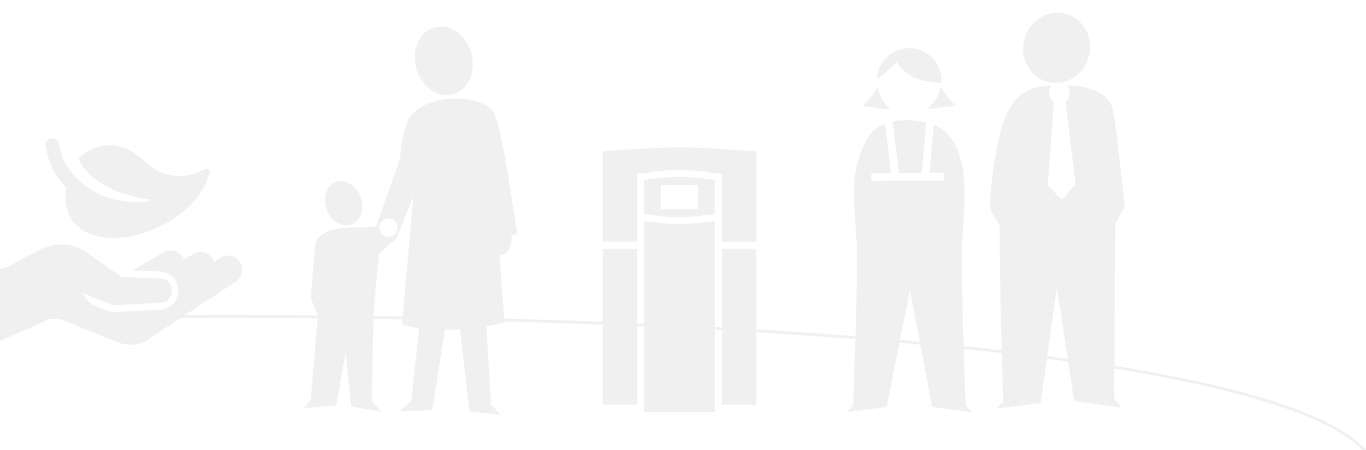
Vaillant Group vision

# As a future-oriented family enterprise we set a benchmark in the areas of ecological, economical and social sustainability.

Sustainability vision

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Ralf-Otto Limbach, Dr Carsten Voigtländer, Dr Dietmar Meister

Ladies and gentlemen,

Sustainable action is successful action. This simple formula also aptly expresses the way the Vaillant Group sees itself. As a forward-looking family company we are convinced that long-term and prudent economic management pays off – for our business result, our innovative strength, our employees and the environment. Taking into consideration the impacts of their own entrepreneurial action on people and the environment is characteristic of many family companies. Not least, that is why our aspiring to sustainable growth is the essence of our corporate vision.

The challenges of the climate change and the scarcity of raw materials are increasingly becoming the determining issue of the public debate. Equally, awareness is growing that these challenges can only be met if the huge potential for savings and efficiency in the buildings sector is used. To date, more than one-third of Europe's primary energy is needed to generate room heating and hot water.

The core business of the Vaillant Group, the development of trailblazing and highly efficient solutions for heating, cooling and hot water, is thus part of the implementation of climate protection targets by society as a whole. With our innovative products and services we contribute to sparing natural resources and lowering emissions that are harmful to the climate. We want to enable our customers to actively save energy by using intelligent, easy-to-operate and environment-friendly products and at the same time improve their quality of life.

Linked with this conviction is our claim to be a role model in the areas of ecological, economical and social sustainability. Therefore, since the beginning of this year, we have strategically realigned our sustainability management and adjusted it to meet future challenges. Under the umbrella of our S.E.E.D.S. programme, we are concentrating on the key areas of the environment, our employees, development and products, and society.

With this report we aim to inform you about our understanding of sustainability. Learn more about the new sustainability strategy of the Vaillant Group, selected projects and our goals for continual improvement of the Group-wide sustainability performance.

Dr Carsten Voigtländer  
Chief Executive Officer

Ralf-Otto Limbach  
Managing Director  
Sales & Marketing

Dr Dietmar Meister  
Managing Director  
Finance & Services

Experience in efficiency

# The Vaillant Group introduces itself

It was 137 years ago that Johann Vaillant created a market of the future with a trailblazing invention. His "closed-system gas-fired bathroom boiler" began the competition to achieve the most energy-efficient ways of generating heat. Since then, the Remscheid-based Vaillant Group has decisively shaped modern heating technology as an innovation and technology leader.

**When in 1874** coppersmith and pump-maker Johann Vaillant with his master craftsman's installation business laid the foundation stone for today's Vaillant Group he certainly had no idea that his company would be one of the world's leading suppliers of the heating technology industry in the 21st century. The Vaillant Group, with headquarters in Remscheid, is the umbrella for eight established heating technology brands that offer their products and services around the world. Johann Vaillant paved the way for this success story by preferring sustainable growth to short-term profit. Nothing has changed about that. As a family company, for the Vaillant Group it is important that the well-being of its employees, society and the environment is in harmony with its corporate strategy.

Energy efficiency, climate protection and economical handling of resources are decisive for our products and services. Our product portfolio encompasses highly efficient combined heat and

power technology, coupling technology, ventilation systems for low-energy houses, efficient wall-hung and floor-standing boilers based on gas or oil, gas and electric water heaters, air-conditioning systems and radiators. In addition, the importance of our technologies based on renewable energy sources is growing. Solar thermal and photovoltaic systems, heat pumps and wood pellet boilers, environment-friendly hybrid systems that intelligently link various components with each other such as solar collectors, hot water storage cylinders and controls are the standard of today's modern heating technology. As a system supplier, the Vaillant Group offers its customers all the respective products and services from one source.

With about 12,400 employees, the Group manufactures its products at 14 sites in eight countries and sells them in more than 80. In 2010 the company achieved sales of 2,314 million euros.

Johann Vaillant laid the foundation for the Vaillant Group. Right from the beginning, social responsibility and sustainable development were of major importance to him.



**The Vaillant Group** has been family-owned since its founding. A corporate policy focused on long-term development is typical of many successful family companies – for the same applies to the Vaillant Group. The owners of the Vaillant Group assume responsibility for the company in the Partners Board, the Supervisory Board and the Partners Meeting. The corporate strategy is laid down by the Management Board in close consultation with the Partners' Board. The focus is on long-term, balanced company development.

## History of the Vaillant Group

1874

Johann Vaillant lays the foundation stone for today's Vaillant Group, which is still 100 per cent in family ownership.

1894

Patent filing for the "closed-system gas-fired bathroom boiler", which enables hygienic water heating for the first time.

1924

Vaillant develops the first central heating boiler, meaning that only radiators were needed in rooms.

1961

With the Circo Geysler, Vaillant is the first company in the world to market a wall-hung gas circulation water heater.

1995

Vaillant markets its first self-developed and produced wall-hung condensing heating appliance.

2001

Vaillant takes over the British Hepworth Group. The brands of the new group continue to be sold separately in the European markets.



2004

The Vaillant Group puts its new module plant in Trenčín, Slovakia, into operation.

2006

Heat pump production is started in Gelsenkirchen.

2007

The Vaillant Group acquires the majority interest in the Turkish heating and air-conditioning specialist Türk Demir Döküm Fabrikaları.

2008

Opening of Vaillant's first own solar collectors production in Gelsenkirchen.

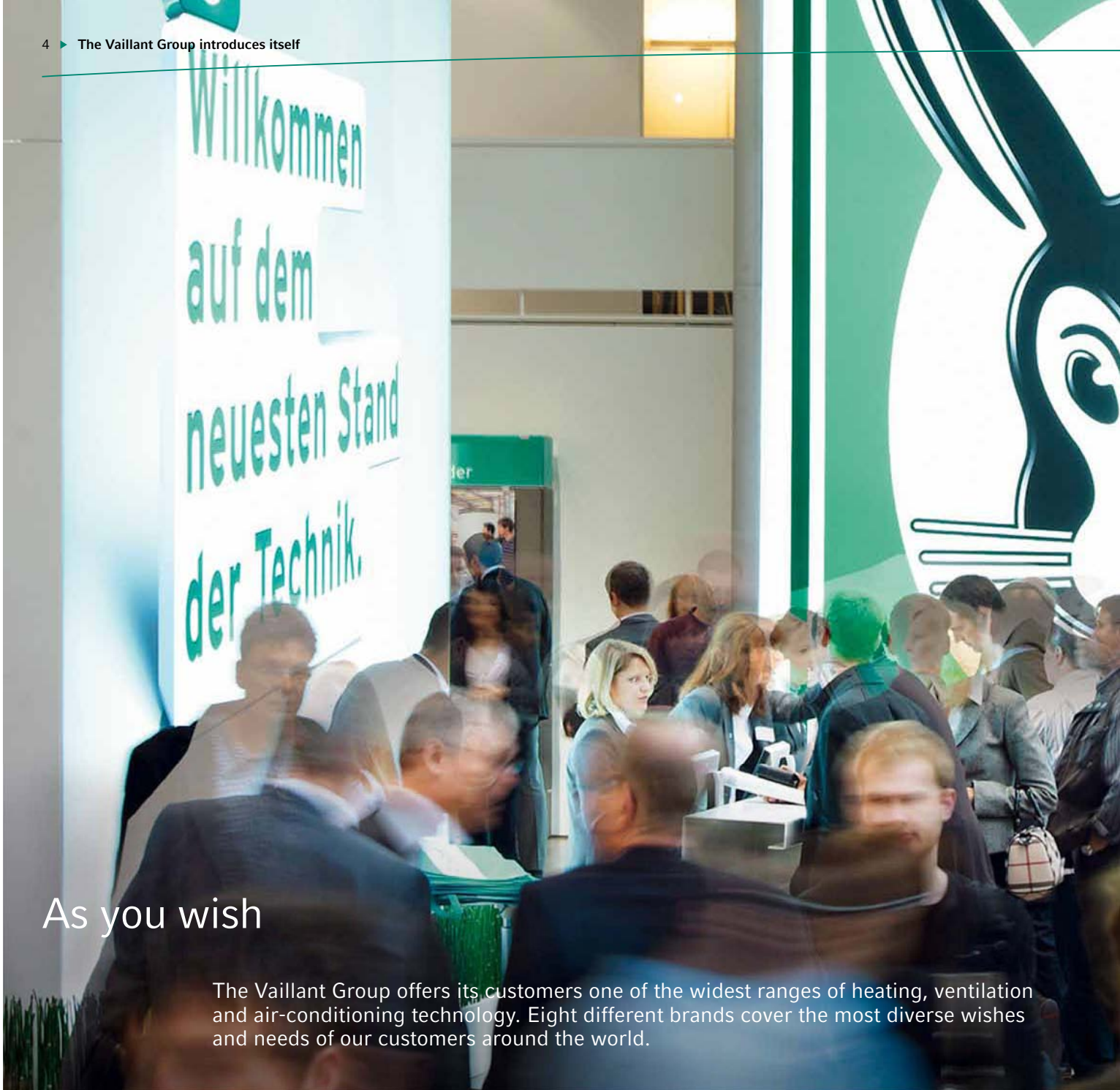
2009

Vaillant seals a cooperation agreement with the Japanese technology company Honda for the development of micro-combined heat and power systems for use in single-family houses.

2010

The world's first zeolite gas heat pump is launched on the market. It boosts the efficiency of customary gas-fired condensing boilers by more than 20 per cent.





## As you wish

The Vaillant Group offers its customers one of the widest ranges of heating, ventilation and air-conditioning technology. Eight different brands cover the most diverse wishes and needs of our customers around the world.

**The two brand groups** Vaillant and Saunier Duval address the customers of the most important market segments worldwide. Vaillant concentrates on the high demands of a discerning clientele in the premium segment. The brand sees itself as a supplier of tailor-made systems and products for an upmarket demand. The focus is on environment-friendly and energy-saving heating, ventilation and air-conditioning systems that intelligently link products based on renewable energies with proven technologies based on fossil fuels.

The Saunier Duval Brand Group encompasses the brands Saunier Duval, awb, Bulex, Glow-worm, Hermann, Protherm and DemirDöküm. These brands concentrate mainly on the middle, high-volume price segments. At an attractive value-for-money ratio they cover the needs of price-conscious customers with clever solutions. For the respective customer groups we offer a harmonised product and service portfolio. In particular, we are continually expanding our offer in the renewable energies sector and of Web-based services.





The Vaillant hare marked its territory at the International Sanitary and Heating trade fair ISH Energy in Frankfurt/Main. Vaillant serves the Premium segment, but with its eight brands the Vaillant Group covers the most diverse customer wishes. Worldwide.

Johann Vaillant founded his master craftsman's installation company in Remscheid in 1874. In the more than 137 years since then the company has become a leading European supplier of intelligent systems for domestic comfort.



Vaillant Brand Group

Saunier Duval, based in Nantes, France, has been a pioneer of the industry since 1907. The brand covers the entire range of heating, ventilation and air-conditioning technology as well as many innovations.



Saunier Duval Brand Group

The Dutch company, founded by Herman van Thiels almost 80 years ago, has grown to become an important Dutch supplier that offers a wide range of products with excellent value for money.



Under the Belgian brand Bulex, high-quality appliances for heating, hot water and air-conditioning in business complexes and residential buildings have been offered for 80 years. Today they fulfil the highest demands for comfort and good ecology.



Demir Döküm, founded in 1954, is the leading heating and air-conditioning technology specialist in Turkey. In addition, Demir Döküm products are sold in more than 50 countries in Europe, Asia and North Africa.



Since 1934, the focus of the leading heating appliance manufacturer in the UK has been on reliable, highly efficient products that work in both an energy-saving and environment-friendly way.



The Italian Hermann company began its activities in the heating technology business in 1970. Since then it has developed into a highly modern brand that is focused on compact wall-hung boilers.



Protherm, the youngest brand, came into being in 1991 and today has a leading position in several Eastern European countries. Protherm also exports to many other countries in Europe, Asia and Africa.





Production and R&D sites

- 1 Vaillant Group headquarters
- 2 Research and development
- 3 Wall-hung boilers
- 4 Renewable energies
- 5 Floor-standing boilers
- 6 Gas water heaters
- 7 Electrical appliances
- 8 Air-conditioning systems
- 9 Modules
- 10 Storages
- 11 Electronics
- 12 Radiators





Bundled competence for renewable energies: In Gelsenkirchen, Germany, we produce solar collectors, heat pumps and combined heat and power systems.



Lin Huaibing works on a new production line at our Chinese plant in Wuxi. The plant produces mainly for the Chinese market.

## Dense network

The Vaillant Group manufactures its products at 14 sites in seven European countries and China. The close-meshed and coordinated manufacturing network guarantees the on-target and efficient manufacture of our products.

**Short paths, bundled competence** – the structure of the Group production network follows these principles. As extensive as our solutions for heating, cooling and hot water are, all our products are manufactured as close as possible to the respective sales markets. That not only increases the efficiency of the operational flows, but also ensures customer-friendly delivery times and short transport routes.

