



Sustainability Report

2012



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FOREWORD OF THE EXECUTIVE BOARD

Dear readers,

You hold in your hands the first sustainability report of the Jenoptik Group which will provide you with an overview of initiatives within the Group; it is a first step and we will endeavor to develop it on an ongoing basis.



As a high-tech company with extensive expertise in optoelectronics, we contribute to shaping the industrial environment both now and in the future. Optoelectronics is a cross-sectional technology, an enabler for many growth industries. Our products, systems, our overall range of services thus inherently contribute to greater efficiency and with it the conservation of resources. We are establishing ourselves as a strategic partner to international customers and, together with them, develop cutting-edge trends in the areas of energy efficiency, safety, health and mobility. This is possible thanks to our clear strategic orientation and long-term financing structure.



We want to use resources responsibly. This is the requirement we set for our company itself and our innovative products, which meet it in use by our customers and partners around the world. We respond to the challenge of this responsibility by constantly optimizing the ratio of resource use to resource conservation. High technology and our core competencies in all areas of optoelectronics and precision mechanical engineering help to achieve this objective.

Dr. Michael Mertin
Chairman of the Executive Board

Rüdiger Andreas Günther
Member of the Executive Board

GENERAL COMPANY DATA

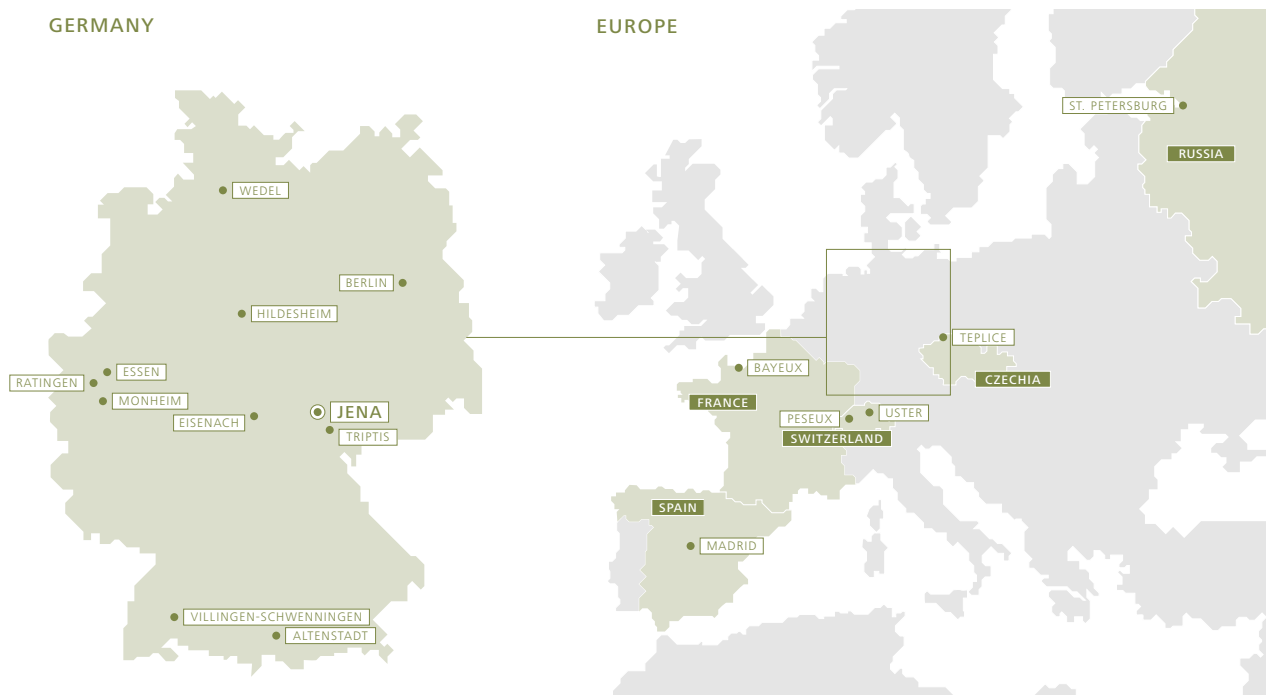
Jenoptik is a high technology company and positions itself as a supplier of outstanding and innovative products for diverse areas of application relating to all aspects of optics, lasers, material processing, metrology and sensor and energy systems. Jenoptik's customers benefit from solutions which focus on efficiency, reliability and precision and thus frequently provide a resource-friendly alternative to conventional products and methods.

Jenoptik operates in five divisions: Lasers & Material Processing, Optical Systems, Industrial Metrology, Traffic Solutions and Defense & Civil Systems. The Corporate Center is responsible for control and core tasks, supporting activities are combined in the Shared Service Center. With this Group structure, Jenoptik meets the diverse requirements of a varied product portfolio and generates cost savings with synergies, and taps the full innovation potential through the cross-market technological expertise.

In the 2011 fiscal year, Jenoptik's employees, over 3,100 in number, generated sales of 543 million euros and an operating profit of 49 million euros around the world. The company's head office is in Jena, the bulk of production is carried out there and at other sites in Germany. Key foreign production and assembly facilities are located in the United States, France and Switzerland.

As a supplier of capital goods, Jenoptik operates exclusively in the B2B sector. Key markets are the semiconductor and semiconductor equipment industries, the automotive and automotive supplier industries, the medical technology, security and defense technology industries and the aviation industry. Alongside Europe, America and Asia are maturing as key sales regions. Jenoptik is working to continually expand its presence on the international stage.





COMPANY DATA AT A GLANCE

(in million euros)	2011	2010 ²⁾	Change in percent
Sales	543.3	478.8	13.5
of which domestic	221.8	199.1	11.4
of which foreign	321.5	279.7	14.9
EBIT	49.2	29.0	69.7
EBIT margin ¹⁾	9.1 %	6.1 %	–
Earnings after tax	34.1	9.0	278.9
Free cash flow (before income tax)	44.0	31.6	39.2
Capital expenditure	25.1	14.5	73.1
Order intake	647.9	534.6	21.2
	as at Dec. 31, 2011	as at Dec. 31, 2010	Change in percent
Order backlog	448.5	355.4	26.2
Number of employees	3,117	2,951	5.6
of which domestic	2,720	2,635	3.2
of which foreign	397	316	25.6

¹⁾ EBIT as percentage of sales, ²⁾ Continuing business divisions

SUSTAINABILITY AT JENOPTIK

INFORMATION ON THE REPORT

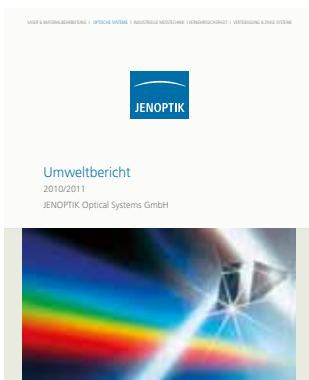
The present report provides an overview of initiatives along the value-added chain as well as of Jenoptik products which facilitate particularly efficient production processes. Jenoptik acts as an enabler here, offering customers new and better alternatives and thereby contributing to their success. The components, modules, systems and services Jenoptik offers contribute to greater sustainability in diverse ways. What they all have in common is efficiency, quality and precision when deployed by customers. Jenoptik's unique solutions thus help to conserve scarce resources.

In addition, the sustainability report consolidates environmental data from the Jenoptik Group and then provides an overview of social issues relating to employees and society.

Environmental and sustainability issues are organizationally integrated in the various operational areas and are supported in a coordinating capacity by the Group's general environmental

officer. Various experts from the specialist departments provide assistance, depending on the initiative. The topics relating to employees and personnel advertising and recruitment – and thus opportunities and support for high-school students, trainees and university students – are based in HR, sponsorship and donations in the office of the Executive Board.

The objective of the Jenoptik sustainability report is not just to gather information for interested parties outside the company but also to raise awareness of sustainability issues within the Group and help initiate future initiatives and programs. The report thus also addresses all employees of Jenoptik. From now on, it will be published regularly every two years, and draws on existing reporting structures used in financial reporting. As a listed company, Jenoptik publishes an annual report every year. Its detailed contents have played a key role in helping to place it among the best in annual report rankings on several occasions. Here Jenoptik also reports on the topics of sustainability, employees as well as on environmental protection and safety at work.



