

The engineer's choice.

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ebm**papst**



The engineer's choice

ebm**papst**

A symbol that defines standards.



Green through and through

In order to underline our philosophy, efforts and achievements when it comes to environmental protection, we have put them all in a nutshell with GreenTech. The benefits of GreenTech mesh with one another from the initial development of our products through to their use – and they form a circuit that finishes right where it began: with the philosophy that we shall soon build another, even more eco-friendly and economical product.

Philosophy:

Each new development must exceed the economic and ecological performance of its predecessor.

Development:

Materials, products and processes are selected and designed in an environmentally responsible manner using state-of-the-art methods.

Production:

State-of-the-art energy, air-conditioning and ventilation technology provides maximum energy efficiency in our plant.

Awards:

Environmental prizes, distinctions and energy efficiency that beats even the most stringent limits speak for themselves.

Application:

Our high-efficiency products use GreenTech EC technology and boast enormous energy savings with top performance.



Dear reader,

As a globally active technology company, we are very much aware of our ecological responsibility. If you’re now thinking “that’s what they all say,” then you’re probably right.

But at ebm-papst, there is a decisive difference. For us, ecological awareness is not simply a fad, but rather a conviction that is deeply rooted in the history of our company.

Why do we (rightly) call ourselves the “green company”? And how do our customers benefit from this? You will find the answers to these questions on the following pages. In addition, we would also like to give you an insight into our overall thoughts and actions.

We hope you enjoy reading this issue.

Hans-Jochen Beilke
Chairman of Board of Directors

Contents

Philosophy	4 5
Economy	6 7
Ecology	8 11
Air Technology and Drive Engineering	12 13
Employees	14 15
Core Competencies	16 17
Products	18 19
Sales	20 21
Quality	22 23
Future	24 25

“Every **product** developed from new must outstrip its predecessors **economically** and **ecologically**.”

Gerhard Sturm

Set standards, be the benchmark with excellent products. Develop technologies and then enhance them with impassioned engineering skills; and always cater for economic as well as ecological needs. And with exemplary customer proximity, be the first choice for industry worldwide.

That is our claim! And this is why our approximately 10,000 employees throughout the world experience a corporate culture of openness, of dialogue and of innovative spirit. And this is why we think and act with ultimate responsibility, and always with an eye upon the challenges of our time. With our blowers, fans and drives we deliver contributions to energy-efficient, successful finished products ... and at the same time we make an important contribution towards conservation of the global climate and environment. Our jointly held values prepare the ground upon which our power to innovate and also our creativity prosper. Welcome to the world of ventilation and drive engineering. Welcome to our world.

user Programm.
quality is our program

Milestones

From the left: Dirk Schallock, Thomas Borst, Hans-Jochen Beilke, Dr. Bruno Lindl, Hans Peter Fuchs, Thomas Wagner, Stefan Brandl

Since 1965, we have made **EC** what it is today:
The **technology of the future.**



In our fans, ventilators and motors, everything revolves around maximum efficiency. And that can be found above all in GreenTech EC technology, which we have played a major part in defining and promoting.

GreenTech stands for the future, and EC stands for Electronically Commutated. This makes GreenTech EC motors and fans versatile to control and regulate so that they can respond flexibly to different performance requirements. Or they simply switch themselves off when they're not actually needed. Nothing could be more efficient. And because they work without brushes, they are considerably quieter, completely wear-free and substantially more durable than conventional AC motors. GreenTech EC technology does not just reduce energy consumption by up to 70 %, it also reduces costs for materials and maintenance.

If European industry alone were to convert to GreenTech EC fans for ventilation refrigeration and air-conditioning applications, some 30 % of energy costs could be saved, allowing 4 coal-fired power stations to be shut down! Annual CO₂ emissions would be reduced by approximately 16 million tons.

By the way: ebm-papst launched the first compact fan with EC technology way back in 1965. This technological lead benefits our customer each and every day.

Our technology has **always been** green.
Now **its is also called** green.



EC technology with the GreenTech label pays – for the environment and in hard cash. And it isn't just cost-effective for new installations. These pay for themselves within a very short period of time – as the examples opposite demonstrate – and the savings continue for the whole service life of GreenTech EC motors and fans which is not even taken into account in these calculations.

