



Vacuum in Life

Annual Report 2002

PFEIFFER  *VACUUM*

Key Numbers

Net sales (in M €)

| | | |
|------|-------------|-------|
| 1998 | <div></div> | 142.8 |
| 1999 | <div></div> | 153.5 |
| 2000 | <div></div> | 184.7 |
| 2001 | <div></div> | 170.1 |
| 2002 | <div></div> | 150.9 |

Income before tax (in M €)

| | | |
|------|-------------|------|
| 1998 | <div></div> | 23.4 |
| 1999 | <div></div> | 23.8 |
| 2000 | <div></div> | 34.1 |
| 2001 | <div></div> | 29.4 |
| 2002 | <div></div> | 24.8 |

Return on equity (in %)

| | | |
|------|-------------|------|
| 1998 | <div></div> | 23.5 |
| 1999 | <div></div> | 27.8 |
| 2000 | <div></div> | 28.4 |
| 2001 | <div></div> | 22.6 |
| 2002 | <div></div> | 19.0 |

Capital expenditures (in M €)

| | | |
|------|-------------|------|
| 1998 | <div></div> | 3.3 |
| 1999 | <div></div> | 4.4 |
| 2000 | <div></div> | 13.7 |
| 2001 | <div></div> | 9.1 |
| 2002 | <div></div> | 2.5 |

M € = millions of euros

Ebit margin (in %)

| | | |
|------|-------------|------|
| 1998 | <div></div> | 15.3 |
| 1999 | <div></div> | 14.9 |
| 2000 | <div></div> | 19.2 |
| 2001 | <div></div> | 16.6 |
| 2002 | <div></div> | 14.0 |

Earnings per share (in €)

| | | |
|------|-------------|------|
| 1998 | <div></div> | 1.44 |
| 1999 | <div></div> | 1.54 |
| 2000 | <div></div> | 2.24 |
| 2001 | <div></div> | 2.16 |
| 2002 | <div></div> | 1.99 |

Equity ratio (in %)

| | | |
|------|-------------|------|
| 1998 | <div></div> | 46.6 |
| 1999 | <div></div> | 45.0 |
| 2000 | <div></div> | 47.4 |
| 2001 | <div></div> | 55.4 |
| 2002 | <div></div> | 59.5 |

Employees

| | | |
|------|-------------|-----|
| 1998 | <div></div> | 765 |
| 1999 | <div></div> | 792 |
| 2000 | <div></div> | 800 |
| 2001 | <div></div> | 793 |
| 2002 | <div></div> | 811 |

| | | 2002 | 2001 | Variation |
|--|-----|-----------|-----------|-----------|
| Sales | | | | |
| Net sales | K € | 150,942 | 170,140 | – 11.3 % |
| Domestic | K € | 40,530 | 47,987 | – 15.5 % |
| Other countries | K € | 110,412 | 122,153 | –9.6 % |
| Operating profit | K € | 21,169 | 28,175 | – 24.9 % |
| Net income | K € | 17,535 | 18,871 | – 7.1 % |
| Ratio return on sales | % | 11.6 | 11.1 | |
| Operating cash flow | K € | 21,557 | 19,694 | + 9.5 % |
| | | | | |
| Balance sheet | | | | |
| Total liabilities and shareholders’ equity | K € | 155,496 | 150,604 | + 3.2 % |
| Share capital | K € | 22,504 | 22,504 | 0 % |
| Number of shares | | 8,790,600 | 8,790,600 | 0 % |
| Shareholders’ equity | K € | 92,508 | 83,402 | + 10.9 % |
| Equity ratio | % | 59.5 | 55.4 | |
| Return on equity | % | 19.0 | 22.6 | |
| Capital expenditures | K € | 2,502 | 9,091 | – 72.5 % |
| | | | | |
| Employees | | | | |
| Employees (31. 12.) | | 811 | 793 | + 18 |
| Domestic | | 615 | 585 | + 30 |
| Other countries | | 196 | 208 | – 12 |
| Personnel cost | K € | 49,616 | 46,028 | + 7.8 % |
| per employee | K € | 61 | 58 | + 5.2 % |
| Sales per employee | K € | 186 | 215 | – 13.5 % |
| | | | | |
| per share | | | | |
| Earnings | € | 1.99 | 2.16 | – 7.9 % |
| Cash dividend | € | 0.56 | 0.56 | 0 % |

K € = thousands of euros

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Financial Glossary

Financial Calendar and Contacts

Corporate Philosophy

For our shareholders

- We want to clearly portray both our Company's past performance as well as its objectives and prospects
- We want to offer an appropriate return on invested capital, even in difficult times, by distributing a dividend for the fifth year in a row
- We want to explain that an investment in Pfeiffer Vacuum shares represents an investment in a financially sound high-tech company with great future potential

For our customers

- We want to be a dependable partner
- We want to supply both high-quality individual products as well as innovative vacuum technology solutions
- We want to offer added value through an extensive, global sales and service concept

For our employees and marketing partners

- We want to utilize new products and supporting sales and marketing strategies to assure competitive jobs and incomes over the long term
- We want to offer the opportunity of involvement in our decision-making processes and share with them our corporate objectives
- We want to encourage entrepreneurial thinking and motivation by providing a high level of self-direction

For the society in which we live

- We want to demonstrate that we are a responsible corporate citizen with a long-term view
- We want to serve as a role model by observing high environmental, ethical and safety standards
- We want to do our part by fostering science, culture, sports and social services

Foreword from the Chief Executive Officer

Dear Shareholders and Friends of Pfeiffer Vacuum,

“Some wait for the times to change, others take the initiative – and act.” That was the opening quotation in last year’s Annual Report. The Annual Report for 2002 has now been published, and it’s time to report whether we have, in fact, taken the initiative and acted.

One and a half years ago, we had already stated in no uncertain terms that the world economy was headed downhill. We have viewed emerging problems as a challenge, and we have done everything in our power to keep the Company on course. Ultimately, this meant that we “only” had to record an 11.3 % decline in net sales to € 150.9 million. Before-tax income totals € 24.8 million for the fiscal year; this represents a return of 16.4 % on sales, a level that most companies aren’t even able to achieve in the best of times! And our cash assets total € 72.3 million. Reason enough to be satisfied? Certainly not, because we always view good results as an incentive to deliver even better results. Nor, however, have we allowed ourselves to be caught up by the hectic, blind activism and widespread pessimism that is so prevalent in the economic community; instead, we have steadily pursued our medium- and long-term objectives:

- To be an enthusiastic, committed, dependable and fair partner to our customers
- To increase the value of the Company for our shareholders
- To offer our people jobs that are as secure as possible

To do this, we have developed new products, manufactured even faster and with even higher quality, intelligently lowered our costs of materials and reduced core business inventories, cleaned up our product portfolio, strengthened our selling activities, streamlined our organization – in short: Day in and day out, we have endeavored to be a bit better.

We naturally could have also accepted every order, cut drastically lowered our prices, withdrawn from forward-looking markets and reduced our workforce in order to show an even higher profit over the short term. We are a high-tech company that lives from the intelligence, professionalism, knowledge, commitment and reliability of its people throughout the world – and that necessitates a sound corporate culture. A corporate culture grows only slowly, yet it can quickly be destroyed by sending out the wrong signals to employees – and losing corporate culture is a sure way to gamble away a company’s future. During these difficult times, we have worked together to earn a respectable profit that will enable us to pay a tidy dividend for the fifth year in a row to you, our shareholders. Thanks to this profit, we have been able to make the required investments in people, markets and machinery, and we have been able to make all necessary decisions independently and professionally.

Within the space of a year, the trading price of Pfeiffer Vacuum shares has declined by 45.4 %. While this is still moderate by comparison with the overall development of share prices, it is not something to be happy about. There are many reasons for the declines

suffered on all stock exchanges throughout the world: Dubious, unsound and sometimes absurd business models at many New Economy companies, greed and criminal behavior on the part of some executives, a gambler mentality instead of reputable business practices, and much more. The backlash – the Corporate Governance Code in Germany, the Sarbanes Oxley Act in the United States – is unfortunately also characterized by activism. You, the shareholders of Pfeiffer Vacuum, can rest assured that you own a company in which there are no balance sheet manipulations, fictitious sales, daredevil financing, exorbitant salaries and options, etc.

It may sound somewhat old-fashioned: But we believe in honesty, openness and leading by doing! And this applies at all levels of the Company and on all continents on which we are active.

We have explained this and many additional details about our Company to our existing and prospective investors at numerous presentations in Austria, Canada, Denmark, England, France, Germany, Monaco, Scotland, Sweden and the United States, as well as at corporate headquarters in Asslar. Perhaps this is one of the reasons why the price of our shares is still doing relatively well in these times of continuing horror stories and revelations.

What can you/we now expect of the year 2003?
On the basis of what we know today, we do not see any dramatic improvements and rises in the year 2003. We hope that the blind activism on the part of many politicians will give way to a more objective approach, that the country will pull itself together and we will reflect on our strengths. We at Pfeiffer Vacuum have not been – and will not be – infected by the pessimism that predominates today, and will continue to work toward aligning ourselves to the needs of the world market and develop your company into a shining star of Germany industry. In doing so, we will naturally make mistakes; but we are constantly analyzing our approaches and correcting them where necessary – and that’s why we have no fears about the future of your Company.

There are simply no grounds for sitting back and resting on our laurels! Nor is there any reason why we shouldn’t have a bit of self-confidence.

Yours

Wolfgang Dondorf
Chief Executive Officer

Management Board



Wolfgang Dondorf

Chief Executive Officer, responsible for Development, Manufacturing, Sales & Marketing and Public Relations.

Wolfgang Dondorf, 59, has been with the Company since 1994. He successfully took Pfeiffer Vacuum public on the New York Stock Exchange in 1996 and on the Neuer Markt Stock Exchange in Frankfurt am Main in 1998. He studied at the RWTH Aachen, earning a postgraduate degree ("Diplom-Ingenieur") in electrical engineering. From 1971 to 1994, Wolfgang Dondorf served as a senior executive in industry, including the post of general manager of a manufacturer of electronic components, switchgear and sensors. He spent several years in Geneva, Switzerland, where he managed the European production locations of an American-based corporate group. In his leisure time, Wolfgang Dondorf is a creative do-it-yourselfer. He is also an enthusiastic pilot and holds both American and German private pilot licenses.



Wilfried Glaum

Chief Financial Officer, responsible for Administration, Controlling, Finance and Human Resources.

Wilfried Glaum, 56, is a business administrator who has been with the Company since 1972. During this period, he held executive posts in the fields of Logistics, Materials Management and Controlling. His profound knowledge of the Company was especially beneficial during the period in which it was being transformed from a pure manufacturing company into a globally operating, publicly traded corporation. In 1996, he was appointed Chief Financial Officer in connection with this transition. To unwind from his hectic daily routine, Wilfried Glaum seeks relaxation in observing nature and hunting.

Halogen lamps
are put under vacuum before being filled with halogen.



**Processors and flat panel displays
would be inconceivable without vacuum technology.**

Report of the Supervisory Board

In fiscal 2002, the anticipated overall economic recovery, and in particular the upswing in the semiconductor industry, unfortunately failed to materialize. And this also left its mark on the Company's economic development. Given the economic conditions, though, it is the opinion of the Supervisory Board that a respectable result was able to be achieved.

In four meetings during the 2002 fiscal year, the Supervisory Board informed itself about the current position of the Company and the corporate group and conducted intensive discussions with the Management Board. The Supervisory Board meetings were conducted on March 11, June 11, August 5 and November 4, all of them in Asslar. Dr. Oltmanns, Mr. Anderson and Mr. Timmerbeil attended the meeting on August 5 over the telephone. In addition to the information provided at its regular meetings, all members of the Supervisory Board received detailed monthly and quarterly reports on the Company's position, with the Chairman of the Supervisory Board additionally being provided with the minutes of all Management Board meetings. The Supervisory Board supported and advised the Management Board in connection with particular issues. Aside from the regular meetings of the Supervisory Board, its Chairman was constantly kept abreast of all major business matters through discussions with the Management Board.

Those measures requiring the consent of the Supervisory Board were deliberated and decided upon at its meetings. The Supervisory Board complied with all of the obligations vested in it under applicable legislation and the Company's articles of incorporation and bylaws, taking into consideration the particular requirements of the German Control and Transparency Act of 1998 ("KonTraG"), as well as the German Publication Transparency Act ("TransPuG"), and vigilantly and fully supervised the management of the Company.

The requirements with respect to risk management mandated under the German Control and Transparency Act were discussed extensively together with the Management Board. The Supervisory Board repeatedly convinced itself that sufficient insurance coverage is in force for insurable risks and that operating, financial and contract risks are being monitored through organizational processes and approval procedures. A detailed reporting system exists for the Company and the corporate group and is subjected to ongoing review, update and development. All employees in the operating units are sensitized to potential risks and are instructed to conduct appropriate reporting.

Since in the past the Management Board had already been in compliance with its heightened reporting obligation to the Supervisory Board as anchored in the German Publication Transparency Act, no modification to the reporting system was necessary. The Supervisory Board discussed the German Corporate Governance Code in detail. The statement of compliance pursuant to § 161 of the German Stock Corporation Act ("AktG") was able to be submitted by the Management and Supervisory Boards sufficiently in advance of the close of the fiscal year.

Report of the Supervisory Board

In the meetings of the Supervisory Board and in individual discussions, the Supervisory and Management Boards deliberated at length the Company's strategic alignment and planning. In this connection, the development of Pfeiffer Vacuum Systems GmbH, in particular, was discussed in detail. The development of the economy and the weakness of the semiconductor industry, with its ramifications for the Company and the corporate group, were also the subject of intensive discussions between the Management and Supervisory Boards. The budget for the 2003 fiscal year was discussed and adopted.

In accordance with the resolution adopted by the Annual Shareholders Meeting on June 11, 2002, Ernst & Young Deutsche Allgemeine Treuhand AG, Wirtschaftsprüfungsgesellschaft, of Frankfurt a. M., was commissioned to audit the Annual Financial Statements of Pfeiffer Vacuum Technology AG, as well as the Company's Consolidated Financial Statements, which are presented in accordance with U.S. Generally Accepted Accounting Principles (U.S. GAAP), and, where legally mandated, the financial statements of its subsidiaries. The Annual Financial Statements, Management's Discussion and Analysis, as well as the Consolidated Financial Statements presented in accordance with U.S. GAAP for the 2002 fiscal year, all of which were prepared by the Management Board, were audited by the independent auditors and received their unqualified opinion. The financial statements were discussed in detail with the Management Board and the independent auditors at the meeting of the Supervisory Board on March 11, 2003.

On the basis of its own thorough review, the Supervisory Board concurs with the results of the audit conducted by the independent auditors. The Supervisory Board approved the financial statements, which were thus formally adopted. The Supervisory Board concurs with the Management Board's proposal regarding appropriation of the Company's retained earnings.

The Supervisory Board wishes to express its thanks to the members of the Management Board, to the Employee Council and to the entire staff of the corporate group for their successful work in fiscal 2002.

Asslar, March 2003

Supervisory Board

Supervisory Board



From left to right:

Dr. Michael Oltmanns (Chairman)

Attorney at Law, Law Offices of Menold & Partner, Frankfurt a. M.

Further supervisory board posts:

HPC AG, Weinheim, Supervisory Board Chairman;

HyChem AG, Steinau an der Strasse, Supervisory Board Vice Chairman;

Jetter AG, Ludwigsburg, Supervisory Board Chairman;

Scholz AG, Esslingen, Supervisory Board Chairman

Michael Anderson

Investment Banker, New York, USA

Edgar Keller

Commercial Staff Member, Solms, Employee Representative

Prof. Dr. Klaus-Jürgen Kügler (Vice Chairman)

Professor at the Giessen/Friedberg Technical University

Günter Schneider

Chairman of the Employee Council, Leun, Employee Representative

Götz Timmerbeil

Certified Public Accountant and Tax Advisor, Timmerbeil Tax Office,
Gummersbach



Healthy growth
is assured through analysis with vacuum technology.

Pfeiffer Vacuum Share Performance

We were one of the few companies listed on the Neuer Markt Stock Exchange to pay a dividend for 2002, and we did it for the fifth time in a row. While the development of trading prices in general was unsatisfactory in 2002, at –45.4 % our share price developed on a clearly better note than the average for the Nemax 50 Index (–68.8 %). Our reliable financial communications received multiple awards during the year under review.

Pfeiffer Vacuum shares have been traded on the New York Stock Exchange since July 1996 and on the Neuer Markt Stock Exchange in Frankfurt since April 1998.

| | |
|--|---|
| Neuer Markt Frankfurt symbol: PFV | International Securities Identification Number: ISIN DE0006916604 |
| Index: Nemax 50 | reuters symbol: PV |
| New York Stock Exchange symbol: PV | Free-float as of December 31, 2002: 100 % |

On the Neuer Markt Stock Exchange

The year 2002 was once again a very difficult trading year for all stock exchanges, and thus for most shareholders. The year did not offer much to be happy about for companies listed on the Neuer Markt. In the wake of balance sheet scandals, incorrect or late reporting and insolvencies on the part of various companies that are traded on the Neuer Markt, the end of the game was announced for this stock market segment in the autumn of 2002. Preceding attempts to utilize more stringent rules had failed to produce greater transparency and thus rekindle investor confidence. In the generally tense stock market climate, funds and investment managers withdrew capital from the Neuer Markt; a number of Neuer Markt funds were dissolved. Profit-taking to offset losses in other issues depressed the price of Pfeiffer Vacuum shares. As a result of the persistent economic weakness, the Company was forced to scale down its sales and earnings forecasts during the year 2002, which additionally burdened the development of its share price.

