



Annual Report 2002

Bosch Group

Robert Bosch GmbH, Stuttgart

Originated as the "Workshop for Precision Mechanics and Electrical Engineering" founded by Robert Bosch in Stuttgart in 1886

Responsible for a total of 253 subsidiaries, of which 36 are domestic and the remaining 217 are situated outside Germany

Owners: Robert Bosch Stiftung GmbH, Stuttgart, 92% Bosch family, 8% Robert Bosch Industrietreuhand KG, Stuttgart, execution of the entrepreneurial ownership functions

 Front-page illustration: Seventy-five years ago, Robert Bosch gave "auto-mobility" to the diesel engine, which until then had virtually only been used in stationary functions or in marine applications. In November 1927, full-scale series production of diesel injection pumps and nozzles began, which now made it a

commercial proposition to manufacture diesel engines for overthe-road vehicles. The first commercial application was the in-line pump shown here for an MAN truck. In the foreground can be seen a modern common-rail injector for commercial vehicles.

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Key Figures

Bosch Group Worldwide	2002	2001
Sales	34,977	34,029
percentage change from prior year	+2.8	+ 7.8
Foreign sales		
as a percentage of sales	72	72
Research and development expense	2,487	2,274
as a percentage of sales	7.1	6.7
Investments in tangible fixed assets	2,006	2,368
as a percentage of depreciation	108	123
Number of employees		
average for the year	225,897	218,377
as of January 1, 2003/2002	224,341	220,999
Total assets	27,475	27,783
Equity capital	8,885	9,014
as a percentage of total assets	32	32
Net income for the year	650	650
Unappropriated earnings		
(Dividends of Robert Bosch GmbH)	60	50

Introduction

To our business partners and friends

As for many other companies, 2002 was again a difficult year for Bosch: the world economy in large part did not go beyond the first signs of recovery; the German economy stagnated for the second year in a row, with a significant slowing effect on all of Europe. Even an innovative and internationally broadly represented company such as Bosch, could not avoid being negatively affected by such an environment.

Although the business development was disappointing at first glance, 2002 did meet our cautious expectations. The Bosch Group in total reached a sales volume of about 35 billion euro. That was nearly 3% more than the year before. Because of the significant increase in the value of the euro, the good growth we experienced in North America and Asia did not find its way into our sales figures. Had the currencies remained stable, our sales growth would have been 6%. Net income remained at the level of the prior year.

The business outlook for 2003 is not encouraging and above all very uncertain: another year of stagnation threatens. At present all plans worldwide are overshadowed by the Iraq conflict; in Germany the mood is further dampened by a government program, which even after the announcement of corrective actions, still does not enjoy a broad measure of confidence. The slow growth in the world economy leads to a still more severe competitive environment. At the same time, China, as a new, dynamic economic region, keeps gaining in importance, opening up significant opportunities for us too. We will meet these challenges with determination and do everything to further strengthen our business powers. To do so, we place our emphasis first and foremost on innovation, technical competence and a worldwide regional presence. Our customers and suppliers will continue to find Bosch to be a strong, forward-looking and reliable partner.

Hermann Scholl

Herme- Mon



Supervisory Council

Dr.-Ing. Wolfgang Eychmüller, Ulm/Donau,

Chairman

Chairman of the Supervisory Council of Wieland-Werke AG

Walter Bauer, Kohlberg, **Deputy Chairman**

Chairman of the Joint Shop Council as well as of the Combined Shop Council, and Chairman of the Shop Council of the Reutlingen Plant of Robert Bosch GmbH

Dr. jur. Peter Adolff, Stuttgart, former Member of the Board of Management of Allianz Versicherungs-Aktiengesellschaft

Knut Angstenberger, Stuttgart, (until June 30, 2002) Department Manager in the Diesel Systems Division, and Chairman of the Joint Speaker Group of Robert Bosch GmbH and of the Group Speaker Committee

Dr. h.c. Bo Erik Berggren, Stockholm, former Chairman of the Board of Directors and Chief Executive Officer of The Stora Kopparberget Corp.

Henning Blum, Hildesheim, Chairman of the Shop Council of the Hildesheim Plant and Member of the Joint Shop Council of Robert Bosch GmbH

Dr. jur. Ulrich Cartellieri, Frankfurt, Member of the Supervisory Council of Deutsche Bank AG Ruth Fischer-Pusch, Stuttgart, Trade Unions of the Metals Industry, District Management Baden-Württemberg

Dr.-Ing. Heiner Gutberlet, Fellbach-Oeffingen, (from April 17, 2002) Chairman of the Board of Trustees of Robert Bosch Stiftung GmbH

Dr. jur. Karl Gutbrod, Stuttgart, (until April 16, 2002) former Member of the Board of Management of Robert Bosch GmbH

Dr.-Ing. Rainer Hahn, Stuttgart, (from April 17, 2002) former Member of the Board of Management of Robert Bosch GmbH

Dieter Klein, Wolfersheim, Chairman of the Shop Council of the Homburg Plant and Member of the Joint Shop Council of Robert Bosch GmbH

Dieter Krause, Hildesheim, Chairman of the Shop Council of Blaupunkt GmbH, and Member of the Combined Shop Council

Prof. Gero Madelung, Munich, (until April 16, 2002) formerly Technical University Munich Chair of Aviation Technology

Matthias Madelung, Munich, (from April 17, 2002) Member of the Board of Trustees of Robert Bosch Stiftung GmbH

Prof. Dr. rer. nat. Hans-Joachim Queisser, Stuttgart, (until April 16, 2002) former Director at the Max-Planck-Institute for Solid-State Research Urs B. Rinderknecht, Ennetbaden, Chief Executive of UBS AG

Wolf Jürgen Röder, Tübingen, Trade Unions of the Metals Industry, Managing Director

Gerhard Sautter, Erdmannhausen, Chairman of Main Election Management for the Supervisory Council Election, until April 27, 2002, Chairman of the Shop Council of the Feuerbach Plant, and Deputy Chairman of the Joint Shop Council of Robert Bosch GmbH and the Combined Shop Council

Hans Peter Stihl, Remseck, General Partner of STIHL Holding AG & Co. KG

Jürgen Ulber, Frankfurt, Union Secretary at the Managing Directorate of the Trade Unions of the Metals Industry

Jörg Vial, Nehren, (from July 1, 2002) Department Director for Central Purchasing Projects and Methods and Chairman of the Joint Speaker Group of Robert Bosch GmbH and of the Group Speaker Committee

Hans Wolff, Bamberg, Chairman of the Shop Council of the Bamberg Plant and Member of the Joint Shop Council of Robert Bosch GmbH

Hubert Zimmerer, Stuttgart, former Member of the Board of Management of Robert Bosch GmbH

Supervisory Council Report

In regular meetings, the Supervisory Council kept itself informed about the progress of business and the company's situation. Business developments, financial situation and investment plans, as well as new technical developments were presented and discussed in detail. Reporting and discussion included all important companies of the Bosch Group. Written monthly reports brought the Supervisory Council up to date on current business developments. Special events were covered in newsletters.

Ernst & Young Deutsche Allgemeine Treuhand AG, Stuttgart, audited the financial statements of Robert Bosch GmbH and the consolidated financial statements as of December 31, 2002, and the condensed management report. The auditors in all cases gave their unqualified opinion. The Supervisory Council concurs with the audit findings, without objections, and recommends that the shareholders approve the financial statements of Robert Bosch GmbH and the consolidated financial statements and follow the proposal of the Board of Management for the disposition of net income.

On April 16, 2002, Dr. jur. Karl Gutbrod, Prof. Gero Madelung and Prof. Dr. Hans-Joachim Queisser left the Supervisory Council, followed on June 30, 2002 by Knut Angstenberger. The Supervisory Council expresses its thanks to these gentlemen for their long and constructive work. The shareholders appointed Dr.-Ing. Heiner Gutberlet, Dr.-Ing. Rainer Hahn and Matthias Madelung as new members of the Council, effective April 17, 2002. On July 1, Jörg Vial joined the Council as replacement member.

On June 30, 2002, Claus Dieter Hoffmann retired from the Board of Management. The Supervisory Council thanks him for his long and successful career with the company. At its meeting on April 18, 2002, the Supervisory Council, acting on the recommendation of the shareholders, appointed Gerhard Kümmel deputy member of the Board of Management of Robert Bosch GmbH effective July 1, 2002.

As successor to the Chairman of the Board of Management, Dr.-Ing. Hermann Scholl, who leaves the Board on June 30, 2003 to join the Supervisory Council, the Council appointed Franz Fehrenbach effective July 1, 2003. As of January 1, 2004, Dr. rer. nat. Siegfried Dais will take over from Tilman Todenhöfer as Deputy Chairman of the Board of Management. Tilman Todenhöfer will leave the Board of Management on December 31, 2003, in order to join the Supervisory Council of the company on January 1, 2004. Effective July 1, 2003, Dr.-Ing. Bernd Bohr will take over the chairmanship of the Automotive Technology Business Sector, which is currently held by Dr.-Ing. Hermann Scholl.

Stuttgart, March 2003 For the Supervisory Council Dr.-Ing. Wolfgang Eychmüller Chairman

Board of Management



Back row: Peter Marks, Gerhard Kümmel, Wolfgang Drees, Tilman Todenhöfer, Kurt Liedtke Middle row: Hermann Scholl, Wolfgang Chur, Bernd Bohr Front row: Franz Fehrenbach, Siegfried Dais, Gotthard Romberg

Board of Management

Hermann Scholl

Chairman

 Corporate Planning Coordination Automotive Technology Executive Personnel

Tilman Todenhöfer

Deputy Chairman

 Human Resources and Social Welfare Legal Affairs and Taxes Public Relations

Bernd Bohr

- Gasoline Systems; Diesel Systems (Technology)
- Environmental Protection
- Japan

Wolfgang Chur

- Sales Automotive Technology; Automotive Aftermarket
- Coordination OE Sales; Quality; Licensing, Patents, Trademarks
- Korea

Siegfried Dais

- Car Multimedia; Automotive Electronics; Security Systems; Broad-band Networks
- Research; Coordination Development; Automotive Technology; Information Processing

Franz Fehrenbach

- Diesel Systems (Sales and Business Administration); Automation Technology; Packaging Technology
- Construction and Buildings
- India

Claus Dieter Hoffmann

(until June 30, 2002)

Kurt Liedtke

North America

Gotthard Romberg

- Power Tools; Thermotechnology
- Sales Organization (Trade)
- China

Wolfgang Drees

Chassis Systems

Gerhard Kümmel

(from July 1, 2002)

Business Administration
 Finance and Financial Statements
 Planning and Controlling
 Purchasing and Logistics

Peter Marks

- Energy Systems; Body Electronics
- Manufacturing Coordination; Capital Expenditures; CIP
- Australia
 South America

- Divisions
- Corporate Responsibilities
- Regional Responsibilities

Senior Management

as of April, 2003

Executive Management of Divisions and Subsidiaries

Automotive Technology

Gasoline Systems Ludwig Walz¹ Reiner Leipold-Büttner¹ Rolf Leonhard Rainer Lohse¹ Peter Tyroller John Moulton¹

Diesel Systems Ulrich Dohle¹ Klaus Bohler Karl Nowak Werner Struth Andreas Wiegert

Chassis Systems Wolfgang Drees Manfred Dreyer Jean Dufour Bernd Ehlers¹ Günther Plapp¹ Hans-Joachim Weckerle¹

