

**BOSCH**



**Annual Report  
2001**

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**BOSCH**

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 218 subsidiaries,  
of which 34 are domestic and the  
remaining 184 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

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▶ *Front page illustration:*

One hundred years ago,  
on January 7, 1902, we  
received a patent on a  
system combining a  
spark plug with a high-  
voltage magneto. This  
ignition made a decisive  
contribution to the  
reliability of the gasoline  
engine and thus to the  
popularity of the auto-  
mobile.

Here: A spark plug with  
four ground electrodes  
for direct-injection gaso-  
line engines. The elec-  
trodes are formed from  
an alloy containing  
yttrium. This is a "rare  
earth", and endows the  
spark plug with its out-  
standing resistance to  
heat and wear.

To our business partners and friends

<b>Bosch Group Worldwide</b>	<b>2001</b>	<b>2000</b>
<b>Sales</b>	<b>34,029</b>	<b>31,556</b>
percentage change from prior year	<b>+ 7.8</b>	<b>+ 13</b>
<b>Foreign sales</b>	<b>72</b>	<b>72</b>
as a percentage of sales		
<b>Research and development expense</b>	<b>2,274</b>	<b>2,030</b>
as a percentage of sales	<b>6.7</b>	<b>6.4</b>
<b>Investments in tangible fixed assets</b>	<b>2,368</b>	<b>2,111</b>
as a percentage of depreciation	<b>123</b>	<b>118</b>
<b>Number of employees</b>		
average for the year	<b>218,377</b>	<b>196,880</b>
as of January 1, 2002/2001	<b>220,999</b>	<b>198,666</b>
<b>Total assets</b>	<b>27,783</b>	<b>24,504</b>
<b>Equity capital</b>	<b>9,014</b>	<b>8,288</b>
as a percentage of total assets	<b>32</b>	<b>34</b>
<b>Net income for the year</b>	<b>650</b>	<b>1,380<sup>1</sup></b>
<b>Unappropriated earnings</b>		
(Dividends of Robert Bosch GmbH)	<b>50</b>	<b>2,603<sup>1</sup></b>

<sup>1</sup> Special effect of "pay-out-and-reinvest" procedure at Robert Bosch GmbH

I address myself to you here personally for the first time to present to you our 2001 annual report. Our company overall has grown strongly during the past few years, now employs around 221,000 people worldwide, is successful with futuristic innovations and has at its disposal a worldwide network of customers and suppliers, which is larger and closer knit than ever before. To keep and continue to expand this position is our constant challenge. The cooperation and trust of our worldwide partners and the high level of commitment of our employees support us in this endeavor – we thank you for this.

The year 2001 did not live up to our expectations. As with most companies, we were also unable to avoid the consequences of the worldwide recession. More than that we were affected by the terror attacks of September 11 in the U.S. They showed us how difficult it is these days to guarantee both freedom and security in systems which are open to the world, and how much our contribution as an international enterprise is required to further expand and foster fair business relations worldwide.

We finished the year 2001 with sales of 34 billion euro. The 8% growth came primarily from new consolidations, especially of Rexroth. The weak internal growth also squeezed the profit development, making it impossible to get closer to our long-term profitability goal. We do not expect 2002 to bring a noticeable improvement of the overall economy. However, we want to better our net income.

Our business strategies remain the same. We will not reduce the speed with which we innovate, and we will continue to invest significantly in research and development in order to stay technologically at the forefront in all areas in which we operate. We will also persistently follow the goal of reaching an even better balance among our various business sectors concomitant with greater growth, especially in North America and Asia. That will also require additional acquisitions. The greatest growth potential will continue to lie in the enterprise itself and in the competence and commitment of our employees. Our most important concern is to even further enhance the level of satisfaction of our current customers and to gain new customers for our products.

Hermann Scholl




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

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

Knut Angstenberger, Stuttgart, 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, (as of January 18, 2001)

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 Metal Industry District Management Baden-Württemberg

Dr. jur. Karl Gutbrod, Stuttgart, former Member of the Board of Management of Robert Bosch GmbH

Dieter Klein, Wolfersheim,

Chairman of the Shop Council of the Homburg Plant of Robert Bosch GmbH and Member of the Joint Shop Council of Robert Bosch GmbH

Dieter Krause, Hildesheim, Chairman of the Shop Council of Blaupunkt GmbH, Hildesheim

Olaf Kunz, Frankfurt, (until December 31, 2001)

Managing Director of the Trade Unions of the Metal Industry Department for Union Policy

Prof. Gero Madelung, Munich, formerly Technical University Munich Chair of Aviation Technology

Prof. Dr. rer. nat.

Hans-Joachim Queisser, Stuttgart, former Director at the Max-Planck-Institute for Solid-State Research

Urs B. Rinderknecht, Emmetbaden, Chief Executive of UBS AG

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

Gerhard Sautier, Erdmannhausen, 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, Chairman of the Board of Management of Stihl AG

Jürgen Ulber, Frankfurt, (as of January 2, 2002)

Union Secretary at the Managing Directorate of the Trade Unions of the Metal Industry

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

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 accounting and financial statements of Robert Bosch GmbH, the consolidated financial statements of the Bosch Group 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 follow the proposal of the Board of Management for the disposition of net income.

As of December 31, 2001, Olaf Kunz left the Supervisory Council. The Council expresses its thanks to him for his constructive work. Jürgen Ulber was appointed as new member of the Council by decision of the Stuttgart court dated January 2, 2002.

Stephan Rojahn left the Board of Management of Robert Bosch GmbH on November 15, 2001, at his own request. The Supervisory Council thanks him for his many years of work for the company. Rainer Hahn retired December 31, 2001, after a long, many-faceted and successful career on the Board of Management. The Supervisory Council expresses its gratitude to him.

At its meeting on November 29, 2001, the Supervisory Council, acting on the recommendation of the shareholders, appointed Wolfgang Drees and Peter Marks deputy members of the Board of Management effective January 1, 2002. Kurt Liedtke, Executive Vice President, was appointed as a full member of the Board of Management, also effective January 1, 2002.

Earlier, during its meeting of June 28, 2001, the Council had followed the recommendations of the shareholders and appointed the former deputy members of the Board of Management, Bernd Bohr, Wolfgang Chur and Franz Fehrenbach, to full members of that Board.

Stuttgart, April 2002  
For the Supervisory Council  
Dr.-Ing. Wolfgang Eychmüller  
Chairman

# Board of Management

## Board of Management

**Hermann Scholl**  
Chairman

**Tilman Todenhöfer**  
Deputy Chairman

**Bernd Bohr**

**Wolfgang Chur**

**Siegfried Dais**

**Franz Fehrenbach**

**Rainer Hahn**  
(until December 31, 2001)

**Claus Dieter Hoffmann**

**Kurt Liedtke**  
(as of January 1, 2002)

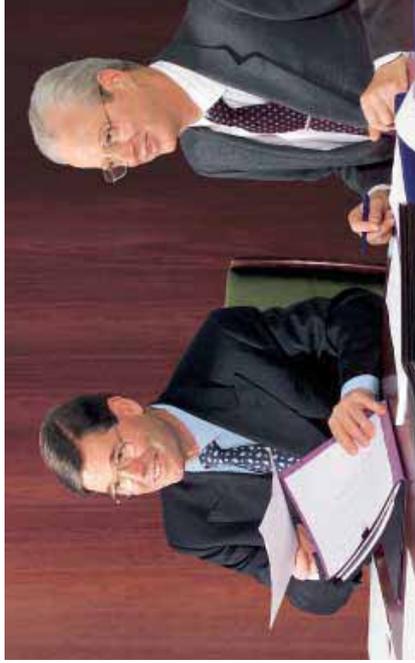
**Stephan Rojahn**  
(until November 15, 2001)

**Gotthard Romberg**

## Deputy Members of the Board of Management

**Wolfgang Drees**  
(as of January 1, 2002)

**Peter Marks**  
(as of January 1, 2002)



### Hermann Scholl

- Corporate Planning and Social Welfare
- Coordination Automotive Technology Executive Personnel

### Tilman Todenhöfer

- Human Resources and Social Welfare
- Legal Affairs and Taxes
- Public Relations



### Franz Fehrenbach

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

### Wolfgang Chur

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

### Peter Marks

- Energy Systems
- Body Electronics
- Manufacturing Coordination
- Capital Expenditure C/P
- Australia



### Gotthard Romberg

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

### Claus Dieter Hoffmann

- Business Administration
- Finance and Financial Statements
- Planning and Controlling
- Purchasing and Logistics
- Environmental Protection
- Japan

### Bernd Bohr

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



### Wolfgang Drees

- Chassis Systems

### Siegfried Dais

- Car Multimedia
- Automotive Electronics
- Security Technology
- Research
- Coordination Development OE
- Information Technology
- South America

### Kurt Liedtke

- North America

- Divisions
- Corporate Responsibilities
- Regional Responsibilities

# Senior Management

as of May 1, 2002



Technical discussion at an information seminar on modern diesel technology. In the picture (from right to left): Hermann Scholl, Chairman of the Board of Management, in conversation with Kurt Liedtke, Member of the Board of Management, and Klaus Bohler, Executive Vice President Diesel Systems division.

## Executive Management of Divisions and Subsidiaries

### Automotive Technology

#### Gasoline Systems

**Ludwig Walz<sup>1</sup>**  
Reiner Leopold-Büttner<sup>1</sup>  
Rolf Leonhard  
Rainer Lohse<sup>1</sup>  
Peter Tyröller

#### Diesel Systems

Klaus Bohler  
Jens-Michael Busselt  
Ulrich Dohle<sup>1</sup>  
Karl Nowak

### Industrial Technology

#### Body Electronics

**Beda-Helmut Bolzenius<sup>1</sup>**  
Herbert Hemming  
Wolfgang Prüße  
Peter Schick

#### Bosch Rexroth

**Winfried Witte<sup>1</sup>**  
Albert Hieronimus<sup>1</sup>  
Manfred Grundke  
Gerhard Kümmel<sup>1</sup>  
Mehmet Vatik

#### Car Multimedia

**Wolfgang Malchow<sup>1</sup>**  
Stefan Asenkerschbaumer  
Klaus Dieterich  
Otto Mayer  
Wolf-Henning Scheider

#### Packaging Technology

**Friedbert Klefenz**  
Gebhard König  
Franz Thoren

### Chassis Systems

#### Wolfgang Drees

Manfred Dreyer  
Jean Dufour  
Bernd Ehlers<sup>1</sup>  
Günther Plapp<sup>1</sup>

### Automotive Electronics

#### Martin Zechmann<sup>1</sup>

Rainhard Aßmann  
Volkmar Denner  
Josef Evers<sup>1</sup>

### Consumer Goods and Building Technology

#### Power Tools

**Alfred Odendahl<sup>1</sup>**  
Boris Gleißner  
Uwe Raschke<sup>1</sup>

### Energy Systems

#### Beda-Helmut Bolzenius<sup>1</sup>

Joachim Hoff  
Peter Schick  
Charles Visconti

#### Automotive Aftermarket

**Eugen Konrad<sup>1</sup>**  
Heinz Decker  
Ruprecht Hammerbacher

#### Thermotechnology

**Joachim Berner<sup>1</sup>**  
Hans-Dieter Eckhardt  
Klaus Hüttelmaier

#### Security Technology

**Uwe Glock**  
Christof Ziegler  
Peter Ribinski

#### Broadband Networks

Reiner Beutel

## Executive Management of selected Regional Subsidiaries

### USA

John Moulton<sup>1,2</sup>  
David D. Robinson<sup>1,2</sup>  
Hans-Joachim Weckerle<sup>1,2</sup>  
Knut Bendixen<sup>2</sup>  
Robby Drave  
Lee Manduzzi  
Meredith Nickol  
Gary Saunders

### Brazil

Klaus Neidhard<sup>1</sup>  
Holger Jacoby  
Edgar Silva-Garbade

### U.K.

Manfred Müller  
Manfred Seitz

### Other Subsidiaries

**France**  
Patrick Mermilliod<sup>1</sup>  
Dietmar Feder<sup>1</sup>  
Gerold Lemperle  
  
**Japan**  
Horst Wittmoser<sup>1</sup>  
Yutaka Ota  
Helmut Pfeifle  
Stefan Stocker  
Toshio Takata  
Andreas Wiegert

## Corporate Executive Management

Adolf Ahnefeld<sup>1</sup>  
Klaus Bleier<sup>1</sup>  
Klaus Bolenz  
Theo-Ernst von Bomhard  
Frank-Ulrich Breitsprecher  
Dietlef Classe  
Klaus Deller  
Christian Deplewski  
Heinz Derenbach

## Senior Vice Presidents – Original Equipment Sales

Dieter Eichler<sup>1</sup>  
Robert Hanser  
Karsten Köhn  
Volker Schmidt  
Helmut Schwarz

Bernt Graf zu Dohna  
Ulrich Eichler  
Christoph Kübel  
Gerd Friedrich  
Manfred Graf  
Heinz Grewe  
Wolf-Dieter Haecker<sup>1</sup>  
Georg Hanen<sup>1</sup>  
  
Thomas Heinz  
Eva-Maria Höller-Cladders  
Hans-Gerd Holtkamp  
Bertram Huber  
Dietlef Konter  
Wolfgang Mierzwa  
Frank Seidel

Names in bold print:  
Presidents of the Divisions

Gert Siegle  
Thomas Wagner  
Tyll Weber-Carstanjen  
Udo Wolz

<sup>1</sup> At the same time  
Senior Director of  
Robert Bosch GmbH

<sup>2</sup> At the same time  
Executive Vice President  
(Divisions)

## Business development meets economic headwind

The worldwide economic environment in 2001 turned out less positive than expected. After having weakened progressively during the first half of the year, the general business climate was further strained by the terror attacks of September 11, 2001. Worldwide economic growth decreased from about 4.3% in 2000 to only about 1.5% in 2001. Worldwide automobile production at the same time shrank by 4%, with the largest reduction taking place in the NAFTA area.