On January 2, 2002, Pfeiffer Vacuum shares began the year at a price of € 35 on the Neuer Markt. They reached their high for the year of € 41.80 on March 19, their low for the year of € 15.80 on September 24. At year-end, shares were trading at € 19.12. Over the course of the year, the value of Pfeiffer Vacuum shares thus declined by 45.4 %, while the Nemax 50 Index dropped by an even greater 68.8 %. Daily average trading volume was 17,847 shares.

Pfeiffer Vacuum Share Performance

On the New York Stock Exchange

During the year 2002, prices of Pfeiffer Vacuum ADRs on the New York Stock Exchange were again characterized by low trading volumes. Prices in New York generally paralleled developments on the Neuer Markt. The high for the year of US\$ 37.53 was reached on June 28, the low for the year of US\$ 16.50 on September 25. Of the total of 8,790,600 shares in circulation, 1,039,655 ADRs were still being traded in New York at year-end, representing 11.8 % of total shares. In 2002, no fund or individual investor held more than 5 % of the Company's ADRs.

American investors continue to display keen interest in Pfeiffer Vacuum. This was demonstrated by numerous talks conducted by the Chief Executive Officer during the two roadshows in the United States in April and May 2002, as well as by visits by American investors at corporate headquarters. However many American funds and investment houses are now buying our shares on the more liquid Neuer Markt in Frankfurt. Some of them have been invested in Pfeiffer Vacuum since its initial public offering in New York in July 1996, and continue to have confidence in the management and medium-term development of the Company and its sound financial footing.

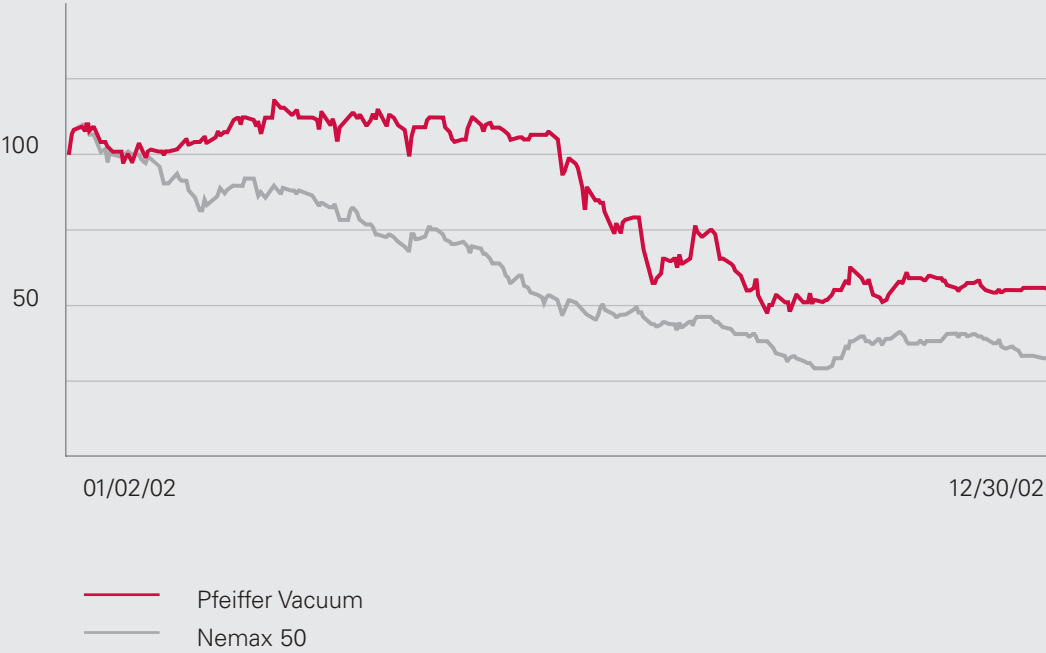
Proposed dividend

Investors generally had little reason to be happy about the development of share prices in 2002. This is why it is all the more important to investors for companies that earn a profit to enable their shareholders to participate in the company's success in the form of a dividend. The Management and Supervisory Boards will therefore propose to the Annual Shareholders Meeting that a dividend of € 0.56 per share be distributed. This represents a dividend yield of 2.9 %.

Corporate governance

In 2002, a government commission, as well as legislators, the media, many attorneys and, last but not least, publicly traded companies in Germany and other countries came to grips with the issue of corporate governance. Balance sheet scandals on a gigantic scale in the United States, as well as falsification of financial statements and corporate insolvencies in Germany, first and foremost on the Neuer Markt Stock Exchange, made stricter controls unavoidable.

Share Price Development in % Pfeiffer Vacuum/Nemax 50



Share Price Development in € on the Neuer Markt and \$ on the NYSE



Pfeiffer Vacuum Share Performance

In the past, Pfeiffer Vacuum has always published its financial statements correctly and in a timely manner. All of the Company’s financial communication has always been open and transparent. The Company initiated all steps required for compliance with the additional requirements of the German Corporate Publication Transparency Act (“TransPuG”) and the corporate governance guidelines. The Company is in compliance with all material requirements of the German Corporate Governance Code. Further details on this subject are contained in Management’s Discussion and Analysis on page 78, as well as in the Report of the Supervisory Board on page 9.

In order to satisfy the heightened requirements of the U.S. Securities and Exchange Commission, the members of the Management Board have submitted affidavits confirming the correctness of the information contained in the 20-F Report (the financial statements in the form required for companies traded on U.S. stock exchanges).

Pfeiffer Vacuum Share Highlights

| | | 2002 | 2001 | 2000 |
|-----------------------------------|-----|-----------|-----------|-----------|
| Number of shares | | 8,790,600 | 8,790,600 | 8,619,200 |
| Highest trading price | € | 41.80 | 51.36 | 50.40 |
| Lowest trading price | € | 15.80 | 24.40 | 24.68 |
| Trading price at year-end | € | 19.12 | 35.20 | 45.20 |
| Market capitalization at year-end | M € | 168 | 309 | 390 |
| Dividend per share | € | 0.56 | 0.56 | 0.50 |
| Dividend yield | % | 2.9 | 1.6 | 1.1 |
| Earnings per share | € | 1.99 | 2.16 | 2.24 |

Investor relations – Shareholders are customers too

Ongoing contact with our investors is naturally an important commitment for us. Short response times in handling inquiries and requests for literature, fast appointments for visits to the Company and personal talks with the Board, numerous roadshows in Germany and other countries, a financial press conference and analyst conference in Frankfurt, telephone conferences on our quarterly numbers, an Internet chat with the Board, as well as participation in three major investor conferences in Frankfurt, Monaco and London, were all part of our investor relations (IR) activities in the year 2002. For the first time, an analyst conference was conducted in May 2002 together with other Neuer Markt companies during MediaTech in Frankfurt, a major optical storage media tradeshow; the conference was extremely well received by the nearly 70 attendees.

A separate investor relations department on the Internet at www.pfeiffer-vacuum.net affords everyone an opportunity to obtain detailed information relating to Pfeiffer Vacuum shares, to download annual reports, quarterly numbers and press releases, or to sign up on an e-mail distribution list to receive future corporate news. For the first time, an interactive version of the 2002 Annual Report will be available on the Internet.

On behalf of business weekly Wirtschaftswoche, the Institut für Betriebswirtschaft at the Münster Institute of Technology analyzed the quality of the Internet financial communications of DAX, MDAX and Nemax 50 companies. With a score of 1.83, Pfeiffer Vacuum came in at an outstanding 10th place among the more than 100 companies that were evaluated. We are proud of the second place we achieved in the Neuer Markt segment in the rankings of annual reports by Manager Magazin. Especially high marks went to its clear language and informative financial portion.

Over 20 analysts from Germany and other countries regularly follow our Company, assessing its current position and prospects in close contact with the Board and the Investor Relations Department. In 2002, the Buy, Long-Term Buy and Accumulate recommendations predominated. In their forecasts, most analysts anticipate positive development of Pfeiffer Vacuum share prices as soon as the economy makes a lasting recovery and the Company can again profit from this development in the form of sales growth.

Outlook

The reorganization of the German stock exchange world will be instituted in early 2003. Pfeiffer Vacuum has been included in the Prime Standard. Pfeiffer Vacuum will probably belong to the newly created TecDax Index of the 30 most important technology issues on German stock exchanges, as well as to the recompiled Nemax 50 Index, which will continue to be listed until year-end 2004. With its sound business model and its investor-driven financial communication, the Company will continue to be an interesting issue for investors from Germany and other countries in this new stock exchange world.



Headlamp reflectors for the automotive industry wouldn't be nearly as bright without vacuum deposition.

Products and Applications

Vacuum produces conditions that are similar to those encountered in space, which are indispensable in the production of numerous high-tech products as well as articles that are used in daily life. Any number of forward-looking ideas would not be feasible without products from Pfeiffer Vacuum.

As one of the leading full-line suppliers of vacuum technology, Pfeiffer Vacuum's broad product portfolio offers solutions for the widest possible range of requirements in connection with vacuum generation, measurement and control.

High-vacuum and ultra-high vacuum products and applications

Accounting for 37.6 % of total sales in 2002, the Company's most important product is the turbomolecular pump, or "turbopump" for short. This class of pumps was invented at Pfeiffer over 40 years ago and has since been steadily evolved. Turbopumps generate vacuums in the high to ultra-high vacuum range of up to 10⁻¹¹ mbar. This represents the pressure conditions that prevail around 1,000 km above sea level. The turbopump rotor, with rotor elements made from a special aluminum alloy – like aircraft turbines –, rotates inside the pump at speeds of up to 90,000 revolutions per minute. The utmost demands are also placed upon the rotor's bearings. Depending upon the application in question, the Company offers either magnetic, and thus oil- and maintenance-free, or mechanical bearing versions. Turbopumps are available in a wide range of sizes – from the world's smallest, the TPD 011 CompactTurbo for the analytical industry, right through to large 3,000-liter pumps, which are primarily employed in the coating and semiconductor industries. Reflecting market needs, both small, compact turbopumps have been developed, and pump performance and reliability of the existing product portfolio have been further optimized. Turbopumps always require so-called backing pumps. They can be rotary vane, dry or diaphragm pumps. These pumps cover the vacuum range from atmospheric pressure to a maximum of 10⁻³ mbar.

Vacuum Generation

- Diaphragm pumps
- Diffusion pumps
- Dry pumps
- Roots pumps
- Rotary vane pumps
- Turbopumps
- Valves and components

Measurement and Analysis

- Leak detectors
- Mass spectrometers
- Total pressure measurement instruments

Vacuum Systems

- Coating systems
- Leak detection systems

Products and Applications

Vacuum produces conditions that are similar to those encountered in space and are indispensable in the production of numerous high-tech products and many products that are used in daily life. Materials with differing melting points, like metal and plastic or glass and metal, can be bonded to one another in a vacuum chamber.

Eyeglass lenses, for example, can be provided with an antireflective or color coating with the aid of turbopumps. Our vacuum technology lends the brilliant sparkle to crystal figurines and jewelry from famous Austrian and Czech manufacturers. All prominent manufacturers of architectural glass perform glass coating in vacuum systems equipped with Pfeiffer Vacuum turbopumps. Architectural glass incorporates not only decorative colored or antireflective coatings, but also the increasingly important environmental aspects of thermal coating to protect against heat or cold. The latest trend in glass coating is toward so-called self-cleaning glass (lotus effect), which is also manufactured with the aid of vacuum and is employed both in buildings as well as in the automotive industry. Wear protection is a further application in the coating sector. Our customers apply mechanically resistant coatings to drills, milling cutters and other tools under vacuum. The **coating** segment has taken on significant importance in recent years. In 2002, this segment accounted for 20 % of total sales, not

including the 4 % of total sales accounted for by the new market segment of storage media (2001: 24 %). Ongoing contract negotiations and announced projects hold the promise of moderate growth in this segment in 2003.

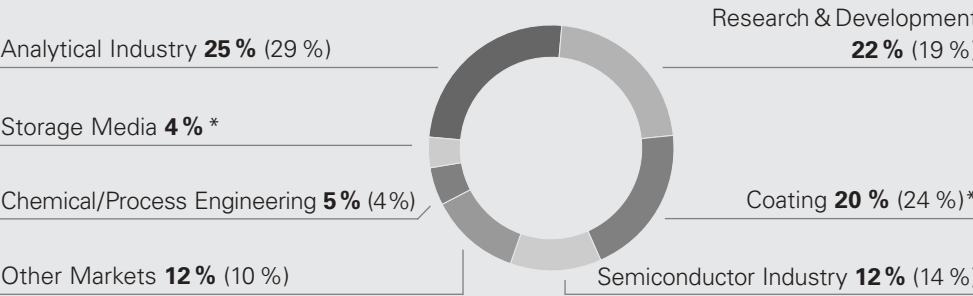
Small turbopumps with volume flow rates of up to 500 l per second are indispensable elements of analytical equipment. Here, the trend is clearly moving toward small, compact, portable units. These kinds of analytical instruments are employed, for example, in DNA analysis, medical technology for blood or tissue studies or in environmental and biotechnology. An electronic microscope, too, is an analytical instrument in which the composition of materials is tested and surface analyses, in semiconductor production, for example, are conducted under vacuum. Our products – turbopumps, for example – are also employed in nuclear spin tomographs. Leak detectors with integral diaphragm and turbopumps are required in many industrial sectors, e. g. in the production of refrigeration appliances or in the automotive industry. In 2002, the **analytical industry**, which is located primarily in Japan, England and the United States, suffered from the weak economy, especially in the semiconductor market, as well as from the general trend of capital investment hesitancy. Its percentage of total sales declined from 29 % in 2001 to 25 % in 2002. However Pfeiffer Vacuum succeeded in retaining its position of market leadership. With several new products for the analytical market, the Company stands ready to benefit from an economic recovery and grow faster than the market.

We also supply a broad spectrum of customers in **research & development** with our turbopumps. Physics and chemical research laboratories in universities around the world know and trust our products. Many research institutions need vacuum products for their projects. Our customers include major international research institutions like Cern, Desy or Bessy. Vacuum technology from Pfeiffer Vacuum is being employed to research replenishable energies, in accelerator rings, in accelerators for cancer therapy and in work on neutron sources. During the year under review, individual publicly financed universities and institutes suffered from budget freezes and cuts. The trend is moving toward clustering multiple universities and institutes that receive public funding for special research projects to enable them to jointly utilize expensive research facilities. Moreover, contract research funded directly by industry is also on the rise. As a competent partner to universities and private-sector institutes, Pfeiffer Vacuum benefits from fast knowledge transfer. One spectacular research segment, although it does not involve high sales, is space research. Pfeiffer Vacuum products, first and foremost turbopumps, have flown along on virtually all space missions in recent years. Typical applications included analysis of astronauts’ respiratory air or studies of the gravitational effect on new metal alloys. The research & development segment is one of the Company’s least cyclical markets and offers a constant utilization factor. In 2002, the percentage of total sales accounted for by this segment rose to 22 % (2001: 19 %).

Sales by Product 2002 (numbers in brackets: year 2001)



Sales per market segment 2002 (numbers in brackets: year 2001)



* A market segment last year

Products and Applications

Of all the markets the Company supplies, the **semiconductor industry** is the market segment with the greatest volatility. Pfeiffer Vacuum supplies manufacturers of systems for the production of semiconductor components and flat panel displays. Due to the corrosive gases that have to be pumped and the continuous-duty cycles that are involved, extremely high quality demands are placed upon the turbo and dry pumps that are employed in this segment. Our products enable the production of microprocessors, digital signal processors and micro-controllers for computers and mobile phones, and the microprocessors in the Sony Playstation 2. Further examples include MEMS (micro-electromechanical systems) for aeronautics, telecommunications, environmental monitoring, memory modules, Ethernet chips for high-speed data transfer over the Internet, laser diodes, D/A converters and 100-Hz modules. As a result of the persistent crisis in the semiconductor industry, there was another decline in the percentage of total sales accounted for by these products to 12 % for 2002 (2001: 14 %). Sales in this segment are primarily being generated by replacement demand; in some cases, pumps in existing systems are also being replaced with more refined and powerful pumps in order to provide greater memory capacity on less space. During the year under review, the Company's products were qualified on newly developed 300-mm tools (systems for the fabrication of larger and more powerful semiconductor wafers having a diameter of 300 mm). However on the basis of its own research and statements by major semiconductor manufacturers, the Company does not anticipate a recovery prior to the second half of 2003.

Low and medium vacuum products and applications

It is predominantly our rotary vane and Roots pumps that are employed in the **chemical and process engineering** market segment. During the year 2002, this highly conservative and safety-minded market suffered from the weak global economy. Its share of total sales amounted to 5 % in 2002, as opposed to 4 % in 2001. We do not anticipate any significant growth in 2003.

Rotary vane pumps are required for generating vacuums in the low and medium vacuum range from atmospheric pressure to 10^{-3} mbar. They very often serve as backing pumps employed in combination with turbo or Roots pumps in pumping stations. Rotary vane pumps are available in series with volume flow rates of from 2.5 to 650 m³ per hour. Rotary vane pumps are frequently employed in chemical research laboratories, as well as in the pharmaceutical and biotechnology industries. Vacuum drying cabinets, in which rare old books can be saved from disintegrating, for example, operate with rotary vane pumps. A special line of rotary vane pumps, the PacLine, is employed in both the packaging and conveying industries. Small rotary vane pumps, for example, are used by dentists to harden dentures.