Energy and Body Systems Beda-Helmut Bolzenius¹ Herbert Hemming Joachim Hoff Peter Schick David D. Robinson¹ **Car Multimedia Wolfgang Malchow**¹ Klaus Dieterich Otto Mayer Wolf-Henning Scheider

Automotive Electronics Volkmar Denner Rainhard Aßmann Josef Evers¹ Rainer Kallenbach

Automotive Aftermarket Eugen Konrad¹ Ruprecht Hammerbacher Udo Wolz Knut Bendixen

Industrial Technology

Bosch Rexroth Winfried Witte¹ Albert Hieronimus¹ Manfred Grundke¹ Georg Hanen¹ Mehmet Varlik

Packaging Technology Friedbert Klefenz Gebhard König Franz Thoren

Consumer Goods and Building Technology

Power Tools Uwe Raschke¹ Boris Gleißner Holger Jacoby Reiner Beutel¹

Thermotechnology Joachim Berner¹ Hans-Dieter Eckhardt Klaus Huttelmaier

Security Systems Uwe Glock Christof Ziegler Peter Ribinski

Broad-band Networks (provisional) Werner Scheuer Norbert Lenge

Executive Management of selected Regional Subsidiaries

USA

Reiner Beutel^{1,2} John Moulton^{1,2} David D. Robinson^{1,2} Hans-Joachim Weckerle^{1,2} Knut Bendixen² Robby Drave Lee Manduzzi Meredith Nickol Richard Nork

France

Patrick Mermilliod¹ Dietmar Feder¹ Gerold Lemperle

Japan

Stefan Stocker¹ Helmut Pfeifle Kiyoto Inoue Friedrich Megerle Hidekazu Oshizawa Toshio Takata Andreas Wiegert²

Italy

Rudolf Colm¹ Massimo Guarini¹

Names in bold print: Presidents of the Divisions

- ¹ At the same time Senior Director of Robert Bosch GmbH
- ² At the same time Executive Vice President Divisions

Spain

Micha Kirchhoff Harald Bronkal

Brazil Edgar Silva-Garbade¹ Helmut Schwarz

U.K. Manfred Müller Manfred Seitz

Other Subsidiaries

Hans-Peter Bauer Manfred Beesch Hermann Birg Klaus Peter Fouquet Heinz Grewe Hans-Karl Hechtel Günter Käs Per Kempel M. Lakshminarayan

Harald Margreiter Krister Mellvé Andreas Nobis Peter Pang Stefan Seiberth Uwe Thomas V.K. Viswanathan

Corporate Executive Management

Adolf Ahnefeld¹ Ferdinand Allerkamp Stefan Asenkerschbaumer Klaus Bleier¹ Theo-Ernst von Bomhard Frank-Ulrich Breitsprecher Detlef Classe Klaus Deller Christian Deplewski Heinz Derenbach

Bernt Graf zu Dohna Ulrich Eichler Gerhard Felten Gerd Friedrich Manfred Graf Wolf-Dieter Haecker¹

Thomas Heinz Eva-Maria Höller-Cladders Hans-Gerd Holtkamp Bertram Huber Peter Kilgenstein Detlef Konter Christoph Kübel Wolfgang Mierzwa Manfred Möllendorf Klaus Neidhard¹ Alfred Odendahl¹

Gert Siegle Karl Strobel Gerhard Turner Thomas Wagner Horst Wittmoser¹ Gunter Zimmermeyer

Senior Vice Presidents – Original Equipment Sales

Dieter Eichler¹ Robert Hanser Karsten Köhn Volker Schmidt

Robert Bosch International Advisory Committee

Dr. Hermann Scholl, Stuttgart President

Dr. Peter Adolff, Stuttgart Dott. Alessandro Benetton, Treviso/Venice Dr. h.c. Bo Berggren, Stockholm Miguel Boyer Salvador, Madrid Fernão Botelho Bracher, São Paulo Sir Alec Broers FRS FREng, Cambridge Dr. Hugo Bütler, Zurich Dr. Cornelius A. J. Herkströter, Wassenaar/The Hague Kensuke Hotta, Tokyo Dr. Klaus Kinkel, St. Augustin/Bonn Dr. Henry A. Kissinger, Washington Charles F. Knight, St. Louis Professor Gero Madelung, Munich François Scheer, Paris Dr. Guido Schmidt-Chiari, Vienna

Management Report

A well-maintained position in a difficult environment

Business in 2002 generally developed as expected. Following the worldwide economic weakening in 2001 and the terror attacks in the United States on September 11 of that year, it was foreseeable that the general business climate in 2002 would remain depressed. We had incorporated this in our planning. In reality, economic growth worldwide for 2002 amounted to about 2%, while Western Europe and especially Germany came in considerably lower.

The Bosch Group in 2002 reached total sales of about 35 billion euro. That was nearly 3% more than in the prior year. The increase, however, was entirely the result of some newly consolidated entities. Primarily this was the first time that Rexroth was consolidated for the full twelve months. Eliminating these effects, our sales were nearly 1% lower than the year before. However, we lost approximately 3% in sales volume in euros because of the upward valuation of this currency and the resulting exchange effects, mainly in our sales outside Europe.

The currency movements hide the fact that our business in the NAFTA area developed well in comparison. Our sales – without changes in consolidation – on a U.S. dollar basis rose about 5%, supported above all by a similar increase in the American automobile production. In Asia, our Group sales increased by about 9% in local currency. In both cases, the equivalent euro-denominated sales were approximately the same as the year before. In contrast, we were disappointed primarily by the business development in Germany and Latin America, where some of our divisions had to cope with noticeable decreases. In the European area outside Germany, business generally remained stable. The non-German portion of our consolidated sales stayed at 72 %.



Breakdown of sales By business sectors in 2002 (as a percentage)



Investments in tangible fixed assets

Defense of market shares

Along with the continuing economic weakness and the accompanying overcapacity, competition worsened also in many of our areas of activity. We were nevertheless able to maintain our leading market positions in most cases, even improving them further in important areas.

Although automobile production in our largest market, Western Europe, decreased in 2002 by 1.5 %, our Automotive Technology Business Sector was able to keep its sales at around 23.3 billion euro, more or less equal to the previous year. As in prior years, the high-pressure diesel-injection systems were an important support for our business. They helped to further increase the share of diesel-powered new-automobile registrations in Europe to over 40 %. Our sales of diesel systems amounted to approximately 6.5 billion euro. Since we have decisively defined the diesel market with our innovations in recent years, we are confident that we can continue to meet the coming competition. In addition, we see good opportunities in the medium and long-term for diesel systems also in North America and Asia, since alternative drive systems with a comparable potential for fuel savings by similar power output will not be available for some time.

Business in chassis systems, with sales of nearly 5 billion euro our second largest area of activity within automotive technology, increased as a result of us expanding to become the producer of complete braking systems. During 2002 we gained a large additional order volume, which will make us, from 2006 onwards, by far the largest supplier of chassis systems in North America. We are pleased that especially the business with our electronic stability program (ESP) developed positively in 2002. By the middle of 2003, we will have produced 10 million of these systems. Statistically valid tests performed by sources independent of Bosch have proven that ESP significantly contributes to the reduction in accident frequency.



Investments in tangible fixed assets

By business sector 2002 (as a percentage)

We are also making considerable efforts in the Consumer Goods and Building Technology Business Sector to achieve greater growth in the future. Strong cyclical headwind in 2002, however, caused total sales of this sector to stagnate at around 7.7 billion euro. Especially consumer goods were subjected to sharply increased competitive pressure from the Far East, particularly by power tools from China and by household appliances from Korea. Because of this challenge, but also because of the large growth potential in these countries, we will increasingly direct our activities at this region.

In industrial technology, we were forced to deal with the most unfavorable economic development in 2002. In comparison to the previous year, although our sales fell by 6% to about 4 billion euro, they were still in excess of our expectations. As is always the case when capacity utilization shrinks, investment volumes are adjusted at short notice, leading to declining sales in capital goods. Experience shows, however, that growth rates in the following periods of upswing are all the stronger, thus permitting us to keep to our long-term expansion of this business. The successful integration of Rexroth into the Bosch Group serves as a further encouragement.

We are also continuing our efforts to reach a better balance among the various business sectors in the Bosch Group. Having included Rexroth in the consolidation for a full year, the share of industrial technology to total sales in 2002 grew to more than 11%, while the share of automotive technology decreased to 67%. Two years ago, those shares were 4% and 71% respectively. The Consumer Goods and Building Technology Business Sector share amounted to about 22%. In this year, this will be supplemented by the take-over of the video-surveillance business from Philips, with which we have further strengthened our security-technology activities.

Profits remain level

Profits earned in 2002 were not satisfactory, at least not as measured by what we consider absolutely necessary for the protection and expansion of our business. In view of the unfavorable economic environment, however, we regard it as a success that we were, in general, able to achieve our profit plans for 2002. The operational results of our regular activities in 2002 were about the same as the year before. Since we keep our long-term high growth goals, it remains the key to our business strategy to improve profits as the source for financing our growth.

Employment levels stay generally the same

At the beginning of 2003 we employed about 224,000 people worldwide, of which 122,000 or 55% worked outside Germany. Included in this total are approximately 3,700 employees who were added during the year 2002 because of changes due to consolidation. Not counting these additions, we kept the number of employees nearly constant, despite the unfavorable business development. In the areas of development, application engineering and services the number even increased slightly. The continuing economic weakness, however, requires us to tighten our belts. Needed adjustments are made using above all the available flexibility in union contracts. At the same time, however, struc-



Power and precision: One of the first purchasers of our diesel injection pumps in 1927 was MAN. With this equipment MAN was able to develop an engine with more power, and lower fuel consumption than other contemporary engines. Thus was born the world's strongest diesel truck at that time.



In our corporate research and development area, we work on new, for each application customized, materials - for instance polymer-ceramic composites. Their basic materials can be formed flexibly thus allowing the economic manufacture of such complex assemblies as diesel-engine glow plugs. These respond quickly and further shorten the start-up phase of modern dieselengine motor vehicles.

tural alignments are required at various locations, which we want to make as socially acceptable to our employees as possible.

Successful quality work

We have made further progress with our quality work in all areas. Although the complexity of most of our products continued to increase, the total number of customer complaint reports fell to the lowest level ever. Contributing especially to this is the continuing improvement of our development and production processes, utilizing a systematic self-assessment in line with the Excellence model of the European Foundation for Quality Management (EFQM) and the broad support provided by Six Sigma methods. But we also invite public evaluations: during 2002, our plant in Bursa, Turkey, was awarded the European quality prize "EFQM". More crucial, however, is the fact that we work closely with our customers and suppliers in securing quality.

Further globalization in purchasing

With sales of 35 billion euro in 2002, our purchasing volume amounted to approximately 20 billion euro. In tact with the further globalization of our activities, we enhanced the international aspect of our purchasing. Procurement outside Germany increased to about 60%. Global Purchasing Management Teams combine the requirements of the most important material groups in electronics, electromechanics and mechanics in our three most important market regions, and concentrate our demand on the most efficient suppliers. Our base of preferred suppliers in Asia and America was deliberately expanded, and we persisted with the shift of the added-value share to our best suppliers. For the standardization and acceleration of our operating processes we utilized the expanded possibilities of the internet market SupplyOn.

