



## Annual Report 2004

# Key facts & figures at-a-glance

LPKF Laser & Electronics AG in Garbsen/Hannover manufactures systems and equipment for electronics development and production. LPKF is the world market leader in laser systems for the production of solder stencils and for pro-environment solutions for the Rapid PCB Prototyping of circuit boards. From the very beginning, LPKF's philosophy has been innovation and the highest levels of product quality.

- 1976** Foundation of LPKF and introduction of the first prototyping systems
- 1980** Establishment of a branch in the USA
- 1984** Launch of a complete prototyping system (including CAD program)
- 1989** Entry into laser technology and laser material processing
- 1991** New headquarters in Garbsen
- 1993** First StencilLaser
- 1996** First development projects for the laser structuring of MIDs
- 1998** Conversion to stock corporation and IPO
- 2000** Branch office opened in China
- 2001** First laser systems for PCB production
- 2002** Expansion of the Service segment
- 2003** First production systems for sensors using the LPKF LDP method
- 2004** Series production started using the LPKF LDS method

<b>Key Group figures</b>			
	2004	2003	2002
Turnover (in € million)	25.2	22.7	25.3
EBIT	1.73	1.30	1.44
Cash-flow	2.9	3.1	3.2
Investments in tangible and intangible assets	1.4	1.1	2.0
Earnings per share (in €), diluted	0.09	0.07	0.06
Turnover per region (in million €)			
Domestic	5.1	5.6	6.2
Rest of Europe	5.6	4.1	4.9
North America	4.8	6.8	6.8
Asia	8.8	5.9	7.1
Others	0.9	0.3	0.3
Turnover per product (in million €)			
Laser Systems	13.0	12.3	13.7
Rapid PCB Prototyping	9.8	9.1	9.4
Services	1.0	1.0	1.6
Others	1.4	0.3	0.6
Employees	223	200	219

# Contents

Message from the CEO .....	3
Report of the Supervisory Board .....	5
German Code of Corporate Governance .....	7
The LPKF Group management report 2004 .....	9
Launch of forward looking technology .....	19
Customer orientation is a key factor .....	20
The business segments of LPKF Laser & Electronics AG .....	22
PCB production technology .....	24
Stencil technology .....	26
Inhouse Rapid PCB prototyping .....	28
Advances in plastic technology .....	30
Production services .....	32
Group annual financial statements .....	34
Group statement of income .....	36
Group consolidated statement of changes in shareholders' equity .....	37
Group balance sheet .....	38
Group cash flow statements .....	40
Notes to the consolidated statements .....	41
Annual financial statements of LPKF Laser & Electronics AG .....	58
Glossary, Imprint .....	61



# Message

from the

# Chief Executive Officer

Dear Shareholders,

In the recent past, the electronics industry has had to cope with numerous difficulties. The hesitancy of potential customers to commit to investments had a particularly serious effect on the suppliers of production and development technology. Our company was also affected by this situation. However, we now appear to be moving out of this trough. Compared to last year, we can again report a rise in turnover during the reporting period – an upward trend which was again confirmed impressively in the 4th quarter 2004.

The reasons for the satisfactory results are easily explained: both the Rapid PCB Prototyping and Stencil Production segments launched important new product developments on the market at the beginning of 2004 which proved very attractive to our clients. We generated good sales in particular with a new high-end model in our circuit board plotter series – winning the first orders before we had even completed development of the product. The MicroCut, a new model in the StencilLaser family, also attracted a great deal of demand. This is also another real high-end product which enabled us to significantly boost cutting speed and stencil manufacturing productivity. This opens up new areas of application for this technology. It also enables our customers to expand their businesses and achieve a rapid return on investment. These successes clearly underline that we are pursuing the right strategy of clearly tailoring our products to the wishes of our customers.

We refocused our marketing activities last year on the growing PCB production market. Where laser-supported applications are involved, interest is moving more and more from drilling to the cutting of rigid and flexible circuit carriers. In the production of batches in particular, the technical and economic advantages of this technology put it well ahead of conventional production techniques – a potential which our clients are increasingly recognising. Thanks to its forward-looking development policy, LPKF has established an excellent reputation in recent years as a competent partner in the laser cutting sector.

In the 3D-MID segment, we made a major step forward in the marketing of this highly promising technology by building up a network of material suppliers, production service providers and end users in recent years. By bringing on board big-name partners like Lanxess, BASF, Degussa and Ticona, we have succeeded in acquiring important multipliers for the establishment of LPKF's production method. The technology has already been successfully used in security-relevant segments as well as other areas. Nevertheless, turnover from the sale of laser systems for 3D-MID production was a long way from reaching the planned targets. This demonstrates again that the launch of revolutionary new solutions is never easy and often faces a strong uphill struggle. Establishing this process therefore simply needs more time because potential users first want to see our new technology prove itself in practice.

A brake on even stronger growth in turnover during the reporting period has proven to be the change in the dollar exchange rate. Such exchange rate fluctuations represent risks which should not be underestimated, particularly for an export-oriented company like LPKF.

All in all, the results we have achieved enable us to face the future with greater confidence. The slump in the electronics industry finally seems to be a thing of the past. LPKF has reacted aggressively to this development and has geared up for further growth, also with respect to its operative structure: a comprehensive restructuring of the corporate structure oriented to functional criteria, and the greater bundling of skills creates more flexibility and enhances the sales and marketing-oriented drive of the employees within the AG. As a result of the restructuring of the company management, Bernd Lange as the second member of the Board of Managing Directors has been responsible for the marketing and development segments since last autumn. Our staff have responded to these changes with the usual high level of commitment. Their dedication and expertise continue to be the most important springboard for the success of our company.

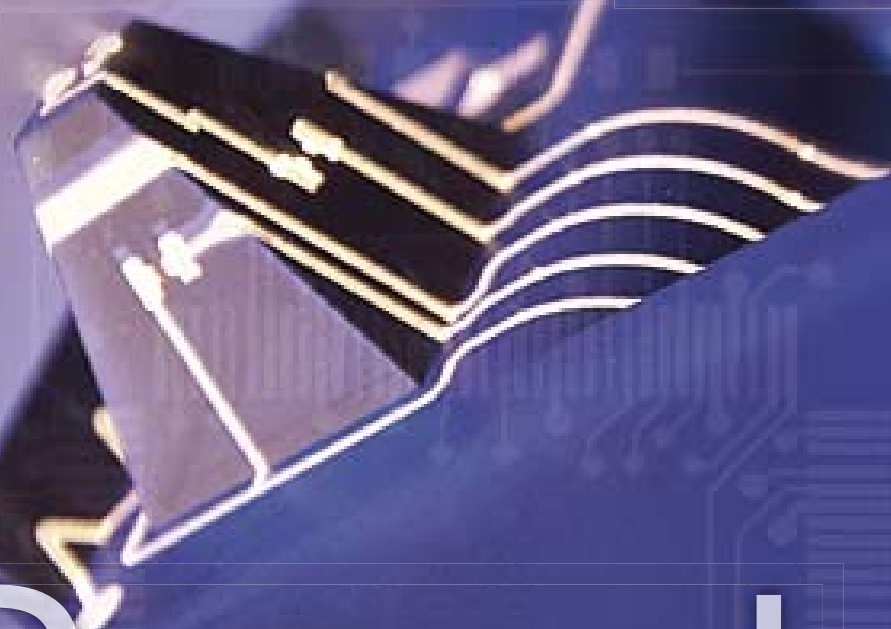
LPKF has created an excellent platform for further positive business development with numerous new product developments. All of the new developments – including stencil technology, Rapid PCB Prototyping and PCB production – are targeted at already existing well-established markets. With their enhanced productivity and more comfortable operation, they have considerably boosted the benefits enjoyed by our clients. This is the foundation from which we expect to generate a considerable growth in turnover in the next three years: growth to Euro 30 million in 2005, and a doubling of turnover by 2007 compared to 2004 by increasing sales to Euro 50 million. This forecast is realistic given the tremendous response of the market to our new products and the continuing good business potential.

I look forward to your continued support.

Garbsen, March 2005



Bernd Hackmann



# Report of the Supervisory Board

## Report of the Supervisory Board

Ten formal Supervisory Board meetings took place during the reporting year. On top of this, 2004 was marked by particularly close co-operation between the Supervisory Board and the LPKF management. One of the reasons was the restructuring of the Board of Managing Directors which has already been reported on in detail during the reporting year. This restructuring was accompanied by a reorganisation of middle and lower management which quickly resulted in a clear boost in staff motivation as well as other positive overall effects.

In addition, important strategic decisions also had to be made on product strategy, and the plastics segment in particular. Projects with a long term focus such as 3D-MID and laser plastic-welding have the target of opening the door to new markets in the automotive, medical and telecommunications sectors; however, the welding segment results in particular still continue to depress net income. Nevertheless, given the good start to the marketing of these systems, the Supervisory Board and the Board of Managing Directors decided to push ahead with these segments in parallel to the implementation of cost-cutting measures with the aim of removing complete dependence on the electronics market in the medium to long term. The thermoplastic segment is expected to move into profit in 2005.

The 2004 financial year was also marked by several important product developments with good opportunities for generating a considerable increase in sales and profits in the coming years.

Despite the modest business results in 2004, the Supervisory Board still considers all requirements to have been met to achieve positive corporate development in the next three years.

Effective risk management is put into practice as in the past by close co-operation between the Board of Managing Directors and the Supervisory Board. The instruments for early risk identification are continuously optimised to ensure that systematic examination is guaranteed in compliance with the risk management manual and to enable the permanent localisation of potential problems. The risk inventory and the tried-and-tested DIN EN ISO 9001:2000 quality management system provide continuously up-dated data supporting the early identification and minimisation of risks. The latest version of the German Code of Corporate Governance has been implemented and the declaration of compliance according to Section 161 German Stock Corporation Act has been published in the internet. LPKF Laser & Electronics AG has thus adopted the German Code of Corporate Governance and complies with it with the exception of those aspects published on our website.

The Supervisory Board engaged PwC Deutsche Revision Aktiengesellschaft to audit the 2004 Group annual financial statements according to the resolution passed by the annual general meeting. Individual and Group financial statements were audited and given unconditional approval by the auditor.

The auditor participated at the meeting of the Supervisory Board, reported on its audit of the annual financial statements, and provided additional information. The Supervisory Board in turn reviewed the annual financial statements, the management report and the profit appropriation proposal, and approved the annual financial statements. They are now authorised.

The Board of Managing Directors and the Supervisory Board will propose a resolution at the annual general meeting on 1 June 2005 to appropriate part of the net income for the 2004 financial year of LPKF Laser & Electronics AG totalling € 1,447,053.91 to pay a dividend of 4 Cent per share to shares with dividend entitlements. The total dividend payment for the share capital with dividend entitlements of € 10,647,895.00 will be € 425,915.80. The amount of € 1,000,000.00 is to be transferred to earnings reserves and the remaining net income to be carried forward. The consolidated financial statements, the management report on the state of the company and the auditor's report were available for reference during discussions between the Board of Managing Directors and the auditors. The consolidated financial statements and the management report on the state of the company have been reviewed by the Supervisory Board which then approved the consolidated financial statements.

The Supervisory Board thanks the Board of Managing Directors, the works council, all of the employees, and the management and staff of subsidiaries and co-operating companies around the world for their commitment to the company in carrying out their work in 2004. Although the LPKF Group did not achieve its targets in the reporting year, it is now charting a course for success and future growth. This has been helped by the faith shown in us by numerous clients, the good co-operation with suppliers, and the long-term partnerships with research institutes, to whom we would like to express our warmest thanks.

Garbsen, March 2005

On behalf of the Supervisory Board

Bernd Hildebrandt



# German Corporate Governance Code



### Declaration of compliance according to Section 161 German Stock Corporation Act

The Board of Managing Directors and the Supervisory Board of LPKF Laser & Electronics AG have complied with the recommendations of the German Code of Corporate Governance published on 4 July 2003 in the electronic Bundesanzeiger, and shall continue to do so in future.

The Board of Managing Directors and the Supervisory Board have reviewed the German Code of Corporate Governance and established that LPKF Laser & Electronics AG has managed the company since the IPO almost completely in accordance with the code of conduct laid down in the German Code of Corporate Governance.

The management practice of LPKF Laser & Electronics AG differs from the code in the following aspects:

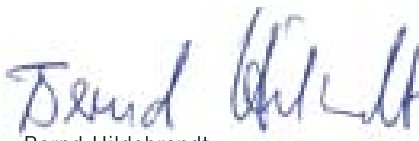
- The Supervisory Board of LPKF Laser & Electronics AG is comprised of only three individuals due to the size of the company. This ensures efficient working. For this reason, no committees or review boards will be established within the Supervisory Board.
- The quarterly reports are published 60 days after the reporting period at the latest due to the extensive Group interdependence. This period will be subject to annual examination with the aim of shortening it if possible.
- The remuneration of members of the Board of Managing Directors is not disclosed on an individual basis but as a total amount divided up into fixed salary, performance-based components and components with a long-term incentive effect.
- The remuneration of the Supervisory Board members is not disclosed on an individual basis but as a total amount.

The declaration of compliance according to Section 161 German Stock Corporation Act is published in the internet at [www.lpkf.de](http://www.lpkf.de) and permanently made accessible to all shareholders and potential investors.

Garbsen, March 2005  
LPKF Laser & Electronics AG



Bernd Hackmann  
Chairman of the Board of  
Managing Directors



Bernd Hildebrandt  
Chairman of the  
Supervisory Board



# The LPKF Group Management Report

**Corporate bodies****The Annual General Meeting****The Supervisory Board**

Bernd Hildebrandt, Chairman  
Klaus Sülter, Deputy Chairman  
Dr. Heino Büsching

**The Board of Managing Directors**

Bernd Hackmann, Chairman  
Bernd Lange<sup>1</sup>  
Dr. Jörg Kickelhain<sup>2</sup>  
Christoph Wiese<sup>3</sup>

<sup>1</sup> Board member since 18 November 2004

<sup>2</sup> Stepped down from the board on 29 February 2004

<sup>3</sup> Stepped down from the board on 30 September 2004

# 2004

## I. Report on business developments

### 1. Development of the sector and the overall economy

The global economy overall has experienced a clear upturn during the 2004 financial year. According to a survey carried out by VDMA, orders received in the mechanical engineering sector over the year have grown by double figures in per cent terms, and have benefited in particular from the upswing in exports. German exports have grown considerably against this background. The 2004 financial year was also very positive for the whole electronics sector and therefore also for LPKF's customers. Although the year began with very restricted demand in the first quarter, the situation improved rapidly as the year progressed. In the Laser segment in particular, the improvement in the order situation amongst our customers did not immediately lead to new and replacement investments. This increasingly shows the tendency amongst our customers of first making investments when real orders are in hand, and not merely responding to an indirectly experienced positive improvement in the general mood of the market. They also always hope to rapidly amortise the capex in their machinery. There was also no slow-down in the trend to shift production capacity, and increasingly also development capacities, from Europe and North America to Asia. As a consequence, Asia is the region in which LPKF boasts the strongest growth in turnover.

The depressed level of investment over the last three years has also forced LPKF's customers to invest in replacement equipment to combat competitive pressures and other market forces.

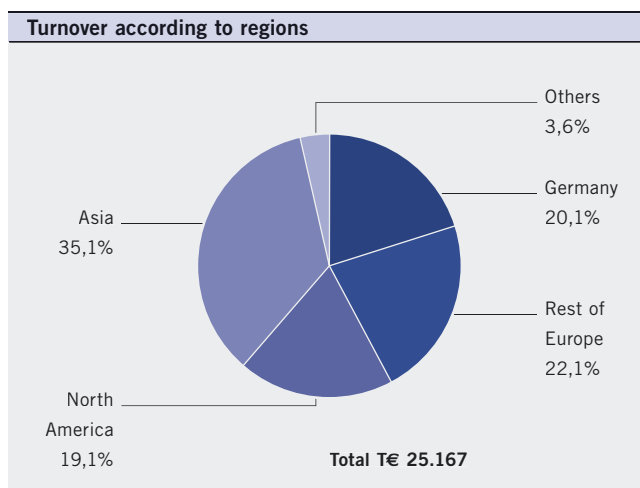
In the Rapid PCB Prototyping sector, customers base their capex decisions on other criteria. Budget strategy in particular regulates the investment cycles amongst public sector and private sector institutions and companies. Although the budgets which were cut back considerably in previous years have been stocked up in some cases, they still remain under pressure.

It is generally clear in all product segments that customer orientation and the associated new and further development of the product range is the primary factor for sales success and company growth given the rapidly changing market environment described above. The strategy pursued in previous years of ensuring that cost reductions do not jeopardise profitable product developments is therefore now increasingly reaping its rewards and forms the foundation for the future success of the LPKF Group.

### 2. Turnover and sales development

Group turnover has risen by around 11.0% in the 2004 financial year compared to 2003. The main engine of growth was the Rapid PCB Prototyping segment with a boost in turnover of 8.1% to € 9.83 million. The Laser segment as well could boost an increase in turnover from € 12.31 million to € 12.98 million, corresponding to a rise in turnover of 5.5%. The PCB Production technology showed a particularly strong growth in sales. The positive stimulus in both segments came from new or further developed products. For instance, impressive sales were achieved by the ProtoMat® H100 fully automatic Rapid PCB Prototyping system launched at the end of 2003, as well as the new LPKF MicroCut launched in the second half of 2004, which presents a new generation of faster and even more precise StencilLasers. Both of these machines are in

the high-end range of their product segments. After the disappointing results in the preceding year, the PCB Production Systems segment also enjoyed an upswing. Although turnover volume in the 3D-MID segment rose, it still falls far short of our ambitious expectations. The same applies to the sale of systems for laser plastic-welding. This product segment is still in the establishment phase and its results continue to significantly depress LPKF Group profits. Both of these segments have attracted a great deal of customer interest as confirmed by the further increase in the number of samples supplied to customers. Another negative effect on results is the increasing weakness of the US dollar which led to a direct year-on-year decline in dollar-based turnover during the reporting year of € 0.46 million. This puts considerable pressure on the margins. In addition to these direct negative effects, there were also indirect consequences such as the failure to win orders: competitors in the dollar zone and in Asia have benefited from these exchange rate factors.