Markus Meyer Trainee Workshop · Trainer · 23 years old · With the Company since 1996
Leisure pastimes: Badminton and information technology

Yvonne Diesfeld Low/Medium Vacuum · Roots and Rotary Vane Pump Manufacturing
25 years old · With the Company since 1996 · Leisure pastimes: Riding and listening to music

Benjamin Rathmann Trainee Workshop · Industrial mechanic trainee · 21 years old
With the Company since 2001 · Leisure pastimes: Motorcycling

Roots pumps are very robust pumps that are especially suitable for evacuating aggressive gases in the chemical industry, for example, or in heat treatment furnaces (melting, sintering). Their volume flow rates range from 250 to 25,000 m³ per hour. A Roots pump typically requires a backing pump from atmospheric pressure onward; it offers a pressure range of up to 10^{-5} mbar. Multiple Roots pumps are often integrated into complete pumping stations. A pumping station also includes valves, flanges, as well as gauges and controls for regulating the vacuum and the entire process.

Interesting applications that involve Roots pumps include the production of highly wear-resistant plastic/acrylic glass for mobile phone displays, for manufacturing polyester, and for providing sealing plies in plastic/PET bottles to prevent losses of carbon dioxide or flavor compounds. Further important fields of application include vacuum drying and freeze drying.

Products and Applications

In space simulation chambers in Germany, Italy and India, Roots pumping stations enable a vacuum similar to that encountered in space to be produced in these chambers in order to conduct preparatory tests for space missions. One of the applications for these pumping stations is to evacuate satellite thruster exhausts from the test chambers. Due to the large chamber volume involved here, very large Roots pumps are employed.

The line is rounded out by a number of **dry pumps** and pumping stations. A dry pump does not require lubricants in the pump chamber, thus making it especially suitable for applications in the semiconductor industry, for example, in which oil residues could endanger the process. Dry pumps also include small diaphragm pumps, whose volume flow rates of from 1 to 8 m³ per hour make them suitable as backing pumps for small turbopumps of the type that are predominantly employed in analytical equipment. The OnTool™ DryPump is a compact, stackable dry pump that is especially suitable for employment in cleanrooms, first and foremost in the semiconductor industry. By installing the pump directly on or in the machine, the customer requires only a smaller, more cost-effective pump and enjoys considerable savings in installation, operating and maintenance costs. This significantly increases the utilization factor of the customer's production facility and reduces production costs.

Vacuum systems and applications

Pfeiffer Vacuum develops and manufactures complete vacuum systems for customer-specified processes. Such vacuum systems comprise the following assemblies: Recipient (vacuum chamber), vacuum pump or vacuum pumping station, measurement and regulating equipment, as well as electrical/electronic control.

Products in the systems segment also include helium **leak detection systems**. Environmental protection, quality assurance and cost optimization are placing very high demands on leak detection in numerous components, such as vehicle fuel tanks, aluminum rims, chilled water piping and compressors for air conditioning systems, food packaging and pressure vessels. With 15 supplied fuel tank leak detection systems, Pfeiffer Vacuum is the market leader in the automotive supply industry. On the one hand, it is necessary to satisfy increasingly strict legal limits and quality requirements, while minimizing testing times and operating costs on the other. Pfeiffer Vacuum employs innovative measurement technology to satisfy these requirements. Its custom-designed helium leak detection systems satisfy the highest demands with respect to efficient quality assurance.

We classify these highly heterogeneous applications under the **other industries** market segment. These industries also include metallurgy, the refrigerator and freezer industry, as well as the automotive and packaging industries. In 2002, this segment accounted for 12 % of total sales, as opposed to 10 % in 2001. It is very difficult to make secure predictions

about the further development of this market segment. However the experience of recent years shows that new applications are constantly emerging, and that the Company's competence in these areas is highly valued by our customers. Growing environmental requirements, driven by the Western industrialized nations, hold the prospect of steady sales growth for our products.

Type Classic **coating systems** are single-chamber systems that are predominantly employed in the fields of optics, sensor technology and semiconductor fabrication. A Classic system can be employed to provide an antireflective coating on eyeglass lenses, for example, or to coat watch dials with high-quality metals or color decors. One interesting application during the year under review was a system for coating stents, which are often employed in connection with cardiac catheterizations. In this application, the purpose of the sheer coating is to prevent the body from rejecting the stent and scarring of the wound.

Coating technology is also required for manufacturing optical storage media like CDs and DVDs. With its decision to expand its DVD activities, the Company has decided to enter a market that, although hotly contested, holds a great deal of promise for the future. One of the key components in manufacturing DVDs is vacuum technology, and in this new line of business, Pfeiffer Vacuum unites its traditional vacuum and mechanical engineering competence with the development and sputtering know-how offered by our new colleagues. At its additional manufacturing facility in Aschaffenburg, Germany, Pfeiffer Vacuum builds **metalizers** and complete **lines for the production of DVDs**. This product spectrum includes Single Layer Metalizers for mass-producing prerecorded and writable CDs and DVDs. This product offers top values with respect to layer homogeneity, productivity and cycle time. The DVD Line is a production line for all DVD-ROM formats. It can operate at a cycle time of three seconds, achieving production outputs of up to 26,000 DVDs per day. In the autumn of 2002, a first DVD Line was sold to a leading German DVD manufacturer, where it has been providing very good production results.

The Multi Layer Metalizer is a compact system for coating rewritable DVDs in mass production environments. The predecessor of this system, the WAVE laboratory system, is producing outstanding results for a customer in Taiwan with respect to layer homogeneity and surface quality, and is being employed for layer development. In early 2003, a fully automated production system for mass producing rewritable DVDs will complement the product portfolio. It is designed as a dual line that integrates the Multi Layer Metalizer with its nine process and cooling stations. The market for rewritable storage media will stagnate until the format dispute between the DVD player manufacturers has been resolved. In the future, though, rewritable DVDs will replace videocassettes, and Pfeiffer Vacuum will participate in this growth market.

Products and Applications

Reflecting the growing importance of the DVD segment, Pfeiffer Vacuum is presenting **storage media** as a market segment in its own right for the first time this year. For many years, in addition to DVD systems, Pfeiffer Vacuum has also been supplying vacuum pumps and components to manufacturers of CD and DVD coating systems. Moreover, the Company also supplies manufacturers of audio and video heads. Its global service network makes the Company an acknowledged and dependable partner to CD and DVD manufacturers. In the past, products for this market had been classified under the process vacuum/coating market segment. In 2002, storage media accounted for 4 % of total sales.

Measurement and analysis equipment and applications

Pfeiffer Vacuum not only offers its customers products for generating vacuum. **Vacuum measurement and analysis equipment** is equally important. In vacuum technology processes, it is not only of high importance to generate a vacuum, it is also necessary to be able to identify and control the quality of the vacuum. There is no one instrument that can measure the total pressure throughout the entire vacuum range. Consequently, Pfeiffer Vacuum offers three different series of **total pressure measurement instruments**: The ActiveLine, a cost-effective solution for total pressure measurement in a vacuum; the DigiLine, digitally controlled gauge heads for industrial applications, i. e. vacuum process systems in which robustness and reliability are key; and the ModulLine for radiation-resistant total pressure measurement in ultra-high vacuum in research & development.

A **mass spectrometer** can be used to analyze the composition of a gas mixture in a production system. Because in production processes it is not only important to know “how much” is contained in the mixture, but also “what” it is that is contained in it. Portable mass spectrometers are employed in the field of environmental analysis. Pfeiffer Vacuum supplies a broad portfolio of mass spectrometers, ranging all the way to high-performance mass spectrometers for plasma analysis.

To make it easier for customers to select the most suitable mass spectrometer for their respective needs and to illustrate their practical applications, the company published a mass spectrometer compendium in 2002. For the first time, this offers customers a comprehensive mass spectrometer handbook.

Leaks can occur in even the best systems. These leaks are detrimental to the process and result in quality shortcomings. **Leak detectors** are employed to identify these kinds of effects that are detrimental to the production process. The leak detectors offered by Pfeiffer Vacuum are characterized by a combination of a high level of accuracy, robustness and industrial suitability. Typical applications include leak detection in refrigerators, air conditioning systems, piping systems and pressure vessels. Leak detectors are required in every market segment served by Pfeiffer Vacuum.

Pfeiffer Vacuum’s product portfolio is rounded out by a broad selection of **components**, e. g. valves, gaskets, seals, flanges and fasteners. In 2002, measurement and analysis equipment and components accounted for 27 % of total sales, as opposed to 28 % in 2001.

Service

Service for our products is a segment in its own right within the Company’s product portfolio. A close-knit, worldwide service network assures that we can provide prompt assistance to our customers. Service includes maintenance, repair or replacement of products at the factory or at the customer’s site, supply of replacement parts and system start-up. Customer training courses on vacuum technology in general and our products in special are part of our service program. In times of economic weakness, the percentage of sales accounted for by the service segment increases, as customers tend to want to utilize existing systems longer, instead of making new capital investments. In 2002, service accounted for 17 % of total sales, as opposed to 16 % in 2001.

Pfeiffer Vacuum Worldwide

Pfeiffer Vacuum markets its products through a well-developed, close-knit network consisting of its own sales offices and subsidiaries, as well as independent marketing agents. There are also service support points in all major industrial locations throughout the world to assure fast and qualified service.

Germany

Workforce vacuum pump and component sales: 18

Sales: € 40.5 million

The German economy was especially hard-hit by sluggish demand in Germany and other countries. With a GDP growth of 0.2 %, the German economy essentially did not grow at all in 2002.

The year 2002 was characterized by a hesitancy on the part of industry to make capital investments, as well as by a policy of cost cutting and postponement of planned procurements. The research & development market segment suffered from drastic government funding cuts, budget freezes, institute closures and university consolidation.

In Germany, vacuum pumps and components are not sold through a separate sales subsidiary. The sales and marketing staff are employees of corporate headquarters in **Asslar** and work decentrally.

The percentage of sales to German OEM (Original Equipment Manufacturer) customers in the fields of surface coating/deposition, metallurgy and tool coating also posted growth, with a very high share of exports going to China and the Far East. There was also growth in business with industrial customers employing new environmentally friendly technologies that require vacuum products. Pfeiffer Vacuum was able to sustain its position of market leadership in turbopumps in Germany.

Several interesting projects and applications during the year under review:

- Internal and external coating of PET bottles (Roots pumps, coating systems)
- Turbopumps for developing new lithographs with EUV light in the semiconductor industry
- Evacuation of gas cylinders with the aid of dry pumps
- Coating aircraft turbines (Turbopumps)
- Mass spectrometers for the development of hydrogen engines at a Bavarian carmaker
- DigiLine gauge heads for monitoring centrifuge technology
- Spot welding under vacuum for the automotive segment (complete vacuum line)

Beer barrels
are checked for leaks with vacuum technology.

Pfeiffer Vacuum Worldwide

The concept of splitting up the sales organization into specialists for key segments like major accounts in the coating industry, in the automotive supply industry and in the analysis equipment manufacturing industry, as well as into national sales and marketing staff, has proven its worth. Sales activities in the low and medium vacuum segment will be intensified in 2003. Numerous major projects for accelerators will soon be awarded in the research & development segment. On balance, we anticipate that our sales in Germany will grow faster than the economy in general.

Pfeiffer Vacuum Systems GmbH has been a member of the corporate group since January 1, 2002. DVD metalizers and complete DVD systems are developed and built at the Company's premises in **Aschaffenburg**, Germany, sometimes in special cleanrooms. The primary task in 2002 was to establish its structures worldwide and develop its products for market. There were not yet any major sales during this start-up year. The product portfolio was showcased at major tradeshowes and conferences for storage media in Frankfurt, Las Vegas and Shanghai. Sales activities for DVD products are presently focusing on Germany, the United States and Asia.

Benelux

Belgium: Workforce: 9 · Sales: € 3.6 million
Netherlands: Workforce: 11 · Sales: € 6.0 million

It was not possible to achieve the economic growth of 2 % that had been forecast for 2002 in the Benelux countries; the actual figure was 1.1 %. Mainly due to the introduction of the euro, the inflation rate rose to 2.7 %, while exports declined by 2 %. The global decline in stock market prices lowered consumer confidence, with personal consumption declining sharply. Major industrial capital investments were made only hesitatingly, or were postponed until the following year.

Pfeiffer Vacuum's customers in this region from the traditional industrial sectors of anti-abrasion and decorative coating reduced their orders by up to 50 %. The innovative new turbopumps in the field of solar cell coating helped win new customers. There was a change in marketing channels from nationwide sales to key account management.

France

Workforce: 18
Sales: € 5.9 million

Survey results showed that the mood of the French economy has rarely been as dismal as it was in 2002. There was virtually zero willingness to invest. Government budget cuts additionally deteriorated the situation.

For Pfeiffer Vacuum France, which has traditionally been strong among universities and major research facilities, the budget cuts led to significant declines in sales in the research & development segment. Orders were lost in the process technology and chemical segments, as well as in the automotive supply industry, as a result of aggressive price pressure on the part of competitors. Successes were able to be posted in the architectural glass coating segment, where it was not only possible to win orders for new projects, but to also replace a competitor's pumps in existing systems. The French sales and service organization was restructured in 2002. A clearer focus on target markets will not bear fruit until 2003.

Great Britain

Workforce: 16
Sales: € 5.0 million

At 2 %, economic growth lagged behind expectations, while the inflation rate remained under control at 2 %. There was a rise in personal consumption, coupled with increased, double-digit indebtedness. Production relocations and corporate closures impacted overall economic development. The British pound was relatively stable against the euro.

New projects at Pfeiffer Vacuum's semiconductor customers, like the 300-mm wafer, were either postponed or cancelled. Several production facilities were shut down entirely. Manufacturers of analysis equipment had to cope with the economic downturn, although there were signs of a moderate improvement here at year-end. The SplitFlow™ turbopump was successfully introduced at two major customers. Two large coating projects were postponed until 2003.



Robert Cho Pfeiffer Vacuum Korea · Service Engineer
29 years old · With the Company since 2002
Leisure pastimes: Cinema, reading and computer games

Gasper Ovcak Marketing Agency for Slovenia, Croatia, Czech Republic
and Slovakia · Service Engineer · 27 years old · With Scan d. o. o. since 1996
Leisure pastimes: Motorcycling and fitness

Dr. Piotr Katowski Marketing Agency for Poland · Sales and Service Technician
36 years old · With Softtrade Sp.z o.o. since 2001 · Leisure pastimes: Photography and physics

Benoît Gennaro Pfeiffer Vacuum France · Sales Engineer
32 years old · With the Company since 2002 · Leisure pastimes: His two children and trekking

Italy

Workforce: 9
Sales: € 5.8 million

The year 2002 was characterized by minimal economic growth of 0.4 %. The dramatic situation at FIAT, Italy’s largest industrial enterprise, impacted both the situation in entire regions as well as that of numerous suppliers. Public funding for research & development was drawn down sharply.

Pfeiffer Vacuum Italia did quite well in the face of this difficult economic situation, thanks to its broad product portfolio as well as the many markets it serves. The budget target was able to be reached, and orders were won in the food and packaging industries as well as from refrigeration manufacturers, in spite of a massive price war on the part of the competition.

Austria and the new Southeast European EU member countries

Workforce: 14
Sales: € 7.0 million

In 2002, the Austrian economy was harder hit than anticipated by the consequences of the global economic slump. Although the first half of the year saw moderate growth, the flooding suffered by the country hurt the economy during the 3rd quarter, and the 4th quarter, too, offered little dynamics. While there was a rise in the inflation rate (1.5 %) and unemployment (4.1 %), these parameters are still significantly below the EU average. There was also a slowdown in economic growth in the new EU member countries Czech Republic, Slovakia, Hungary and Slovenia.

In spite of the difficult economic environment, Pfeiffer Vacuum Austria just barely missed its 2002 net sales targets. One of the success factors was a major contract for two leak detection systems from the automotive industry. These systems are used to test fuel tank filler tubes. New customers were also able to be won in the segments of surface treatment and eyeglass lens coating.

Switzerland

Workforce: 12
Sales: € 5.2 million

The Swiss economy suffered from the weak global economy in 2002, combined with a strong Swiss franc. Personal consumption rose only moderately, while the construction industry stagnated and the equipment supply industry contracted. The unemployment and inflation rates continue to remain at a relatively low level.

The decline in production output in the capital goods industry also impacted Pfeiffer Vacuum in Switzerland, especially in the coating and storage media segments. There were successes among manufacturers of analysis equipment, with the new, compact and powerful turbo-pumps contributing to this achievement. The good business relationships with universities and research institutes that have been established over the course of the years again bore fruit this year, in spite of expenditure restrictions. A multi-chamber coating system for optoelectrical and semiconductor research, for example, went into operation at the Swiss Institute of Technology in Lausanne.

Pfeiffer Vacuum Worldwide

Scandinavia

Workforce: 12
Sales: € 5.6 million

Gross domestic product in the countries of Scandinavia increased of 1.4 % in 2002, with an inflation rate of around 2 %. With the exception of Finland, the Scandinavian countries do not belong to the euro zone. Exchange rate fluctuations between the euro and the currencies of the Scandinavian countries were absorbed by the corporate group.

Pfeiffer Vacuum Scandinavia succeeded in achieving its budget targets. In Sweden and Denmark, additional market share was won in the segments of analysis, research & development and coating. Coating has developed into the segment with the highest sales, accounting for 39 % of total sales in 2002, as opposed to 26 % in 2001. Although fewer contracts were awarded in 2002 in the research & development segment, Pfeiffer Vacuum succeeded in growing its market share here too. Declines were suffered predominantly in the semiconductor segment as a result of fewer orders from the major Scandinavian mobile phone manufacturers.