- The Optical Systems division has published an environmental report for the
- Jena location every two years since 1999. It reflects the high priority the
- division accords the topic of environmental protection. The report, the latest edition of which was released in June 2012, complements the Group's sustainability report and provides specific facts and figures on the Optical Systems division's Jena location. In the other divisions, reporting is made in connection with environmental audits and certifications (see page 21).

In creating the report, relevant data was collated and analyzed. This data set formed the basis for this report and also provided an initial idea of topics to be widened in the future. The data were then selected and grouped. It became clear that, especially the product portfolio makes a significant contribution to conserving resources. Ecological and social issues are also given high priority in the report. The surveys in the chapters "Ecological Issues" and "Social Issues" in part refer only to the Group's locations in Germany.

GROUP STRATEGY

- As an attractive, global high-tech partner creating added value for our customers thanks to rapid and consistent actions, our Jenoptik enjoys sustained financial success.

The strategic orientation of the Jenoptik Group has been fixed since 2008. In addition to a focus on product quality, international character and customer orientation, sustainability occu-

pies a fundamental position. Lasting success is conditional upon the sustainable orientation of a company in all its areas of action. Jenoptik is not interested in short-term profit maximization. The strategic objective is lasting profitable growth for the Group. Economic, ecological and social issues also form the basis for strategic decisions. Customer success is central to Jenoptik's activities. As an innovative high-technology company, identifying future needs already today is essential for Jenoptik.

All strategic and operational measures are geared toward five value levers:

- Organic growth through market development, market penetration and product innovations.
- Market and customer orientation by expanding distribution and marketing activities and focusing internal processes on customers and markets.



- Internationalization by systematically developing foreign markets, particularly in North America and Asia.
- Employees & management by challenging and encouraging employees and managers through a uniform system of performance management.
- Operational excellence by examining all the company's processes in order to improve them and generate cost savings.

The principles of commercial operations at Jenoptik are laid down in a binding form in a comprehensive regulatory system. Valid across the Group, the code of conduct for Jenoptik employees and guidelines based on a compliance guideline require conduct in compliance with laws and the rules of all companies and their employees. A compliance board closely monitors relevant developments, reviews any impacts on the Group and updates the compliance guideline accordingly.

Aspects relating to sustainability are explicitly integrated within various guidelines in the Jenoptik Group, these being the code of conduct, the environmental protection guideline and the health and safety at work guideline.

Excerpts from the code of conduct for employees:

- Dealing with suppliers: "In order to ensure the quality of Jenoptik products, suppliers must be selected with care. In addition to price, in particular delivery reliability, financial stability and environmental concerns must be taken into account. No business dealings may be initiated or maintained with suppliers whose business practices clearly violate applicable laws or, in particular regarding environmental protection or labor law, international principles."
- Honorary office and donations: "Jenoptik supports voluntary work at non-profit-making and charitable associations and organizations. The company accordingly also endorses employees who undertake voluntary work privately."



■ Environment and technical safety: “Protecting the environment and conserving its resources are business objectives of high priority. Group-wide environmental management ensures compliance with laws and sets high standards. Environmentally-friendly design, technical safety and health protection are key parameters as early as the development stage of our products. Every employee should contribute to assuring exemplary performance in these areas.”

ADDED VALUE

Research & development.

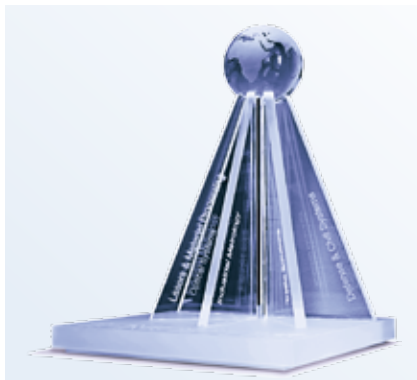
Research and development are crucial to the success of the Jenoptik Group. Only a continuous process of innovation makes it possible to meet the challenges of the present. Developing marketable products with substantial unique selling points is a key aspect of this. These USPs are often new, resource-friendly and durable products and methods designed to improve processes for Jenoptik’s customers. As a cross-sectional technology, optical techniques in combination with precision mechanics and electronics can be used in a broad range of

applications and frequently replace contact methods which are susceptible to wear.

Joint development work with customers and cooperations with scientific institutions play an important role in Jenoptik’s innovation activities. Extensive technological expertise in the entire company is exploited to this end. Jenoptik is intensifying cooperation between the separate areas and across divisions. The objective is the efficient use of all available expertise across the Group.

Ideas management processes were introduced to all divisions in 2010. They enable our employees to submit their own innovative ideas and thus to contribute directly to the development and improvement of the company and share in the resulting success. In this way, over 100 new ideas were collected only in 2011.

Jenoptik and its partners are involved in several joint research projects geared toward the topic of sustainable business.



■ The top product and process innovations are rewarded annually during the Innovation Days with the Jenoptik Innovation Award. In 2011, the IPS 100 HiRes internal test sensor from the Industrial Metrology division was recognized as the best idea. It contributes to the development of more fuel-efficient engines. In addition to the Industrial Metrology division the German and American locations of the Optical Systems division helped to develop the sensor. Further information can be found on page 16.

■ As part of the funding program entitled “Resource-Efficient Production”, the Lasers & Material Processing division has been involved in the ENERWELD joint research project funded by the German Federal Ministry of Education and Research (BMBF) since July 2009. The aim is to increase the efficiency of thermal joining processes with the help of assessment methods, simulation models and the development of new technologies. These processes are used in many areas of industry. Jenoptik is contributing with expertise in laser welding.

■ The Optics business unit in the Optical Systems division is supporting the BMBF joint research project SIRKO (rapid infrared spectrometer for the analysis of hydrocarbon) as part of the “SME innovative: optical technologies” initiative. The ministry is using this initiative to promote cutting-edge research in small and medium-sized enterprises (SMEs). The SIRKO project was launched in March 2012 and over its three-year duration is expected to result in a micro-opto-mechanical component which can determine

the composition of gas mixtures faster and more accurately than existing analytical methods. A comparatively small and simple sensor will ensure leak detection in technical processes for safety control.

■ As part of the Thuringia “Green Photonics” initiative, the Lasers & Material Processing division is developing new solutions for welding and cutting metals using laser systems. These innovations are due to replace inefficient lasers, especially lamp-pumped designs, which today are still in widespread use.

Purchasing.

In strategic purchasing, Jenoptik already works according to the ten principles of the United Nations Global Compact when selecting suppliers and thus also focuses on the subjects of human rights, labor standards, environmental protection and anti-corruption in the upstream levels of the value chain. Jenoptik audits are carried out and documented at the suppliers site to check and evaluate their environmental performance.



■ The Fraunhofer Green Photonics innovation cluster has set itself the goals of developing solutions to address pressing future issues with the use of light, of opening up new markets in key cutting-edge fields for the industry and thereby creating the basis for sustainable growth in German manufacturing. In public-private partnerships, Green Photonics combines the strengths of business, science, the government and the Free State of Thuringia.

Production.

In production, Jenoptik is dedicated to conserving resources and using them more efficiently with the help of a range of initiatives and measures.

- On the ÖKOPROFIT project (see page 21), the following
 - were some of the measures implemented in the Traffic Solutions division: conversion of heating systems to condensing technology, central timers for night deactivation of the air conditioning, use of motion and presence sensors in social and sanitary areas, partial conversion of lighting to LED technology, introduction of switchable socket boards and the installation of automatic timers for workplace PCs. These measures result in savings of 246,900 kWh and thus 15,600 euros over every twelve-month period. That also equates to a reduction in CO₂ emissions of 75 tons.
 - In 2011, the introduction of optimized production in the Defense & Civil Systems division at the Altenstadt location
 - was accompanied by the commissioning of a new painting

plant. It is now possible to remove excess paint particles using an air current and purify them in a downstream filter system. This prevents the contamination of water and simultaneously reduces the volume of hazardous waste.

- With the installation of an environmentally-friendly heating
 - system at the Villingen-Schwenningen location, a further
 - part of the Group has been using renewable energy sources since 2012. Here, heating oil is replaced by wood pellets, a renewable raw material.

Distribution.