29%
Savings

6 fans work in one heat exchanger. At an average duty cycle of 75% this means an annual savings potential of over 24 MWh. This corresponds to approx. 14.4 tonnes of CO₂ and saves 2,814 euro*.



e. g. A36800 axial fan



67%
Savings

A small supermarket operates 40 fans in the refrigeration counters. The lower intrinsic heating of the energy-saving motor allows a 30% shorter working time. Over a year, that means a savings potential of more than 9.4 MWh and 5.6 tonnes of CO₂. Cost saving: 1,080 euro*.



e. g. W16200 axial fan



79%
Savings

In a medium-sized factory are 50 control boxes with air filters running in continuous operation. Exchanging the conventional AC fans could save 6.5 MWh of energy over a year. The fans will have paid back the extra cost after just 4–6 months.



e. g. ACI 4400 axial compact fan



22%
Savings

6 precision air conditioning units are working in the IT rooms of a computer centre, each equipped with 3 GreenTech EC fans. With a duty cycle of 100%, up to 50 MWh of electricity can be saved. That corresponds to about 30 tonnes of CO₂ and 5,898 euro* every year.



e. g. R36500 centrifugal fan



30%
Savings

8 centralised air conditioning units are operating in a shopping centre. With a duty cycle of 100% and ventilator operation according to actual requirements, the annual savings potential is 291 MWh and 34,081 euro. CO₂ emissions are reduced by about 175 tonnes.



e. g. K36560 fan



*11.69 cent/kWh, average electricity price for industry in Germany (as of January 2010, source: VEA, BDEW)



As a manufacturer of high-quality industrial products with global operations we feel obligated to our world – in other words our environment – to a special degree. As a matter of conviction, we look at cost-effectiveness and environmental protection not as contradictions, but rather as an inseparable unit – and this we have done ever since the very early days of our company. That applies not only to end products that are both economically and ecologically outstanding, like our GreenTech EC motors and fans, but also the complete path to get there and the further development beyond.

Today, ebm-papst is looked upon as a role model in recycling, in waste avoidance, in the continual reduction of emissions, in the use of environmentally compatible materials and in reducing energy consumption.

With this uniquely universal approach, we send out a clear signal. And we call it GreenTech.



our **engineering** skills are encountered throughout the world.
But they are **at home** here.

ebm-papst engineering services are available throughout the world – however the source of our engineering skills originates in Germany: in our corporate centres with their very different, interrelated focuses. A total of over 500 engineers and technicians find ideal requirements here for their intensive work in the fields of motor technology, electronics and aerodynamics. Close cooperation between our three central locations and also their different specialisations are our very essential success factors: at ebm-papst Mulfingen above all the expertise in ventilation, air-conditioning and refrigeration technology is at home. Again and again, new and excellent ideas and products, for instance the pioneering energy-efficient GreenTech EC fans with a diameter of up to 990 mm or energy-saving motors for refrigeration technology, ensure that ice-cold savings are made for any cooling task.

At ebm-papst St. Georgen the focus is in the electronic cooling segment for IT and telecommunications with the permanent enhancement of the legend-ary compact fans. Furthermore, ebm-papst St. Georgen is the R&D partner to many major automobile brands.

And ... whether refrigerators or freezers, driers or ovens: fans from ebm-papst Landshut perform their tasks almost silently in the widest range of household appliances. We have also established an excellent position in heating engineering, for instance with highly energy-efficient systems for innovative heating condensing boiler technology.

Mulfingen reservoir

Our joint **success** is based on the
passion of each and every **individual**.

Whether in sales, manufacturing, development, service or administration: our employees are our success factor number one. No wonder, because whoever experiences them, also experiences real passion for motors and fans. In addition, high qualification and creativity as well as above-average preparation and motivation.

Our employees constantly and flexibly face up to repeated new challenges at all national and international locations with their exemplary commitment. And they assure our competence lead in global competition. The ideal requirements for this are provided by our clear organisation structure with flat hierarchical levels and a management concept that transfers a high degree of personal responsibility to all employees. Teamwork and above all team spirit play a supporting role here. And also the Managing Directors, who specify the guidelines as well as the strategic goals of the company, act with team orientation so that our organisational concept is consequently implemented and experienced. From the top to the base.