United States

Workforce: 65
Sales: € 35.9 million

For the second year in a row, the industrial segment, first and foremost semiconductor manufacturers and telecommunication companies, reduced its capital investments, costs and workforces. With the exception of replacement needs, it would appear that demand for PCs, mobile phones and other consumer goods has been satisfied, and there is presently no revolutionary new product that could significantly heat up consumer demand. The U.S. economy was driven exclusively by personal consumption. Thanks to extremely low interest rates, Americans bought real estate, automobiles and other consumer goods, with personal indebtedness rising. Toward the close of the year, however, there was a sharp drop in consumer confidence.

Pfeiffer Vacuum USA had already initiated initial steps in 2001 to combat its dependence upon the semiconductor industry. The sales team, for example, was significantly augmented with specialists for further markets in which the Company has been highly successful in Europe, for example. This includes the glass coating industry, the automotive supply industry and the growth market of storage media.

Reliable protection
thanks to woven-in high-strength fibers, produced under vacuum.



Pfeiffer Vacuum Worldwide

In connection with the general economic weakness and the dramatic decline in sales in the semiconductor industry, these steps were not yet able to produce the desired success in 2002. By comparison with the other regions, the United States posted the sharpest drop in sales, which declined from € 44.8 million in 2001 to € 35.8 million in 2002. Around € 2.0 million of this decline was due to foreign exchange rates as a result of the significantly weaker dollar this year.

Sales to universities and government facilities in the research & development segment were able to be moderately increased. Sales in the analytical market declined. However no orders were lost to the competition; in fact, it was even possible to replace competition products at several customers and to win smaller new customers. Leak detection equipment was able to be successfully sold to customers in the coating and automotive industries, where our market share grew from 10 to 14 %. A replacement program for older turbopumps was successfully instituted in the service segment.

China

Workforce (working exclusively for Pfeiffer Vacuum): 6
Sales: € 1.7 million

The gradual transition toward an increasingly stronger market economy focus has unleashed huge growth potential in China. During the year under review, China's economy grew by nearly 8 %, a record level by comparison with the other countries of Asia. However the country's continuing transition from a primarily agrarian to an industrial and service economy is not progressing without disruptions and social tension. After China joined the WTO in 2001, foreign investments rose to new record levels, and export growth advanced by 7 % over 2001.

China is also an important target market for Pfeiffer Vacuum. In late 2001, a Company-owned sales subsidiary was established in Hongkong, which initially developed business contacts in the South China region. Sales were able to be generated in research & development as well as in the coating and semiconductor industries. Pfeiffer Vacuum products were also exported indirectly to China via customers in Germany, such as in the field of metallurgy and chemistry, for example.

Customers in the Greater Beijing region are served through a marketing agent.

Expansion of selling activities has already been initiated for the year 2003. Manpower levels have been increased, primarily in the Shenzen and Shanghai economic regions. In February 2003, a Company-owned service center will be opened in Shanghai, with further service centers to follow in other regions of China.

India

Workforce: 13
Sales: € 1.9 million

During the year under review, the Indian economy was able to disengage itself somewhat from the global downward trend. Yet here, too, capital investments were reduced, first and foremost at government facilities.

Government research facilities and universities are Pfeiffer Vacuum India's most important customers. This subsidiary is therefore especially proud to have achieved its targets, been able to maintain market share and even grow sales by 38.6 % over the previous year. The largest project was a four-stage Roots pumping station for a space simulation chamber. The subsidiary also succeeded in selling pumps and measurement equipment to customers in the analytical industry.

Japan

Workforce (working exclusively for Pfeiffer Vacuum): 31
Sales: € 10.2 million

The phase of stagnation and recession that has persisted since the early 1990s has still not yet been overcome. The high level of government debt is impeding further government economic stimulus programs. Moreover, the economic situation was additionally characterized by relocations of production facilities to China, increasing unemployment and capital investment hesitancy.

The Company has been represented in Japan for many years by a marketing organization that has specialized in selling high-quality technology products that require explanation. In 2002 net sales declined by 7 %. The reasons for the decline in sales were high stocks at customers in the analytical and semiconductor industries from previous years, as well as a postponement of further orders until 2003.

Business with total pressure measurement instruments through contracts from major OEM customers from various industrial segments was able to be increased by 60 % from 2001. There was also a rise in orders for Roots pumps. It was possible to win a major order from a solar cell manufacturer, as well as a further order in the research segment.

Given a moderate rise in demand by year-end and ongoing contract negotiations, our Japanese marketing agent anticipates year-on-year growth of 15–20 % for 2003.

Pfeiffer Vacuum Worldwide

Korea

Workforce: 12
Sales: € 3.1 million

The Korean economy continues to be outstanding by comparison with the global economy. During the year under review, Korea was one of the few countries to post a sharp rise in gross domestic product of over 6 %. Unemployment stands at less than 3 %, the inflation rate is 3 %, and the government budget is in the black. Growth is being driven by consumers and rising exports, primarily to neighboring Asian counties, first and foremost to China.

Pfeiffer Vacuum Korea again succeeded in significantly growing its sales year on year. One of its successes was to motivate semiconductor customers to replace competition products in their existing systems with Pfeiffer Vacuum pumps. Manufacturers of flat panel displays were successfully won as new customers for turbopumps.

Taiwan

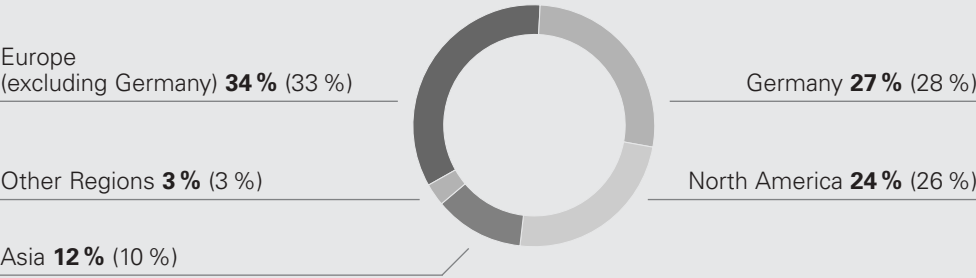
Workforce (working exclusively for Pfeiffer Vacuum): 10
Sales: € 1.6 million

In Taiwan, our products are distributed exclusively through a marketing agent that belongs to the same parent corporation as the marketing agent in Japan. Sales rose by 10 % over 2001. The Taiwanese marketing representative is characterized by an outstanding service center. There are many production systems in Taiwan at manufacturers of semiconductors, consumer goods and storage media in which Pfeiffer Vacuum pumps and measurement equipment are installed. These products have to be regularly serviced or replaced. During the year under review, the Taiwanese marketing agent repeatedly succeeded in replacing competition products in existing systems with products from Pfeiffer Vacuum. These efforts will be continued in 2003.

Rest of the world

Pfeiffer Vacuum enjoys a presence through marketing agents in over 20 additional countries, including Israel, South Africa, Australia, Brazil, Argentina and Mexico. This global presence in sales and service is a unique selling proposition that sets Pfeiffer Vacuum apart from most other competitors.

Sales by Regions 2002 (numbers in brackets: year 2001)



Research & Development

Our star product, the turbopump, was developed at our Company. Year in and year out, we are investing in refinements and new product developments to sustain our position of technology leadership. In 2002, our research & development expense ratio rose to 6.9 % as a result of our new DVD line of business.

Developing new products and evolving our successful existing product portfolio enjoys high priority at Pfeiffer Vacuum. An innovation team consisting of staff from Development, Sales and Marketing began its work in 2002. This team continuously reviews the existing product portfolio on the basis of milestones and complements it through the addition of new products. What is important to us in this connection is for new products to be market-driven and developed in close collaboration with our customers. In our new developments, we pay special attention to assuring that the customer will be able to additionally benefit from low operating and maintenance costs.

The turbomolecular pump was invented at Pfeiffer Vacuum over 40 years ago; today, it is still the vacuum pump for high and ultra-high vacuum that offers the broadest range of application options. Pfeiffer Vacuum has steadily broadened its position of technology leadership in this class of pumps, and brought numerous evolved models to market during the period under review.

In early 2002, the Company significantly expanded its activities in the DVD segment. This entry into DVD business is viewed as a forward-looking investment in a growth market. During the year under review, the start-up costs in this segment, first and foremost in the field of research & development, were not offset by any significant sales.

In 2002, research & development expenditures were significantly higher than in the preceding year as a result of our entry into the DVD sector, amounting to € 10.4 million in 2002, as opposed to € 8.1 million in 2001. Consequently, the percentage of total sales accounted for by research & development rose from 4.7 % to 6.9 %.

We employ 92 engineers, physicists and technicians in the field of research and development, 20 of them in the DVD segment. Nine new patent applications were filed in the year 2002, two of them in the DVD segment. We hold a total of some 70 fundamental patents worldwide, along with 100 other patents.



**Digital storage media
won't work without vacuum technology.**



Helmut Bernhardt Research & Development · Magnet-Levitated Turbopumps
46 years old · With the Company since 1984 · Leisure pastimes: Table tennis and listening to music

Michael Schill Research & Development · Turbopump Development · 40 years old · With the Company since 1978 · Leisure pastimes: His child, mountainbiking, as well as painting in pastels and oils

Hartmut Tschesche Research & Development · Engineering · 60 years old · With the Company since 1978 · Leisure pastimes: Gardening and skiing

The following products were successful launched during the year under review:

Leak detection turbopump

This compact turbopump was specially developed and patented (pending) for helium leak testers. The advantage of this new development is that it provides the customer with an end-to-end solution, consisting of turbopump, valve block and valves. This product could be compared with trends in the automotive industry: While a separate speedometer used to be installed in a car, today the entire instrument panel is installed, along with the complete electronics for it. This pump is currently in the test phase at a major manufacturer of analysis equipment.

Large SplitFlow™ turbopump

Following the successful integration of SplitFlow™ turbopumps offering volume flow rates of up to 250 l/s in mass spectrometers, this series was complemented to include a version with higher volume flow rates of up to 400 l/s. With this development, we are strengthening our position in the analytical industry, as we now offer the matching pump for every type of mass spectrometer.

New generation of turbopumps for the coating and semiconductor industries

With the TPH 2301 and TPH 2303 turbopumps, two powerful pumps were introduced that are especially suitable for applications in the glass coating industry and in the fabrication of semiconductor chips. The TPH 2301 is characterized by its high gas flow rate. The TPH 2303, with its very fast run-up, is optimally suited for load lock operations.

New drive electronics were developed that can be employed, in particular, in areas in which radioactive radiation can occur.

A portable programming unit was developed as a practical accessory with which specific parameterization can be performed more quickly on dry pumps and turbopumps. This tool simplifies servicing of installed products.

Magnetically coupled rotary vane pump

The UNO 30 M rotary vane pump complements a series of hermetically sealed backing pumps with maintenance-free drives. This pump is especially environmentally friendly by comparison with conventional rotary vane pumps, as oil losses at shaft seals cannot occur. It runs very quietly and does not require any further soundproofing. Its design principle affords a highly compact size. This pump has the smallest dimensions of any competition product in this performance class. Pumps that feature this design are presently in the qualification phase at selected customers from the analytical industry.

Measurement and analysis equipment

Two years ago, the Company developed and brought to market the DigiLine total pressure measurement instrument. This year, these products were complemented by a field bus converter. This enables us to satisfy the needs of our industrial customers, where more and more plant control systems are being designed for field bus systems.

Production line for prerecorded DVDs

During the 4th quarter of 2002, the DVD Line, a DVD-ROM production line, was released for marketing after passing a customer test. With this new development, Pfeiffer Vacuum has created a system that offers a cycle time of three seconds and a production output of up to 26,000 DVDs per day. Key processes, such as cooling, sputtering and bonding, are in-house developments. A user-friendly machine control system, servo-controlled handling

Research & Development

systems, video process control and a controlled temperature management system throughout the entire machine assure consistently outstanding product quality. In developing this system, particular emphasis was placed on rigorously implementing a product family concept for reasons of cost. The process modules and handling systems employed in the DVD Line, for example, are also major constituents of the Bonder and RW Line. The newly developed sputter unit (single layer metalizer) is offered as an integration assembly or a standalone device.

Production line for rewritable DVDs

The DVD RW Line from Pfeiffer Vacuum is a fully automated production system for mass producing rewritable DVDs. In the standard configuration, this DVD-RW production system satisfies all requirements for manufacturing 120-mm-diameter single-sided rewritable DVD-RAMs, DVD-RWs and DVD+RWs under the various standards. The system is optionally offered on a turnkey basis, including the process know-how required for the rewritable DVD+RW and DVD-RW standards.

The system is designed as a dual line. It automatically performs all process steps, from injection molding right through to filling the spindle buffers with rewritable DVDs. Integrated in the DVD RW Line is the Multi Layer Metalizer with nine process and relaxation chambers, an in-house development. As a special feature, the DVD RW Line incorporates the fully integrated ILC Inline Crystallizer, which was developed exclusively by Pfeiffer Vacuum in collaboration with Hitachi. The ILC fully crystallizes the amorphously sputtered phase change layer without any loss of cycle time.

Outlook

Planning calls for a number of new products to be brought to market during the first half of 2003, including a series of magnetically coupled Roots pumps and an innovative backing pump. In the DVD segment, a standalone bonding system will complement the Company's product portfolio of DVD metalizers and complete DVD production lines. With its broad product portfolio, Pfeiffer Vacuum is thus excellently positioned for an economic recovery.

Doping checks in sports
are performed with the aid of vacuum technology.



Environment, Safety and Quality

For us, environmental protection, environmentally compatible manufacturing conditions, job safety and economic success are not contradictions. Our sophisticated quality management system already conforms to the stricter European testing criteria.

Environmental protection – Important today and tomorrow

The Company’s sophisticated environmental management system has been certified under ISO 14001 since 1996. In connection with a follow-up audit, compliance with the requirements contained in ISO 14001 was confirmed without restriction in October 2002.

We regularly monitor and assess all relevant environmental factors. Fourteen environmental and quality audits were performed during the course of the year. The items that were audited included handling of hazardous materials and water pollutants (coolant-lubricants, oils, cleaning agents, paints, solvents). Proper storage of hazardous materials was also monitored. No material variances from the criteria defined in the quality handbook were identified.

Development at the location in Asslar of energy and water consumption:

| | | 2002 | 2001 | 2000 |
|-------------|-----|---------|---------|---------|
| Electricity | MWH | 8,749 | 9,664 | 9,280 |
| Gas | m³ | 735,237 | 840,481 | 787,602 |
| Water | m³ | 17,344 | 32,945 | 27,694 |

An overview of various environmental measures conducted in 2002:

- Collection of old batteries for recycling
- Construction of a central waste collection point
- Reduction of solvent consumption through rigorous conversion to water-based paints
- Optimal care and monitoring of the coolant-lubricants employed in machining processes and a corresponding reduction in waste volumes from 104 tons in 2001 to 80 tons in 2002
- Reduction of packaging waste from 108 tons to 68 tons through the employment of reusable packaging between the Company and its customers and suppliers
- Reduction of total disposal costs by 37 % from 2001
- Construction of a parking lot with ecological paving stones (cost: € 260,000)

2003 environmental targets:

- Improvement of the hazardous materials management system
- 10 % reduction in waste volumes

Sustainable product development – An important factor in business success

Environmental design requirements are employed in developing our new products. This relates both to the materials that are used, including their recyclability, as well as to such customer-specific environmental aspects as reduced energy requirements for pump operation, for example, thus significantly reducing regular operating costs. A good example of this is the OnTool™ DryPump dry backing pump, which significantly reduces regular consumption of nitrogen, electricity and cooling water. Stricter environmental and quality assurance requirements in the automotive industry were one of the reasons for the renewed rise in demand for our helium leak detection systems in 2002.

Job safety – Important to both our people and our Company

In 2002, 22 job safety audits were conducted, eleven of them together with a plant physician and the Employee Council. Five employees attended external job safety training courses in 2002. Our employees are familiarized with all requirements relating to noise abatement, handling hazardous materials, accident and fire protection, as well as other safety requirements. A corresponding set of rules is contained in the quality handbook that all employees worldwide can access over the intranet.

The Company's job safety organization and job safety measures were also audited within the context of the follow-up audit under EN ISO 9001 and 14001. The comprehensive annual environmental and job safety report was submitted in January 2002.

The number of on-the-job accidents for the entire year 2002 again declined from the previous year’s level (from 16 to 12, including one commuting accident).

2003 job safety targets:

- 20–24 job safety audits
- Job safety training for an additional five employees
- Three Job Safety Committee meetings
- Reduction in on-the-job accidents through increased safety training



Ruth Fieres Customer Service · Team Asia · 43 years old ·
With the Company since 1976 · Leisure pastimes: Cycling and foreign languages

Kuno Herrmann Manager Sales & Marketing · 49 years old · With the Company since 1981
Leisure pastimes: Motorboating and tennis

Wolfgang Dondorf Chief Executive Officer · Development, Manufacturing, Sales & Marketing and PR
59 years old · With the Company since 1994 · Leisure pastimes: Aviating and do-it-yourselfing

Quality – Important to both customers and our people

Within the framework of our quality management system, all business processes are continuously scrutinized and enhanced. Fourteen internal quality audits were conducted in 2002 for this purpose; no material variances were identified. Moreover, all processes are documented in a handbook that all employees can access over the intranet.

Quality targets are defined and assessed annually, with compliance being measured. Continuous improvement processes are an integral element of all corporate processes, from development of a product right through to monitoring of the product being used by the customer.

All A suppliers are visited at least once a year and subjected to a “supplier check”. During this check, complaints and on-time, correct deliveries are reviewed, and new targets are agreed upon. The achieved values are reviewed monthly and published on the intranet.

An intranet-based customer complaint management system is in place. Defect analyses are resulting in steady improvement of our product and service quality.

The Company's entire quality management system already satisfies the stricter requirements under EN ISO 9001 : 2000.