Against this background, the increase in sales of our Group in 2001 by 78% to 34 billion euro was primarily the result of additions to the consolidated group. A major component of this was the inclusion of Rexroth for part of the year.

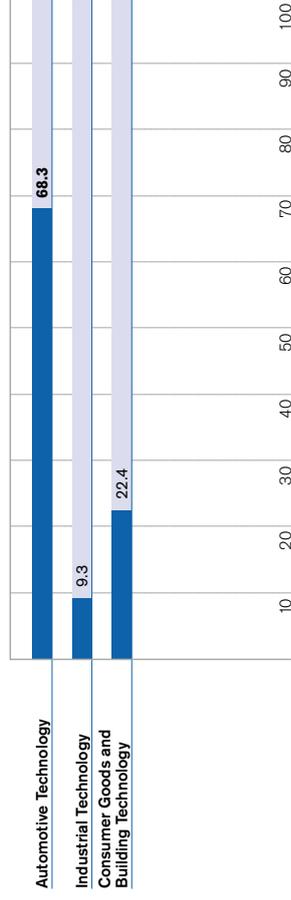
The weak internal growth was caused principally by sales losses outside Europe. The main influence here was the slowdown in the US economy, which also negatively affected growth in Latin America and many Asian countries. In contrast, our European sales – still approximately 65% of our total business – grew internally by about 3%, favored by a still stable automobile business, but above all by a continuing strong growth rate in diesel systems. Non-German sales as a percentage of total sales remained at 72%.

## Greater weighting of industrial technology

With the consolidation of Rexroth starting in May 2001, our Industrial Technology Business Sector reached a sales level of 3.2 billion euro. Its share of total Bosch Group sales thus increased from 3.8% in 2000 to 9.3% in 2001. Had the company been included in consolidation for the full year, that share would have been 12%. The integration of Rexroth into the Bosch Group in 2001 has already made great progress. Industrial technology could not avoid being affected by the economic weakening. Compared with the previous year, 2001 sales, including those of Rexroth, grew by a mere 1%.

Our Automotive Technology Business Sector reached a sales volume of 23.2 billion euro in 2001. Including the first-time consolidation of our Japanese braking businesses, accounting for 600 million euro, sales increased by 3.4%. Thus we continued to strengthen our position as the world's second-largest supplier to the automobile industry. Within the Bosch Group, the sector's share of sales fell from 71% to 68%. This, though, was attributable to the Rexroth acquisition, and is in line with our aim of achieving a better balance among our business sectors.

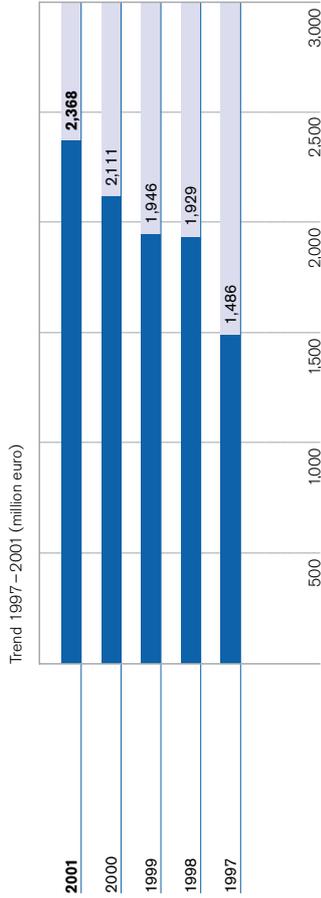
**Breakdown of sales**  
By business sectors in 2001 (as a percentage)



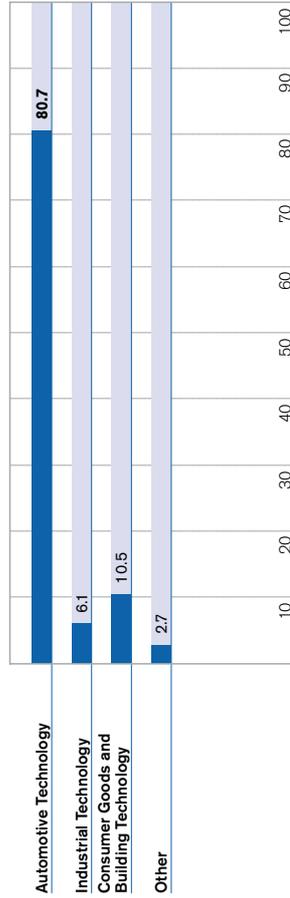
The greatest contribution to growth in automotive technology came, as in prior years, from European diesel-systems sales. The share of diesel-powered vehicles in new registrations of passenger automobiles in Western Europe rose further from 32% to 36%, aided significantly by our new high-pressure injection technology. We also achieved comparatively high rates of growth in our antilock braking systems (ABS), electronic stability program (ESP) and in vehicle navigation business.

Sales of consumer goods and building technology amounted to 76 billion euro in 2001. Including new first-time consolidated units, sales increased by 2.3%. Significant growth was especially achieved with security-technology products. We were also pleased at the way in which the broadband network business developed. However, the power tools, thermotechnology and household-appliances businesses were on the skids. As in prior years, it was particularly the domestic sales which were weak. Thanks to many new and innovative products we still managed to keep or even expand market positions, providing a good platform for the future.

**Investments in tangible fixed assets**



**By business sectors 2001 (as a percentage)**



**Unsatisfactory operating results**

Profit development also suffered from the unfavorable market environment. Our long-term profitability goals, which are indispensable for the financing of investments and further growth, were not met in 2001. For a number of years now we have made large investments, especially in automotive technology, for many new and sometimes very complex products and systems. This, together with very strong competition, exerts pressure on financial results.

**More employees through acquisitions**

At the beginning of 2002 the Bosch Group worldwide employed about 221,000 people, of which 54 % worked outside Germany. That amounted to an increase of 22,300 over the prior year, all as a result of first-time consolidations. The acquisition of Rexroth alone contributed 21,600 employees. The companies already included in the consolidation at the end of 2000 reduced their workforces by about 3,500. This reduction applied mostly to our locations outside Europe. If the effects of the newly consolidated entities are ignored, the number of employees in Germany remained virtually unchanged.

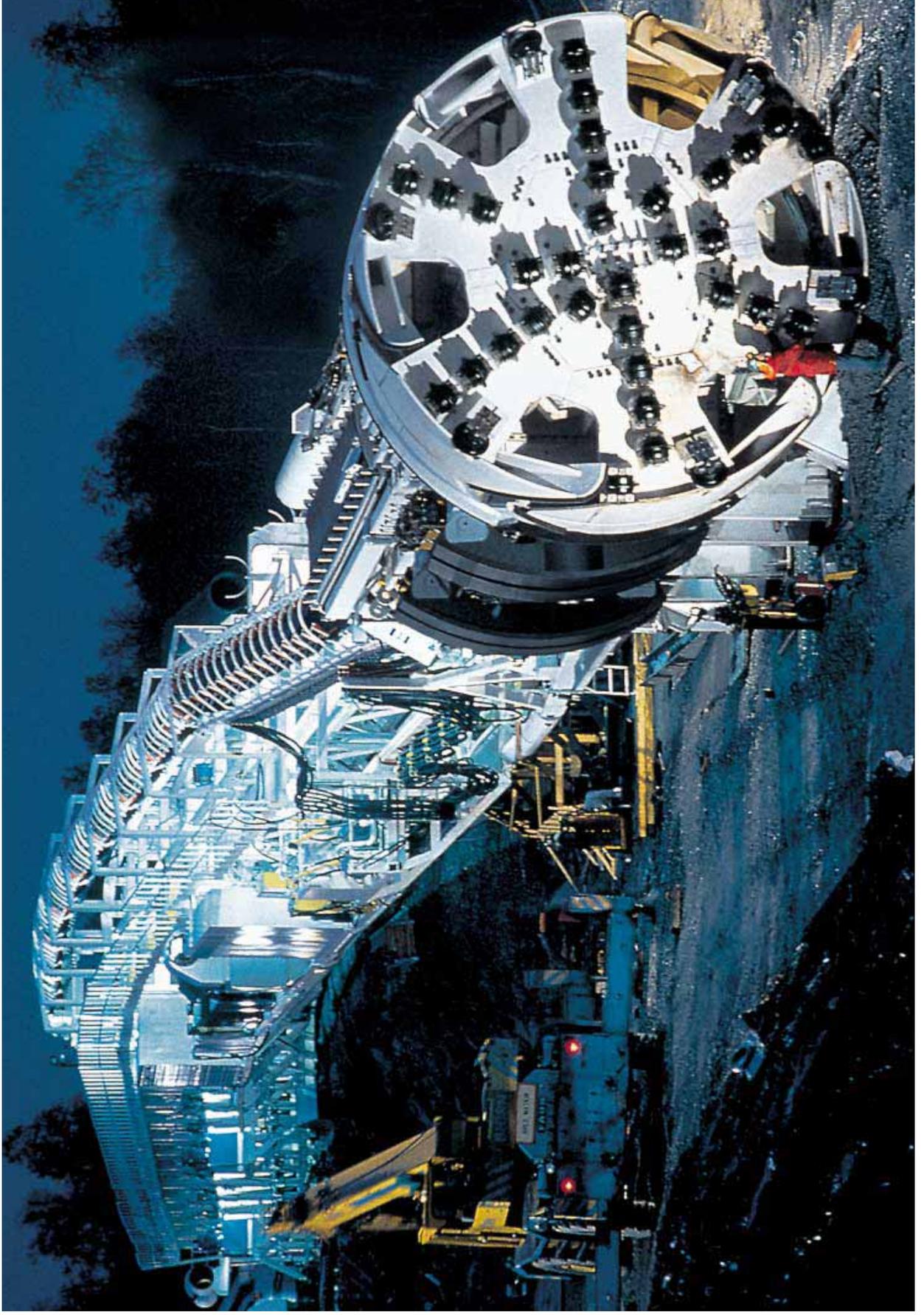
**Further increase of investments**

In 2001 business growth was primarily with new products, and this again called for a further increase of investments in tangible fixed assets. The largest share thereof was for the expansion of production capacity for diesel systems. Special regional investments were focused on our locations at Bursa, Turkey and Jihlava in the Czech Republic. At the same time we commenced building a new development center for automotive technology in Abstatt near Heilbronn. When finished, 2,000 employees will work there. Our total investments in tangible fixed assets in 2001 amounted to around 2.4 billion euro, 62% of which was invested outside Germany.

**No letup in research and development**

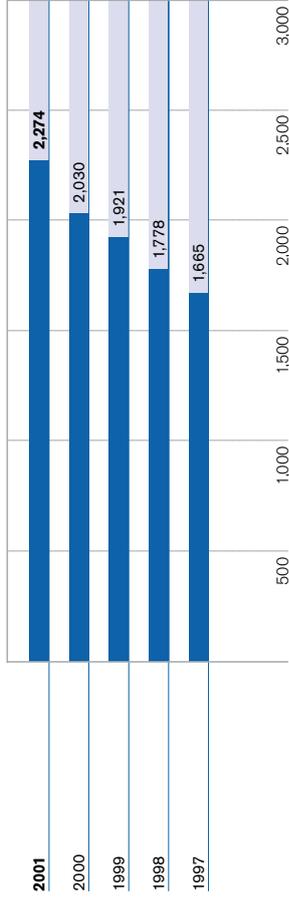
To further expand our technological competence in all areas of our business, we continued to extend our research and development activities. We thus spent approximately 2.3 billion euro in 2001 on research and development which, as a percentage of sales, represents an increase from 6.4 % to 6.7 %. At the beginning of 2002 we employed about 18,550 scientists, engineers and technicians in R & D around the world. Thanks to their work, we were able to keep the number of our patent applications at the high level of the year before.

- ▶ **Power and precision:** The largest tunnel-boring machines in the world operate with technology from Bosch Rexroth. Such "moles" are equipped by us with axial-piston machines, valves, cylinders, gears and controls.



**Total expenditures for research and development**

Trend 1997–2001 (million euro)



**Intensive quality work**

All in all, we were successful with our quality endeavors in 2001, and quality complaints from our customers dropped significantly. At the same time, the many new product generations that we introduced led to increasing challenges to our quality. Especially the growing penetration of software into all systems makes far-reaching demands on our development and production processes. In order to make this our fundamental focus, we have expanded the self-assessment process in accordance with the Excellence model of the European Foundation for Quality Management. The Six Sigma method has proven particularly applicable to the solution of difficult technical problems, and is now being taught throughout the company in intensive seminars.