The production of related appliance types, core components and modules is bundled at the individual sites in order to use the know-how of our employees as best as possible. In Gelsenkirchen,

the Group's Competence Centre for renewable energies, products such as solar collectors, heat pumps and combined heat and power systems are manufactured in series. Thereby the company's production basis concentrates on growth in all product segments – especially in the areas of renewable energies and environment-friendly condensing technology.

This is making the Vaillant Group manufacturing network ideally tuned to the current market requirements – and at the same time for future developments in the heating technology industry.





## Sustainability? We simply live it

Sustainability has been the yardstick of our entrepreneurial actions right from the start. Company founder Johann Vaillant and following generations of the family have always been particularly committed to their employees and the people living nearby. That's why the issue of sustainability has top priority at the Vaillant Group.

**The Vaillant Group** clearly acknowledges its responsibility for the environment, its employees and society. Our company goals and business aspirations can only be realised in harmony with human and environmental needs. Our fundamental understanding of sustainability is specified in writing in the Group's Corporate Vision and Sustainability Vision. It was laid down by the Management Board and senior management together with representatives of the owner family. In line with its Corporate Vision, the Vaillant Group aims for sustainable, profitable growth.

Sustainability at the Vaillant Group is one of the company's most important strategic issues. Our products and services make a considerable contribution to the protection of the environment and enhancing people's quality of life. In Germany alone, about 55 million tonnes of CO<sub>2</sub> a year can be saved by replacing all outdated heat generators.

The operational management of a sustainable company development is ensured in its core areas by the Vaillant Group Sustainability Management department. In organisational terms it is assigned to the Group Communications department, which reports directly to the Vaillant Group CEO. He is informed regularly on developments in the sustainability area. The sustainability objectives are laid down and reviewed for coming years in strategic meetings with the Management Board.

The operational organisation and implementation of the Vaillant Group sustainability strategy is in the hands of various sustainability bodies. Since the beginning of 2011, the Vaillant Group Sustainability Board has been meeting once a year. The board consists of the Management Board, the Sustainability Management department and the main representatives of the top management. Here, all strategic decisions in the area of sustainability are discussed and approved. The company's strategic alignment is the basis for the Vaillant Group Sustainability Circle. This body is composed of the Sustainability Management department and members of headquarters departments such as Purchasing, Production, Logistics, Sales and Service. They meet once a year in order to develop the main measures in the operational area of the Vaillant Group. In the Vaillant Group Sustainability Forum, the Sustainability Management department and the special environment representatives of all Vaillant Group plants meet once a year. Here they discuss the



Detailed work at the annual meeting of the Vaillant Group Sustainability Forum. The members develop the main measures for environment-friendly production.



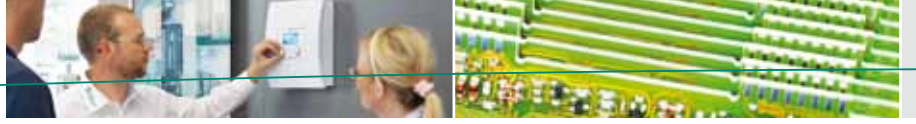
Sustainability: Walk the talk. It's our yardstick. Our products and business activities are aligned to it.

Sustainability Board	Sustainability Circle	Sustainability Forum
Management Board Sustainability Management Representatives of the top management levels	Sustainability Management Representatives of headquarters departments (Purchasing, Production, Logistics, Sales, Service, etc.)	Sustainability Management Special environmental representatives of all plants
Strategic decisions	Operational measures	Environment-friendly production processes
<b>Sustainability Management</b>		

current issues regarding the environment-friendly organisation and improvement of production processes. Feedback on the results ensures a continuous exchange of information between all company levels.

In order to take account of external parties' views on current and future sustainability issues, the Group actively seeks a common dialogue. That's why we are members of the German Environmental Management Association, B.A.U.M., Europe's largest environmental initiative of commerce and industry, and support the German Sustainability Award.





## Sustainability: a factor of success

Dr Carsten Voigtländer, CEO of the Vaillant Group, explains the key points of the Vaillant Group's understanding of sustainability.

### Why is sustainability a 'matter for the boss' at the Vaillant Group?

▶ Sustainability is an essential strategic issue for the Vaillant Group. Consumer habits are changing, a scarcity of resources and the climate change dominate the public and political debate. As a family company and one of the market leaders worldwide with a sense of responsibility, we want to shape the future and actively contribute to solving global problems. In addition, our customers are asking for highly efficient and environment-friendly technologies more and more. That is why sustainability is a main pillar of our strategy and our business success.

### So the affirmation of sustainability is an economic consideration?

▶ In our opinion, sustainability and long-term economic growth are linked together very closely. We did not discover the issue of sustainability only as a reaction to the climate change debate. Sustainability has played a role for the Vaillant Group right from the start – it's just that at the end of the 19th

century nobody called it that. It was already clear back then to our founder, Johann Vaillant, that treating the environment, resources and employees with care ensured business success. He was, for example, the first entrepreneur in the Bergisches Land region where we are based who gave his employees a day off on Saturdays so they could rest. He also made sustainability a 'matter for the boss'.

### So what does that look like today in concrete implementation terms?

▶ For us, sustainability is a holistic issue. It's not a one-way street. We generally include the employees and are always open to their suggestions. That's the only way a sustainable corporate culture can survive. Moreover, we have set ourselves concrete goals and derived concrete measures from them which can now be implemented. Thereby our focus is not solely on the environment. Our sustainability management encompasses practically all company sectors. A key area is also our employees, who are our most important resource. Not least, we shall take major strategic decisions on products and service as well as further company development, with sustainability aspects very much in mind.

### Where do you see the Vaillant Group in the next few years?

▶ On the one hand, we want to maintain and further expand our technology and innovation leadership – and above all in the growth business fields of renewable energies and highly efficient technologies. On the other hand, it's also important for us to point the way in the areas of ecological, economical and social sustainability. As we have stated in our Sustainability Vision. We aim to be a model – be it in sparing the environment and resources, in the development and production of energy-efficient products, in promoting our employees or by assuming social responsibility. This will be our focus in the next few years.





# INTRODUCING S.E.E.D.S.





## Comprehensive responsibility

Sustainability at the Vaillant Group has a new name: S.E.E.D.S. With this programme, the company is further expanding its sustainability strategy.

**The Vaillant Group** sees itself as having a special responsibility – towards the environment, the employees and society. Our sustainability strategy is therefore an important part of the overall strategic alignment of the Vaillant Group. From this year, the strategy is being implemented in the Group’s new sustainability programme: S.E.E.D.S. – Sustainability in Environment, Employees, Development & Products and Society. The programme describes the four basic fields of focus on which our sustainability strategy concentrates. Sustainability management thereby supports the Vaillant Group goal

of achieving a sustainable increase in profitability along with balanced growth.

In the selection of the key areas, S.E.E.D.S. tackles the main challenges in the core business of the Vaillant Group. Clearly defined objectives in all four of the S.E.E.D.S. programme’s spheres of activity ensure a structured and Group-wide implementation. The Vaillant Group developed the goals in close consultation with the Management Board, the departments involved and important stakeholders.



Strategic sustainability programme

- Sustainability in
- Environment
- Employees
- Development & Products
- Society

# S.E.E.D.S.



## Objectives of the Vaillant Group S.E.E.D.S. programme

### **S**ustainability

Sustainability is an integral part of our corporate culture and strategy. Our goal is to take a leading position in key sustainability areas and to be perceived as a role model.

### **E**nvironment

Protection of the environment and resources is an important part of the Vaillant Group's sustainability strategy. We aim to use resources responsibly, consistently lower CO<sub>2</sub>-emissions, prevent negative influences on the environment and actively use opportunities for improvement.

### **E**mployees

Our employees form the foundation and the soul of the Vaillant Group. We pursue the goal of being the employer of choice for job applicants and existing employees.

### **D**evelopment & Products

Our objective is to offer our customers energy-efficient products over the entire product life cycle – from development, to purchasing, from production to use, and from service to recycling.

### **S**ociety

The Vaillant Group acknowledges its social responsibility. The company makes an active contribution where it operates, for social progress and the welfare of people.



## Tailor-made and practical

At the beginning of 2011 the Vaillant Group's sustainability strategy was re-shaped. Dr Jens Wichtermann, Director Group Communication and Sustainability Management, and Brigitte Kruse, Head of Sustainability Management, outline the most important changes.

### **Sustainability has been an integral part of the company strategy at the Vaillant Group for several years. In what ways has your concept changed?**

**JW** ▶ The sustainability programme, which originally rested on the three classic dimensions of sustainability, in other words ecological, economic and social aspects, was expanded in recent years and many new projects have been implemented. In 2011 we introduced our new sustainability programme called S.E.E.D.S. on a Group-wide basis. With this, we have expanded the three dimensions to four core fields. In the future we will be focusing our activities in the sustainability sector on the environment, our employees, society, and development and products.

### **Wasn't the old structure sufficient? Why are you concentrating on these four areas?**

**JW** ▶ Previously, the focal points of our sustainability programme were protecting the environment and resources. When we expanded the strategic focus we realised that the old structure couldn't depict all the main challenges in the Vaillant Group's core business. The new sustainability programme continues, of course, to take account of the three main pillars of sustainability. However, in order to implement the sustainability strategy across the Group, the four core areas are much more suitable.

### **To what extent do the four key areas cover the special features of the Vaillant Group?**

**JW** ▶ In our view, economic sustainability is a framework condition which enables sustainability in other areas. Development and products are the backbone of our company. Without products of improved efficiency we couldn't exist on the market successfully or in the long term. To underline this significance, besides the environmental area, a separate field of focus was devoted to the issue of development and products. In the area of social sustainability, we reiterate the importance of these two groups with the two focus fields relating to employees and society.



Dr Jens Wichtermann and Brigitte Kruse have been in charge of sustainability management at the Vaillant Group since 2011.

### **What impacts do these changes have on your daily business?**

**BK** ▶ Clearly defined objectives in all four of the S.E.E.D.S. programme's spheres of activity will enable us to make a structured and Group-wide implementation. We can assign every area of responsibility to the focus fields and thus define common goals and detail them for each operational level. That opens up a lot of new possibilities for lived sustainability in practice. By concentrating on four areas with great practical relevance, the topic of sustainability at the Vaillant Group will also be more vivid and tangible for the customers and the general public.

### **How do you ensure that the employees across the Group follow this new structure?**

**BK** ▶ On the one hand, by Group-wide communication, and on the other by the close integration of the employees. It's important for us that not only the operational departments but also our managers are involved in Sustainability Management and back the decisions taken here. This is why we also created new bodies when we changed our strategic alignment, such as the Sustainability Board and the Sustainability Circle, where the employees can voice their opinion in connection with the Group's activities. This is also how we receive direct feedback on our ideas and initiatives. Furthermore, our Group-wide Kaizen system is available to every employee in order to point out ideas and potential opportunities in matters concerning sustainability. We also promote the initiation of sustainability activities by our own in-house sustainability prize, the S.E.E.D.S. Award.



## You can take our word for it

In the sustainability sector, certification according to recognised standards plays a prominent role. The objective of gaining certification is to underline the company's responsible actions and make them visible and comprehensible for external stakeholders.

**As part of** a so-called multi-site certification, the Group-wide application and implementation of its quality and environmental standards are regularly scrutinised by an independent test institute. So far, our sites in Belper (UK), Nantes (F), Remscheid (D),

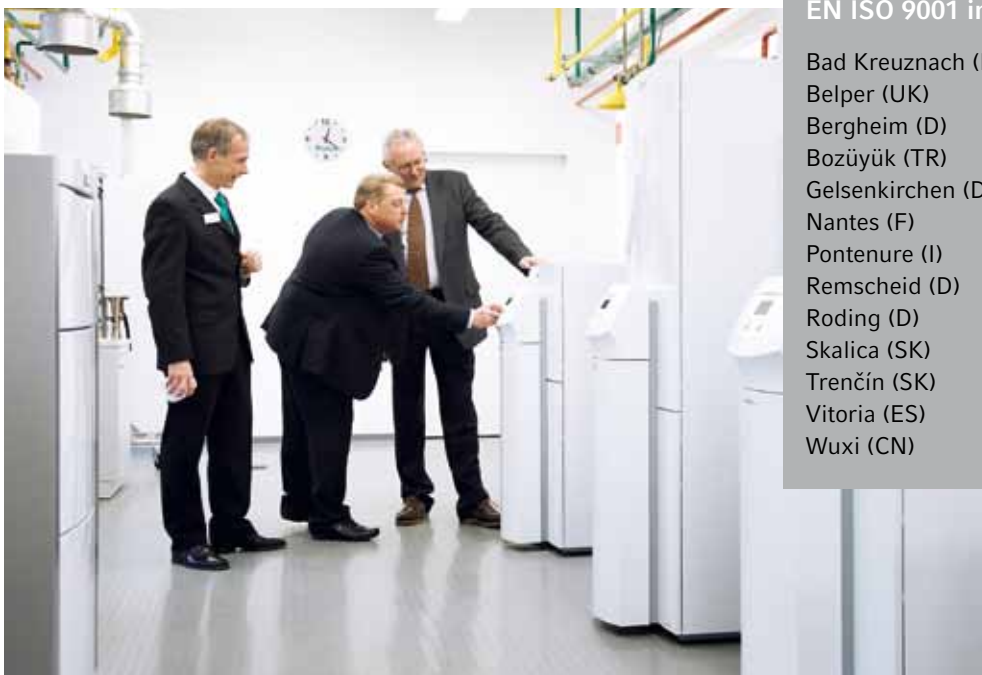
Skalica (SK), Trenčín (SK), Vitoria (ES) and Wuxi (CN) are part of the Vaillant Group multi-site certification. In the coming years all production plants are to be included.

▶ **QUALITY MANAGEMENT ACCORDING TO ISO 9001**

EN ISO 9001 lays down the requirements for a certain quality standard. They include statements on customer orientation, continual improvement, supplier relationships and other quality-relevant bases. They describe the entire quality management system and form the basis for our quality processes.

▶ **ENVIRONMENTAL MANAGEMENT ACCORDING TO ISO 14001**

EN ISO 14001 is the most important guideline in the environmental sector worldwide. It describes the requirements for a company's environmental management system. By applying this standard, environmental degradations are significantly alleviated by the drastic reduction of waste. Programmes that make production even more environmentally sound are regularly implemented at all our manufacturing sites.



- Sites certified according to EN ISO 9001 in 2010**
- Bad Kreuznach (D)
  - Belper (UK)
  - Bergheim (D)
  - Bozüyük (TR)
  - Gelsenkirchen (D)
  - Nantes (F)
  - Pontenure (I)
  - Remscheid (D)
  - Roding (D)
  - Skalica (SK)
  - Trenčín (SK)
  - Vitoria (ES)
  - Wuxi (CN)

- Sites certified according to EN ISO 14001 in 2010**
- Belper (UK)
  - Bozüyük (TR)
  - Nantes (F)
  - Remscheid (D)
  - Roding (D)
  - Skalica (SK)



## QUALITY POLICY

### ▶ Customer focus

Customers determine products and services as well as the quality they expect from a brand.