- 2003 quality targets:
Systematic improvement and refinement of customer-oriented processes:
- 5 % improvement in the level of customer satisfaction
- Improvement of internal processes:
- 10 % reduction in the internal complaint rate
 - 5 % improvement in correct, on-time delivery



Instant coffee
is freeze-dried under vacuum.

Our People

On December 31, 2002, the corporate group employed a total of 811 people. The increase over 2001 resulted chiefly from the takeover of 45 employees at the new manufacturing facility in Aschaffenburg, Germany, as of January 1, 2002. Personnel expenses in the year 2002 totaled K € 49,616, as opposed to K € 46,028 for 793 employees in 2001.

A high-tech company like Pfeiffer Vacuum is highly dependent upon the high level of training and education of its qualified employees. During the economically difficult past year, ways were therefore sought in close cooperation with the Employee Council to respond to the lower level of sales in a flexible manner, yet without drastic layoffs. At corporate headquarters, for example, flexible worktime accounts were established, temporary employment contracts were not renewed, part-time contracts were offered, 39-hour contracts were reduced to 35-hour contracts, and terminating employees were usually not replaced. The subsidiary in the United States responded to the sharp decline in orders stemming from the country's persistent semiconductor crisis with a voluntary four-day workweek. This enabled existing resources to be matched to demand and quickly ramped up again when the economy revives.

Pfeiffer Vacuum thus resisted the temptation to cut costs short term through reductions in force, while simultaneously expressing its commitment to Germany as an industrial location. The Company continues to like the sound of “made in Germany”. And the attrition rate of less than 2 %, which is significantly lower than the average of other industrial companies in the region, demonstrates that our people also value Pfeiffer Vacuum as an attractive employer.

Workforce on December 31,

| | 2002 | 2001 |
|---|------|------|
| Total employees, worldwide | 811 | 793 |
| – Male | 668 | 650 |
| – Female | 143 | 143 |
| Employees at corporate headquarters | 558 | 585 |
| Employees at the Aschaffenburg facility | 57 | 0 |
| Employees in sales subsidiaries | 196 | 208 |



Stefan Diehl Quality Management · 43 years old · With the Company since 1986
Leisure pastimes: Skiing

Rosa Cañas Customer Service Shipping · 43 years old · With the Company since 1978
Leisure pastimes: Motorcycling, detective stories and walks

Achim Raich Shipping · 31 years old · With the Company since 1996 · Leisure pastimes: Soccer, fitness and travel

Training and qualifications

Good education and training, as well as a willingness to engage in ongoing continuing education and training in response to the needs of the market, represent the best pre-requisites for secure jobs and sustained business success.

Industrial mechanics are trained for tasks in manufacturing operations in a modern trainee workshop at the manufacturing facility in Asslar. Further training opportunities are available for white-collar workers. In close collaboration with colleges and universities, new blood for the future is familiarized with life in a modern industrial enterprise by making jobs available for interns and awarding contracts to post-graduate thesis candidates. In 2002, two post-graduate theses were written at the Company: A real-life thesis in the form of a customer

satisfaction analysis in Sales & Marketing, as well as a further thesis in connection with manufacturing operations on the subject of optimizing test equipment for permanent magnet rings.

Since 2001, Pfeiffer Vacuum has been participating in the work-study educational program for business engineers under a collaborative effort between the Giessen-Friedberg Technical University and the chamber of industry and commerce. University openings for four mechanical engineering students are currently being promoted.

Professional and vocational qualifications

| Development and Manufacturing | 2002 | 2001 |
|--|------|------|
| College and university graduates | 72 | 63 |
| Employees with specialized training | 301 | 283 |
| Employees without specialized training | 65 | 69 |
| Trainees | 20 | 20 |

| Administration, Sales and Marketing | 2002 | 2001 |
|--|------|------|
| College and university graduates | 160 | 141 |
| Employees with specialized training | 176 | 187 |
| Employees without specialized training | 10 | 25 |
| Trainees | 7 | 5 |

There are two dedicated employees who provide technical training for employees and customers. Further employees from Marketing, Development and Service can be called in on a part-time basis to lecture at training courses. A broad course curriculum offers training in German and English on new and existing products not only to our customers but also to all sales and service staff.

In addition, the Company also conducts on-the-job training, as well as specific participation in external seminars with the objective of optimally preparing our people for their present and future responsibilities and increasing flexibility within the Company.

Our People

Attractive pay concepts

All employees again shared in the Company’s success in 2002 in the form of an additional pay bonus. A growth-based bonus system provides additional incentive to the staff of the sales organization. Executives at corporate headquarters have a variable income element that is coupled to the achievement of the Company’s operating profit target. Following the successful conclusion of the first convertible bond program in 2001, two further option programs for executive employees were launched. The objective of these programs is to promote executive loyalty to the Company and to motivate executives to contribute to the success of Pfeiffer Vacuum.

Old-age pension plan

In Germany, Pfeiffer Vacuum offers its employees a Company old-age pension plan (funded supplemental retirement benefit corporation), which provides a tax-advantaged opportunity for a supplementary old-age pension by earmarking a portion of their income for this purpose. In addition, a qualifying direct insurance plan was established in 2002. Employees who joined the Company prior to June 1996 are additionally entitled to a Company-funded old-age pension.

Various pension plans that conform to country-specific conditions exist at the sales subsidiaries.

During the year under review, eight employees took advantage of the opportunity to gradually transition into retirement under a part-time contract for near retirees. This enabled all trainees to be offered a permanent job upon passing their final examination. This is another way of assuring that knowledge is transferred to junior employees from experienced older staff.

| | | |
|--------------------------------|-----|--------|
| Age Structure of our Workforce | | |
| Under 30 | 103 | (13 %) |
| 30 to 50 | 551 | (68 %) |
| Over 50 | 157 | (19 %) |

Social and ethical responsibility inside and outside the Company

Modern workplaces, teamwork and flat hierarchies are what characterize Pfeiffer Vacuum. The Company takes its social responsibility towards its people seriously, meets its disabled-employee quota and is in compliance with official accident prevention and job safety regulations. The Company pays employees at its German locations either on the basis of the general collective-bargaining agreement for the metalworking and electrical engineering industries or at higher pay scales, and observes codetermination principles. The fact that there does not have to be a contradiction between corporate and employee interests at Pfeiffer Vacuum is demonstrated by the spirit of constructive collaboration that exists between Employee Council and Management, for example in instituting flexible worktime accounts during the year under review. The principles of equitable treatment for all and the protection of minors are observed worldwide.

The positive corporate climate and the cohesion of Pfeiffer Vacuum’s people are demonstrated by the fact that events and gatherings also take place outside working hours at the various locations, such as soccer matches, ski or motorcycle tours, hikes, barbecues or runs.

Pfeiffer Vacuum also lives up to its social responsibility outside the Company. It awards grants to aid the work of facilities for children and the disabled, and sponsors regional sports clubs. In a major expression of solidarity, employees and management donated € 17,000 in the summer of 2002 for schools, childcare facilities and social services that had been especially hard-hit by the catastrophic flooding in the German state of Saxony.

For more than 40 years, Pfeiffer Vacuum has been one of the two donor companies that fund the prestigious € 7,500 Röntgen Prize that is awarded each year to young physicists at Justus Liebig University in Giessen in recognition of outstanding research work.

Corporate Communication

Sound information is the prerequisite for assuring lively communication. That's why all communication activities are predicated upon our objective of providing honest, clear, comprehensive and ongoing information to both our people as well as external target audiences.

In 2002, Pfeiffer Vacuum's image was shaped by numerous campaigns and activities: 30 tradeshows and exhibitions, six brochures with a total press run of 35,000 copies, 15 leaflets with a total press run of 40,000 copies, and a comprehensive all-inclusive catalog – in print form and on the Internet.

To assure a consistent image throughout the world, the **Corporate Design Handbook** was updated and provided to all subsidiaries, agents and key employees, as well as to suppliers. This handbook contains all major information about Pfeiffer Vacuum's logo, colors, typography and layout.

Tradeshows and exhibitions are highly important as an instrument for marketing capital goods. During the year 2002, Pfeiffer Vacuum exhibited at 30 tradeshows and exhibitions in Germany and other countries for a variety of market segments. We showcased our products at booths ranging between 10 and 60 m² in size. Important tradeshows during the year under review included Semicon Europa in Munich, Semicon Singapore, Semicon West in San Francisco (U.S.A.) and Semicon Taiwan in Taipei for the semiconductor market, as well as Analytica in Munich and Pittcon in Orlando (U.S.A.) for the analytical market. For the first time, Pfeiffer Vacuum Systems presented the Optical Storage Media Division at the MediaTech tradeshow in Frankfurt. The Company also exhibited at numerous further tradeshows, such as Salon de la Physique in Paris (France), Maschinenbaumesse MSV in Brno (Czech Republic), Vacuum Show in Tokyo (Japan) and Het Instruments in Utrecht (Netherlands) for the vacuum market in general.

The focal point of **product advertising** is the Company's all-inclusive catalog, its brochures and leaflets. In 2002, a new catalog illustrating all products in detail was issued in English and German with a total press run of 30,000 copies. Sought-after know-how brochures were published that provide the reader with technical background information and formulas. These publications provided a significant increase in name and brand recognition. The print media are made available to customers and prospects through the staff of the sales organization. Image brochures offer prospects, job applicants and visitors an overview of the Company. Visitors to the website are able to order all leaflets, brochures, the catalog and the annual report. Print media design is consistent throughout the corporate group.

Our **series of advertisements** is run only in selected trade journals in order to reach customers in the respective markets. Advertisements are employed to support product launches and cultivate our image.

Architectural glass
is more durable and attractive when coated under vacuum.



Wilfried Glaum Chief Financial Officer
Administration, Controlling, Finance and Human Resources
56 years old · With the Company since 1972
Leisure pastimes: Nature watching and hunting

Manfred Bender Manager Controlling and Finance · 38 years old
With the Company since 1998 · Leisure pastimes: Running and skiing

Gudrun Geißler Investor Relations · 53 years old · With the Company since 1986
Leisure pastimes: Child welfare association officer, study trips and cycling

Nathalie Möglich Subsidiary Controlling · 26 years old · With the Company since 2000
Leisure pastimes: Italian cuisine and concerts

Ongoing, open contact to the **trade press and electronic media** is very important to us. Worldwide, some 200 journalists are regularly and competently supplied with information relating to the Company on a timely basis. Numerous interviews with the Board, as well as product information and detailed professional articles were reprinted. This resulted in a large number of reader inquiries.

The **Internet** has always played a special role for Pfeiffer Vacuum. In 1996, we were the first in the industry to develop our own website. This was followed in 1997 by an intranet to provide fast and secure paperless information between all members of the Company.

www.pfeiffer-vacuum.net has a consistent structure throughout the corporate group. The Internet enables us to quickly enter into a dialog with customers, shareholders and prospects. Journalists and job applicants will find detailed background information in special departments. More than 150,000 visitors from throughout the world were registered in 2002. The homepage content is always up to date and available around the clock: Product presentations, current corporate developments, an image database, the current share price and much more. Annual and quarterly reports can be downloaded or requested over the Internet. This happened more than 500 times in 2002 – and the trend is rising. Our further print information, too, is increasingly being ordered over the Internet. The **online catalog** on the Internet also offers many advantages to our customers. Our product line, from vacuum components to vacuum measurement right through to vacuum analysis, is available in up-to-date form and 24 hours a day. Extensive information can be queried about all products, right through to technical specifications. The application has a “Quickfinder”, which enables users to search on the basis of keywords, order numbers or model designations. In addition to the selection of standard products, it is also possible for users to configure pumping stations or mass spectrometers in accordance with their own individual needs.

Internal communication

In addition to a dialog with customers and investors, contact with our people is also very important. Given the manageable size of our workforce, some 800 employees throughout the corporate group, there are no obstacles to a dialog between the Board and employees. The values and targets are clearly formulated and communicated through our semiannual employee magazine, Pfeiffer Inside, as well as through the Internet and personal conversations. Changing exhibits at corporate headquarters show application examples for vacuum, our own products, as well as works of art created by regional artists using production materials from Pfeiffer Vacuum products. In 2002, a poster campaign urged our people to think about and optimize the way they work. Numerous suggestions were made regarding the issues of “avoiding mistakes”, “initiative”, “teamwork” and “thinking about the way we work”. At Pfeiffer Vacuum, internal communication is conducted throughout the entire corporate group. All employees of the individual subsidiaries receive the German/English employee magazine, have access to the intranet and are able to share their experiences on international project teams.

Financial communication

Our 2001 Annual Report generated particular attention. It took second place in Manager Magazin's ranking of companies listed on the Nemax Index. Both its language and financial communication received a grade of very good. This confirms our efforts aimed at providing a transparent and clear portrayal. Around 6,000 copies of the annual report are distributed each year. To read more about the communication with the financial community, see also the chapter entitled “Pfeiffer Vacuum Share Performance” on page 13.

Management's Discussion and Analysis



An antireflective coating
can only be applied to eyeglass lenses with vacuum technology.

| | |
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Economic Report

Significant corporate success in the face of a poor economy

We are not satisfied – yet we are nevertheless proud of having earned an operating profit of € 21.2 million in spite of the poor economic situation in the year 2002. While this does represent a decline of 24.8 % from last year’s operating profit of € 28.2 million, it is still a good result, and thus a success that will lead to a further increase in our liquid assets and stability.

Fiscal 2002 was characterized by a difficult general economic environment in all major markets.

The current crisis in the semiconductor industry, a major market for vacuum products, began in late 2000 and has now lasted for the past two years. Experts had assumed that the market had bottomed out in 2001 and would begin advancing again in 2002. That did not happen.

Due to the market’s persistent stagnation, the sales of our American subsidiary, in particular, declined from € 44.3 million to € 35.8 million. In addition to the weak economy in the United States, European economic growth was also sluggish. On balance, the sales of all European subsidiaries dropped from € 124.3 million to € 112.1 million.

Overall economic development

World economic growth was again low at 1.7 % (2001: 1.4 %), and the world economy did not see a recovery. Consequently, the vacuum industry, too, suffered considerable declines in both new orders and sales.

Europe

At 0.7 %, there was only a moderate rise in gross domestic product (GDP) for all of Europe (2001: 1.5 %).

Italy and the Netherlands hovered at the edge of stagnation in a situation that was similar to that in Germany, where the country’s GDP growth of 0.2 % was down from the previous year’s level of 0.6 %.

Another year of poor economic growth in Germany was reflected by the unsatisfactory situation on the capital market, by the poor labor market, as well as by the dismal mood of businesses and private households. As a result of noticeably depressed capital investments and sluggish consumer demand, the German economy is essentially not growing at all.

United States

At 2.3 %, American economic growth in 2002 was up moderately from last year (1 %). Nevertheless the U.S. economy continues to be on poor footing. American consumer confidence in the country’s economic prospects is dwindling, and businesses are taking a noticeably hesitant stance in their capital investments.

Asia

The development of our important markets of South Korea, Taiwan and Thailand was encouraging. At 6 %, South Korea’s economic growth was up significantly from last year’s level of 3 %. With a GDP growth of 3 % (2001: – 2.2 %), Taiwan was also up sharply from the previous year. Thailand, too, succeeded in surpassing last year’s economic growth of 1.8 % with a GDP growth of 3.7 % in 2002. The phase of stagnation and recession that has persisted in Japan since the early 1990s has still not yet been overcome.

Pfeiffer Vacuum Group

| Subsidiaries | Location | Holdings | Shareholders' Equity* | Net income/ loss* | Net Sales* |
|--|----------------------------|----------|-----------------------|-------------------|------------|
| | | % | K € | K € | K € |
| Pfeiffer Vacuum Austria GmbH | A-Wien | 100.0 | 972 | 204 | 6,918 |
| Pfeiffer Vacuum Belgium N.V. | B-Temse | 100.0 | 1,399 | 180 | 3,561 |
| Pfeiffer Vacuum (Schweiz) AG | CH-Zürich | 99.4 | 1,841 | 412 | 5,189 |
| Pfeiffer Vacuum Systems (International) AG | CH-Zuzwil | 75.0 | (2,727) | (788) | 152 |
| Pfeiffer Vacuum Systems GmbH | D-Aschaffenburg | 100.0 | (3,558) | (5,986) | 258 |
| Pfeiffer Vacuum GmbH | D-Asslar | 100.0 | 57,644 | 20,516 | 114,942 |
| Pfeiffer Vacuum France SAS | F-Buc | 100.0 | 686 | (246) | 5,943 |
| Pfeiffer Vacuum Ltd. | GB-Newport | 100.0 | 1,176 | 202 | 4,939 |
| Pfeiffer Vacuum Asia Ltd. | HK-Hongkong | 100.0 | 90 | 142 | 1,084 |
| Pfeiffer Vacuum Italia S.p.A. | I-Rho | 100.0 | 2,467 | 381 | 5,723 |
| Pfeiffer Vacuum (India) Ltd. | IND-Secunderabad | 73.0 | 400 | 69 | 142 |
| Pfeiffer Vacuum Korea Ltd. | KR-Yoinin City, Kyungki-Do | 75.5 | 1,146 | 375 | 1,759 |
| Pfeiffer Vacuum Holding B.V. | NL-De Meern | 100.0 | 2,635 | (3) | 0 |
| Pfeiffer Vacuum Nederland B.V. | NL-De Meern | 100.0 | 2,796 | 556 | 6,006 |
| Pfeiffer Vacuum Scandinavia AB | S-Upplands Väsby | 100.0 | 1,927 | 543 | 5,574 |
| Pfeiffer Vacuum Inc. | USA-Nashua | 100.0 | 16,348 | 2,001 | 35,847 |

* Amounts reflect the local individual U.S. GAAP year-end-reports.



