

# Environmental Statement 2007

In accordance with EU regulation no. 761/2001 (EMAS II)

Hettich Holding GmbH & Co. oHG

with the companies in Kirchlegern / Bünde

- Paul Hettich GmbH & Co. KG
- Hettich Management Service GmbH
- Hettich Maschinenteknik GmbH & Co. KG
- Hettich Marketing- und Vertriebs- GmbH & Co. KG
- Hettich Logistik Service GmbH & Co. KG



The title photo shows the thin, sensitive atmosphere of our earth as seen from the space shuttle.





The protection of our environment, the protection of the health of our employees and the conservation of natural resources are an integral part of our economic success.

We therefore operate a far-reaching environmental policy, thus making an important contribution towards protecting nature and life.

Our main aims are:

- introduction of environmentally-friendly and energy-saving production procedures
- resource-saving design of our products
- taking active precautions to prevent interruption of operational procedures
- prevention of waste and ensuring the environmentally-friendly disposal of unavoidable waste
- use of environmentally-friendly basic commodities and raw materials
- protecting the health of our co-workers and fellow human-beings

This environmental impact statement is a public declaration to our customers, suppliers and employees to show that environmental protection is treated seriously by HETTICH in Kirchlengern / Bünde. We are continually developing and implementing our environmental program. We intend to reduce existing environmental pollution still further and actively promote the conservation of resources.

We will report at regular intervals on the success of the measures we have introduced.

The updated Environmental Impact Statement for 2007 will be submitted for the interim audit in April 2008.

Kirchlengern / Bünde, June 2007

HETTICH - INTERNATIONAL  
located in Kirchlengern / Bünde

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## CONTENTS

1	The Company.....	4
2	Environmental management .....	6
2.1	Environmental principles.....	6
2.2	Description of environmental management system .....	7
2.3	Eco-Audit.....	9
2.4	Environmental goals and programme.....	10
3	Environmental aspects of our activity .....	12
3.1	Relevant environmental systems .....	12
3.2	Determination and monitoring of important environmental aspects.....	14
4	Operative environmental performance.....	16
4.1	Products .....	17
4.2	Raw commodities and operating materials.....	18
4.3	Wastel.....	21
4.4	Water and sewage .....	23
4.5	Energy .....	25
4.6	Exhaust and noise.....	29
4.7	Soil and ground water .....	32
5	Company contact person.....	33
6	Name of authorized environmental advisor .....	33
7	Validity of the environmental impact statement.....	34



## 1 The Company

The company was originally started in 1888 in Schramberg in the Black Forest. In 1930 Paul Hettich GmbH was founded in Herford. In the post-war period, these two companies evolved into the Hettich Group, which today is an international manufacturing and trading group. The headquarters of the Group are in 32278 Kirchlengern, Germany. The companies mentioned below are located here and employ 1,746 full time employees and 100 part-time employees. Many divisions operate three shifts.

**Hettich Holding GmbH & Co. oHG (HHO)** controls the development of the companies within the Hettich Group, determines the comprehensive environmental policy of the group, and authorizes budgets and large individual projects. The Environmental Officer belongs to it and reports directly to the Holding Management.

The largest production company in Kirchlengern is **Paul Hettich GmbH & Co. (HPH)**, which develops and produces drawer runners and complete drawer systems in metal for the national and international furniture industry, trade and do-it-yourself market.

**Hettich Management Service GmbH (HMS)** provides internal services to all companies within the Group. These services include the preparation of prototypes, customer samples, small batch production, life tests of batch products and prototypes as well as other services, e.g. data processing and the central purchasing activities.

**Hettich Marketing- und Vertriebs-GmbH & Co. KG (HMV)** is responsible for the sales of all products from the Group and is therefore the connecting point between production and customer.

**Hettich Maschinentechnik GmbH & Co. KG (HMT)** is the company responsible for the construction of special machines. It develops and manufactures assembly machines, robot cells, welding devices and other special purpose machines not only for the Hettich Group but also for the automotive, electrical and building fittings industry.

**Hettich Logistik Service GmbH & Co. KG (HLS)** runs the incoming goods departments for finished products and commodities, their storage, commissioning and transportation packaging. External carriers are used to deliver the goods.

The premises in Kirchlengern are located in an industrial area. It is bordered to the east and west by a public swimming pool and agricultural areas, to the south and north are residential and industrial facilities. The new HLS logistics centre, built in 2005, lies to the northwest in the industrial area of Bünde, and is integrated into the overall process in Kirchlengern/Bünde.

The validation and this environmental impact statement refer to the six Hettich Group companies mentioned above that are located in Kirchlengern / Bünde.





## 2 Environmental management

### 2.1 Environmental principles

The companies of the Hettich Group accept their **share of the responsibility** for the **protection of the natural basic necessities**. We place special emphasis on environmental protection. This is reflected in the following efforts and future objectives.

- **environmental protection** forms an important part of the **management principles** of the company
- An **Environment Representative** has been appointed to co-ordinate the environmental concerns for the entire **Group of companies**. An **Environmental Co-ordinator** and employee representative has also been appointed for the relevant environmental fields in all **Group companies/factories/manufacturing facilities**.
- An **Environmental Committee** has been appointed for each production facility. **Environmental protection goals** are formulated annually and the Environmental Committee also monitors the achievements of the previous year.
- The legal requirements are seen as the minimum acceptable requirements. Furthermore, **voluntary actions** will be encouraged to continually improve environmental protection in order to:
  - avoid, reduce and recycle residual substances
  - minimize emissions
  - protect soil and water, and
  - minimize the use of raw materials and energy.For all these activities, we use the best technology available under the criterion of economic feasibility.
- Environmental aspects are given important consideration during manufacturing, use and disposal of materials during **product development**.
- Environmental protection is included whenever possible in quantified form as an independent criterion in the **business planning and control**.
- **Information** is provided and employees are **included** in the in-house environmental protection activities.
- The **disaster action plan** is checked at regular intervals and adjusted to the operating situation.
- **Documentation** is issued regularly, highlighting the relevant environmental operating situation and the environmental protection measures involved.
- We include **suppliers and customers** in our efforts towards environmental protection by providing information and – as far as possible – making appropriate agreements.
- Good contacts are built up with the **public and authorities** by providing regular information and co-operation.



## 2.2 Description of environmental management system

The environment management system applies and implements the environmental policy and goals defined by the management. This guarantees that the goals defined in the EMAS II are maintained, the operating licence is obtained and official requirements are fulfilled when operating production facilities. The application of the environment management system also guarantees that any negative impact on the environment is prevented, or at least reduced, in the best possible way for all activities.

The system defines the organizational structures, responsibilities and processes established to implement the environmental policy. The environmental management system is laid down in the environmental handbook. The Environmental Management Representative is responsible for developing, enforcing and controlling the system. All employees, particularly executives, are responsible for ensuring that the handbook is put into practice.