### ▶ Quality responsibility

Quality is the task and goal of every employee. Managers are role models for their staff.

### ▶ Continuous improvement

Existing processes are measured and improved on an ongoing basis to generate more profitable growth. This is done using measurable processes and Six Sigma methods.

### ▶ Employees

Employees are empowered to perform their tasks effectively and efficiently. This supports development of the organisation. We aim to be the partner of choice for tailor-made solutions (system supplier and service provider).

### ▶ Sustainability

Aspects of sustainability play a major role within quality management. For this reason, our management system is based on the principles stipulated in EN ISO 9001 and EN ISO 14001. We pursue the goal of retaining customers long-term through high-quality, eco-friendly products and efficient service.

### ▶ Social responsibility

In developing and manufacturing its products, the Vaillant Group undertakes to manage resources and the environment in a responsible way.

## ENVIRONMENTAL POLICY

### ▶ Customer focus

By accepting ecological responsibility, the Vaillant Group contributes to customer satisfaction. Our responsible approach is underlined by the steadily increasing proportion of high-efficiency, resource-friendly products in our range and their environmentally compatible disposal at the end of the product life cycle.

### ▶ Environmental responsibility

The Vaillant Group is committed to comprehensive environmental protection which takes into account current legal requirements.

### ▶ Continuous improvement

To ensure sustainable environmental performance, environmental aspects have been identified. On the basis of these aspects, the consumption of resources by Vaillant business processes in development, production and sales is continuously optimised.

### ▶ Employees

The Vaillant employee management system empowers all employees to support the organisation in its environmental policy. Eco-friendly work conditions make a major contribution to employee satisfaction.

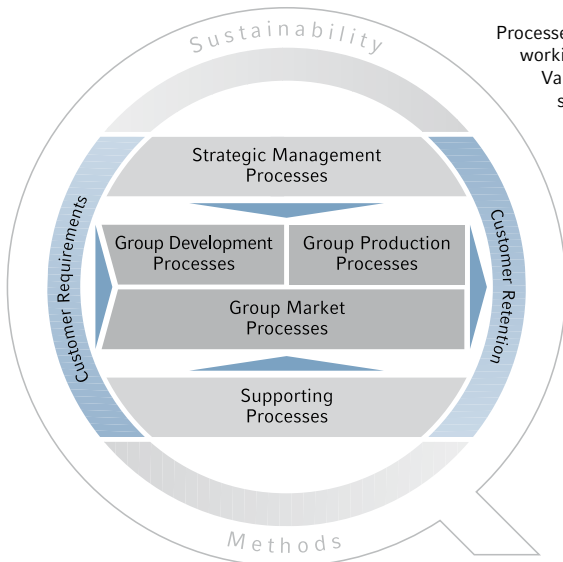
### ▶ Sustainability

The sustainability management system of the Vaillant Group ensures attainment of environmental goals and the actual environmental quality of business processes. Our contractual partners are included in our efforts to continuously improve environmental protection. The efficient use of resources, production processes that produce minimum waste and emissions, as well as energy-efficient products help secure the business results of the Vaillant Group.

### ▶ Social responsibility

We inform the public regularly and in a targeted way about environmental protection within the Vaillant Group. Interested parties may obtain additional information if they so desire.

The quality and environmental policy are monitored in regular reviews.



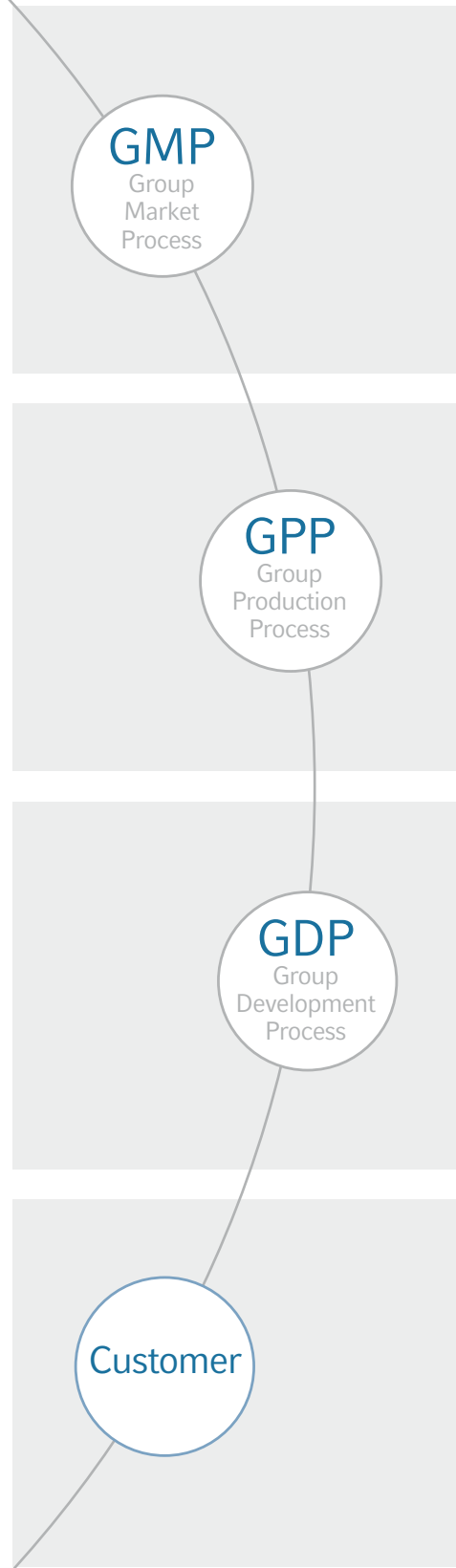
Processes structure the working methods in the Vaillant Group and ensure smooth operations.

## Sustainability in the Vaillant Group processes

The actions within the Vaillant Group are steered by clearly defined processes. These ensure that sustainability in all its dimensions is implemented and lived out in the company in its products and work processes right from the start. Sustainability is firmly anchored in these processes.

**Process management – that sounds** like petty rules, work instructions and the opposite of creativity. But it's precisely by its processes that the Vaillant Group ensures sustainability over the entire product life cycle. Processes steer the interaction of a great number of colleagues across departments and national borders – and ensure uniform Group-wide sustainability standards. That begins with product development and ends with the product's disposal. Thereby the processes are not laws set in stone.

The Vaillant Group Process Office, set up in 2010, analyses and reviews the processes in the whole company, which have often grown over many years. The objective is to support the managers in the various company departments in identifying, designing, implementing, steering and improving the business processes.



**Excellent services** before and after the sale of our appliances are essential for us. Altogether, the Vaillant Group employs nearly 4,000 service technicians and engineers. Comprehensive service after an appliance has been installed guarantees that our products maintain their efficiency over their entire life cycle and thus their maximum environmental benefits.



We perceive service to be comprehensive and it doesn't end with a sale. Our Customer Service staff ensure sustainable top performance: speedy, competent and reliable.

**Our production takes** place as close as possible to our main sales markets. Where it makes sense, we handle our goods deliveries via environmentally friendly means of transport such as by rail and sea. In addition, we optimise our logistics processes by cooperating with other manufacturers in our own and other industries. This is how we avoid empty running.



Our new Logistics Centre in Neuss, near Düsseldorf, sets standards. Orders can be handled much faster and more efficiently than before. For the good of the customers and the environment.

**The Vaillant Group considers** the products' entire life cycle right through to recycling as early as their development stage. The focus is on customer benefits, environmental protection and product safety. Our goal is to use finite resources more efficiently and reinforce the application of technologies based on renewable energies.



A wall-hung Vaillant device, for example, is 99.8 per cent recyclable. That prevents unnecessary waste and also ensures the efficient use of resources in the products' manufacture.

**In order to offer** sustainable products we have to know a lot. The most important thing is: What do our customers want? But we also have to know how the general conditions will change. In our 2020 Scenario Report, futurologist Markus Wieber looked into the future and showed the impact the expected climatic, economic, social and cultural changes will have. So we know today what our customers will want tomorrow.



Sustainability is a project related to the future. What does the future look like? Markus Wieber, Trends and Futurology Manager, has looked into the future with scientific methods. The result is the Vaillant Group 2020 Scenario Report.



# SUSTAINABILITY IN ACTION





The Vaillant Group has set itself four focal points for its sustainability management: development and products, the environment, employees and society. We attach special importance to these four core areas along with sustainable company development according to our corporate vision. We consider them to be essential for the further growth of our company. Therefore we make a particular effort in these fields of focus for continual improvement of our sustainability performance and indicators.

The following pages provide a detailed introduction to our four core areas. You can get to know the projects, people and the main indicators, and learn about the goals we will be pursuing in the future to improve our Group-wide sustainability performance.

Do you have any questions or suggestions? If so, please enter into dialogue with us: [sustainability@vaillant.de](mailto:sustainability@vaillant.de)





Innovative, efficient and well thought-through down to the last detail. With our products, everything must be right, for example in the geoTHERM heat pumps system.

#### Milestone ▶ Development and products

The domestic and world climate are inseparable. Supplying heat to residential buildings accounts for about one-third of the entire need for energy in Germany. Therefore modern heating technology plays a key role in achieving the climate protection targets. The prerequisite for that is that our appliances will be ever more efficient. That is why we are continually increasing the proportion of highly efficient appliances in our product portfolio. Professional advice and customer service contribute to optimum use of our products. Environmentally sound disposal at the end of the products' life cycle is not new for us, but a standard that we have lived by for a long time. New developments will in future contribute to the continuation of this tradition.

Green moves things: Vaillant has two electric cars with which employees can travel in an environmentally-friendly way from our Remscheid headquarters to our nearby site in Lennep.



#### Milestone ▶ Environment

In its environmental policy the Vaillant Group commits itself to a comprehensive protection of the environment and resources. In order to comply with this obligation, we work with a Group-wide Environmental Management System. In addition, an annual meeting of the managers responsible for environmental issues at all of our production plants ensures the exchange and Group-wide implementation of best practice activities. Important subjects in the environmental sector are, in our view, increasing material efficiency, reducing our energy and water consumption, preventing waste, and raising the recycling rate at our sites. In our aim to reduce CO<sub>2</sub> emissions, besides paying attention to the energy consumptions we also take a close look at our logistics and our behaviour with regard to business trips. A Group-wide logistics project is ascertaining and realising the optimum transport network of tomorrow. Modern conference technology is used to reduce the number of trips.



Strong performance:  
Our employees are the heart and soul of the Vaillant Group, their efforts lead us to success.



### Milestone ▶ Employees

Our employees are the heart and soul of the Vaillant Group. With the help of their commitment, their ideas and their efforts we have advanced to become a leading heating technology company worldwide. Mutual trust and tolerance are the basic values of our international corporate culture. A special concern for us is the personal further development of our employees. To achieve targeted promotion of each individual the Group runs an extensive system of initial and advanced training programmes. Further-training analyses, detailed development planning and management training courses make it possible to draw up individual promotion profiles. In addition, we see ourselves as a company that trains young talents. By means of various commercial and technical training courses we train apprentices to become the skilled personnel of tomorrow. These activities are supplemented by additional offers, such as health-promoting measures.

### Milestone ▶ Society

The Vaillant Group has always seen itself as a "Corporate Citizen" – as a company that acts responsibly and makes an active contribution to society where it operates. We promote development and support disadvantaged members of the community. Also of major concern to us is promoting children and teenagers. As part of our sustainability strategy we define principles and standards for this social commitment. Social responsibility, however, is not confined to individual social projects. Business activities must be compatible with the common good in general. So the observance of human rights and social standards is a matter of course for us and demanded by us of our contractual partners. Moreover, where applicable, our activities are subject to the strict compliance principles for companies.



Our future in mind: We take our social responsibility seriously by supporting projects like such as this energy-saving plan at a Remscheid primary school.

# Development and Products





“I am convinced that the fuel cell will be the top natural gas technology of the future.”

## With combined heat and power into the future

Brief interview with Joachim Berg, Head of Group R&D Cogeneration

### Mr Berg, you work on the technology of the future. Where does that lie in the heating sector?

▶ One of our most important issues of the future is the further development of combined heat and power, meaning the simultaneous generation of heat and electricity. The benefits speak for themselves. With such technology we already achieve efficiency values of more than 90 per cent. Even the most modern large-scale power stations reach only about 60 per cent. So cogeneration saves energy costs and reduces CO<sub>2</sub> emissions. Furthermore this is a well-controllable, decentral technology and thus a perfect complement to renewable energies, which depend greatly on weather conditions.

### What does Vaillant focus on?

▶ At present, we can cover the requirements of single and two-family houses with our ecoPOWER 1.0 system. The larger systems, ecoPOWER 3.0 and 4.7, are designed for blocks of flats, business premises and public buildings. These cogeneration units, CHP for short, are powered by gas combustion engines. In addition, we are working on a wall-hung CHP system with fuel cell technology.

### How does a fuel cell work?

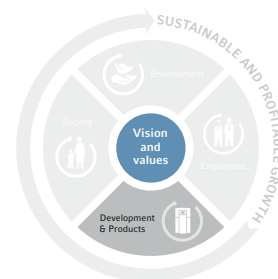
▶ In the ceramic fuel cell, which we favour, electricity is generated via an exchange of electrons and heat is produced at the same time. The carbon part of the natural gas is burnt and supplies additional heat. The whole process runs more or less silently and very efficiently.

### How far are you in the development?

▶ This technology is a major issue in the field of innovation. From autumn 2011 to the end of 2013, 100 fuel cell appliances will be part of the Germany-wide “Callux” field test. This test phase is important not only to further examine the system, but also in order to set up production chains with our industrial partners.

### What does this technology promise?

▶ Fuel cell technology saves space and above all is highly efficient. There is no long conversion chain and thus fewer losses. Such a CHP system works environment-sparingly and extremely quietly so it can be used very close to rooms, such as on a landing. I am convinced that the fuel cell will be the top natural gas technology of the future.