Aluminum rims
are tested for leaks with vacuum technology.

Business in Fiscal 2002

Sales in the major markets

In spite of declining sales in 2002, there was no loss of market share.

Even though in retrospect we are not satisfied with the development of sales and new orders in fiscal 2002, this dissatisfaction must be put into perspective by comparison with the situation of our competitors. On balance, sales slumped by 11.3 % from € 170.1 million in 2001 to € 150.9 million in 2002.

This decline was attributable not to a loss of market share but to the poor overall economic situation in our markets. Given generally insecure economic development, the effect of investment hesitancy on the part of businesses, government and private households was clear to see.

Europe

In Europe (excluding Germany), sales declined by 10.1 % from € 56.6 million to € 50.9 million – this, too, stemmed from an economy that was stagnating or declining overall. In Germany, our largest market in Europe, sales dropped by 15.6 % from € 48.0 to € 40.5. Europe as a whole represents 60.6 % of our total sales, thus making it the Company's largest sales engine.

As of January 1, 2002, the Company acquired the major assets of a company in Aschaffenburg, Germany, and formed "Pfeiffer Vacuum Systems GmbH". This subsidiary develops and sells machines and systems for the production of prerecorded and rewritable DVDs. This new line of business did not generate any significant sales, as its products still have to be developed for series production and marketing activities were not able to commence until the second half of the year.

United States

In the U.S., we suffered the greatest slump in sales, where sales declined by 20.1 % from € 44.8 million to € 35.8 million.

The reason for this was the persistent slump in the semiconductor industry and the poor overall economic situation in the United States. What is encouraging, though, is that some of the declines in sales in our traditional markets were able to be offset by moving into new markets.

The U.S. represents 23.7 % of our total business, thus making it a significant factor for the Company as a whole.

Business in Fiscal 2002

Asia and the rest of the world

The Asian region developed on a positive note. We succeeded in growing sales by 5.1 % to € 18.6 million (2001: € 17.7 million).

Within the Asian market, South Korea, in particular, advanced sharply. Sales in South Korea rose by 14.8 % from € 2.7 million to € 3.1 million.

In over 20 additional countries, including Israel, South Africa, Australia, Brazil, Argentina and Mexico, Pfeiffer Vacuum enjoys a presence through marketing agents.

Sales by product

As in previous years, the turbopump was again our best seller in 2002. With sales of € 56.7 million, it accounted for 37.6 % of total sales. 2002 saw a rise in demand for small turbopumps, in particular. Accounting for 27.6 % of total sales, measurement and analysis equipment and vacuum components now rank second, with this product segment declining from € 48.0 million to € 41.7 million. Ranking third was service business, which accounted for 17.3 %. Sales in this segment declined by 3.0 % from € 26.9 million to € 26.1 million. The fourth-ranking product segment consisted of backing pumps, i. e. rotary vane, Roots and dry pumps, accounting for 12.8 %. Sales in this line of business slumped by 13.5 % from € 22.3 million to € 19.3 million. Ranking fifth were sales of leak detection and coating systems, which accounted for 4.7 % of total sales. At € 7.1 million, sales of these products were down 21.1 % from the previous year's level of € 9.0 million.

Net Sales 1999 – 2002 (in € millions)

| | | |
|------|--|-------|
| 1999 | | 153.5 |
| 2000 | | 184.7 |
| 2001 | | 170.1 |
| 2002 | | 150.9 |

Sales by Regions 1999 – 2002 (in € millions)

| | Europa (excluding Germany) | Germany | North America | Asia | Other Regions |
|------|-------------------------------|---------|---------------|------|------------------|
| 1999 | 49.3 | 47.9 | 42.9 | 12.2 | 1.2 |
| 2000 | 59.3 | 42.4 | 62.9 | 17.6 | 2.5 |
| 2001 | 56.6 | 48.0 | 44.8 | 17.7 | 3.0 |
| 2002 | 50.9 | 40.5 | 35.8 | 18.6 | 5.1 |

Sales by Product 1999 – 2002 (in € millions)

| | Turbopumps | Measurement and analysis equipment, Components | Service | Backing Pumps | Systems |
|------|------------|--|---------|------------------|---------|
| 1999 | 59.8 | 36.8 | 23.1 | 17.6 | 16.2 |
| 2000 | 83.7 | 43.5 | 26.0 | 24.1 | 7.4 |
| 2001 | 64.0 | 48.0 | 26.8 | 22.3 | 9.0 |
| 2002 | 56.7 | 41.7 | 26.1 | 19.3 | 7.1 |

Business in Fiscal 2002

New orders and orders on hand

At € 145.5 million, new orders were down € 13.0 million from the previous year's level of € 158.6 million. Orders on hand declined from € 26.3 million in 2001 to € 20.9 million in 2002.

These two figures illustrate that a recovery cannot be expected in the near future. In times of economic difficulty, customers tend to run their stocks down to the lowest possible limit. At the same time, they expect fast responses to their orders. Consequently, new orders can fluctuate greatly during the course of a given month. We anticipated this trend years ago and aligned our organizational structure, manufacturing operations and materials management accordingly. This is reflected by our modern machinery and equipment, faster cycle times, modular component design and manufacturing operations ("more of the same"), close ties to key suppliers and flexible worktime models.

Earnings

In 2002, we again achieved our goal of wanting to be highly profitable:

Operating profit: € 21.2 million = 14.0 % of sales

Income before taxes: € 24.8 million = 16.4 % of sales

These are very good numbers by international comparison. Nevertheless, it should be noted that these numbers were down 24.9 % and 15.6 %, respectively, from last year.

We were able to reduce manufacturing costs by increasing the effectiveness of our manufacturing processes and through more favorable purchasing. With selling prices remaining roughly unchanged, our gross margin rose moderately from 45.3 % to 46.8 % of sales. In absolute terms – resulting from the 11.3 % decline in sales – gross profit dropped from € 77.0 million in 2001 to € 70.6 million in 2002.

Selling, general and administrative expenses were able to be reduced by 4.7 % from € 36.1 million to € 34.4 million. At € 10.4 million, research and development expenses were € 2.3 million higher than the previous year's level of € 8.1 million and represent an investment in the future.

These cost items include € 4.8 million in additional expense for our new subsidiary Pfeiffer Vacuum Systems GmbH, which were not offset by any material sales during its first year of business. In other words: Without this new line of business, general and administrative, selling and research & development expenditures would have actually declined by 9.5 %.

Our operating profit of € 21.2 million was down € 7.0 million from the previous year. Reasons for this decline include the previously mentioned development of sales, gross margin, selling, general and administrative expenses, as well as research and development costs.

At € 24.8 million, income before taxes was down € 4.6 million from the previous year's level of € 29.4 million. Income after taxes declined by 7.4 % from € 18.9 million to € 17.5 million. Amounting to 29.3 %, the tax rate was down 6.5 percentage points from the previous year's level of 35.8 %.

This results in earnings per share of € 1.99 (2001: € 2.16). At the Annual Shareholders Meeting, the Management and Supervisory Boards will propose that our shareholders participate in the Company's success in the form of a dividend of € 0.56 per share (2001: € 0.56).

Operating Profit 1999–2002 (in € millions)

| | | |
|------|--|------|
| 1999 | | 22.9 |
| 2000 | | 35.5 |
| 2001 | | 28.2 |
| 2002 | | 21.2 |

Income before tax/Net Income 1999–2002 (in € millions)

| | | |
|------|------|------|
| 1999 | 23.8 | 13.3 |
| 2000 | 34.1 | 19.1 |
| 2001 | 29.4 | 18.9 |
| 2002 | 24.8 | 17.5 |

Business in Fiscal 2002

Capital expenditures and financing

Capital expenditures in 2002 declined from € 9.1 million to € 2.5 million. Following higher capital spending for new construction and conversion work in 2000 and 2001 at the Asslar facility in Germany, capital expenditures have thus now returned to their normal level. In 2002, we invested a total of € 1.9 million in modernizing our machinery and equipment, as well as € 0.6 million in software and buildings. The capital expenditures in 2002 came from cash assets.

Cash flow from operating activities increased by € 1.9 million to € 21.6 million. This increase is chiefly attributable to the reduction in accrued liabilities and income tax liabilities.

Cash flow from investing activities improved by € 4.1 million to € –4.7 million (2001: € –8.8 million). This improvement stemmed from lower capital expenditures for property, plant and equipment.

Cash flow from financing activities declined to € –6.1 million. On balance, cash and cash equivalents rose by € 7.2 million.

A net total current asset ratio of 241.9 % is a manifestation of our high level of credit-worthiness (2001: 190.4 %).

Capital Expenditures 1999–2002 (in € millions)

| | | |
|------|--|------|
| 1999 | | 4.4 |
| 2000 | | 13.7 |
| 2001 | | 9.1 |
| 2002 | | 2.5 |

Operating Cash Flow Development 1999–2002 (in € millions)

| | | |
|------|--|------|
| 1999 | | 6.6 |
| 2000 | | 25.5 |
| 2001 | | 19.7 |
| 2002 | | 21.6 |

Working Capital 1999–2002 (as a percentage of sales)

| | | |
|------|--|------|
| 1999 | | 14.3 |
| 2000 | | 11.3 |
| 2001 | | 14.1 |
| 2002 | | 19.0 |

Balance Sheet Structure (in K €)

| | | |
|--------------------------------------|---------|---------|
| | 2002 | 2001 |
| Assets | | |
| Current assets | 121,818 | 115,650 |
| Long-term assets | 33,678 | 34,954 |
| Liabilities and shareholders' equity | | |
| Current liabilities | 20,486 | 26,589 |
| Long-term liabilities | 42,502 | 40,613 |
| Shareholders' equity | 92,508 | 83,402 |

Business in Fiscal 2002

Key balance sheet parameters largely stable

- The equity ratio rose to 59.5 % (2001: 55.4 %).
- The return on shareholders' equity declined to 19.0 % (2001: 22.6 %) as a result of lower income before taxes and a higher equity ratio.
- Total group inventories increased from € 20.4 million to € 22.4 million as a result of the acquisition of inventories from newly acquired subsidiary Pfeiffer Vacuum Systems GmbH. Adjusted for this special effect, there would have been a € 7.9 million reduction.
- Fixed assets remained largely constant at € 28.4 million (2001: € 30.2 million).
- Current liabilities declined to € 20.5 million (2001: € 26.6 million) chiefly as a result of lower income tax liabilities.
- Long-term liabilities rose to € 42.5 million (2001: € 40.6 million) chiefly as a result of higher pension accruals.

The active ingredients in medicines
are analyzed and specified with the aid of vacuum technology.



Risk Report

Risk management and risks

Poor economic growth, loss of market share, failure to identify new technologies, foreign exchange risks, loss of employee knowledge, quality problems, supplier and customer insolvencies, criminal acts, data losses and natural disasters are risks that could threaten our corporate success.

Risks have to be identified early on in order to be able to initiate suitable measures for minimizing or eliminating these risks. Our risk management system, which is being evolved from year to year, is of key importance in this connection. We are proud that our risk management system is not only being documented but is, first and foremost, being lived. The Management Board, our executives and staff perform their duties with an enormous sense of responsibility. A risk coordinator was appointed in 2002. He will regularly conduct risk analyses with the corresponding employees and compile timely reports. Moreover, he will initiate and monitor proper execution of adopted risk avoidance and containment measures, as well as expansion of the system. The objective is to heighten the awareness of everyone in the Company and to involve and commit them to implement the measures that have been adopted.

Risk reports are submitted to the Risk Committee, which comprises the Management Board, department heads and the risk coordinator, for information and decision. Known risks are categorized and assessed. This assessment is followed by a plan of action for minimizing risks. In the future, all department heads will be required to comment on risk development on a quarterly basis. The purpose of the risk inventory is to identify new and unknown risks early on.

Risks and action

World economic growth

Risk: As a globally operating enterprise, one major risk for Pfeiffer Vacuum is the development of the world economy. Declining world economic growth has a direct impact on our corporate success. This can result in lower sales and earnings.

Action: We have to respond to economic change with relatively swift cost-cutting measures. Cutting back on less urgent investments, making optimum use of existing resources and reducing overcapacities are several typical examples.

Market and competition

Risk: Loss of market share and name recognition.

Action: Ongoing customer contact and the market intimacy that this brings supplies us with important information about the needs of our customers. We utilize the information about technology needs that we gain from the marketplace to broaden our competitive edge and name recognition.

Value added and technology

Risk: Missing out on an innovation that is needed by the market, as well as a decline in the quality of our products and the resulting loss of market share to a substitute developed and marketed by a competitor.

Action: As a result of high barriers to market entry and our present market positioning, this risk is predictable. We have to sustain this good market positioning. Consequently, we continuously invest in the development of new products in order to be able to continue to satisfy our customers’ needs in the future with innovative new products. Our research and development ratio, i.e. the ratio between development costs and consolidated sales, 6.9 %. With these development investments, we will continue to combat the risk of technology losses. As a manufacturer of quality high-tech products, it is especially important that we satisfy this quality standard. Our strict quality controls reduce the risk of quality shortcomings. Please also refer to the section entitled “Environment, Safety and Quality” in this connection.

Foreign exchange

Risk: Foreign exchange risks exist as a result of the high percentage of our sales that is accounted for by non-Germany business. This poses the risk of potentially negative influences on the percentage of our sales accounted for by the American and British markets, in particular.

Action: We use our foreign exchange management system to minimize this risk. We do not engage in any speculative transactions.

Production

Risk: Production facility outages as well as our dependence on suppliers and the resulting potential for supply bottlenecks.

Action: We employ modern production machinery and qualified technicians to significantly reduce the risk of production facility outages. This reduces technically related downtimes to a low risk level. We primarily combat the risk of supply bottlenecks by continuously reviewing alternative suppliers. Further action to reduce these kinds of business risks consists of taking out suitable insurance coverage.

Loss of accounts receivable

Risk: Loss of accounts receivable from customers as a result of a customer’s insolvency.

Action: Because of the current economic situation and the risk of insolvencies this entails, we are increasingly focusing on this risk. We reduce the risk of accounts receivable losses with the aid of our rigorous system of accounts receivable management and by monitoring our customers’ payment patterns. Moreover, our dependence upon individual customers is very limited, as none of them accounts for more than 10 % of our total sales.

Risk Report

Loss of qualified employees

Risk: As a high-tech manufacturer, we are dependent upon the high level of training and education of qualified employees.

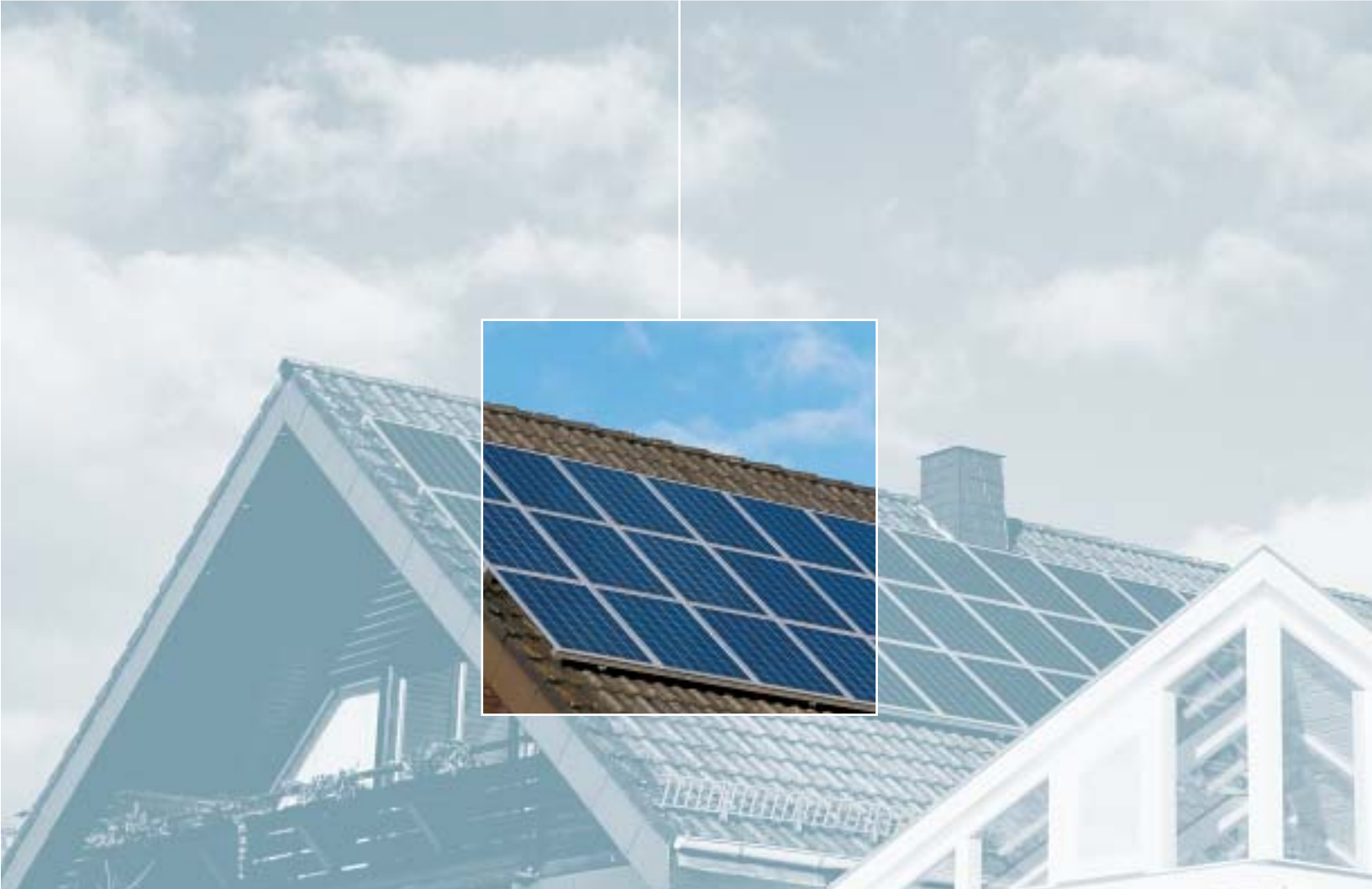
Action: Training and educating young, qualified employees is a method of strategic risk minimization. To minimize operative risks, we provide continuing training and education for our employees and foster self-direction in order to create incentives and gain ideas from our people. An attrition rate of less than 2 %, which is clearly below the industry average, represents a positive signal for us.