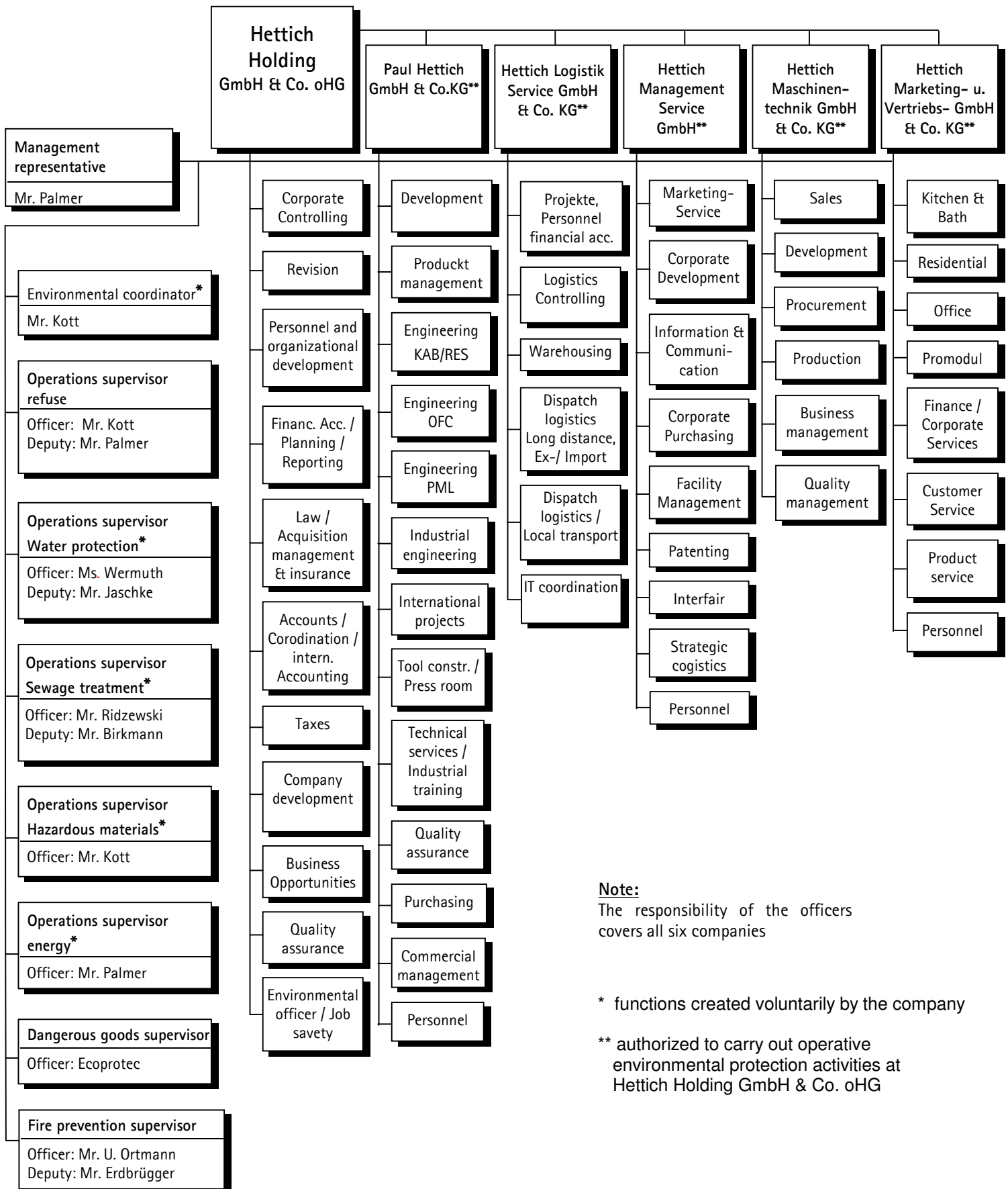
All environment-related tasks are recorded and controlled through the environment management system. It is intended to help executives to optimally carry out their executive duties with regard to environmental protection. By assigning responsibilities, it should emphasize to the employees, particularly executives, the importance of environmental protection. The requirements for the implementation of the different environment-related tasks are specified through the environment management system. The workflow, organizational structure and the principal responsibilities are clearly recognizable in order to guarantee that environmental aspects are taken into consideration in all relevant activities. This applies also, for example, to providing information to new employees.

Within the environment management system, employees are designated who are responsible for monitoring specific environmental areas. Their area of responsibility covers the entire site and they have unlimited access to information concerning all environmental concerns within their field of responsibility. They report directly to the management. The following organigram shows the organization of all functions that are concerned with environmental protection (environment management representative, environmental co-ordinator, water protection officers, etc.). The individual tasks and responsibilities assigned to all officers are described in the environmental handbook.

The employees in Kirchlengern / Bünde are integrated in many different ways into the environmental management system. This is carried out via the two "information kiosks" in the canteens, the continual improvement processes, the operational improvement suggestion system, the "Environmental blackboard", the environmental committee, target agreements, the environmental program and a data file containing environmental documentation, which can be accessed by all employees having PC work stations.



Environmental protection organigram Kirchlengern / Bünde



**Note:**  
The responsibility of the officers covers all six companies

\* functions created voluntarily by the company

\*\* authorized to carry out operative environmental protection activities at Hettich Holding GmbH & Co. oHG



### 2.3 Eco-Audit

Eco-Audits are carried out regularly in order to evaluate the environmental efficiency of our company and to continually improve environmental protection. We check that environmental management activities are in accordance with the environmental program, that operational procedures correspond to the environmental management system, and that the environment management system is suitable and being effectively implemented by the company.

In addition to evaluating the environmental management system, the Eco-Audit checks that the environment-related activities conform to the existing environmental legislation and the EU Eco-Audit directive (EMAS II) and EN ISO 14.001:2004.

An environmental audit is carried out once every three years for the entire site at Kirchlengern / Bünde. An interim audit is carried out each year in order to check and determine the effectiveness of the environmental management system. The Hettich Group Environmental Representative is responsible for performing and co-ordinating the Eco-Audit and the interim audit. He is supported by the Kirchlengern / Bünde Environmental Co-ordinator.

The eco audit is carried out by means of an audit plan and comprises interviews, documentation checks and inspections. Specific function protocol checklists are used to document the findings, activities and implementation deadlines.



## 2.4 Environmental goals and programme

We have drawn up an environmental programme in order to implement our environmental policy and realize our future environmental goals. Concrete measures will be defined and those responsible for carrying them out have been nominated and the required financial means for implementing them have been provided. The achievement of the environmental goals will be guaranteed through the timely implementation of the individual points of the environmental programme.

The programme points agreed by the management and the environmental advisor will be entered in a three-year list (EMAS audit cycle) and their status will be updated. The new environmental programme points suggested by the environmental committee or in the monthly "Jour Fixe Umwelt und Sicherheit" (Environment and safety) shall be agreed by the management and will be checked at the next appointment with the environmental advisor. The (newer) environmental points that have not been finished at the end of the three-year period will be carried forward into the next environmental programme. Previous experience shows that, through this procedure a large dynamic with gratifyingly higher implementation rate exists in the environmental programme.

The environmental goals and measures will be checked and updated in the interim audit and in the environmental audit. Furthermore through the Management representative, the Environmental Coordinator and the other officers, the achievement of the environmental goals will be worked towards and its implementation will be monitored by the environmental committee as well as the "Joure Fixe". The Management Representative and the Environmental Coordinator are responsible for monitoring and ensuring that measures are carried out on schedule. They report to the management and the environmental committee.

When the interim validation was carried out in June 2007, approx. 40 % of the points in the dynamic environmental programme to be carried out by 2009 had been implemented. As only one third of the new cycle has now passed, this can be deemed adequate.

During the building of the new logistics centre relevant environmental aspects were taken into consideration during the planning and construction. This is reflected in the energy consumption that has been read for the first time, e.g. electricity. Furthermore media consumption controlling has been introduced in the Logistics centre as a further optimization measure.

A thermal imaging camera has been procured which will allow the applications of energy in the production plants and buildings to be monitored and checked.

There are several environmental programme points to reduce steel waste. Unfortunately these have not been very positive during 2006 as they have been influenced by other short-term factors that have increased waste (e.g. quality from suppliers, batch introduction of a product, scrapping of packing that was used as a dummy at the end of the trial operation of the logistics centre have had negative effects.

Replacement of cardboard packaging by reusable packing was successful as can be seen from the below average increase in the amount of cardboard when compared to the increase in production.

Under the waste point the extension of the change interval of the paint stripper has been achieved by submersion treatment.

The current environmental programme comprises 6 environmental goals.



The following table summarizes the environmental goals 2006-2009.

Environmental goals	Activity	Responsible (company)	Date [Quarter]
Conservation of iron ore and energy resources	Technical optimization to prevent scrap by less than 10% (2005) with the performance value of the specific amount of scrap (reduction of set-up processes)	Production manager (HPH)	12/2007
	Reduction of the scrap on profile plants by 50% through optimization of raw materials	Production manager (HPH)	12/2007
Conservation of cellulose resources	Further reduction in consumption of paper and packaging inserts through internal optimization	Management despatch and warehousing logistics (HLS)	06/2007
Energy saving	Reduction of the blow air on the profiling plants through technical measures	Production manager (HPH)	12/2007
	Minimization of heating energy for end customers by 20% (related to our product) through optimized product design	Production manager (HPH)	12/2007 (extended)
	Check whether the waste heat from the profiling plant can be used effectively after the production has been restructured.	Facility Management (HMS)	12/2008 (extended)
Prevention of waste	Planning of a central cooling and lubricating supply for the profiling plants	Technical manager (HPH)	12/2007 (extended)
	Check if possible to reduce the amount of cooling and lubricating material by approx. 90% through an own ultrafiltration	Technical manager (HPH)	12/2007 (finished)
	Extension of the change period of the paint stripper by 30% through maintenance measures	Production manager (HPH)	09/2006 (finished)
	Replacement of cardboard packaging by reusable packaging for some products by 100%	Production manager (HPH)	08/2006 (finished)
	Check whether the amount of sludge to be disposed of can be reduced if dried in order to improve the thermal usability	Production manager (HPH)	12/2007 (finished)
Reduction of noise pollution	Noise-reducing construction of the new hall roof in A2; reduction of noise by up to 5 dB(A)	Production manager (HPH)	09/2006 (finished)
Relief through light-weight furniture	Establishment of improved basic conditions for wide market introduction of light-weight furniture	Management Systementwicklung & Normung	12/2009

<sup>1</sup> Implemented for 1 of 2 products

<sup>2</sup> Restructuring delayed – Inspection only possible afterwards

<sup>3</sup> Employment of new responsible employee delayed



### 3 Environmental aspects of our activity

#### 3.1 Relevant environmental systems

The production techniques in use in Kirchlengern / Bünde require the use of cooling and lubricating fluids, oils, chemicals and other operating materials. These materials are defined as water-endangering and hazardous materials and appropriate safety precautions are required. These materials are potentially hazardous to the environment and are stored and used in specially equipped storage areas and production plants in accordance with the statutory requirements.