The regional distribution in sales revenues is increasingly shifting from America and Europe to Asia where LPKF achieved a growth in turnover of 50.0% in this strategically very important region for the company. The structure of the sales revenues continues to remain balanced both regionally as well as according to segments.

The year-on-year increase in orders received is further evidence of the continuing positive development of the LPKF Group. The same is true of the orders-in-hand which rose by 27.4% to € 2.4 million on the balance sheet date.

### 3. Production and procurement

LPKF Motion & Control GmbH in Suhl/Germany is the main supplier of in-house developed machine controls for laser systems and ProtoMats. Group synergies are also harnessed by involving LPKF Motion & Control in the development of new products in the Rapid PCB Prototyping segment. Circuit board plotters and additional system equipment for Rapid PCB Prototyping, as well as all in-house manufactured laser sources, are supplied by the subsidiary LPKF Laser & Elektronika d.o.o., Kranj/Slovenia. In the Rapid PCB Prototyping segment, the actual production is increasingly outsourced to system suppliers. In addition to Group companies, components and services were also supplied by a number of subcontractors, whereby

approx. 90% of the purchased volumes are supplied by less than 10% of the overall number of suppliers. The capital bound up in inventories has risen slightly year-on-year, particularly as a result of the increase in turnover volume, the higher level of orders-in-hand, and in the light of planned turnover in the near future. The inventories encompass order-related articles as well as new products where holding them in stock guarantees relatively short delivery times when clients finally make their investment decision. LPKF considers the ability to supply “off the shelf” in the Rapid PCB Prototyping segment to be a strategic advantage. As always, the secret here is to find the optimum balance between availability and the tying-up of capital in stocks. LPKF benefits here from a sophisticated production planning and control system and a rolling primary materials planning system.

The second complete audit of the DIN EN ISO 9001:2000 quality management system was passed successfully at the Garbsen and Suhl production sites. The certification company BVQI-Dasa-Zert investigated the process reliability and the risk early warning system over a period of several days. The auditor reported that the system was functioning properly and passed it accordingly.

**4. Investments**

As in the previous year, the planned investments were not completely realised. This was due to the cutting of planned investments for projects which failed to pass the economic benefit and market readiness test. The total investment in tangible and intangible assets of K€ 1,399 was therefore 30.1% down on the previous year.

The main investments were on systems for development and the Service segment. This involved developments to expand the LPKF product spectrum as well as investment in laser technology and laser-plastic welding in particular. In the new financial year, investments are planned in PCB production systems, 3D-MID laser systems, laser plastic-welding systems, and the Service segment, as well as measures associated with the planned merger of various production sites and administration in Slovenia.

In the 2004 financial year, in addition to investments in the assets eligible for reporting on the asset side of the balance sheet in accordance with the strict IFRS criteria, investments totalling K€ 3,060 were also made in development services which cannot be capitalised in the balance sheet. These investments are a major element of the LPKF Group’s growth strategy. LPKF Laser & Electronics AG progressively increased its shareholding in Laserquipment AG during the course of the financial year to 100.0% of the share capital. This is intended to give the company’s growth dynamism a further boost and to intensify its integration within the Group. Another objective is to harness synergies in engineering and in joint marketing with the 3D-MID segment. Benefits are also being realised in administration and the shared use of distribution channels. This is a direct continuation of the strategy initiated in the previous financial year.

**5. Financing measures**

The Group’s financial position improved further with a rise in financial resources of € 7.13 million (previous year: € 6.00 million). The inflow of funds from the operative business was

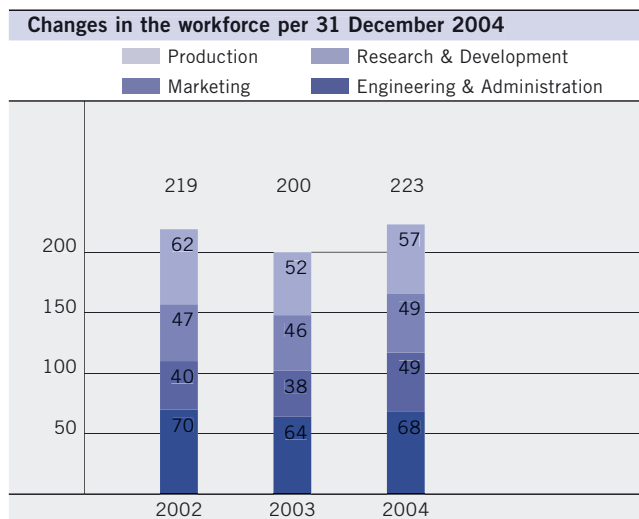
used by the Group to reduce its long-term liabilities, implement investment measures, and pay a dividend to the shareholders. As in previous years, the current account overdraft facilities were only used for brief periods for operative payment transactions. The financial situation of the LPKF Group continues to remain very solid.

As part of its risk management activities, the Group engaged in forward exchange deals for currency hedging purposes. This involved seven contracts with a face value of KUS\$ 1,203 and KGB£ 46.

**6. Human resources**

We have increased the number of employees to reflect the current development in turnover and the potential for growth. After the downsizing of the workforce of around 10% in the previous year, the reporting year was characterised by initial consolidation and subsequent targeted increases in staff numbers. New employees were hired in particularly in areas directly related to sales such as marketing, service and applications. New staff were also hired for some of the development activities. With this proactive change of course, the Group now also has the human resources to deal with the forecast growth. To maintain the necessary human resource flexibility and to adapt the associated costs to any changes in turnover as quickly as possible without any delays, new recruits are increasingly hired on the basis of short-term contracts. It may also be necessary to hire new staff for specific areas in future to maintain further growth.

Qualification measures continued to be carried out in all segments during 2004. One of the main foci of training in 2005 will be sales and marketing.



**7. Report on affiliated companies**

In the 2005 financial year the management intends to streamline the Group structure in order to simplify the business transactions and reduce costs. The specific measures are discussed in the following for each of the companies concerned.

**LaserMicronics GmbH**

Despite the loss of turnover related to stencil production after the sale of this segment, the company was able to acquire new



customers and expand some of its existing business relationships. The 2004 financial year therefore only saw a moderate year-on-year reduction in turnover. LaserMicronics will concentrate even more in future on production services. The intention here is to serve clients who have not (yet) acquired their own machinery but wish to benefit from LPKF expertise.

#### A-Laser Inc. in the USA

A-Laser Inc. failed to meet its turnover and profit targets. This is due to the increasing competition in the stencil service sector and the shift from the USA to Asia of parts of the electronics industry. Having its own stencil production is no longer of major strategic importance to the LPKF Group because the original intention of establishing laser-produced stencils in the market has been successfully implemented. The management therefore decided to sell off the main assets of this company. An agreement to this end was signed at the beginning of 2005.

#### LPKF Motion & Control GmbH

The economic situation of LPKF Motion & Control GmbH was satisfactorily improved during the reporting period. This good performance was helped by the upturn in the parent company's business, and particularly the third-party turnover, especially in the measuring technology sector. The sale of inspection systems for the electronics industry is particularly noteworthy. Sales and marketing have also been expanded here as well. During the reporting period, the company very successfully passed the second audit of its DIN EN ISO 9001:2000 quality management system. Further growth potential is forecast for 2005 given the predicted development in turnover of the parent company and the considerable further rise in external sales.

#### LPKF Laser & Elektronika d.o.o. in Slovenia

The turnover and profits of LPKF Laser & Elektronika d.o.o. have also developed satisfactorily during the 2004 financial year. This is attributable to an increase in turnover of the parent company. Third-party turnover declined. Further improvement in its business is forecast for 2005, particularly because

of the development in business of the parent company.

When selecting the site for this company in 1994, the company chose a location with a favourable tax status. The subsequent unilateral cancellation of this favourable tax status by the authorities led to the demand for a high tax repayment in 2000. The Group considers this demand unjustified and initiated legal proceedings. The upper administrative court in Slovenia has still not issued its judgement on the case. It is impossible to predict when the final judgement will be made by the upper court. However, favourable judgements on similar cases handed down by the court during the reporting period give grounds for optimism.

Consideration will be given in 2005 on bringing the company's business activities together at one site in the vicinity of Kranj.

#### LPKF Laser Components GmbH

This company was founded in 1999 in co-operation with a partner in Russia to support the transfer of laser expertise. LPKF Laser Components GmbH is currently only involved in a minor amount of commercial activity.

The Board of Managing Directors intends to merge this company with LaserMicronics GmbH.

#### LPKF Laser & Electronics Inc. in the USA

LPKF Laser & Electronics Inc. is the Group's sales and service partner in the North American region. With the increased shareholding in its North American distribution company, which is planned to take place in 2005, LPKF Laser & Electronics AG wants to strengthen its commitment in this important market.

After very slow business in the first months of 2004, activity picked up considerably in the last quarter in particular. The situation therefore developed very well overall. This commercial success is mainly attributable to sales of Rapid PCB Prototyping systems. Turnover in the Laser segment was well below target. Turnover in this region in Euro terms was depressed by the continuing weakness of the US\$.

### Group structure per 31 December 2004

LPKF Laser & Electronics AG, Garbsen			
10,647,895 EUR			
LPKF Laser & Elektronika d.o.o.	12,500,000 SIT	LPKF Laser & Electronics Inc.	100 US\$
Kranj, Slovenia	75%	Wilsonville, USA	60%
LPKF Motion & Control GmbH	98,168 EUR	LPKF Benelux N.V.	247,398 EUR
Suhl, Germany	50.94%	Brüssel, Belgium	100%
Laserquipment AG	237,402 EUR	LPKF Laser & Electronics France	50,000 EUR
Erlangen, Germany	100%	Lisses, France	94%
LaserMicronics GmbH	25,565 EUR	LPKF (Tianjin) Co. Ltd.	4,297,453 CNY
Garbsen, Germany	100%	Tianjin, China	100%
A-LASER	250,000 US\$	LPKF Properties LLC	100 US\$
Beaverton, USA	100%	Wilsonville, USA	60%
LPKF Laser Components GmbH	25,000 EUR	PhotonicNet GmbH	30,000 EUR
Garbsen, Germany	80%	Hannover, Germany	8.33%

**LPKF Properties LLC in the USA**

The business purpose of this company founded in 2000 is to provide LPKF Laser & Electronics Inc. with real estate. The company owns the company offices currently used by LPKF Laser & Electronics Inc. There were no changes during the reporting period.

**LPKF France S.A.R.L.**

LPKF France continued to suffer from the weak electronics market during the reporting period. There has been no significant improvement in the climate for investment in the French electronics industry, even compared to the weak previous year. Against this background, the almost balanced result can be considered to be a minor success. The region is still thought to have good business potential, particularly in the HF segment. The aim is also to increasingly exploit the opportunities when they arise in the PCB industry.

**LPKF Benelux N.V.**

The company again failed to generate a profit in the 2004 financial year, just as in the previous year. However, unlike preceding years, the company managed to generate an almost balanced result.

As part of the Group structure optimisation measures, the Board of Managing Directors intends to wind up the company because experience has now shown that it is not worthwhile operating a company-owned business in this region. Marketing will therefore be pursued by a representative.

**LPKF (Tianjin) Co. Ltd. in China**

LPKF (Tianjin) Co. Ltd. is responsible for all the distribution and service activities in China, such as maintenance and repair. The strategic expansion and associated investment in our Chinese company have again proven to be very prudent. We have also been able to expand our access to the Chinese PCB market by setting up a marketing office in the southern Chinese city of Shenzhen. The sales successes scored here confirm that LPKF is charting the right course in China. The opportunities are to be exploited further by the enlargement of the marketing structure and the strengthening of the marketing and service skills base.

**Laserquipment AG**

This company markets system solutions for laser plastic-welding. The company's strategy is to provide services to introduce potential clients to the technology and to bridge the production start-up phase until actual investment in equipment is made. The company was unable to fulfil its targets. The further expansion of this business therefore considerably depressed the net income for the year. This is attributable to the lack of investment dynamism of the most important customer groups, particularly the automotive sector. An additional factor arises from the very long development cycles involved here and the replacement of the technology already established in the market – this process is taking more time than originally planned. A balanced result is forecast for 2005. It was possible to optimise the cost structures. The main reason, however, is the good start to the marketing of the systems. LPKF Laser & Electronics AG increased its shareholding in Laserquipment AG progressively throughout the reporting period to 100% of the share capital.

The Board of Managing Directors plans to merge Laserquipment AG with LPKF Laser & Electronics AG with the aim of broadening the base of the LPKF Group's activities so that it

becomes less dependent on the electronics market in the medium to long term.

**PhotonicNet GmbH**

LPKF continues to hold a 8.33% stake in PhotonicNet GmbH. This is a competence centre for optical technologies. The company is a public-private partnership involving numerous established companies and has the overall aim of accelerating the development of optical technologies in Germany and to set up and expand an associated network.

**8. Research and development**

Research and development activities were pursued undiminished during the reporting period. The focus lay in concentrating all of the available resources on near-market development projects which have been launched onto the market within a very short period of time. New and better quality products developed in all segments and successfully launched on the market at the end of 2004 or in 2005 should boost sales further.

In the Rapid PCB Prototyping segment, completion of the development work on the high end ProtoMat® H100 model was immediately followed by the redesign of a fully-automated standard machine to become a new benchmark in this market segment in terms of features, output parameters, price: performance ratio and ease of operation. And the ProtoLaser 100 which was also developed during the reporting period is a piece of equipment that superbly embodies the opportunities opened up by laser technology in the Rapid PCB Prototyping sector. Ultrafine lines can be made much more quickly and with much greater accuracy using this state-of-the-art device than is currently possible by mechanical milling or chemical methods. Interest in this system has been shown in particular by manufacturers of security and military equipment.

Work in the StencilLaser segment focused on improving system productivity even further. This led to the presentation of the new LPKF MicroCut in mid 2004. Its compelling performance features very quickly led to successful sales. This again highlights the benefits of LPKF's client-oriented development policy. Its customers include the manufacturers of wafer bump and flip-chip stencils. The spectrum of PCB Production Systems was further expanded by additional laser cutting systems and a PCB repair unit. The range of products therefore now appeals to a much broader spectrum of PCB manufacturers. These include the producers of flexible PCBs in particular.

The focus of R&D work on the LPKF LDS method for 3D-MIDs lay on the qualification of series products. Virtually all of the activities were therefore oriented to specific customer requests and the publicly funded joint projects. We were successful during the reporting period in bringing the first products into series production using the LPKF LDS method. This gives us an important reference for international marketing. A particular aspect is the expansion of a network of service companies and other partners who can realise each of the process steps involved in the LDS method when specific projects are required. The capacities of the Applications Centre in Bad Salzflen are to be moved to Garbsen at the beginning of 2005 as one of the measures for streamlining the LPKF Group. The aim of bringing this facility closer to company headquarters is to be able to structure the processes even more efficiently. The main focus of development in the laser plastic-welding segment is combining automatic handling

systems with a hybrid welding method. Laser welding systems of this kind are used for mass production by automotive and medical technology suppliers.

New inspection systems developed by LPKF Motion & Control GmbH for chip assembly also open up promising business prospects.

The developments outlined above reflect a new quality over a broad area in the range of systems on offer. It is clear in all product segments that products that are now at the beginning of their lifecycles form the basis for the growth achieved in 2004 and for the planned growth of the LPKF Group in future.

This is also where the risk lies associated with the further improvement in the overall economy, which has a major influence on the willingness of clients to invest in new technologies and equipment. The successful marketing of new products is not only achieved through the economic advantages they open up for the users, but also from a positive dynamism in the target markets.

## 9. Risk management system

Risk management within the LPKF Group involves the formulation and implementation of measures that are able to identify existing risks and either diminish the amount of damage they cause, restrict the chances of their occurring, avoid them completely or deliberately accept them.

The LPKF Group is exposed to numerous risks as it pursues its global business activities within the rapidly changing conditions affecting the electronics market. Risk management, and particularly the risk early warning system, have therefore always been a fundamental element in the planning and implementation of our business strategy. This was vital in the recent past in the weak overall economic environment, and is just as important today in times when there are signs of a renewed upswing. Generally, although risks can be limited by suitable measures and can be rapidly and precisely identified by an early warning system, they can never be completely excluded and always need to be reassessed at the time the risk evaluation is carried out. LPKF therefore makes use of a number of management and control systems to measure, monitor, control and handle the risks which we are exposed to.

A particularly important aspect here is our Group-wide strategic corporate planning and the associated reporting.

The Board of Managing Directors of LPKF Laser & Electronics AG is responsible for risk policy and the internal control and risk management system. These functions are implemented by the decentralised management of each segment in each organisational unit in accordance with the Group structure. A risk manager co-ordinates and authorises the various measures implemented to control the risk. This procedure has proven itself time and again in the past. Our risk management system is assessed at various times including annually by our auditor.

As part of the risk identification and control procedure, existing instruments such as the risk management manual and the reporting tools are continuously updated, whilst the daily implementation of the risk management system is documented. Risk management discussions of all types are always recorded in minutes. As in previous years, a risk inventory was also conducted in the 2004 financial year which reviewed the existing and potential risks, and checked the efficiency of reporting with respect to the management of risks. Another important element in the early warning system and the regulated transaction of business processes is the quality management sys-

tem according to DIN EN ISO 9001:2000, whose efficiency is checked annually by a neutral organisation as part of the control audit. The corporate governance model implemented by the LPKF Group is also relevant in this context, in particular because a high degree of risk limitation is provided by the close co-operation between the Supervisory Board and the Board of Managing Directors. Good corporate governance has always been an integral part of LPKF's business philosophy and has traditionally had a high priority within the company. We therefore welcome the initiatives implemented in Germany and internationally.

In the following, we describe the main risks which could have a significant influence on LPKF's business, assets, financial and earnings positions. These are not the only risks which LPKF faces. Risks which we are currently unaware of, or risks which we currently consider to be negligible, could also have a negative impact on our company.

### Business risks

The LPKF Group is internationally positioned and active in a business environment subject to continuous rapid change. The situation of its clients is characterised by considerable cost and competitive pressures as well as considerably reduced investment budgets in part. The past weakness of the overall economy forced the sector into even more efficient cost management and investment budget cuts. Of particular significance here is the shift of production sites overseas, as well as the complete closure of production sites. The willingness to accept risks, invest further in the expansion of capacity, or to introduce new technologies continues to be small against this background. New investments are frequently only made when the future capacity utilisation of this equipment appears assured by concrete orders from customers. Happily, this situation appears to be changing very positively. The Laser segment is traditionally subject to stronger cyclic fluctuations than the primarily budget-driven Rapid PCB Prototyping segment. The Laser segment has therefore profited more in the 2004 financial year from the economic upswing. However, customers still usually react with a slight delay to any improvement in the order situation when considering investments.