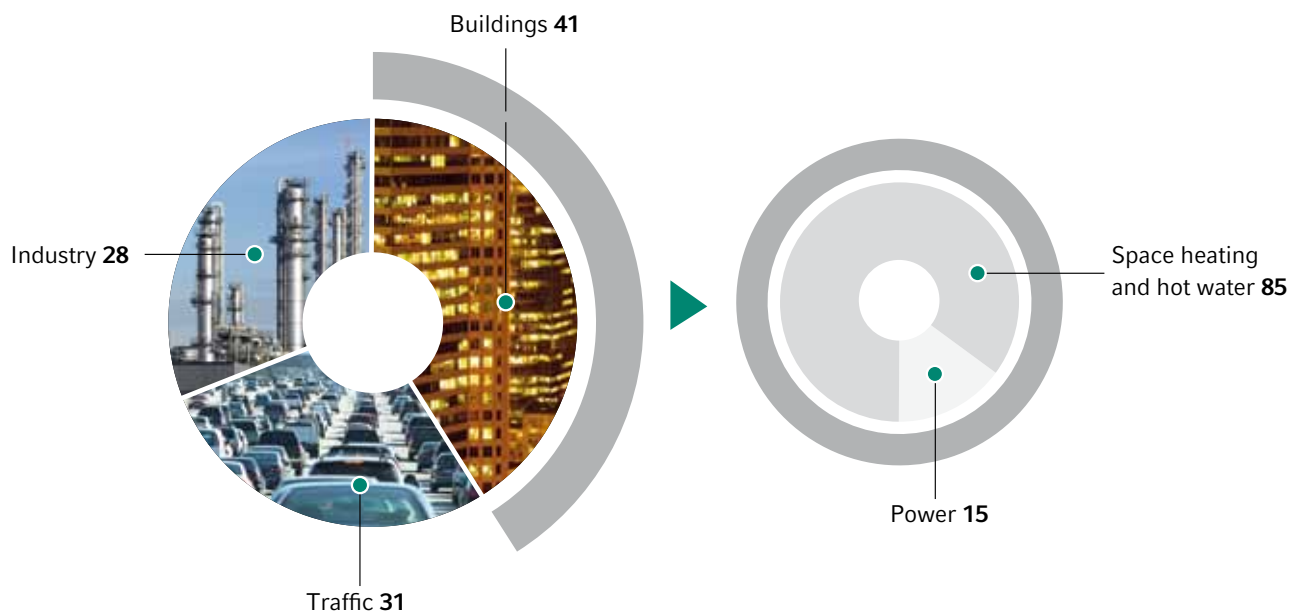


# Heating technology as the biggest lever

One of the biggest climate-killers lives in your basement. And if not in yours, then perhaps in the basement of your neighbour's, your uncle's or your mother-in-law's house. Only about every eighth heating system uses state-of-the-art technology. But modern heating technology can save up to 55 million tonnes of CO<sub>2</sub> emissions in Germany alone. Every year.

## Distribution to the primary energy consumption

%



**More than 40 per cent** of the total primary energy in the European Union is consumed in and for buildings. And the lion's share, namely no less than 85 per cent of it, is needed to generate space heating and hot water. So there's a huge potential to save – and thus spare resources and the environment.

The domestic and world climate are linked inseparably. That's why sustainability is essential for the Vaillant Group as one of the world's leading manufacturers of environment-friendly heating and air-conditioning technology. Modern heating technology can already make an important contribution today to achieving the climate protection targets. In Europe, just by replacing old systems with highly efficient technologies up to 40 per cent of the energy and thus also approximately 40 per cent of CO<sub>2</sub> emissions could be saved. And if, in addition,

renewable energy sources such as the sun are used, the CO<sub>2</sub> emissions can be reduced even more significantly.

That is why a key focus of the Vaillant Group is on products and systems that use renewable energies. In the future, there will be a demand for heat pumps using heat from the ground or the ambient air, as well as solar thermal systems. Another important mainstay is hybrid systems. They combine renewable energies with heating appliances based on fossil fuels to form particularly efficient and intelligent systems.

Combined heat and power (CHP) systems also focus on this efficiency. Here, energy is used only once via a gas-powered engine in order to generate both electricity and heat. This means that the CHP system achieves an efficiency level of 90 per cent and more. A strong lever.



Interview with Klaus Jesse, BDH President

**As the President of the Federal Industrial Association of Germany, House, Energy and Environmental Technology (BDH), you advocate an accelerated modernisation. What do you bank on for the near future?**

► If we really want to achieve the ambitious climate protection targets, we must drastically increase the speed of modernisation in the building sector. This is where in the truest sense of the word there slumbers a huge potential for sparing resources, boosting the use of renewable energies and significantly reducing CO<sub>2</sub> emissions. The technology for that already exists. The reasons for the standstill in modernisation that has continued for years include changeable subsidy conditions and a public debate that revolves almost solely around the issue of electricity and largely leaves the heating sector out in the cold.

**How big is the potential?**

► It's enormous. Take a look, for example, at Germany. Only 13 per cent of 17.8 million heat generators throughout the country work efficiently and use renewable energies. If outdated boilers were replaced by modern heating systems such as condensing technology or heat pumps and combined with solar thermal systems, we could save up to 40 per cent in energy – and correspondingly 40 per cent of CO<sub>2</sub> emissions.

**How can one accelerate this process?**

► An important step has been taken. With the nuclear phase-out being finalised the German government is turning to the building sector and heating

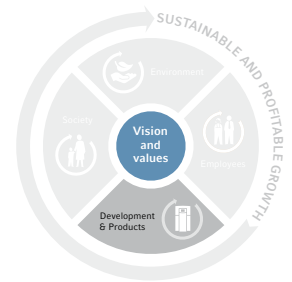


**We assume that in Germany only 13 per cent of all heat generators work efficiently and use renewable energies.**

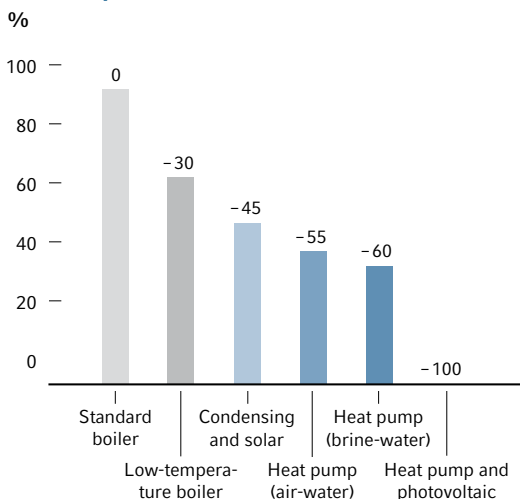
market. After all, roughly a third of the primary energy is consumed here. But we need concrete measures and the right incentives for private and public investors.

**And that's the hitch?**

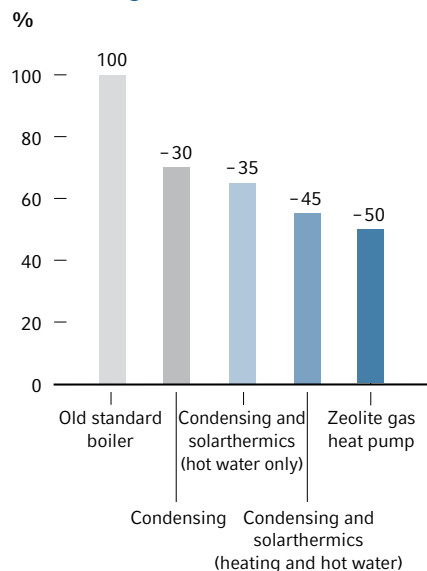
► Unfortunately, yes. The ecological heating systems also suffer from the lavish subsidising of solar electricity. As a result, we lose valuable roof surfaces and also capital for solar thermal collectors, which are much more efficient because they can generate both space heating and hot water. We're not calling out for subsidies, but making the case for a stable political framework for consumers and businesses alike. We're also aware that the federal government's ambitious objectives cannot be achieved without incentives for private investors.



**Potential savings in energy consumption**



**CO<sub>2</sub> emissions of heating systems based on gas**



# Hightech for the climate of tomorrow

The international heating, ventilation and air-conditioning technology market is changing fundamentally. The focus is above all on energy-efficient systems and products based on renewable energies. Controls connect the individual components of a heating system, such as heating appliances, storage tanks and solar collectors, thus creating smart system solutions. This trend is reflected in the product portfolio of the Vaillant Group. For every application area and for all types of energy, the Group offers perfectly tailored solutions which combine highest energy efficiency with comfort.

## 01 ▶ Solar collectors

Solar collectors serve to provide hot water and support heating. They absorb sunlight and especially heat radiation so that the water they contain heats up. The collectors are available as tube or flat-plate versions.

## 02 | 03 ▶ Condensing boilers

In contrast to customary heating appliances, condensing boilers use the heat energy in the flue gas which otherwise is lost up the chimney. They liquefy the steam in the flue gas and draw the residual heat energy from it by condensation in the heat exchanger. This is then fed into the heating cycle. Condensing boilers are available as wall-hung or floor-standing variants.

## 04 ▶ Heat pumps

Heat pumps extract natural energy from the soil, ground water or the air. They work emission-free and stand out for their very low energy consumption. Due to its separation in an internal and an external unit, the air based heat pump technology was optimised yet again.

## 05 ▶ Zeolite gas heat pump

A zeolite gas heat pump combines the benefits of modern heat pumps with those of gas-fired condensing heating and solar technology. To further increase its efficiency, and for the first time in the history of heating technology, the appliance is equipped with a zeolite unit. Zeolite has a structure like a sponge, with many cavities in which the mineral absorbs water. In doing so, the zeolite develops heat which is also used in the heating process.



01



04



02



03



05



06



07



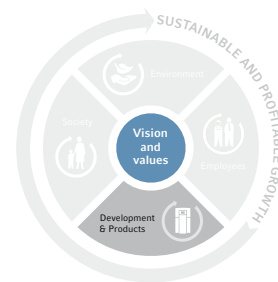
08



09

### 06 ▶ Combined heat and power

Combined heat and power (CHP) is a cost-saving form of power and heat generation. A micro-CHP unit contains a gas-powered combustion engine that drives a power generator. The heat arising from the power production by the engine and generator, as well as the heat of the flue gases, is used for heating and hot water.



### 07 ▶ Pellet boiler

A pellet boiler can cover a building's entire need for hot water and domestic heating in an environment-friendly way. For fuel it uses wood pellets that occur as waste material in wood processing.

### 08 ▶ Storage tanks

Hot water storage tanks have become a significant factor of modern heating systems, with many control functions. They take in heated water through solar collectors and other heat sources, such as condensing boilers or heat pumps, and store the heat until it is needed for hot water or heating.

### 09 ▶ Controls

Controls are the interface between the heating system and the user. Depending on the need, the indoor climate can be set individually.

Aesthetic architecture with outstanding energy consumption values after replacement of the system technology: the house of the Brockbals family in Gütersloh, built in 1960/62.

Sustainable system renovation of a house in Gütersloh:

## Heating for one euro

The heating of buildings consumes about one-third of the primary energy used in Germany. Often, this energy is literally thrown out of the window because the heating technology is out of date. The greatness of the potential for saving is shown by an example in Gütersloh. There, the old gas boiler was exchanged for a modern ecoPOWER 1.0 micro-CHP system. This cut the energy costs for power and heat from €2.15 to €1.03 per square metre a month!

These savings are all the more remarkable when you look at the building. True, the charming home from the 1960s already had a comparatively well insulating latticed wall and intermediate insulation under the roof tiles. House owner Burkhard Brockbals rejected further measures, especially on the extensive facade, quite consciously. "An insulation of 10 or 20 centimetres thickness would not have suited the architectural character of the house, would have negatively influenced the indoor climate – and would not have been worth it, neither ecologically nor economically."

### Cost-efficient investment

Brockbals can prove that with concrete figures. The insulation would have guzzled up about 40,000 euros – but reduced the heating need of the two-family house with 255 square metres of living space by only about 30 per cent. And the family would also

have had to dig deep into their pockets for the new heating system which was due anyway. Burkhard Brockbals: "But such a calculation is only really meaningful when you also include the electricity costs, meaning looking at the energy needs of the house as a whole."

### Efficiency for old buildings

In their search for alternatives, the Gütersloh family was also prepared to consider an innovative approach. They found it in the ecoPOWER 1.0 micro-CHP system, which Vaillant has specially developed for single and two-family houses. With 1 kilowatt of electrical output, the compact CHP unit generates only 2.5 kilowatts of thermal energy and thus is perfectly tuned to what the house needs. Burkhard Brockbals: "It's ideal for projects involving the renovation of old buildings, such as here in Gütersloh, because due to the consumption





Compact and well-structured and also easy to install. That's the new "power station centre" with an ecoTEC exclusive peak-load boiler, heat decoupling module with system control, CHP module with a gas-powered combustion engine and a 400-litre multi-function storage cylinder with a drinking water station.



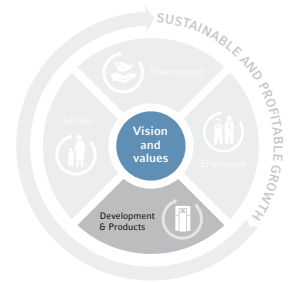
Sibylle and Burkhard Brockbals with installer Christian Hinzmann (from right) at the handover of their new system, which can be steered intuitively via a touchscreen.

of power and heat on site, you achieve the long running times that make the micro-CHP system so efficient. The electrical efficiency factor of 26 per cent beats all comparable systems by far." In addition, compared to the alternative insulation of the facade and a customary new heating system, the family saved 40 to 50 per cent in investment costs.

### Simple installation

For Burkhard Brockbals, however, the power station in his own basement is especially interesting for yet a second reason. The installation requires hardly any more time and effort than simply replacing an out-of-date boiler. That also goes for the Vaillant ecoTEC gas-fired condensing appliance for peak loads, the allSTOR multi-function storage cylinder with a drinking water station, and the system hydraulics, which are brought together in a distribution block that is easy to assemble. Installer Christian Hinzmann, who assembled the CHP system in the Brockbals family's home, sees an important sales argument in this fully harmonised system technology. "With the simple installation and integration of the existing heat distribution with the high flow and return temperatures, we even win over end-customers, who are not so open

to new technologies as we are." The expert is sure: "The combination of much lower consumption costs without elaborate conversion work, coupled with consistent heat and hot water comfort simply convinces everyone."



### Proven gas-powered combustion engine

The heart of the ecoPOWER 1.0 micro-CHP system is a highly efficient Honda gas-powered combustion engine. In Japan and the USA, this engine has been used in more than 100,000 systems since 2003. In contrast to a car engine, it needs significantly less maintenance and has longer service intervals. Maintenance work by an installer is required only every 6,000 operating hours – for the home in Gütersloh that means about once a year, just like for a gas-fired condensing boiler.



Genia Hybrid of the Saunier Duval Brand Group combines an air-water heat pump with a gas-fired heating appliance via a smart control.

The Vaillant Group was honoured for the second time in 2010 with the German Sustainability Award.



## The future begins now

Sustainable products are not new for the Vaillant Group. At Vaillant, everything has revolved around them for 137 years. Yet about 500 engineers still work continually on developing new systems and products that are even more economical, efficient and ecological. Here are some examples from our ideas workshop.

### Air and water ingeniously combined

In two air-water heat pumps, Vaillant effectively combines both elements. The geoTHERM, Vaillant's first air-water heat pump with split technology, is already on the market. The system consists of an external unit and a brine-water heat pump that efficiently uses the warmth of the ambient air to heat buildings and provide hot water.

Also the Genia Hybrid heating system of the Saunier Duval Brand Group combines both elements. First it combines an air-water heat pump with a gas heating appliance. A hydraulic module then connects both heat generators to the heating circuit in a house. The Examaster control selects the most effective source or switches both together – depending on the outside temperature, the need for heat, and the energy costs.