Raw commodities and material-related aspects are linked directly to environmental protection through the production processes and plant-related aspects. A reduction in the environmental pollution can only be achieved if serious consideration is given to both these aspects during the development phase for products and plants. Ideally, environmental pollution can be completely or partly prevented when measures are taken to integrate environmental protection into the products and production methods.

Different production operations are used in Kirchlengern in the production of drawer runners and drawer systems at **HPH**.

The mechanical processing of the strip steel used as raw material for the production of the **drawer runners** is carried out with presses (64), profiling and bending systems (35). This equipment has particular environmental relevance because hydraulic oil as well as cooling and lubricating fluids is used.

The pre-manufactured basic components are partly joined together by welding machines (15) and welding robots (3) or laser welding systems (3).

The components are then joined to drawer runners in assembly machines and by robots.

In the **drawer production**, the drawers are pressed, bent and welded. They are then cleaned and pre-treated before being painted. This is done by means of neutral degreasing followed by cascade washing (3 systems respectively).

After the drying process, the cleaned drawers are sent to the low waste and low emission powder coating (3 systems). A drawer model is produced from precoated measured material. Degreasing and power painting is not done by us in house

The components are then fixed together into complete drawers ready for use. In some cases, robots are used.

The **drawer profiles** are produced using profiling, pressing and bending as well as the high-strength and energy-saving TOX insertion techniques. The coating is done in the same way as described for the drawers.

The steel hooks on the transportation chain are coated at the same time. The powder coating must be removed in a continuous paint stripping plant (2 systems).

The cleaning and rinsing water originating in the pre-treatment is reprocessed in the company's own sewage treatment plant (1 plant).

However at **HMT** the use of classic metalworking applications is comparatively low. Furthermore assembly operations of special machine constructions dominate.



In prototype and small batch series, **HMS** uses lathes and milling machines as well as plastic injection mounting plants to process metal, wood and plastic. Furthermore, presses and other machines are also used there for sheet metalworking. The information and communication technology department (computer systems, cooling systems, emergency district heating power station A8) is also located at HMS.

The main environmental relevance of **HLS** lies in the production of the transport packing, the temporary storage on high shelves as well as transportation using mainly lorry and ship.

**HMV** is a sales company. The main environmental pollution here comes from the sales representatives who cover long distances each year using company cars.



### 3.2 Determination and monitoring of important environmental aspects

Our company registers all environmental effects in accordance with the requirements of the EMAS II and evaluates them regularly to assess the need for corrective action. Both direct and indirect environmental effects are taken into consideration here. Environmental targets can be derived depending on the degree of monitoring that can be done, the influence exerted and the importance of the consequences (assessment).

The following table summarizes the results. Only those environmental aspects that are considered as being important and having at least average effects are shown here. The level of importance is assessed as "high", "average", or "low".

Activity / product	Environmental aspect d: direct, type i: indirect, type	Can be monitored? [y/n], y: type	Influence expected? [y/n]	Important effect? [y/n], y: Assessment	Considered in the objective? [y/n], y: Activity
Profiling KSS	d: Material consumption	y: Consumption controls	y:	y: average  Disposal and treatment as waste	y: Central cooling lubricant supply
Profiling Raw material steel	d: Consumption of resources	y: Consumption controls	y:	y: average	y: Minimization of waste
Profiling Energy consumption	d: Consumption of electricity and compressed air	y: Area-related consumption measurement	y:	y: high  Resource consumption and climatic pollution	y: Reduction in consumption of compressed air
Assembly Energy consumption	d: Consumption of electricity and compressed air	y: Plant related consumption measurement	y:	y: high  Resource consumption and climatic pollution	n
Drawer production Bath heating (district heating)	i: Consumption of resources	y: Area-related consumption measurement	n	y: average	y: Check waste heat utilization of new profiling plants
Drawer production Dry oven	d: Consumption of resources	y: Area-related consumption measurement	y:	y: average  Resource consumption and climatic pollution	n: (not influenced by process)
Logistics Fuel (carrier)	i: Consumption of resources	n	n	y: average	n: (not influenced by process)



Activity / product	Environmental aspect d: direct, type i: indirect, type	Can be monitored? [y/n], y: type	Influence expected? [y/n]	Important effect? [y/n], y: Assessment	Considered in the objective? [y/n], y: Activity
Logistics Emissions (Carriers)	i: Climatic pollution, health protection	n	n	y: average	n: (not influenced by process)
Administration Use of paper	d: Consumption of resources	y: Consumption controls	y:	y: average	y: "Paperless" customs documentation
Land and buildings Building heating	d: Consumption of resources d: Climatic pollution	y: Consumption controls	y:	y: average	n
Land and buildings Power requirement	d: Consumption of resources d: Climatic pollution	y: Consumption controls	y:	y: average	n

The environmental goals mentioned here will be substantiated through individual measures in the environmental programme.

Under the indirect environmental effects in particular are:

- The use of district heating for process baths and room heating (see section 4.5 Energy)
- The use of 88 fuel-operated vehicles in Kirchlengern / Bünde (see section 4.6 Pollution and noise)



#### 4. Operative environmental performance

The development of the operational environmental protection over the last three years is described below and illustrates the environmental performance in Kirchlengern / Bünde of our company. In order to be able to illustrate the changes effectively when compared to the previous years, we have introduced relative environmental performance values. The raw materials used (strip steel, powder paint and wood panels) have been taken as reference sizes when determining these values. On the one hand, the environmental performance values allow the effectiveness of environmental relief measures to be illustrated without being influenced by production variations. On the other hand meaningful environmental performance values assume at least a constant product and process spectrum on the site. It must also be noted that material thicknesses have been reduced (specific product weight) over the last years. This can have an adverse affect on the environmental performance values as more product items are produced from the raw materials.

Also because of production-related changes (e.g. energy-intensive laser welding plants, increased use of transfer lines or sharply increased, energy-intensive use of robots, increased office technology, increase in single layer power-coating, ...) on the site in the last years, the performance values are in some cases pushed to the limits.



#### 4.1 Products

Drawer runners and drawer systems for the furniture industry (HPH), prototypes and small batches (HMS) as well as special purpose machines (HMT) are produced at this location.