As a company, the LPKF Group is also repeatedly exposed to rapid and far-reaching changes resulting from the introduction of new technologies.

The shareholding in Laserquipment AG should also be seen as a means of boosting our innovation and competitive strength, as well as expanding diversification and spreading risks. However, investments of this kind are always associated with the risk that the planned business model fails to meet its targets because of unforeseen circumstances. And last but not least, the global political situation is also associated with risks which could have a negative impact on the development of the LPKF Group's business. The €/US\$ exchange rate should also be mentioned in this context. A strong Euro also has an impact on currencies oriented to the US dollar. This can have negative effects on sales in Asia and the United Kingdom even if invoicing in these countries is carried out on a Euro basis. Our main competitors mostly come from the "non-Euro area" and therefore have competitive advantages compared to us when the Euro rises very strongly against these currencies. Moreover, a weaker dollar has a negative effect when converting US dollar-based turnover to Euros. And because most of the expenses arise in Euros, this can also put further pressure on margins.



### Dependence on suppliers

The procurement of components and services from external suppliers is associated with basic risks involving long delivery times and changes in prices. LPKF does not directly depend on one or more suppliers. However, price changes in particular can have a special influence on business activities. During the reporting period, the delivery of components and modules did not cause any shortages. During the current economic upturn, the change in the price of energy and raw materials has caused some suppliers to raise their prices in some cases. There is at least a risk that this trend will continue and have a negative effect on material costs.

### Dependence on customers

The regional spread of our sales markets is balanced. This has been demonstrated over many years by the distribution of our turnover according to regions so that there are no special risks associated with this factor. In the MicroLine Laser segment, sales have only been realised with two customers during the reporting period, which was also the case in the previous financial year. Because of the volume of potential new orders, the long lead times before sales are actually realised, and the individual specifications of each system, no significant increase in the number of systems sold annually in this segment is expected. In the other product segments, there are no dependencies on major clients. The credit worthiness of each of the many new clients is always checked before going into business. If necessary, suitable measures are implemented to limit any potential risks. During economically slow periods in particular, collaboration is carried out with reliable organisations with the relevant experience to safeguard the collection of payments.

### Exchange rate fluctuations

The exchange rates between foreign currencies sometimes undergo major fluctuations. For LPKF, the only fluctuation of any significance is that with respect to the US dollar. Fluctuations in exchange rates can have a positive as well as a negative effect on results. The strong depreciation of the dollar against the Euro has had a significant effect on our results as discussed previously. Measures to counteract this trend are permanently reviewed and implemented to the degree possible. During the reporting period, seven cash-flow hedges or currency option transactions with a face value totalling KUS\$ 1,203 and KGB£ 46 were concluded to minimise the risk associated with exchange rate fluctuations. The positive effect on the results of these currency hedging measures totalled K€ 65. No other exchange rate hedging instruments were used. One currency hedging transaction of KGB£ 25 was not balanced on balance sheet date. In January 2005 a further currency option transaction of KUS\$ 500 was concluded.

### Research and development

LPKF's success significantly depends on the speed with which new products can be pushed through the development pipeline on to the market. Market acceptance, and the transition from the production of samples to series production are important milestones on the way to turning product ideas into profit generators for LPKF Laser & Electronics AG. The competitive situation and the very rapid changes in technology are associated with risks. Permanent follow-up is carried out by the Supervisory Board and the Board of Managing Directors to keep these risks to a minimum. This follow-up is an integral part of the risk management system which aims to control the value of new developments and integrate them within the

product strategies. In addition to achieving cost benefits by using LPKF technology, clients can also enjoy benefits from the technology itself and the associated market opportunities. In the markets, which in some cases can be extremely cyclic, this is precisely the aspect which is associated with additional risk when potential customers around the world implement investment stops and budget cuts, and when the willingness to invest in new technology diminishes, or companies stick to old processing technology for an unpredictable period of time. The Business Development Management department was set up and is being expanded with the aim of reducing such risks.

Protecting cutting-edge technologies is carried out where feasible and is accompanied by patent applications.

In the case of all R&D projects which lead to series production, the time factor is a fundamental risk parameter – not only associated with risks involving the actual time in the future when the sampling or series production begins, but also the sale of the first products.

### Patent risks

The LPKF Group aims to achieve technological leadership in all product segments. It is therefore logical to protect this expertise internationally through protection rights and patents. Patents are an instrument of corporate policy. LPKF is already the owner of a large number of patents and is continually applying for new patents thanks to its intense research activities. Several 3D-MID method patents are currently in the application phase. LPKF Laser & Electronics AG considers the acquisition of patent rights to be the most effective means of protecting its R&D investments from depreciation. Moreover, it is also possible for patent searches to reveal the existence of adequate patents and protection rights held by other institutions in technologies which could be of use to the company and have an impact on its economic success.

### Human resource risks

The demand for highly qualified staff remains high even in periods of economic difficulties. Thanks to its close contacts with universities and the growing level of awareness the company enjoys in the laser sector, LPKF has no problems in recruiting adequately trained staff. In addition, the company also runs a staff participation scheme on the basis of stock options to honour the loyalty of staff to the company, and to enable key personnel to participate in the success of the company. The third tranche of the stock option plan was issued during the reporting period.

## II. Business report

The 2004 financial year was marked by the implementation and completion of a large number of development projects. This led to the successful launch of many new products on the market in the second half of 2004. More product innovations will be presented at the start of 2005. All of this gave rise to an increase in marketing costs and continuing high development costs which depressed net income. This is an area where the Group aims to establish the springboard for future growth. The full positive effect of this expenditure on turnover and performance will not be felt until 2005. The economic upswing was strongest in the fourth quarter, and is reflected in the increase in turnover and orders received in our most important

markets. From where we stand, the economic turnaround seems to have been achieved. However, the weak dollar depresses the turnover figures and margins to a considerable degree. Because more than a fifth of our sales are invoiced in US dollars, but the main costs arise in Euros, a strong Euro puts considerable pressure on the turnover figures and margins. As a consequence, the turnover and profit targets in the 2004 financial year were not achieved.

The company's financial situation was improved further. This is reflected in the increase in cash and cash equivalents to K€ 7,125 (previous year: K€ 5,999). The company's asset situation also continues to be extremely sound as reflected by various factors including the high capital ratio relative to the rest of the sector of 70.1% (previous year: 71.1%). Share capital finances up to 262.3% (previous year: 247.5%) of the fixed assets. The share-capital:outside-capital ratio is 234.4% (previous year: 246.0%). Provisions for long running low-yielding claims have been made by discounting, and other provisions against specific debts.

The company's earnings situation is not yet considered satisfactory with respect to the sector as a whole given the economic background. The objective is to further improve the sales return of 3.7%. The Group is in a good position to achieve this thanks to the strength of its numerous new product developments.

### III. Outlook

The LPKF Group sees good opportunities for further development. Many new product developments were launched on the market in the last quarter 2004; others will be presented at the beginning of 2005. New development projects will also be realised in the 2005 financial year, and marketing will be strengthened further with the aim of doubling Group turnover by 2007 with respect to 2004. The management expects that the main engines of growth here will come from the PCB Production systems and Rapid PCB Prototyping systems. In addition to boosting turnover, the objective is naturally also to improve the earnings situation. This is to be supported by a minor rise in overall costs compared to the growth in turnover. The unsatisfactory turnover: cost ratio in the past therefore improved considerably in the light of the growth planned by the management. Profitable growth and cost discipline will always be given priority ahead of an expansion in turnover. After downsizing its workforce the previous year, the Group has now begun to recruit new staff in specific areas, in particular in market-related segments such as service, marketing and application. In addition, the weak dollar is to be exploited more by making more procurements in regions with currencies pegged to the dollar and/or where invoicing is dollar-based. Generally, the changes in the dollar exchange rate can have a considerable impact on our earnings situation.

The expert opinion here is stabilisation at least, even if only at a low level. Asia will continue to be the main regional focus of LPKF's growth strategy. This is where we can reach clients able to purchase a large amount of equipment, particularly in the less well established product segments such as PCB Production systems. This includes the bump inspection systems sector where the Group is entering new, highly interesting and dynamic markets. The 3D-MID and Laser

Plastic-Welding segments are also to be expanded and developed further. The unprofitability of Laserequipment AG in the past is to be turned around with a forecast balanced result in 2005. Very promising approaches for the marketing of these systems have now come into view. The diversification of LPKF's product spectrum associated with a broader line-up has the medium to long-term objective of reducing the dependency of the Group on the electronics industry and its cyclicality. There are now signs that after many years of slow growth, the LPKF Group is now returning to its previous dynamic form. LPKF's potential for innovation, its customer-orientation, and especially, the commitment of our staff to LPKF's business and philosophy, provide the fundamental platform on which this dynamism can prosper.

### IV. Events after the balance sheet date

With effect from 1 February 2005, the Group sold its stencil production business in North America by selling the related assets of A-Laser Inc.

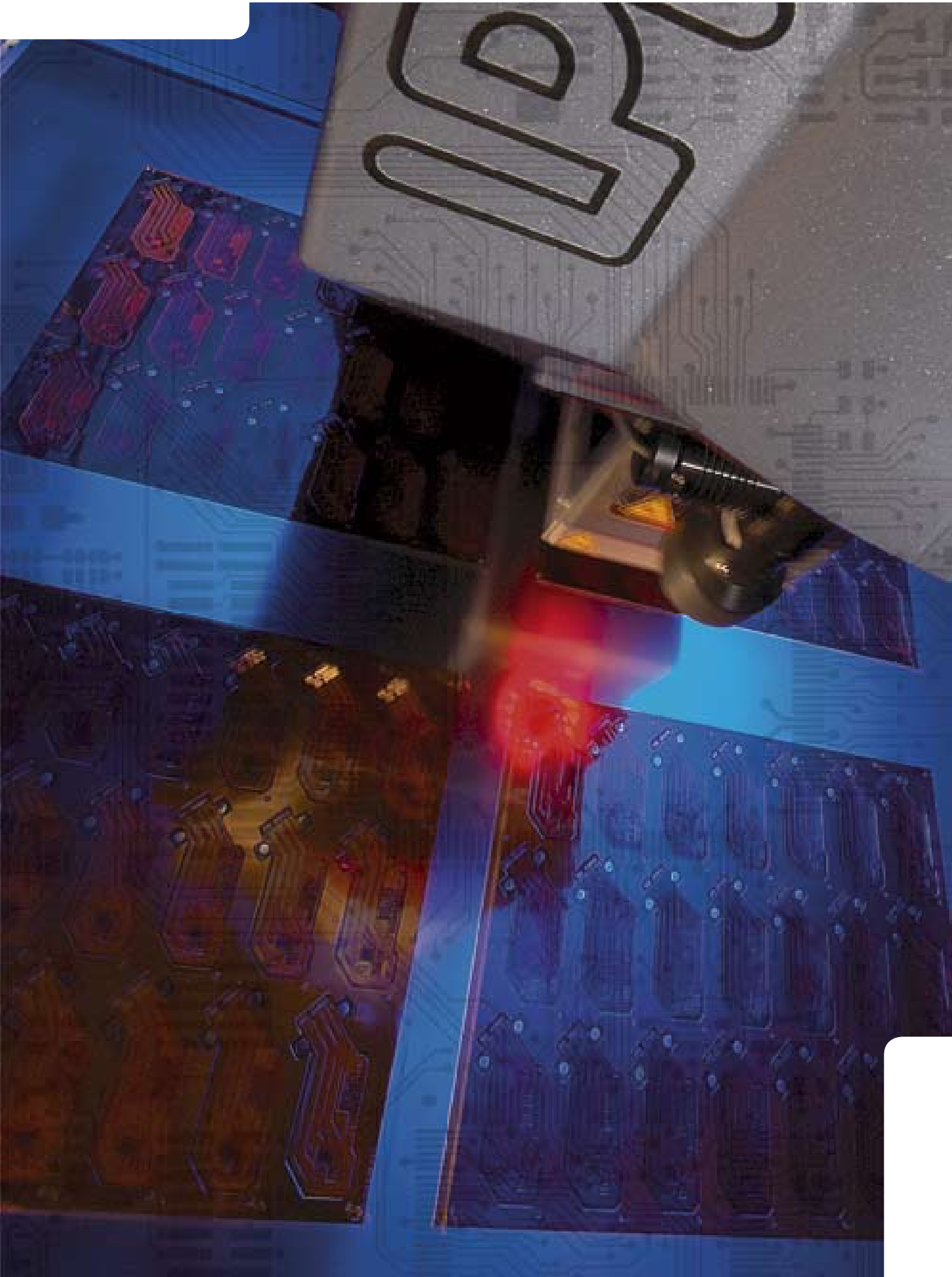
Garbsen, March 2005



Bernd Hackmann



Bernd Lange



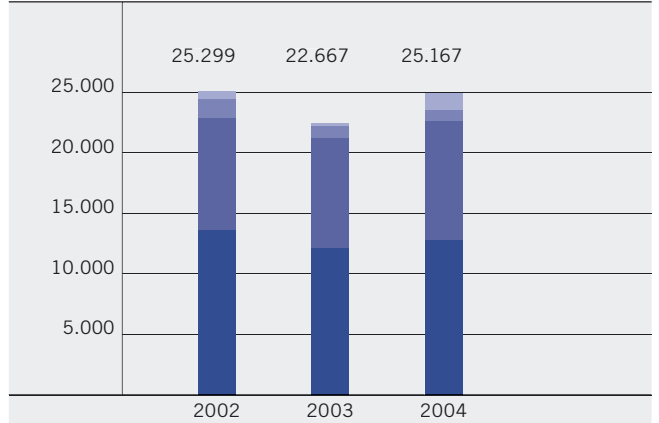


# Launch of forward looking




**Turnover according to segments**

in K€      ■ Laser Systems      ■ Rapid PCB Prototyping  
                  ■ Services                    ■ Others



technology





Customer orientation  
is a **key factor**

## Identifying and satisfying the needs of users

The market for electronic products has been rocked by major changes in the recent past: trends have to be detected even earlier on, products need to be rapidly brought onto the market at attractive prices. The consequences are also felt by the suppliers of production and development technology. Designers and manufacturers are placing more demands on the technologies and materials they use than ever before. And the overriding crucial factor is for the tools and machines to exactly match the specifications.

It is important for LPKF to precisely identify these needs and requirements. This is the only way it can continue to guarantee its high levels of customer orientation and customer satisfaction in future. These are ultimately the aspects on which the profitability of LPKF's business depends.

There has been a major change in recent years in the market situation for the production of circuit carriers: providers in Europe and North America are increasingly focusing on specialised applications. At the same time, the production of mass products is being increasingly shifted to Asia. On the technical side, there is also an increasing demand for finer and finer structures, and for these to be realised as cheaply as possible. This means that the Far East in particular is opening up opportunities for innovative production methods. One of the main technical challenges lies in the functional connection between micro-chips and the PCB. Packaging, flip-chip technology and wafer bumping are the most important techniques here. The tools used to carry out each production step therefore also need to be ever finer and more precise to support these technologies.

This is precisely where LPKF's core competence lies. In the Rapid PCB Prototyping segment and in the stencil technology crucial for soldering processes, LPKF enjoys world market leadership with its cutting-edge technology. One of the company's main corporate objectives is to maintain and further expand this market leadership. LPKF is also committed to further growth in future in the supply of electronics production equipment – and the cutting and structuring of circuit carriers in particular.

## Managing different cultures

Important aspects in realising these objectives are the co-operation of international partners, and exemplary customer care which reflects the high priority placed by LPKF on long-term and sustainable customer relationships. Users of production systems in particular are interested in comprehensive and reliable after-sales service. LPKF has established a considerable reputation in this field in recent years: around the world, service staff and partners provide expert advice and guarantee the smooth running of every LPKF machine thanks to reliable and efficient maintenance. To uphold this extremely high standard, LPKF has invested a great deal of effort and funding in this area in recent years. The trust and good name that the LPKF brand now enjoys amongst users throughout the world proves that this commitment is paying dividends.

A typical feature of LPKF's business relationships has always been maintaining a very special relationship with its clients. Building up and maintaining such a reputation not only means being able to think commercially in terms of technical advantages: successfully nurturing customer relationships in business regions as diverse as Europe, North America and Asia also requires a commitment to becoming fully attuned to the different mentalities. Human contacts establish trust, and the

personal relationships then become crucial factors in conducting international business. This is a key part of LPKF's corporate culture.

## Penetrating the markets

Naturally, competent customer service and the proper nurturing of contacts are only some of the steps involved in being successful in such a harsh competitive market. To be able to match the demands made on a specific technology by different users, LPKF has strongly expanded the width and depth of its range of products over the years. Not every customer in a specific market needs equipment with the same features, not everyone requires the same specifications for precision and comfort. The strategic diversification of its product spectrum enables LPKF to individually cater to all of these requirements. At the top end of the spectrum, the high-end models with their sophisticated technology fulfil even the highest demands for precision, reliability and operating comfort. The other end of the spectrum is balanced by good value entry models which enable customers with smaller capex budgets to enjoy the benefits of our innovative technology.

In addition to broadening the width of its product spectrum, LPKF has also increasingly expanded the depth of some product families in recent years – to create complete production systems. LPKF thus gives its clients the means of implementing all of the production steps required for batch production in-house – a crucial competitive advantage.

Another particularly effective marketing instrument for the acquisition of new customers and the establishment of new technologies in the market has proven to be the in-house production services system. Potential users often first wish to test the benefits of a new technology before they commit to major investments. The production service centres of the LPKF Group provide customers with an opportunity of testing the potential of innovative technologies without having to take any major commercial risk themselves. The system proved very effective in the launch of stencil technology. Because of the positive experience gained in this way, most of the production service clients eventually chose to buy their own StencilLasers. This tried-and-tested marketing technique is currently being intensely used for the marketing of production technologies for almost all new systems.