Information technology

Risk: Information technology risks in the form of data losses and system downtime.

Action: We minimize data losses by daily backups of our complete corporate data. Our corporate database, in particular, with which manufacturing operations, materials management, order handling, financial and cost accounting are handled, is subject to a high security standard. All files created by our employees within the server environment are also backed up on a daily basis. Our backup tapes are stored in secure locations that are protected against fire. The activities of our own support team reduce system downtimes to a low level.

Solar cells
have to be manufactured under vacuum.



Corporate Governance

What is the “German Corporate Governance Code” (“DCGK”)?

The German Corporate Governance Code contains legal regulations relating to corporate management and supervision of companies listed on German stock exchanges. These regulations reflect both internationally and nationally accepted standards of good and responsible corporate governance. Definition of this code was prompted by the increasing number of irregularities at German companies in the past that weakened the confidence of existing and prospective investors. The German Corporate Governance Code serves as a confidence-building instrument.

The German Corporate Governance Code contains recommendations and suggestions. In the Code itself, recommendations are formulated as “should” and the suggestions as “should” or “can”. If an enterprise is in variance with a recommendation contained in the German Corporate Governance Code, it is obligated to disclose this variance in its annual financial statements. Disclosure is not required in the case of suggestions. Elements of the Code that contain neither “should” nor “can” are contained in applicable law. The full text of the Code is available at the following Internet address: www.corporate-governance-code.de

Pfeiffer Vacuum and the German Corporate Governance Code

We have incorporated the recommendations of the German Corporate Governance Code in our corporate governance policies. The investments made by our shareholders are a manifestation of their confidence in us. We are more than willing to employ any instrument aimed at increasing this confidence.

Indicated below are the recommendations contained in the Code, as well as our disclosure of how we are complying with them.

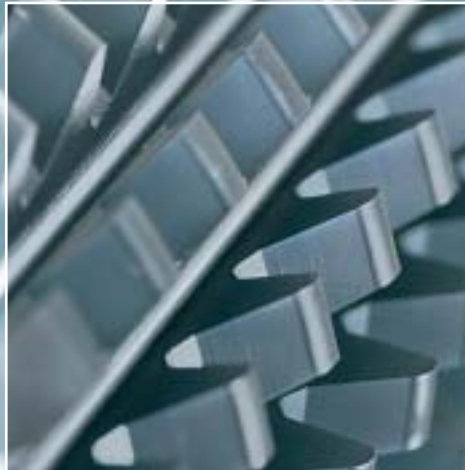
- Reports and documents for the annual shareholders meeting, including the annual report, should not only be made available and sent to shareholders upon request, they should also be published on the enterprise’s Internet site together with the agenda.
We will place both the agenda as well as the reports and documents of future Annual Shareholders Meetings on the Internet. In the past, we have already been making these items available and sending them to our shareholders upon request.
- Financial service providers, shareholders and shareholders’ associations who have requested documents relating to the annual shareholders meeting within the previous twelve months should be informed of the convening of the annual shareholders meeting together with the documents relating to such convening, upon request in electronic form.
We will institute this recommendation within the context of the preparatory work for the Annual Shareholders Meeting.

- The enterprise should facilitate the personal exercise of shareholder rights. The shareholders should be supported in the use of proxies. The management board should arrange for the appointment of a representative to exercise shareholders’ voting rights in accordance with the instructions of the respective shareholders; this representative should also be able to be reached during the annual shareholders meeting.
We will adopt this recommendation for the 2003 Annual Shareholders Meeting.
- Regular, timely and comprehensive sharing of information between management and supervisory boards with regard to planning, business development and risk management.
We follow this recommendation in the quarterly meetings of the Supervisory Board as well as through special meetings or telephone conferences where required.
- Specification of the Management Board’s information and reporting obligation to the supervisory board and timely transmittal of the documents.
We specify a monthly reporting system in collaboration with the Supervisory Board. Each member of the Supervisory Board receives documents relating to the entire Pfeiffer Vacuum Group that are required for decision-making purposes on a monthly basis – by the 15th of the subsequent month at the latest.
- Agreement of a suitable deductible for Directors and Officers Liability Insurance (D & O insurance).
In its meeting on November 7, 2002, the government commission decided, in particular, to deal with the definition of “suitable” at its next meeting. We will conduct concrete negotiations with our insurance broker as soon as the commission has taken a position with respect to the question of “suitability”.
- Annual report on the enterprise’s corporate governance in its annual report. Including an explanation in the case of deviations from the recommendations.
We are following this recommendation with this section of the Annual Report.
- The management board should comprise more than one person and have a chairman or a speaker. Rules of procedure should regulate the allocation of duties and collaboration.
The Management Board consists of two persons. Rules of procedure and allocations of areas of responsibility have been in force since the corporate form of the Company was changed to a stock corporation (“Aktiengesellschaft”) in 1996. These documents govern the duties, responsibilities and collaboration of the Management Board.
- The supervisory board should issue rules of procedure for itself.
Rules of procedure for the Supervisory Board have been in force since 1996.

Corporate Governance

- The compensation of members of the management board should comprise a fixed salary and variable components. Variable compensation should be linked to success parameters. Retroactive modification of the success parameters should be excluded. The concrete details of a stock option plan or a comparable compensation system should be disclosed. *The compensation paid to members of the Management Board consists of a fixed salary and variable components. The variable compensation is stipulated and documented annually by the Supervisory Board. The success of the Company serves as the basis for stipulation of the variable compensation. No retroactive modification is made to the success parameters. No member of the Management Board participates in our current stock option plan.*
- Report on the compensation of members of the management board in the notes to the consolidated financial statements, subdivided according to fixed and variable compensation components. *Information relating to this recommendation is contained in the section entitled “Notes to the Consolidated Financial Statements” on page 116.*
- Conflicts of interest on the part of the management board toward the supervisory board and between members of the management board should be disclosed. Major transactions require the consent of the supervisory board. *Is being observed and is defined in detail in the rules of procedure.*
- Supervisory board mandates and other sideline activities of members of the management board outside the corporate group may only be taken on with the consent of the supervisory board. *Is being observed and is defined in detail in the rules of procedure.*
- Supervisory and management boards are jointly responsible for ensuring long-term successor planning. Reappointment prior to one year before the end of the appointment period with simultaneous termination of the current appointment should only take place under special circumstances. An age limit should be specified for members of the management board. *Successor planning is performed jointly with the Supervisory Board. There is no firmly specified age limit for members of the Management Board. Reappointment prior to one year before the end of the appointment period with simultaneous termination of the current appointment is prohibited.*
- The chairman of the supervisory board should chair the committees that handle contracts with members of the management board and prepare meetings. *All contracts with members of the Management Board are handled by the Management Board Committee. The Chairman of the Supervisory Board chairs the Management Board Committee. Committee and Supervisory Board meetings are organized by the Chairman of the Supervisory Board.*

- Regular contact between the chairman of the supervisory board and the management board to deliberate strategy, business development and risk management. If necessary, convening a special meeting of the supervisory board. *The Management Board maintains regular personal, telephonic and electronic contact with the Supervisory Board. Deliberations relating to major business transactions are made in a timely fashion. Moreover, the Chairman of the Supervisory Board obtains important information from the minutes of the meetings of the Management Board.*
- Establishment of professionally qualified committees for the treatment of complex matters by the supervisory board. *The Management and Supervisory Boards assure professional staffing in connection with the establishment of committees. The qualifications of the members of our Supervisory Board enable suitable committee members to be selected. The qualifications of the members of our Supervisory Board can be seen in the section entitled “Supervisory Board” on page 11.*
- The supervisory board establishes an audit committee to deal with accounting, risk management, independence of the independent auditors, issuance of the auditing commission to independent auditors, stipulation of audit focal points and the fee arrangement. *The Supervisory Board will resolve the establishment of an Audit Committee in 2003. The Chairman of the Supervisory Board will not chair this committee. The audit commission for 2002 was issued to the independent auditors by the Annual Shareholders Meeting.*
- The supervisory board should at all times be composed of members who are sufficiently independent and posses the required knowledge and abilities. Consideration should be given to the enterprise’s international activities, conflicts of interest, as well as an age limit for members of the supervisory board. *Our Supervisory Board is composed of qualified members from differing professional fields and of differing nationality. See also the section entitled “Supervisory Board” on page 11. Conflicts of interest do not exist. The incumbent members of the Supervisory Board will be less than 65 years of age at the end of their current terms.*
- To ensure independent deliberations and supervision of the management board by the supervisory board, not more than two former members of the management board should be members of the supervisory board. No member of the supervisory board should serve in an advisory capacity at or as a member of a body of any major competitor. *No former members of the Management Board are represented on our Supervisory Board. Moreover, no member of the Supervisory Board possesses an advisory capacity at or is a member of a body of any major competitor.*
- The supervisory board should examine the efficiency of its activities on a regular basis. *See section entitled “Report of the Supervisory Board” on page 9.*



Tools

are provided with an anti-abrasion coating under vacuum.

- In order to assure that sufficient time is available for exercising his or her mandate, no member of the management board of a listed enterprise should hold more than five supervisory board mandates in non-group enterprises.

Management Board Chairman and Chief Executive Officer Wolfgang Dondorf holds one supervisory board mandate in a non-group enterprise. Member of the Management Board and Chief Financial Officer Wilfried Glaum does not hold any supervisory board mandate in a non-group enterprise.

- Compensation of members of the supervisory board is specified by a resolution of the annual shareholders meeting or in the articles of incorporation and bylaws. Such compensation is governed by the economic situation of the enterprise. Consideration should be given to chairmanships and vice-chairmanships, as well as to membership in committees.

The compensation paid to members of the Supervisory Board was restipulated by the Annual Shareholders Meeting in 2001. It consists of a fixed compensation, with the Chairman receiving twice and the Vice-Chairman one and a half times the compensation of the other members of the Supervisory Board.

- The compensation paid to members of the supervisory board should contain fixed and performance-based components. Separate indication should be made in the notes to the consolidated financial statements of compensation paid by the enterprise or advantages extended in consideration of personally provided services, in particular for advisory and agency services. *The compensation paid to members of the Supervisory Board currently consists of a fixed component and does not contain a performance-based variable component. During the 2002 fiscal year, no member of the Supervisory Board performed a personal service for the Company, for example in an advisory capacity, with the exception of the Chairman of the Supervisory Board, whose legal firm consulted the Company with respect to individual minor special questions. The compensation is presented in the consolidated financial statements.*

- If a member of the supervisory board has attended less than one half of the meetings of the supervisory board, this should be noted in the report of the supervisory board. *All members of the Supervisory Board attended more than one half of the meetings of the Supervisory Board. See also "Report of the Supervisory Board" on page 9.*

- Each member of the supervisory board should disclose any conflicts of interest to the supervisory board. Conflicts of interest can result from an advisory capacity to or serving in an organizational capacity at customers, suppliers, lenders or other business partners. *Conflicts of interest are disclosed. There were no such conflicts of interest in 2002 or in past fiscal years.*

- The supervisory board should report conflicts of interest of members of the supervisory board to the annual shareholders meeting. Material conflicts of interest which are not merely temporary in nature should result in the termination of the supervisory board mandate. *Is being complied with.*

Corporate Governance

- All information made known to financial analysts and similar addresses should be made available to shareholders. Transmittal of such information to shareholders should be made in a timely manner. Suitable communication media, such as the Internet, should be used. *Compliance with this recommendation is an element of our investor relations work. Upon request, every shareholder can be included in an e-mail or fax distribution list. We view both the press as well as our Internet site as timely media for publication.*
- Any information disclosed outside Germany pursuant to respective capital market regulations should also be disclosed in Germany. *As a result of our listing on the New York Stock Exchange, we are obligated to report to the American Securities and Exchange Commission (SEC). These reports are compiled in conformity with U.S. Generally Accepted Accounting Principles (U.S. GAAP). Both the quarterly reports (6K) as well as the annual report (20F) are submitted simultaneously to the SEC and the Neuer Markt Stock Exchange. In parallel with these submittals, the respective reports are simultaneously published on the Internet.*
- The dates of essential regular publications should be published sufficiently in advance in a financial calendar. *The financial calendar is published in a timely fashion in the Annual Report and on the Internet.*
- Information disclosed by the enterprise should be accessible on the enterprise's Internet site, which should be clearly structured. *We are in compliance with this recommendation. All information can be accessed at any time on our Internet site at www.pfeiffer-vacuum.net under the Investor Relations department. Interested parties can obtain numerous items of interesting enterprise information on our Internet site. Its clear structure enables an overview of the information to be quickly obtained.*
- The consolidated financial statements and interim reports for the fiscal year provide information to shareholders and third parties. The reports are to be prepared in conformity with internationally recognized accounting principles. *Our consolidated financial statements and quarterly reports are prepared in conformity with U.S. Generally Accepted Accounting Principles (U.S. GAAP). The reports are available on the Internet or can be requested directly from Pfeiffer Vacuum.*
- The consolidated financial statements will be prepared by the management board and examined by the independent auditors and the supervisory board. The consolidated financial statements must be publicly available within 90 days and the interim report within 45 days of the close of the reporting period. *We are in compliance with the terms governing disclosure, which are an element of American accounting principles. The reports are simultaneously submitted to the SEC and the Neuer Markt Stock Exchange and published on the Internet.*

- The consolidated financial statements should contain concrete information on stock option programs and similar incentive systems. *We disclose detailed information about our convertible bonds in the financial portion of our Annual Report (see section entitled "Notes to the Consolidated Financial Statements" on page 94).*
- Publication of a list of third-party enterprises in which it has a shareholding that is not of minor importance, indicating the headquarters of the enterprise, the amount of the shareholding, the amount of equity and the results of the past fiscal year. *Pfeiffer Vacuum has no shareholding in any third-party enterprises.*
- Relationships with shareholders who are considered to be related parties should be explained. *We do not have any shareholders who are considered to be related parties.*
- The supervisory board should obtain a statement from the independent auditors. In this statement, the independent auditors should explain whether financial or other relationships existed between the auditing firm, the employees of the auditing firm and the enterprise to be audited. This statement should evidence the independence of the independent auditors. Moreover, this statement should also contain further information about consulting services provided to the enterprise. The supervisory board and the independent auditors will agree to make immediate notification of grounds for disqualification or impartiality unless such grounds can be eliminated. *The statement of independence from the independent auditors for the 2003 audit year will be obtained for the first time prior to the Annual Shareholders Meeting in 2003.*
- The supervisory board and the independent auditors will agree that the auditors will report without delay on special circumstances that arise during the course of the audit. The independent auditors should notify the supervisory board and/or make note in the audit report of misstatements by the management board relating to the Code. *Such an agreement has been reached between the Supervisory Board and the independent auditors. See the section entitled "Report of the Supervisory Board" on page 9 as well as the section entitled "Independent Auditors' Report" on page 117.*

U.S. legislation

As a result of our U.S. listing, we are subject not only to the provisions of German law and of our own Articles of Association but also to the licensing requirements of the New York Stock Exchange. American capital market legislation – specifically, the Sarbanes-Oxley Act and the rules and regulations of the Securities and Exchange Commission (SEC) – also applies to our company. As soon as the SEC regulations are available in their entirety, we will further develop our corporate governance principles.



Packaging for perishable products
are tested for leaks with vacuum technology.

Outlook

The year 2002 clearly showed the extent to which sluggish world economic growth can impact our Company's results. The leading economic institutes are forecasting only moderate growth for the 2003 fiscal year. It will take some time until the markets recover. We will not be able to achieve significant increases in sales again until the world economy has made a clear recovery.

In spite of cautious forecasts, we intend to grow at a rate of 2 to 3 % in 2003. We do not anticipate any changes relative to the second half of 2002 during the first two quarters of 2003. Only in the second half of 2003 do we expect to see increased demand.

Thanks to the evolution of proven components as well as interesting new developments, we are excellently positioned for the future in our core business. New vacuum technologies are opening up more and more new fields of application. Both our component and systems business is benefiting from these emerging new fields of application.

Our systems business is experiencing increased demand and will increase further as the economy revives. Market analyses suggest that demand for DVD-RW equipment will increase in the fourth quarter of 2003. Should these predictions materialize, we are outstandingly positioned with our products.

Pfeiffer Vacuum manufactures predominantly at corporate headquarters in Asslar, Germany. In recent years, the Asslar facility has been fully redesigned and today satisfies the highest demands. Through the acquisition of modern manufacturing and operations management technologies, it has been possible to shorten cycle times, reduce inventories and manufacture more favorably overall. No further extraordinary capital expenditures are necessary. Our future capital spending needs will range between four and five million euros.



Electronic components
are manufactured with the aid of vacuum technology.