Period	Products [t]			
	2004	2005	2006	Change compared to previous year in %
Drawer runners and drawers	55,657	62,016	70,627	+ 13.9

The special purpose machines were developed and produced on customer request by Hettich Maschinenteknik GmbH & Co. KG (HMT). In the last years, through the extension of the production at HPH, there has been a steady increase in orders at HMT

Period	2004	2005	2006
Working hours (workshop) HMT [h]	36,659	45,400	56,945



## 4.2 Raw commodities and operating materials

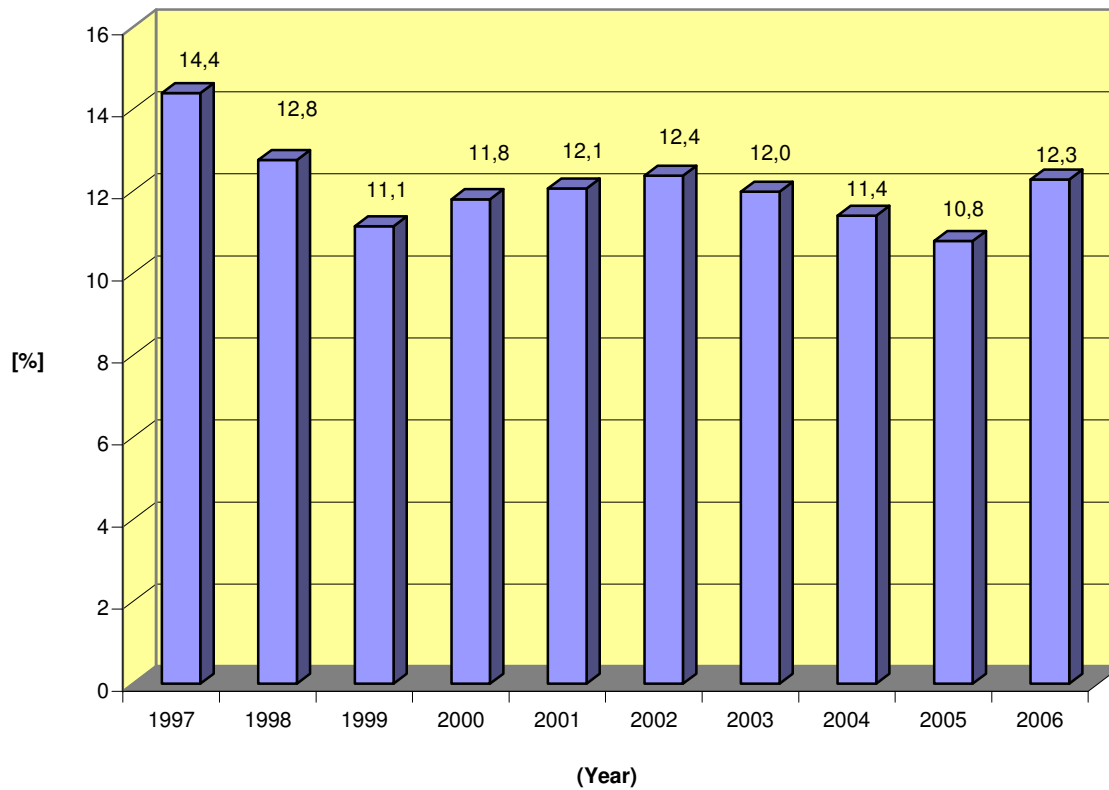
In addition to the raw commodities needed to manufacture our products, a range of auxiliary and operating materials are also required and are used directly or indirectly in the operation of production plants, product packaging, etc.

Period	Raw commodities and operating materials [t]			
	2004	2005	2006	Change compared to previous year in %
Strip steel / sheet metal	58,107	64,500	74,954	16.2 <sup>1)</sup>
Wood panels	3,740	3,990	4,335	8.6 <sup>3)</sup>
Powder paint	437	485	546	12.6 <sup>1)</sup>
Cardboard packaging	2,014	2,099	2,182	3.9 <sup>1)</sup>
Oils and grease	57	39	57	46.2 <sup>1) 4)</sup>
Cooling lubricants	25	21	6	- 71.4 <sup>2) 3) 4)</sup>
Chemicals for sewage purification and pre-treatment	93	103	119	15.5 <sup>1)</sup>
Chemicals for paint removal	94	102	96	- 5.9 <sup>2)</sup>

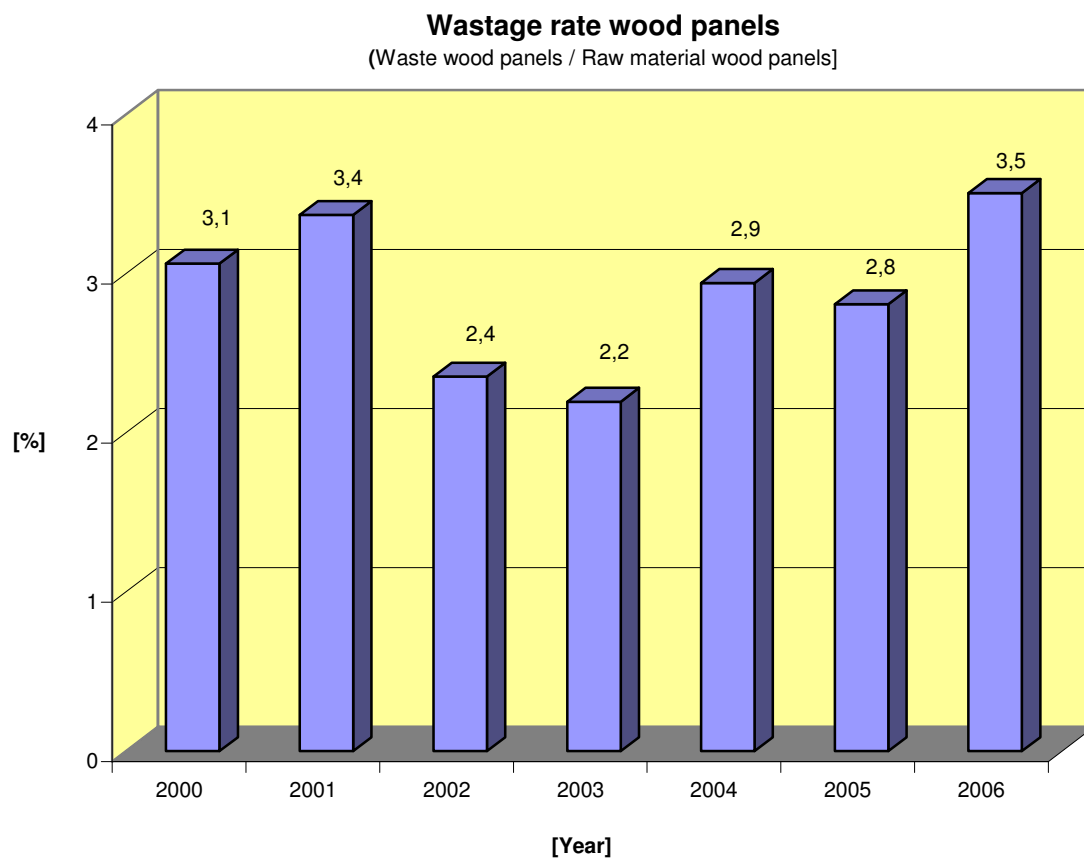
- 1) Production increase
- 2) Optimization of downtime
- 3) Changeover to new suppliers
- 4) Requirement-oriented purchasing (irregular purchasing intervals make it difficult to assess change)

**Steel sheet usage: Proportion of scrap**

[Steel sheet scrap (total) / Steel sheet]



The increase in the amount of waste in 2006 can be attributed to various factors. On the one hand, the increase in product variants led to frequent set-ups, involving start-up scrap. On the other hand, in 2006 the packaging pieces that were used as dummies were scrapped once the trial operation of the new high rack warehouse. Problems with quality of materials from a new supplier also led to increased rejections.



The rejection quota of the wood panels increased in 2006 due to the changeover to another supplier and the start-up problems and expansion of the test.



### 4.3 Waste

The following tables show that, through recycling, a higher portion of the refuse accumulated by us can be put back into the industrial cycle as reusable waste material.

The recycling quota is 79.9 %.

At the present time, a system of waste separation for 32 different types of waste is being used in Kirchlengern / Bünde. The annual amounts will be registered and documented both in a waste balance and in the annual report from the waste officer. The different types of waste are separated by type and collected for disposal in suitable containers located on the company premises.

The following two tables do not show percentage changes when compared to the previous year. Due to the partly a cyclic disposal intervals, this would not yield any meaningful results.