### Awarded for sustainability

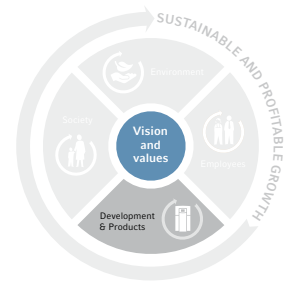
The German Sustainability Award was presented for the third time in 2010. And for the second time in a row Vaillant was among Germany's top three companies in the sustainability sector, receiving an award in the category "Germany's most sustainable products and services". "Vaillant GmbH consistently optimises its products towards greater efficiency and the use of renewable energies by developing and applying new technologies," said the jury's citation. The jury also praised the company's system approach of energy-efficient appliances and its comprehensive support and advice for the customers.



In Aub, in Lower Franconia, an ecoPOWER mini-CHP system serves as a charging station for electric cars.



Strong partners for a strong project: Dr Carsten Voigtländer, Takuji Yamada and Ralf-Otto Limbach. Vaillant and Honda are cooperating in the building of combined heat and power systems.



### The best partners

Vaillant sought strong partners – and certainly found them in AVL Schrick, a neighbouring company in Remscheid, and Honda, the Japanese engine specialists. Both companies supply gas-powered engines for the Vaillant combined heat and power (CHP) systems which generate heat and electricity at the same time, thus sparing resources and reducing CO<sub>2</sub> emissions. Honda provides the engine for the ecoPOWER 1.0 CHP system. This closes a technology gap in the small output range and for the first time enables the optimum use of CHP in one and two-family houses. For the higher needs of two-family houses and blocks of flats, business premises and public buildings, the ecoPOWER 3.0 and 4.7 CHP systems are ideal. AVL Schrick supplies their power drive.

### Clean electricity for clean cars

A Vaillant brand ecoPOWER mini-CHP system covers the energy need of Smiles AG, an electric car manufacturer. The system supplies heat and power for the factory halls and office buildings. In addition, the mini-CHP system provides the company's own power charging station with electrical energy. With the environmentally-friendly produced electricity, CO<sub>2</sub> emissions can be reduced by 70 to 80 per cent compared even to the most economical combustion engines. It's a clean business that's also low-priced: the e-cars of Smiles consume only between 3.5 and 12 kilowatt hours of electricity per 100 kilometres. The costs of 50 euro cents to 2.50 euros can be reduced further by the self-produced CHP system electricity.



# Environment



Interview with Prof Dr Manfred Fishedick, Vice President of the Wuppertal Institute

### The energy supply of the future will be based on renewable energies. In your view, what can the bridge to that look like?

► In my view, besides the entry into a regenerative energy system, two things are pivotal. On the one hand, energy saving that reduces the costs of extending renewable energies and also lowers the need for infrastructure. On the other hand, making conventional power plants flexible in order to be able to react to fluctuations in energy generation.

### What role does natural gas play in this connection?

► In the power generation sector in particular, natural gas is certainly an ideal option. It enables power generation with very high efficiency rates and the use of decentralised combined heat and power systems and thus much greater fuel utilisation. Of the fossil fuels, natural gas is the one with the lowest CO<sub>2</sub> emissions and is characterised by comparatively high availability. In addition, natural gas power stations have great flexibility, so they can be quickly regulated up and down and switched on and off.

### Households and thus heating systems are the biggest consumers of natural gas. What applications make sense here?

► If we are really considering climate protection and the entry into renewable energies, then a great deal must change in the building sector as well. What is important here is the need to increase the present energy-conserving renovation rate of about 1 per cent to 2.5 to 3 per cent a year. Only so do we have a chance of actually achieving the climate protection targets. For the heating sector this will mean using less energy and the heating technologies must be oriented more towards a lower consumption. With regard to natural gas applications, future combinations of natural gas condensing



The future of the energy system will not be black or white. It will include both decentralised and central applications.

boilers with solar collectors, and natural gas heat pumps, fuel cells, small decentralised combined heat and power systems with natural gas are especially interesting. But I also see a great potential for electrical heat pumps in the future.

### What role will the decentralised energy supply play?

► The future of the energy system will not be black or white. It will include both decentralised and central applications, such as offshore wind power plants. Compared to today, however, the supply of energy will be more decentralised because besides renewable energies, options such as decentralised cogeneration will play a bigger role in order to exploit the potential for efficiency. The decentralised CHP system is also as a fluctuation-balancing element interesting for the renewable energies sector because the system can be used flexibly for power generation. In addition, the consumers have a growing interest in being able to generate power themselves, which is affordable and technically possible with decentral CHP systems.



## 20-20-20 by 2020 – the formula for success

The European Commission's formula for success in climate protection gets its message over with only two different figures: 20-20-20 by 2020. But behind it are ambitious targets aimed at bringing Europe on the right path by the year 2020 – towards an environmentally compatible future with a low-CO<sub>2</sub>, energy-efficient economy. This is to be achieved by:

20% less greenhouse gas emissions compared with the level of 1990

20% less energy consumption due to better energy-efficiency

20% of our energy need is to come from regenerative sources

There's a lot do – we're helping to tackle it.





Everything has its place: Thanks also to a sophisticated sorting system, our plant in Belper strongly reduced its waste volume.

## The big goal – zero

No more rubbish is going to the landfill. Our plant in Belper, England, set itself this and other ambitious goals in 2008 with its programme Blue 4 You. And it has already achieved them.



The new test stations (picture above) help to conserve resources.

**Everything is tidy**, boxes in various colours communicate their message silently and clearly: green for plastic, blue for paper. But those two colours also have another meaning. Blue 4 You is the name of the programme that the management proclaimed in 2008 in order to get the plant fit for the future, which is changing from green to blue.

The programme's objectives are as ambitious as they are comprehensive: employee satisfaction, latest technology, added value to business, and "zero landfill", meaning no more rubbish for the disposal site. The big zero was to be achieved in 2012. The team of Plant Manager Marc Dörpinghaus made many big and small changes for that. Even the suppliers were persuaded to pack their goods differently, for example so that in the ideal case the palette overlays can be re-used.

"Re-use, reduce, recycle". Allan Harley, Manager Health and Safety, knows the mantra and lives it. Since 2010 a roto-crush shredder has been standing on the plant grounds that chops up broken palettes. The wood is then sent to a recycling company free of charge. "After only six months we had recovered the 35,000 euros purchasing costs," Harley says.

"Naturally it was also about money. Landfill disposal cost a lot and it was foreseeable that in future it would be even more expensive – like all energy prices," says Dörpinghaus. The environmental sector is completely integrated in the Blue 4 You programme. Even the renewal of the plant roof

considerably contributed towards its progress. The daylight panels provide the factory hall with friendly, natural light and thus help to save energy. In addition, the roof is better insulated – saving energy once again.

The Production department is also making strong savings: of the old test stations working with water, only two are still in operation. Instead, the tightness of the appliances is checked on modern air-test stations. "That works much faster. Instead of 16 minutes we now need only three," explains Richard Sainsbury, Industrial Engineering Manager. Less time, water and energy. The Paint Shop was also changed in order to use the heat better.

New production lines set up at the plant at the beginning of 2010 increased effectiveness and quality. Above them hang screens that tell the employees what's new, reminding them about the rules on separating different kinds of rubbish – or, as during the 2010 FIFA World Cup, bring the world's most beautiful trivia into the factory. "Communication with our employees is very important to us," Dörpinghaus says. Training courses and the monthly Breakfast Club, where the employees can bombard their managers with questions and propose ideas, are part of it.

"Together we have made a new plant out of an old one," Dörpinghaus adds. That has paid off at many places, and surprisingly early at one of them. The Big Zero goal was achieved in May this year. No landfill rubbish. Nothing.

Interview with Marc Dörpinghaus, Belper Plant Director

### What is Blue 4 You?

▶ Blue 4 You points the way forward. With this we aim to show the employees a vision of how we imagine the future for the plant. It should be clear and understandable. Our issues are people, the environment and profit with four core goals: employee satisfaction, added value to business, the latest technology and landfill to zero, meaning no more rubbish for the disposal site. From those objectives we have derived projects for the period from 2008 to 2012 in order to show that we are making headway.

### Why did you initiate the programme?

▶ We and the employees lacked a concrete vision of the future. That was also shown by the employee survey in 2007. In addition, you also have to look at the economic environment. Especially in the UK, our industry had fallen sharply and a negative trend prevailed. I wanted to motivate the colleagues in middle management to develop a vision for their departments, analyse strengths and weaknesses, set targets and thus aim for success and new horizons and, in turn, motivate their employees. In addition, I wanted to build up sustainable structures.

### How much sustainability is there in this concept?

▶ A lot. We could look at many indicators, such as the fluctuation rate, which tended towards nil, absenteeism, which was significantly below the national average, and the production figures, etc. But Blue 4 You is, above all, a step towards getting the organisation fit for the future and making clear that we can start doing so today.



Blue 4 You is a step towards getting the organisation fit for the future and making clear that we can start doing so today.

### The Belper plant won the UK Best Factory Award (BFA). What does that mean?

▶ For a start, I find that you have to celebrate successes and mark them. I was very, very happy for the team. We had achieved a great deal in a short time. But we wanted to know where we really stood. Cranfield University's School of Management, which presents the award, is very serious about it. Naturally, we entered the competition as a company and with various projects. But then things really started to happen. Several teams from Cranfield scrutinised everything here, and even rummaged through the rubbish container (laughs).

### The programme is conceived to run until 2012. Where does it go from there?

▶ The BFA jury visit also showed where we could be even better. In 2012 we in management will re-structure things, including ourselves, and plan the future over the next few years. We can only do that together as a team.



The Blue 4 You programme was set up in 2008 and runs to 2012.

#### Zero landfill

The big goal – zero landfill – was achieved in May this year. In 2006 it totalled 357 tonnes.

#### Production

Compared to 2008, in 2010 production saved 26.67 per cent in energy – per manufactured appliance.

- New test stations check appliances with air, not water, and spare resources (2009).
- New production lines with Radio Frequency Identification (RFID) technology ensure more effective work and higher quality (2010).
- Redesign of the Paint Shop for effective use of heat (2010).

#### Employees

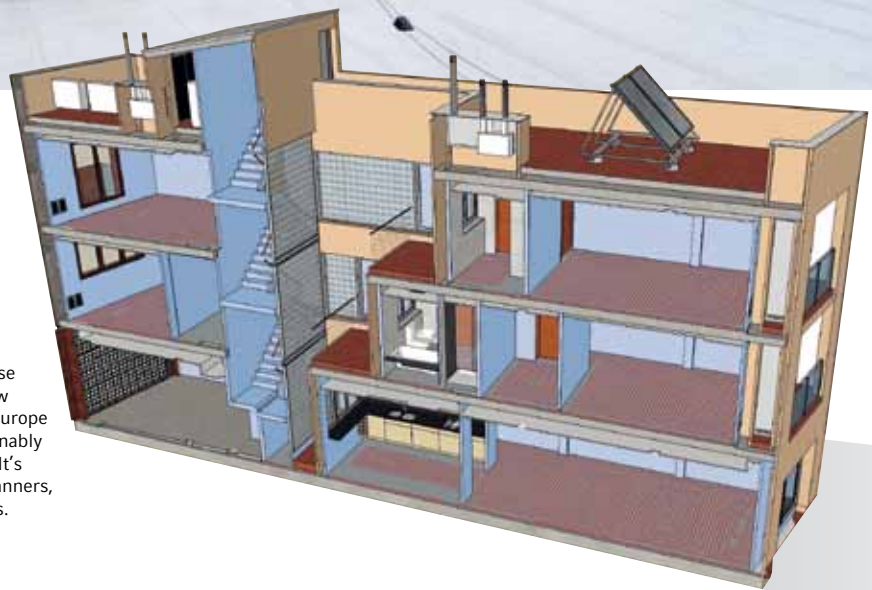
The corporate culture is to change – for and with the employees.

- Various training courses for employees and team leaders, Kaizen (2010).
- New rest areas (2009), workwear and pay structure (2010).
- More communication: Breakfast Club since 2009, better exchange of information.

And, of course, the new factory roof which was completed in 2009. It's well insulated and provides the factory hall with natural light.



Vaillant flat-plate solar collectors provide the hot water supply for a pipe cleaning station at our Remscheid plant.



The energy-saving house in Barcelona shows how buildings in southern Europe can be equipped sustainably and energy-efficiently. It's aimed at sensitising planners, architects and installers.

## Good should be even better

All Vaillant Group plants made great efforts in 2010 to be even better and do even more for the environment. Above all, our consumption of water and electricity in production was reduced.

### Sunshine-clean hot water for our production

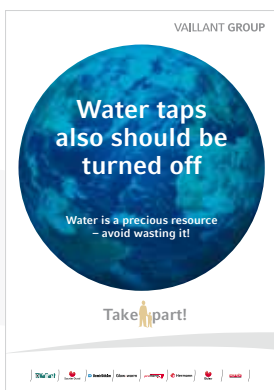
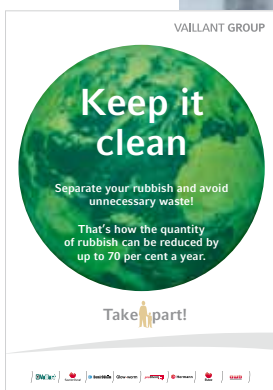
At the Vaillant Group plant in Remscheid, Vaillant flat-plate solar collectors supply heat for a cleaning process in the piping production. On the roof of the workshop, 30 such Vaillant collectors capture the warmth of the sun, which heats the water in the pipe cleaning station. This means that a large part of the heat needed is covered in an environmentally-friendly way and free of emissions and costs. The solar system is to supply about 14,400 kilowatt hours of heating energy per year. This corresponds roughly to the annual need for heat of a well-insulated one-family house with a living area of about 150 square metres. The installation consists almost entirely of standard components from the Vaillant product portfolio – a classic example for the use of solar thermal energy in industrial processes.

### There's an energy-saving house in Barcelona

Low-energy houses have to fit in with their environment. Saunier Duval Spain has realised a low-energy house in Barcelona for the Mediterranean region. Vivienda EE+ is a reference object for sustainable and energy-efficient building concepts in southern Europe. In the exemplarily refurbished single-family house with an area of about 180 square metres, a solar thermal system, a ventilation unit with heat recovery, an air heat pump and under-floor heating and cooling are used. As needed, a geothermal heat pump also provides cooling in summer. By means of a control, the individual components are combined to form an efficient system. The low-energy house is aimed at sensitising planners, architects and installers to the issue of energy efficiency.



The driveways between the press shop and the powder coating station are now circular. The paths are thus shorter, saving time, money and energy. Here, Team Leader Antonio Manuel Silva Antunes makes a random sample check.



### Environment campaign saves resources with pithy posters

“Empty rooms also like to sleep in the dark” – our environment campaign of 2010 ended with this message. For a year, posters sensitised the employees to deal responsibly with resources such as energy and water, to prevent waste and to separate different kinds of rubbish. The posters featured a different crisply communicated theme every quarter. Every batch of 300 posters reminded the staff with subtle and humorous messages about things that should be a matter of course – with success. In total, ten per cent of the resources we use were saved compared to the previous year.