## Developing near-market products

Thanks to its deliberate focusing on specific key markets, and the targeted bundling of expertise, LPKF repeatedly succeeds in developing new products very quickly and launching them successfully on the market. The crucial factor in pushing products through the development pipeline quickly and efficiently is having all of the main product development skills in-house – software, laser technology, electronics design and mechanical design. A sophisticated platform strategy which significantly shortens development times ensures that we can react very quickly to the needs of the market. As a consequence, LPKF technologies have often been used by our clients right from the start in the development of their own products. LPKF has thus proven to be a competent partner, participating on numerous occasions in the successful implementation of innovative ideas.



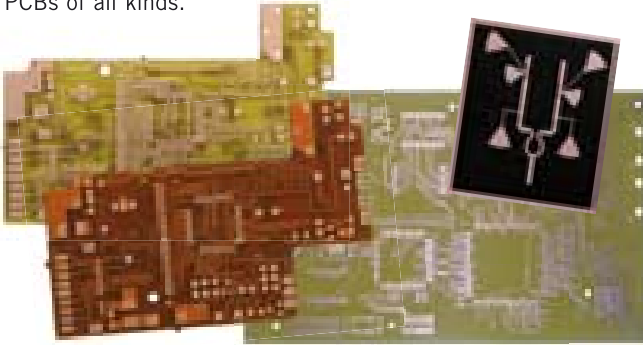
# The Business segments



# The business segments of LPKF Laser & Electronics AG

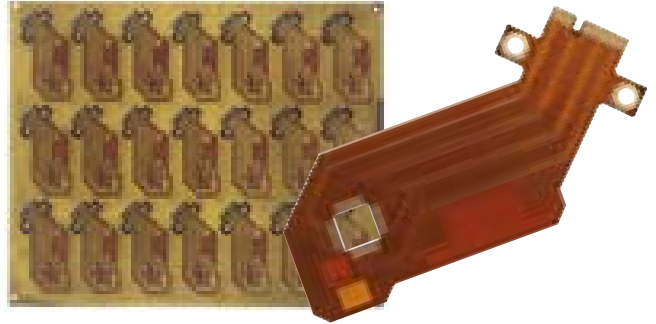
## In-house Rapid PCB Prototyping

LPKF supplies everything needed by electronics laboratories for the in-house development, production and assembly of PCBs of all kinds.



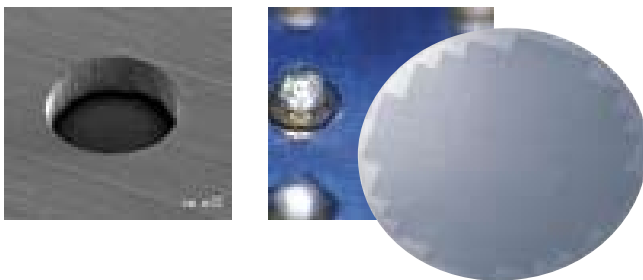
## PCB production technology

LPKF produces specialised flexible laser systems for cutting, drilling, routing and structuring PCBs and flexible circuit carriers.



## Stencil technology

LPKF is the market and technology leader for laser systems for cutting all kinds of stencils, e.g. for solder printing on PCBs, chip housings and silicon chips.



## Technology for 3D-MIDs

The LPKF LDS method is a flexible and economical alternative for the production of 3D-MIDs. LPKF builds special laser systems for the production of MIDs using this method.



## Manufacturing subsidiaries

### LPKF Motion & Control GmbH

LPKF Motion & Control GmbH is a specialist in precise movement systems and 3D production measuring systems for micro-electronics.



### LaserMicronics GmbH

LaserMicronics GmbH provides laser micro-machining services, e.g. ceramic drilling, PCB repair, and laser structuring using the LPKF LDS method.



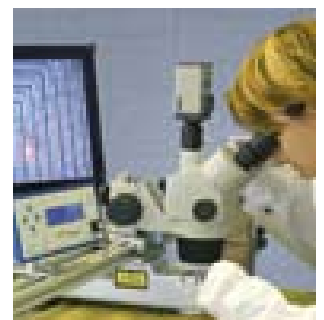
### Laserquipment AG

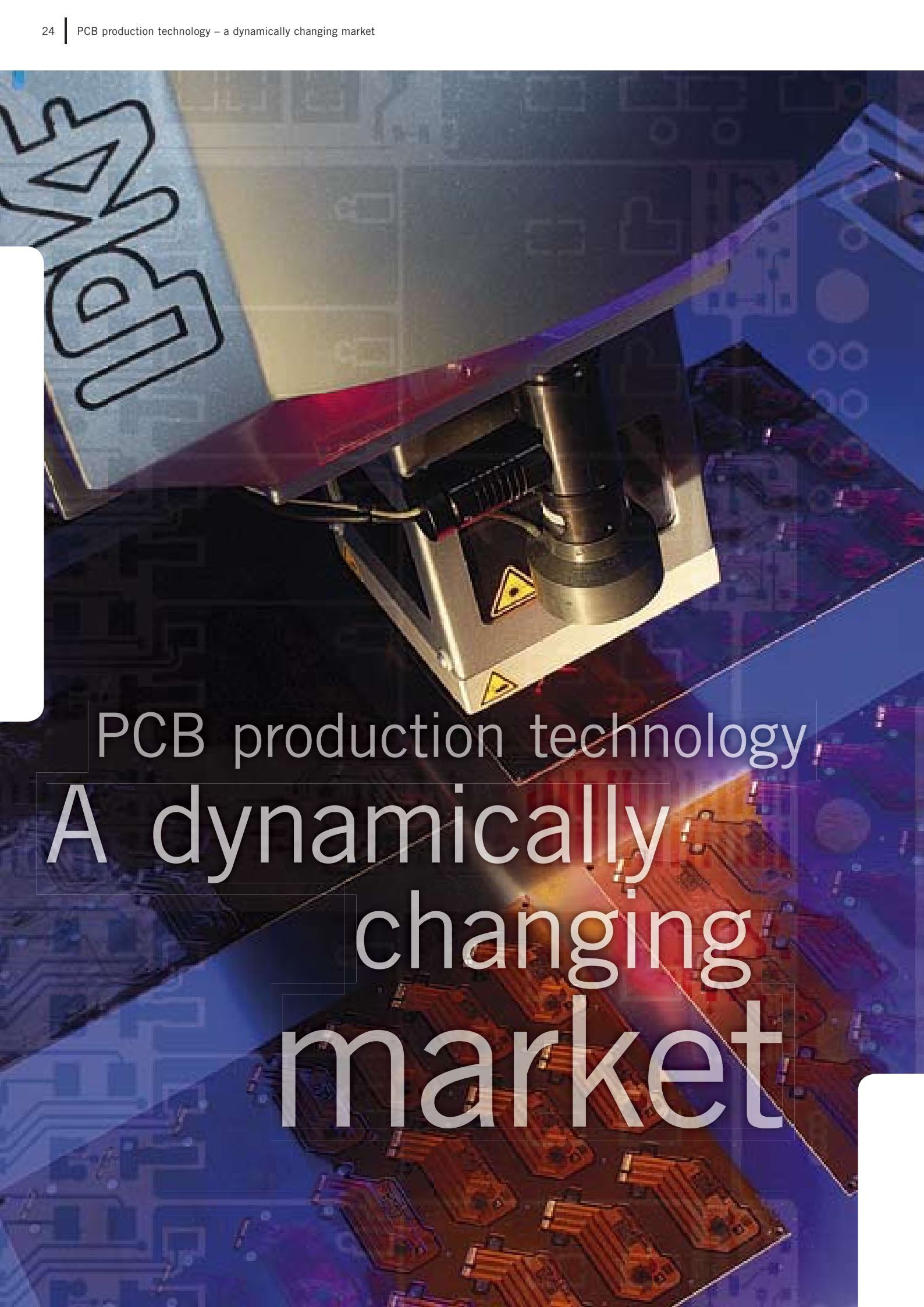
This company concentrates on modular production equipment for laser plastic-welding. Its product range is rounded off by the development of customer-specific processes in its own applications laboratory and a series production service.



### LPKF Laser & Elektronika d.o.o. in Slovenia

This subsidiary specialises in Rapid PCB Prototyping products as well as laser sources and laser marking systems.





PCB production technology  
A dynamically  
changing  
market

### Global shift in production sites

PCB production is currently undergoing enormous changes at an unprecedented scale. The number of production sites for mass-produced electronics goods is rising steadily in Asia, and in China in particular, whilst the opposite trend is observed in Europe and North America: PCB producers in the USA, Canada and Germany are concentrating less and less on the production of cheap mass products, and focusing more on new products and services involving highly specialised technology. This shift in the production focus also created a new market situation for LPKF as a supplier of state-of-the-art PCB production systems. Most of our clients now produce in Asia, and in China in particular. LPKF is thus successfully expanding its marketing and service organisation in this region. At the same time, LPKF focuses its efforts on growing markets in the applications sector. This includes laser cutting systems for PCBs, the laser structuring of thin layers, and PCB repair.

### Laser cutting in the spotlight

Technical demands for the production of PCBs have continuously risen in the last twenty years. Bundling numerous functions in an increasingly smaller amount of space makes it necessary to produce increasingly fine structures and contours. The laser has clearly demonstrated its supremacy as the most suitable technology for achieving these objectives. And laser cutting is one of the most promising applications in this field. The LPKF MicroLine family of products are amongst the most productive machines for the laser cutting of circuit carriers world-wide. The advantages of this technology are many: the enormous rise in customer demands for contouring precision can only be met by lasers; production becomes much more economical because this involves fewer tools; non-contact machining of the material significantly cuts down the reject rate and reduces production costs. The use of laser technology for cutting PCBs also opens up an unprecedented degree of freedom in circuit carrier shape. Or to put it the other way round, some new shapes and contours can no longer be made using conventional production methods.

LPKF's goals in the near future include establishing a leading position in laser cutting. This will be achieved by satisfying customers' demands by bringing the most appropriate technology on to the market faster and better than the competition. Potential customers are not only manufacturers of PCBs, electronics manufacturers are increasingly using step-and-repeat production methods and have to carefully de-panel the separate assembled PCBs. This opens up another application for the LPKF MicroLine series. Achieving the company's ambitious laser cutting objectives will be met by expanding this product family with machines featuring even higher customer benefits. The use of new laser sources here has enabled cutting speeds and thus production speeds to be increased even further. Moreover, adding different sized machines to the range enables us to satisfy different customer needs even better.

### Laser structuring – shift in priorities

The second important application for laser-supported circuit carrier machining is the laser structuring of circuits. LPKF's priorities have clearly shifted in the past year with respect to the use of this technology in mass production. The co-operation project with Atotech Deutschland GmbH was originally considered highly promising and had the aim of combining laser structuring methods with conventional etching technology in a functional way. However, because this method does not have the required degree of flexibility it has so far not been possible to establish this approach in the market. Instead, the most successful area of application for LPKF laser structuring technology is currently in medical sensors. Flexible circuits are produced using the reel-to-reel method (a cost-saving high-volume production process). These flexible circuits form the basis for disposable biosensors for the measurement of blood sugar levels. Concrete projects for the expansion of this production method are planned for 2005.

### Cutting-edge technology with the LPKF LaserScalpel

The new LaserScalpel is a valuable addition to the laser-supported production technology range. This is a repair system for mending technical short-circuits on ultra-fine circuits during production. Damage of this kind could previously only be remedied manually using a microscope and a scalpel. LaserScalpel is the world's first laser-supported workstation of this kind and enables the process to be objectivised for the first time to considerably reduce the number of errors. The yield is a particularly critical factor for ultra-fine technology because of the already expensive production costs. By using a laser which has far higher precision and reliability than manual repair work, it is possible to considerably reduce the reject rate. The benefits are less material and resource consumption, and lower production costs. With its LaserScalpel, LPKF has a useful tool with a direct "profit impact" during production which can benefit a wide range of PCB manufacturers.



LPKF MicroLine 350L



# Stencil technology

### New challenges for stencil technology

Probably no one looking at an electronic product today is aware that the production of such devices is extremely prone to errors. One of the most sensitive production steps is the application of the solder on the PCBs for the subsequent soldering of the components. This process is usually carried out today with the help of stencils specially made for solder printing. The quality of these stencils, which primarily involves the precision of the dimensions and the sharpness of the edges, has a direct influence on the quality of solder printing and therefore on the reject rate.

More than ten years ago, LPKF succeeded in considerably reducing the reject rate associated with solder printing. It did this with the launch of its laser-cut stencil – a major jump in the quality of electronics production. Stencil technology today again faces new technical and economic challenges. The now almost obligatory use of lead-free solders increases the amount of wear on stencils. At the same time, the use of new materials requires the production of much more precise stencils. The second major challenge concerns the need to incorporate solder printing via stencils in wafer level packaging – a procedure which involves the printing of silicon wafers during semiconductor production. It is already clear that tackling these challenges will require a new generation of lasers. Stencil production will therefore experience another jump in quality.

With the LPKF MicroCut we launched an ultra-modern StencilLaser on the market last year which was specially developed to meet the new stencil production challenges.

The LPKF MicroCut combines much higher stencil quality with a significant increase in productivity. Both these features have already established its technical and economic supremacy over other models on the market. With the launch of this new model, LPKF again highlights its market and technological leadership in this sector. The LPKF MicroCut is already a success story, scoring major market acceptance very shortly after being launched. Several systems were already sold and delivered in 2004. This rapid success is also a sign of the major reputation that LPKF has enjoyed in this market for many years.



*LPKF StencilLaser 600HS*

LPKF

# Inhouse Rapid PCB Prototyping



### Increasing demand at the high-end

Designing electronic circuits today is a complex technical process. There are many reasons for carrying out each step in the procedure in in-house laboratories: delegating specific tasks to a production service provider often means being forced to hand over sensitive data. Given the intense competitive environment, this is always associated with a certain amount of risk. The delays associated with outsourcing are also no longer considered to be acceptable in many cases when near-market development is a crucial factor in the success of a product. Another disadvantage is the lack of flexibility which cannot be avoided when employing external providers: the correction of errors and redesigning – integral parts of any development process – can also give rise to further delays. And finally, hiring third-parties also adds another line to the development costs.

These disadvantages no longer have to be accepted: the technical equipment and process expertise of LPKF, the world market leader in Rapid PCB Prototyping, give electronic designers the means of carrying out every step in the development process cheaply in-house – from the first draft of a circuit on the computer, all the way through to completely assembled and soldered PCBs. As last year's sales success showed, the demand in the Rapid PCB Prototyping segment for high-end systems with high levels of user friendliness in particular has risen considerably. LPKF has reacted accordingly with its new S-series which will bring a circuit board plotter on the market enabling even standard users to enjoy a much higher degree of customer benefits: automatic tool changing, simpler handling, a higher degree of automation and faster speeds. These are just four of the most important technical features of this innovative generation of equipment. We have also succeeded in technically further developing the whole prototyping process: a new method for through-plating in future makes the use of chemicals largely unnecessary.

The successful launch of the ProtoMat® H100 at the end of 2003 impressively confirms the correctness of LPKF's business philosophy. New developments can repeatedly generate new growth in markets in which the LPKF brand is already well established. The ProtoMat® H100 played a significant role in the successful development of business in 2004 in the Rapid PCB Prototyping segment.

LPKF also relies on the advantages of laser technology in prototyping. The new ProtoLaser 100 – a combination of circuit board plotter and laser technology – is thus able to structure the ultra-fine lines required by high frequency and microwave technology, wireless connection technology and security technology – all without the use of any chemicals. Its high speed increases the flexibility of circuit designers and also enables it to be used for batch production.



*LPKF ProtoLaser 100*



# Advances in plastic technology



With its three-dimensional moulded interconnect devices (3D-MIDs) and laser plastic-welding, LPKF Laser & Electronics AG covers two technology areas in the thermoplastic sector. Both technologies involve the connections between electrical functions and mechanical structures and are aimed at the modern production of electronic modules, e.g. in automotive engineering. With laser plastic-welding, LPKF steps outside pure electronics production for the first time to strategically expand into the market for general connection technology in car making, medical technology, etc.

### **3D-MID technology: Conquering the 3rd dimension**

Not so long ago, the term circuit carrier just meant flat boards. The situation is now changing because there are a large number of applications where it is possible to go beyond classic PCBs and move into the realms of three-dimensional shapes. These new circuit carriers are called 3D-MIDs and they integrate electrical and mechanical functions for the first time. A typical example: a gadget housing that simultaneously incorporates the antenna or a printed circuit with components. The advantages of 3D-MIDs are obvious: space and weight can be saved at the same time as creating new technical possibilities. And the reduction in the number of process steps increases production efficiency.

The laser-supported LDS method developed by LPKF is a technology which enables high quality 3D-MIDs to be produced flexibly and cheaply: in the first step, the basic shape is conventionally injection-moulded in plastic. A laser is then used to activate extremely precise structures on the surface of this specially treated (doped) plastic, which correspond to the tracks in the subsequent circuit. Structures activated in this way are subsequently metallised in a chemical bath to create a fully functioning circuit.

3D-MIDs made from plastic are the ideal basis for applications such as hearing aids, safety caps for electronic modules, or for functional units in mobile telecommunications. In co-operation with major material producers such as Lanxess, BASF, Ticona and Degussa, LPKF has succeeded in bringing this production method onto the market. These co-operation agreements have now led to the establishment of a network of well-known material suppliers, service companies and end users who are all working together to establish LPKF's LDS technology in the market as a standard method. Together with another co-operation partner, the Harting technology group, we have succeeded in integrating within the LDS method the main elements of series production for electronic components such as mounting and connection technology.

The first major steps for the market launch have already been achieved by the provision of clients with samples and the establishment of a service division in recent years. The real opening of the market for 3D-MID technology is now coming about with challenging projects on the user side and clear prospects for its integration in existing production sequences. The sale of the first production units underlines the success of this strategy. The co-operation partners, which share LPKF's confidence in the technical and economic potential of this method, are active and important multipliers for the launch of this very promising technical solution for the electronics industry.

### **Laser plastic-welding: New joining technology with convincing technical and economic features**

Reliable, non-destructive and cost-effective – laser plastic-welding is a very special joining method. Only developed a few years ago, this plastic welding technology produces superior results and is more efficient than conventional ultrasonic welding or adhesives. The ultra-precise and extremely localised bursts of energy during laser plastic-welding cause minimum thermal stress to the materials – a crucial advantage when working on sensitive components, especially because this involves no compromise with respect to the reliability and tightness of the join. This makes laser plastic-welding an ideal joining technology for all areas of application with high specifications for end product quality. This method also generates no dust, virtually no mechanical stress, and hardly any chemical waste products – it is therefore perfectly suited to the welding of medical technology modules, etc. The extreme tightness of the join is also ideal for protecting sensitive components from moisture – a feature sought after by the automotive subcontracting industry. And because the smaller number of production steps also reduces production times, laser plastic-welding also has clear economic advantages over traditional methods, not to mention the numerous technical benefits.