**Greater efficiency in purchasing**

With total sales of 34 billion euro, our purchasing volume for materials, services, merchandise and capital goods amounted to about 18 billion euro. Of this, 61% was procured outside Germany.

In the face of the stiff competition we experience at our customers, we have continued to improve the efficiency of our purchasing. Within the framework of our “competes” project, we thus placed three objectives at the forefront of our considerations: further concentration on the most efficient suppliers, their early involvement in the development processes of products and production equipment, and a shift of value creation to our best suppliers.

**Internet market SupplyOn goes into operation**

We also implemented process improvements in purchasing with the Internet market SupplyOn, which we founded together with other automobile-industry suppliers. Further partners have joined us in the meantime. For the first time, we have placed all price-bid requests for parts made according to drawings on this market medium. We are working on expanding the range of functions for engineering and logistics together with SupplyOn and the other partners. The goal is to create a comprehensive communications and transactions platform for the European supply industry.

**Outlook for the current year**

Overall, no appreciable improvement in business conditions is visible for 2002. Even though the general economic climate in North America and Europe stabilized at the beginning of this year, the automobile industry remains an exception and worldwide production can be expected to decrease further in 2002. A sweeping economic recovery, which would include the automobile industry, probably will not occur until the year 2003.

Against this background we expect Bosch Group sales in 2002 to experience a small increase only, primarily as a result of the further consolidation effects from the Rexroth acquisition. It is nevertheless our aim to improve profitability compared to 2001 and to keep, where possible, employment stable by utilizing existing flexibility measures.

**Risks inherent in future development**

The greatest risks for sales, employment, profits and liquidity still lie in unstable political and economic conditions as well as the uncertainty involving the further development of the automobile industry.

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

- We have based our 2002 business plan on growth premises which lie below those generally expected. As a result, Bosch Group growth and profit perspectives are conservatively estimated.
- Starting in 2002, we have changed our management philosophy to a value-based system. This will contribute to more firmly anchored profit orientation at all levels and in all decisions, and to greater watchfulness in the efficient use of funds.

- Our risk management is based on a comprehensively structured internal reporting system, which also includes the new business entities which were added in recent years through acquisitions. For better transparency and worldwide control, the business conducted by our subsidiaries is to a large extent consolidated in the applicable divisions.
- Our risk management is complemented by 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. Open currency positions are hedged in line with internal consensus.
- A large number of projects under the motto BeQJK are used to constantly improve all our internal processes. BeQJK represents greater speed in all we do, with the emphasis on quality (Q), innovation (I), and focus on the customer (K).
- With great vigor we continue to implement the two-year old project "Time to Market" in all areas, in order to permanently improve our product creation process, and to speed up new product start-ups with guaranteed quality. This will lower our development and manufacturing costs.
- We are in an intensive process of deepening relations with our customers as partners, aiming with all our resources at achieving common solutions to all new challenges. This applies both to the implementation of new technologies and the search for cost savings in further development of product concepts.
- In order to utilize our worldwide market opportunities still better, especially in times with a poor economic climate, we are expanding our activities in markets and at customers which still offer a large potential for our products. In doing so, we benefit from the demands for technical know-how especially for the careful use of natural resources and for the relief of the environment. These demands are on the increase all over the world.

We are confident that, with this strategic business alignment, we will be able to cope with the risks and thus guarantee the future of the Bosch Group with continued growth and profitability.



Can you put less in and get more out?

**Yes**

Gasoline and Diesel Direct Injection from Bosch makes engines cleaner, more fuel efficient and improves performance, too. 

Bosch. We bring innovation 

**BOSCH**



Is there an automobile equipment supplier who manufactures and provides the support you need wherever and whenever you need it?

**Yes**

Bosch is your local partner – world-wide.

Bosch. We bring innovation 

**BOSCH**

A new advertising concept draws the public's attention more strongly to our high level of innovation. Large-scale advertisements stress our efficiency and capability as one of the world's largest automotive industry suppliers and demonstrate the benefits for vehicle manufacturers and drivers: "Bosch. We bring innovation"



Can fuel be injected so efficiently that up to 20% less is consumed but 5% more power is produced?

**Yes**

With direct fuel injection systems developed by Bosch. 

Bosch. We bring innovation 

**BOSCH**

# Automotive Technology Business Sector

## Key numbers

	2001	2000
<b>Sales</b>	<b>23.2</b>	<b>22.5</b> billion euro
<b>Investments</b>	<b>1.9</b>	<b>1.7</b> billion euro
<b>R &amp; D Expense</b>	<b>1.9</b>	<b>1.7</b> billion euro

**Worldwide motor-vehicle production in 2001 decreased by 3.9% to 55.8 million units. German output, however, again rose, decisively supported by export. Production increased by 3.3% to 5.7 million vehicles. Western European production also rose, in total by 0.6% to 17.2 million. Production in the NAFTA area fell off significantly by 10.4% to 15.8 million vehicles after years of increases. In Japan, production fell by 3.6% to 9.8 million automobiles.**

**Sales of the Automotive Technology Business Sector increased by 3.4% to 23.2 billion euro.**



Testing a high-pressure diesel-injection system. In addition to radial-piston distributor pumps, we primarily produce common-rail and unit-injector systems. All three technologies together with the high-pressure direct injection we developed, make possible the high torque and low fuel consumption of modern diesel engines.

### Gasoline direct-injection expands further

After starting series production of our gasoline direct-injection in 2000, further projects have meanwhile been started or will be started soon. This technology meets the stringent emission limits of Euro IV. Using the stratified-charge method, in which an ignitable air-fuel mixture at the spark plug is surrounded by an insulating layer of air and residual exhaust gas, the DI-Motronic offers particularly economic lean operation in the low-load range. As engine load increases, it switches over to homogeneous cylinder load. Gasoline direct-injection also increases the fun of driving with higher torque values and better spontaneity. In time, we expect that the new technology will be used in every second gasoline-powered vehicle in Western Europe.

### Continued strong growth for diesel-powered vehicles

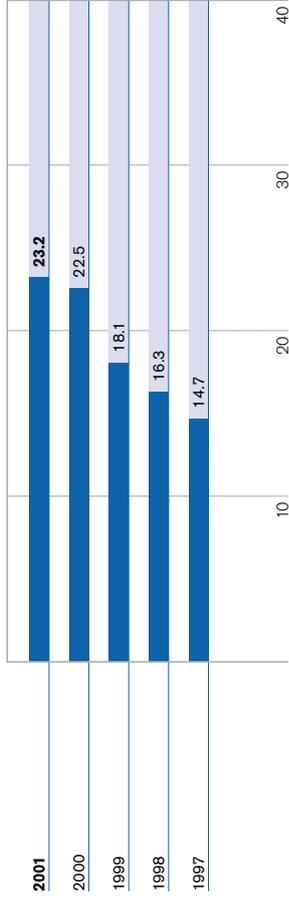
In the year 2001, the share of diesel-powered vehicles among the newly-registered passenger automobiles again increased. The share in Western Europe, at 36%, was about four percentage points above the prior year. Apart from in Europe, we see the greatest growth potential in the next several years in North America and Asia. Our worldwide presence offers excellent conditions for successful market development. Diesel engines are also gaining acceptance in the United States. Here, we draw the attention of the American media, through our own activities and our membership in the Diesel Technology Forum, to the important contribution which modern diesel technology makes in reducing carbon-dioxide emissions.

Thanks to ongoing development, we are able to continually improve our diesel systems. The year 2001 saw the first diesel-powered compact vehicle beat the emissions limits of Euro IV with a Bosch injection system. With the second-generation common-rail systems, which we introduced in 2001, we lowered fuel consumption even further, for the same or better driving performance.



**Sales of automotive technology**

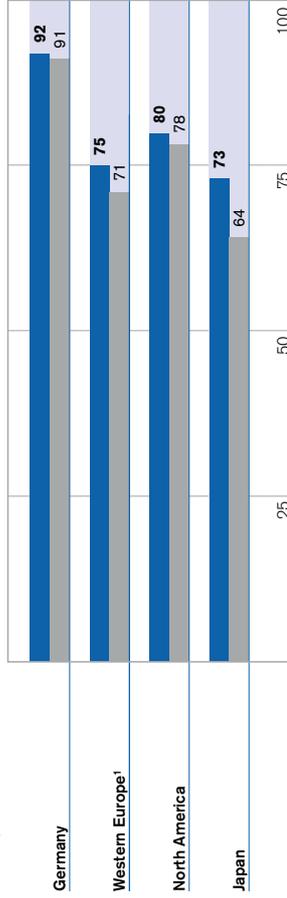
Trend 1997–2001 (billion euro)



**Passenger-car market**

ABS-equipped vehicles as a percentage of passenger-car production in selected markets 2000/2001

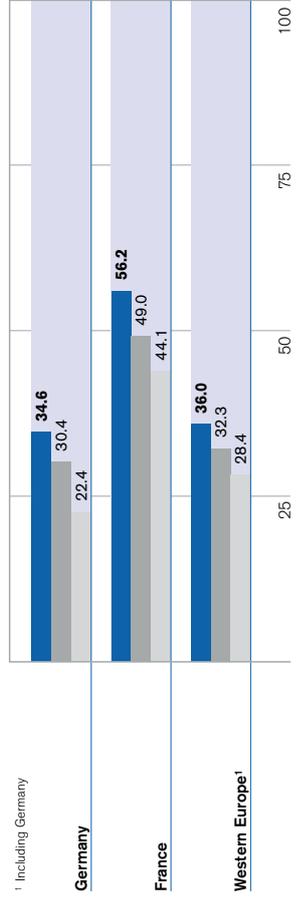
■ 2001  
■ 2000  
† Including Germany



**Automotive market**

Diesel-engine passenger cars as a percentage of new-car registrations in selected markets 2000/2001

■ 2001  
■ 2000  
■ 1999  
† Including Germany



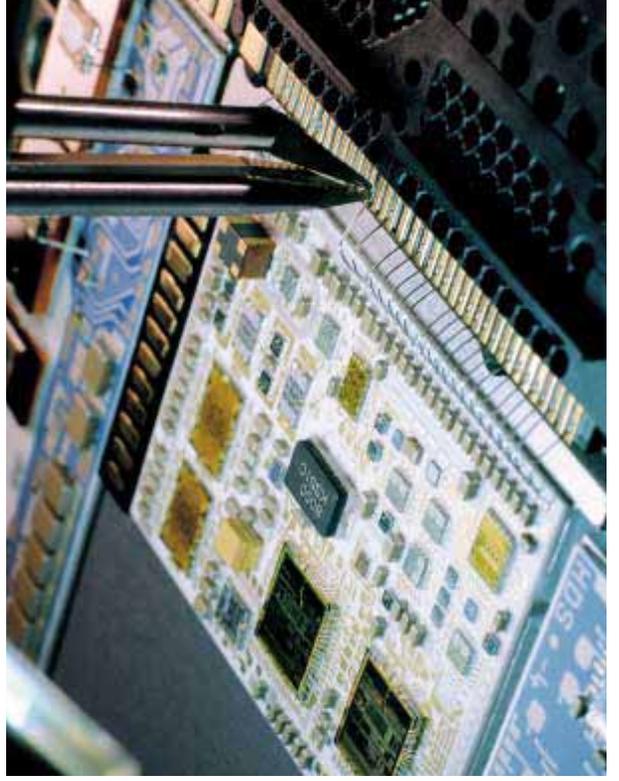
▲ Powerful sensors are a prerequisite for precision systems. Since 2001, we produce a new generation of high-pressure sensors. Sensor elements produced using thin-film technology measure, for instance in common-rail systems, pressures up to 1,800 bar. Here, sensor elements are being loaded into cleaning equipment.

**Development cooperation to reduce braking distance**

We have entered into a long-term strategic partnership with the Michelin Group. By optimizing the combination of our electronic stability program (ESP) with new high-performance tires from Michelin, we together want to reduce passenger-car braking distances by 15%. This means a further upgrade of our system, of which, by the end of 2001, we already had sold 5 million units.

**First brake-by-wire system goes into series production**

The first electrohydraulic brake in the world, the SBC (Sensotronic Brake Control), went into series production in 2001. This system, which we developed together with an automobile manufacturer, uses sensors in the brake pedal to recognize the driver's brake impulse, and transmits the signals to the ECU by means of wire. This, in turn, calculates the individual brake pressures for each of the wheels and manages the braking operation via the hydraulic unit. This constitutes a noticeable plus for the driver's safety and comfort.



▲ As an innovation, the driver's brake impulse in the electrohydraulic brake (SBC) is transmitted electronically as opposed to mechanically. It is processed in a hybrid ECU, which is integrated into the hydraulic unit for controlling the brake pressure. In production, the ECU is automatically connected with the contact plugs via thin aluminum wires.



Worldwide uniform measuring processes and testing equipment ensure that our high quality standards are complied with in all our plants. Here: a worker tests injection nozzles for diesel engines.