Motor technology, electronics, aerodynamics:
our lead lies in the **perfect interplay.**

Leading technologies, groundbreaking application solutions, innovative products – all of these would not be possible if things were not seen as a whole: aerodynamic interrelationships and therefore the perfect interplay of motor technology, electronics and aerodynamics. Our three core competencies are merged directly to each other in our products. Because the objective is always to utilise air and movement with maximum efficiency; regardless of whether in the smallest space, in large dimensions or under extreme ambient conditions. This is the only way that high-quality final products are then produced with the same consistency by our customers; whether barely perceivable climate control systems, high-precision electronic cooling or high-performance, energy-efficient heating systems.

In order to achieve an aerodynamically optimum shape for our fans, we design fan blades, impellers and ducted housings to match the relevant application environment. From seemingly small details, such as the blade-tip slip with winglets, result significant optimisations for noise reduction with even higher efficiencies. And when they are combined with intelligent electronics, the drive engineering and aerodynamics then operate as a system solution optimally matched to each other. The perfect interplay thus arises: our lead in global competition.

Size is less a question of mass than of **class**:
installed in millions of **applications**.

Scale 1:1



Scale 1:1

We offer the ideal solution for almost every task with our unique, wide range of products in air technology and drive engineering. For more and more applications, our customers are choosing our pioneering energy-efficient GreenTech EC fans, for others our tried and tested AC technology. For one the centrifugal design is required, the axial for the other. Small sizes are in demand here and there, sometimes our giants. From fans with a diameter of 990 mm to the 25 mm mini-fans, from universal external rotor motors to highly specialised internal rotor motors: a total of over 14,500 different products that represent one-stop shopping from the largest worldwide provider of air technology and drive engineering.

But size is relative ... and for this reason less a question of mass than of class. And we therefore very much prefer to convince our customers through our uncompromising quality and the extent of our expertise. This has made us the sought-after engineering partner for the widest range of sectors. We passionately strive towards perfect application solutions, and in addition to large-scale series production, we also manufacture to individual customer specifications for professional applications. Not infrequently, fully new products result from this, that then advance to become the industry standard ... and again slightly expand our overall product range.