In distribution the vehicle fleet data are one of the most important bases of reporting. With average emissions of 138 grams CO₂ per kilometer, the 134 vehicles of the central car pool administered from Jena meet the EU recommendation for new cars from 2008. The goal is to reduce average and absolute emissions with the consistent and performance-related selection of CO₂-optimized models and engine types.



- ÖKOPROFIT is a consulting and qualification program for companies of all
 - types and sizes. Experts, companies and regional authorities work together
 - under a cooperative approach. The objective is both to reduce companies' costs and increase eco-efficiency.

SUSTAINABLE JENOPTIK PRODUCTS

Success as a company hinges on the quality of products and solutions Jenoptik can offer its customers. Jenoptik prides itself on extensive expertise in all areas of optoelectronics and a clear focus on customer requirements. The following presents Jenoptik products which offer particularly sustainable performance.

LASERS & MATERIAL PROCESSING

Jenoptik is one of the few suppliers in the world to offer complete technological capabilities for laser beam sources and has expertise along the entire value-added chain in laser material processing – from semiconductor material via diode, disk and fiber lasers to complex laser systems and machines.

Semiconductor base material for diode lasers.

Thanks to close cooperation with the Ferdinand Braun Institute, Leibniz Institute for Ultra High Frequency Technology in Berlin, Jenoptik is a global leader in the development and optimization of semiconductor material for diode lasers. In Jena, it is pro-

cessed into extremely efficient beam sources. These are then integrated within laser systems and machines. A new design in semiconductor material enables the loss of far less energy than previously in diode lasers, without diminishing the crucial beam quality of the laser required for focusing. This development and its transition to production were awarded the transfer prize by the Technology Foundation Berlin in March 2012. The close cooperation between the research institute and Jenoptik as a representative of the business community means that the newly-developed diode laser can be used directly in industry and replace less efficient lasers and other processing methods.

- The diode lasers from Jenoptik achieve a high efficiency
- similar to the semiconductor base material. They are thus
- among the most efficient artificial light sources in the world. With this high energy efficiency and long lifetime, semiconductor material and diode lasers help Jenoptik's customers to manufacture in a way which saves resources and is therefore sustainable.



- The semiconductor material from Jenoptik stands out with a particularly high
- efficiency of up to 70 percent and a long lifetime of up to 30,000 hours
- (equating to 4.5 years). By comparison, the efficiency of a conventional bulb is 5 percent and that of an energy-saving lamp 25 percent. This material, with its small volume, is also extremely reliable (failure rate under 0.5 percent) and cost-efficient in manufacture.

Solid-state lasers.

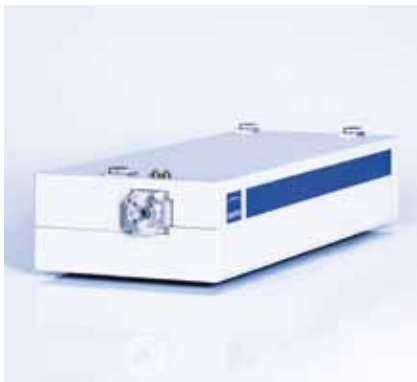
Wherever the performance and beam quality of single high-power diode lasers are no longer sufficient for the desired field of application, they can be used as a pump source for solid-state lasers. One type of solid-state laser is the disk laser, in which the pump radiation is reflected several times by mirrors onto the disk in order to achieve the greatest possible absorption. The fiber laser offers another possibility. The laser light is guided through the fiber and amplified in the fiber core. Both types are used for efficient welding, cutting, drilling or for micro machining diverse materials.

- The JenLas® *fiber cw 1000* is a single mode high-power fiber laser system which replaces conventional metal cutting and welding methods. The laser features a high beam quality, thereby enabling consistently impressive results in the application. In comparison with other beam sources such as the CO₂ laser, fiber lasers are more three times energy and cost-efficient.

- On account of its outstanding parameter stability and high beam quality, together with a high pulse energy and ultra-short pulse duration, the JenLas® *D2.fs*, a femtosecond laser, is used in the photovoltaic industry. One of the outstanding technologies is selective single layer deletion in so-called multilayer systems. The deletion of these layers is beneficial, as there is no heat input to the crystalline silicon and efficiency is therefore not influenced.

Laser processing systems.

Laser machines in the JENOPTIK-VOTAN® product series open up new, efficient and durable production methods for processing diverse materials such as plastic, metal, glass, semiconductor material or thin-film solar cells. They are used in the automotive, photovoltaic, electronics and metal working industries and represent high performance, precision and safety.



- The lasers in the JenLas® *disk IR* family are infrared disk lasers with flexibly adjustable laser parameters. They make possible the realization of the latest photovoltaic technologies. For example, Metal Wrap Through (MWT) or Emitter Wrap Through (EWT) increase the electrical efficiency of solar cells. The contacts are moved from the front to the back side of the cell, thereby enlarging its active area. The Laser Fired Contacts (LFC) process provides an alternative technology to contact the rear sides of solar cells. This is done with local melting ("firing") of the metallization by laser through the passivation layer to the contacts.

■ The JENOPTIK-VOTAN® Solas Advanced laser processing system processes high-tech glass. The Jenoptik laser technology is used here for layer structuring, edge deletion and glass cutting. This high-tech glass is used for so-called smart windows which can be electronically adjusted to outside lighting conditions. Consequently, 25 percent less energy is required for the use of air conditioning systems, while blinds become superfluous.

■ The JENOPTIK-VOTAN® C BIM (beam in motion) laser processing system is a compact processing machine with integrated BIM (Beam in Motion) laser robot. With it, Jenoptik offers a robot solution for the energy-efficient and time-saving processing of 3D lightweight materials such as press-hardened steel. The JENOPTIK-VOTAN® C BIM makes a double contribution to sustainability: on the one hand, the material itself, with its lightweight properties, can be used in automotive engineering to conserve resources. In addition, due its hardness, processing the material is only economically feasible with lasers. A further factor is the high operating speed of the JENOPTIK-VOTAN® C BIM system due to the use of new laser sources in conjunction with high precision.

Industrial waste gas cleaning.

Building on capabilities in laser machining diverse materials, Jenoptik has also supplied industrial waste gas cleaning systems for various laser processes since 2002. They filter and decompose harmful gases generated by the laser radiation out of the waste gas. Jenoptik has continuously improved its expertise – not least together with partners such as the Friedrich Schiller University Jena and the Ernst Abbe University of Applied Sciences Jena.

In addition to laser material processing, the waste gas cleaning systems now also exist in versions for other industries such as the chemical or pharmaceutical industries. Whether it's dust, aerosols, organic or inorganic fumes – Jenoptik offers a system tailored to individual requirements for every application. Through the combination of microwave technology and the special catalyst material the newly-developed KATASORB® M waste gas cleaning system can purify waste air flows generated in industry extremely efficiently (see below).



■ The KATASORB®M system purifies quickly, is energy-efficient and fluctuation-tolerant – across the entire spectrum of organic compounds. In addition to its use in laser-based processes, it is therefore also suitable for the pharmaceutical industry, the petrochemicals industry, reactor protection systems and the manufacturing industry. As only the catalyst bed is selectively heated, convection losses during heating and cooling are minimized. The system can react considerably faster than previous models to changing operating conditions. In the event of a rapid rise in pollutant concentrations in the waste gas, it can be activated immediately and shut down again without reheating following cleaning. On many applications, this saves both capital and operating costs.

OPTICAL SYSTEMS

Optics is a cross-sectional technology and one of the key technologies of the 21st century. With constant advancements, ever more uses for optical technologies are being opened up, helping to make life easier and conserve resources. Examples include new optical analysis methods, new and gentle treatments in medicine, efficient, quiet and faster production processes, the ability to efficiently process new materials and new methods and procedures in science and research or in information technology and the entertainment industry. The Jenoptik Optical Systems division supplies components, modules and entire equipment and systems for all these applications. These include micro-optics for new processes in the semiconductor industry, modules for medical technology, for example for applications at home, optics for new laser machining processes, digital microscope cameras and new beam guidance systems for modern LED lighting systems.

Optoelectronic systems.