Amongst only a handful of companies world-wide active in this field, the LPKF Group company Laserequipment AG is exclusively specialised in laser plastic-welding technology and is one of the technical world leaders in this sector. In its Erlangen/Germany factory, the company develops and produces laser welding equipment which can be easily integrated into existing production lines for automatic production. Thanks to the skills bundled on site and its platform strategy – which enables the company to conduct development work very quickly and cheaply using the modular platform principle – Laserequipment AG is able to deliver solutions which are always customised to the specific needs of its clients. Contact with users is always based on an integrated approach: delivering advice, services and the construction of customised equipment.





# Production Services

### Expansion of the service spectrum as part of product marketing

In addition to producing production and development systems, LPKF's portfolio also includes production services. These are a key element of the marketing strategy for new technologies. Potential users are given the opportunity here of first testing a specific production technology without undergoing any capex risks themselves. Experience in the past has shown that customers taking advantage of this service frequently order a complete production system later on.

The principle of backing up marketing through the provision of services has proved very successful in the past, for instance in the initial launch of stencil technology: laser-cut stencils are now the standard method used in solder printing. For LPKF, this also means in this particular case that the stencil production service in the job-shop has now fulfilled its marketing strategy function. The company therefore no longer needs to be involved in the production of stencils. This marketing principle is now, however, applied to other new technologies.

The current service range includes:

- the production of three-dimensional moulded interconnect devices (3D-MIDs) using the LDS method,
- the cutting and machining of PCBs using the MicroLine series,
- structuring ultra-fine circuits using the reel-to-reel method,
- PCB repair and reworking,
- laser plastic-welding.

The strategic expansion of the Service segment therefore now includes all new LPKF technologies. This enables a large circle of customers to benefit from the possibilities opened up by laser-supported production methods for electronics manufacturing. This form of customer contact is not only an important part of LPKF's marketing strategy, it is also a very important way of gaining first-hand information from designers and users on their specific needs, and incorporating this knowledge in the development of new products.



*LPKF MicroLine 3D Industrial*



# Group annual financial statements

Group annual financial statements for the 2004 financial year based on the International Financial Reporting Standards (IFRS)

<b>Statement of income</b>	36
<b>Consolidated statement of the changes in shareholders' equity</b>	37
<b>Balance Sheet</b>	
Assets	38
Liabilities and shareholders' equity	39
<b>Cash flow statements</b>	40
<b>Notes to the 2004 consolidated statements</b>	
Basis of preparations	41
Consolidated group	41
Consolidation principles	41
Foreign currency translation	41
Segment reporting	42
<b>Statement of income</b>	
1. Sales	43
2. Own work capitalised	43
3. Other operating income	43
4. Cost of materials	43
5. Personnel expenses and employees	43
6. Depreciation and amortisation	44
7. Other operating expenses	44
8. Financial results	44
9. Income taxes	45
<b>Consolidated balance sheet</b>	
Assets	
10. Fixed assets	46
11. Inventories	48
12. Trade accounts receivable	48
13. Other assets	48
14. Cash and cash equivalents	48
15. Prepaid expenses	48
16. Deferred tax assets	48
Liabilities and shareholders' equity	
17. Subscribed capital	49
18. Minority interests	50
19. Provisions for pensions	50
20. Tax provisions and other provisions	51
21. Liabilities	52
22. Bond	52
<b>Other information</b>	
23. Cash flow statement	53
24. Earnings per share	53
25. Dividend per share	53
26. Related parties transactions	54
27. German Corporate Governance Code	54
28. Other disclosures	54
29. Others	55
30. Events after balance sheet date	56
<b>Auditor's Report</b>	57
<b>Annual financial statement of LPKF Laser &amp; Electronics AG</b>	
Balance sheet	
Assets	58
Liabilities and shareholders' equity	59
Statement of income	60

<b>Statement of income</b>			
in K€	Notes	2004	2003
Sales	1	25,167	22,667
Changes in inventories of finished goods and work-in-process		376	390
Own work capitalised	2	862	739
Other operating income	3	1,387	1,324
		<b>27,792</b>	<b>25,120</b>
Cost of materials	4	8,204	6,633
Personnel expenses	5	9,776	9,567
Depreciation and amortisation	6	1,723	2,211
Other operating expenses	7	6,337	5,409
<b>Operating profit</b>		<b>1,752</b>	<b>1,300</b>
Other interest and similar income	8	203	100
Depreciation of current asset securities	8	24	6
Interest and similar expenses	8	187	228
<b>Result from ordinary activities</b>		<b>1,744</b>	<b>1,166</b>
Income tax	9	586	358
Group result before minority interest		<b>1,158</b>	<b>808</b>
Minority interest		228	40
<b>Net income</b>		<b>930</b>	<b>768</b>
Net income per share (basic, in €)	24	0,09	0.07
Net income per share (diluted, in €)	24	0,09	0.07

<b>Consolidated statement of changes in shareholders' equity</b>							
Consolidated statement of the changes in shareholders' equity for the financial year ended 31 December 2004 (previous year in brackets) in K€							
	Subscribed capital	Capital reserve	Other earnings reserves	Market value of hedging transactions	Retained earnings	Foreign currency translation adjustment	Total
As at 1.1.2004	10,648	3,768	-	-	9,249	-918	22,747
As at 1.1.2003	(10,648)	(3,768)	(-)	(-)	(8,481)	(-238)	(22,659)
Buying back own stock	-50	-97	-	-	-	-	-147
	(-)	(-)	(-)	(-)	(-)	(-)	(-)
Additions from valuation of cash flow hedge	-	-	-	-	-	-	-
	(-)	(-)	(-)	(26)	(-)	(-)	(26)
Reduction from valuation of cash flow hedge	-	-	-	-1	-	-	-1
	(-)	(-)	(-)	(-26)	(-)	(-)	(-26)
Allocation to reserves	-	-	4,000	-	-4,000	-	-
	(-)	(-)	(-)	(-)	(-)	(-)	(-)
Dividend payment to shareholders	-	-	-	-	-320	-	-320
	(-)	(-)	(-)	(-)	(-)	(-)	(-)
Net result	-	-	-	-	930	-	930
	(-)	(-)	(-)	(-)	(768)	(-)	(768)
Settlement of difference from acquisition of minority shares	-	-	-	-	-298	-	-298
	(-)	(-)	(-)	(-)	(-)	(-)	(-)
Foreign currency translation adjustment of net investment in economically independent foreign subunits	-	-	-	-	-	204	204
	(-)	(-)	(-)	(-)	(-)	(-226)	(-226)
Other foreign currency translation adjustment	-	-	-	-	-	-247	-247
	(-)	(-)	(-)	(-)	(-)	(-454)	(-454)
As at 31.12.2004	10,598	3,671	4,000	-1	5,561	-961	22,868
As at 31.12.2003	(10,648)	(3,768)	(-)	(-)	(9,249)	(-918)	(22,747)

<b>Balance Sheet: Assets</b>			
in K€	Notes	31.12.2004	31.12.2003
<b>Fixed assets</b>			
<b>Intangible Assets</b>	10		
Software		128	89
Goodwill		74	135
Development costs		609	893
Rights of use		18	17
		<b>829</b>	<b>1,134</b>
<b>Tangible assets</b>	10		
Land and buildings		5,238	5,516
Technical equipment and machinery		1,786	1,557
Other equipment, factory and office equipment		756	839
Prepayments and construction in process		103	133
		<b>7,883</b>	<b>8,045</b>
<b>Financial assets</b>	10		
Participations		2	2
Other loans		5	9
		<b>7</b>	<b>11</b>
		<b>8,719</b>	<b>9,190</b>
<b>Current assets</b>			
<b>Inventories</b>	11		
(System-) components		3,466	3,470
Work-in-process		2,550	1,955
Finished goods and merchandise		3,715	3,929
Prepayments		161	159
		<b>9,892</b>	<b>9,513</b>
<b>Accounts receivable and other assets</b>			
Trade accounts receivable	12	4,562	5,027
Other assets	13	833	880
		<b>5,395</b>	<b>5,907</b>
<b>Securities</b>		1,616	1,271
<b>Cash on hand, bank balances</b>	14	5,629	4,820
		<b>22,532</b>	<b>21,511</b>
<b>Deferred charges and pre-paid expenses</b>	15	108	107
<b>Deferred tax assets</b>	16	1,264	1,184
<b>Total assets</b>		<b>32,623</b>	<b>31,992</b>



<b>Balance Sheet: Liabilities and shareholders' equity</b>			
in K€	Notes	31.12.2004	31.12.2003
<b>Shareholders' equity</b>	17		
Subscribed capital		10,598	10,648
Capital reserve		3,671	3,768
Other earnings reserves		4,000	0
Market value of hedging transactions		-1	0
Net income for the year			
Retained earnings		4,631	8,481
Net income		930	768
Foreign currency translation adjustment		-961	-918
		<b>22,868</b>	<b>22,747</b>
<b>Minority interests</b>	18	<b>1,908</b>	<b>1,557</b>
<b>Provisions</b>			
Provisions for pensions	19	266	234
Tax provisions	20	529	176
Other provisions	20	931	769
		<b>1,726</b>	<b>1,179</b>
<b>Liabilities</b>			
Bond	22	113	175
Medium-term and long-term liabilities due to banks	21	2,084	2,468
Short-term liabilities due to banks	21	505	490
Payment received on account of orders		311	337
Trade accounts payable		1,429	995
Other liabilities		776	835
		<b>5,218</b>	<b>5,300</b>
<b>Deferred income</b>		23	49
<b>Deferred grants</b>	3	275	277
<b>Deferred tax liabilities</b>	16	605	883
<b>Total liabilities</b>		<b>32,623</b>	<b>31,992</b>

<b>Cash flow statement</b>			
in K€	Notes	2004	2003
<b>Operating activities</b>			
Net income for the year		1,158	808
Depreciation and amortisation of fixed assets		1,723	2,211
Profit/loss from sale of assets incl. reclassification into current assets		-16	14
Cashless currency differences in fixed assets		94	242
Other non-payment income/expenses		121	299
Changes in inventories and accounts receivable and other assets		-408	462
Changes in provisions and accrued liabilities		547	-577
Changes in liabilities and deferred income		-51	-1,828
Cash flow from operating activities	23	<b>3,168</b>	<b>1,631</b>
<b>Investing activities</b>			
Fixed asset investments intangible assets		-336	-106
Fixed asset investments tangible assets		-614	-969
Investment in subsidiaries		-126	0
Receipts on sale of equipment		54	126
Cash flows from investing activities		<b>-1,022</b>	<b>-949</b>
<b>Financing activities</b>			
Dividends paid		-320	0
Payments to acquire own shares		-147	0
Repayments convertible bond		-62	-3
Change in long-term bank loans		0	672
Repayments long-term bank loans		-398	-478
Cash flow from financing activities		<b>-927</b>	<b>191</b>
<b>Changes in cash and cash equivalents</b>			
Changes in cash and cash equivalents due to exchange rates		-93	-239
Changes in cash and cash equivalents		1,219	873
Cash and cash equivalents as at 1.1.2004		5,999	5,365
Cash and cash equivalents as at 31.12.2004		<b>7,125</b>	<b>5,999</b>
<b>Composition of cash and cash equivalents</b>			
Cash		5,629	4,820
Short-term investments		1,616	1,271
Bank overdraft		-120	-92
<b>Cash and cash equivalents</b>		<b>7,125</b>	<b>5,999</b>

## Notes to the 2004 consolidated statements

### Basis of preparation

The consolidated financial statements of LPKF Laser & Electronics AG, Garbsen, for the year ended 31 December 2004, have been prepared using uniform accounting policies. All of the standards of the International Financial Reporting Standards (IFRS) and interpretations of the International Financial Reporting Interpretations Committee (IFRIC) were observed on the balance sheet date.

The financial year corresponds to the calendar year. The consolidated financial statement has been prepared in Euro.

### Consolidated group

In addition to the Group parent company, LPKF Laser & Electronics AG, Garbsen, the following subsidiaries have also been included in the consolidated statements:

Consolidated group			
Name	Domicile	Holding%	Acquisition/founding
<b>Full consolidation</b>			
LaserMicronics GmbH	Garbsen/Germany	100.0	1989
LPKF Laser & Elektronika d.o.o.	Kranj/Slovenia	75.0	1995
LPKF Benelux N.V.	Brussels/Belgium	100.0	1995/1999
LPKF Laser & Electronics Inc.	Wilsonville/USA	60.0	1994/1999
A-Laser Inc.	Beaverton/USA	100.0	1995/1999
LPKF Motion & Control GmbH	Suhl/Germany	50.9	1991/1999
LPKF Properties LLC	Wilsonville/USA	60.0	1999
LPKF France S.A.R.L.	Lisses/France	94.0	1999
LPKF Laser Components GmbH	Garbsen/Germany	80.0	1999
LPKF (Tianjin) Co. Ltd.	Tianjin/China	100.0	2000
Laserquipment AG	Erlangen/Germany	100.0 (previous year 78.9)	2000/2002 bis 2004

As part of increases in capital and the acquisition of shares held by minority shareholders, the shareholding in Laserquipment AG rose step by step to 100.0% during the reporting year. A 8.33% minority shareholding in PhotonicNet GmbH in Hannover, acquired in 2000, has not been consolidated.

### Consolidation principles

The basis for the consolidated financial statements are the financial statements prepared according to standard rules as at 31 December 2004 of those companies included in the consolidated financial statements.

For the purposes of capital consolidation, the acquisition costs of investments are offset against the proportionate share of the share values of the equity at the date of acquisition.

Any differences which arise are assigned to the assets and liabilities to the extent to which the fair value differs from the book value. Any remaining positive balance is shown as goodwill and is amortised over five years.

Inter-company profits and losses, expenses and income, accounts receivable and accounts payable between the Group companies have been eliminated.

Deferred taxes are accounted according to the liability method on all of the temporary differences between the tax values and the book values of the assets and liabilities. The income taxes are calculated in compliance with the valid laws and directives.

### Foreign currency translation

The translation of the foreign companies' financial statements is effected according to the functional currency method. All foreign companies are considered according to IAS 21 as independent sub-units. In effecting this translation into Euro, the assets and debts were translated at an average exchange rate at the balance sheet date. Expenses and income were translated at the average annual rate. The conversion differences are shown under shareholders' equity as foreign currency translation adjustments without any effect on net income. The consolidated figures were calculated on the basis of the exchange rates detailed in the following table.

Foreign currency translation				
in €	Reporting date rate		Average rate	
(1 € = x currency)	31.12.04	31.12.03	2004	2003
Slovenian Tolar	239.7600	236.4000	239.0669	233.8304
US-Dollar	1.3640	1.2607	1.2433	1.1309
Chinese Renminbi Yuan	11.2891	10.3336	10.28776	9.26011

## Segment reporting

Annual financial statement data must be segmented according to divisions and regions in compliance with IAS 14 (Reporting Financial Information by Segment). The segmentation is based on the internal reporting. The aim of segment reporting is to make the profitability and potential of each of the Groups' activities more transparent.

The following divisions form the basis for the primary segment reporting:

- Rapid PCB Prototyping involves the further development, production and marketing of circuit board plotters for the world market.
- Laser systems includes all systems such as the StencilLaser, MicroLine Laser and other new laser technologies.
- The Services division includes the product-associated services and the activities carried out by LaserMicronics and A-Laser which manufacture stencils for printing circuits, and provide other services. This segment also includes the production services provided by Laserquipment AG for laser plastic-welding.
- The Others segment involves all of the minor activities, particularly the inspection systems.

Individual expenditure and earnings items which cannot be allocated to any particular business segment are reported in the „Not distributed“ column. There are no internal sales between the segments.

The segment data was determined as follows:

- The segment results were determined taking into consideration goodwill amortisation, but without taking into consideration the financial results or taxes.
- The investments, and depreciation and amortisation including special value adjustments, refer to tangible and intangible assets including goodwill.
- The operating segment assets and the segment liabilities comprise the attributable assets necessary for the operation and/or the debt but excluding any interest-bearing entitlements, liabilities, financial resources or taxes.

Product segments								
in K€		Laser Systems	Rapid PCB Prototyping	Services	Others	Not distributed	Total	
External sales	2004	12,981	9,834	955	1,397	0	25,167	
	2003	12,305	9,095	1,027	240	0	22,667	
Operating income	2004	1,041	1,401	52	426	-1,168	1,752	
	2003	1,131	1,380	89	-15	-1,285	1,300	
Assets	2004	14,320	9,085	946	1,514	6,758	32,623	
	2003	16,334	8,105	1,079	393	6,081	31,992	
Liabilities	2004	1,529	852	20	514	4,932	7,847	
	2003	1,681	812	18	89	5,088	7,688	
Investments	2004	925	424	1	31	18	1,399	
	2003	928	135	5	6	1	1,075	
Depreciation	2004	1,074	447	93	68	41	1,723	
	2003	1,412	485	233	31	50	2,211	
Non-cash expenses	2004	540	301	23	34	657	1,555	
	2003	549	474	36	9	255	1,323	

The rise of K€ 1,074 in other sales revenues is mainly attributable to the successful sales of inspection systems by LPKF Motion & Control GmbH.

The secondary reporting format reflects the four main geographical regions in which the Group is active.

Geographical segments								
in K€		Germany	Rest of		Asia	Others	Total	
			Europe	North America				
External sales	2004	5,063	5,550	4,803	8,840	911	25,167	
	2003	5,578	4,149	6,794	5,894	252	22,667	
Assets	2004	24,775	3,696	3,781	371	0	32,623	
	2003	24,799	2,982	3,923	288	0	31,992	
Investments	2004	817	205	281	96	0	1,399	
	2003	912	92	43	28	0	1,075	

## Consolidated statement of income

### 1. Sales

Sales are recognised when the service has been rendered or when the goods and products have been delivered.

In accordance with IAS 11, the sales for 2004 include a total of K€ 72 for pro rata profits related to three unfinished goods. The revenues were calculated using the cost-plus method, whilst the degree of completion of the goods was determined using the cost-to-cost method. The associated costs are K€ 75.