In our diesel-engine test center we test new components and adapt injection systems to the engines. These are mounted on special frames, which allow for very short connect and disconnect times on the test bench, thus leading to far higher levels of test-bench utilization.

**Internet comes to the automobile**

Our Blaupunkt subsidiary introduced an internet-capable car radio. In addition to having internet access, the radio, designated OnlinePilot, provides vehicle navigation using the data transmitted by mobile radio. The integration of telematics applications will mean that in the future the information providers will be able to exploit this as an excellent platform for their services.

**Pre-crash sensing for restraint systems**

Restraint systems, such as the airbag and the seat-belt tightener, protect all the better, the more detailed the information received with respect to expected accident severity and sequence. We developed systems, which will protect car passengers still more. New sensors already provide data about the expected crash speed and angle during the so-called pre-crash phase, shortly before the actual accident. This means for instance, that the seat-belts can be tightened earlier, and the optimum point in time for the triggering of a second airbag level can be calculated more accurately.



We have equipped a fleet of 66 demonstration automobiles with navigation systems, mobile telephones and automobile hi-fi components from Blaupunkt. These vehicles are made available to dealers, who can thus offer individual test runs.

**More side support with drive-dynamic seat**

We completed development of the drive-dynamic seat in cooperation with an automobile producer. The seat is meanwhile in series production. Our components adjust the size of the air cushions in the upholstery to the actual driving conditions and improve the side support of the seat. This technology provides the driver with a high level of comfort on long drives and very good lateral control in every driving situation.

**Innovative wiper systems for better visibility**

Seventy-five years after we first started mass production of electric wiper motors, we have for the first time produced electronically-controlled units. This innovation reduces space requirements under the hood and optimizes the wiped area. The Aerotwin wiper blade, which we introduced in 1999, is being used more and more as original equipment.





- In the future, controllable fans for engine cooling will become an important part of engine thermal management. They allow for fuel savings of up to 5% and for further reductions in pollutant emissions. Here: double-fan module with brushless motors.



- New comfort and safety systems require a reliable power source in the vehicle. For this task, we developed electronic energy management. Its predictive diagnosis of battery charge and battery condition is decisive for a reliable power supply in the vehicle and for optimum starting. In our low-temperature testing facility, such functions are tested and optimized at temperatures as low as  $-28^{\circ}\text{C}$ .

#### Further growth in aftermarket products

The Bosch service organization supports our aftermarket activities with 9,000 franchises worldwide. We have increased the number of Bosch service centers, particularly in Asia and Eastern Europe. In order to provide our workshop customers with a total solution for vehicle repair and maintenance, we have combined all necessary services, such as technical information, training, consultation and testing equipment under "Bosch Diagnostics". In doing so, we continued to expand our aftermarket business in automotive technology despite the worldwide economic slowdown.

#### Engineering services bring success

Demand for the services of our Asset Automotive Systems and Engineering Technology GmbH subsidiary keeps growing. The company started operations in 1999 and meanwhile employs 250 people. It offers development services for electronic systems. The work focuses on engineering development of engine-control and vehicle-management systems as well as development of comprehensive systems-overlapping functions based on the Cartronic architecture.

#### Electric power steering ready for series production

Our fifty-fifty partnership, ZF Lenksysteme GmbH, has developed a system for electric steering assists, which will go into series production in 2002. The new steering system will contribute significantly to lowering fuel consumption.

#### Bosch presents its product program at its customers

We increasingly showcase our technology at our customers. We then present the entire range of our innovations in automotive technology. These showcases include technical presentations and discussions, displays of product samples, and vehicle demonstrations. In 2001 we held thirteen events in eight countries worldwide, and were able to reach more than 7,000 employees at the automobile manufacturers.

# Industrial Technology Business Sector

## Key numbers

	2001	2000
<b>Sales</b>	<b>3.2</b>	<b>1.2 billion euro</b>
<b>Investments</b>	<b>145</b>	<b>34 million euro</b>
<b>R &amp; D Expense</b>	<b>171</b>	<b>84 million euro</b>

Our Industrial Technology Business Sector has become a strong pillar of our business. Since May, 2001, we have included Bosch Rexroth AG in consolidation. In this company, we combined our Automation Technology Division with Mannesmann Rexroth AG. The inclusion of the company in our consolidation for a part of the year already nearly tripled sales of industrial technology to better than 3.2 billion euro. Especially important: the integration of Bosch Rexroth AG to date has gone off smoothly. A sure sign: despite the weak economy in the mechanical engineering sector, we were able to keep or even expand our market share in all important markets.

◀ The battle against the water: as market leader in hydraulic and control technology in the Netherlands, Bosch Rexroth was involved in building the Oosterschelde storm high-water weir. The first large moveable barrier is part of the Delta works, which was built in the Southwestern part of the Netherlands as protection against flooding.

### Bosch and Rexroth: synergies in core competencies

A fundamental assessment also shows how good the chances are for integrating Rexroth into the Bosch Group. Industrial technology is a business area which, especially in relation to automotive technology, shows significant synergies. In both cases, we can make full use of our competencies, which lie in the combination of electronics, hydraulics, micromechanics and the production processes applicable thereto.

### Bosch Rexroth AG: slow growth in a weak economy

Bosch Rexroth AG, which sees itself as "The Drive and Control Company", is a leading world market supplier of industrial technology. During 2001, which was marked by weak demand in the mechanical engineering sector, the company raised its sales by 1% to 3.9 billion euro. Of this, 2.8 billion euro were included in the 2001 consolidated financial statements. The company employs approximately 26,000 people. Its business lies in industrial hydraulics, mobile hydraulics, pneumatics, assembly and linear-motion technology, and in electric motors and controls.

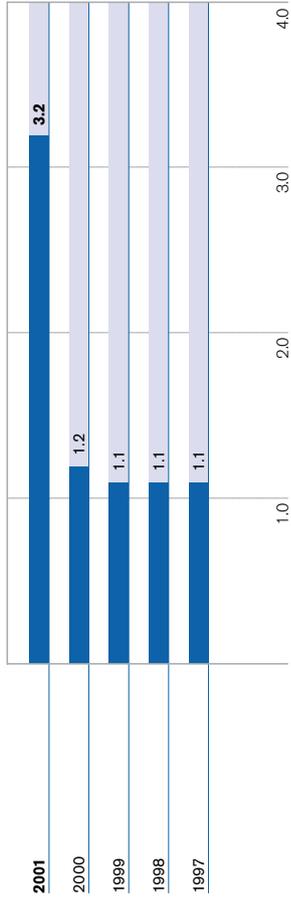
### A world first: hydraulics connection to the Sercos Interface

Bosch Rexroth is also customer-oriented when it comes to innovations. For instance, the company came up with a world first in industrial hydraulics: the digital one- and two-axis controller HNC 100, the first hydraulics connection to the open drive interface, Sercos Interface. This field-proven and familiar interface can now not only be used in the control of electric servomotors and frequency converters, but for the first time hydraulic drives can also be controlled.



**Sales of industrial technology**

Trend 1997–2001 (billion euro)



▼ Toughest jobs: hydro-cylinders from Bosch Rexroth regularly show up in large international projects, such as the building of bridges, locks and reservoirs. Other uses are on ships, offshore platforms and especially in heavy industry.



▲ Protection for the hinterland: The hydraulic cylinders carrying the gates of the Hartel canal weir were manufactured at the Bosch Rexroth plant in the Netherlands. Each cylinder is 30 meters in length and weighs 70 tons. When extended, they reach a length of 50 meters when the weir is let down to protect the Rotterdam harbor area and hinterland from high water.



▲ Clean packaging technology for liquid medicines: we supply the pharmaceutical industry with compact equipment to clean, sterilize, fill and seal cylindrical ampoules.

**Bridge – or how to use the opportunities of e-commerce**

The internet portal of the new company bears the appropriate name Bridge – or “Bosch Rexroth Integrated Global Entrance”. By providing engineering application examples, it supports customers in choosing the products they require. And special configuration software helps in combining components into optimal systems. An electronic shop allows for online ordering of the products selected.

**Packaging technology: from machinery producer to technology supplier**

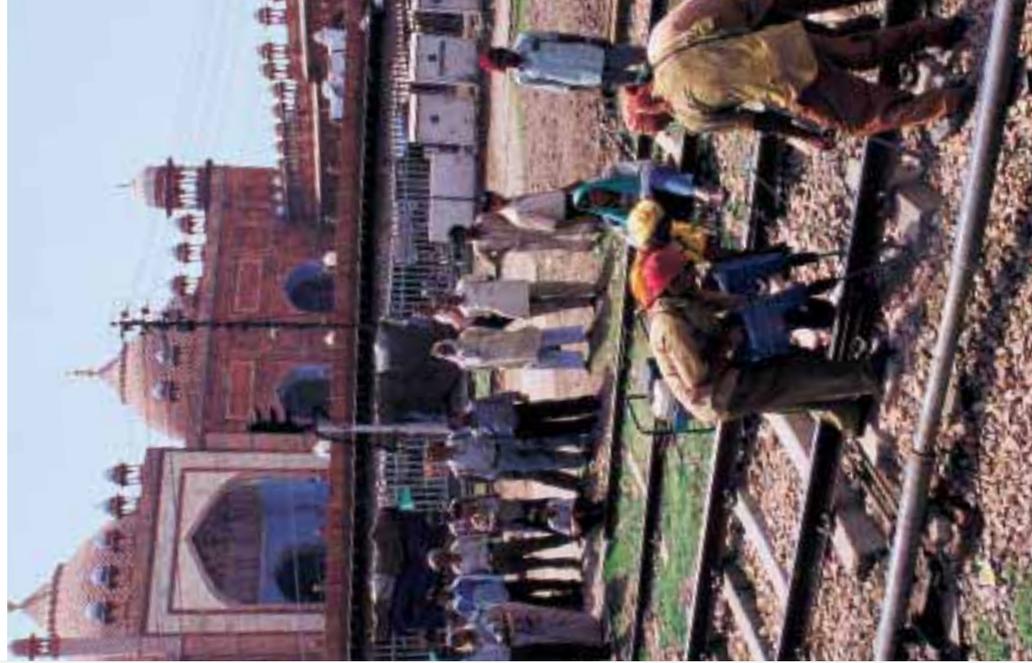
As important as the industrial technology from the newly formed Bosch Rexroth AG is for this business sector, packaging technology is also a factor of noteworthy magnitude. Here, we have reorganized completely: from the pure packaging machinery producer to the wide-ranging technology supplier. We are currently concerned with the integrated production and packaging processes of our customers – whereby the classical packaging machine now only serves as a component. During 2001 we expanded our international position in packaging technology, and our sales growth outpaced that of the market.

# Consumer Goods and Building Technology Business Sector

## Key numbers

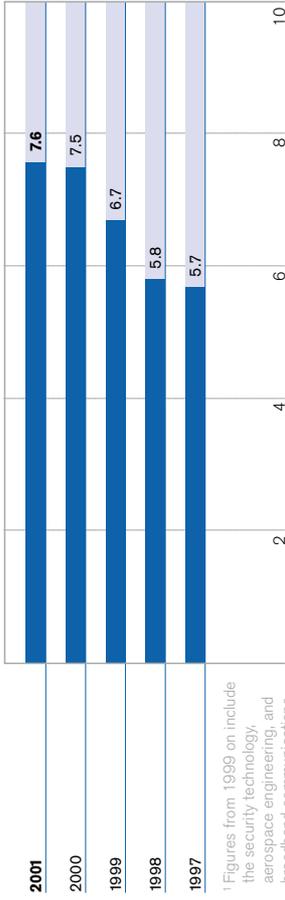
	2001	2000
Sales	7.6	7.5 billion euro
Investments	248	223 million euro
R & D Expense	235	208 million euro

The weak economic climate of 2001 softened our consumer goods and building technology business. Sales in this business sector, not counting new consolidations, fell slightly by 1.6% to 7.3 billion euro. In order to tap new sources of growth, however, we selectively broadened our portfolio with the recent integration of two U.S. companies: with Vermont American Corporation we rose to become the world leader in power-tool accessories, and with Detection Systems we expanded our business in security-technology products.



## Sales of consumer goods and building technology<sup>1</sup>

Trend 1997–2001 (billion euro)



<sup>1</sup> Figures from 1999 on include the security technology, aerospace engineering, and broadband communications product groups

Trains are an important means of coping with the long distances of the Indian subcontinent. The 107,000 kilometer long rail network has always to be kept in good working order. That is why Indian railroad workers prefer robust Bosch tools for their construction and repair work: ten-kilo rock drills powered by special generators in India's hot climate.

### Power tools: the market leader takes new paths

Even in difficult times we do not lack new ideas for our power-tools business. We are introducing as a world first a wall sensor, which can even detect plastic materials in walls. This minimizes the risk of damage while drilling. In order to get such innovations to the craftsman and the do-it-yourselfer, we also utilized the new media, for instance by instituting an online catalog, which also provides users with advisory services and which can be accessed at the internet address "www.Bosch-pt.com".