LEDs – short for Light-Emitting Diodes – are the light sources of the future. In addition to manufacturing customized LEDs and photodiodes, Jenoptik primarily supplies solutions for more efficient use of LEDs. Special optics collimate the light emitted in all directions from the diode and direct and shape it. By working together with optics and mechanics designers, mechanical parts are produced which allow the optics to be directly mounted on the LED circuit board in a casting process. The customer is then provided with a complete module which can be smoothly integrated. Jenoptik also produces color sensors which keep the color, brightness and light distribution of the LED at constant levels.

- The logistics industry is the source of the greatest demand for LEDs with special optics which can meet the requirements of Green Logistics by saving energy and increasing light output. The new “Lucid power high bay” lighting system for high-bay warehouses, factories and cold-storage rooms, developed by Jenoptik together with LEiDs GmbH & Co. KG, is a key innovation in this respect.



- The high-bay and factory lights ensure efficiencies of over 100 lumens per watt and have a lifetime of up to 60,000 hours, considerably longer than conventional lamps. Compared to conventional lamps with identical wattage, the combination of optimized 3-chip LEDs and a highly efficient lenticular lens increase the lighting efficiency by a factor of two and allow for evenly spread illumination without scattering losses. This also reduces the very low power consumption of the already very efficient LED lights compared to conventional solutions. Furthermore, the homogeneous illumination improves working conditions.

INDUSTRIAL METROLOGY

From 2020, new cars in Europe may only emit an average of 95 grams of CO₂ per kilometer. This equates to an average fuel consumption of 3 liters per 100 kilometers. In order to achieve this target, automobile manufacturers are not only developing alternative drive concepts but also focusing on optimizing conventional combustion engines and drive components. If future combustion engines are to operate more efficiently, the engines must decrease in cylinder capacity while maintaining performance, internal friction must be reduced and fuel injection must be more precise. In producing engines, these measures place extreme demands on mechanical precision and require new manufacturing technologies which, closely linked with innovative metrology, guarantee the functional and precision requirements in large-volume production. The Industrial Metrology division supplies optical, tactile and pneumatic metrology closely coordinated with production, thereby making a sustainable contribution to protecting the environment and reducing global consumption of resources.

- The increasing use of turbochargers balances out the loss of performance due to the lower cylinder capacity of smaller engine sizes. Turbochargers increase the density of the fuel air mixture in the engine's combustion chamber. To guarantee reliable functioning with high efficiency and lifetime, they require the utmost manufacturing precision. With the HOMMEL-ETAMIC opticline C300 optical shaft measuring systems, Jenoptik is a market leader and supplies the global automotive industry with precise, flexible measuring systems for monitoring the manufacturing processes of turbochargers.

- The production of modern diesel injection systems is only possible with the greatest mechanical precision. Manufacturing tolerances to within the micrometer range require roughness and contour measuring systems for inspecting surfaces with the finest structures and geometries. With its optical-tactile measuring system, the HOMMEL-EMATIC nanoscan measures the surfaces of injection valves or high-pressure pumps to within the nanometer range – with absolute precision and directly on the production line.



- In optimizing the friction behavior of cylinder bore surfaces, a thin iron layer directly spray-applied to the aluminum reduces the size and weight of the engine and lowers friction, oil consumption and wear. This new method requires full inspection of the cylinder surface on the manufacturing line. The HOMMEL-ETAMIC IPS100 HiRes optical internal test sensor is used for this purpose. 360° panoramic lens with a high performance image sensor automatically records the cylinder surface in an uninterrupted process and assesses the surface quality directly within the manufacturing process.

TRAFFIC SOLUTIONS

According to statistics from the World Health Organization, one person dies in road traffic around every 30 seconds; there are some 3,000 road fatalities every day, approximately 1.3 million a year. Added to this are an estimated 40 to 50 million injuries. The number one cause of accidents around the world is excessive speed – in around 25 percent of all accidents. Excessive speed is also the cause for approx. 50 percent of fatal accidents. Besides the individual fates, according to estimates by the World Bank, accidents resulting in death are responsible for approximately 500 billion us dollars in lost productivity every year around the world.

With more than 20,000 devices for speed and red light monitoring, Jenoptik contributes to reducing accident figures every day in over 80 countries of the world. The Traffic Solutions division thus contributes directly to avoiding the consequential costs for society and personal suffering. International studies and statistics establish a clear link between a decrease in accident rates and the use of traffic monitoring equipment.

According to a current scientific review and summary of diverse international studies, accidents resulting in death are reduced by 17 to 58 percent through the use of speed measurement systems. The majority of the studies report a drop of between 30 and 40 percent. They thus lastingly improve traffic safety.

The United Nations have declared the years 2011 to 2020 the Decade of Action for Road Safety, with the aim of dramatically reducing the number of accident victims around the world and thereby cutting macroeconomic costs. The demand for personal mobility is also rising with increasing globalization and networking. While, according to the International Road Traffic and Accident Database (IRTAD), the number of road accidents in the majority of industrialized nations has been falling constantly, a sharp rise in traffic volumes, time pressure and aging infrastructure in emerging and developing countries has resulted in an increased number of accidents, injuries and deaths there. But it is just these countries which are currently investing in their infrastructure for greater traffic safety. One example is Malaysia.



- Jenoptik will install up to 550 stationary and mobile red light monitoring and
- speed measurement systems in Malaysia. The project is part of an initiative
- launched by the Malaysian government to increase traffic safety. The order for Jenoptik covers the northern regions and the east of the country. Delivery of the systems and implementation of the back office are starting in 2012. The new traffic safety systems aim to improve the behavior of Malaysian road users and reduce the number of deaths and serious accidents in road traffic.

- During the Olympic Games in Barcelona in 1992, several access roads and belt highways were opened. The following years saw numerous accidents arising from heavy traffic and excessive speed. Speed monitoring systems from Jenoptik were consequently installed. In a before and after comparison, a fall in accidents by an average of 27 percent was recorded in the 24 months following installation of the systems in April 2003. This equates to 500 accident-related injuries prevented over this period.
- On the European "Roads to Respect" traffic safety campaign, 25 European students devised ideas to improve the traffic safety in their home towns. One student from the Weimar Bauhaus University initiated the redesign of a pedestrian crossing in Weimar. The crossing is located in the catchment area of two schools and is used by many children. Greater safety is now ensured by a 30 km/h speed limit. Jenoptik supported this project by providing a speed display sign ("Your speed is ... km/h") free of charge. This disciplined road users and protected the children without the need for any fines. The project was awarded the first prize by the European Traffic Safety Council in 2011.

DEFENSE & CIVIL SYSTEMS

Jenoptik is a supplier of components and subsystems for the security and defense industries. The product range includes, among other things, energy systems and optical sensor systems, also exported by Jenoptik in accordance with strict export regulations. The products help to protect soldiers and offer the best technical equipment for the respective mission.

Energy systems.

The Defense & Civil Systems division develops and produces electric motors, generators, power electronics and complete units. These have an efficiency of up to 90 percent and feature an excellent power density i.e. a favorable relation between the electrical or mechanical power generated and weight, and accordingly high energy efficiency. The supply of electrical energy is becoming increasingly important in modern vehicles. Whether it's small or large commercial vehicles or even locomotives: the need for mobile energy supplies in these systems is rising against the backdrop of ever more technical equipment. In this field, Jenoptik specializes in the production of energy systems in medium and higher performance classes.



The Group, however, operates not only in the military but also the civilian sector, in long-distance and local public transport and the commercial vehicles industry.

■ Modern trolley buses require an efficient, compact emergency power supply. This is needed whenever the external power supply is disrupted or totally unavailable, for example when the trolley bus must take a different route to avoid roadworks. Our customers' key demands for this emergency power supply are low space requirements, minimal weight while maintaining performance and adherence to the EURO 5 and future EURO 6 environmental standards. For these trolley buses, Jenoptik supplies a 120 kW APU (auxiliary power unit) system featuring modern, space-saving flywheel generator technology which fully meets these requirements – and especially the environmental standards.