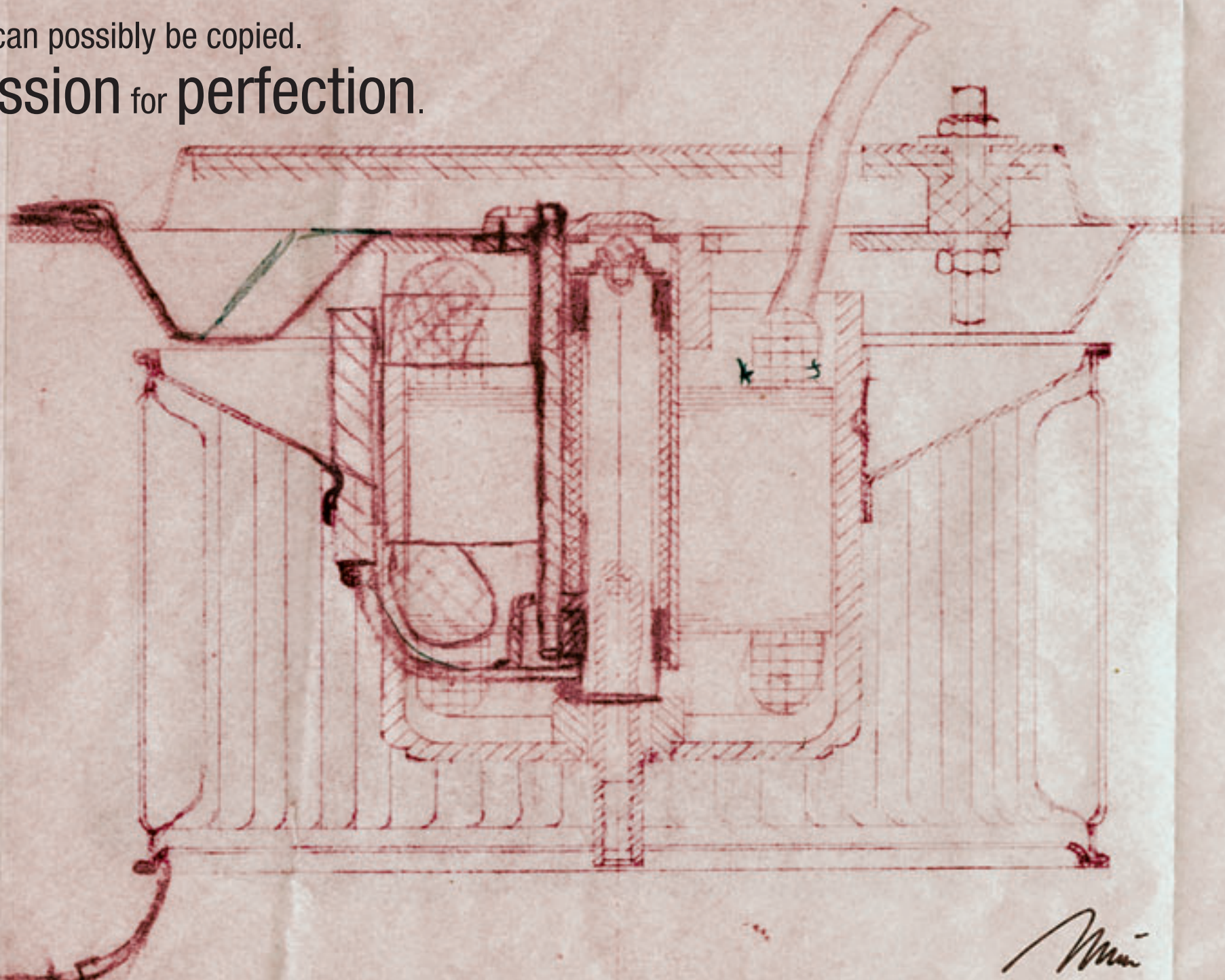


Our **location** is the world.
Our position is **customer proximity**.

Worldwide, ebm-papst maintains 57 sales offices, 47 of which are subsidiaries that also have a dense sales network of representatives and distributors in their country. This is how we guarantee to our customers their very important local proximity to their contact persons: people who give advice on the entire ebm-papst product range and who further function as the link to the development centres in Germany for engineering issues. Our major international customers in turn are supported by our Key Account Management from our corporate centres that, of course, also closely incorporate the national subsidiary into the contact. We therefore ensure short paths in every case: in advice, production, development and in service.

Naturally our sales offices maintain a comprehensive distribution centre of all ebm-papst standard products, and they furthermore present themselves as fully-fledged engineering partners. Field service employees, project engineers or drive engineering support managers: they are highly qualified professionals specialised on the sector and who commit themselves to competitive technical solutions and therefore to the success of their products. Worldwide – and therefore also very close to you.

Our **products** can possibly be copied.
But not our **passion** for **perfection**.



The name ebm-papst is trusted. A trust that is not only supported by decades of pioneering work in research and development, but above all by a very high quality standard. Because even if our technologies and products can be more or less copied ... our passion for perfection cannot. The unwillingness to compromise in our quality management ranges over all process stages: from advice at customers, development, decision upon materials through the choice of selected, certified suppliers and the parts production right up to delivery. All products must pass the most stringent test procedures under all conceivable operating conditions.

Compliance with the EN ISO 9001, ISO/TS 16949 international standards and the EN ISO 14001 standard confirms the success of our quality efforts, which result in products that deliver above-average service life and reliability. Such as the example of the marathon fan: a veteran, millions of which were mass-produced for decades, one of which is a test specimen that has been running in our laboratory for over 200,000 hours without showing any symptoms of fatigue. It is a symbol of the quality awareness of the founding years of our company, an awareness that has not only lasted, but which has also increased. Today, we use the principles and instrumentation of state-of-the-art industrial engineering to produce more and more products with the same full quality of a marathon fan.

68 frame size motor with flange and vibration insulation with integrally molded centrifugal cylindrical rotor wheel. Gerhard Sturm, mid 1967

“We encourage **enthusiasm for engineering** among our youth.
So that products ‘Made by ebm-papst’
remain the **choice of engineers** not only today, but also tomorrow.”

Hans-Jochen Beilke

It is the proverbial spirit of discovery that has made ebm-papst the innovation leader in the sector: the enthusiasm for technology that inspires us in research, development and production. And precisely that is what we want to pass on to new generations: with numerous promotions and projects in Germany and far beyond ... only a few examples: we support junior employees with scholarships in Germany and the USA. Our advanced training course “Master of Engineering” allows many employees to gain international experience and extend their horizons. We encourage technically inclined young ladies as well as young men. We are the leader in many promotions to improve the training structure ... and we give lasting support to the bearers of hope for the future! So that products “Made by ebm-papst” also remain the choice of engineers tomorrow!