The market in the core business with power tools was stagnant in 2001. In addition to a weak construction market in Europe, demand in North America also fell. Nevertheless, we retained our world market leadership with the Bosch, Skil and Dremel brands. In Asia, especially in Japan, we were able to further enhance our position as the largest non-Asian supplier.

### Thermotechnology: international business orientation

In a difficult environment, we were also able to retain our strong market position in thermotechnology. We are number one in gas water heaters in Europe, and number two in gas heating units. Nearly 80% of our sales are made outside Germany, a fact which is proof of our international orientation. Especially in Europe, our wide range of heat-value equipment accommodates increasing customer demands for lower fuel consumption and better emission values.

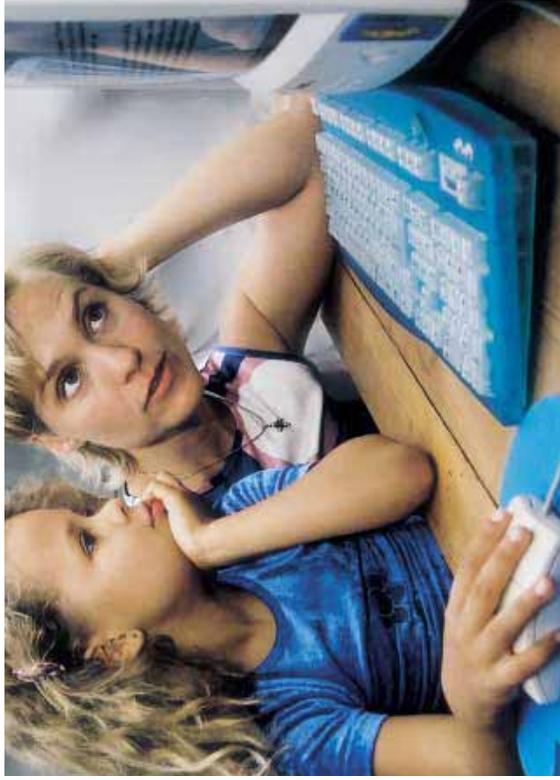
### Household appliances: measures to cope with price erosion and pressure on margins

BSH Bosch und Siemens Hausgeräte GmbH, a 50–50 Bosch and Siemens joint venture was unable to avoid being affected by the weak market conditions. Although the company gained some market shares in important West European countries, sales decreased by 3% from the prior year to 6.1 billion euro. A bundle of measures, though, from productivity increases to aggressive innovation, was able to limit the effect of price reductions and margin pressures.

**Security technology: we now also have plants in the U.S., China and Australia**  
 The world market for security technology is growing twice as fast as that in Germany: 7% vs. 3%. We are taking this into account with the rapid integration of our U.S. company, Detection Systems. This adds production locations in the United States, China and Australia, as well as 20 sales companies worldwide, which we intend to expand. We secured a competitive advantage in the video monitoring of public streets and places – with initial projects in Hesse, Brandenburg and Bavaria.

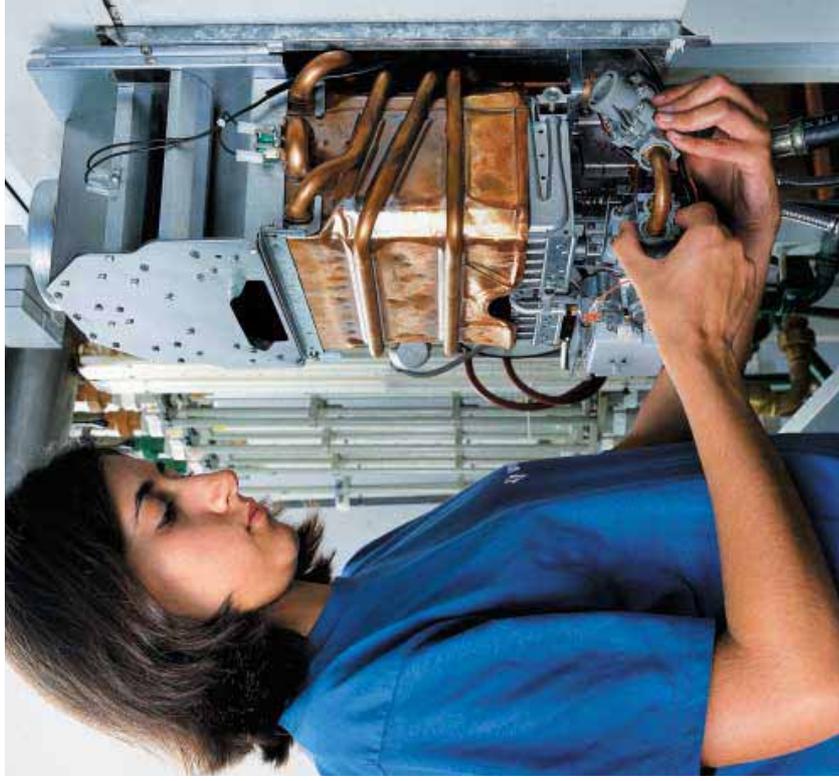
**Broadband networks: new opportunity for a better market position**  
 Although the market for broadband cable services grows continually, it is changing fundamentally due to shifts in network ownerships. We are taking advantage of this to strengthen our market position. After the start-up of the pilot project in Zwickau, we are enhancing other city networks for interactive cable services.

▶ Handy helpers in every situation: thousands of craftsmen worldwide swear by the new "Dremel". Equipped with a powerful battery, it can be put to use without a cord, everywhere. Whether repairing a child's swing or doing filigree handicrafts – it drills, screws, cuts and grinds everywhere.



▶ We offer fast internet access via our broadband cable network. In a pilot network in Zwickau, in Saxony, customers already benefit from the advantages of this service. We have started with the enhancement of further city networks.

▶ With the idea of using a hydrodynamic generator as the power source for the burner ignition, we once again take on a pioneering role in thermotechnology. This world first was developed at our Portuguese plant in Aveiro, where it has gone into production.



# International Business

## Key numbers

	2001	2000
<b>Sales</b>	24.6	22.7 billion euro
<b>Investments</b>	1,463	1,260 million euro
<b>R &amp; D Expense</b>	777	716 million euro

The terror attack of September 11 shocked the world economy and shattered the hopes for a better second half of the year. Although we succeeded in increasing our non-German sales by 8.6% to 24.6 billion euro, this rise was for the most part due to the effects of consolidation measures. If these effects are not taken into account, we were only able to stand our ground in Europe. Here we achieved two thirds of our sales. In other regions we suffered sales decreases. We nevertheless maintain our strategic goal of further expanding our international business. We see opportunities for long-term growth above all in America and Asia: the calls for stricter legislation to control carbon-dioxide emissions in the United States are on the increase, which opens up opportunities for the diesel engine. And in the Far East, automobile producers are increasingly willing to buy from suppliers outside their own groups.



- Customer service as we understand it: our Indian dealers also emphasize consultation and service. The customer receives detailed information about function and quality of our products. Technical features are explained using samples.

- Production of diesel injection pumps on the Indian subcontinent: with about 11,000 employees at four locations, we produce automotive technology, automation technology, packaging technology and power tools for the do-it-yourselfer. In addition, in Bangalore, 700 employees develop software for all divisions of the Bosch Group as well as for third parties.



### Present on all continents

In order to still better compensate for economic and currency fluctuations, we are intensifying our international presence. We are not only strongly emphasizing additions in the various sectors, but are also concentrating on regional diversity. We are present on each continent and represented by subsidiaries or associate companies in more than 50 countries. We manufacture our products at 227 locations, of which 171 are outside Germany, and are at the forefront in all markets in which we are active.

### North America remains the most important market outside Germany

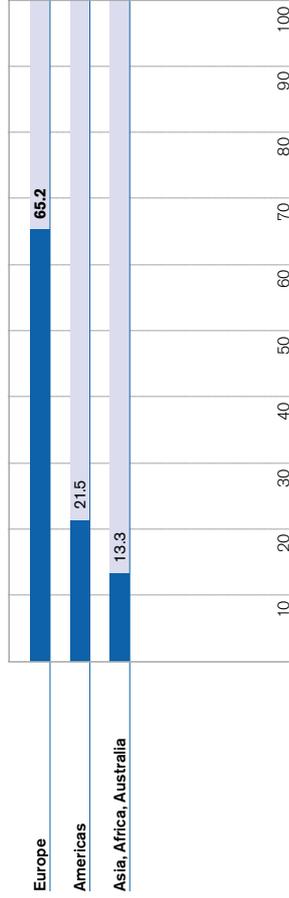
We could not continue the high rate of growth in the NAFTA area (USA, Canada, Mexico). The terror attacks of September 11 were too much of an additional blow to the already weakened North American economy. Automobile production in the fourth quarter thus fell by 10% despite widespread sales incentives. We were only able to partially compensate for this. As a result of new consolidations, our sales in North America increased by 10% to 6.3 billion euro. We employ 24,000 people in the NAFTA area and produce automotive technology, power tools, and automation and packaging technology at 47 locations.

### Opportunities for expansion of business with Japanese automobile producers

We have, in recent years, significantly strengthened our position in Japan, which represents our second-largest market overseas. The focus of our activities here is on diesel injection, braking business and vehicle air-conditioning technology. We increasingly integrate these activities into our international production and development network. This opens up opportunities for further expansion of business with Japanese automobile manufacturers and their worldwide transplants. In Japan too, our 12% growth to 2.2 billion euro is attributable solely to new consolidation measures. Our workforce at our 18 locations totals 8,800.

**Breakdown of sales**

By regions 2001 (as a percentage)



**The most important year 2001 markets outside Germany**

Sales (billion euro)	
NAFTA	6.3
France	3.2
Japan	2.2
U.K.	1.8
Italy	1.7
Spain	1.4
Brazil	0.8
Austria	0.6
Korea	0.6
Sweden	0.6

**Diesel-powered vehicles also gain importance in Korea**

In order to optimize our service to the growing market for diesel-powered vehicles in Korea, we have commenced production of components locally. We started producing electronic control units for diesel direct-injection systems in our Taejeon plant. The production of common-rail injectors will follow in early 2003. Despite falling automobile production, we were able to increase our sales to Korean automobile manufacturers.

**Continued expansion of our Chinese business**

Our business volume in the Chinese market, which shows no letup in its dynamic growth, rose by approximately 39%. In China we develop, produce and sell – partially with partners – products of automotive technology, automation technology, packaging technology, thermotechnology, security technology, and power tools and household appliances.

**Growth in the European region outside Germany**

Our European business was marked by the favorable developments in France, Italy and Austria. This was primarily the result of good sales of our diesel systems. We also experienced further growth in Central and Eastern European countries, which turned out to be less susceptible to the worldwide economic slowdown. In total, our sales in Europe (excluding Germany) increased by 7.9% to 12.8 billion euro.

▶ Diesel-powered passenger automobiles are becoming ever more popular, especially in Europe. The direct-injection systems, which we developed, have significantly contributed to this popularity. In order to meet the growing demand, we have further expanded capacity. At our Jihlava (Czech Republic) and Bursa (Turkey) locations we have increased manufacturing floor space significantly. Here: A Turkish employee tests common-rail injectors, which we produce there since 2000.



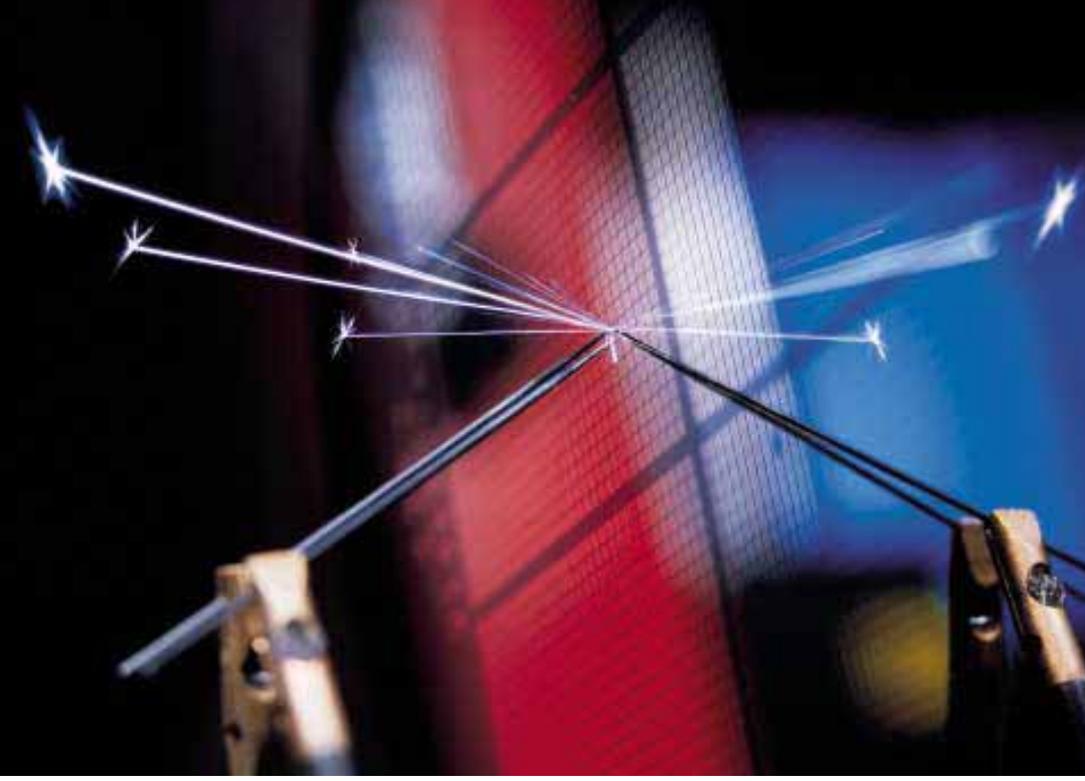
# Research and Development



The technical competence of the Bosch Group is above all characterized by innovative products and processes. Our research and development departments are major contributors in this respect. They guarantee the transfer to the divisions of new technologies, technical concepts and manufacturing processes.