### 2. Own work capitalised

The own work capitalised reported in the financial statements totals K€ 862. This comprises technical equipment and machinery used by affiliated companies for production, prototype development projects activated during 2004, and machinery produced in-house to be used throughout their lifetimes for Group production operations. The depreciation of ongoing projects valued at material and personnel costs takes place over five years.

### 3. Other operating income

The „Grants for research and development“ exclusively concern government grants – in some cases with the involvement of project executing agencies with a private sector structure – granted for specific confirmed costs incurred during the financial year (expenditure grant).

Payments are made in line with project progress. The „Reversal of deferred item for grants“ is based on the useful life of the associated capitalised development costs. The same accounting procedure applies to a grant for building costs in Suhl totalling K€ 413.

Other operating income	2004	2003
Grants for research and development	813	592
Exchange gains	137	222
Gains from reversal of value adjustments	123	1
Gains from reversal of provisions	73	144
Gains from sale of plant and machinery	26	185
Reversal of deferred item for grants	10	67
Others	205	113
	<b>1,387</b>	<b>1,324</b>

### 4. Cost of materials

Cost of materials in K€	2004	2003
Cost of (system) components and purchased merchandise	7,837	6,158
Cost of purchased services	367	475
	<b>8,204</b>	<b>6,633</b>

## 5. Personnel expenses and employees

Personnel expenses in K€	2004	2003
<b>Wages and salaries</b>		
Wages and salaries	7,946	7,769
Other	206	211
	<b>8,152</b>	<b>7,980</b>
<b>Social security costs and pension costs</b>		
Employer's contribution to social security	1,354	1,343
Workman's compensation board	47	48
Pension costs	223	196
	<b>1,624</b>	<b>1,587</b>
	<b>9,776</b>	<b>9,567</b>

The annual average number of employees was divided up as follows:

Number of employees	2004	2003
Production	55	56
Distribution	45	39
Research and Development	47	47
Engineering and Administration	65	66
	<b>212</b>	<b>208</b>

In addition, there were also 11 part-time employees and 12 trainees as at 31 December 2004.

## 6. Depreciation and amortisation

The depreciation and amortisation of the different groups of fixed assets are shown in the fixed assets movement schedule (note 10).

## 7. Other operating expenses

The total expenses for Research and Development in 2004 were K€ 3,406, made up of the cost of materials totalling K€ 574 plus other costs including personnel costs and depreciation totalling K€ 2,832.

The leasing agreements entered into by the company and reported here are classified as operating leases. The leasing payments are reported in the statement of income linearly over the term.

Significant agreements reported under leasing mainly include leasing agreements for vehicles as described in detail in Note 28 "Other financial commitments".

Other operating expenses		
in K€	2004	2003
Advertising and distribution expenditure	849	781
Entertainment expenses, travel	716	627
Rent, incidental costs, leasing, real estate and building costs	652	552
Sales commissions	465	64
Legal and consultancy costs	445	314
Repairs/Maintenance/Operating materials	365	321
Exchange losses	330	251
Trade fair costs	305	253
Postage, telephone, facsimile	246	258
Insurance, contributions, levies	231	234
Investor Relations	226	236
Allocation to bad debts	189	83
Voluntary social expenses	171	158
Vehicle costs	151	132
Financial statements, publicity, auditing fees	148	147
Supervisory board expenses	146	220
Research and Development consumables	139	291
Services	118	172
Office materials, books, software	87	59
Bank charges	69	55
Others	289	201
	<b>6,337</b>	<b>5,409</b>

## 8. Financial results

Financial results		
in K€	2004	2003
Other interest and similar income	203	100
Write-downs on securities of the current assets	-24	-6
Interest and similar expenses	-181	-217
Interest on convertible bond		
Changes in present value	0	-2
Payment to subscribers	-6	-9
	<b>-8</b>	<b>-134</b>



## 9. Income taxes

Effectuated and deferred taxes are reported as tax expenses or tax revenue in the Statement of Income unless they affect entries directly reported as shareholders' equity. In this case, the taxes are reported as shareholders' equity with no effect on the results.

<b>Income taxes</b>		
in K€	2004	2003
Corporate tax and solidarity surcharge	398	427
Trade tax	251	225
Deferred taxes	-63	-294
	<b>586</b>	<b>358</b>

In the balance sheet, tax claims of K€ 844 were formed for the tax losses of subsidiaries unused so far. The amount of so far unused tax losses from subsidiaries for which no deferred tax claim was calculated is K€ 298, cf. note 16. For the preparation of the consolidated financial statements, the individual corporate tax rates in the countries involved were used for the calculation of the deferred taxes.

<b>Reconciliation between anticipated and effected tax expenditure</b>		
in K€	2004	2003
Consolidated net income before income taxes	1,744	1,166
Anticipated tax expense 38% (previous year 38%)	663	443
Use of losses carried forward for which no deferred taxes had previously been capitalised	0	-121
Non-activated deferred taxes in a loss situation	0	26
Tax rate variances amongst subsidiaries	-204	-110
Temporary rise in corporation tax related to Flood Victim Solidarity Law	0	18
Recaptured temporary differences between financial statements and tax accounts not taken into consideration the previous year	0	44
Tax refund of back tax associated with a field tax audit	0	-26
Other tax payments unrelated to the reporting period	16	0
No allowance made for deferred taxes on reported exchange rate differences with a neutral effect on results	38	0
No allowance made for deferred taxes on amortisation	23	81
Other variances	50	3
Effective tax expense 33.6% (previous year 31%)	<b>586</b>	<b>358</b>

## Consolidated balance sheet: Assets

### 10. Fixed assets

The following schedule shows the development of the individual fixed asset items:

Consolidated fixed assets schedule in K€	Acquisition/manufacturing costs					as at 31.12.04
	Balance	Currency	Additions	Reclassifi- cation	Disposals	
	01.01.04	differences				
<b>Assets</b>						
<b>Intangible assets</b>						
Software	617	0	105	0	0	722
Goodwill	1,030	0	0	0	0	1,030
Development costs	3,576	-4	223	0	0	3,795
Rights to use	862	-11	8	0	0	859
	<b>6,085</b>	<b>-15</b>	<b>336</b>	<b>0</b>	<b>0</b>	<b>6,406</b>
<b>Tangible assets</b>						
Land and buildings	6,898	-64	45	0	0	6,879
Technical equipment	4,347	-150	630	143	272	4,698
Other equipment, factory and office	3,664	-13	275	0	206	3,720
Prepayments and construction in process	133	0	113	-143	0	103
	<b>15,042</b>	<b>-227</b>	<b>1,063</b>	<b>0</b>	<b>478</b>	<b>15,400</b>
<b>Financial assets</b>						
Participations	2	0	0	0	0	2
Other loans	9	0	0	0	4	5
	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>7</b>
<b>Total fixed assets</b>	<b>21,138</b>	<b>-242</b>	<b>1,399</b>	<b>0</b>	<b>482</b>	<b>21,813</b>

The goodwill arising from company acquisitions (capitalised differences arising from capital consolidation) are reduced by scheduled straight-line amortisation over the useful life in each case. During the 2004 financial year, the remaining 10.79% stake in Laserquipment AG, Erlangen, still held by minority shareholders was acquired in the fourth quarter 2004 for K€ 126 cash. The goodwill of K€ 298 arising from this acquisition of minority shareholdings was directly reported in the profit brought forward.

At every balance sheet date, an assessment is made to determine whether there is justification for a decrease in value. If affirmative, the book value of the goodwill is compared with the obtainable amount. Depreciation is carried out if the book value exceeds the obtainable amount.

Software is valued as an intangible asset at the acquisition cost, reduced by scheduled depreciation.

The development services shown in the assets section of the balance sheet are also reduced by straight-line amortisation. The items are shared by the segments as follows:

Development costs shared by segments		
in K€	2004	2003
Laser Systems	350	783
Rapid PCB Prototyping	259	110
Others	0	0
	<b>609</b>	<b>893</b>

The rights of use are valued on the basis of the cost of acquisition and depreciated linearly.

The tangible assets are valued at acquisition or production cost reduced by accumulated straight-line depreciation. Land is not depreciated.

The production costs cover the cost of direct materials and material overheads and the manufacturing costs and manufacturing overheads, as well as production-related pro rata administration costs. Outside capital costs are not capitalised.

The following useful lives are assumed:

Assumed useful lives	Years
Software	3
Goodwill	5
Development costs	5
Rights of use	5
Buildings	25
Outside facilities	10
Technical equipment and machinery	3-10
Other equipment, factory and office	3-10

Depreciation of intangible and tangible assets is reported in the "Depreciation" entry.

Accumulated depreciation						Net book value		
as at 01.01.04	Currency differences	Additions	Reclassifi- cation	Disposals	as at 31.12.04	as at 31.12.04	Previous year	
528	0	66	0	0	594	128	89	
895	0	61	0	0	956	74	135	
2,683	-3	506	0	0	3,186	609	893	
845	-11	7	0	0	841	18	17	
<b>4,951</b>	<b>-14</b>	<b>640</b>	<b>0</b>	<b>0</b>	<b>5,577</b>	<b>829</b>	<b>1,134</b>	
1,382	-9	268	0	0	1,641	5,238	5,516	
2,790	-88	473	0	263	2,912	1,786	1,557	
2,825	-10	342	0	193	2,964	756	839	
0	0	0	0	0	0	103	133	
<b>6,997</b>	<b>-107</b>	<b>1,083</b>	<b>0</b>	<b>456</b>	<b>7,517</b>	<b>7,883</b>	<b>8,045</b>	
0	0	0	0	0	0	2	2	
0	0	0	0	0	0	5	9	
<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>11</b>	
<b>11,948</b>	<b>-121</b>	<b>1,723</b>	<b>0</b>	<b>456</b>	<b>13,094</b>	<b>8,719</b>	<b>9,190</b>	

Leasing arrangements are classified as finance leasing when all of the general risks and opportunities associated with the ownership are transferred to the lessee as part of the leasing conditions. All of the other leasing arrangements are classified as operating leasing.

Assets held as part of finance leasing arrangements are reported as Group assets at the lower applicable market value compared to the cash value of the leasing rates at the time of acquisition. The associated liabilities with respect to the lessor are reported in the balance sheet as finance leasing obligations. The financial result of the difference between the total leasing obligations and the applicable market value is distributed over the term of the leasing arrangement in the statement of income to ensure that there is a constant interest rate for the remaining balance for the periods involved.

The transfer of the sale-and-lease-back investment as part of a finance leasing arrangement the previous year gives rise to a liability of K€ 88 at the balance sheet date. This is balanced by assets totalling K€ 66. The term of the contract is 36 months in total (non-terminable basic leasing period) and extends by one month at a time for max. 36 months if the lessee fails to return the leased item before the scheduled end of the leasing term and the start of the lease extension period.

There is another finance leasing arrangement which on the balance sheet date is reported on the assets-side with a value of K€ 15, and on the liabilities-side with a value of K€ 19.

Assets held in the form of finance leasing arrangements are depreciated over their forecast useful lives in the same way as analogous assets, or over the shorter contractual period.

The total minimum leasing payments at the reporting date and for each subsequent period are as follows:

Leasing rates		
in K€	Face value	Cash value
Leasing rates, reported in the 2004 financial year	43	-
Up to 1 year	43	41
Longer than 1 year, and up to 5 years	75	65

### 11. Inventories

The inventories are valued at the acquisition or manufacturing costs or the lower net sales values at the balance sheet date.

Manufacturing costs of finished goods and work-in-process include manufacturing costs, manufacturing overheads, direct material costs and material overheads, as well as production-related pro rata administration costs. In line with the benchmark method, borrowing costs were not capitalised. The Fifo method is used to value the inventory asset items.

Some of the inventories are covered by the usual securities and reservations of ownership.

Value adjustments of K€ 391 were applied to the lower net sales values of the stock. The inventories in each segment are as follows in a comparison with the previous year:

Inventories		
in K€	2004	2003
Laser Systems	6,572	6,352
Rapid PCB Prototyping	2,877	3,004
Services	42	48
Others	401	109
	<b>9,892</b>	<b>9,513</b>

### 12. Trade accounts receivable

Trade accounts receivable		
in K€	2004	2003
Nominal amount of accounts receivable	4,704	5,198
Provision for doubtful accounts including exchange losses	-115	-142
Lump-sum provisions	-27	-29
Accounts receivable after provisions, discounting and exchange losses	<b>4,562</b>	<b>5,027</b>

The trade accounts receivable are generally shown in the balance sheet at the nominal value less appropriate provisions for amounts considered to be uncollectable. Those with a term exceeding one year are reported in accordance with their cash value. Here, additions to the provisions for receivables are reported in "Other operating costs", whilst releases are reported in "Other operating income".

The residual book value of the receivables totals K€ 203 and concerns receivables with a remaining term of more than one year.

### 13. Other assets

The Other assets are reported at their purchasing costs or their nominal values.

Other assets		
in K€	2004	2003
Input VAT refunds	274	220
Reinsurance	185	162
Outstanding investment grants	37	67
Income tax refunds	35	165
Others	302	266
	<b>833</b>	<b>880</b>

Other assets amounting to K€ 185 (previous year: K€ 162) have a residual term of more than one year.

### 14. Cash and cash equivalents

Cash and cash equivalents comprise cash on hand of K€ 9 (previous year: K€ 9) as well as cash in other banking accounts of K€ 5,620 (previous year: K€ 4,811).

### 15. Prepaid expenses

The capitalised deferred charges and prepaid expenses primarily concern prepaid insurance premiums totalling K€ 108 (previous year: K€ 107).

### 16. Deferred tax asset

The capitalised deferred tax asset encompasses deferred taxes primarily on the basis of tax loss carry forwards, inter-company profits and the addition of a special entry for grants. Deferred taxes were measured on the basis of the expected tax rates valid for the periods in which an asset is realised or a debt is discharged. Deferred tax assets were capitalised for two subsidiaries even though these companies generated a loss in the 2004 financial year. The business plans which have been submitted indicate that these deferred tax claims can be used in subsequent years. The deferred tax liabilities were solely set up with respect to capitalised development costs. In addition, K€ 46 for deferred tax liabilities from differences in the currency translation of net investments in economically independent foreign subunits was directly entered to the debit of the shareholders' equity. The development of the deferred taxes is as follows:

Deferred tax assets		
in K€	2004	2003
Tax loss carry forwards	844	760
Special item	0	4
Inter-company profit elimination and other deductible temporary differences	420	420
	<b>1,264</b>	<b>1,184</b>

Deferred tax liabilities		
in K€	2004	2003
Capitalised development costs and other deductible temporary differences	605	883
	<b>605</b>	<b>883</b>

## Consolidated balance sheet: Liabilities and shareholders' equity

### 17. Subscribed capital

In accordance with the resolution passed by the Annual General Meeting on 15 June 2000, the Board of Managing Directors was authorised, with the approval of the Supervisory Board, to increase the share capital by up to € 5,250,000 (authorised capital) by one or more issues of up to 5,250,000 new shares for cash or contributions in kind up to 14 June 2005.

The conditional capital according to § 4 Section 7 of the Memorandum and Articles of Association, was adapted in accordance with § 218 AktG to enable the share capital to be contingently raised by up to € 500,000. The conditional capital increase shall only be realised in proportion to the extent to which the holders of convertible bonds, issued by the company on the basis of the resolution passed by the Annual General Meeting on 13 October 1998, exercise their conversion rights to convert the bonds into new shares. The new shares participate in the profits from the beginning of the financial year in which the option to utilise the conversion rights was exercised. The € 1.00 nominal value bonds entitle their owners to exercise a conversion right to acquire one new share in LPKF Laser & Electronics AG with an arithmetical share of the share capital of LPKF Laser & Electronics AG of € 1.00. The conversion price for the acquisition of such a share will be calculated on the basis of a formula reflecting a comparison of the increase in value of LPKF's shares compared to the German share index (DAX). When exercising the conversion right to acquire a share, a cash payment must be made corresponding to the amount the conversion price exceeds the proportional nominal amount of the bond being converted.

The term of the convertible bond is five years (maturity date 29 December 2003) with an annual interest rate of 5%. In accordance with the resolution passed by the Annual General Meeting on 13 June 2002, the Board of Managing Directors was empowered to extend the term of the convertible bond to ten years maximum from the time of issue of the bond. In addition, the exercise period was extended from two to four weeks and the number of exercise periods increased to four. This means that the rights in each period can be exercised the day after the quarterly reports are published. The first conversion took place after the Annual General Meeting on 17 May 2001. This created 137,770 new shares. Conversion in the 2002 financial year created 10,125 new shares. No conversions have taken place since this date.

The share capital of the company after conversion was € 10,647,895 and is divided into 10,647,895 ordinary shares belonging to the shareholders with a theoretical value of € 1.00 each.

The premium on the new shares issued was incorporated in the capital sur-plus.

The Board of Managing Directors was authorised at the Annual General Meeting on 17 May 2001, with the approval of the Supervisory Board, to issue up to 600,000 option rights by 16 May 2011 to members of the Board of Managing Directors, as well as managers and other employees of the company and/or current and future affiliated companies under the following conditions (hereinafter referred to as the "Stock Option Programme 2001"):

Beneficiaries of the 600,000 options available are members of the company Board of Managing Directors with a maximum of 120,000 option rights (20% of the total volume), company employees including the remaining management of the company with a maximum of 300,000 option rights

(50%), members of the management of affiliated companies with a maximum of 60,000 option rights (10%) and employees of affiliated companies with a maximum of 120,000 option rights (20%).

The legal subscription rights of the shareholders are excluded.

The term of the Stock Option Programme 2001 is five years. The option rights issued can be exercised within this time period. By exercising the option rights, shares at a ratio 1:1 can be acquired by paying the exercise price. Purchase takes place subject to the individual conditions formulated by the company Board of Managing Directors in agreement with the Supervisory Board and subject to all revisions arising from capital measures or a conversion of the company.

The exercise price is derived from the average closing price of the shares in the company in XETRA trading at the Frankfurt stock exchange in the ten stock trading days prior to the issue of the option. The exercise price is at least € 1.00.