Waste recycling [t]			
Period	2004	2005	2006
Wood waste	214.0	218.0	220.7
Cardboard paper	480.1	490.5	471.2
Paper / cardboard	40.8 <sup>4)</sup>	29.0	28.6
Batteries / Lead batteries (stackers) <sup>**)</sup>	6.0	1.7 <sup>1)</sup>	1.6
Fluorescent tubes <sup>**)</sup>	0.8	0.7	0.7
Oil waste / Hydraulic oil <sup>**)</sup>	17.6	8.4 <sup>1)</sup>	13.7 <sup>1)</sup>
Sludge from the sewage treatment	48.3	53.2 <sup>1) 2)</sup>	51.1
Contents of cooling circuit <sup>**)</sup>	0.0	9.9 <sup>3)</sup>	0.0
Paint sludge (liquid) <sup>**)</sup>	39.4 <sup>1)</sup>	13.7 <sup>5)</sup>	10.3 <sup>1)</sup>
Powder paint	9.5 <sup>4)</sup>	7.1 <sup>1)</sup>	5.9
Plastic film	31.1	31.3	22.0 <sup>1)</sup>
Printer components	1.0	0.4 <sup>1)</sup>	0.8
Electronic waste <sup>**)</sup>	1.1	2.6 <sup>1)</sup>	3.2 <sup>1)</sup>
Garden refuse	36.7	16.9 <sup>1)</sup>	10.7 <sup>1)</sup>
Copper cable	1.4	0.5 <sup>1)</sup>	1.5 <sup>1)</sup>
Brass wire	2.7	3.3 <sup>1)</sup>	3.9
Mixed and sheet metal waste	6.456	6.823 <sup>2)</sup>	9.026 <sup>2) 4)</sup>
VA / Chrome steel	170.5	129.8 <sup>6)</sup>	182.1 <sup>2)</sup>
Residual waste	217.0	219.0	240.0 <sup>2)</sup>
Polystyrene	12.7	10.8	10.9
Food leftovers	0.0	3.6	3.5
Absorbents and filter materials <sup>**)</sup>	12.2	15.0 <sup>1)</sup>	15.6

1) Requirement-oriented disposal (irregular disposal intervals make it difficult to assess change)

2) Production increase

3) Partial disposal from central cooling circuit

4) Scrapping of old stocks

5) A paint sludge had to be added for disposal

6) Reduction of wastage rate through optimisation of position

\*\*) Refuse requiring special monitoring



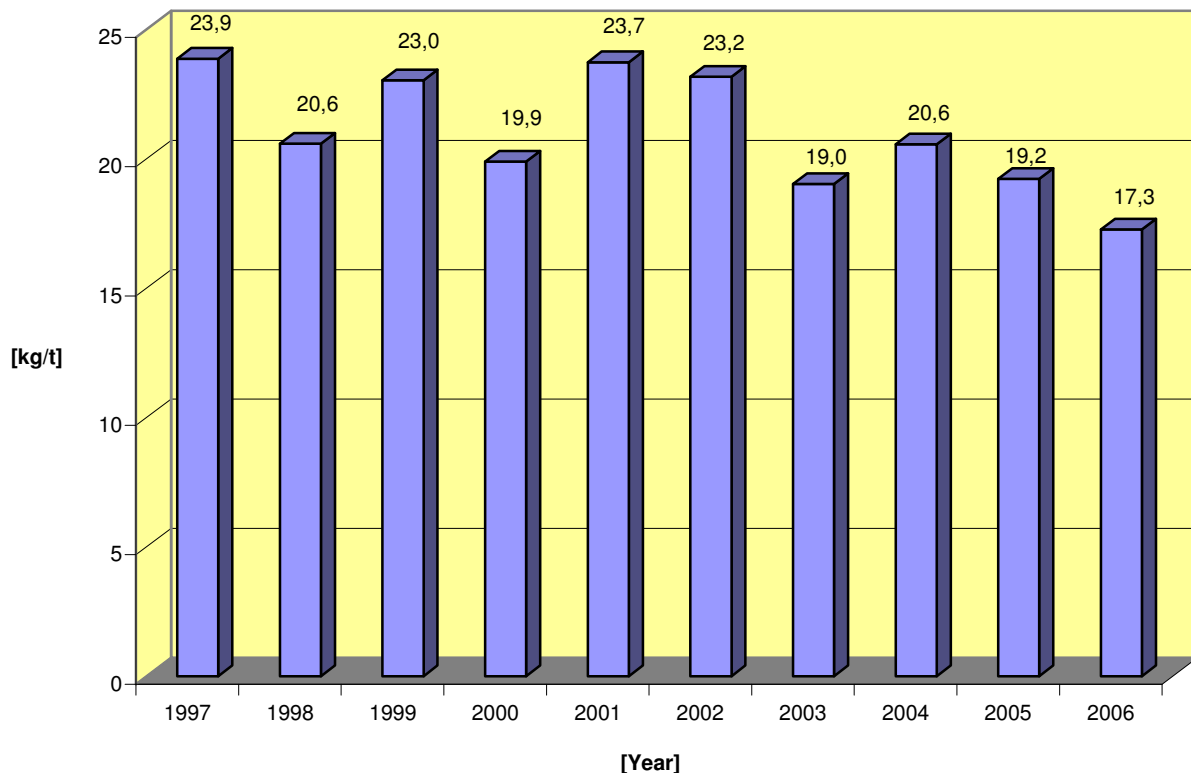
Waste disposal [t]			
Period	2004	2005	2006
Building rubble **) - mostly	49.5 <sup>1)</sup>	18.6 <sup>2)</sup>	35.8 <sup>2)</sup>
Emulsion mixtures (Cooling lubricants) **)	48.0	52.3 <sup>3)</sup>	59.8 <sup>3)</sup>
Batteries, dry **)	0.3	0.3	0.3
Paint sludge (solid and liquid) **)	59.1 <sup>5)</sup>	105.8 <sup>7) 3)</sup>	111.3 <sup>3)</sup>
Phosphate sludge**) )	34.0 <sup>6)</sup>	0.0 <sup>2)</sup>	17.5 <sup>6)</sup>
Bases from pre-treatment **)	0.0	11.3	17.1 <sup>2)</sup>
Waste from the vapour degreasing **)	2.6 <sup>2)</sup>	12.4 <sup>2)</sup>	3.2 <sup>2)</sup>
Diluted drilling fluids	0.4	0.0 <sup>2)</sup>	0.0 <sup>2)</sup>
Roofing plates containing asbestos **)	46.9 <sup>1)</sup>	47.6 <sup>1)</sup>	0.0
Special disposal of small amounts at the – hazardous substances collection point in Herford	0.0	0.4 <sup>2)</sup>	0.0 <sup>2)</sup>

- 1) Larger building and renovation activities
- 2) Requirement-oriented disposal (irregular disposal intervals make it difficult to assess change)
- 3) Production increase
- 4) Reduction of the VE plants with epoxy resin that must be refilled on side was completely done away with from 2005
- 5) Through large displacement of the hooks in A8 frequent emptying of the rinsing zone (see environmental programme point)
- 6) Capacity bottlenecks in the sewage treatment plant
- 7) Since 2005, paint sludge must be disposed of instead of being recycled

\*\*) Refuse that requires special monitoring

**Specific amount of refuse (Kirchlängern+Bünde from 2006)**

[kg refuse (excluding scrap, building rubble, garden refuse, bulky refuse / t raw materials (total)]