◀◀ We develop biometric ID systems for the identification and verification of people-related authorizations. Such systems can be used for the individual operation of vehicle systems.

▶ Workpieces to be coated or glued, must be as clean as possible. In order to assess the efficiency of cleaning processes for mass production, we inspect the parts with ellipsometric, laser-aided measuring techniques, which can detect contamination with a film thickness measured in nanometers. An employee here tests the exact focusing of the laser beam onto the workpiece surface.



▶ "Intelligent" ignition elements with integrated evaluation electronics are key components of future restraint systems. We currently analyze the necessary production processes to combine thin-film ignitors with electronic chips. Here: ignition spark of a thin-film airbag ignitor.

# Environmental Protection



▼ This symbol for environmental protection at Bosch stands for uncontaminated water, clean air, and unspoilt nature. The closed circle is synonymous for the life cycle as applied to nature and to man-made products: From development, through production, and up to disposal at the end of the product's useful life. The Q shape implies the connection to the Bosch quality symbol.

▼ Chips fall and heat is generated wherever drilling and turning takes place. Cooling lubricants, which are used to prevent equipment from overheating, stick to the drilling and turning chips. By centrifugal action, the lubricant is separated from the chips so that it can be used again. Highly innovative technologies even permit such lubricants to be dispensed with completely. In the photo: In the Leinfelden plant near Stuttgart, power-tool components are dry-turned.



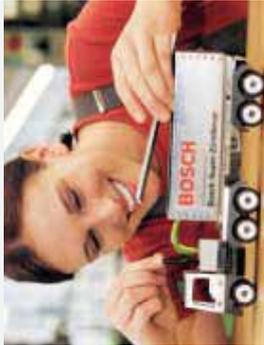
As far back as 1973, environmental protection was laid down as a corporate principle for the Bosch Group. It has been allocated the same level of priority as the quality of our products and the economic success of the company. Our corporate standards for environmental protection not only comply with the strict demands in Europe, but are also adhered to at the Bosch sites all over the world.

**Across-the-board introduction of environmental-protection management**  
The introduction of environmental-protection management systems started in 1995. In the meantime, more than 120 sites have been certified as per ISO 14001. In 2001, we extended the environmental-protection management objectives to cover fire protection and occupational safety and health. A uniform, process-oriented method is applied to generate synergetic effects between the individual sectors.

**3-S program: Safe, Clean, Economical**  
Since 1974, we have applied this motto to our main research and development activities. Our highly successful diesel and gasoline-injection systems not only drastically reduce toxic emissions but also reduce fuel consumption, with the result that CO<sub>2</sub> emissions are lowered extensively to the benefit of the environment and of resources conservation.

**Environmentally-oriented product development**  
Environmental protection starts already during the product-development stage. From the very beginning, our development departments take into account the stipulations covering the minimum amount of material used and the bans on certain material types, as well as the regulations on recycling capabilities and low energy levels for the production process. This procedure contributes to the increasing environmental compatibility of our products. An oil filter, for instance, whose components are no longer glued together so that they can be recovered again completely during the recycling process.

# Employees of the Bosch Group



How innovative the Bosch Group is, is not only evident in technology, but also in its personnel and social services. The year 2001 provided good examples thereof, for instance, the supplementary salary and wage agreement for some of our research and development personnel. The agreement allows engineers to work longer on a weekly basis in connection with a lifetime-work-account. We also increasingly use new media, such as the internet platform "e-fellows.net" in order to attract highly qualified younger staff.



There is room too for a new mechatronics shop. In this new five-floor building we have for the first time brought together under one roof the training at our largest German location. On increased floor space we now train about 630 young women and men. In the year 2001 alone, we added more than 200 apprentices.

Proof of our loyalty to the location Germany: the new building complex at our Stuttgart-Feuerbach facilities, which went into use in the fall of 2001 after two years of construction. We invested 50 million euro in the project. Personnel development, vocational and advanced training, the Robert Bosch Kolleg and information processing, work here on a 38,500 sqm large floor space. The company health-insurance organization and the ETAS subsidiary are located here too. In total, 1,500 employees work in the new building.

**Effects of new consolidations lead to an increase in the number of employees**  
Although the worldwide workforce of the Bosch Group has clearly increased, this increase mirrors primarily the effect of newly consolidated entities. For instance, the employees of Bosch Rexroth AG are included both in Germany and abroad for the first time in 2001. The workforce outside Germany increased by better than 9,700 to 118,500, while German employment grew by more than 12,600 to 102,500.

**80% more international tours of duty than five years ago**

We attach great importance to the international exchange of employees. This intensifies worldwide cooperation and especially the knowledge transfers inside the Bosch Group. And, last but not least, longer tours of duty abroad promote employee development. At the beginning of 2002, 1,680 employees worked outside their home country – 30% more than the previous year and 80% more than five years ago.

**Apprentices shine at Career World Tournament**

Even our apprentices have a chance to prove themselves internationally. During 2001, more than 100 apprentices completed a tour abroad. At the beginning of 2002, about 5,800 young people were engaged in an apprenticeship program. The quality of our training showed itself in 2001 in a special success: apprentices from Germany and Australia participated in the Career World Tournament in Seoul, after they had excelled in their disciplines in their respective home countries. Our Australian apprentices even ended up by winning the "Manufacturing Team Challenge" competition in the Korean capital.



▶ The capabilities of our apprentices were shown, among other things, by these "trikes", three-wheeled motorcycles. They worked three weeks on the models, starting with the development of a concept, followed by proving their skills: milling, filing, soldering.



**Supplementary salary and wage agreement for research and development**  
 Despite all efforts at attracting new employees, the job market for engineers remains tight. Against this background, the supplementary salary and wage agreement for some areas of our research and development department is particularly important. The new rules open up the possibility for higher-paid employees in these areas, primarily engineers, to work up to five hours extra each week. Half of this time is paid for directly, and the other half applied to lifetime work accounts. We view this as a breakthrough on the way to a more differentiated wage and salary policy, which meets the needs of both the company and the individual.

**Expression of appreciation to employees and their representatives**  
 Bosch is made up of people. Essentially, the company's success is based on the knowledge, commitment, and performance of our employees, for which we are deeply thankful. We also want to express our appreciation to the labor representatives for their willingness to cooperate with us in a constructive manner.



**More participants in our doctorate study program**  
 We also encourage the next-generation scientists more than ever. As such, the number of participants in the doctorate study program at Robert Bosch GmbH in Germany rose again. During 2001, approximately 130 college graduate employees primarily with degrees in physics, mechanical engineering and electrical engineering, received support from us in attaining their doctor's degrees. Particularly encouraging: about 90% of our doctoral candidates stayed with the company.

**Contact with top students via the internet**  
 We tread new paths to attract highly qualified young recruits for the company. Early in 2001 we joined the internet platform "e-fellows.net", with which European businesses address top students. In this framework, we approach the "high potentials" with, for instance, mentoring and international training programs.



Whether with inline skating or biking – at nearly all our locations employees have joined in leisure activity groups. They not only seek to balance their career tensions with physical activities, but also the private contact with colleagues. New employees especially take advantage of these opportunities. Is there a better opportunity than sport for getting to know someone quickly?

# Financial Statements of the Bosch Group Worldwide

## Consolidated Balance Sheet as of December 31, 2001

(million euro)

<b>Assets</b>	Appendix	December 31, 2001	December 31, 2000
<b>Fixed assets</b>	(6)		
Intangible fixed assets		986	958
Tangible fixed assets		7,436	6,385
Financial investments		919	1,065
		<u>9,341</u>	<u>8,408</u>
<b>Current assets</b>			
Leased products		39	41
Inventories	(7)	3,932	3,654
Accounts receivable and other assets	(8)		
Accounts receivable		5,733	5,271
Other receivables and assets		1,830	2,015
Marketable securities		3,688	3,400
Liquid assets		3,180	1,684
		<u>18,402</u>	<u>16,065</u>
<b>Deferred expenses</b>		40	31
		<u>27,763</u>	<u>24,504</u>
<b>Liabilities and Equity</b>	Appendix		December 31, 2000
<b>Equity capital</b>	(9)		
Capital stock		1,200	920
Capital surplus		4,557	2,367
Earned surplus		2,489	1,905
Unappropriated earnings		50	2,603
Minority interests		718	493
		<u>9,014</u>	<u>8,288</u>
<b>Accruals with valuation reserve portion</b>	(10)	205	115
<b>Accruals</b>			
Accruals for pensions and similar obligations		4,406	3,800
Other accruals	(11)	6,888	5,958
		<u>11,294</u>	<u>9,758</u>
<b>Liabilities</b>	(12)		
Liabilities from financing		3,557	2,538
Accounts payable		2,134	2,233
Other liabilities		1,553	1,552
		<u>7,244</u>	<u>6,323</u>
<b>Deferred income</b>		26	20
		<u>27,763</u>	<u>24,504</u>

Financial Statements of the Bosch Group Worldwide  
 Consolidated Statement of Income  
 for the period from January 1 to December 31, 2001  
 (million euro)

	Appendix	2001	2000
<b>Sales</b>	(15)	<b>34,029</b>	31,556
Changes in finished goods and work-in-progress inventories and other capitalized costs	(16)	<b>171</b>	369
<b>Total operating performance</b>		<b>34,200</b>	31,925
Other operating income	(17)	<b>2,195</b>	2,046
Cost of materials	(18)	<b>-16,284</b>	-15,428
Personnel costs	(19)	<b>-9,959</b>	-8,950
Depreciation and amortization of intangible and tangible fixed assets		<b>-2,502</b>	-2,250
Other operating expenses	(17)	<b>-6,419</b>	-6,078
Net income from investments	(20)	<b>155</b>	83
Amortization of financial investments and securities included with current assets		<b>-101</b>	-72
Interest income, net of expenses	(21)	<b>126</b>	138
<b>Income from ordinary business activities</b>		<b>1,411</b>	1,414
Taxes on income	(22)	<b>-761</b>	-34
<b>Net income for the year</b>		<b>650</b>	1,380
Including profit and loss of minority shareholders	(23)	<b>-42</b>	53

Financial Statements of the Bosch Group Worldwide  
 Capital Flow Statement<sup>1</sup>  
 (million euro)

	2001	2000
Net income for the year	<b>650</b>	1,380
Depreciation of fixed assets <sup>2</sup>	<b>2,551</b>	2,309
Increase in long-term accruals and accruals with valuation reserve portion	<b>480</b>	40
<b>Cash flow</b>	<b>3,681</b>	3,729
Change in inventories and leased products	<b>278</b>	-524
Change in receivables	<b>513</b>	-500
Increase in short-term accruals	<b>188</b>	136
Decrease in liabilities	<b>-857</b>	-115
<b>Additions to funds from business activities (1)</b>	<b>3,803</b>	2,726
Additions to fixed assets	<b>-2,860</b>	-2,792
Retirements of fixed assets	<b>432</b>	472
Changes in the consolidated group	<b>-430</b>	
<b>Application of funds to investment activities (2)</b>	<b>-2,858</b>	-2,320
Dividends 2000/1999	<b>-2,603</b>	-41
Capital increase Robert Bosch GmbH	<b>2,470</b>	
Change in liabilities from financing	<b>587</b>	-19
Other changes in balance-sheet items	<b>92</b>	514
<b>Additions to funds from financial activities (3)</b>	<b>546</b>	454
<b>Change in liquidity (1) + (2) + (3)</b>	<b>1,491</b>	860
<b>Liquidity at the beginning of the year</b>	<b>5,084</b>	3,780
Changes in the consolidated group	<b>293</b>	444
<b>Liquidity at the end of the year</b>	<b>6,868</b>	5,084

<sup>1</sup> not published in the Federal Gazette

<sup>2</sup> after offset by write-ups of 2 million EUR in the prior year

# Financial Statements of the Bosch Group Worldwide

## 2001 Development of Fixed Assets

(million euro)