Reduced investments

In view of the noticeable risks of an extended period of weakness in the economy, we reduced our investments in tangible fixed assets in 2002. After the large volume of investments in prior years, this applied primarily to expansion investments. The construction of a new development center for automotive technology in Abstatt, which was started in 2001, however, was continued according to plan. The first buildings there will be ready for occupancy in 2003. On the building site of the original Bosch location in Stuttgart we laid the cornerstone for a continuing education center, which is intended to become an important focusing point for the Bosch Group.

Research and development continue at high levels

Our research and development activities in 2002 stayed at high levels. This entitles us to claim remaining the leader with innovations and thus to provide for our growth under our own power. Our 2002 research and development expenditures amounted to 2.5 billion euro, or 7.1% of sales, compared to 6.7% the year before. At the beginning of 2003 we employed about 20,000 people, mostly scientists, engineers and technicians in worldwide research and development. Despite stagnating operations, this was 8% more than the prior year. As a result of their inventions, we were able to apply for more than 2,600 patents.

BeQIK - be better, be Bosch

To achieve the best-possible results with the resources applied, we continue to work toward a permanent improvement of our internal processes under the motto BeQIK. Q stands for quality, I for innovation and K for orientation to customer requirements. However, we want to stay unmistakably Bosch. Included therein is our traditionally strong sense of values, which we have brought to bear and manifested in our entrepreneurial activities. This code of values ranges from future and results orientation, by way of responsibility, initiative, openness and trust, via fairness, reliability, credibility and legality all the way to cultural diversity.

Value contribution as central control measure

Starting in 2002, we introduced value contribution as a central business measure for the control of operations. The assessment of results using return on sales as applied in the past is thus expanded by a stronger focus on the use of resources. Through their value contribution we can tell which profit individual areas earn over and above our uniform internal return on capital, as well as the extent to which they contribute to the overall increase in the value of the company. The variable portion of management compensation is tied to this index.

Divisions with worldwide responsibility

With increasing globalization of all business and further concentration at our customers, our divisions have in the meantime taken on responsibility for their activities worldwide. They therefore plan and control their business for all countries with continuous consolidation. This is combined and coordinated in our three business sectors. In order to coordinate the various regional interests, the managers of the most important regional subsidiaries overseas are at the same time members in the executive management of the divisions. In the European aftermarket business we have combined the sales and management functions of several countries.

Outlook for the current year

Business prospects for 2003 remain depressed: another year of stagnation is likely. The worldwide economic climate is overshadowed by the Iraq conflict. An incomplete and not very growth-oriented government program in Germany adds paralyzing uncertainties. Rarely was the environment for investors and consumers as obscure and onerous as today. Whether these conditions will change for the better during the further course of the year is open. Should a military escalation occur in the Middle East, together with massive oil-price increases, then a short economic collapse cannot be ruled out. Should the con-



Total expenditures for research and development (million euro)



Whether for automobile engines or large locomotive and marine engines – the development and production of injection nozzles requires greatest precision. In order for diesel engines to work cleanly and economically, we test the injectionnozzle holes using precise optical measurement techniques.

flict be settled soon, however, there would be good chances for improvement of the worldwide economic climate.

We utilize the time to strengthen our own power to grow and to prepare for an enduring improvement in profitability. We achieve this with convincing innovations, consistent cultivation of the market and committed orientation to the customer, unremitting improvement in quality of our products and internal processes, permanent reduction in costs at all levels, further consolidation of our areas of business through acquisitions, and further systematic expansion of our activities outside Europe.

Risks inherent in future development

The greatest risks facing us for sales, employment, profits and liquidity lie in the extremely uncertain political and economic conditions, with difficult to calculate effects on sales, prices and rates of exchange.

We intend to apply the following measures in particular in order to limit the possible negative effects of these risks:

- We have based our 2003 and later business plans on generally cautious growth premises. A stronger economic collapse as a result of another Gulf war is, however, not anticipated.
- We have assumed that the euro will experience a further increase in value vis-à-vis the US dollar and other currencies, with the resulting lowering effect on our sales planning expressed in euro.
- In view of the uncertain economic background we have planned our resources cautiously, keeping in mind however, not to pass up concrete longterm growth and profit opportunities in the process.
- We want to respond to employment fluctuations in 2003 by again using available tools for flexible adaptation of work volumes.

We assess the growth and profit perspectives arising out of the assumptions made for the Bosch Group as realistic. Should things develop more unfavorably due to external influences, we will promptly take all measures in order to avoid substantial losses of earnings.

Our risk management is based on a clearly structured internal reporting system, which also includes all new business entities which were added in recent years through acquisitions. For better transparency and worldwide control, the business conducted by our non-German subsidiaries is, from 2003 forward, to a large extent consolidated in the applicable divisions.

Our risk management is complemented by central summarization and constant monitoring of all financial and foreign currency movements of our worldwide business units. Our monetary positions in the most important currencies are to a large extent in balance. The more significant open currency positions are hedged on a corporate-wide basis. In order to control the risks from changes in value, we also adjust our capital investments to basic market developments on a timely basis and strictly in conformity with the principle of due care, so that the current liquidity needs of the Bosch Group are always fully covered.



Automotive Technology Business Sector

Key numbers

	2002	2001		
Sales	23.3	23.2	billion	euro
Investments	1.5	1.9	billion	euro
R&D Expense	2.1	1.9	billion	euro

The worldwide production of motor vehicles in 2002 rose by about 4 % to 58 million units, while production in Western Europe declined by 1.5%. The massive pressure on prices in the automobile industry continues without letup. We maintain our position in this difficult environment with successful products such as high-pressure diesel-injection systems and the electronic stability program (ESP). Above all, we continue to direct our innovative powers at the goals "safe, clean, economical". We were thus able to keep sales of our Automotive Technology Business Sector in 2002 at the prior-year level, amounting to 23.3 billion euro.





By using aluminum, we were able to design our new brake calipers for front-wheel disc brakes to be both very light and yet rigid. They are service-friendly and also meet the requirements of the new EU regulation on automobile recycling.

 We produce high-pressure injection pumps for fuel-saving gasoline direct-injection. They regulate pressure in accordance with need, thus operating very efficiently. Their flow rate was further increased.

Diesel technology continues its advance

The diesel share of new passenger cars in Western Europe again increased, to over 40%. We expect this figure to grow to about 50% in the next few years. Our common-rail and unit-injector systems are significant contributors to this growth. Of the common-rail systems for passenger cars alone, we have supplied about 10 million units between its production start in the middle of 1997 and the end of 2002. There continues to be great growth potential in the NAFTA area, in Asia and in Eastern Europe, where we are informing the public of the advantages of the new diesel automobiles. We have thus also held "Diesel Days", which had found significant notice in the United States, with representatives of the press and with politicians in Japan, Korea and Russia.

Piezo-injectors for diesel injection systems ready for mass production

We continue to develop our injection systems for diesel engines further. As such, our diesel systems division in 2003 will start mass production of commonrail injectors, in which piezo-elements control the fuel injection. The new injectors are more compact, faster and more precise, and enable diesel engines to operate still more efficiently, quietly and cleanly.

Second-generation common rail now also in commercial vehicles

After having started production for passenger cars, the second generation of common-rail technology also went into production for commercial vehicles. Its higher injection pressure lowers exhaust emission values and increases engine power.

Gasoline systems with new technology for a cleaner environment

In order to meet legal exhaust regulations, gasoline-engine injection systems must be adapted precisely to the geometry of the intake manifold and combustion chamber. The new injector EV14i from our gasoline systems division is so compact, that it can be directly integrated into the fuel rail independent of the engine type. The electrical connection is thus also simplified: only one central plug is needed for all injectors in an intake module. What was limited in prior years to diesel engines, has now reached the gasoline user: greatly reduced fuel consumption. Here: components of our electronically controlled system for gasoline direct-injection.

> Thanks to state-of-the-art technology, in Generation 8 of the Electronic Stability Program (ESP), computing power was increased, while at the same time weight was reduced and a wide variety of innovative functions were introduced. Shown below: The new

Generation 8 ESP.





New Electronic Stability Program (ESP) line enters series production

Our chassis systems division has introduced a new series of brake-control systems, which is extremely compact and which has been expanded with additional functions. The basic ABS version can be supplemented by an ASR function, or expanded to form an ESP system. The ESP version first went into series production at the end of 2002. Between the start of production in 1995 and the end of 2002, we have already produced 8 million ESP units, thereby contributing significantly to greater driving safety.

Electric power steering in series production

ZF Lenksysteme GmbH in Schwäbisch Gmünd, a fifty-fifty partnership of Bosch and ZF Friedrichshafen AG, has commenced full-scale production of electric power steering. This system can replace the traditional hydraulic steering assists and requires power only upon steering maneuvers. This leads to approximate fuel savings of 0.2 liters per 100 kilometers.



We started manufacture of the first gasoline directinjection in 1952. This worldwide first was standard equipment for the Goliath 700GP and the Gutbrod Superior 600.

Improved controls over occupant-protection systems

Our newest control system for passenger safety is modular and flexibly expandable. Key components are the controller with integrated sensors, and additional acceleration and pressure sensors in the vehicle body. The new electronics processes data from up to twelve decentralized sensors, and controls, as needed, a maximum of 38 restraint devices, such as airbags or seatbelt tighteners. The newly developed software can, with the large number of sensors, analyze the type and gravity of an accident even more precisely and apply the restraint devices in optimal fashion.

More driving safety through awareness of the environment

We have combined our activities in the automobile electronics division into an area called driver-assistance systems. The emphasis of our developments lies in systems which monitor the vehicle environment and which can detect dangerous situations early. To this purpose, we developed highly sensitive sensors and efficient software, which evaluates and interprets the data. The "vigilant vehicle", which supports the driver and alerts him to critical situations, thus becomes a distinct possibility.



Greatest precision in the production of gasoline direct-injection: laser welding of the swirl plate to the valve needle for high-pressure injection

valves.

Sales of Automotive Technology



(billion euro)



ESP equipment rate

ESP-equipped vehicles as a percentage of passenger-car production in selected markets 2001/2002

¹ including Germany







With the help of electronic systems, we continually find new functions which render driving safer, cleaner and more economical. Here: test of a controller in airbag development.

TwinCeiver: the smallest double tuner in the world

Clearly better radio reception is what the newly-developed TwinCeiver concept from our subsidiary Blaupunkt offers. We equip top-of-the-line car radios both as standard equipment and in the aftermarket with this concept. We have combined new double receive circuits and new antenna technology on a single semiconductor chip. The TwinCeiver evaluates the digital signals of two antennas and combines them into one strong, interference-free signal.

Digital radio reception and MP3 in one instrument

With the Woodstock DAB 52, we have introduced a further new type of car radio into the market. It processes not only the traditional wavelengths – ultrashort wave, medium wave and long wave – , but also the signals of digital audio broadcasting (DAB) and thus offers radio sound of CD quality. Recording media with digitalized music in MP3 format can also be used. As storage medium, we for the first time use a chip-card. The compact instrument fits the standard installation slot.

Integrated solution for automobile repair shops: under the title "Bosch Diagnostics", we combine all products which repair shops need to diagnose, maintain and service vehicles. Training and a hotline for technical questions supplement the range of test equipment and applicable software we have to offer.







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An alternator's high performance and efficiency are achieved primarily by a very dense winding of the copper wire in the stator grooves. To do so, the wires are first wound onto a flat stator core, which is easier to access, after which it is then bent into the usual rounded form.