The new shares which are acquired by exercising the option rights are entitled to a share of the profits for the financial year in which the option rights were exercised. The shares required to fulfil the exercised option rights will be made available by a contingent capital increase. The share capital of the company currently totalling € 10,647,895 will be contingently increased by up to € 600,000 by the issue of up to 600,000 shares. The contingent capital increase will only be implemented for the purpose of the Stock Option Programme 2001 and only to the extent corresponding to the assigned option rights. The Memorandum and Articles of Association of LPKF Laser & Electronics AG have thus been supplemented accordingly in § 4.

The potential acquisition periods cover a period of 30 working days starting with the first bank working day after publication of the quarterly figures. The issued tranche for each group of option holders must not exceed 25% of the total volume per year.

The option holders can exercise the option rights in general up to 50% not earlier than two years after their issue; and an additional 25% not earlier than three years after their issue; and the remaining 25% not earlier than four years after their issue. The option rights lapse when the active employment relationship ends for a reason attributable to the beneficiary. Moreover, the option rights can only first be exercised when the relative development in the price of LPKF Laser & Electronics AG shares (closing price XETRA trading) is higher than the relative stock performance of the Nemax All Share Index (Neuer Markt Index) – or the Technology All Share Index (the successor to the Nemax All Share Index) in accordance with the resolution passed by the Annual General Meeting on 5 June 2003 – during the period from the day of the receipt to the day of exercising the right (performance target in the sense of § 193 Section 2 Number 4 AktG).

Four time periods each lasting four weeks are scheduled for exercising the options. These begin in each case with the end of the first bank working day after publication of the quarterly reports and/or figures. Exercising the option rights is excluded from the day on which the company makes public an offer to its share-holders with respect to new shares or debentures with conversion or option rights by writing to all share-holders or by publication in the Bundesanzeiger of the Federal Republic of Germany, up until the day the shares of the company with entitlement to subscribe are officially quoted for the first time as "ex option rights" at the stock exchange at which the company shares were admitted for official trading.

All taxes including church tax and solidarity tax arising from the granting or exercising of option rights shall be borne entirely by the option holder.

The Board of Managing Directors of the company – and in so far as it is itself affected, the Supervisory Board – is authorised to determine the remaining details of the formulation of the Stock Option Programme 2001 and 2002. This entails in particular:

- determining the number of option rights assigned to an individual or a group of option holders as well as the granting periods within the acquisition periods in each case;
- excluding or guaranteeing the transferability and/or tradability of the option rights;
- the details of the procedure involved in the programme as well as the terms of distribution and exercising, and in addition, the making available of the shares offered under conversion options in agreement with the listing requirements;
- the regulations concerning the treatment of option rights in special cases (e.g. the death or parental leave of an option holder);
- to determine reasons for termination in the interests of the company as well as regulating the terms of termination in detail, and in particular, to determine them more precisely when the employment relationship terminates for reasons for which an option holder is responsible (see (1));
- any revisions to the programme required to safeguard the economic basis of the Stock Option Programme 2001 in the light of changes in the law.

Within the context of this empowerment, the Board of Managing Directors, with the agreement of the Supervisory Board, authorised the 2002 option conditions dated 13 June 2002.

In the 2002 financial year, 75,014 options were issued to the aforementioned beneficiaries in the first tranche. The beneficiaries could only exercise the option rights for the first time in the 2004 financial year. The subscription price is set at € 6.84. A second tranche of 76,706 options was issued in the 2003 financial year at a subscription price of € 2.92. A third tranche of 73,700 options was issued in the 2004 financial year at a subscription price of € 4.10. Of the options issued up to the reporting date, 176,376 options are still entitled to be exercised.

In accordance with IAS 19.145, the granted share options were not reported in the balance sheets or the statement of income.

In accordance with SIC 17, K€ 697 of the flotation costs were transferred from capital reserves to net income for the year on January 2001.

On the balance sheet date, LPKF Laser & Electronics AG held 50,000 of its own shares.

## 18. Minority interests

The minority interests with respect to shares in subsidiaries have developed as follows:

Minority interest		
in K€	2004	2003
As at 1 January	1,557	1,705
Additions/disposals	351	-148
As at 31 December	<b>1,908</b>	<b>1,557</b>

The changes result from the share in the Group's year end results accruing to outside shareholders, from currency translation, from initial consolidation measures, as well as payments with respect to minority interests.

## 19. Provisions for pensions

Germany has a statutory contribution-based basic pension scheme for employees which pays out pensions dependent upon income and effected contributions. The company has no other payment obligations once it has paid its contributions to the state pension insurance institution. Moreover, some Group employees have taken out policies in the 2002 financial year with a private insurer on the basis of a plant agreement within the context of the company pension scheme. In this case as well, the company has no other payment obligations on top of the costs for an allowance reported in the ongoing personnel costs.

The provisions for pensions reported in the balance sheet refer exclusively to the performance-related pension commitments to the current and former executive members of the parent company. The calculations were made using the corridor method in accordance with IAS 19 (whereby actuarial profit and losses are not taken into consideration if they do not exceed ten per cent of the committed amount) and in accordance with the standard international method (Projected Unit Credit Method) on the basis of the „Guidelines“ issued by Dr. Klaus Heubeck.

The following amounts were reported in the balance sheet for the payment commitments:

Reported amounts in the balance sheet		
in K€	2004	2003
Cash value of the non-externally financed obligations	294	287
Unreported time-adjusted losses	-28	-53
Net debt reported in the balance sheet	<b>266</b>	<b>234</b>

The following amounts were reported in the statement of income:

Reported amounts in the statement of income		
in K€	2004	2003
Ongoing office hours expenditure	14	14
Amortised actuarial losses	1	1
Interest expenditure from obligations	17	16
Total expenses reported in the statement of income	<b>32</b>	<b>31</b>



The ongoing office hours expenditure and the actuarial profit/losses are re-reported in "Personnel expenses". The interest expenditure on the obligations is reported in "Financial results".

The net debt reported in the balance sheet has changed as follows:

<b>Changes of net debt reported</b>		
in K€	2004	2003
Provisions for pensions as at 1.1.	234	203
Net expenditure reported in the statement of income	32	31
Pensions paid out of company assets	0	0
Others	0	0
Net debt reported in the balance sheet as at 31.12.	<b>266</b>	<b>234</b>

The provisions for pensions were calculated using the following assumptions:

<b>Calculating assumptions</b>		
	2004	2003
Discounting rate as at 31.12.	5,0%	5,75%
Future increase in remunerations	0,0%	0,0%
Future increase in pensions	1,5%	1,25%
Fluctuation rate	0,0%	0,0%

## 20. Tax provisions and other provisions

Provisions are set up for legal or effective obligations which arose in the past, when it appeared possible that the fulfilment of the obligations could lead to an outflow of Group resources, and when it is possible to make a reliable estimate of the size of the obligations.

<b>Tax provisions</b>		
in K€	2004	2003
Corporation tax and solidarity surcharge	205	64
Trade tax	217	1
Other taxes on the basis of auditing	107	111
	<b>529</b>	<b>176</b>

<b>Provisions schedule</b>					
in K€	As at 01.01.04	Utilisation	Release	Additions	As at 31.12.04
Provisions for pensions	234	0	40	72	266
Accrued taxes	176	69	0	422	529
Bonuses	100	100	0	87	87
Guarantees	195	180	15	187	187
Annual financial statement costs	148	142	6	171	171
Others	326	314	12	486	486
	<b>1,179</b>	<b>805</b>	<b>73</b>	<b>1,425</b>	<b>1,726</b>

The other provisions particularly include provisions for legal and consultancy costs, for the workman's compensation board, holidays, overtime and out-standing bills.

With the exception of the provisions for pensions, all of the provisions referred to are due within one financial year.

## 21. Liabilities

The table below shows a summary of the liabilities broken down according to remaining terms:

Liabilities schedule in K€	Total amount	with a remaining term of			Secured amount	Type of security
		Up to 1 year	1 to 5 years	More than 5 years		
Convertible bond	113	113	-	-	-	-
	(175)	(175)	(-)	(-)	(-)	(-)
Liabilities due to banks	2,589	505	1,297	787	2,065	*,**
	(2,958)	(490)	(1,420)	(1,048)	(2,328)	(*,**)
Prepayments received on orders	311	311	-	-	-	-
	(337)	(337)	(-)	(-)	(-)	(-)
Trade accounts payable	1,429	1,358	71	-	-	-
	(995)	(844)	(151)	(-)	(-)	(-)
Other liabilities	776	770	6	-	37	**
	(835)	(835)	(-)	(-)	(38)	(**)
	<b>5,218</b>	<b>3,057</b>	<b>1,374</b>	<b>787</b>	<b>2,102</b>	
	<b>(5,300)</b>	<b>(2,681)</b>	<b>(1,571)</b>	<b>(1,048)</b>	<b>(2,366)</b>	

\*Land charge, Assignment of claims \*\*Security assignments

The amount due to banks includes fixed interest loans totalling K€ 2,469 (previous year: K€ 2,866) which are subject to interest at rates of 3.75% p.a. to 5.85% p.a.

Conditions of loans		
in K€		
Original loan	Interest rate p.a.	Term
658	3.75%	09/99 - 09/09
1,150	5.85%	09/99 - 09/09
1,585	5.41%	01/00 - 09/09
672	5.50%	01/03 - 12/07

The market value of the fixed interest loan is K€ 2,436. With the exception of the loan taken out in the 2003 financial year, the loans are specified for the financing of new construction measures.

The other liabilities include an unsecured short-term loan totalling the equivalent of K€ 37 taken out by LPKF Laser & Elektronika d.o.o. subject to interest at 6.00% p.a. which was granted by a closely associated company.

The other liabilities carry no interest.

## 22. Bond

Convertible bonds are combined finance instruments consisting of an equity component and a debt component. On the issue date, the market value of the debt component is estimated from the determining interest rate for an analogous non-convertible bond. The book value of the convertible bond per 31 December 2004 corresponds to the market value.

## Other information

### 23. Cash flow statement

The cash flow from operating activities includes tax payments of K€ 491 (previous year: K€ 752), interest paid totalling K€ 187 (previous year: K€ 228) and interest received of K€ 203 (previous year: K€ 96). The short term financial assets refers exclusively to the shares in a money market or bond fund reported in the balance sheet under Securities. The amounts reported in the balance sheet under Liabilities due to banks include K€ 120 (previous year: K€ 92) current account liabilities as well as loan liabilities totalling K€ 2,469 (previous year: K€ 2,866).

### 24. Earnings per share

The undiluted earnings per share is determined according to IAS 33 as a quotient of the consolidated net income attributable to the shareholders of LPKF Laser & Electronics AG and the number of shares in circulation in the financial year.

Dilution of the earnings per share applies when the average number of shares in circulation is increased by including the issue of potential shares in connection with the LPKF Laser & Electronics AG convertible bond issue and the options issued as part of the share option scheme. Convertible bonds and options always dilute the earnings.

Profit per share	2004	2003
Number of shares undiluted	10,633,365	10,647,895
Effect of the issue of potential shares from convertible bond and option scheme	0	29,256
Number of shares diluted	10,633,365	10,677,151
Consolidated earnings (in K€)	930	768
Adjusted consolidated earnings (in K€)	930	768
Income per share (basic, in €)	0.09	0.07
Net income per share, diluted (in €)	0.09	0.07

### 25. Dividend per share

Dividends are only taken into consideration after a resolution on profit appropriation is passed by the Annual General Meeting. The Supervisory Board and the Board of Managing Directors will propose at the Annual General Meeting on 1 June 2005 that the net income for the 2004 financial year of LPKF Laser & Electronics AG totalling € 1,447,053.91 be appropriated as follows: to pay the shareholders a dividend of € 0.04 per share, with a total amount of € 425,915.80 based on the share capital with dividend entitlement of 10,647,895.00; to transfer € 1,000,000.00 of the remaining net income to retained earnings (other retained earnings according to Art. 266 Para. 3 A III No. 4 HGB); and to carry forward the remaining amount of € 21,138.11.

In the event that the company still holds its own shares when the dividend payment is due, the Board of Managing Directors will propose that the net income for the 2004 financial year of LPKF Laser & Electronics AG be appropriated as follows: to pay the shareholders a dividend of € 0.04 per share, with a total amount of € 423,915.80 based on the share capital with dividend entitlement of € 10,597,895.00; to transfer € 1,000,000.00 of the remaining net income to retained earnings (other retained earnings according to Art. 266 Para. 3 A III No. 4 HGB); and to carry forward the remaining amount of € 23,138.11.

## 26. Related parties transactions

### Zeltra Naklo d.o.o., Slovenia

A shareholder of the subsidiary LPKF Laser & Elektronika d.o.o. holds 100% of the shares in Zeltra Naklo d.o.o. Materials and equipment, merchandise and services totalling K€ 33 were purchased from this related party in 2004. In addition, the related party granted the Slovenian subsidiary a short-term loan with a nominal value of TSIT 8,990 subject to interest at standard market rates.

### PMV d.o.o., Slovenia

50% of the shares in PMV d.o.o. are held by a shareholder of the subsidiary LPKF Laser & Elektronika d.o.o. and 50% by other related parties. In 2004, business relations with this company covered development and production services and rentals and/or licence agreements totalling K€ 484. In addition, Group companies carried out orders totalling K€ 55 for PMV d.o.o.

### Related board members and other closely associated natural persons

The managing director of LPKF Properties LLC was granted a loan by this company totalling K€ 109.

In addition, secretarial services totalling K€ 20 were provided by an employee of a company in which the managing director of LPKF France S.A.R.L. has a share.

An external shareholder of the Slovenian subsidiary provided this company with services totalling K€ 20.

On the balance sheet date, LPKF AG had liabilities due to members of the Supervisory Board of K€ 157. CMS, the law firm in which Dr. Büsching is a partner, provided the Group with consultancy services totalling K€ 91.

In addition, one close relative of a former manager in the parent company and one close relative of a member of the Supervisory Board of the parent company were also employed as salaried members of staff.

With the exception of the aforementioned, there are no other significant claims or liabilities, or paid remunerations or benefits issued against the LPKF Group companies with respect to related parties.

## 27. German Corporate Governance Code

The declaration of conformity from the Supervisory Board and the Board of Managing Directors laid down by Art. 161 AktG covering the implementation of the recommendations set out by the German Corporate Governance Code government commission, and the disclosure of any non-compliance with the recommendations, was permanently made accessible to the shareholders by posting on the company's website.

## 28. Other disclosures

### Other financial commitments

Long-term real estate and building lease contracts exist for the offices of A-Laser, LPKF d.o.o., Laserequipment AG and LPKF France, as well as car leasing contracts involving LPKF Motion & Control and the parent company.

The existing car leasing contracts are classified as operating leasing arrangements. The basis for the payable leasing rates are leasing contracts with Volkswagen Leasing GmbH calculated on the basis of the term and the kilometres driven by each car.

There are no other provisions or agreements with respect to the extension of terms or favourable purchasing options.

Total future rent leasing payments classified according to terms are:

- Leasing rates contained in the results for the year:	K€ 46
- up to 1 year	K€ 34
- longer than 1 year and up to 5 years	K€ 27.

See note 10 for the finance leasing commitments.

There are no other significant financial obligations.

### Financial Instruments IAS 39

LPKF Laser & Electronics AG incorporated IAS 39 in its consolidated financial statements from the 2001 financial year onwards.

#### 1. Original financial instruments

IAS 39 fundamentally differentiates between original and derivative financial instruments. The original financial instruments are divided up into the following categories:

- Financial instruments held for trading purposes
- Financial instruments held until reaching maturity
- Issued loans and claims
- Financial assets available for sale.

Financial instruments belonging to the categories "Financial instruments held for trading purposes" and "Financial instruments held until reaching maturity" do not exist.

With respect to the „Issued loans and credits" these are primarily loans and trade accounts payables, other assets, liquid assets, payables associated with the convertible bond, liabilities due to banks, and other liabilities. Valuation was based on continued acquisition costs or the market value. Changes in market value are reported in the books with an effect on net income.

The "Financial assets available for sale" include liquid assets and the securities reported under current assets. The securities concern a money market fund and shares in a bond fund which were valued at the price existing on the settlement date (market value). Changes in the attributable market value were reported with an effect on net income.

The participation in Photonic Net GmbH should also be mentioned in this context and should also be considered as a "Financial asset available for sale". This is a strategic holding acquired with the aim of establishing a platform in the optical segment (lasers) for the exchange of expertise. This company does not have the intention of maximising profits. Because no active market exists for these shares and the market value cannot be reliably determined at acceptable costs, they are reported at the level of their acquisition costs.

The purchase or sale of on-balance sheet assets takes place according to the reporting-at-settlement-date method.

## 2. Derivative financial instruments

The Group uses various derivative financial instruments to hedge against future transactions and cashflows.

The anticipated foreign currency payments are hedged up to 50% maximum for a period of up to six months. During the course of the year, four currency hedging contracts in the form of cash flow hedges with a nominal volume of KUS\$ 203 and KGB£ 46 were entered into to hedge against the currency risks associated with planned sales and the procurement of materials respectively. A rate-hedging transaction totalling KGB£ 25 still remained unsettled at the balance sheet date. Said option which still had 3 weeks to run on the balance sheet date was reported at a negativ market value of K€ 1. In addition, to hedge against an existing dollar trade receivable totalling KUS\$ 1,000, two currency option transactions (fair-value hedges), were taken out. These fair-value hedges whose terms ended on the balance sheet date were reported for a period of less than 12 months at the market value. Their market values were assessed by the bank issuing the hedges. Changes in market value are reported in the books with an effect on net income, insofar as reportable transactions have already taken place. The hedging transactions generated profits of K€ 69 and losses of K€ 3. No other derivative or hedging transactions were in place on 31 December 2004.

## 3. Hedging policy and risk management

Around 75% of the Group turnover was generated with customers outside of Germany. Because of its activities, the company is exposed to various risks. In general, the Group risk management system is designed to cover uncertainties from future developments in the financial markets, and has the aim of minimising negative effects on the financial strength of the Group. Risk management is handled by the Board of Managing Directors which sets the general principles for risk management and lays down the procedures involved. Implementation is carried out by the technical departments through compliance with the authorised business principles, and is coordinated by the Group Risk Manager.

The main risks for the LPKF Group in connection with financial instruments are explained in the following:

### *Liquidity risk*

Minimising the liquidity risk is achieved through continuous liquidity planning. In addition to existing liquid assets, credit lines are also available from various banks. Long-term bank credits are mainly used to finance the buildings in Suhl and Garbsen.