### Circular traffic in the pressing plant

The routes have become shorter. Traffic between the pressing plant and the powder coating plant in Remscheid now goes in a circle because routes have been redesigned in a circular layout. Due to the improved logistics and the circular traffic, the routes both for the employees and the components and parts have become much shorter. This means the work flows are organised more efficiently and there are fewer intermediate storage points. That enables lower warehouse stocks. So it's a good idea that saves time, money and energy and goes easy on the employees and the environment.



# Employees

80%

of the employees who took part in the survey judge the way that direct managers deal with their employees as respectful, find their work interesting or enjoy it and in general have a positive view of the Vaillant Group.

76%

said they were satisfied with the Vaillant Group. This value is slightly above that of the previous survey.

57%

said they received sufficient feedback on their performance. Because the findings differ greatly from one company site to another, an individually adaptable package of measures to improve the feedback culture is being implemented.

## Because we take it seriously

How satisfied are Vaillant Group employees? Where can we be even better? Because Vaillant knows how important our employees are, they are regularly asked for their opinions – and conclusions are drawn from their answers.

**The company's major** employee survey takes place every two to three years. They were all asked for their opinions in December 2010 – in writing and, of course, anonymously. The questionnaire covered all areas that have substantial influence on their satisfaction: their direct managers, qualification and development opportunities, cooperation and the learn-from-mistakes culture, work environment and own job, processes and quality. "This major employee survey provides a comprehensive picture of their opinions that is very important to us and which we take seriously," says Bernd-Johannes Dziwis, Vaillant Group Director Human Resources. For example, as a result of the last two surveys the canteen at our plant in Nantes, France, was rebuilt and Kaizen as a company-wide suggestion system introduced. And with the Best Management Team project a further training programme was also developed for the narrower management circle.

However, an interval of two to three years between the surveys is rather long. That's why in September 2010 we additionally started the "Panel", a trend survey which is now to take place quarterly. This simply recognises changes faster. "That is how we can identify long-term developments in employee satisfaction precisely and derive appropriate measures from them," Dziwis adds. The Panel is implemented as a random sample among a representative selection of 1,000 employees. They are always asked about their agreement with or rejection of the same six statements, such as "I feel well led by my manager" or "I experience good teamwork in my department".

75%

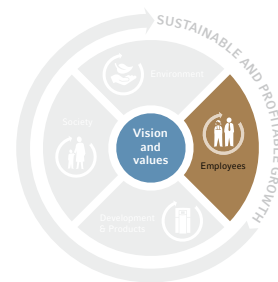
said their managers had clear expectations on performance. To 71 per cent they received the information they needed to fulfil their tasks from their managers.

56%

of the employees find the atmosphere in their work area to be performance-enhancing. In workshops and meetings with all company departments the HR department discusses what the employees understand as a "performance-enhancing atmosphere". An international team led by Marc Dörpinghaus, Belper Plant Manager, is developing measures to improve such a work climate.

59%

of all employees took part in the survey in December 2010. This was slightly below the participation rate of 64 per cent in the previous survey in 2007, and thus at a level that is typical of industrial companies.







## Step by step

Daniela Yntema is on the way up. At only 28 she became Head of Country Controlling and heads a team. In our Junior Management Circle she learns what an excellent manager is made of.

**Challenges are nothing new** for Daniela Yntema. "Even when one is sometimes 'thrown into the deep end' – I have never felt that I was being left on my own." Her career at Vaillant resembles a steep upward curve. At only 28 she becomes Head of Country Controlling in the Finance, Sales & Marketing department and is responsible for five other members of staff.

Her international Finance Trainee programme had only just ended when she grasped the opportunity and applied for the leadership of a project. The then 25-year-old supervised the introduction of a new project management software in the countries in which the company operates. This involved a lot of travel, training and reporting – and all with a considerable amount of responsibility. Even before the project was completed she was promoted to become the Assistant to the Managing Director Finance & Services, giving professional support and completing her expertise. Next came the permission to take part in the future managers training

programme. The Junior Management Circle (JMC) is aimed at staff not older than 35, who have studied at a university, have been with the Vaillant Group for at least one year and have not yet had responsibility for personnel.

The JMC aims at training staff who have the potential to become managers. They are trained in the subject areas of corporate values, leadership of employees and project work. "We are taken along step-by-step and are given the right tools directly," says Daniela Yntema. In addition, support is provided by an established manager as a mentor and by a "buddy" programme in which up to three JMC participants get together. "When questions arise I can turn to them and know that they will tackle issues with the same understanding."

The new JMC programme has been running since April 2010 and Daniela Yntema is taking part in the international course. She's also had responsibility for personnel herself since June 2010. "That's an





Daniela Yntema is responsible for five employees. In the Junior Management Circle she's being prepared for the tasks of a manager.

**Vita**

Daniela Yntema studied business administration and then spent six months in the USA working as a student apprentice. The international orientation of the Vaillant Group and the well-structured trainee programme were the deciding factor in her decision.

**May 2006** Joined Vaillant in the Purchase Controlling department as an International Finance Trainee

**May 2007** Work experience in Belper, UK, as part of the trainee programme

**Nov 2007** Joined the department Project / R&D Controlling

**May 2008** Became Assistant to the Managing Director Finance & Services

**April 2010** Started participating in the JMC

**June 2010** Became Head of Country Controlling in the Finance, Sales & Marketing Controlling department



“I enjoy leading a team, and promoting issues and people.”

advantage because I can apply what I have learnt directly.” Her team is young, dynamic and motivated. “It’s simply a joy to work with my team,” she says. For her it’s important to always have an open door for her staff and others. That this also invites criticism is taken into account, and indeed welcome. “Naturally, I have to face it, but I see it as a stimulus for development.”

The JMC demands this ability to accept criticism and openness from the participants. “It’s a lot to do with psychology in the sense of social skills and one’s own personality,” Daniela Yntema says. “You get a mirror held up to you.” She knew that the 18-month programme would be challenging and demanded time and effort. However, “it was clear to me at an early stage that I wanted to be a manager,” she adds, quite as a matter of course. Why? “I enjoy leading a team, and promoting issues and people.”

In the JMC not only the skills of the individual, but also networks grow. “I benefit from being able to work so closely with the others.” The international course – besides which there is also a course run purely in German – is perfect for her. “You learn to see things from the other person’s perspective and ask yourself if you are communicating with them properly.” Having graduated in 2006, she was persuaded by the international orientation of the Vaillant Group and its forward-looking products to join the family company. She has never regretted that decision. At Vaillant, she has been on the way up ever since, step by step. “It’s really great that the Vaillant Group offers these opportunities.”





## So you've become a boss – and now?



Being responsible for personnel demands a lot from managers. That's why the Vaillant Group supports them in their tasks with targeted training courses, lectures and a regular 360-degree feedback assessment.

**There's a department** where nothing works. Four colleagues and their boss are at loggerheads. Discontent is spreading, projects are failing. The problem: everyone insists on their own position. Compromises? No chance.

Luckily, what's going on here is pure fiction – a stage play. The audience consists of participants in the Best Management Team (BMT) manager development programme. It's aimed at creating a uniform understanding of leadership across the Group. The company's entire management team are trained in the subject areas of agility, partnership and leadership. In September 2010 about 150 members of staff of the second management level took part in the second section of the programme, on "Partnership". So it's the third component of the BMT, which came into being as a reaction to the employee survey of 2005.

The 360-degree feedback, which takes place every two years, also supports the managers. This involves at least three employees and three colleagues as well as the direct superiors of the managers assessing them, and they also assess themselves. "So the assessed managers get a complete picture of themselves from as many people as possible with whom they have to do in their working environment," explains Samantha Stella, who takes care of the project in the HR department. She draws up profiles from the assessments which show to what extent self-assessment and the views of others agree – or simply diverge. Questionnaires and evaluations are treated strictly confidentially. The managers are also called on to discuss the findings with their employees.

The regular manager seminars also offer the opportunity to get to know new approaches, to question one's own behaviour and to improve oneself – and are therefore very popular.

Staff appraisal on the big stage: In the third part of the Best Management Team programme at the Remscheid Theatre, the theme was "Partnership".



## One goal and many paths

80 per cent – there’s a lot behind this dry figure: opportunities, trust and challenge. The Vaillant Group aims to develop 80 per cent of its managers from its own ranks. “So we place great importance on further developing our employees,” says Bernd-Johannes Dziwis, Vaillant Group Director Human Resources.

**Although it can** be achieved via many paths, the 80 per cent objective is an ambitious goal that can only be done with a good concept. The Personnel Development department has worked out programmes for application at all levels. “It’s important for us to find out the strengths and goals of the individual employee to enable us to promote staff in the best possible way,” Dziwis points out. In annual talks, employee and managers review the performance and development of the past year and lay down objectives for the coming one. But most importantly they define together the most suitable measures for further qualification. “Every employee leaves the talks with a concrete plan,” Dziwis emphasises.

Through the HR Academy on the company Intranet, all employees have the opportunity to register for training courses or seminars. “We started the HR Academy in Germany in September 2009 and had very good experiences with it. In 2010, a total of 1,168 registrations for training courses came in,” Dziwis says.



Junior Management Circle	▶	Manager
General Management Programme	▶	Generalist/Manager
Expert Trainee Programme	▶	Specialist
Apprentice DE	▶	Skilled worker

The Vaillant Group implements various programmes to systematically develop its staff.

Besides the individual offers of the HR Academy there are several programmes that systematically develop future managers. In the Junior Management Circle (JMC), for example, young talents with the potential for managerial positions get fit for their future tasks in management (read more on pages 42-43).

The Experts Trainee programme is aimed at young academics with little or no professional experience. In two years they are trained to fill expert positions in specialist divisions. While this programme is addressed to specialists, the General Management programme develops generalists. Via projects, university graduates with some years of professional experience are being qualified for management tasks. The projects run in close cooperation with top management. Seminars impart other management skills.





Pure summer fun was enjoyed by 34 children of Vaillant staff. The 6- to 14-year-olds spent a week of their school holidays at a camp in Jedl'ové Kostol'any.

## People in focus

Our 12,423 employees are the foundation of our success and the soul of the Vaillant Group. Trust and tolerance are the intrinsic values of our corporate culture. Thus the well-being of our employees is especially important to us – as a social mission in the footsteps of company founder Johann Vaillant and as an investment in our common future.

### Summer fun for children

A total of 34 youngsters, seven days, a summer camp. The 6- to 14-year-old children of employees at our Slovakian plant in Trenčín were invited to spend a week of their summer school holidays together at Camp Areál Zdravia. It was great fun for all of them because there was a lot to experience, such as swimming, riding, Petang and football. In the evenings there was a barbecue and dancing. The contribution towards the costs was low for them thanks to the plant's social fund. The week was a complete success that will be repeated. And the best thing of all: every child can come along. Promise.

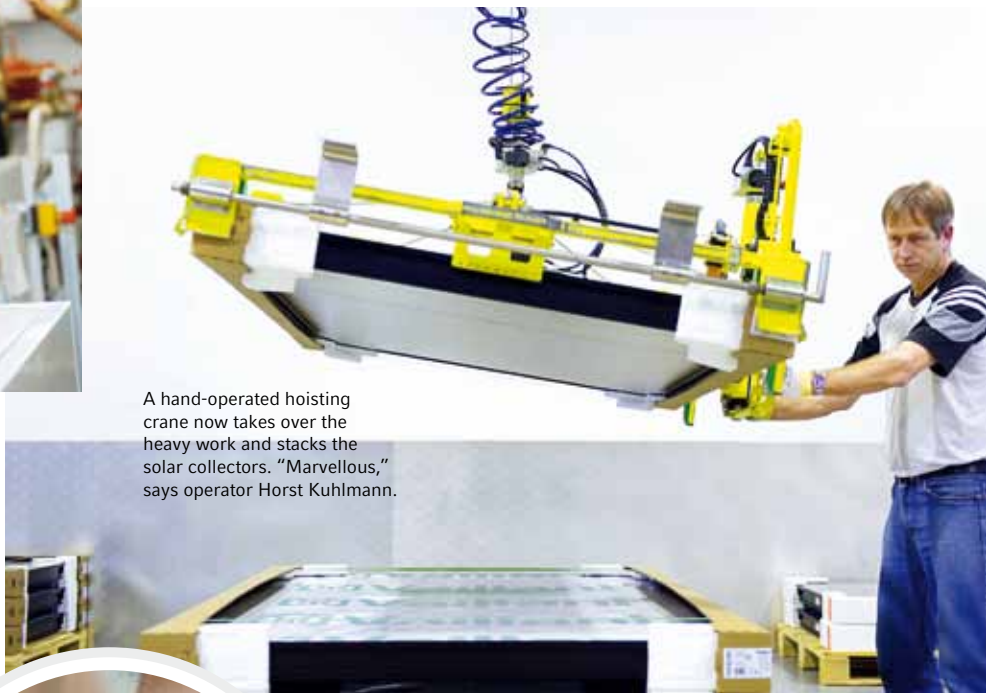
### Open to new ideas: KIA training

Andreas Hübert is the first KIA student at the Vaillant Group. KIA, "Kooperative Ingenieurausbildung", comprises cooperative engineer training, a skilled worker apprenticeship and course in one. Training as a mechatronics engineer was the first step on his list. He worked at our Remscheid plant three days a week and studied on two. Now he's concentrating on studying at the Bochum University of Applied Sciences. His workload is huge. While his fellow-students enjoy their lecture-free time, Hübert works at the Remscheid plant during the day and swots in the evening. With him, Vaillant has taken a new path and his example has set a precedent. So he's the first but no longer the only KIA student at Vaillant.





Andreas Hübert is Vaillant's first KIA student. The cooperative engineer training programme combines a skilled worker apprenticeship and university degree course.



A hand-operated hoisting crane now takes over the heavy work and stacks the solar collectors. "Marvellous," says operator Horst Kuhlmann.



It pays off to take a close look, such as by skin screening. That's only one of our many offers to do with healthcare. For our employees are important to us.



### Everything for good health

From a health course for apprentices to back training for the employees in production at our Remscheid plant and skin screenings to lung function checks – the health of our employees matters to us. The managers in charge do a lot to make the offers attractive and ensure that everyone can take advantage of these health-related initiatives. At our Slovakian plant in Trenčín, for example, the employees have their own medical room. The physicians come to the plant once or twice a week, as arranged, which saves the employees travelling and waiting times.

### Knowledge links people

If you know what your job is about, you work better and feel better. But to really get to know a big company like the Vaillant Group, you need information. At our Slovakian plant in Trenčín all the employees were invited to the in-house Knowledge Olympics. Over a period of some weeks the managers introduced their departments. From Production and

Purchasing to Finance and Controlling, everything was on the syllabus, and the employees were able to ask questions and discuss what they had heard. At the end of the learning phase there was a test, which all 426 of them passed.