■ Diesel-electric locomotives have long lives and must work hard; routes covering a hundred thousand kilometers a year are no rarity. The drive must accordingly not just be regularly serviced but from time to time also renewed. The main objectives here are reducing fuel consumption, cutting waste gas volumes and saving on labor and material during the maintenance procedures. An alternative to the purchase of a new locomotive is remotorization. It is not just cheaper but also conserves resources, as only a few parts are replaced. Together with a strategic partner, Jenoptik supplies remotorization solutions, particularly relating to generators. Their power range is from about 400 kilowatts for smaller shunting locomotives to 3,000 kilowatts for heavy road locomotives, primarily used in freight traffic.



■ The 17 kW ADSF auxiliary power unit has an extremely high power density with a remarkably low weight and compact design. While comparable auxiliary power units could previously typically generate an output of up to eight kilowatts within the assigned space, the new APU more than doubles output at 17 kilowatts with a markedly lower weight and the same size. It is therefore particularly suitable for retrofitting and provides a power supply, for example for air conditioning, when the main engine is switched off.

Optical sensor systems.

Jenoptik's optical competencies make possible the use of light as an instrument for monitoring, measuring and analyzing environmental data. Regarding their contribution to sustainability, two areas of application must particularly be stressed. The Group develops and produces laser sensor equipment for measuring aerosol height profiles, cloud heights and snow depths. Using these data, meteorologists and environmental researches can make statements on the long-term development and change in climate, which may in turn significantly contribute to research and debate on climate change. Jenoptik is also a leading supplier of thermal imaging cameras for contactless measurement of temperature distribution in numerous fields from quality control in industrial production via analytical systems in medicine, research and development to aerial photography, building thermography and preventive maintenance.

- In the infrared module, Jenoptik supplies the crucial component for the new thermal imaging cameras from Dräger, which are specially designed for rescue forces. The cameras in the UCF series help firefighters to maintain their bearings, even in the presence of thick smoke, and locate persons or identify sources of fire using a thermal signature. Jenoptik was presented the Supplier Award 2011 in the Innovation category from Dräger Safety AG for the outstanding partnership in the development and now ongoing mass production of the module. Together, the partners have helped to equip firefighters with reliable and safe devices so that they are optimally equipped to act in emergency situations and can thus save lives.



- The thermal imaging cameras in the VarioCAM® product series stand out with their high image resolution (3 megapixels) and a highly precise display of temperature differences (up to 1/20th of a degree Celsius). With them, for example, even the smallest thermal leaks in buildings can be efficiently detected and displayed. Targeted renovation measures to improve building insulation in combination with high energy savings are possible on the basis of these measurements.

ECOLOGICAL ISSUES

Protecting the environment and careful use of available resources are defined with binding effect in the Group's environmental protection guideline.

ENVIRONMENTAL MANAGEMENT & LEGAL REQUIREMENTS

Certification.

By expanding environmental management performance, Jenoptik is on the one hand meeting the rising standards. On the other, the certification also helps to strengthen Jenoptik's performance in this area. In the Optical Systems and Defense & Civil Systems divisions, the key areas are already certified to the recognized standard DIN EN ISO 14001.

In the past year, the Traffic Solutions division participated in the regional "ECOPROFIT" project, which after receiving an award in May 2012 will now serve as the foundation for establishing a comprehensive environmental management system. This is the requirement for DIN EN ISO 14001 certification of the division at the Monheim location.

ENERGY AND RESOURCE EFFICIENCY

In the face of increasing scarcity of natural raw materials and the associated rise in prices, supplying both resource-friendly products and solutions and organizing all internal processes as efficiently as possible is in Jenoptik's own interest. Focusing business activity on these principles does not just lastingly protect the environment but is now already reducing costs.

Media consumption.

Since 2009, the use of various types of energy in every production and administrative process at all the German locations has been documented. There have been no fundamental changes in media consumption in the last three years. As business has, however, been significantly expanded in this period, consumption of resources has essentially increased at a slower rate than the expansion of business.

MEDIA CONSUMPTION IN GERMANY

	2011	2010*	2009*
Electricity	30,735 MWh	31,077 MWh	33,174 MWh
Gas	11,849 MWh	8,043 MWh	10,791 MWh
Wood pellets	588 MWh	679 MWh	616 MWh
District heating	9,436 MWh	7,236 MWh	7,632 MWh
Heating oil	1,060 MWh	1,434 MWh	1,190 MWh
Water	56,794 cbm	49,147 cbm	55,000 cbm

*) In 2010, Jenoptik withdrew from one area of business. Consumption in this business area is still included in the values for 2009; the values for 2010 are adjusted and thus directly comparable with 2011.

Jenoptik produces the majority of its products in Germany. The Optical Systems and Industrial Metrology divisions have production sites abroad. In relation to the total sales of the Jenoptik Group, media consumption at the German locations per million euros of sales is virtually constant. Fluctuations can be attributed to a modified sales mix.

Real estate.

Jenoptik produces in Germany on both its own as well as on rented and leased real estate. Energy assessment of key real estate in Germany was carried out in 2010 and 2011. 35 properties were examined, assessed and given corresponding energy certification. All the buildings achieved good to excellent results. On the basis of this, cost-benefit analyses were conducted in 2011 to determine specific measures for achieving a further increase in energy efficiency in the buildings. The volume of capital expenditure in the real estate used by Jenoptik required to improve energy efficiency came to a total of 2.9 million euros in 2011 (2010: 2.5 million euros).

Selected measures to improve energy efficiency in buildings used by Jenoptik itself include

- roof renovations in building 4 in Göschwitz at the Jena location with improvement to roof insulation,
- building seals at the Ernst Abbe Building, registered office of the Group management in the center of Jena, and conversion of the lettering to LED lighting,
- conversion of the central heating system, including pump control automation, at building "Bau 15" in Göschwitz at the Jena location,
- modernization of the cooling system in building "Bau 7" in Göschwitz at the Jena location and
- insulation of the cooling pipes in building "Bau 14" in Göschwitz at the Jena location.

MEDIA CONSUMPTION (GERMANY ONLY) PER 1 MILLION EUROS OF SALES

(MWh/cbm per 1 million euros of sales)	2011 (543.3m euros of sales)	2010* (478.8m euros of sales)	2009* (473.6m euros of sales)
Electricity	56.6 MWh	64.9 MWh	70.0 MWh
Gas	21.8 MWh	16.7 MWh	22.8 MWh
Wood pellets	1.1 MWh	1.4 MWh	1.3 MWh
District heating	17.3 MWh	15.1 MWh	16.1 MWh
Heating oil	2.0 MWh	2.9 MWh	2.5 MWh
Water	104.5 cbm	102.6 cbm	116.1 cbm

*) In 2010, Jenoptik withdrew from one area of business. Consumption in this business area is still included in the values for 2009; the values for 2010 are adjusted and thus directly comparable with 2011.

Emissions.

A quantified assessment of the emissions generated by Jenoptik's business activities was made on the basis of energy consumption in Germany. CO₂ emissions caused by energy consumption rose slightly in 2011. In relation to the increase in sales of 13.5 percent and the associated rise in production compared to the respective previous year, CO₂ emissions have increased considerably less sharply.

Waste management.

As a company in the high-tech industry, specifically in the optical industry, the use of production materials declared as hazardous substances is unavoidable. The respective employees are provided with instruction prior to handling hazardous substances and informed of potential risk and their prevention or minimization. In the course of compiling this report, the volumes of different types of waste were systematically recorded for the first time and analyzed across all divisions. There are consequently no Group reference values at the present time. By continuing the analysis and expanding the records of waste volumes to the international locations in the coming years, however, this will be possible.

CO₂ EMISSIONS AT THE GERMAN LOCATIONS

	2011	2010*	2009*
Total CO ₂ emissions	19,337 t	19,278 t*	19,916 t
CO ₂ emissions/1 million euros of sales	35.6	40.3	42.1

*) The figures correspond to continuing business areas. Consumption and thus emissions of this business area is included the values for 2010 are adjusted and thus directly comparable with 2011.

WASTE BY TYPE AND DISPOSAL METHOD AT THE GERMAN LOCATIONS IN 2011

Waste type	Waste volume	Disposal method
Hazardous waste	266 tons	Treatment/disposal plants via transport of dangerous goods
Non-hazardous waste	642 tons	Treatment/disposal plants via road transportation



In Germany, four water treatment plants are operated at the Jena and Berlin locations to ensure compliance with official requirements on the quality of wastewater and thereby rule out any negative impacts on the immediate environment at the

locations. All four plants are operated in accordance with the respective permit issued pursuant to the water law. Plant 2 for treating wastewater from optics production was renewed in 2010 for 250,000 euros.