4.4 Water and sewage

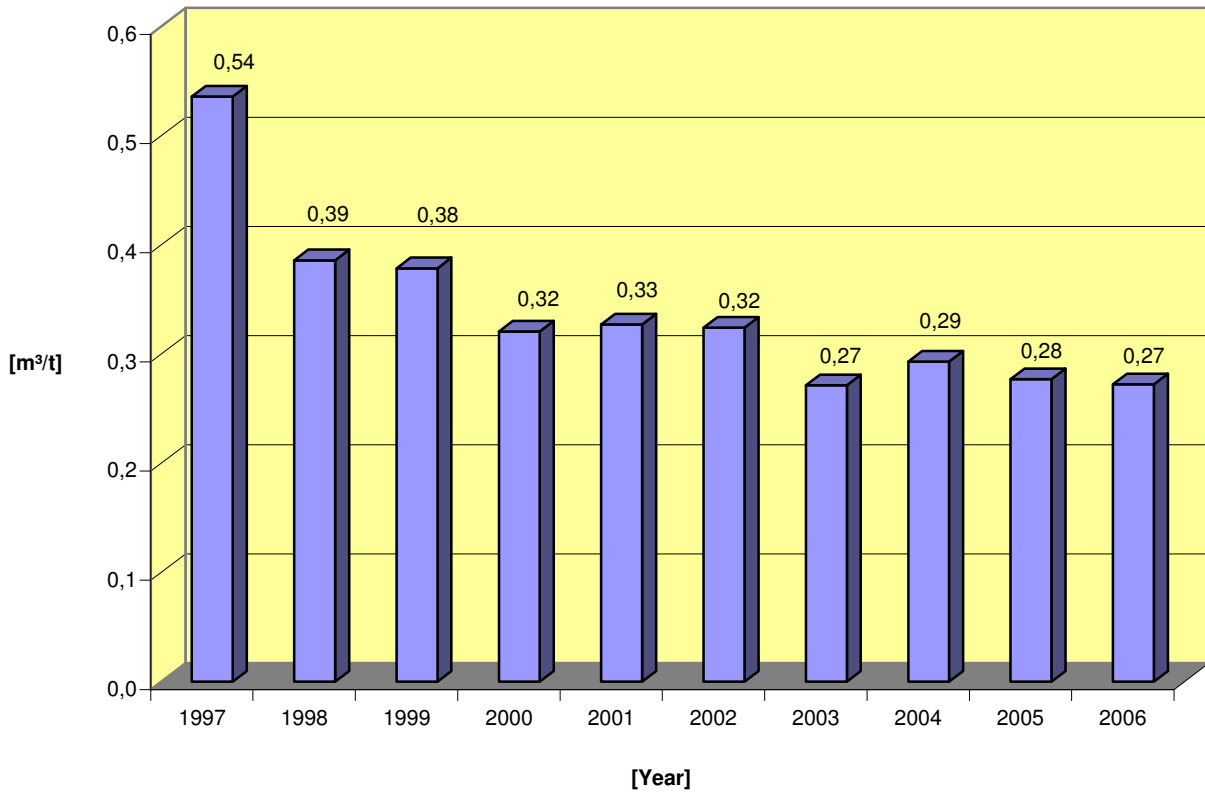
Water consumption

Period	Water consumption [m <sup>3</sup> ]			
	2004	2005	2006	Change compared to previous year in %
Sanitary water	8,740	8,481	10,238	20.7
Process water B4/B5/A8	7,571	8,697	8,996	3.4
Total consumption	16,311	17,178	19,234	12.0

The process water consumption for the B4/B5/A8 areas at HPH (drawer production) has increased disproportionately to the increase in production. However, there has been a further slight improvement in the specific product-related water consumption. The difference between water consumption and waste water yield is caused by the relatively high water temperature as well as the large product surface in the area of the pre-treatment plant.

**Spec water consumption (Kirchlengern+Bünde from 2006)**

[m<sup>3</sup> water total / t product]





### Waste water yield:

Waste water accumulates in the form of production, sanitary and precipitation waste water. The sanitary, production and – also in part – the precipitation water are discharged into the sewage system, which is connected to the local sewage treatment plant in Löhne. The part of the precipitation water coming from the roof area in factory B is passed through a retention reservoir and then discharged directly into the watercourse. This also applies to the water from the roof of the new Logistics centre. The waste water from the production comes exclusively from the drawer production (HPH). This is discharged into the company's sewage treatment plant. This plant comprises a neutralization, a flocculation and sedimentation and a filtration. The cleaned waste water is also discharged into the sewers. The sewage treatment plant is monitored by our own and official measurements, maintenance work, regular inspections and visual checks. The limit values specified will certainly be maintained in accordance with the external laboratory analyses.

Period	Waste water yield [m <sup>3</sup> ]			
	2004	2005	2006	Change compared to previous year in %
Sanitary waste water	8,740	8,481	10,238	20.7
Waste water from treatment plant as well as full desalination plant	3,420	3,913	3,574	- 8.7

The increase in waste water from the treatment and full desalination plant is more or less covered by the increase in the use of raw material.

The concentrations of materials discharged from the sewage treatment plant into the public sewage (direct discharger) result in the following annual load for the subsequent communal sewage treatment plant.

Waste water load of the sewage treatment plant B4				
Parameter	Unit	Value determined Ø	Limit value	Annual load [g/a]
Aluminium	mg/l	0.17	3	469
AOX <sup>1)</sup>	mg/l	0.04	1	110
LHKw <sup>2)</sup>	mg/l	0.01	0.1	28
Zinc	mg/l	0.02	2	55
Hydrocarbons	mg/l	2.96	10	8,170

1) Absorbing organically-linked halogenates

2) Low volatile halogenated hydrocarbons



## 4.5 Energy

District heating is drawn from a district heating power station (combined heat and power) on site for the heating supply to the buildings and degreasing baths. The plant was put into operation in 1994 and also supplies heat to the neighbouring municipal swimming pool "Aqua Fun" and an adjoining housing estate.

Natural gas is another source of energy that is used to generate heat in the production facilities (baking furnaces in the powder coating as well as heating the paint removal baths) and for the district heating power station (constructed in 2003). The Logistics Centre that came into operation in 2006 is heated by natural gas. A special feature here is the efficient gas-infrared heating system in the commissioning area.

The electricity is supplied from the public grid.

Period	Energy consumption			
	2004	2005	2006	Change compared to previous year in %
Power <sup>1)</sup> [MWh]	18,450	19,479	21,340	+ 9.6
Natural gas * [MWh]	7,432	8,211	9,934	+ 21.0
District heating <sup>2)</sup> [MWh]	4,980	5,838	6,112	+ 4.7

\* in the drawer production HPH and gas consumption for the BHKW A8 (since June 2003), as well as heating the Logistic Centre (since 2006)

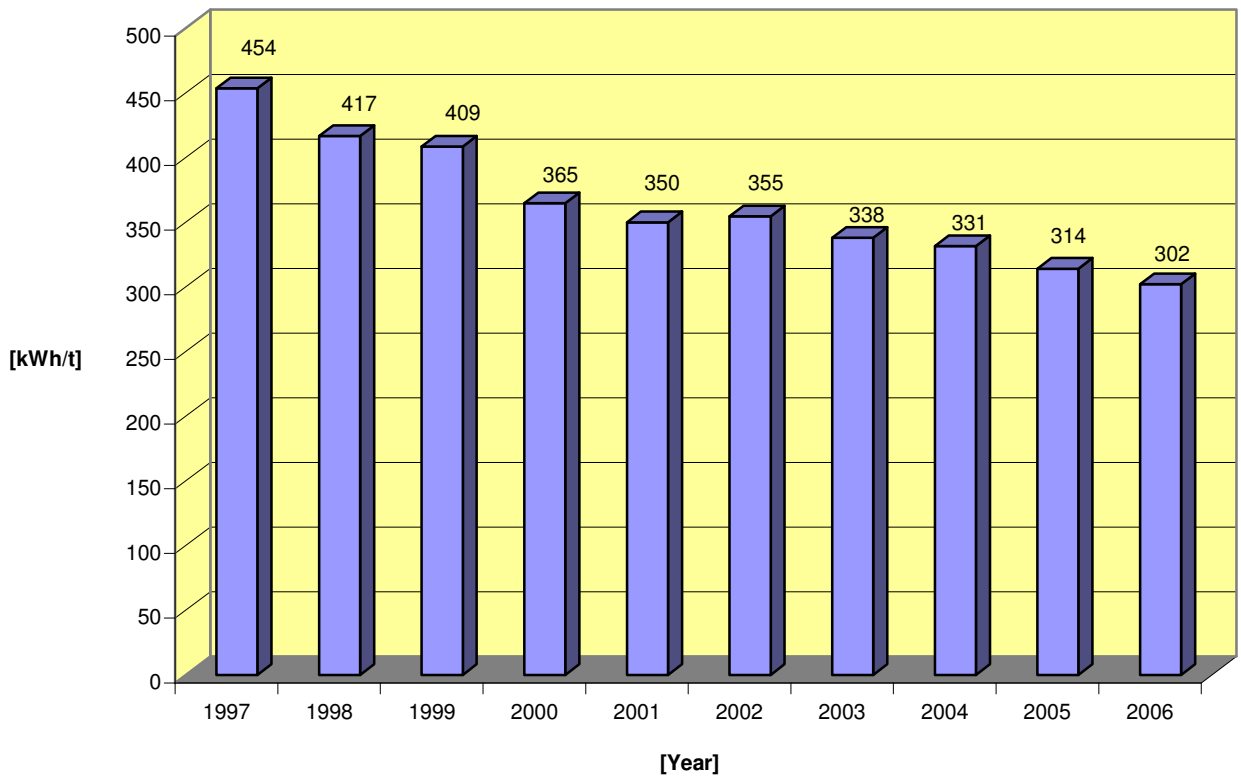
- 1) without own electricity generation BHKW A8  
 2) without own heat generation BHKW A8

In disproportionate increase in electricity consumption when compared to the processed materials of 9.6 % can be traced back mainly to the considerably higher amount of raw materials (+15.7 %) processed.