### Work easier

We have been producing solar collectors at our plant in Gelsenkirchen, Germany, since 2008. After some time the employees noted room for improvement in the ergonomics. They not only pointed out the problems but also made constructive suggestions. Small changes in the processes now make the work easier and help to prevent physical complaints. Earlier, a shift in the collector packaging station, for example, would involve employees having to manually lift a total of 3.5 tonnes. Now an electric lifting and transport system, a hand-operated hoisting crane and assembly trolleys provide relief.

# Society







These Remscheid primary school pupils are working on an energy-saving project. And we are already shaping their future.

## What the future needs

Experts in the Peer Review of 2009, which discussed sustainability in Germany, both praised and cautioned the country's efforts. They said a so-called Grand Design for 2050 should help to depict the fundamental changes. Above all, it should point the way to the future, Vision 2050.

**The future needs visions.** And, says Günther Bachmann: "Visions also need an informed dialogue." He's the Managing Director of the German Council for Sustainable Development, which has invited experts to plan for the future. Not the future in five or ten years' time, but in 40 years. In the Peer Review 2009 international experts criticised what they said was a lack of a general vision for sustainability and overall concepts for the future.

The Council thereupon ventured an experiment in 2010. It asked leading thinkers in business, academia and public life, such as Prof. Uwe Schneidewind of the Wuppertal Institute, about their perceptions of 2050. They are summarised in the book "Visions 2050. Dialogues Future 'Made in Germany'" Describing social utopias, technical ideas, wishes and probabilities of future developments, but also fears and worries.

"Everything will change: socially, ecologically and economically. But the outcome of that will only be

constructive if we discuss and develop ideas, core issues and values," says Bachmann in his foreword to Visions 2050. According to the decision-makers of the present, the generation that will characterise and shape the time until then needs to take part in the plans for the future.

A total of 85 young visionaries are to describe the future in 2050 and the path to it. Protagonists in politics, business and civil society who make a convincing effort as regards sustainability were asked by the Council to nominate participants under the age of 27. Vaillant was also asked to name a representative. This is how Lars Heinen, an engineer in the company's Innovation Technology Scouting department, became a visionary (read more about it on the following pages).

Dialogues\_Future\_Vision2050 has a further task: The project is to show how sustainability can be communicated, how people can be motivated to join in – the future needs a community.





During a discussion on ball bearings, the 85 participants exchanged ideas at the Dialogues\_Future\_Vision2050.

## Lars Heinen: the visionary

The German Council for Sustainable Development invited 85 young people to a conference in Berlin titled Dialogues\_Future\_Vision2050. Lars Heinen, an Innovation Engineer at Vaillant, was there.

**“You have to grasp opportunities,”** says Lars Heinen with a smile. He’s an expert on opportunities and works in the Innovation Technology Scouting department of Vaillant where he seeks exciting innovations. And when he was asked if he would like to represent Vaillant at the Dialogues\_Future\_Vision2050 he said yes immediately – despite his Master’s thesis, which was still lying on his desk. After all, taking part also held opportunities in store.

The Council for Sustainable Development, which advises the German government on sustainability issues, invited people to the conference in order to develop an overall model. With the project it also wanted to establish a link with the public and find out how the debate on sustainability can be anchored in society. The 85 young visionaries aged under 27 were to set out the shape of their future in 2050 – and a sustainable path to get there (see also page 49).

The issue of sustainability is Heinen’s daily business – purely professionally. “The conference broadened my horizons,” he notes. The nominated participants had developed the subjects in an online

phase beforehand. They drafted their own Vision 2050 in a text and wrote down how they imagined the future, who the key players would be – and what must already be done today for a good future.

A huge spectrum of topics was on the agenda of the subsequent three-day conference. “Other issues such as agriculture and urban planning have now come to my attention,” Heinen says. He has devoted himself to the issues of sustainable management, and energy and the environment. The visionaries worked on eight sectors in workshops, the findings of which are then presented and discussed with experts.

“It was an exciting process”, says Heinen, which not only provided a fruitful discussion but also a positive insight: Sustainability involves everyone and can be of interest to a large variety of people. “But it must become an issue.” It is already one for Heinen, also in the little things in life. “Bicycle, train or car? I always try to choose the most eco-friendly option.” And in his professional life, concerning himself with sustainability is how he earns a living.





### Dialogues\_Future\_Vision2050

**Topics:** Eight focal points crystallised from the online discussion: social cohesion and diversity, traffic and mobility, international relations, individual responsibility, participation and commitment, sustainable consumption, sustainable management and energy and the environment.



“We need the courage to invest in technological developments, even at the risk of sometimes failing here and there.”



### Interview with Lars Heinen

#### You outlined your vision for 2050 for the Dialogues\_Future. What does it look like?

► Naturally, my vision is strongly characterised by aspects concerning energy. I believe consumption will be minimised. The yield from renewable energies will be optimised – and, above all, there will be new storage technologies. The decentralised supply of energy plays a big role. The most important protagonists are the politicians. They must define the targets and get strategies under way. In particular, they will have ensured that sustainable action is attractive and understandable for everybody.

#### Each of the 85 conference participants contributed their vision. How did a dialogue on the future result from that?

► The visions in the online forum led to over four weeks of discussions. The individual subject areas crystallised from the keywords, which were then examined in workshops at the conference in Berlin. The groups then presented their findings and discussed them with experts and independent observers.

#### What impressed you on a lasting basis?

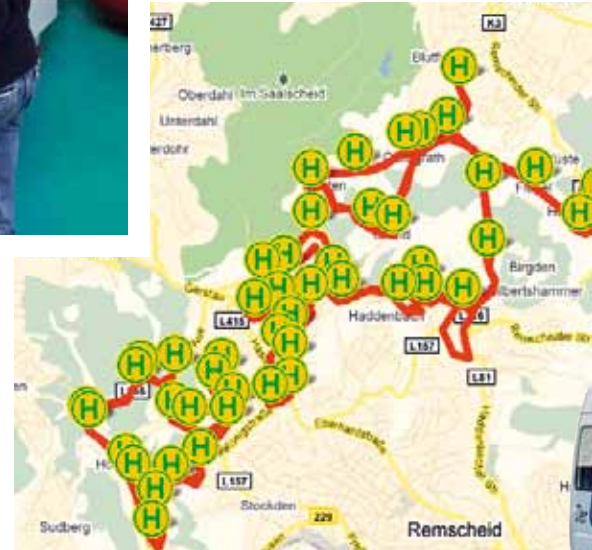
► Two things, actually. First, that a constructive discussion arose so quickly in this heterogeneous group. And second, that in such a short time I have retained so much, including facts in conjunction with issues that I had never ever thought about before. This proves that one can communicate sustainability.

#### After all the information and discussions, how would you summarise the visions?

► That we are on the right track. But: we as a society and the politicians must have the courage to invest in technological developments, even at the risk of sometimes failing here and there.



The primary school pupils of Moorriem marvel at the new Vaillant ecoPOWER mini-combined heat and power system.



## Together for the community

In the countries where the Vaillant Group operates, it also assumes social responsibility. That's a tradition the founder of our company, Johann Vaillant, started in the late 19th century. And we have no lack of fresh ideas or occasions to help.

### Power station for a school

The primary school in Moorriem, Lower Saxony, now has its own power station. In a Germany-wide competition hosted by Vaillant and the magazine FOCUS-SCHULE (FOCUS-SCHOOL), the 45 pupils and teachers came up with the most impressive idea for environmental and climate protection and energy saving. In November 2010 the school was awarded the prize of a Vaillant ecoPOWER mini-combined heat and power system.

### Speedy aid for flood victims

In summer 2010 the Cracow region in southern Poland was hit by heavy flooding. Many people lost their homes or had to struggle with the damage the water had left behind. Vaillant Poland quickly decided to provide direct and unbureaucratic help. Thus, heating appliances and parts for the installa-

tions were repaired or delivered at remarkably low prices. The Vaillant field sales force and partners organised the aid on site so that it was provided where it was needed.

### A day for a good cause

Help the helpers – that's the motto with which Vaicon, the Vaillant Group IT company, has called for social responsibility. The basic idea is as simple as it is effective. Every Vaicon employee may invest a day of their working time in social projects. So far, they have supported initiatives such as the Remscheid Citizen's Bus by taking care of its website and a scheme for young people by coaching them in job applications. The help is organised via "Die Brücke", volunteer agency in Remscheid. In 2010, 14 employees took the opportunity and participated in social projects.

During the “Glückstour” cycling event, chimney sweeps cycled many miles to collect donations for children suffering from cancer – a charity initiative that Vaillant has been supporting for years.



Picture: Google



The Remscheid Citizen Bus adds to the mobility of many local people with the help of volunteers. And in line with the motto ‘Help the helpers’ a Vaicon expert adds life to the Citizen Bus Website.




**Glückstour 2010 (“2010 Good-Luck Tour”): cycling for children suffering from cancer**

In Germany, chimney sweeps are regarded as bringers of good luck. And these sweeps lived up to their reputation. About 30 of them took part in the Glückstour of 2010 and cycled right across Germany collecting donations for children suffering from cancer. At stopovers in a total of eight cities, the 29 men and women on the tour handed the donations to people who have dedicated themselves to battling the disease. The Glückstour has been an annual event since 2005, and in recent years the chimney sweeps have “cycled in” more than 350,000 euros. Vaillant has been a partner of the Glückstour for several years.

**Hot water for a clinic in Gambia**

The Royal Victoria Teaching Hospital in Banjul, Gambia, now has hot water – hygienic, faultless, ecological and free of charge. Two teachers of the VTI school for installers in Belgium’s Ostend together with pupils of the Banjul Skills Centre, a partner school, installed the solar energy system donated by Vaillant. Until then, the hospital only had water heated in kettles. But not only the clinic benefited from the new system: the pupils of the Banjul Skills Centre also learnt about technology and renewable energy. As part of their lessons they now monitor the Vaillant installation and measure its efficiency.





## Principles of reporting

In 2009 the Vaillant Group published a Sustainability Report for the first time. Since then this report has been published on an annual basis and complements our Annual Report with important aspects and key indicators in the sustainability sector.

### Scope of the report

The Sustainability Report depicts the main company-wide developments in the key strategic areas: the environment, our employees, development and products, and society. The report contents portray Group-wide successes and challenges in the sustainability sector and thus show a representative cross-section of the entire company. The report's objective is to give our customers, employees, managing partners and suppliers, as well as media representatives and other interested stakeholders, a transparent insight into our important values and our understanding of sustainable economic management.

### Report time frame and data collection

The last Sustainability Report was published in July 2010. The time frame for all the key figures in this report covers the year 2010 from 1 January to 31 December. The editorial deadline for our sustainability topics was 31 May 2011.

All production-relevant figures relate to our 14 production plants in seven European countries and

China. The data was collected in the form of a written inquiry at the main sites. In the indicators shown on pages 56-59 it should be noted that these are absolute figures which do not, for example, take account of productivity increases or the expansion of production capacities. In order to generate a sound and reliable database in the future, we will use specific parameters in our 2011 Sustainability Report.

### Global Reporting Initiative (GRI)

As part of the realignment of our Group-wide sustainability management at the beginning of this year, in the extension and improvement of our reporting we orient ourselves according to the internationally recognised standards of the Global Reporting Initiative (GRI, [www.globalreporting.org](http://www.globalreporting.org)).

In this connection we have switched our sustainability reporting from the previously depicted classic dimensions of ecology, economy and social affairs to the four key areas of our sustainability strategy:





Report section	Page	Collected GRI indicators
Foreword	1	1.1, 4.11
The Vaillant Group introduces itself	2–3	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.8, 4.1, 4.2, DMA-EC
The Vaillant Group brands	4–5	2.2, DMA-EC
Production sites	6–7	2.5, 2.7
Sustainability? We simply live it	8–9	2.9, 4.1, 4.11, 4.12, 4.13, SO5
Interview with Dr Carsten Voigtländer	10	1.1, 1.2, 4.11
Sustainability strategy	11–15	1.2, 2.9, 3.5, 4.8, 4.9, EN14
ISO certifications	16	4.9
Quality at the Vaillant Group	17	4.9, DMA-PR, PR1
Sustainability in the Vaillant Group processes	18–19	4.9, PR1
<b>Sustainability in action.</b>		
Development and products	24–33	2.8, 2.10, 4.13, DMA-EC, DMA-EN, DMA-PR, EC2, EN6, EN7, EN18, EN26, SO5, PR1
Environment	34–39	2.10, EN4, EN7, EN18, EN26
Employees	40–47	4.4, 4.7, DMA-LA, DMA-HR, EC3, EC8, LA1, LA8, LA11
Society	48–53	DMA-HR, DMA-SO
Principles of the reporting	54–55	3.1, 3.2, 3.3, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11, 3.12, 3.13, 4.14, 4.15, 4.16, 4.17
Sustainability key figures	56–59	2.7, 2.8, 4.10, DMA-EC, EC1, EN2, EN3, EN4, EN6, EN8, EN9, EN21, EN22, LA1, LA2
Imprint	U4	3.4
Online version with detailed comments		additionally: 4.5, 4.6, 4.14, 4.15, 4.16, 4.17

the environment, our employees, development and products, and society (see also the detailed depiction of the Vaillant Group sustainability strategy on pages 8-15 of this publication). The strategic realignment also took into account the findings of a survey by Vaillant Group Market Research among installers and customers in five European countries. In the future we will further systemise the dialogue with our stakeholders. More institutionalised formats are being planned in order to enhance communication and make our reference groups' demands visible at an earlier stage.

In order to understand our reporting in accordance with the GRI indicators, you can download the Content Index at [www.vaillant-group.com/sustainability](http://www.vaillant-group.com/sustainability). The degree of application of the GRI-G3 guidelines is in accordance with our self-

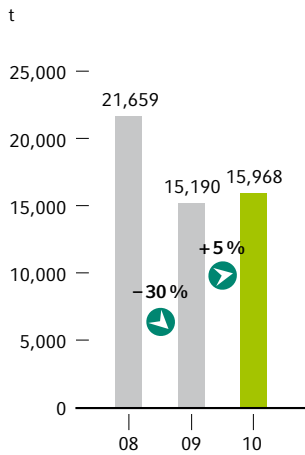
assessment of level 'B'. An external examination of the Vaillant Group's reporting according to the GRI has neither taken place nor has such an examination been planned.

### Print and online

The report appears in German and English. In addition, an online version can be accessed at [www.vaillant-group.com/sustainability](http://www.vaillant-group.com/sustainability). In case of doubt, solely the German version published in printed form is binding.

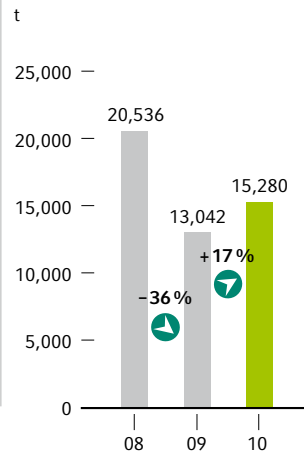
# Sustainability key figures

## Waste



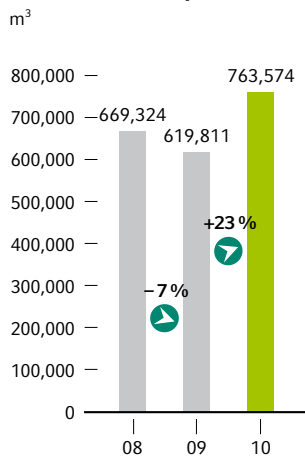
The Vaillant Group's absolute amount of waste last year increased by five per cent compared to the previous year. The relative amount, however, matched the previous year's level. The Vaillant Group is continuing to work on the issue of waste prevention, such as by greater use of reusable packaging in the production material.