### *Currency translation risk*

Because of its international business activities, the LPKF Group is subject to currency risks, especially with respect to the US-Dollar. Hedging transactions are concluded during the year to hedge against currency risks.

### *Change in interest risks*

The net result and the cash flow from ongoing business activities are largely independent of changes in the market interest level. The credits taken out for construction finance are of a long-term nature and have fixed interest rates.

## 29. Others

The conditions according to Art. 292a HGB to exempt a company from the obligation of preparing consolidated annual financial statements according to German accounting standards have been fulfilled. The consolidated annual financial statements follow the rules in accordance with DRS 1 of the German Accounting Standards Committee, and in particular, the European guidelines on consolidated accounting (directive 83/349/EU). In this context, the main variances from the German Commercial Code (HGB) with respect to accounting methods, valuation methods and consolidation methods were as follows:

- Capitalisation of development costs
- Accounting the convertible bond at present value
- Capitalisation of deferred taxes on tax loss carry forwards, if their use was considered probable.
- Treatment of the costs arising from subscribed capital transactions in a way not affecting net income.
- Securities and currency put options are reported in the balance sheet at their market value even if this exceeds the acquisition costs.

LPKF Laser & Electronics AG has thus been exempted from the obligation of preparing its annual financial statements according to the German Commercial Code.

The members of the Board of Managing Directors of the company are:

- Dipl.-Ing. Bernd Hackmann, Chairman
  - Chairman of the Supervisory Board of Laserquipment AG, Erlangen, from 1 January 2004
- Dipl.-Ing. Dr. Jörg Kickelhain
  - to 29 February 2004
  - Deputy Chairman of the Supervisory Board of Laserquipment AG, Erlangen, to 29 February 2004
- Dipl.-Wirt.-Ing. Christoph Wiese
  - to 30 September 2004
- Dipl.-Ing. Bernd Lange
  - from 18 November 2004
  - Member of the Supervisory Board of Laserquipment AG, Erlangen, from 1 March 2004

The remuneration of the Board of Managing Directors is performance-based and consists of a fixed component and variable performance-based components.

During the 2004 financial year, the Board of Managing Directors received fixed salaries totalling K€ 406 (K€ 445).

The performance-based component was related in the 2004 financial year to the Group EBT and only comes into effect when a minimum net profit for the year of € 1.0 million has been generated. No subsequent changes to the performance targets are permitted. The ultimate size of the performance-based salary components for the 2004 financial year is determined during the elaboration of the consolidated annual financial statements of LPKF Laser & Electronics AG. Because of the profit situation, no variable performance-based remuneration was made for the 2003 financial year.

In addition, the Board of Managing Directors was granted 12,000 share options in the 2004 financial year as part of the 2001 Share Option Scheme as a salary component with a long-term motivation factor.

The following table shows the number of options held by each member of the Board of Managing Directors:

Options held by each member of the Board of Managing Directors				
	31.03.04	30.06.04	30.09.04	31.12.04
Bernd Hackmann	12,800	24,800	24,800	24,800
Bernd Lange	1,156	1,156	1,156	1,156

The intrinsic value of the options granted on 31 December 2004 in the 2004 financial year to the members of the Board of Managing Directors active on the reporting date totalled K€ 0. The intrinsic value of all of the options held by the Board of Managing Directors is also K€ 0.

The options held by the members of the Board of Managing Directors who stepped down in the 2004 financial year is as follows:

Options held by the members of the Board of Managing Directors who stepped down in the 2004 financial year				
	31.03.04	30.06.04	30.09.04	31.12.04
Dr. Jörg Kickelhain	9,600	9,600	9,600	9,600
Christoph Wiese	9,600	9,600	9,600	0

The remuneration of the Supervisory Board of LPKF Laser & Electronics AG from 1 January 2004 was fixed at K€ 135 p.a. plus a variable component oriented to the dividend paid in the preceding financial year. No variable remuneration was paid for the 2003 financial year.

As at 31 December 2004, the members of the Board of Managing Directors held 190,500 (285,650) shares, which are broken down as follows:

Number of shares held by board members				
	31.03.04	30.06.04	30.09.04	31.12.04
<b>Board of Managing Directors</b>				
Bernd Hackmann	190,000	190,000	190,000	190,000
Bernd Lange	500	500	500	500
<b>Supervisory Board</b>				
Bernd Hildebrandt	874,250	874,250	874,250	874,250
Klaus Sülter	808,800	808,800	808,800	808,800


The members of the Supervisory Board are:

- Bernd Hildebrandt, Chairman
  - Businessman
  - Chairman of the Supervisory Board of LPKF Laser & Elektronika d.o.o., Kranj/Slovenia
  - Member of the Supervisory Board of Laserquipment AG, Erlangen (from 1 January 2004)
- Klaus Sülter, Deputy Chairman
  - Power of attorney for Cura Consult GmbH
  - Member of the Supervisory Board of LPKF Laser & Elektronika d.o.o., Kranj/Slovenia
  - Member of Supervisory Board of Bankverein Werther AG, Werther
- Dr. Heino Büsching
  - Lawyer/tax adviser
  - Member of the Supervisory Board of Solara AG, Hamburg

### 30. Events after balance sheet date

With effect from 1 February 2005, the Group sold its stencil production business in North America by selling the related assets of A-Laser Inc.

Garbsen, 14 March 2005  
LPKF Laser & Electronics AG

  
Sgn. Bernd Hackmann

  
Sgn. Bernd Lange



## Auditor's Report

We have audited the consolidated financial statements of LPKF Laser & Electronics AG consisting of the balance sheets, the income statement and the statements of changes in equity and cash flows as well as the notes to the financial statements for the business year from 1 January to 31 December 2004. The preparation and the content of the consolidated financial statements according to the International Financial Reporting Standards of the IASB (IFRS) are the responsibility of the company's Board of Managing Directors. Our responsibility is to express an opinion, based on our audit, whether the consolidated financial statements are in accordance with IFRS.

We conducted our audit of the consolidated financial statements in accordance with German auditing regulations and generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer in Deutschland (IDW). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatements. Knowledge of the business activities and the economic and legal environment of the LPKF Laser & Electronics Group and evaluations of possible misstatements are taken into account in the determination of audit procedures. The evidence supporting the amounts and disclosures in the consolidated

financial statements are examined on a test based within the framework of the audit. The audit includes assessing the accounting principles used and significant estimates made by the Board of Managing Directors, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

In our opinion the consolidated financial statements give a true and fair view of the net assets, financial position, results of operations and cash flows of the LPKF Laser & Electronics Group for the business year in accordance with IFRS.

Our audit, which also extends to the group management report prepared by the Board of Managing Directors for the business year from 1 January to 31 December 2004, has not led to any reservations. In our opinion, on the whole the group management report together with the other information of the consolidated statements provide a suitable understanding of the group's position and suitably presents the risks of future development. In addition, we confirm that the consolidated financial statements and the group management report for the business year from 1 January to 31 December 2004 satisfy the conditions required for the Company's exemption from its duty to prepare consolidated financial statements and the group management report in accordance with German accounting law.

Hanover, 14 March 2005  
PwC Deutsche Revision Aktiengesellschaft  
Wirtschaftsprüfungsgesellschaft

T. Stieve  
German Public Accountant

Dr. M. Schellhorn  
German Public Accountant

## Annual financial statement of LPKF Laser &amp; Electronics AG

<b>Balance sheet: Assets</b>		
in K€	31.12.2004	31.12.2003
<b>Fixed assets</b>		
<b>Intangible assets</b>		
Software	84	63
Rights to use	0	0
	<b>84</b>	<b>63</b>
<b>Tangible assets</b>		
Land and buildings	3,376	3,547
Technical equipment and machinery	660	603
Other equipment, factory and office equipment	596	668
Prepayments and construction in process	0	133
	<b>4,632</b>	<b>4,951</b>
<b>Financial assets</b>		
Shares in affiliated companies	3,441	3,335
Loans to affiliated companies	972	1,008
Participations	2	2
	<b>4,415</b>	<b>4,345</b>
	<b>9,131</b>	<b>9,359</b>
<b>Current assets</b>		
<b>Inventories</b>		
Raw materials and supplies	4,402	3,989
Finished goods and merchandise	2,544	2,641
Prepayments	663	702
	<b>7,609</b>	<b>7,332</b>
<b>Accounts receivable and other assets</b>		
Trade accounts receivable	2,755	3,916
Accounts due from affiliated companies	1,217	1,504
Other assets	340	463
of which with a residual maturity of more than one year K€ 185 (previous year: K€ 162)		
	<b>4,312</b>	<b>5,883</b>
<b>Securities</b>		
Own shares	145	0
Other securities	1,402	1,015
	<b>1,547</b>	<b>1,015</b>
<b>Cash on hand, bank balances and cheques</b>	<b>3,090</b>	<b>2,869</b>
	<b>16,558</b>	<b>17,099</b>
<b>Deferred charges and prepaid expenses</b>	<b>34</b>	<b>35</b>
<b>Total assets</b>	<b>25,723</b>	<b>26,493</b>

<b>Balance sheet: Liabilities and shareholders' equity</b>		
in K€	31.12.2004	31.12.2003
<b>Shareholders' equity</b>		
Subscribed capital (conditional capital K€ 952 [previous year: K€ 952])	10,648	10,648
Capital reserve	4,568	4,568
Earnings reserves		
Reserves for own shares	145	0
Other earning reserves	3,855	0
	<u>4,000</u>	<u>0</u>
Net income for the year		
Retained earnings	1,122	4,800
Net income	325	641
	<u>1,447</u>	<u>5,441</u>
	<b>20,663</b>	<b>20,657</b>
<b>Provisions</b>		
Provisions for pensions	229	257
Tax provisions	399	108
Other provisions	763	583
	<u>1,391</u>	<u>948</u>
<b>Liabilities</b>		
Bonds, of which convertible: K€ 114 (previous year: K€ 175)	114	175
Liabilities due to banks	1,999	2,333
Payments received	207	338
Trade accounts payable	378	281
Accounts due to affiliated companies	557	1,324
Other liabilities	414	437
including taxes K€ 92 (previous year: K€ 78)		
including social costs K€ 128 (previous year: K€ 117)		
	<u>3,669</u>	<u>4,888</u>
<b>Total liabilities</b>	<b>25,723</b>	<b>26,493</b>

<b>Statement of Income</b>		
in K€	2004	2003
Sales	19,726	17,951
Changes in inventories of finished goods and work-in-process	-97	749
Own work capitalised	85	218
Other operating income	1,037	792
	<b>20,751</b>	<b>19,710</b>
Cost of materials		
Cost of raw materials and supplies	8,075	7,698
Personnel expenses		
Wages and salaries	4,567	4,657
Social security and pension costs	847	884
thereof pension costs: K€ 59 (previous year: K€ 72)		
Depreciation and amortisation costs	651	669
Other operating expenses	5,159	4,627
	<b>19,299</b>	<b>18,535</b>
Income from profit and loss transfer agreements	138	232
Municipal trade tax participation passed on to a subsidiary	34	55
Other interest and similar income	197	140
thereof from affiliated companies: K€ 44 (previous year: K€ 69)		
Depreciation of financial assets	652	302
Other interest and similar expenses	142	166
<b>Profit from ordinary operations</b>	<b>1,027</b>	<b>1,134</b>
Taxes on income	688	468
Other taxes	14	25
<b>Net income</b>	<b>325</b>	<b>641</b>
Retained earnings brought forward from the previous year	5,122	4,800
Drawing on other revenue reserves	145	0
Allocation to earnings reserves		
in the reserves for own shares	145	0
in other earnings reserves	4,000	0
<b>Net income for the year</b>	<b>1,447</b>	<b>5,441</b>

## Glossary of technical terms

### 3D-MID

Three-dimensional injection-moulded circuit carriers with an applied circuit structure (MID: Moulded Interconnect Device).

### Doping

Treatment of plastic material with special active substances.

### Flip-Chip technology

A naked chip is flipped over and assembled face down on a substrate (e.g. a PCB). The two are connected via bumps (see wafer bumping). When the soldering and testing of the flip-chip is completed, it is covered by resin and cured. This is then used as the housing.

### Circuit board plotter

Machine for the mechanical structuring of PCBs in Rapid PCB Prototyping.

### LDP method

A thin metal layer is ablated from a plastic using a laser beam to create ultra-fine circuits.

### LDS method

(LDS: Laser Direct Structuring) A special laser-based MID production method. The surface of a plastic treated with a special active substance is activated by laser structuring to expose metal atoms. These act as the nuclei for subsequent metallization to build up the circuit structure.

### Solder Printing

Screen printing of solder paste in the form of solder depots on a PCB, a package or a wafer.

### Packaging

Packaging (electronic packaging) is the name for processes in which electronic components (e.g. transistors) or semiconductor circuits (e.g. chips) are encapsulated in a housing to protect them from mechanical and chemical damage.

### Rapid PCB Prototyping

Method for the production of PCB prototypes by in-house laboratories.

### Reel-to-reel method

Closely resembling a roll of film, a metallised plastic strip is passed in front of a laser beam and structured using the LDP method.

### Stencil

A thin stainless steel sheet in which fine highly precise openings are cut by a laser (StencilLaser). Used for solder printing.

### StencilLaser

Laser system for cutting fine highly precise openings in a stencil for screen printing (stencil).

### Stencil technology

Method of printing depots on a PCB, package or wafer (wafer bumping) by using a stencil.

### Wafer Bumping

Wafer bumping is a method used to apply special bumps (solder blobs) to a wafer (silicon disc with integrated circuits).

### Wafer Level Packaging (WLP)

In wafer level packaging, the size of the circuit housing (package) is similar to the size of the chip. This enables such a housing to be reduced in size which in turn leads to the further miniaturization of electronic devices.

### Imprint

#### Publisher

LPKF Laser & Electronics AG  
Osteriede 7  
D-30827 Garbsen  
Germany

Phone +49 (0) 51 31-70 95-0  
Fax +49 (0) 51 31-70 95-90

lpkf@lpkf.de  
www.lpkf.com

#### Concept, design and layout

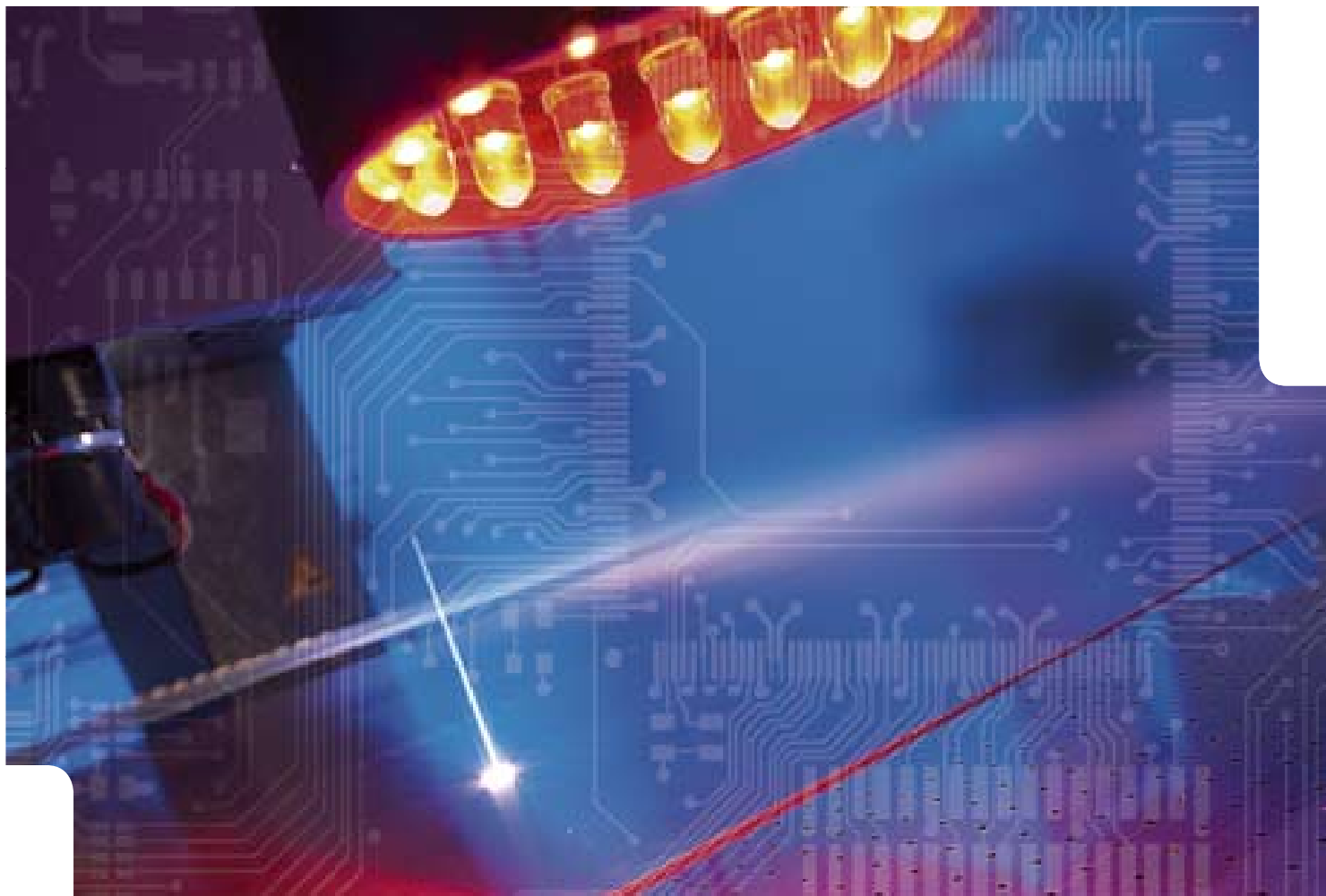
ADHOME  
Leinstraße 33  
D-30159 Hannover  
Germany

Phone +49 (0) 51 11-6 00 95-740  
Fax +49 (0) 51 11-6 00 95-2 07

info@ad-home.net  
www.ad-home.net

#### Number of copies

1.800 German  
1.600 English



LPKF Laser & Electronics AG  
Osteriede 7  
D-30827 Garbsen  
Germany

Phone +49 (0) 51 31-70 95-0  
Fax +49 (0) 51 31-70 95-90

lpkf@lpkf.de  
www.lpkf.com