A further, slight reduction of 3.8 % on 302 kWh/t production can be recorded for the specific electricity consumption. The continually increasing amount of technology (e.g. laser welding, PCs, communication devices, ...), increasing automatization (e.g. increase in use of robots, transfer lines, ...) as well as the increase in cooling for buildings and machinery, that unfortunately cannot be meaningfully quantified, make further specific decreases in the consumption of electricity difficult. Without these different measures, the absolute increase in the consumption of electricity would be considerably higher; the relative consumption of electricity would go up.



**Specific electricity consumption (Kirchlengern+Bünde from 2006)**  
[kWh electricity / t Product]



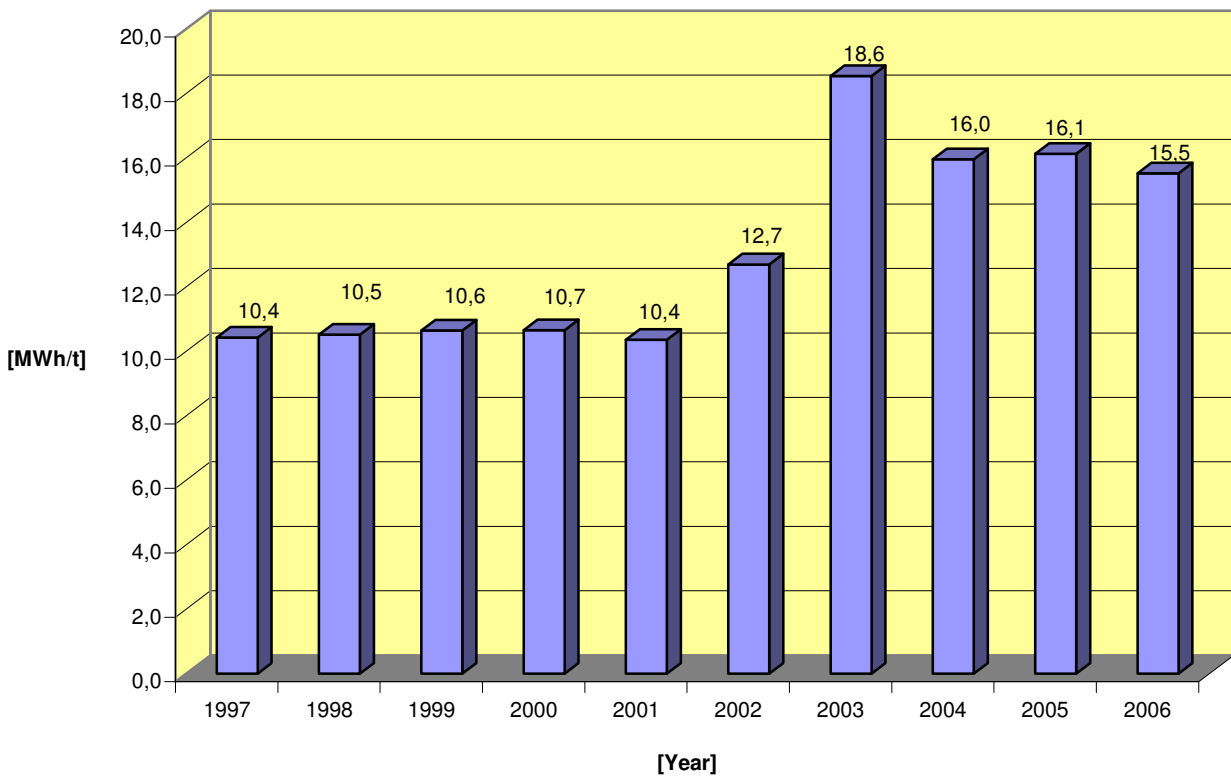


The 8.3% increase in gas consumption up to last year (for the baking furnaces B4/B5 and A8 as well as the two paint removal bath heating systems) is disproportionate to the increase in production.

This means that consumption of gas has shown a slight improvement.

The process gas consumption has now stabilized in the range of 15 MWh/t powder coating. This is mainly because the second baking furnace build in 2002 is heated indirectly for quality reasons, which leads inevitably to an increase in the consumption of energy.

**Specific process gas consumption B4-B5-A8**  
[MWh Gas / t powder coating]

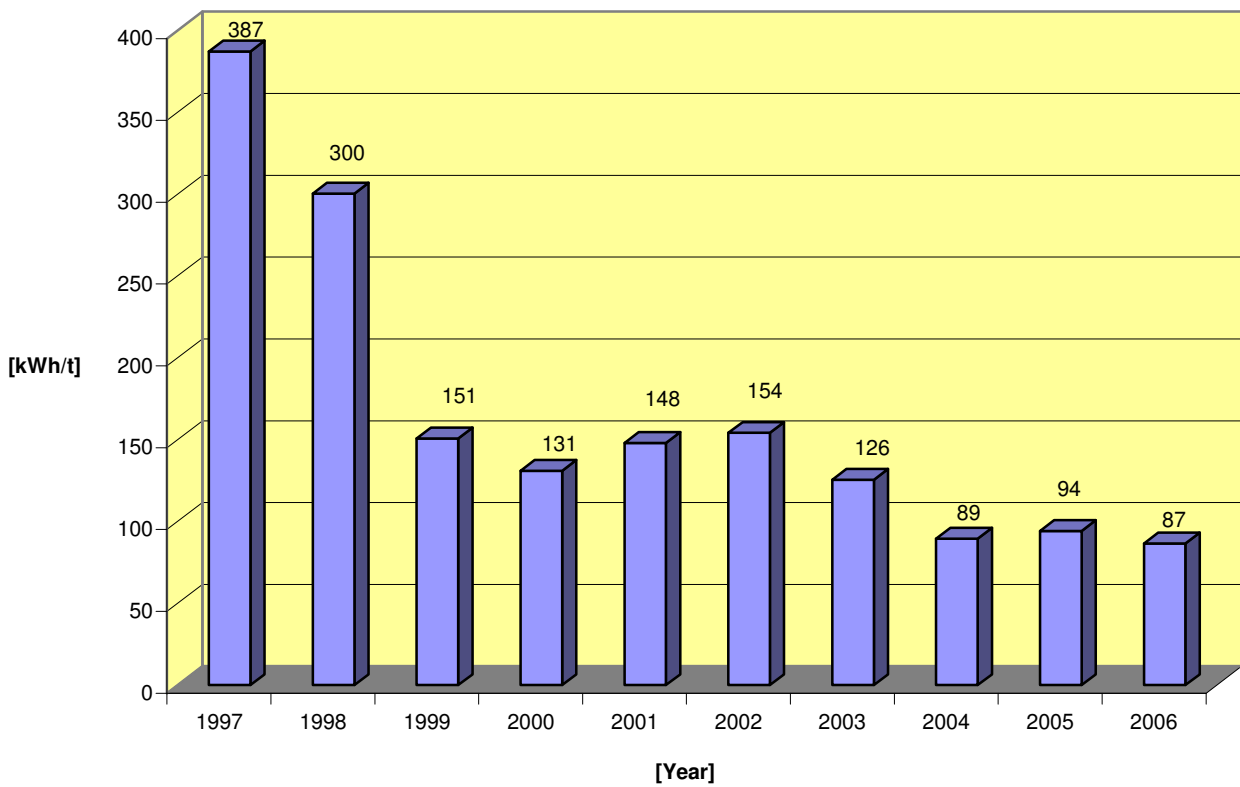




The heat consumption for the last years has decreased by 36 % when compared to 1997 (in spite of a production increase of 185 %)! The excellent result can be traced back to the standardized energy concept within the scope of energy contracting in 1998 with the connected extensive modifications, plant renewals and different measures for the use of surplus heat, as well as the centralized compressor station with heat coupling. The absolute increase in consumption during the reporting period – when compared with the previous year – is 4.7 %. The specific heat consumption decreased in total from 387 kWh/t product (1997) by 300 kWh/t product to 87 kWh/t product in 2006, corresponding to a total decrease of 78 %!

**Specific heating consumption**

[kWh heating / t product]





## 4.6 Exhaust and noise

### Exhaust emissions:

None of the company's plants is subject to the licensing requirement laid down in the Federal Ambient Pollution Control Act.

The gas heating of the paint removal plants and the baking furnaces B4/B5 and A8 as well as the Emergency power district heating power station A8, the space heating for the boiler and the gas infrared heating in the new Logistics Centre can be cited as relevant emission sources. These fall far below the limit requirements of the first Federal emission control regulation (Bundesimmissionsschutz-Verordnung).