Getting there without interference: Our Blaupunkt subsidiary has established an EMC center - accredited by both the German federal traffic agency and the government regulatory administration for telecommunications. In an anechoic chamber we determine with specific measurements and quality tests the electromagnetic tolerance of our vehicle navigation systems.

Attractive start in dynamic navigation

With its new radio navigation system TravelPilot DX-R52, Blaupunkt offers drivers, at an attractive price, not only a well-equipped car radio with CD player, but at the same time a complete navigation system for routing searches in traffic. The compact unit can easily be installed in the standard radio slot in all common vehicles. Routing to destinations is announced by voice and also by display.

Commercial-vehicle industry in focus

Because of its long-term growth potential, we see exceptional sales opportunities for a wide range of our innovative products in the commercial-vehicle market. In order to optimally tap this potential, we have established commercial-vehicle departments in the relevant divisions staffed by employees who concentrate their activities exclusively on commercial-vehicle customers.

Bosch Engineering GmbH: all engineering services under one roof

This subsidiary, formerly known as ASSET Automotive Systems and Engineering Technology GmbH, continued to grow rapidly in 2002. The company now performs development services in the area of electronic vehicle systems for nearly all automobile manufacturers. We have placed our Motorsport department in this organization as well, in order to take advantage of further synergies in the area of engineering services.

Bosch service workshops: the change to bumper-to-bumper service

The Bosch service organization is changing its concept by offering new services for the entire vehicle, so that the car driver receives optimal service in one place – from diagnostics with the latest hard- and software to original replacement parts. With nearly 10,000 workshops and a worldwide new market image we are in the process of enhancing the familiarity of the Bosch name with car drivers.

Industrial Technology Business Sector

Key numbers

	2002	2001	
Sales	4.0	3.2	billion euro
Investments	149	145	million euro
R&D Expense	207	171	million euro

Even though the integration of our new company, Bosch Rexroth AG, was successful, the weak capitalgoods demand in 2002 left its mark on our Industrial Technology **Business Sector, whose sales** amounted to 4 billion euro. This was nearly a quarter more than in 2001, but only because Rexroth was consolidated for the first time for a full year. The comparable sales of Bosch Rexroth AG actually decreased by 7% as a result of the weakness in capital investments. Our packaging technology division, however, was able to continue its growth. Looking forward beyond this year, we again see good growth perspectives for our industrial technology. After all, Bosch Rexroth means to mechanical engineering what Bosch automotive technology means to the automobile industry: a technical leader and a partner with a broad range of products.





Into the wind: azimuth gears always turn the machine pod of wind power plants in the right direction. Bosch Rexroth each year supplies several thousand sets of gears for the generation of renewable energy. A contribution to the protection of the climate.

Electricity for a whole city: the largest offshore wind-energy project in the world was erected off the Danish North Sea coast. In the summer of 2002, a total of 80 windmills went into operation there. Bosch Rexroth provided the gearsets for these mills. This allows the new windfarm to produce a rated output of 160 megawatt. That is enough for about 150,000 Danish households.

The Drive & Control Company: Bosch Rexroth offers one-stop solutions

The marketplace has accepted the new Bosch Rexroth AG very well. We increased market share in 2002 in some areas. Both in industrial and mobile hydraulics, Bosch Rexroth plays a leading role worldwide. In addition, the integration has led to sensible product complements. For instance, assembly technology, which Bosch contributed, was not in the Rexroth portfolio. We are now, more than before, able to offer solutions from one source – not only in factory automation, but also for mobile applications. That is exacly why Bosch Rexroth AG carries the slogan: "The Drive & Control Company". This concept corresponds to the prevailing customer trend towards systems solutions.

Cooperation and a new plant: greater presence in the growth region of Asia

During 2002, Bosch Rexroth expanded its product range in pneumatics by entering into cooperation with the Japanese manufacturer Koganei. This step also improved our presence in the growth market Asia. We are presently expanding our production capacity, especially in China. A new plant for industrial hydraulics is under construction there in Wujin.

D&C engine: knowing in the planning phase how the system will operate

Considering the business by industry, construction and agricultural machinery, packaging and wind energy, developed positively. Bosch Rexroth's strength lies not least in the many new products which went to market in 2002, such as the buckling-arm robot and the drive series IndraDrive. We are working under high pressure on our new simulation system, the D&C engine. This system will allow computer testing of the dynamic characteristics of machines and assemblies as early as the development phase. That is exactly what customers want: to know during the planning process how a system will operate as a unit.

Sales of industrial technology





Movement on the stages of the world: whether in Warsaw, Bayreuth, Budapest or in the Beijing Opera, stage technology from Bosch Rexroth operates in the background - quietly, reliably and with precision. We deliver a complete package, including drive and control systems, for this purpose. When needed, we even assume the role of general contractor.





High tech in agriculture: at Bosch Rexroth we combine powerful hydraulics with state-of-the-art electronics and software into ready-to-assemble systems, including data bus connection. Thus we increase the productivity of tractors for the tough jobs in all climates.



Service automation: growth in services despite market trend

Just how customer-specific Bosch Rexroth operates is also visible in the production of engineering and software modules. With these and other services, we were able in 2002 to expand our new Service Automation department in Germany despite a negative market trend. This positive experience will be utilized by Bosch Rexroth step-by-step in other European and later in overseas markets.

Bosch Packaging Control: packaging machines become even more flexible

Our packaging machinery division also supplements its product range with an extensive service program. Customized to the specific wishes of customers, it ranges from planning entire production lines to on-the-job training of customer employees. This has become important because packaging machines are becoming still more powerful and, especially, more flexible as a result of our newly created control platform, Bosch Packaging Control (BPC).

One area, where we focus the applications of our packaging technology, is the food and confectionery industry. We have held a strong position in this industry for a long time. With our packaging machines for the pharmaceutical industry we are the market leader, both in filling injection solutions and in packaging capsules. In all these areas our business has an international orientation: in 2002, 85% of our sales of packaging technology was outside Germany.

Clinically clean: that is what counts in packaging technology for the pharmaceutical industry, which is our domain. The picture above shows a machine with six stations for cleaning ampules both on the inside and outside.

Consumer Goods and Building Technology Sector

Key numbers

	2002	2001	
Sales	7.7	7.6	billion euro
Investments	245	248	million euro
R&D Expense	219	235	million euro

2002 was a difficult year for our **Consumer Goods and Building** Technology Sector. The continuing weakness in the worldwide economy slowed our business just as did the crisis in the German construction industry. As a result, our sales in consumer goods and building technology stagnated in 2002 at close to 7.7 billion euro. However, we see good growth opportunities in the long term. That is why we have again deliberately expanded our portfolio of products in 2002. For instance, we took over the video-monitoring business from Philips as an addition to our security systems. At the same time we are doing everything we can to grow internally. To this end, our power tool division is rapidly expanding its manufacturing capacities in Hungary and China.





Sales of consumer goods and building technology¹ (billion euro)

2001 also including aerospace technology

Wet, heavy or even high grass is a problem for many lawnmowers, but not for our new Rotak with Powerdrive system. It has an extremely strong and high-speed electric motor, as well as a transmission. Compared to traditional direct-drive electric lawnmowers, the Rotak develops approximately ten times the power at the blade. At low rotational speeds it generates the greatest torque. The advantage: if high or heavy grass slows the blade, power is automatically increased until even the most stubborn grass has been cut.

Power tools: breaking the ground for a new plant in Hungary

Our power tool division, like other brand-name producers, is the object of attacks by so-called no-name suppliers. Their equipment is often inferior in quality, but they nevertheless put pressure on prices. In response, we are concentrating the production of our basic tools in each of our three major market regions at an efficient and at the same time low-cost location. Aiming at the European market, for instance, we have commenced building a new plant at Miskolc in Hungary – groundbreaking took place in the summer of 2002.

In 2002 we maintained our position as leading supplier of brand-name tools, even though the market in our core business, power tools, weakened slightly worldwide. Key to our success are innovative tools, which specifically meet customer needs. Examples are the new Akku product line and the Rotak lawnmower with Powerdrive system.

Thermotechnology: new equipment for the Chinese market

The innovations in our thermotechnology division are oriented toward the specific characteristics of each country. For instance, during the summer of 2002, we introduced a new generation of gas water heaters for the Chinese market. These units, which are manufactured in our Shunde, China, plant have an installation depth of only 10 centimeters. Despite a weakening world market, we were even able to achieve some sales growth in this area of operations. We thereby consolidated our position among the most important producers of gasoperated space- and water heaters.

Household appliances: growth primarily in Western Europe and Asia

Both sunlight and shadows marked the year 2002 for the business of BSH Bosch und Siemens Hausgeräte GmbH, a 50-50 Bosch and Siemens joint venture. Sales increased by 3.2% to 6.3 billion euro, but growth came primarily from Western Europe and Asia, not from Germany. The share of non-German sales in total sales rose from 71% to 73%. BSH was successful with its aggressive innovations, and concentrated on selling high-value items.

Ever drilled into an electric wire or a water pipe? That annoyance is now a thing of the past. Our new wall scanner D-tect 100 from our power tools division virtually renders walls transparent. It locates metals and even plastic pipe up to a depth of 10 centimeters. It is a cost saver for both craftsman and the demanding do-it-yourselfer.



Security technology: among the top five in product sales

Even though the economic environment is difficult, the world market for security systems grows – especially in the 2.6 billion euro video-monitoring segment. In just this area we were able to strengthen ourselves significantly: we took over Philips' activities in the professional video-monitoring business. This catapulted us into the group of five largest product suppliers in the world. We have also expanded our sales organization in the security systems division. We are represented in 36 countries with subsidiaries.

Broadband networks: interactive services and digital television are on the way In the broadband-network business we are only active in Germany. The market here keeps expanding, even though the reforms are not completed. Our networks grew markedly in 2002. We improved our networks technically in order to be able to offer additional and digitally transmitted television programs as well as interactive services. In Hagen, in Westfalia, we started operations of a new city network for that purpose.


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Such advertising carries a punch: throughout Europe our power tool division positions its green power-tools line for do-it-yourselfers anew. With integrated advertising and sales promotion, from classic hard-copy ads and TV spots, to identical-design product packaging, we are enhancing the strength of the brand. More clearly than ever before, we differentiate our products from the competition, especially from the rising flood of no-name products.

What bothers the customer out there? To find that out in practice, we, in the thermotechnology division, established the "day at the customer". Employees who usually do not get out of their offices or workshops get a chance to experience the daily routine at wholesalers, plumbers, electricians, heating installers, architects or chimney sweeps. Klaus Huttelmaier (at left), responsible in divisional management for sales, set a good example: he visited the Michel heating firm in Schorndorf.



International Business

Key numbers

	2002	2001	
Sales	25.4	24.6	billion euro
Investments	1,103	1,463	million euro
R&D Expense	803	777	million euro

We have greatly expanded our international business in recent years. Our non-German share of total sales is 72 %, compared with 65 % in 1998. Eliminating currency fluctuations, our non-German sales rose in 2002 by about 7.5 %. We manufacture our products at 236 locations, of which 179 are outside Germany. We are present through subsidiaries and affiliates in more than 50 countries. On this basis we intend to continue to resolutely expand our international activities in the coming years.





In the spring of 2002, we opened in Dubai a new liaison office for aftermarket products in automotive technology. From here, we will provide support in sales, marketing and customer service for our agencies on the Arabian peninsula. Here: Sheik Ahmed Bin Saud Al Maktoum and Eugen Konrad, president of the automotive aftermarket division.