### Cost of acquisition or manufacture

	Jan.1, 2001	Changes in the consolidated group	Additions	Transfers	Retirements	Dec. 31, 2001	Depreciation cumulative to Dec.31, 2001	Net book value as of Dec.31, 2001	Net book value as of Dec.31, 2000	Depreciation current year
<b>Intangible fixed assets</b>										
Concessions, patents, trademarks and similar rights and assets as well as licenses to such rights and assets	315	8	102		102	323	242	81	86	115
Goodwill	2,015	466	57		19	2,519	1,615	904	871	463
Advance payments	1					1		1	1	
	<u>2,331</u>	<u>474</u>	<u>159</u>		<u>121</u>	<u>2,843</u>	<u>1,857</u>	<u>986</u>	<u>958</u>	<u>578</u>

### Tangible fixed assets

Land, leasehold rights and buildings, including buildings on land owned by others	3,894	843	142	77	231	4,725	2,621	2,104	1,718	195
Production equipment and machinery	10,921	1,476	1,149	419	1,130	12,835	9,308	3,527	3,108	1,293
Other equipment, fixtures and furniture	4,663	534	470	73	678	5,062	3,980	1,082	903	436
Advance payments and construction in progress	675	75	607	-569	60	728	5	723	656	
	<u>20,153</u>	<u>2,928</u>	<u>2,368</u>		<u>2,099</u>	<u>23,350</u>	<u>15,914</u>	<u>7,436</u>	<u>6,385</u>	<u>1,924</u>

### Financial investments

Investments in affiliated companies	727	-370	203	3	20	543	227	316	408	26
Loans to affiliated companies	8	-3	2	2	1	8		8	8	
Investments in associated companies	146		42	25	49	164	37	127	110	1
Other financial investments	515	17	11	-28	168	347	84	263	389	11
Long-term investments	106	2	68		1	175	12	163	105	11
Other loans	46	3	7	-2	10	44	2	42	45	
	<u>1,548</u>	<u>-351</u>	<u>333</u>		<u>249</u>	<u>1,281</u>	<u>362</u>	<u>919</u>	<u>1,065</u>	<u>49</u>
<b>Total fixed assets</b>	<u>24,032</u>	<u>3,051</u>	<u>2,860</u>		<u>2,469</u>	<u>27,474</u>	<u>18,133</u>	<u>9,341</u>	<u>8,408</u>	<u>2,551</u>

# Financial Statements of the Bosch Group Worldwide

## Balance Sheet Structure 1997–2001

(million euro)

# Financial Statements of the Bosch Group Worldwide

## Appendix 2001

	1997	1998	1999	2000	2001
<b>Assets</b>					
Fixed assets	6,142 34 %	6,495 35 %	7,211 35 %	8,408 34 %	9,341 34 %
Inventories, leased products	3,135 18 %	3,292 18 %	3,551 17 %	3,695 15 %	3,971 14 %
Receivables	4,832 27 %	5,174 28 %	6,289 30 %	7,317 30 %	7,603 27 %
Marketable securities, liquid assets	3,738 21 %	3,621 19 %	3,781 18 %	5,084 21 %	6,868 25 %
	17,847	18,582	20,832	24,504	27,783
<b>Liabilities and Equity</b>					
Equity capital	5,817 33 %	6,069 33 %	6,646 32 %	8,288 34 %	9,014 32 %
Long-term liabilities	6,723 37 %	7,092 38 %	8,029 38 %	8,457 34 %	11,393 41 %
Current liabilities	5,307 30 %	5,421 29 %	6,157 30 %	7,759 32 %	7,376 27 %
	17,847	18,582	20,832	24,504	27,783

### (1) General 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) Consolidated group

The consolidated group includes Robert Bosch GmbH and 34 domestic as well as 184 foreign subsidiaries. For the first time, we consolidated the following companies:

- Bosch Rexroth AG, Stuttgart, from May 1, 2001 (the sub-consolidation includes 13 domestic and 48 foreign subsidiaries),
- Moehwald GmbH, Homburg, Saar,
- Centro Studi Componenti per Veicoli SpA, Modugno (Bari), Italy,
- Bomoro Portuguesa, Fabrica de Componentes para o Automóvel, Lda, Tondela, Portugal,
- Robert Bosch, Sp. z o.o., Warsaw, Poland, and
- Bosch Braking Systems Co Ltd, Shibuya-ku, Tokyo, Japan.

The consolidation was further expanded with the inclusion of two subsidiaries at Bosch Automotive Systems Corporation, Shibuya-ku, Tokyo, Japan, and 14 subsidiaries at Zexel Valeo Climate Control Corporation, Shibuya-ku, Tokyo, Japan.

During the year we sold the business of Bosch SatCom GmbH, Backnang.

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 associated companies was applied in accordance with the book-value method. This valuation pertained to three domestic and twelve foreign companies.

Because of the changes in the consolidated group, sales increased by 2.6 billion EUR and balance sheet totals by 2.5 billion EUR.

### (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.

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.

Accounts receivable and accounts payable stated in foreign currencies were translated 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 principles

For capital consolidation of companies or for newly acquired capital shares, we applied 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 45 (prior year 31) million EUR were included with other assets.

<b>(6) Fixed assets</b>	Extraordinary depreciation and amortization amounting to 286 million EUR pertained mostly to goodwill and to financial investments.
	In accordance with tax regulations, we deducted an extra 28 million EUR directly from the acquisition costs of tangible fixed assets. The depreciation was taken pursuant to Section 6b of the Income Tax Law, and pursuant to local tax laws at our foreign subsidiaries.
	The development of fixed assets is presented on pages 54 and 55 of this report.

**(7) Inventories**

Included with the stated value of inventories, in the amount of 3,932 million EUR, are our advance payments of 48 million EUR (2000: 40 million EUR). On the other hand, advance payments received in the amount of 94 million EUR (2000: 77 million EUR) were deducted.

Inventories increased by 0.6 billion EUR as the result of changes in the consolidated group.

	2001	2000
Million EUR		
<b>Accounts receivable and other assets</b>	<b>5,733</b>	<b>5,271</b>
including maturities of more than one year	11	11
<b>Other receivables and assets</b>	<b>429</b>	<b>404</b>
Receivables from affiliated companies including maturities of more than one year	3	24
Receivables from companies in which interests are held	147	70
Other assets	1,254	1,541
including maturities of more than one year	100	93
	<b>1,830</b>	<b>2,015</b>
<b>Receivables and other assets</b>	<b>7,563</b>	<b>7,286</b>

Accounts receivable increased by 0.7 billion EUR as the result of changes in the consolidated group.

**(9) Equity capital**

The subscribed capital stock of 1,200 million EUR and the capital surplus of 4,557 million EUR correspond to the respective balance-sheet items of Robert Bosch GmbH. As a result of the "pay-out-and-reinvest" procedure carried out at Robert Bosch GmbH in 2001, subscribed capital stock and capital surplus increased by 280 million EUR and 2,190 million EUR respectively.

Earned surplus accounts consist of the following:

	2001	2000
Million EUR		
Earned surplus of Robert Bosch GmbH	442	92
Other earned surplus	2,047	1,813
	<b>2,489</b>	<b>1,905</b>

Unappropriated earnings of the consolidated group are identical to those of Robert Bosch GmbH.

**(10) Accruals with valuation reserve portion**

Accruals with valuation reserve portion were formed pursuant to Sections 6b and 52 Paragraph 16 of the Income Tax Law, as well as Section 82 d, Income Tax Implementation Regulation, Section 3 Law for the Promotion of the Economy of the Border Regions, and Section 4 Area Economic Development Law. Our foreign subsidiaries followed local regulations with respect to such items.

	2001	2000
Million EUR		
Accrued taxes	320	165
Other accruals	6,568	5,793
	<b>6,888</b>	<b>5,958</b>

The changes in the consolidated group caused accruals for pensions and similar liabilities to increase by 0.4 billion EUR, and for other accruals to rise by 0.5 billion EUR.

**(12) Liabilities**

In the consolidated financial statements for 2001 we have changed the classification of liabilities. Prior year amounts have been changed to achieve comparability.

Million EUR	2001 Including maturities up to one year	2000 Including maturities up to one year
<b>Liabilities from financing</b>		
Bonds	1,863	86
Liabilities with banks	1,566	391
Other financing liabilities <sup>1</sup>	128	128
	3,557	606
<b>Accounts payable</b>	2,134	2,133
	2,229	2,229
<b>Other liabilities</b>		
Liabilities from acceptances and drafts	162	162
Liabilities with affiliated companies	214	212
Liabilities with companies in which interests are held	90	90
Other liabilities	1,087	1,048
	1,553	1,512
<b>Total liabilities</b>	7,244	4,250

<sup>1</sup> Commercial paper, loan notes

Of the liabilities with banks, 91 million EUR were secured by mortgages and another 18 million EUR by other liens. Of other liabilities, 4 million EUR were secured by mortgages and 7 million EUR by other liens.

Other liabilities contain tax liabilities in the amount of 300 million EUR (2000: 275 million EUR) and liabilities pertaining to social obligations in the amount of 208 million EUR (2000: 195 million EUR). Liabilities with shareholders in the amount of 13 million EUR (2000: 24 million EUR) pertain to Robert Bosch Stiftung GmbH.

Total liabilities with maturities of more than 5 years amounting to 120 million EUR included 110 million EUR of liabilities with banks and 10 million EUR of other liabilities.

As a result of changes in the consolidated group, Bosch Group liabilities increased by 1.2 billion EUR.

**(13) Contingent liabilities**

Million EUR	
Contingent liabilities from the issuance or transfer of notes including on behalf of affiliated companies	168
Contingent liabilities from guarantees including on behalf of affiliated companies	16
Contingent liabilities from warranties	101
Contingent liabilities from collateral given for third-party liabilities	36
	48
	20

As a partner in two foreign private companies, we are jointly and severally liable in accordance with legal requirements.

**(14) Other financial obligations**

Robert Bosch GmbH had a financial commitment for the acquisition of Rexroth AG of about 2.2 billion EUR.

Other financial obligations of significance for an opinion on the financial condition of the company did not exist.

**(15) Breakdown of sales**

Million EUR	2001	%	2000	%
<b>Sales by business sectors</b>				
Automotive technology	23,228	68.3	22,471	71.2
Industrial technology	3,176	9.3	1,198	3.8
Consumer goods and building technology/ <sup>1</sup>	7,625	22.4	7,452	23.6
Spun-off divisions of communications technology? <sup>2</sup>	–	–	435	1.4
	34,029	100.0	31,556	100.0

<sup>1</sup> Including the security, technology, aerospace engineering and broadband networks product groups

<sup>2</sup> Public and private networks as well as terminals

Million EUR	2001	%	2000	%
<b>Sales by regions</b>				
Countries of the European Union	20,491	60.2	19,140	60.7
Rest of Europe	1,692	5.0	1,586	5.0
Americas	7,316	21.5	6,796	21.5
Asia, Africa, Australia	4,530	13.3	4,034	12.8
	34,029	100.0	31,556	100.0

Million EUR	2001	2000
<b>(16) Changes in finished goods and work-in-progress inventories and other capitalized costs</b>		
Change in finished goods and work-in-progress inventories	-164	161
Other capitalized costs	335	208
	171	369

**(17) Other operating expenses and income**  
Expenses resulting from additions to accruals with valuation reserve portion in the amount of 95 million EUR are included in other operating expenses. Income from the reversal of accruals with valuation reserve portion in the amount of 42 million EUR are included in other operating income.

Million EUR	2001	2000
<b>(18) Cost of materials</b>		
Cost of raw materials, supplies and merchandise	14,925	14,383
Purchased services	1,359	1,045
	16,284	15,428

Million EUR	2001	2000
<b>(19) Personnel costs</b>		
Wages and salaries	7,990	7,159
Social security, pension plans, and support payments of which pension plans	1,969	1,791
	569	529
	9,959	8,950

Average numbers of employees during the year, by region:

	2001 Including Total BSH, ZFLS (prorated)	2000 Including Total BSH, ZFLS (prorated)
Countries of the European Union	135,986	15,489
Rest of Europe	15,715	2,581
Americas	36,526	2,780
Asia, Africa, Australia	30,150	1,952
	218,377	22,802
		196,880
		22,627

Million EUR	2001	2000
<b>(20) Net income from investments</b>		
Income from investments including affiliated companies	117	48
Result from associated companies	14	20
Profit/loss transfers	37	39
	1	-4
	155	83

Million EUR	2001	2000
<b>(21) Interest income, net of expenses</b>		
Interest from other securities and from loans included with financial investments including affiliated companies	4	4
Other interest and similar income including affiliated companies	-	1
Interest and similar expenses including affiliated companies	335	320
	8	9
	-213	-186
	1	1
	126	138

Million EUR	2001	2000
<b>(22) Tax expenses</b>		
Taxes on income	761	34
Other taxes	143	146
	904	180

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.

	Million EUR	
<b>(23) Profit and loss of minority shareholders</b>	<b>2001</b>	<b>2000</b>
Profits	56	93
Losses	-98	-40
	-42	53

**(24) Compensation of the members of the Board of Management and of the Supervisory Council**

During 2001, the aggregate compensation of the members of the Board of Management of Robert Bosch GmbH amounted to 10 million EUR. Former members of the Board of Management and their dependents received 6 million EUR, and the members of the Supervisory Council about one million EUR.

Accruals at Robert Bosch GmbH for pension liabilities for former members of the Board of Management and their dependents amounted to 47 million EUR.