CO<sub>2</sub> emission through energy consumption (absolute)  
(electricity, natural gas, district heating)

	2004	2005	2006	Change compared to previous year
Tons/year	11,531	12,351	13,672	+ 10.7 %

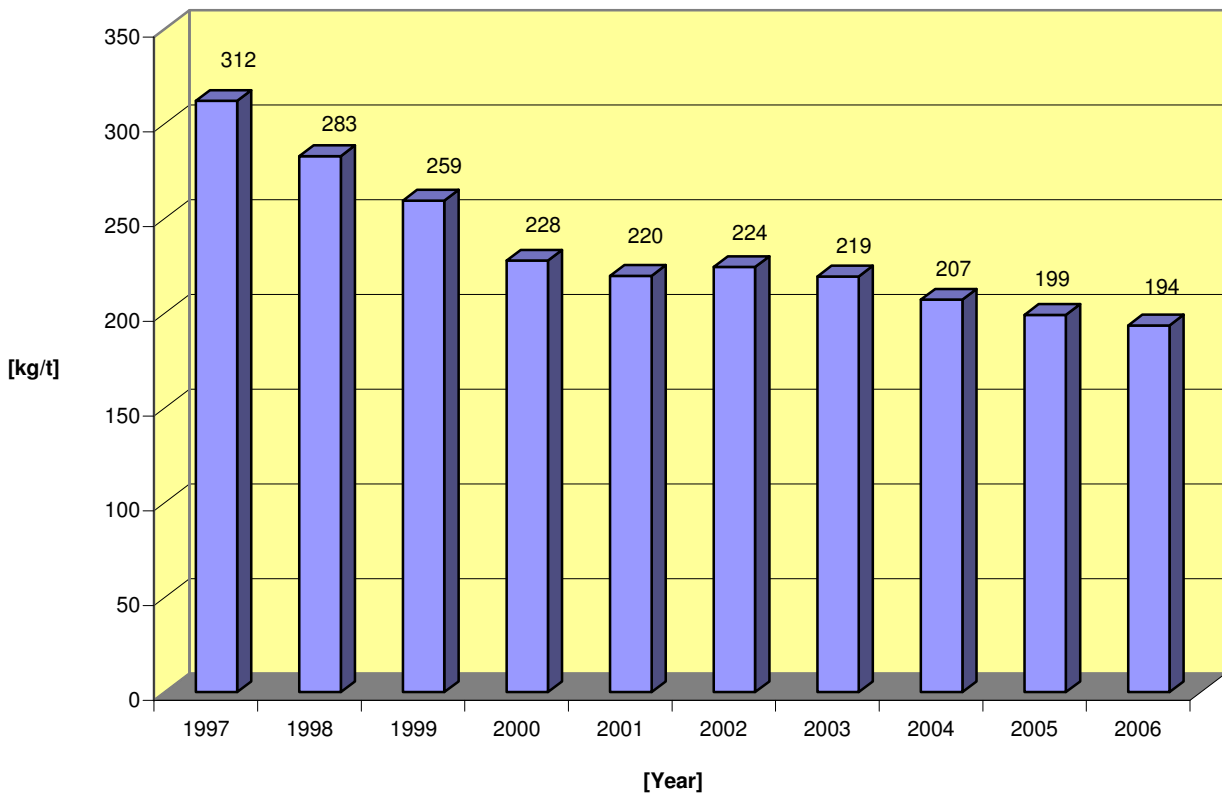
Also if the absolute CO<sub>2</sub> emissions increase again because of the increases in production, the specific CO<sub>2</sub> emissions could be brought down to the lowest level for ten years! This is due to further effective energy reducing projects (new compressor control with comprehensive waste heat extraction, district heating power station A8, infrared heating Logistics Centre ...), with which we have managed to overcompensate growing energy requirements by

- increased degree of technology, e.g. laser welding plants
- sharply increased automatization (robots, transfer lines, etc.)
- increasing number of cooling plants (building and machines)
- increased office technology (computer, telecommunication, etc.)
- increased product efficiency (i.e. optimization of the product material thickness needs, e.g. the same powder coating, but represents less "product tons"!!)



**Specific CO<sub>2</sub> Emissions (Kirchlegern+Bünde from 2006)**

[kg CO<sub>2</sub> / t product)



It is our goal, when planning new plants and buying machinery, to give serious consideration to waste air and indirect energy-consumption related CO<sub>2</sub> emissions. If it is not possible to avoid emissions of waste air through the production process, appropriate measures will be taken to reduce them in order to keep the environmental pollution as low as possible.

In addition to the permanently installed plants, other emissions come from the vehicles used on the site. Cars mainly concern those for the field representatives as well as vehicles for special use. In addition to the vehicles from external carriers, the two lorries are used to transport products. The stackers mentioned have gas combustion engines and support the battery electric-operated forklift trucks used for in-plant transportation.

In order to comply with the ecological and statutory necessities of the reduction of fine dust under the given technical possibilities as quickly as possible, on 12.05.2005 the Holding Company decided to lease only diesel cars with particulate filters immediately.

Vehicles	Mileage / consumption
79 cars (Diesel)	3,240,722 km / year
2 lorries (diesel)	46,589 km / year
7 stackers (liquified gas)	29,221 l / year



## Noise emissions

The company in Kirchlegern / Bünde is located in an industrial area. There are small residential areas and commercial operations in the vicinity. Measurements are carried out to maintain the limit values of the TA noise. The adherence to the legal limit values has been assessed to ensure that the impact on the residents is as low as possible. The limit values can be reliably maintained by us throughout the year.

There is a high noise pollution when the production areas are operating. These areas are appropriately identified by us. In-house noise abatement measures, such as encapsulation, have already been introduced. Where this was not sufficient or not possible, employees have been issued with personal protective equipment.

Noise reduction measures will be taken into consideration when planning new plants in accordance with the EU "Noise" Directive (2003/10/EG).



#### 4.7 Soil and ground water

No soil contamination is to be expected on the premises at Kirchlengern / Bünde because of its previous agricultural use. However, precautionary soil analyses were undertaken because degreasing baths with chlorinated hydrocarbon (CKW) were used when the operation was originally started. These indicated soil contamination in the vicinity of A3 and the loading area. Several measurements were undertaken and it was agreed with the responsible authorities that no clean-up is necessary. Further checks have also been carried out on a regular basis and evaluated in order to confirm the results. These gave a harmless assessment.

Under preventative points, different measures have been taken, e.g. acquisition of additional collecting zones. Employees working on the machines on site have been trained to deal with water-endangering substances, in order to prevent contamination of ground and ground water.

Period	Surface area [m <sup>2</sup> ]		
	2004	2005	2006
Sealed areas	99,758	131,938	137,232
Unsealed areas	69,014	36,834	41,940
Total surface area	168,772	168,772	179,172

In 2006, an additional area of 10,400 m<sup>2</sup> was added to the premises.

Building permission was also granted for two buildings. These have been built and a car park has also been constructed. As the annexes have been built to a large extent on surfaces that were previously sealed, this has no serious effect on the previously sealed areas.



**5 Company contact person**

The contact person for further information is the Company environmental co-ordinator, Mr. Kott

Tel.: 05223 / 77-1524

E-mail : Uwe\_Kott@de.hettich.com

**6 Name of authorized environmental advisor**

At the instigation of the ESC GmbH Zertifizierungsstelle Kassel, Teichstr. 14, 34130 Kassel:

Dr. Ralf Rieken

(Licence no.: DE-V-0034)



## 7 Validity of the environmental impact statement

The environmental policy, goals, programme, environmental management system and the Eco-Audit and procedure for the Hettich premises in Kirchlengern / Bünde correspond to the requirements of the regulation 761/2001 (EMAS II).

The data and information in the environmental impact statement are reliable. They provide a good picture of the environmental relevance of all activities of the companies

Hettich Holding GmbH & Co. oHG

at Vahrenkampstr. 12 – 16 in 32278 Kirchlengern / Bünde

together with the following companies

Paul Hettich GmbH & Co. KG

Hettich Management Service GmbH

Hettich Maschinenteknik GmbH & Co. KG

Hettich Marketing- und Vertriebs- GmbH & Co. KG

Hettich Logistik Service GmbH & Co. KG



Kirchlengern / Bünde, June 2007

Dr. Ralf Rieken  
(Licence no.: DE-V-0034)