Two sights worth seeing at one glance: As part of the introductory advertising for the new gas water heaters with the Hydro Power brand from Junkers in Spain, local public transport in the entire country was decorated with the "water and flames" theme. A sight worth seeing in front of the "Sagrada Familia" in Barcelona.

China: double digit growth in 2002

Aside from Japan, the Asian area showed the highest growth rate of all regions. In China, our consolidated 2002 sales increased by 30% to 580 million euro. The sales of all our companies located in China, including those not consolidated, rose to around 1 billion euro. We employ almost 9,000 people in China and develop, produce and sell products of automotive technology, automation technology, packaging technology, thermotechnology, and security technology, as well as power tools and household appliances.

We achieved a better-than-average growth in China with diesel systems. Here the market was stimulated by the introduction of the Euro-I-Norm and the good development in the commercial-vehicle market. Mid-2002 we broke ground for the erection of a new local production and application engineering plant for antilock braking systems, which will go into operation in early 2004. As a second step, we plan production of the electronic stability program (ESP). Our joint venture company, ZF Lenksysteme GmbH was also able to expand its China business significantly, supported primarily by the production launch at our Chinese subsidiary for steering pumps. In security technology we above all utilized the cost advantages of production in China. We were able to increase exports from China significantly.

Korea: another step for the local manufacture of the common-rail dieselinjection system

In Korea we achieved a similar high rate of growth as in China: 26%. The growth of our subsidiary there was primarily the result of investments in the local production. In December 2002, our Taejon plant delivered the first injectors for common-rail diesel injection, after having started production of the accompanying ECUs in the year before.

Japan: our new company is among the ten largest automotive suppliers

In Japan, too, we experienced in 2002 growing demand from original equipment customers for our diesel systems. In the middle of the year we combined our activities there by merging Bosch Braking Systems Corporation into Bosch Automotive Systems Corporation. The resulting company, with consolidated



By regions 2002 (as a percentage)



The most important year 2002 markets outside Germany

sales of 2.5 billion euro, ranks among the ten largest automotive suppliers in Japan. Of its approximately 10,300 employees, almost 1,400 work in development.

Sales (billion euro)					
NAFTA	6.6				
France	3.1				
Japan	2.2				
U.K.	1.8				
Italy	1.8				
Spain	1.4				
Korea	0.8				
Austria	0.7				
Sweden	0.7				
Brazil	0.7				

North America: more growth than expected, but only in U.S. dollars

Bosch's largest overseas market is North America. Business in 2002 there developed more favorably than we had expected after the terror attacks on September 11 of the year before. Automobile production in the NAFTA area, which includes Canada and Mexico besides the United States, rose by 5.7%. Continued intensive sales promotions by American automobile producers significantly contributed to this growth. In this positive environment our U.S. dollar sales in North America, including those from newly-consolidated companies, increased by 10.2%. Over the long term, we foresee good opportunities for diesel in the United States too. One understands there in the meantime that the new diesel technology will reduce fuel consumption substantially. For instance, our common-rail system is already in use in American light trucks. In the future, one can count on increased exports of European diesel vehicles to the United States.

Expansion of business in Central and Eastern Europe

Our business in Central and Eastern Europe continues to develop positively. We were able to further expand our position in this growth market and raise our sales by 11.1% to more than 1.4 billion euro. We achieved the highest rates of growth in Slovenia, Belarus and the Ukraine. During 2002, the number of our employees in this region increased by 1,000 to 15,300. This increase was primarily the result of the expansion in production capacities for high-pressure diesel pumps in the Czech Republic.



China is one of the most important growth markets for many industries, as it is for our power tools. With the opening of our first Chinese service center in the Guangzhou region, we laid the groundwork for the expansion of our service network and at the same time set the benchmark for the Chinese market. For instance, we are the first producer of power tools in China to guarantee customers in the area of the center repair services within 48 hours.

Research and Development



Innovation creates a competitive edge. That is the reason why we spend large sums each year for research and development. Bosch rates as one of the most innovative companies, regularly ranking among the leaders with its high number of annual patent applications. A major contributor to this success is our corporate research and development department. It works in close contact with the divisions on new materials, technologies, methods and tools for the efficient development and manufacture of products, as well as on fundamentals, concepts and prototypes for new products and systems. This allows us to expand our technical competence in all areas of work.



An important role in many of our products is played by ceramic multi-layered components, into which complex sensors or active and passive electronic modules are integrated. With new materials and manufacturing processes, we improve the function of the ceramic foils used for these applications.

- Multimedia becomes mobile: navigation, telephone and entertainment media keep moving into the automobile. We develop technologies which interconnect the different applications and make them easier to operate.
 - Using laser-optical methods, we analyze enlarged, transparent models for flows inside air and fuel-carrying components and systems. It is, for instance, thus possible to examine the complex flow of fuel in the nozzles of our common-rail injection systems. From this, product optimization measures can be derived, which lead to still better combustion.



Environmental Protection

At Bosch, environmental protection and efficiency are compatible with each other. In our second environmental report which we published in the fall of 2002 under the title "People, Environment, Products 2001/2002" this is illustrated with many examples and data from experience. The report found a very positive response. The introduction to the brochure states: "Since the time that Robert Bosch farsightedly introduced social programs for employees and their families, the combination of economic goals and social and ecological dimensions has proven to make sense to us."





This symbol for environmental protection at Bosch stands for uncontaminated water, clean air, and unspoilt nature. The closed circle is symbolic of the life cycle as

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applied to nature and to man-made products: from development, through production, to disposal. The Q shape implies the connection to the Bosch quality symbol.



Under the brand name "Bosch Exchange", we offer car drivers and workshops a broad palette of replacement parts for timely and efficient repair. Here: disassembly of alternators in our Göttingen plant, where we, since 1987, remanufacture 1,000 different types of starters and alternators in volume. Starting in 2003, we will add ignition distributors, air-flow sensors and components for disc brakes. For each of the more than 2,500 products which are reconditioned every day in Göttingen and bear our brand name, we extend the same warranty as for new products.

From old to new: replacement parts of best quality at favorable prices

We make an important contribution to the protection of resources with the mass remanufacture of automotive-technology products. In doing so, we save on new material and ensure environmentally friendly separation and reuse of materials and components. We not only replace wear parts and defective components with original replacement parts, but also completely test the resulting products. In these tests of the parts' functions, we use the same standards applied to new parts going into original equipment. We thus offer car drivers and workshops quality, favorable prices and long useful product life.

At the end there is a new beginning: reusability of power tools

Not only automotive products, but also power tools have a new start at the end of their life cycle. This is made possible by the environmentally friendly design to which we have committed ourselves. This ensures simple disassembly and a high degree of recycling for our power tools. The recovered materials return to the raw-material cycle or are reused in the manufacture of our products. Our recycling service operates at many of our European locations.

Well-prepared for the recycling of old automobiles

We are very well prepared for the application of the year 2000 regulation by the European Union as it pertains to the treatment of old automobiles. Since as early as 1995, we take into account the subsequent possibility of reuse and utilization in the development of our automotive technology products. Together with the automobile manufacturers, we thus work toward an ecologically sound car design.

Employees of the Bosch Group



"Find a good man, and the work is done." This sentence by the founder of our company showed already how important qualified employees are for a company. To attract such people, our human resources department literally continues to tread new paths. As an example: in 2002 an information van went from university to university with the slogan "Bosch meets Campus". Just as innovative is our social services department. We were, in 2002, the first German industrial company to establish a separate company pension fund. That too shows how progressive we are as an employer.





Globalization on the job: close cooperation of worldwide operating teams with our customers and suppliers contributes substantially to achieving high quality standards. Here: circuit developer and layouter designing a chip.

Female "employees" at Bosch can be this young: under the motto "Start Early", both big and small girls had a chance on "Girls' Day" to gain many interesting insights into the work environment of our company.

Learn to prepare for the real world: with well thought-out learning systems and graphic "Teachware", Rexroth didactic serves the worldwide market for training and continuing education in all automation technologies. In total, we support our customers with more than 200 different seminars – at their place or in our training centers.

A company also needs values: a new code provides guidance

Bosch belongs to the companies, which, by tradition, strongly orient themselves to a set of values. To a large extent these go back to the founder, Robert Bosch himself. However, in the course of decades, several of the principles have changed, and others have been added. Good enough grounds for us to formulate the values by which we operate. What, for instance, mean the following to us: future and profit orientation, responsibility, initiative, openness and trust, fairness, reliability, credibility and legality, and cultural diversity? We have answered these questions in a codex of values, which should provide guidance. This leads to better and faster decisions, to more personal initiative and ability to carry responsibility, and all-in-all makes our company a better one.

From university to university by van: a campaign to attract young people

It is very important that we convey our values also to the many new employees we hire each year. In 2002 alone, we hired in Germany 2,150 university graduates, of which 78% were engineers or scientists. In view of the competition for qualified young employees, we consider this a success. But this takes an effort: we participated in the internet fair "Jobfair 24", and under the motto "Bosch meets Campus", in 2002 we visited 22 universities with an information van. The latter met with particularly great interest: about 5,000 students informed themselves in personal conversations about our company, above all about traineeships, dissertations toward degrees, and job openings. ▼

Bosch team at the Germany Tour: In June of 2002 the best bicycle professionals in the world started from our Bühlertal location on the "Kings" stretch of the Germany Tour through the Black Forest. Six members of our bicycle sports group participated as "Team Bosch Bühlertal" in the amateur division. Supported and cheered on by fellow workers, they reached the finish in Stuttgart after seven tough days of competition.

That too is career support: feedback for young employees in their technical and managerial careers

Whoever has started out with Bosch does not stay behind. Instead, he or she is specifically supported in his or her career. Both in Germany and abroad, we thus organize development seminars lasting several days, for our young, aspiring technical and managerial staff. In the course of the seminars, participants get individualized feedback on personal weaknesses and strengths from trained observers among our leadership cadre.

Learning at Bosch: aspiring microtechnologists produce chips

As much as we expect lifelong learning from our employees, we also offer young people a well-grounded education, and thus confront the continuing lack of skilled workers. On January 1, 2003, worldwide about 5,700 young people were undergoing training at Bosch, of which 4,200 were in Germany – 305 of them in cooperation with a technical college. We established a new training center at our Reutlingen location. Our aspiring microtechnologists can even make chips there. Where else would you find a training laboratory for semiconductor production?





The pension fund: an innovative offer which is well-received

Not only mature, but also young employees must keep their old-age pensions in mind. That is why we, since July 2002, have an innovative offer on the table: a separate company pension fund. There our employees can invest their own contributions under a government-promoted scheme. Their contributions can come from gross or net earnings, or from a combination of the two. This is in conformity with the law on old-age capital formation and the union contract of the metals and electronics industry. Our separate pension fund supplements the long-time existing company-wide old-age care plan. The fund in the meantime has proven its attractiveness: by the end of 2002, it had already registered its 10,000th participant.

We express our appreciation: words of thanks to our employees and union representatives

What would an innovative company like Bosch be without the ideas, the knowledge the commitment and performance of its employees? We have all the reasons to thank our Bosch staff. Our appreciation also applies to the union representatives, who reacted constructively to new challenges.