POLLUTANT RELEASE BY VOLUME AT GERMAN LOCATIONS IN 2011

Pollutant	Volume	Purification measures
Plant 1 at Jena location: Annex 40 Waste Water Regulation (AbwV) (metal working and processing)	1,125 cbm/a (Indirect discharge into sewer system if below threshold values)	Neutralization, ion exchange
Plant 2 at Jena location: Annex 41 Waste Water Regulation (AbwV) (production and processing of glass and artificial mineral fibers)	1,539 cbm/a (Indirect discharge into sewer system if below threshold values)	Neutralization, precipitation, filtration
Plant 3 at Jena location: Annex 54 Waste Water Regulation (AbwV) (production of micro-optical components)	489 cbm/a (Indirect discharge into sewer system if below threshold values)	Neutralization
Plant 4 at Berlin location: Annex 54 Waste Water Regulation (AbwV) (production of semiconductor components)	2,262 cbm/a (Indirect discharge into sewer system if below threshold values)	Neutralization, ion exchange



SOCIAL ISSUES

EMPLOYEES

Jenoptik had 3,154 employees all over the world as at June 30, 2012. More than 400 of them work abroad. In coming years, the focus will be on promoting increased personnel development and support. Jenoptik wants to retain its employees and present itself as an attractive employer at its locations. In addition to human resources development opportunities and remuneration in line with performance, this primarily also includes reconciling family and work.

The highest quality and operational excellence is not just expected of products and services but also required in the conduct of Jenoptik employees. This is laid down in the Code of Conduct. As a summary of all basic principles of conduct employees are expected to abide by, it is also a global unifying element.

Further information can be found on p. 8 and at: <http://www.jenoptik.com/de-code-of-conduct>

Diversity.

Jenoptik supports a culturally diverse workforce; employees are assessed and selected on the grounds of their performance and qualifications alone. There is no assessment of employees based on gender, religion, sexual identity, cultural background etc. (age, physical disability).

Jenoptik opposes binding quota regulations relating to female employee ratios. Positions in the Group are filled on the basis of the qualifications and suitability of applicants or employees. As an optoelectronics Group, Jenoptik is also faced with the fact that many job profiles require a background of technical or scientific training. Considerably fewer women than men undergo this training, which is accordingly reflected in the workforce. In order to make a contribution to society here and increase the number of women in technical and scientific occupations, Jenoptik supports events such as the Girls' Technology Congress, the "Physics for School Students" workshop and similar activities.

JENOPTIK GROUP EMPLOYEES IN GERMANY

	2011		2010		2009	
	Number	in %	Number	in %	Number	in %
Women	755	27.0	733	27.1	759	25.8
Men	2,041	73.0	1,973	72.9	2,180	74.2



■ The “Physics for School Students” workshop was held for the 9th time in 2012 and was organized by the Faculty of Physics and Astronomy at Friedrich Schiller University in Jena. The goal is to provide femal school students aged of the 10th to 13th grade the opportunity to become acquainted with physics outside the classroom, to experiment themselves and thus to stimulate interest in future study in the so-called STEM fields (science, technology, engineering and mathematics).

Aside from their wealth of ideas, Jenoptik also benefits from the diverse facets of its employees. This is why equal opportunities are very important in the Group. Jenoptik offers a working environment in which all employees can develop their creativity and skills and are placed, supported and advanced according to their abilities.

Demographic change/staff recruitment.

Demographic change presents German companies in particular with challenges. Jenoptik endeavors to work against this and already attaches great importance to recruiting well-edu-

cated people. The company positions itself as an attractive employer offering social and cultural opportunities as well as childcare facilities and flexible working hours. In order to actively address the target group of young people, Jenoptik is involved as local sponsor of the largest international student organization, AIESEC, in Jena. Through this, motivated and highly-qualified local students are not just given financial and relevant subject support, but contact with them is maintained and Jenoptik is presented as an attractive future employer. Cooperation work with top schools and universities also ensures a supply of new employees.

AGE STRUCTURE

Age groups	2011	2010	2009
< 30 years	15.8%	15.4%	14.0%
30–55 years	63.7%	65.5%	68.8%
> 55 years	20.5%	19.1%	17.2%



- Jenoptik maintains cooperations with various schools in Thuringia. Plant tours and workshops are offered.
- Jenoptik also participates in the German “National Scholarship Program”, supporting students at the Technical University Ilmenau and the Ernst Abbe University of Applied Sciences for the duration of their courses.
- Since 2005, Jenoptik has awarded doctoral scholarships at the Friedrich Schiller University and the University of Applied Sciences in Jena.
- Jenoptik supports the Abbe School of Photonics at the Friedrich Schiller University in Jena and the Karlsruhe School of Optics & Photonics and thus graduate training in the field of optics/photonics.
- As a member of the “Light Alliance” initiative from the Spectaris industry association, Jenoptik endeavors to raise awareness of the photonic industry as an appealing area of work.
- The Chairman of the Executive Board of JENOPTIK AG, Dr. Michael Mertin, is a member and deputy chairman of the university council at the Technical University Ilmenau.

In addition to recruitment, the focus lies on retaining new employees in the company, as only then the development of first-class solutions can be guaranteed with internal expertise and the benefits of experience. To this end, activities relating to the subject of “onboarding”, i.e. the integration of new employees in the company, were expanded in 2011. The objective is

the group-wide standardization of the onboarding process, in which new employees are offered such things as familiarization programs, welcome folders, city tours and information on the city and the company.

Education and further training.

Alongside specific programs to secure young professionals and train them further, Jenoptik offers high school graduates diverse routes to entering the company. Thirty-eight trainees and students of career academy started their training at German locations in late summer 2011. In the long-term, Jenoptik sees the potential here for widening the training of young people to include locations outside Germany.

In Thuringia, young people are trained in optical, precision mechanical, electronic and commercial careers in conjunction with the Jena training center. After Schott JENAer Glas GmbH and Carl Zeiss Jena GmbH, Jenoptik has been the third partner of the Jena-based educational establishment since 2010. Jenoptik invested a total of approximately 620,000 million euros in training in 2011 including the training of students of the career academies.

FURTHER TRAINING AT THE GERMAN LOCATIONS

	2011	2010	2009
Number of employees benefiting from further training	1,471	1,303	1,369
Expenditure for education and further training, in millions of euros	1.3	1.4	1.2

Further training of existing employees is another area of focus. In 2011, Jenoptik invested 1.3 million euros to provide almost every second employee with further training. Key areas were project management and foreign language training workshops. Topics relating to the development of methodical and personal skills were also addressed. Human resource development needs are identified centrally every year so as to ensure an appropriate further training.

Jenoptik primarily recruits managers – alongside new hires – from within the company. Candidates are prepared for future work in the Group with a special program.

In the Jenoptik Junior Leadership Program (J²LP), Jenoptik offers potential managers the opportunity to advance personally and professionally over two years. The program also includes modules on social, methodical and personal abilities to promote the development of all-round managerial skills. In 2010, the program could boast 16 successful graduates. In the past year, this number rose by 17.

Health and safety at work.

The integration of health and safety principles in all operational processes is an essential factor in maintaining fitness for work and employee satisfaction. Jenoptik wants to provide its employees with a safe and healthy working environment. With 14.78 accidents at or on the way to work per 1,000 employees and a total of 480 lost days in 2011, Jenoptik is significantly below average values when compared to all the member companies of the Energie Textil Elektro Medienerzeugnisse trade association.

In order to prevent work-related illnesses and thereby reduce the number of resulting lost days, employees are offered all

**ACCIDENTS AT OR ON THE WAY TO WORK
PER 1,000 EMPLOYEES AT THE GERMAN LOCATIONS**

	2011	2010	2009
Jenoptik	14.78	10.43	12.36
BG ETEM ¹⁾	20.70	21.40	19.99

¹⁾ Data from all member companies of the Energie Textil Elektro Medienerzeugnisse (BG ETEM) trade association.

other necessary in-house medical examinations in addition to compulsory medical examinations.