The members of the Supervisory Council of Robert Bosch GmbH are listed on page 6 and of the Board of Management on pages 8 and 9.

**(25) Shareholdings of Bosch Group Worldwide**

A listing of the shareholdings of the consolidated Bosch Group will be deposited with the commercial registry of the Stuttgart Court.

Stuttgart, March 6, 2002  
 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, 2001. 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 6, 2002

Ernst & Young  
 Deutsche Allgemeine Treuhand AG  
 Wirtschaftsprüfungsgesellschaft

Prof. Dr. Pfitzer Dr. Oser  
 Wirtschaftsprüfer Wirtschaftsprüfer

# Major Companies of the Bosch Group Worldwide

(as of December 31, 2001)

(million euro)

Name	Location	Equity Capital Capital? % owned <sup>1</sup>	Sales <sup>2</sup>	Profit or loss <sup>2</sup>
<b>Germany</b>				
Blaupunkt GmbH	Hildesheim	100	95	1,065
Bosch Rexroth AG <sup>3,5</sup>	Stuttgart	100	871	2,577
BSH Bosch und Siemens Hausgeräte GmbH <sup>4</sup>	Munich	50	837	6,092
Bosch Telecom GmbH	Stuttgart	100	475	542
BT Magnet-Technologie GmbH	Herne	50	34	79
ETAS Entwicklungs- und Applikationswerkzeuge für elektronische Systeme GmbH	Stuttgart	90	7	78
GKR Gesellschaft für Fahrzeugklimaerregung mbH	Leonberg	100	9	114
Hawera Probst GmbH	Ravensburg	100	12	78
Knorr-Bremse Systeme für Nutzfahrzeuge GmbH	Munich	20	104	510
Robert Bosch Fahrzeugelektrik Eisenach GmbH	Eisenach	100	56	419
VB Autobatterie GmbH	Hanover	20	94	264
ZF Lenksysteme GmbH <sup>4</sup>	Schwäbisch Gmünd	50	247	1,485

## Foreign Countries

<b>Europe</b>				
NV Robert Bosch SA	Anderlecht/Belgium	100	22	149
Robert Bosch Produktie NV	Tienen/Belgium	100	44	224
Robert Bosch A/S	Ballerup/Denmark	100	19	80
Robert Bosch (France) SA <sup>4</sup>	Saint-Ouen (Paris)/France	100	209	1,861
Atco-Qualcast Limited	Stowmarket, Suffolk/U.K.	100	9	95
Robert Bosch Ltd	Denham/U.K.	100	120	510
Worcester Group plc <sup>4</sup>	Worcester/U.K.	100	37	186
Robert Bosch SpA <sup>4</sup>	Milan/Italy	100	62	766
Robert Bosch BV	Hoofddorp/Netherlands	100	15	143
Van Doorne's Transmissie BV	Tilburg/Netherlands	100	11	64
Robert Bosch A/S	Trollaaen (Oslo)/Norway	100	9	43
Robert Bosch AG	Vienna/Austria	100	44	216
Robert Bosch Sp. z o.o.	Warsaw/Poland	100	17	92
Blaupunkt/Auto-Rádio Portugal Lda	Braga/Portugal	100	26	367
Vulcano Termor-Domésticos SA	Aveiro/Portugal	100	112	170
Robert Bosch AB	Kista (Stockholm)/Sweden	100	10	82
Robert Bosch Internationale Beteiligungen AG	Zurich/Switzerland	90	424	54
Robert Bosch AG	Zurich/Switzerland	100	15	109
Scintilla AG	Solothurn/Switzerland	85	529	547
Robert Bosch España SA <sup>4</sup>	Madrid/Spain	100	246	1,291
Robert Bosch spol. s r.o.	České Budějovice/Czech. Rep.	100	50	183
Bosch Diesel spol. s r.o.	Jihlava/Czech. Rep.	100	42	325
Bosch Sanayi ve Ticaret AS	Bursa/Turkey	100	99	319
Robert Bosch Elektronika Gyártó Kft	Hatvan/Hungary	100	31	119

Name	Location	Equity Capital Capital? % owned <sup>1</sup>	Sales <sup>2</sup>	Profit or loss <sup>2</sup>
<b>Americas</b>				
Robert Bosch Ltda	Campinas/Brazil	100	198	855
Associated Fuel Pump Systems Corporation	Anderson/USA	50	79	196
Automotive Electronic Control Systems Inc	Anderson/USA	51	40	122
Robert Bosch Corporation <sup>4</sup>	Broadview (Chicago)/USA	100	984	4,783
S-B Power Tool Company <sup>4</sup>	Chicago/USA	100	246	894
Vermont American Corporation <sup>4</sup>	Louisville/USA	100	127	382
<b>Asia, Australia</b>				
Motor Industries Co Ltd	Bangalore/India	57	149	380
Bosch KK	Yokohama/Japan	100	46	347
Bosch Automotive Systems Corporation <sup>4,6</sup>	Shibuya-ku (Tokyo)/Japan	55	639	1,962
Bosch Electronics Corporation	Tomioka-shi/Japan	100	20	63
Bosch Packaging Machinery KK	Tokyo/Japan	100	15	53
Nippon Injector Corporation	Odawara-shi/Japan	35	59	89
Korea Automotive Motor Corporation	Buyong/Korea	100	51	162
KEFICO Corporation	Kunpo-Si/Korea	25	91	289
Robert Bosch Korea Mechanics & Electronics Ltd	Chonan/Korea	100	38	148
Robert Bosch (Malaysia) Sdn Bhd	Penang/Malaysia	100	31	127
Robert Bosch (South East Asia) Pte Ltd	Singapore/Singapore	100	23	96
Robert Bosch (Australia) Pty Ltd <sup>4</sup>	Clayton (Melbourne)/Australia	100	87	435
Robert Bosch (Proprietary) Ltd	Johannesburg/South Africa	100	7	106

<sup>1</sup> Shares held directly and indirectly by Robert Bosch GmbH

<sup>2</sup> 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

<sup>3</sup> Profit and loss transfer agreement (PLT)

<sup>4</sup> Represents a consolidated sub-group

<sup>5</sup> From May 1, 2001

<sup>6</sup> Stub period April 1 to December 31, 2001

Financial Statements of Robert Bosch GmbH  
Balance Sheet as of December 31, 2001  
(million euro)

	December 31, 2001	December 31, 2000
<b>Assets</b>		
<b>Fixed assets</b>		
Intangible fixed assets	-	-
Tangible fixed assets	1,673	1,694
Financial investments	4,558	3,808
	6,231	5,502
<b>Current assets</b>		
Inventories	1,197	1,292
Accounts receivable and other assets		
Accounts receivable	1,863	2,004
Other receivables and assets	2,112	1,729
Marketable securities	3,089	2,718
Liquid assets	2,279	1,008
	10,540	8,751
<b>Deferred expenses</b>	2	3
	16,773	14,256
<b>Liabilities and Equity</b>		
<b>Equity capital</b>		
Capital stock	1,200	920
Capital surplus	4,557	2,367
Earned surplus	442	92
Unappropriated earnings	50	2,603
	6,249	5,982
<b>Accruals with valuation reserve portion</b>	126	65
<b>Accruals</b>		
Accruals for pensions and similar obligations	2,454	2,412
Other accruals	3,464	3,188
	5,918	5,600
<b>Liabilities</b>		
Liabilities from financing	1,598	196
Accounts payable	474	580
Other liabilities	2,407	1,833
	4,479	2,609
<b>Deferred income</b>	1	
	16,773	14,256

Financial Statements of Robert Bosch GmbH  
Statement of Income  
for the period from January 1 to December 31, 2001  
(million euro)

	2001	2000
<b>Sales</b>	17,286	16,555
Changes in finished goods and work-in-progress inventories and other capitalized costs	98	114
<b>Total operating performance</b>	17,384	16,669
Other operating income	1,464	1,799
Cost of materials	-10,949	-10,020
Personnel costs	-3,691	-3,699
Depreciation and amortization of intangible and tangible fixed assets	-643	-675
Other operating expenses	-2,842	-2,697
Net income from investments	316	363
Amortization of financial investments and securities included with current assets	-357	-106
Interest income, net of expenses	154	163
<b>Income from ordinary business activities</b>	836	1,797
Taxes on income	-436	264
<b>Net income for the year</b>	400	2,061
Transfers from surplus accounts		542
Additions to surplus accounts	-350	
<b>Unappropriated earnings</b>	50	2,603

# Ten Year Statistics Bosch Group Worldwide

(million euro)

## Bosch Group Business Sectors and Divisions

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Sales	17605	16,601	17,628	18,327	21,038	23,955	25,735	27,906	31,556	34,029
Foreign share as a percentage of sales	47	49	54	56	61	65	65	66	72	72
Research and development expense as a percentage of sales	1,177	1,133	1,153	1,265	1,476	1,665	1,778	1,921	2,030	2,274
Investments in tangible fixed assets including domestic	67	68	65	69	70	70	69	69	64	67
including foreign	1,042	793	807	1,051	1,236	1,486	1,929	1,946	2,111	2,368
as a percentage of sales	689	506	491	642	649	704	987	893	851	905
as a percentage of depreciation	353	287	316	409	587	782	942	1,053	1,260	1,463
	5.9	4.8	4.6	5.7	5.9	6.2	7.5	7.0	6.7	7.0
	103	85	90	117	117	125	148	128	118	123
Depreciation on tangible fixed assets	1,010	939	893	898	1,053	1,187	1,302	1,523	1,788	1,924
Employees – annual average – (000 omitted)	177	165	156	158	172	180	188	194	197	218
including domestic	113	104	95	92	91	91	94	97	91	99
including foreign	64	61	61	66	81	89	94	97	106	119
as of January 1 of following year	170	157	154	157	176	181	190	195	199	221
Personnel costs	6,053	5,978	5,849	5,868	6,655	7,342	7,963	8,298	8,950	9,959
Total assets	12,502	13,011	13,996	14,574	16,501	17,847	18,582	20,832	24,504	27,783
Fixed assets	3,972	3,581	3,400	3,557	5,514	6,142	6,495	7,211	8,408	9,341
as a percentage of total assets	32	27	24	24	33	34	35	35	34	34
Equity capital	4,018	4,246	4,378	4,621	4,871	5,817	6,069	6,646	8,288	9,014
as a percentage of total assets	32	33	31	32	30	33	33	32	34	32
Cash flow	1,790	1,900	1,925	1,659	1,809	2,669	2,507	3,258	3,729	3,681
as a percentage of sales	10.2	11.4	10.9	9.1	8.6	11.1	9.7	11.7	11.8	10.8
Net income for the year	262	218	262	281	256	848 <sup>1</sup>	435	460	1,380 <sup>1</sup>	650
Unappropriated earnings										

<sup>1</sup> Special effect of "pay-out-and-reinvest" procedure at Robert Bosch GmbH

### Automotive Technology<sup>1</sup>

Gasoline Systems Diesel Systems Chassis Systems

Energy Systems Body Electronics Car Multimedia<sup>2</sup>

Automotive Electronics Automotive Aftermarket

### Industrial Technology

Bosch Rexroth<sup>3</sup>

Packaging Technology

### Consumer Goods and Building Technology

Power Tools

Thermotechnology

Household Appliances<sup>4</sup>

Security Technology<sup>5</sup>

Broadband Networks<sup>5</sup>

<sup>1</sup> Including ZF Lenksysteme GmbH (50% Bosch)  
<sup>2</sup> Blaupunkt GmbH (100% Bosch)  
<sup>3</sup> Bosch Rexroth AG (100% Bosch)  
<sup>4</sup> BSH Bosch und Siemens Hausgeräte GmbH (50% Bosch)  
<sup>5</sup> Bosch Telecom GmbH (100% Bosch)

# Supervisory Council as of April 17, 2002

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

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

Knut Angstenberger, Stuttgart,  
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 Metal Industry,  
District Management  
Baden-Württemberg

Dr.-Ing. Heiner Gutberlet,  
Fellbach-Oeffingen,  
Chairman of the Board of Trustees  
of Robert Bosch Stiftung GmbH

Dr.-Ing. Rainer Hahn, Stuttgart,  
former Member of the  
Board of Management of  
Robert Bosch GmbH

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

Dieter Krause, Hildesheim,  
Chairman of the Shop Council  
of Blaupunkt GmbH, Hildesheim

Matthias Madelung, Munich,  
Member of the Board of Trustees  
of Robert Bosch Stiftung GmbH

Urs B. Rinderknecht, Ennetbaden,  
Chief Executive of UBS AG

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

Gerhard Sautter, Erdmannhausen,  
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,  
Chairman of the Board of Manage-  
ment of Stihl AG

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

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

# Board of Management as of July 1, 2002

## **Board of Management**

**Hermann Scholl**  
Chairman

**Tilman Todenhöfer**  
Deputy Chairman

**Bernd Bohr**

**Wolfgang Chur**

**Siegfried Dais**

**Franz Fehrenbach**

**Kurt Liedtke**

**Gotthard Romberg**

## **Deputy Members of the Board of Management**

**Wolfgang Drees**

**Gerhard Kümmel**

**Peter Marks**