Training with a difference: in June 2002, a group of apprentices designed, nearly entirely on their own, a page in our employee newspaper "Bosch-Zünder". A workshop took place in Bamberg on the occasion of the jubilee "100-years spark plug". As reporters in the plant, apprentices could test their team spirit and social abilities, and last but not least, their creativity. They even climbed onto their employer's roof to get the front-page photo.

Financial Statements of the Bosch Group Worldwide

Consolidated Balance Sheet as of December 31, 2002

Assets	Appendix	December 31, 2002	December 31, 2001
Fixed assets	(6)		
Intangible fixed assets		2,569	986
Tangible fixed assets		7,174	7,436
Financial investments		917	919
		10,660	9,341
Current assets			
Leased products		48	39
Inventories	(7)	3,761	3,932
Accounts receivable and other assets	(8)		
Accounts receivable		5,285	5,733
Other receivables and assets		1,204	1,830
Marketable securities		4,196	3,688
Liquid assets		2,288	3,180
		16,782	18,402
Deferred expenses		33	40
		27,475	27,783

Liabilities and Equity	Appendix	December 31, 2002	December 31, 2001
Equity capital	(9)		
Capital stock		1,200	1,200
Capital surplus		4,557	4,557
Earned surplus		2,717	2,489
Unappropriated earnings		60	50
Minority interests		351	718
		8,885	9,014
Accruals with valuation reserve portion	(10)	126	205
Accruals			
Accruals for pensions and similar obligations		4,576	4,406
Other accruals	(1 1)	7,073	6,888
	(11)		11,294
	(10)	11,649	11,294
Liabilities	(12)		0.555
Liabilities from financing		3,082	3,557
Accounts payable		2,195	2,134
Other liabilities		1,512	1,553
		6,789	7,244
Deferred income		26	26
		27,475	27,783

Financial Statements of the Bosch Group Worldwide

Consolidated Statement of Income for the period from January 1 to December 31, 2002

A	ppendix	2002	2001
Sales	(15)	34,977	34,029
Changes in finished goods and work-in-progress inventories and other capitalized costs	(16)	261	171
Total operating performance		35,238	34,200
Other operating income	(17)	2,263	2,195
Cost of materials	(18)	- 16,236	- 16,284
Personnel costs	(19)	- 10,815	-9,959
Depreciation and amortization of tangible and intangible fixed assets		- 2,480	-2,502
Other operating expenses	(17)	- 6,406	-6,419
Net income from investments	(20)	83	155
Amortization of financial investments and securities included with current assets		-233	- 101
Interest income, net of expenses	(21)	4	126
Income from ordinary business activities		1,418	1,411
Taxes on income	(22)	- 768	-761
Net income for the year		650	650
Including profit and loss of minority shareholders	(23)	64	-42

Financial Statements of the Bosch Group Worldwide Capital Flow Statement¹

(million euro)

	2002	2001
Net income for the year	650	650
Depreciation of fixed assets	2,509	2,551
Increase in long-term accruals and accruals with valuation reserve portion	193	480
Cash flow	3,352	3,681
Decrease in inventories and leased products	162	278
Decrease in receivables	1,081	513
Increase in short-term accruals	83	188
Change in liabilities	20	-857
Additions to funds from business activities (1)	4,698	3,803
Additions to fixed assets	-4,386	-2,860
Retirements of fixed assets	254	432
Changes in the consolidated group		-430
Application of funds to investment activities (2)	-4,132	-2,858
Dividends 2001/2000	-50	-2,603
Capital increase Robert Bosch GmbH		2,470
Change in liabilities from financing	- 475	587
Other changes in balance-sheet items	-444	92
Decreases in / additions to funds from financial activities (3)	- 969	546
Change in liquidity (1) + (2) + (3)	-403	1,491
Liquidity at the beginning of the year	6,868	5,084
Changes in the consolidated group	19	293
Liquidity at the end of the year	6,484	6,868

¹ not published in the Federal Gazette

Financial Statements of the Bosch Group Worldwide

2002 Development of Fixed Assets

	Cost of acquisition or manufacture				
Intangible fixed assets	Jan.1, 2002	Changes in the consolidated group	Additions	Transfers	
Concessions, patents, trademarks and similar rights					
and assets, as well as licenses to such rights and assets	297	1	116	1	
Goodwill	2,466	214	1,884		
Advance payments	1		1	- 1	
	2,764	215	2,001		
Tangible fixed assets					
Land, leasehold rights and buildings,					
including buildings on land owned by others	4,461	273	137	76	
Production equipment and machinery	12,078	235	897	192	
Other equipment, fixtures and furniture	4,921	31	393	272	
Advance payments and construction in progress	684	5	579	-540	
	22,144	544	2,006		
Financial investments					
Investments in affiliated companies	518	-289	151		
Loans to affiliated companies	8	-2	7		
Investments in associated companies	155		28		
Other financial investments	334	7	184		
Long-term investments	175		1		
Other loans	42		8		
	1,232	-284	379		
Total fixed assets	26,140	475	4,386		

Retirements	Dec. 31, 2002	Depreciation cumulative to Dec.31, 2002	Net book value as of Dec. 31, 2002	Net book value as of Dec.31, 2001	Depreciation current year
105	310	245	65	81	125
558	4,006	1,503	2,503	904	490
	1		1	1	
663	4,317	1,748	2,569	986	615
173	4,774	2,673	2,101	2,104	188
836	12,566	9,321	3,245	3,527	1,245
403	5,214	4,072	1,142	1,082	432
37	691	5	686	723	
1,449	23,245	16,071	7,174	7,436	1,865
7	373	147	226	316	12
1	12	1	11	8	1
40	143	38	105	127	1
57	468	93	375	263	11
	176	15	161	163	3
10	40	1	39	42	1
115	1,212	295	917	919	29
2,227	28,774	18,114	10,660	9,341	2,509

Financial Statements of the Bosch Group Worldwide

Balance Sheet Structure 1998–2002

	1998	1999	2000	2001	2002
Assets				9,341 34%	10,660
		7,211	8,408 34%		39 %
Fixed assets	6,495 35%	35%	3,695 15%	3,971 14%	3,809 14 %
Inventories, leased products	3,292 18%	3,551 17%	7,317	7,603 27 <i>%</i>	6,522 24%
Receivables	5,174 28%	6,289 30%	30%		
Marketable securities, liquid assets	3,621 19%	3,781 18%	5,084 21 %	6,868 25%	6,484 23%
	18,582	20,832	24,504	27,783	27,475
Liabilities and Equity			8,288	9,014 32%	8,885 32%
	6,069	6,646 32%	34%		
Equity capital	33%	8 000	8,457 34%	11,393 41 <i>%</i>	11,107 41 %
Long-term liabilities	7,092 38%	8,029 38%			
Current liabilities	5,421 29%	6,157 30%	7,759 32%	7,376 27%	7,483 27%
	18,582	20,832	24,504	27,783	27,475

Financial Statements of the Bosch Group Worldwide Appendix 2002

(1) G	ieneral remarks	The consolidated statements of the Bosch Group Worldwide conform to the regulations of the Commercial Code, and were prepared in euro (EUR).			
		In order to ensure better understanding of these financial statements, we combined a number of individual balance sheet and statement of income items into key groupings. These items are stated separately in this appendix. Required comments for individual items are also contained in this appendix. The consolidated statement of income follows the format of the total cost method.			
(2) C	consolidated group	The consolidated group includes Robert Bosch GmbH and 36 domestic as well as 217 foreign subsidiaries. For the first time, we consolidated the following companies:			
		 Bosch Engineering GmbH, Stuttgart, ETAS Entwicklungs- und Applikationswerkzeuge für elektronische Systeme GmbH, Stuttgart, with three foreign subsidiaries, Bosch Security Systems Inc, Fairport, New York, USA (the sub-consolidation includes 20 subsidiaries), Robert Bosch Power Tool Elektromos Szerszámgyártó Kft, Miskolc, Hungary, Bosch Electronics Corporation, Tomioka-Shi, Japan, Bosch (Shunde) Gas Appliances Co, Ltd, Lecong, Shunde, China. The consolidation was further expanded with the inclusion of 13 subsidiaries at Bosch Automotive Systems Corporation, Shibuya-ku, Tokyo, Japan, and one subsidiary at Zexel Valeo Climate Control Corporation, Shibuya-ku, Tokyo, Japan. In the line of corporate restructurings, various companies were integrated into others, among them Bosch Braking Systems Co, Ltd, Tokyo, Japan, and Bosch Electronics Corporation, Shibuya-ku, Tokyo, Japan, as of July 1, 2002. Bosch Sicherheitssysteme GmbH, Stuttgart, resulted from a spin-off out of Bosch Telecom GmbH, Stuttgart, as of January 1, 2002, which was renamed Bosch Breitbandnetze GmbH, Stuttgart. During the year we sold Robert Bosch Schließsysteme GmbH, Wuppertal, including its Portuguese subsidiary. The consolidated statements of BSH Bosch und Siemens Hausgeräte GmbH, Munich, and ZF Lenksysteme GmbH, Schwäbisch Gmünd, were included pro rata pursuant to Section 310 of the Commercial Code. In accordance with Section 296, Paragraph 2 of the Commercial Code, companies lacking operations or having insignificant business volume, were not included with the consolidated financial statements. The equity valuation of material interests in ass			
		and ten foreign companies.			

(3) Principles of classification and valuation

The financial statements of Bosch Group Worldwide include the individual statements of our subsidiaries which conform to uniform principles of classification and valuation.

We adhered to the valuation at lower of cost or market and imparity of gain or loss recognition.

Financial statements of foreign associated companies were not modified to comply with the uniform accounting principles of the consolidated group.

Intangible assets including goodwill resulting from first-time consolidations as well as tangible and financial assets were valued at acquisition cost or cost of manufacture subject to depreciation and amortization. We applied straight-line as well as accelerated depreciation methods. Items of minor value were fully depreciated during the year of acquisition. We applied special depreciation allowances according to tax regulations in all countries. Goodwill of BSH Bosch und Siemens Hausgeräte GmbH, Munich and ZF Lenksysteme GmbH, Schwäbisch Gmünd were amortized over a maximum life of ten years.

Interest-free and low-interest loans were adjusted to reflect present values by application of a uniform discount rate domestically, and prevailing rates in foreign countries.

Additions to interests in associated companies include shares purchased as well as capital contributions and prorated profits. Retirements include prorated losses, dividends paid and shares sold.

We valued inventories at the lower of average purchase or manufacturing cost or market. Manufacturing costs include direct costs and reasonable overhead.

At domestic companies, the LIFO valuation method was used in principle. We used this method also at foreign subsidiaries when accepted by the tax authorities.

We provided for risks inherent in warehousing and distribution through appropriate deductions. Additional write-downs were taken in cases of unfavorable returns.

Accounts receivable and other current assets were stated at face values less write-downs for individual risks and for general credit risks. Interest-free or low-interest receivables with maturities of more than one year were discounted.

We valued marketable securities included in current assets at the lower of acquisition cost or market.

In determining the size of accruals we provided for all identifiable risks.