Jenoptik regularly holds health days to increase employees' awareness of health issues. Employees are provided with stimulating ideas on the topic of health which are easy to integrate into their everyday work. Priority is given, for example, to a healthy back, a varied diet, sight tests and vaccinations.

In April 2012, Jenoptik installed 16 automatic external defibrillators (AED) at the Jena locations. Other locations also possess this ultramodern emergency aid in the event of a heart problem: Wedel has three, Villingen-Schwenningen, Essen and Altenstadt have one each. Employees at the locations have been given necessary training.

Remuneration.

At the Jena location, a collective wage agreement forms the basis of remuneration for approx. 800 employees and trainees. In addition to stepped increases in compensation (on July 1, 2011 and March 1, 2012), the collective wage agreement includes a profit-sharing scheme, comprised of a Group component and a division component. In addition, the regional collective wage agreement in the metals and electronics industry

applies to parts of the Group. Jenoptik has been offering an employee-funded retirement provision model since 2001. It is based on a three-pronged concept with a provident fund, the pension scheme of the metals industry and private pension agreements.

Professional and family life.

Reconciling professional and family life is particularly important to Jenoptik. Alongside flexible working time models such as flexitime or part-time, Jenoptik already offers childcare areas in direct proximity of the workplace at two locations, where children of Jenoptik employees are given priority admittance. The children's facilities offer special conditions, for example opening hours compatible with working hours and an integrated bilingual learning environment. A day care center for children for other locations of the Group (in Germany) is currently in preparation. There are also initiatives for flexible occasional childcare.

- At the Wedel location near Hamburg, a cooperation agreement was concluded with FRÖBEL Hamburg gGmbH for the "Wasserstrolche" FRÖBEL Kindergarten in May 2012.

With financial support from Jenoptik, a quota of places at day care center will in future be reserved for children of Jenoptik employees. Their number is determined according to demand. There is also guest and emergency care.

- Jenoptik rents out premises to the Thuringia students' union in the center of Jena to enable the flexible "JUNI Kinder" childcare program near the campus. Students as well as Jenoptik employees may place their children aged between twelve weeks and six years in the care of trained educators for a few hours every day.
- The "Saaleknirpse" day care center for children was built by Jenoptik in the immediate vicinity of employees' workplace in Jena's industrial area of Göschwitz. In 2011, 43 children of Jenoptik employees benefited from the bilingual and integrated concept. The day care center is also guided by the German project "Leuchtpol – experiencing energy and the environment in a new way": The project supports education for sustainable development at pre-school age. Jenoptik supports the day care center with around 150,000 euros annually.



SOCIETY

A functioning society provides the essential framework for a business. The objective of Jenoptik is lasting financial success, and this requires a lively social environment. That’s why the Jenoptik Group has always been committed to science, art & culture and social issues. This commitment follows on from a sponsorship concept which was adapted to the restructuring of the company in 2008 and is guided by the history of Jenoptik’s social involvement as well as its fundamental values and strategic targets.

JENOPTIK DONATIONS AND SPONSORSHIP IN GERMANY

TEUR	2011	2010	2009
Sponsorship	183	106	150
Donations	94	92	92
Other gifts (in particular Saaleknirpse day care center)	163	163	163

Art & culture.

High-quality art and culture events are important criteria for an attractive business location. An appealing environment both supports the recruitment of qualified young people and skilled workers and offers employees the opportunity to experience art and culture as a way of developing their personality and creativity. Jenoptik is primarily committed to the visual arts and has been supporting diverse institutions and events at the Jena location for many years, including the Jena theater house and the Jena dance theater since the early 1990s and the annual “cellu l’art” short film festival since 2005.

- At the “cellu l’art”, an annual short film festival, young artists are given the opportunity to present their short films to a jury of experts and the general public.
- The annual Kulturarena is the highlight of the Jena summer. It has been attracting countless visitors to the center of the city every summer since 1992. Over six weeks, there are concerts, film and theater performances almost every day. Jenoptik particularly supports an open-air event which opens the Kulturarena every year at the theater house.

Since 1994, Jenoptik has been organizing art exhibitions in the company’s own gallery at its main location in Jena. They can be visited by both Jenoptik employees and the general public free of charge. Workshops for children and students are hosted during the exhibitions. Jenoptik also makes works from its own art collection available to employees to decorate their workplaces. In May 2012, Jenoptik owned more than 400 artworks, of which around half have been lent out to employees.

The art exhibitions and sponsorship activities are the basis of an exceptional project which Jenoptik devised together with the Ernst Abbe University of Applied Sciences Jena (FH) and since 2004 has linked activities in science and education, Jenoptik business activities and the company’s work in the field of art and culture. In the series ENCOUNTERS CULTURE – TECHNOLOGY – BUSINESS, students at the Ernst Abbe University of the Applied Sciences Jena have the opportunity once a semester to engage critically with a cultural project promoted by Jenoptik. The idea behind it is that good technical training is alone no guarantee of professional success. Skills such as

creativity, team spirit and awareness of values are at least as important. It is precisely these soft skills which are prioritized in workshops on an art project lead by a professional trainer. In this way, art is strategically employed as an inspirational adjunct to scientific training. In the workshops, Jenoptik representatives offer insights into their work and their experience in relation to the respective topic of the workshop. In 2007 the project was chosen as a "Selected Location 2007" and is thus one of the 365 places in the "Germany – Land of Ideas" initiative.

- In autumn of 2011, the Frank Stella Exhibition, part of the
- ENCOUNTERS CULTURE – TECHNOLOGY – BUSINESS series,
- offered visitors the opportunity to engage with the artist's innovativeness. A Jenoptik business unit manager drew the connection to business. He discussed the circumstances under which creativity and innovation may influence the corporate environment and profitability with students.

Social issues.

In the area of social commitment, Jenoptik strives for close and, wherever possible, long-term partnerships. The goal is to provide help where it is most needed. As far as is possible,

Jenoptik offers moral support in addition to purely financial assistance.

Jenoptik has been taking this approach since 1996 with the patronage of the Elterninitiative für krebskranke Kinder Jena e.V., offering both financial and personal support. A member of the Jenoptik Executive Board has acted as patron of the initiative since 1996 and is also personally committed to maintaining and safeguarding the association's work in the long-term. The initiative offers parents of children with cancer information, support, hope and a place to share their experience at a difficult time. Jenoptik provides support with its own donations, collects donations from partners and organizes/supports various events for the children. In this context, sponsorship of a benefit concert given by the Internationale Junge Orchesterakademie is one important example.

- In April 2012, the benefit concert performed by the Inter-
- nationale Junge Orchesterakademie was given for the
- fourth time in Jena and presented a unique combination of musical enjoyment, international understanding and charitable work. Young musicians from around the world per-



form free of charge for a good cause. A portion of the proceeds are donated to the Elterninitiative für krebskranke Kinder Jena e.V. Thanks to the proceeds from concerts in the past year, the association managed to launch a new project: educational work in schools to facilitate the reintegration of young patients into school life following their lengthy therapies and dispel any concerns from fellow students and teachers when dealing with them. This is an important part of the recovery process for the young patients.

Since 1997, Jenoptik has been appealing for donations from guests at its New Year reception for associations or projects, primarily in the social area. Donations from guests in 2012 amounted to 16,500 euros and were given to the "Off Road Kids Foundation". Based in an office near Villingen-Schwenningen, the German site of the Industrial Metrology division, the foundation has already helped more than 2,000 young people across Germany out of homelessness and given them new, viable prospects in life. Donations in previous years have gone to a children's leisure center, a day nursery urgently in need of renovation, the "Music for All" association and a theater project for children and young people from diverse social backgrounds. In sponsoring initiatives and institutions, Jenoptik gives preference to the company's own locations.

- The "Familienfreundliches Jena e.V." Förderkreis (support group) group was formed from the "Jena Family Alliance".
- Projects organized by the Alliance are supported in cooperation with numerous partners. Jenoptik is a partner of the support group and is committed to improving the conditions for reconciling family and work as well as equal educational opportunities.

- In 2012, Jenoptik acted as patron the concert summer at the Thalbürgel monastery church for the 18th time. The founders affirm their belief in the monastery church, a jewel of cultural heritage, by not just managing and maintaining it but also imbuing it with new life and linking it to social responsibility issues every year. A portion of the proceeds from the concert summer go to social youth work.