## Recycling



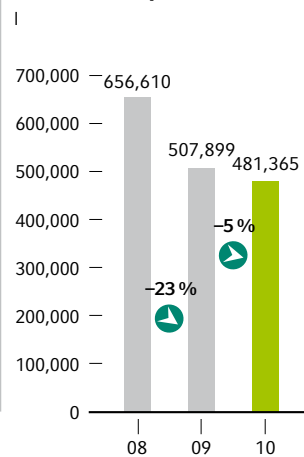
The Vaillant Group increased the amount of waste recycled by 17 per cent compared to the previous year. The proportion of recycling with regard to total waste thereby increased to 96 per cent. Projects including "Blue 4 You" at our site in Belper, UK, contributed to that achievement (see the report on page 36-37).

## Water consumption



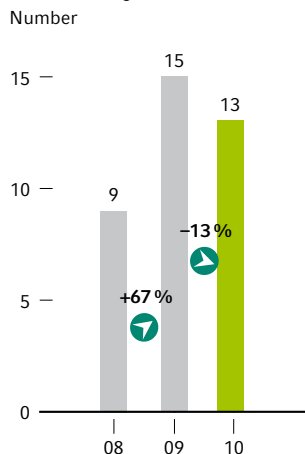
Compared to the previous year, our absolute water consumption increased by 23 per cent. While at most of our sites the relative consumption was reduced by targeted measures, our site in Turkey registered an increased consumption. The reason for that was the filling of a new sprinkler system. The Vaillant Group will continue to aim for ongoing improvements in water consumption.

## Oil consumption



Our absolute oil consumption was reduced by 5 per cent compared to the previous year. At most of our sites, highly efficient condensing boilers, combined heat and power units, and solar, photovoltaic and geothermal systems were used.

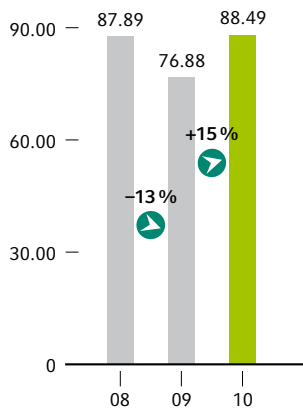
## Internal system audits



The Vaillant Group subjects itself to regular internal examinations and certifications. These include certifications of our sites according to internationally recognised standards such as EN ISO 9001 and EN ISO 14001. The main sites are examined internally every year.

**Power consumption**

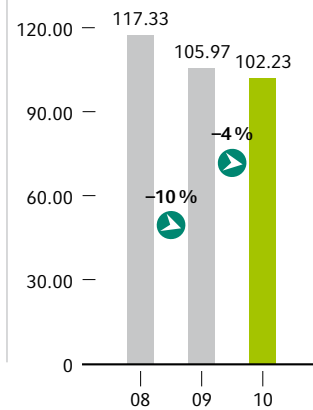
GWh



The Vaillant Group recorded an increase of 15 per cent in its absolute power consumption. Most of our sites reduced their consumption or held it steady. The increase resulted from a rise in production operations at our Chinese plant, so the relative power consumption shows a slight decrease.

**Gas consumption**

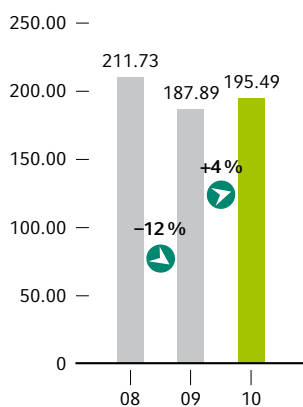
GWh



Our gas consumption was reduced by four per cent compared to the previous year. The use of efficient heating technology and a communication campaign at the main sites led to this good result.

**Total energy consumption**

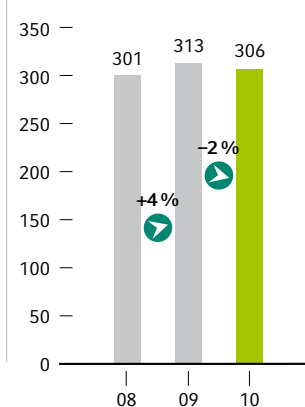
GWh



The total energy consumption increased by four per cent compared to the previous year.

**Audits of suppliers**

Number



The Vaillant Group carries out regular audits of its suppliers. By this means the company ensures that they act and manage according to our clearly defined standards. With 306 audits completed, we achieved our target of a minimum of 300 supplier audits each year.

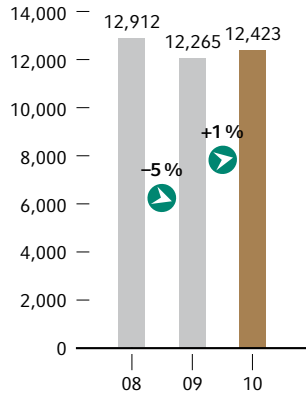
- All figures given are absolute figures.
- Therefore, a year-on-year comparison might not take all relevant factors into account, such as productivity increases or the expansion of production capacities.
- In the 2011 Sustainability Report the Vaillant Group will use specific parameters in order to increase the informative value of its data basis.
- These specific parameters grant a more precise insight into the development of our Group-wide sustainability performance.



# Sustainability key figures

## Employees

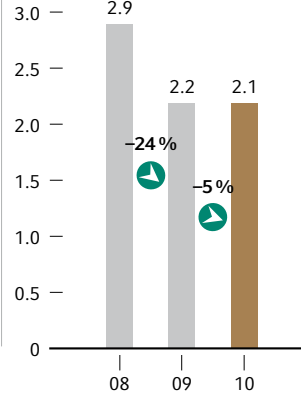
Headcount



In 2010, the Vaillant Group's staff numbers increased by 158 employees compared to 2009. The change arose mainly due to growth in the service sector, an increased production volume compared to the previous year, and new additions in the Research and Development department.

## Accidents at work

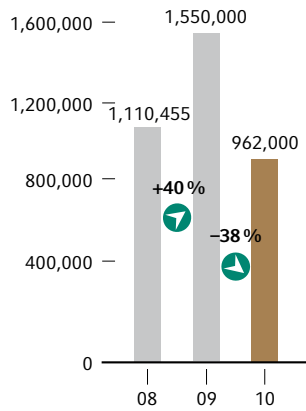
per 100 employees



The accident rate was reduced further compared to 2009. This was the result of our continual improvements in safety at work and the employees' greater attention to this issue.

## Savings due to employee suggestion system

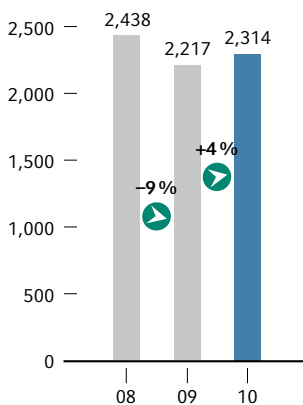
net, €



In the company suggestion system the employees submit their ideas for improvements. By this means the Vaillant Group saved 962,000 euros in 2010. This was a decline of 38 per cent compared to 2009. But the ideas must not always relate to savings. They can also lead to an improvement in the employees' working conditions. These effects are not taken account of here.

## Sales

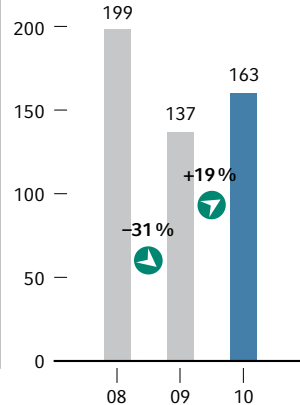
€ million



In 2010, the Vaillant Group increased its net sales by 97 million euros (4.4 per cent) to 2,314 million euros. Our good business development made a substantial contribution to that, which was reflected in higher sales volumes.

## Earnings (EBIT)

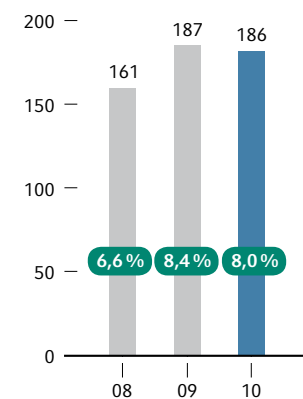
€ million



We significantly increased our operating result compared to the previous year. This positive development is not to be attributed solely to a more friendly economic environment, but also to the company's improved overall development. The influencing factors include an optimised product and country mix, a consistent optimisation of the sales structures and successful management of the manufacturing and fixed costs.

## Renewable energies – share of overall sales

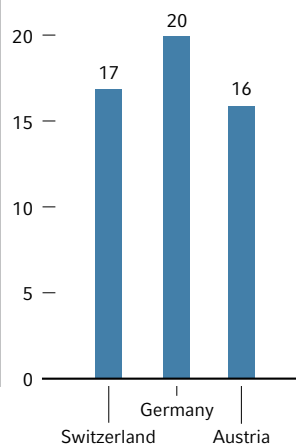
€ million, %



The share of renewable energies of the overall sales remained mostly stable. The demand for and thus also the sale of highly efficient products increased compared to the previous year.

## Markets with the greatest share of renewable energies in sales:

%



Products based on renewable energies are called for in central Europe in particular.

- Sales renewable energy
- Share of renewable energies in total sales

## Sales by regions\*

€ million

- Northern Europe: 740
- Southern Europe: 655
- Central Europe: 602
- Eastern Europe: 437
- Rest of world: 54

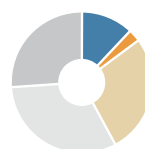


The impacts of the global economic and financial crisis in the markets could continue to be seen in 2010. Against this background, the Vaillant Group's sales developed very differently from market to market.

## Employees by regions

Headcount

- Northern Europe: 1,484
- Southern Europe: 3,248
- Central Europe: 3,953
- Eastern Europe: 3,383
- Rest of world: 355



The number of employees in the regions is in the main, characterised by staff increases in the service sector, in production and in research and development.

\* Gross revenues without sales-related reductions

# Sustainability targets

Targets	Measures	Status	Deadline
<b>Sustainability management</b>			
Sustainability strategy	Development of a Group-wide "Sustainability strategy 2015" in the sectors environment, development and products, employees and society	New goal	2011
Sustainability culture	Communicating the sustainability strategy, and integration of the employees	New goal	Ongoing
Integration of suppliers	Conveying the sustainability aspects of the Vaillant Group to suppliers during the regular Suppliers Day	New goal	2012
<b>Environment</b>			
Environmental management by suppliers	Sustainability aspects will be taken account of as part of supplier audits. The Vaillant Group only works with companies that fulfil the prescribed minimum standards.	Introduction in 2006, then continual improvement, about 300 audits per year	Ongoing
	Environmental compatibility will be taken account of more strongly in the selection of suppliers and service providers.	Suppliers will be informed and called on to tell us about their product innovations and substitutes that result in an improvement in their environmental performance.	Ongoing
Energy efficiency projects to reduce energy consumption	New heating systems will all be equipped only with highly efficient condensing appliances, CHP units and regenerative products. Existing systems will be modernised step by step.	Besides modern condensing technology, our sites in Germany and Slovakia also use heat pumps, photovoltaic and solar systems to generate energy and heat. Solarthermics will also be used to generate process heat in production.	2012
Waste prevention	Increasing the use of reusable packaging for production material	Some of the production material is already supplied in reusable packaging. Our plants have defined a standard for this packaging, which is to apply to the majority of the suppliers.	2015
<b>Employees</b>			
Compliance training	Group-wide training courses	The Group-wide compliance and implementation of training courses across the Group is to be reworked.	2012
Six Sigma training courses	More than 3,600 employees will be purposefully qualified as part of a Belt training concept.	About 1,400 employees were trained by the end of 2010.	2015
Reduction of accidents at work	Certification according to OHSAS 18001 by 2015	Major aspects were raised, projects to increase attention to work safety aspects were started in 2010.	2015
Attractiveness as an employer	Improvement in the work-life balance and the working environment	The employees can already take advantage of flexible time models. An employee survey at the end of 2010 showed other issues with room for improvement, which are now being worked on in a structured way.	2012
<b>Development and products</b>			
Increase in the development of highly efficient products	Continual further development of the existing product portfolio, as well as the research and development of new energy-saving and resource-sparing technologies	Market launch of the first zeolite gas heat pump in 2009, market launch of the first micro-CHP system for single-family houses in 2010.	Ongoing
<b>Society</b>			
Assumption of social responsibility where we operate	Projects to impart energy-efficient behaviour to children and teenagers	In cooperation with FOCUS-SCHULE (FOCUS-SCHOOL), a competition was organised at German primary schools. The prize was a CHP system which reduces CO <sub>2</sub> emissions by 23 per cent. In addition, pupils were shown up close how a solar collector, a heat pump and a Stirling engine works.	Ongoing





“What will our customer’s wishes look like in some years’ time? This question preoccupies me. The answers to this will help us to continue to offer a product portfolio that enables our customers to use even less energy while enjoying improved comfort.

**Daniela Jargon**  
Senior Manager Market Insights,  
Germany



“Environmental and industrial safety are central factors for sustainability in manufacturing. We regularly meet with colleagues of other production sites to exchange ideas and experiences and learn from each other.

**Martina Kvaltinova**  
Safety and Environmental  
Engineer Skalica, Slovakia



“For me as a Quality Manager, sustainability is an important aspect of my daily work. My goal is to constantly improve product quality and production processes at our plant in Bozüyük.

**Habibullah Adanur**  
Quality Manager Bozüyük, Turkey



“Our products must be sustainable, that’s our claim. This is why we focus on highly efficient, easy-to-use and customer-oriented system solutions.

**Liselotte Nielsen**  
Vaillant Marketing Manager,  
Denmark



“For us, sustainability means developing ever more efficient appliances. This also means that at the end of their life cycle they must burden the environment as little as possible.

**Heinz-Jörg Brecker**  
R&D Manager Wall-hung  
Appliances, Germany



“An optimised supply chain network can ensure a reduction in CO<sub>2</sub> emissions. So with my daily work I contribute to ecological and economical sustainability.

**Jérôme Le Maire**  
Group Supply Chain Manager,  
France



“In the company apprenticeship the issue of sustainability constantly accompanies us, regardless of whether it’s about the environment, employees, products or society.

**Esra Şenlikoğlu**  
Industrial Business Management  
Apprentice, Germany



“Sparing resources and protecting the environment in production is a matter of course for us. And lower use of energy also means lower production costs.

**Dr Liangya Cheng**  
Plant Manager Wuxi, China



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