Pension accruals and similar liabilities were determined by the application of actuarial principles and were discounted to reflect present values. For domestic companies, we used a 6% discount rate in accordance with the 1998 guideline tables, while foreign subsidiaries used discount rates prevailing in their respective countries. In determining the amounts accrued for pending transactions with expected losses, we basically took account of prices and costs expected at the time these transactions would close. Liabilities were stated at the amounts owed. (4) Currency Accounts receivable and accounts payable stated in foreign currencies were translated translation to EUR equivalents at the less favorable of the average exchange rate at the date of origin, or at the balance-sheet date. For the translation to EUR of the financial statements in foreign currencies and the related profits and losses, we applied, in principle, average exchange rates at the balance-sheet date. Transactions pertaining to fixed assets were translated at average annual EUR equivalents. Resulting differences were included with beginning balances of cost of acquisition or manufacture as well as in cumulative depreciation. Income and expenses were translated at average exchange rates. Differences resulting from the application of average exchange rates versus year-end exchange rates were included with other operating expenses. (5) Consolidation For capital consolidation of companies or for newly acquired capital shares, we applied principles the book-value method at the date of acquisition or at the date of first-time consolidation. As far as possible, we allocated amounts subject to capitalization to the respective assets. Remaining amounts were included with goodwill. Negative goodwill resulting from capital consolidation was included with earned surplus. Receivables and payables, sales, expenses, and income, as well as results within the consolidated group were eliminated. Profits from sales to the consolidated group by associated companies were not eliminated since they were insignificant. Deferred tax assets resulting from consolidation measures in the amount of 36 (2001: 45 million EUR) were included with other assets.

	Extraordinary depreciation and amortization amounting to 131 million EUR pertained mostly to goodwill (of which 31 million EUR for ZF Lenksysteme GmbH, Schwäbisch Gmünd) and to tangible fixed assets.				
	In accordance with tax regulations, we deducted an extra 13 mi the acquisition costs of tangible fixed assets. The depreciatior Section 6b of the Income Tax Law, and pursuant to local tax sidiaries.	n was taken pu	rsuant to		
	The development of fixed assets is presented on pages 54 and	55 of this repor	rt.		
	Goodwill of BSH Bosch und Siemens Hausgeräte GmbH, Mun GmbH, Schwäbisch Gmünd, developed as follows (in million 1		ksysteme		
	Cost at January 1	333			
	Additions	2			
	Cost at December 31	335			
	Accumulated amortization, January 1	196			
	Additions	82			
	Accumulated amortization, December 31	278			
(7) Inventories	Included with the stated value of inventories, in the amount of	3,761 million H	EUR, are		
(7) Inventories	Included with the stated value of inventories, in the amount of our advance payments of 29 million EUR (2001: 48 million EU advance payments received in the amount of 95 million EUR were deducted.	UR). On the oth	ner hand,		
(8) Accounts receivable	our advance payments of 29 million EUR (2001: 48 million EU advance payments received in the amount of 95 million EUR	UR). On the oth	ner hand,		
	our advance payments of 29 million EUR (2001: 48 million EU advance payments received in the amount of 95 million EUR were deducted.	UR). On the oth (2001: 94 millio 2002	er hand, on EUR) 2001		
(8) Accounts receivable	our advance payments of 29 million EUR (2001: 48 million EU advance payments received in the amount of 95 million EUR were deducted.	UR). On the oth (2001: 94 millio	ner hand, on EUR)		
(8) Accounts receivable	our advance payments of 29 million EUR (2001: 48 million EU advance payments received in the amount of 95 million EUR were deducted. Million EUR Accounts receivable	UR). On the oth (2001: 94 millio 2002 5,285	er hand, on EUR) 2001 5,733		
(8) Accounts receivable	our advance payments of 29 million EUR (2001: 48 million EU advance payments received in the amount of 95 million EUR were deducted.	UR). On the oth (2001: 94 millio 2002 5,285	er hand, on EUR) 2001 5,733		
(8) Accounts receivable	our advance payments of 29 million EUR (2001: 48 million EUR advance payments received in the amount of 95 million EUR were deducted. Million EUR Accounts receivable including maturities of more than one year Other receivables and assets	UR). On the oth (2001: 94 millio 2002 5,285 3	er hand, on EUR) 2001 5,733 11		
(8) Accounts receivable	our advance payments of 29 million EUR (2001: 48 million EUR advance payments received in the amount of 95 million EUR were deducted. Million EUR Accounts receivable including maturities of more than one year Other receivables and assets Receivables from affiliated companies including maturities of more than one year Receivables from affiliated companies including maturities of more than one year	UR). On the oth (2001: 94 millio 2002 5,285 3 133	er hand, on EUR) 2001 5,733 11 429		
(8) Accounts receivable	our advance payments of 29 million EUR (2001: 48 million EUR advance payments received in the amount of 95 million EUR were deducted. Million EUR Accounts receivable including maturities of more than one year Other receivables and assets Receivables from affiliated companies including maturities of more than one year Receivables from companies in which interests are held	UR). On the oth (2001: 94 millio 2002 5,285 3 133 92	2001 5,733 11 429 3 147		
(8) Accounts receivable	our advance payments of 29 million EUR (2001: 48 million EUR advance payments received in the amount of 95 million EUR were deducted. Million EUR Accounts receivable including maturities of more than one year Other receivables and assets Receivables from affiliated companies including maturities of more than one year Receivables from companies in which interests are held Other assets	UR). On the oth (2001: 94 million 2002 5,285 3 133 133 92 979	2001 5,733 11 429 3 147 1,254		
(8) Accounts receivable	our advance payments of 29 million EUR (2001: 48 million EUR advance payments received in the amount of 95 million EUR were deducted. Million EUR Accounts receivable including maturities of more than one year Other receivables and assets Receivables from affiliated companies including maturities of more than one year Receivables from companies in which interests are held	 JR). On the oth (2001: 94 millio) 2002 5,285 3 133 92 979 62 	2001 5,733 11 429 3 147 1,254 100		
(8) Accounts receivable	our advance payments of 29 million EUR (2001: 48 million EUR advance payments received in the amount of 95 million EUR were deducted. Million EUR Accounts receivable including maturities of more than one year Other receivables and assets Receivables from affiliated companies including maturities of more than one year Receivables from companies in which interests are held Other assets	UR). On the oth (2001: 94 million 2002 5,285 3 133 133 92 979	2001 5,733 11 429 3 147 1,254		

(9) Equity capital	The subscribed capital stock of 1,200 million EUR and the capital sur lion EUR correspond to the respective balance-sheet items of Robert Earned surplus accounts consist of the following:	1 ·	
	Million EUR	2002	2001
	Earned surplus of Robert Bosch GmbH	782	442
		1,935 2,717	2,047 2,489
(10) Accruals with	Bosch GmbH. Accruals with valuation reserve portion were formed pursuant to Sec	ctions 6b	o and 52
(10) Accruals with valuation reserve portion	Accruals with valuation reserve portion were formed pursuant to See Paragraph 16 of the Income Tax Law. Our foreign subsidiaries follow tions with respect to such items.		
(11) Other accruals	Million EUR	2002	2001
	Accrued taxes Other accruals	267	320
		6,806 7,073	6,568 6,888
		1,010	0,000

Million EUR	2002 l	ncluding	2001	Includir
	m	aturities		maturitie
	u	p to one		up to or
		year		ye
Liabilities from financing				
Bonds	1,728	95	1,863	8
Liabilities with banks	1,341	543	1,566	39
Other financing liabilities	13	13	128	15
	3,082	651	3,557	60
Accounts payable	2,195	2,195	2,134	2,13
Other liabilities				
Liabilities from acceptances				
and drafts	166	166	162	1
	90	90	214	2
Liabilities with affiliated companies				
· · · · · · · · · · · · · · · · · · ·				
Liabilities with affiliated companies Liabilities with companies in which interests are held	82	82	90	(
Liabilities with companies in which	82 1,174	82	90	
Liabilities with companies in which interests are held				1,0- 1,5

Of the liabilities with banks, 196 million EUR were secured by mortgages and another 20 million EUR by other liens. Of other liabilities, 9 million EUR were secured by mortgages.

Other liabilities contain tax liabilities in the amount of 267 million EUR (2001: 300 million EUR) and liabilities pertaining to social obligations in the amount of 235 million EUR (2001: 208 million EUR). Liabilities with shareholders in the amount of 45 million EUR (2001: 13 million EUR) pertain to Robert Bosch Stiftung GmbH.

Total liabilities with maturities of more than 5 years amounting to 134 million EUR included 60 million EUR of liabilities with banks and 74 million EUR of other liabilities.

(12) Liabilities

(13)	Contingent liabilities	Million EUR				
		Contingent liabilities from the issuance of	or transfer of note	S		142
		including on behalf of affiliated comp	anies			6
		Contingent liabilities from guarantees				94
		including on behalf of affiliated comp	anies			16
		Contingent liabilities from warranties				11
		Contingent liabilities from collateral give	n for third-party li	abilities		15
(14)	Other financial obligations	Other financial obligations of significa the company did not exist.	nce for an opinio	on on the f	inancial con	udition of
(15)	Breakdown of sales	Million EUR	2002	%	2001	%
		Sales by business sectors				
		Automotive technology	23,353	66.8	23,228	68.3
		Industrial technology	3,953	11.3	3,176	9.3
		Consumer goods and				
		building technology	7,671	21.9	7,625	22.4
			34,977	100.0	34,029	100.0
		Million EUR	2002	%	2001	%
		Sales by regions				
		Countries of the European Union	20,842	59.6	20,491	60.2
		Rest of Europe	1,864	5.3	1,692	5.0
		Americas	7,358	21.0	7,316	21.5
		Asia, Africa, Australia	4,913	14.1	4,530	13.3
			34,977	100.0	34,029	100.0

(16)	Changes in fin- ished goods and	Million EUR			2002	2001
	work-in-progress	Change in finished goods and				
	inventories and	work-in-progress inventories			- 38	-164
	other capitalized	Other capitalized costs			299	335
	costs				261	171
(17)	Other operating expenses and income	Expenses resulting from additions to a amount of 7 million EUR are included reversal of accruals with valuation reser- included in other operating income.	in other opera	ating expen	ses. Income	e from the
(18)	Cost of materials	Million EUR			2002	2001
		Cost of raw materials, supplies and merc	handise		14,917	14,925
		Purchased services			1,319	1,359
					16,236	16,284
(19)	Personnel costs	Million EUR Wages and salaries Social security, pension plans, and suppo of which pension plans	rt payments		2002 8,611 2,204 686 10,815	2001 7,990 1,969 569 9,959
		Average numbers of employees during the year, by region:				
			2002	Including	2001	Including
			Total	BSH,	Total	BSH,
				ZFLS		ZFLS
			(prorated)		(prorated)
		Countries of the European Union	140,667	15,422	135,986	15,489
		Rest of Europe	17,427	2,708	15,715	2,581
		Americas	35,923	2,566	36,526	2,780
		Asia, Africa, Australia	31,880	2,104	30,150	1,952
			225,897	22,800	218,377	22,802

20) Net income	Million EUR	2002	2001
from investments	Income from investments	54	117
	including affiliated companies	13	14
	Result from associated companies	29	37
	Profit/loss transfers	25	1
		83	155
21) Interest income,	Million EUR	2002	2001
net of expenses	to be used. For our other and set of the second former to second second set		
	Interest from other securities and from loans included		1
	with financial investments	4	4
	including affiliated companies	1	005
	Other interest and similar income	292	335
	including affiliated companies	3	8
	Interest and similar expenses	- 292	- 213
	including affiliated companies	1	1
		4	126
(22) Tax expenses	Million EUR	2002	2001
	Taxes on income	768	761
	Other taxes	149	143
		917	904

Other taxes are shown under other operating expenses.

The impact of other tax allowances on the profit for the fiscal year as well as in former years, and the size of future burdens from the resulting valuations are of secondary significance.