Science & education.

- Since 1991, Jenoptik has been a sponsor of the Thuringian "Jugend forscht" state competition, in which especially talented young people are promoted in the natural sciences, technology and mathematics. From this year, Jenoptik has also been supporting the new state competition entitled "Schüler experimentieren", in which school students up to 14 years are given the opportunity to demonstrate their skills. The objective is to encourage new ideas in specialist fields which are key to Jenoptik as well as raising interest in the natural sciences among students at an early stage and thus secure potential new trainees and employees.
- The "Long Night of Science" was held for the fourth time in Jena in November 2011. On this day, institutes, universities and companies open their door to the general public and present their products, processes and latest ideas. Visitors had the opportunity to look behind the scenes at Jenoptik and find out about the diverse range of products.

More information on the topic of Jenoptik's partnerships with science and research can be found in the chapter "Employees" from page 25.

OUTLOOK

The Jenoptik sustainability report provides an overview of

- initiatives in the Group along our value chain,
- the Jenoptik product range which contributes to the topic of sustainable business,
- environmental measures in the Group
- and our commitment to employees and society.

On the basis of this initial analysis of topic areas, we have compiled an action plan and agreed it with all parties involved.

As a first step, the collection of relevant data will be expanded to cover the Group's foreign locations. This will ensure that we will be able to provide information valid for the entire Group in future. We will also review the data base, expand it in accordance with its relevance to Jenoptik and include it in our reporting structures. A team comprised of representatives from the divisions and the departments of the central Corporate Center and Shared Service Center will further promote the topic within the company. The objective is to define a concept of sustainability specific to Jenoptik and derive concrete company targets from it.

Jena, August 2012

CHRONICLE

The German privatization agency (Treuhandanstalt) in Berlin acquires the VEB Carl Zeiss JENA combine which at that time has 13 plants with around 30,000 employees. The combine is renamed JENOPTIK Carl Zeiss Jena GmbH.

This company gives rise to the creation of the state-owned enterprise JENOPTIK GmbH under the management of Lothar Späth in October 1991. Jenoptik is responsible for the structural development in Jena and becomes the legal successor to the combine. It takes over the optoelectronics, system engineering and precision manufacture business areas.

1990 – 1993



At the beginning of 1994 JENOPTIK GmbH is organized as a holding company for the production, regional development and service areas. JENOPTIK Technologie GmbH is created to cover the areas of automation, medical, micro-production and special technology.

JENOPTIK GmbH becomes the owner of MEISSNER+WURST GmbH+Co. of Stuttgart (later M+W Zander). The facility engineering company for the electronics industry will influence Jenoptik for the next ten years.

1994



JENOPTIK Technologie GmbH is divided into three companies: JENOPTIK Automatisierungstechnik GmbH, JENOPTIK Laser, Optik, Systeme GmbH and JENOPTIK Microfab GmbH.

In October 1995 Jenoptik and Aesculap form Aesculap-Meditec GmbH in Jena in order to combine the expertise in laser medical technology. The company later merged into today's Carl Zeiss Meditec AG.

JENOPTIK GmbH is converted to a public limited company in January 1996.

1995 – 1996



Jenoptik is organized into four business divisions: Clean Systems Technologies, Photonics Technologies, Telecommunications Technologies and New Technologies.

Jenoptik acquires ESW Extel Systems Wedel (today ESW GmbH) located in Wedel near Hamburg, in November 1997 consequently strengthening its Photonics business division.

In June 1998 JENOPTIK AG's is listed on the Frankfurt Stock Exchange. More than 3,000 Jenoptik employees number among its first shareholders. The Jenoptik stock is listed on the MDax index for the first time in December.

1997 – 1998



1999 – 2000

Jenoptik acquires Robot Foto und Electronic GmbH (today JENOPTIK ROBOT GmbH) of Monheim, near Düsseldorf. This acquisition makes Jenoptik a market leader in traffic monitoring.

The renovation of the former Zeiss center main site in the Jena city center has been completed in autumn 1999.

Jenoptik acquires 100 percent of the shares in Hommelwerke GmbH, Villingen-Schwenningen – a leading supplier of tactile metrology and measuring systems.



2001

In June, JENOPTIK AG celebrated its 10th anniversary with a number of events in Jena.

JENOPTIK Laserdiode GmbH opens a new production facility in Jena in November 2001. The capacity for serial production of diode lasers is expanded substantially.



2002

Photonics is further expanded. In May JENOPTIK Laser, Optik Systeme GmbH establishes a development and production partnership with Hilti. HILLOS GmbH emerges from this cooperation in 2003.

Since November 2002 the Group has owned the majority in Jena-Optronik GmbH which is thus expanding its aerospace business.



2003

Alexander von Witzleben becomes the chairman of the executive board of JENOPTIK AG. Lothar Späth is elected chairman supervisory board.

JENOPTIK AG acquires 100 percent of shares in Wahl optoparts GmbH (today JENOPTIK Polymer Systems GmbH) in December 2003. The company specializes in custom-made optical components, as well as optomechanical and optoelectronic assemblies made of plastics.

With the Göttingen-based Innovavent GmbH a new company belongs to the Group which focuses on new laser applications.

Jenoptik and SINAR AG, Switzerland, will jointly develop, produce and sale professional digital camera backs.

2004



Jenoptik sells its majority in M+W Zander Gebäudetechnik GmbH, a company of the former Clean Systems business division.

Jenoptik acquires a 51 percent share in PHOTONC SENSE GmbH. The company specializes in the production of basic components made of optical germanium and silicon.

2005

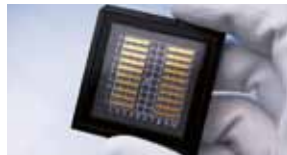


Jenoptik closes the sales of the Clean Systems business division in May. The Group's operating business now focuses solely on the former Photonics business division.

Excellent infrastructure conditions are created for high-power diode lasers and polymer optics by inaugurating two new production facilities in Berlin and Triptis respectively.

In October Dr. Michael Mertin becomes a new member of the Executive Board.

2006



Alexander von Witzleben moves to the Haniel Group after 14 years at Jenoptik. Dr. Michael Mertin becomes Jenoptik's new CEO. Frank Einhellinger is the new CFO.

In November the Free State of Thuringia sell its shares in Jenoptik to ECE Industriebeteiligungen GmbH, Vienna, which in turn becomes the largest individual shareholder of the Group.

Hommelwerke and ETAMIC S.A., acquired in 2006, merge to Hommel-Etamic GmbH. This creates a globally operating system supplier for industrial measurement technology.

2007



2008

Jenoptik begins the year with a new divisional structure in five divisions, focusing more on customers and markets.

In December Jenoptik completes the purchase of the wafer manufacturer Three-Five Epitaxial Services AG, Berlin. Now Jenoptik is one of the few companies worldwide to offer the complete range of diode lasers.

At the end of the year 2008 Jenoptik returns to the TecDax, an index comprising Germany's 30 most prominent technology shares.



2009

Jenoptik's Industrial Metrology division acquires segments of the Chinese company AES Auto Equipment Co. Ltd. (AES) and thus expands assembly capacities and procurement know how.

Jenoptik's Optical Systems division and Israel's company Dagesh found JENOPTIK OptiSys Ltd., a joint venture based in Israel.

Jenoptik is to be represented in South Korea by a laser application center. Together with the Korean company Telstar-Hommel Corp. the company JENOPTIK Korea Corp. is founded.



2010

Jenoptik is strengthening its global presence: the US business is consolidated under the umbrella of JENOPTIK Optical Systems Inc.; the Group combines its activities of the Industrial Metrology division in a new building in Shanghai, and in Japan, Jenoptik is now present with the majority in JENOPTIK Japan Co., Ltd.

With the sales of the space business of Jena-Optronik GmbH and the minority shareholding in caverion GmbH Jenoptik continues to focus on the core business.



2011

Jenoptik celebrates its 20-year company anniversary at all locations around the world.

With debenture loans in the sum of 90 million euros successfully placed, Jenoptik secures its medium- to long-term financing.

Production is expanded and optimized at the Berlin and Altenstadt locations.

Jenoptik bundles all activities on the Chinese market and opens a new office in Shanghai.

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