(23)	Profit and loss	Million EUR	2002	2001
	of minority shareholders	Profits	73	56
	Shareholders	Losses	-9	-98
			64	-42
(24)	Information with respect to joint ventures	0	and liabilities of BSH Bosch und Siemens Ha eme GmbH, Schwäbisch Gmünd were:	usgeräte
		Million EUR	2002	2001
		Current assets	1,397	1,356
		Long-term assets	829	884
		Current liabilities	758	761
		Long-term liabilities	817	797
		Schwäbisch Gmünd.	geräte GmbH, Munich, and ZF Lenksysteme	,
(25)	Compensation of the members of the Board of Management and of the Supervisory	of Robert Bosch GmbH amounte Management and their depender Supervisory Council about one n	ensation of the members of the Board of Man d to 9 million EUR. Former members of the nts received 7 million EUR, and the membe nillion EUR. H for pension liabilities for former member	Board of ers of the
	Council		dependents amounted to 51 million EUR.	rs of the
		The members of the Supervisory Management are listed on pages	Council of Robert Bosch GmbH and of the 6 and 9.	Board of
(26)	Shareholdings of Bosch Group Worldwide	A listing of the shareholdings of the commercial registry of the Str	the consolidated Bosch Group will be depos uttgart Court.	ited with
		Stuttgart, March 5, 2003	Robert Bosch GmbH The Board of Management	

Auditors' report

We have audited the consolidated financial statements and the group management report prepared by Robert Bosch GmbH, Stuttgart, for the business year from January 1 to December 31, 2002. The preparation of the consolidated financial statements and group management report in accordance with German commercial law is the responsibility of the Company's management. Our responsibility is to express an opinion on the consolidated financial statements and the group management report based on our audit.

We conducted our audit of the consolidated annual financial statements in accordance with §317 HGB (German Commercial Code) and the generally accepted German standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (IDW). The applied standards are also in accordance with the International Standards on Auditing. Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with German principles of proper accounting and in the group management report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Company and evaluations of possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the internal control system as it relates to accounting and the evidence supporting the disclosures in the consolidated financial statements and the group management report are examined primarily on a test basis within the framework of the audit. The audit includes assessing the annual financial statements of the companies included in consolidation, the determination of the companies to be included in consolidation, the accounting and consolidation principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements and the group management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion, the consolidated financial statements give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with German principles of proper accounting. On the whole the group management report provides a suitable understanding of the Group's position and suitably presents the risks of future developments.

Stuttgart, March 5, 2003

Ernst & Young Deutsche Allgemeine Treuhand AG Wirtschaftsprüfungsgesellschaft

Prof. Dr. Pfitzer Dr. Schmidt Wirtschaftsprüfer Wirtschaftsprüfer

Major Companies of the Bosch Group Worldwide

(as of December 31, 2002)

(million euro)

Name Germany	Location	Equity Capital % owned ¹	Equity Capital ²	Sales ²	Profit or loss ²
Blaupunkt GmbH	Hildesheim	100	95	1,010	PLT ³
Bosch Rexroth AG ⁴	Stuttgart	100	602	3,624	24 ⁶
BSH Bosch und Siemens Hausgeräte GmbH ⁴	Munich	50	961	6,289	129 ⁶
Bosch Breitbandnetze GmbH	Stuttgart	100	154	154	44
Bosch Sicherheitssysteme GmbH	Stuttgart	100	205	443	40
BT Magnet-Technologie GmbH	Herne	50	34	75	4
ETAS Entwicklungs- und Applikationswerkzeuge					
für elektronische Systeme GmbH	Stuttgart	90	4	80	2
Hawera Probst GmbH	Ravensburg	100	10	83	PLT ³
Knorr-Bremse Systeme für Nutzfahrzeuge GmbH	Munich	20	110	553	22
Robert Bosch Fahrzeugelektrik Eisenach GmbH	Eisenach	100	31	457	PLT ³
Robert Bosch Klima-Komponenten GmbH	Leonberg	100	4	105	-2
VB Autobatterie GmbH ⁵	Hanover	20	94	231	16
ZF Lenksysteme GmbH ⁴	Schwäbisch Gmünd	50	128	1,536	-89

Foreign Countries

Europe					
NV Robert Bosch SA	Anderlecht/Belgium	100	13	85	1
Robert Bosch Produktie NV	Tienen/Belgium	100	35	242	8
Robert Bosch A/S	Ballerup/Denmark	100	18	76	0
Robert Bosch (France) SA ⁴	Saint-Ouen (Paris)/France	100	190	1,889	-19
Atco-Qualcast Limited	Stowmarket, Suffolk/U.K.	100	9	103	1
Robert Bosch Ltd	Denham/U.K.	100	113	490	17
Worcester Group plc ⁴	Worcester/U.K.	100	36	214	25
Robert Bosch SpA ⁴	Milan/Italy	100	68	753	- 1
Robert Bosch BV	Hoofddorp/Netherlands	100	13	140	5
Skil Europe BV ⁴	Breda/Netherlands	100	24	127	- 1
Van Doorne's Transmissie BV	Tilburg/Netherlands	100	32	107	22
Robert Bosch A/S	Trollaasen (Oslo)/Norway	100	8	43	1
Robert Bosch AG	Vienna/Austria	100	42	239	12
Robert Bosch Sp. z o.o.	Warsaw/Poland	100	17	93	2
Blaupunkt Auto-Rádio Portugal Lda	Braga/Portugal	100	31	319	2
Vulcano Termo-Domésticos SA	Aveiro/Portugal	100	72	176	20
Robert Bosch AB	Kista (Stockholm)/Sweden	100	10	79	4
Robert Bosch Internationale Beteiligungen AG	Zurich/Switzerland	90	436		52
Robert Bosch AG	Zurich/Switzerland	100	19	67	8
Scintilla AG	Solothurn/Switzerland	85	600	538	83
Robert Bosch España SA ⁴	Madrid/Spain	100	209	1,304	-5
Robert Bosch spol. s r.o.	České Budějovice/Czech. Re	ер. 100	55	215	9
Bosch Diesel spol. s r.o.	Jihlava/Czech. Rep.	100	96	403	48
Bosch Sanayi ve Ticaret AS	Bursa/Turkey	100	180	393	49
Robert Bosch Elektronika Gyártó Kft	Hatvan/Hungary	100	37	150	6

Name	Location %	Equity Capital owned ¹	Equity Capital ²	Sales ²	Profit or loss ²
Robert Bosch Limitada	Campinas/Brazil	100	118	715	10
Associated Fuel Pump Systems Corporation	Anderson/USA	50	74	184	7
Automotive Electronic Control Systems Inc	Anderson/USA	51	37	104	13
			17	196	5
Bosch Security Systems Inc ⁴	Fairport/USA	100			
Robert Bosch Corporation ⁴	Broadview (Chicago)/USA	100	835	5,046	24
S-B Power Tool Company ⁴	Chicago/USA	100	445	724	88
Asia, Australia					
Motor Industries Co Ltd	Bangalore/India	61	141	338	27
Bosch KK	Yokohama/Japan	100	49	274	7
Bosch Automotive Systems Corporation ⁴	Shibuya-ku (Tokyo)/Japan	55	502	2,538	15
Bosch Packaging Machinery KK	Tokyo/Japan	100	16	60	2
Nippon Injector Corporation	Odawara-shi/Japan	35	56	79	5
KEFICO Corporation	Kunpo-Si/Korea	25	103	325	24
Korea Automotive Motor Corporation	Buyong/Korea	100	55	190	11
Robert Bosch Korea Mechanics & Electronics Ltd	Chonan/Korea	100	58	202	23
Robert Bosch (Malaysia) Sdn Bhd	Penang/Malaysia	100	25	97	5
Robert Bosch (South East Asia) Pte Ltd	Singapore/Singapore	100	21	91	1
Robert Bosch (Australia) Pty Ltd ⁴	Clayton (Melbourne)/Australi	a 100	83	482	13
Robert Bosch (Proprietary) Ltd	Johannesburg/South Africa	100	6	108	-1

¹ Shares held directly and indirectly by Robert Bosch GmbH

² Translation of foreign currencies (except EUR countries) pertaining to equity capital and profit and loss stated at average exchange rates at the balance-sheet date; sales stated at average exchange rates of the year

³ Profit and loss transfer agreement (PLT)

⁴ Represents a consolidated sub-group

⁵ Stub period from January 1 to October 31, 2002

⁶ Results after profit and loss transfer

Financial Statements of Robert Bosch GmbH

Balance Sheet as of December 31, 2002

Assets	December 31, 2002	December 31, 2001
Fixed assets		
Intangible fixed assets	-	_
Tangible fixed assets	1,702	1,673
Financial investments	7,711	4,558
	9,413	6,231
Current assets		
Inventories	1,110	1,197
Accounts receivable and other assets	.,	
Accounts receivable	1,707	1,863
Other receivables and assets	1,222	2,112
Marketable securities	3,141	3,089
Liquid assets	1,400	2,279
	8,580	10,540
Deferred expenses	2	2
	17,995	16,773
Equity capital Capital stock Capital surplus	1,200 4,557	1,200 4,557
Earned surplus	782	442
Unappropriated earnings	60	50
	6,599	6,249
Accruals with valuation reserve portion	92	126
Accruals		
Accruals for pensions and similar obligations	2,490	2,454
Other accruals	3,929	3,464
	6,419	5,918
Liabilities		
Liabilities from financing	1,598	1,598
Accounts payable	494	474
Other liabilities	2,792	2,407
	4,884	4,479
Deferred income	1	1
	17,995	16,773
		,

Financial Statements of Robert Bosch GmbH

Statement of Income

for the period from January 1 to December 31, 2002

	2002	2001
Sales	16,888	17,286
Changes in finished goods and work-in-progress inventories	,	,
and other capitalized costs	- 32	98
Total operating performance	16,856	17,384
Other operating income	1,303	1,464
Cost of materials	- 10,431	- 10,949
Personnel costs	- 3,842	-3,691
Depreciation and amortization of tangible and intangible fixed assets	- 599	-643
Other operating expenses	- 2,845	-2,842
Net income from investments	690	316
Amortization of financial investments and securities included		
with current assets	- 298	-357
Interest income, net of expenses	9	154
Income from ordinary business activities	843	836
Tours on income	440	406
Taxes on income	-443	-436
Net income for the year	400	400
Transfers from surplus accounts		
	0.40	050
Additions to surplus accounts	- 340	-350
Unappropriated earnings	60	50

Ten Year Statistics Bosch Group Worldwide

Bosch Group Business Sectors and Divisions

Automotive Technology¹

Gasoline Systems	Diesel Systems	Chassis Systems
Energy and Body Systems	Car Multimedia ²	Automotive Electronics

Automotive Aftermarket

Industrial Technology

Bosch Rexroth³

Packaging Technology

Consumer Goods and Building Technology

Power Tools

Thermotechnology

Household Appliances⁴

Security Systems⁵

Broad-band Networks⁶

1 Including ZF Lenksysteme GmbH (50% Bosch) 2 Blaupunkt GmbH (100% Bosch) 3 Bosch Rexroth AG (100% Bosch)

4 BSH Bosch und Siemens Hausgeräte GmbH (50% Bosch)
 5 Bosch Sicherheitssysteme GmbH (100% Bosch)

6 Bosch Breitbandnetze GmbH (100% Bosch)

BOSCH

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