Consolidated Financial Statements (U.S. GAAP)

| | |
|-----------------------------------|----------|
| Balance Sheet | Page 90 |
| Statement of Income | Page 91 |
| Statement of Shareholders' Equity | Page 92 |
| Statement of Cash Flow | Page 93 |
| Notes to the Financial Statements | Page 94 |
| Independent Auditors' Report | Page 117 |

Balance Sheet in K €

| | Note | 2002 | 2001 |
|---|------|----------------|---------|
| Assets | | | |
| Cash and cash equivalents | | 72,264 | 65,035 |
| Trade accounts receivable – net | 3 | 21,937 | 24,788 |
| Other accounts receivable | | 3,164 | 3,714 |
| Inventories – net | 4 | 22,403 | 20,448 |
| Prepaid expenses | | 562 | 1,186 |
| Deferred tax assets – net | 12 | 775 | 274 |
| Other current assets | | 713 | 205 |
| Current assets | | 121,818 | 115,650 |
| Property, plant and equipment – net | 5 | 28,434 | 30,184 |
| Deferred tax assets – net | 12 | 2,731 | 2,783 |
| Goodwill | | 1,037 | 1,037 |
| Other assets | 6 | 1,476 | 950 |
| Long-term assets | | 33,678 | 34,954 |
| Total assets | | 155,496 | 150,604 |
| Liabilities and shareholders' equity | | | |
| Current portion of long-term debt | | 1,291 | 1,291 |
| Trade accounts payable | | 5,752 | 7,608 |
| Accrued other liabilities | 10 | 9,188 | 10,436 |
| Income tax liabilities | | 2,317 | 5,414 |
| Customer deposits | | 1,938 | 1,840 |
| Current liabilities | | 20,486 | 26,589 |
| Long-term debt | 7 | 7,746 | 9,037 |
| Convertible bonds | 8 | 1,011 | 563 |
| Accrued pension | 9 | 33,615 | 30,883 |
| Minority interests | | 130 | 130 |
| Long-term liabilities | | 42,502 | 40,613 |
| Share capital | | 22,504 | 22,504 |
| Additional paid-in-capital | | 2,821 | 2,821 |
| Retained earnings | | 65,870 | 53,258 |
| Accumulated other comprehensive income | | 1,313 | 4,819 |
| Shareholders' equity | 11 | 92,508 | 83,402 |
| Total liabilities and shareholders' equity | | 155,496 | 150,604 |

Statement of Income in K €

| | December 31, | 2002 | 2001 |
|---|--------------|----------------|----------|
| Net sales | | 150,942 | 170,140 |
| Cost of sales | | (80,318) | (93,117) |
| Gross profit | | 70,624 | 77,023 |
| Selling and marketing expenses | | (23,215) | (24,682) |
| General and administrative expenses | | (11,213) | (11,413) |
| Research and development expenses | | (10,400) | (8,064) |
| Depreciation | | (4,627) | (4,569) |
| Goodwill amortization | | 0 | (120) |
| Operating profit | | 21,169 | 28,175 |
| Interest expense | | (525) | (605) |
| Interest income | | 2,228 | 2,440 |
| Foreign exchange gain (loss) | | 1,946 | (610) |
| Income before income tax | | 24,818 | 29,400 |
| Current income taxes | | (7,513) | (10,510) |
| Deferred income taxes | | 230 | (19) |
| Taxes | | (7,283) | (10,529) |
| Net income | | 17,535 | 18,871 |
| Earnings per ordinary share and ADR (in €) | | | |
| Basic | | 1.99 | 2.16 |
| Diluted | | 1.99 | 2.16 |

Statement of Shareholders’ Equity in K €

| | 2002 | 2001 | 2000 |
|--|---------|---------|---------|
| Shareholders’ equity at January 1, | 83,402 | 67,107 | 47,957 |
| | | | |
| Share capital | | | |
| Balance at January 1, | 22,504 | 22,065 | 21,635 |
| Additional paid-in capital | 0 | 0 | 0 |
| Bonds converted | 0 | 439 | 430 |
| Balance at December 31, | 22,504 | 22,504 | 22,065 |
| | | | |
| Additional paid-in capital | | | |
| Balance at January 1, | 2,821 | 2,184 | 1,560 |
| Share capital increase | 0 | 0 | 0 |
| Bonds converted | 0 | 637 | 624 |
| Share repurchase | 0 | 0 | 0 |
| Balance at December 31, | 2,821 | 2,821 | 2,184 |
| | | | |
| Retained earnings | | | |
| Balance at January 1, | 53,258 | 38,706 | 22,951 |
| Net income | 17,535 | 18,871 | 19,082 |
| Dividends paid | (4,923) | (4,319) | (3,327) |
| Balance at December 31, | 65,870 | 53,258 | 38,706 |
| | | | |
| Minimum pension liability | | | |
| Balance at January 1, | 0 | (19) | 0 |
| Components of other comprehensive income | (656) | 19 | (19) |
| Balance at December 31, | (656) | 0 | (19) |
| | | | |
| Cumulative translation adjustment | | | |
| Balance at January 1, | 4,628 | 3,540 | 2,297 |
| Components of other comprehensive income | (3,068) | 1,088 | 1,243 |
| Balance at December 31, | 1,560 | 4,628 | 3,540 |
| | | | |
| Unrealized gain/(loss) on hedges | | | |
| Balance at January 1, | 191 | 631 | (486) |
| Components of other comprehensive income | 218 | (440) | 1,117 |
| Balance at December 31, | 409 | 191 | 631 |
| | | | |
| Total shareholders’ equity at December 31, | 92,508 | 83,402 | 67,107 |

Statement of Cash Flow in K €

| | December 31, | 2002 | 2001 |
|---|--------------|---------|---------|
| Net income | | 17,535 | 18,871 |
| Depreciation | | 4,627 | 4,569 |
| Goodwill amortization | | 0 | 120 |
| Loss (gain) on disposal of fixed assets | | (35) | (116) |
| Deferred taxes | | (230) | 19 |
| Provision for doubtful accounts | | 850 | 108 |
| Trade accounts receivable | | 2,001 | 3,309 |
| Other accounts receivable | | 550 | 529 |
| Inventories | | (86) | 4,073 |
| Prepaid expenses | | 624 | (443) |
| Other current assets | | (1,009) | 433 |
| Other long-term assets | | 101 | (833) |
| Accrued pension liabilities | | 2,732 | 1,425 |
| Trade accounts payable | | (1,856) | (2,014) |
| Income tax liabilities | | (3,097) | (4,914) |
| Accrued other liabilities | | (1,248) | (4,311) |
| Customer deposits | | 98 | (1,131) |
| Net cash provided by operating activities | | 21,557 | 19,694 |
| | | | |
| Proceeds from disposal of fixed assets | | 194 | 290 |
| Capital expenditures | | (2,502) | (9,091) |
| Acquisition of business assets | | (2,403) | 0 |
| Net cash used in investing activities | | (4,711) | (8,801) |
| | | | |
| Proceeds from (repayments of) borrowings | | (1,291) | 4,192 |
| Dividend payment | | (4,923) | (4,319) |
| Bonds payable (issuance) | | 103 | 0 |
| Bonds payable converted | | 0 | 1,076 |
| Net cash provided by (used in) financing activities | | (6,111) | 949 |
| Foreign currency translation and other comprehensive income adjustments | | (3,506) | 667 |
| Net increase in cash and cash equivalents | | 7,229 | 12,509 |
| Cash and cash equivalents at beginning of the year | | 65,035 | 52,526 |
| Cash and cash equivalents at end of the year | | 72,264 | 65,035 |
| | | | |
| Non-cash transactions: | | | |
| Bonds payable (issuance of employee loans) | | 448 | 0 |
| | | | |
| Supplemental disclosures: | | | |
| Cash paid for interest | | 453 | 360 |
| Cash paid for taxes | | 7,033 | 13,016 |

Notes to the Consolidated Financial Statements

1. Basis of Presentation

The consolidated financial statements of Pfeiffer Vacuum Technology AG (hereinafter called “the Company”) have been prepared in conformity with accounting principles generally accepted in the United States (“United States Generally Accepted Accounting Principles” or “U.S. GAAP”). All amounts are presented in euros (€).

The German and United States accounting systems are based upon differing views. Accounting under German law (German Commercial Code or “HGB”) emphasizes the principle of conservatism and protection of creditors, while the primary objective of the U.S. accounting system is to provide the shareholder with relevant decision-making information. In order to reflect the major differences in various areas, the Company has recorded certain adjustments in its financial statements, principally relating to fixed assets, hedging transactions, goodwill and pension accruals.

2. Summary of Significant Accounting Policies

Consolidation Principles

The accompanying consolidated financial statements include the financial position, results of operations and cash flow of the Company and its subsidiaries. All significant effects of intercompany transactions have been eliminated.

The financial statements of the Company’s foreign operations are measured in the currency in which that entity conducts its business (the functional currency). The functional currency of all the Company’s foreign operations is the applicable local currency. When translating foreign functional currency financial statements year-end exchange rates are applied to the asset and liability accounts, while average annual rates are applied to income statement accounts. Adjustments resulting from this process are recorded in a separate component of shareholder’s equity.

Foreign currency translation gains and losses resulting from the settlement of amounts receivable or payable denominated in a currency other than the functional currency are credited or charged to income.

Adoption of New Accounting Rules

In June 2001, the Financial Accounting Standards Board issued SFAS No. 141, “Business Combinations”, and SFAS No. 142, “Goodwill and Other Intangible Assets”. Under SFAS No. 142, goodwill acquired within the context of business combinations will no longer be amortized; instead, the value of the goodwill must be subjected to an annual fair value-based test, and any impairment reflected in the annual income statement. Other intangible assets acquired must be valued at cost of acquisition and, insofar as their utilization is limited over time, amortized on a straight-line basis over their estimated useful operational lives. These accounting principles were adopted by the Company effective January 1, 2002.

The Company performed the first required fair value-based test on the carrying value of goodwill at June 30, 2002, no adjustment was necessary. Goodwill amortization was € 120,000 in 2001 and € 1,038,000 in 2000.

Effective January 1, 2002, the Company also adopted the rules set forth in SFAS No. 144, “Accounting for the Impairment or Disposal of Long-Lived Assets”. Under SFAS No. 144, an impairment loss must only be recognized if the book value of the asset is no longer covered by the total of the anticipated future undiscounted cash flow from its further utilization. SFAS No. 144 requires that an asset to be abandoned, an asset to be exchanged for a similar productive asset or an asset to be returned to owners in connection with a spinoff must be considered held and used until it is disposed of. Moreover, an asset’s remaining useful life must be adjusted if this asset is to be abandoned. The adoption of SFAS No. 144 did not have any impact on the Company’s financial position or results of operations.

SFAS No. 148, “Accounting for Stock-Based Compensation, Transition and Disclosure”, was issued on December 31, 2002. Statement 148 amends SFAS No. 123, “Accounting for Stock-Based Compensation”, to provide alternative methods of transition to Statement 123’s fair-value method of accounting for stock-based employee compensation. Statement 148 also amends the disclosure provisions of Statement 123 and APB Opinion No. 28, “Interim Financial Reporting”. Statement 148’s amendment of the transition and annual disclosure requirements of Statement 123 are effective for fiscal years ending after December 15, 2002, with earlier application permitted. The adoption of SFAS No. 148 did not have any impact on the Company’s financial position or results of operations.

Notes to the Consolidated Financial Statements

New Accounting Standards

In June 2001, the FASB issued Statement of Financial Accounting Standards No. 143, “Accounting for Asset Retirement Obligations” (“SFAS No. 143”), which addresses the financial accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated asset retirement costs. The provisions of this Statement are effective for the Company beginning fiscal year 2004, with early application encouraged. Management does not expect the adoption of this Statement to have a material impact on the Company's financial position or results of operations.

In April 2002, SFAS No. 145, “Rescission of FASB Statements No. 4, 44 and 64, Amendment of FASB Statement No. 13, and Technical Corrections” (“SFAS No. 145”) was issued. SFAS No. 145 rescinds SFAS 4 and 64, which required gains and losses from extinguishment of debt to be classified as extraordinary items. SFAS 145 also amends SFAS 13 eliminating inconsistencies in certain sale-leaseback transactions. The provisions of SFAS No. 145 are effective for fiscal years beginning after May 15, 2002. The Company does not expect that the adoption of SFAS No. 145 will have a material effect on the Company's financial position or results of operations.

SFAS No. 146, “Accounting for Costs Associated with Exit or Disposal Activities”, was issued in July 2002. SFAS No. 146 replaces current accounting literature and requires the recognition of costs associated with exit or disposal activities when they are incurred rather than at the date of commitment to an exit or disposal plan. The provisions of the Statement are effective for exit or disposal activities that are initiated after December 31, 2002. The Company does not anticipate the adoption of this statement will have a material effect on the Company’s financial position or results of operations.

Derivatives and Hedging Transactions

Effective January 1, 1999, the Company adopted the provisions of SFAS No. 133 issued by the Financial Accounting Standards Board in accounting for its forward currency hedging activities as cash flow hedges. SFAS No. 133 requires the Company to recognize derivative financial instruments as either assets or liabilities at their fair values. Derivatives that are not hedges must be adjusted to fair value through current income. If the derivative is a hedge, depending on the nature of the hedge, changes in fair value are either offset against current income or recognized in other comprehensive income until the hedged item is recognized in earnings. Changes in the fair market value of the derivative transactions (hedging contracts) will continue to be recognized in the corresponding asset or liability items of the balance sheet until the forecasted transaction is recognized in earnings.

Trade Accounts Receivable

Trade accounts receivable are recorded when related revenue is recognized, which is generally at the time of shipment of goods or when installation is completed at the customer’s facility. The Company periodically assesses the adequacy of the allowance for doubtful accounts receivable and makes adjustments as appropriate based on both specific identification and aging distribution of receivables. The Company charges off uncollectable accounts only when all means of collection are exhausted.

Inventories

Inventories are valued at the lower of cost or market, with cost principally determined on an average cost basis. Allowances are established for slow-moving and obsolete inventories based on historical and projected sales activity.

Property, Plant and Equipment

Property, plant and equipment are carried at cost of acquisition or production and depreciated over the estimated useful lives of the assets on a straight-line basis. The following useful lives are assumed:

- Buildings: 20–50 years
- Machinery and equipment: 3–15 years

The Company regularly evaluates the carrying value of property, plant and equipment for impairment on an ongoing basis.

Accrued Liabilities

The valuation of pension and postretirement benefit liabilities is based upon the projected unit credit method in accordance with SFAS No. 87, “Employers Accounting for Pensions”.

Other reserves and accrued liabilities are recorded when an obligation to a third party has been incurred and payment is probable and reasonably estimable. Liabilities are shown at amounts payable, which estimate fair market value.

Accounting for Stock-Based Compensation

As permitted under SFAS 123, “Accounting for Stock-Based Compensation”, the Company applies the intrinsic value-based method in accordance with APB 25 for its employee convertible bonds stock-based compensation plans. Under APB 25, the Company records no expenses relating to the convertible bonds since the conversion price is equal to or greater than the market price of the Company’s ordinary share on the date of grant.

Notes to the Consolidated Financial Statements

Research and Development

All research and development costs are expensed as incurred.

Repair and Maintenance

All repair and maintenance costs are expensed as incurred.

Advertising

Advertising and promotional costs are expensed as incurred.

Taxes

The Company accounts for certain income and expense items differently for financial reporting purposes than for tax purposes. Income tax and the provisions for deferred taxes are formed in accordance with Financial Accounting Standards Board Statement No. 109, “Accounting for Income Taxes”.

Revenue Recognitions

Currently the Company recognizes revenue upon the shipment of its products to the customers, upon provision of service, or when installation is completed at the customer’s facility provided that the Company received a purchase order, the price is fixed, the title has been transferred, collection of resulting receivables is probable, product returns are reasonably estimable, there are no customer acceptance requirements and there are no remaining significant obligations. Revenues under long-term major contracts are recognized using the percentage-of-completion method, based on the contract costs incurred to date compared with total estimated contract costs.

Shipping and Handling Costs

Shipping and handling costs are included in net sales as sales reductions.

Warranty Costs

Warranty accruals are established in the period the related revenue is recognized. The estimate is based on managements’ estimate and historical experience by specific product type.

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents.

Use of Estimates

The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States (U.S. GAAP) necessitates that estimates and assumptions be made that affect the amounts reported in the financial statements and accompanying notes. These estimates and assumptions could differ from the actual results.

Reclassifications

Certain prior-year amounts have been reclassified to provide comparability with the presentation of the current-year financial statements.

3. Trade Accounts Receivable

Trade accounts receivable consist of the following (K €):

| | 2002 | 2001 |
|--|---------------|---------|
| Trade accounts receivable | 23,675 | 25,948 |
| Allowance for doubtful accounts | (1,738) | (1,160) |
| Total trade accounts receivable – net | 21,937 | 24,788 |

A summary of activity in the allowance for doubtful accounts is as follows (K €):

| | 2002 | 2001 |
|--|--------------|-------|
| Balance at beginning of year | 1,160 | 2,374 |
| Provision for uncollectible accounts | 850 | 108 |
| Collection of previously reserved balances | (240) | (675) |
| Accounts written off | (32) | (647) |
| Balance at end of year | 1,738 | 1,160 |

Trade accounts receivable have a remaining term of less than one year.

Notes to the Consolidated Financial Statements

4. Inventories

Inventories consist of the following (K €):

| | 2002 | 2001 |
|--------------------------------|---------------|---------|
| Raw materials | 7,078 | 6,726 |
| Work-in-process | 10,018 | 7,449 |
| Finished products | 10,501 | 10,999 |
| Reserves | (5,194) | (4,726) |
| Total inventories – net | 22,403 | 20,448 |

A summary of the activity in the inventory reserves is as follows (K €):

| | 2002 | 2001 |
|-------------------------------|--------------|---------|
| Balance at beginning of year | 4,726 | 6,511 |
| Provisions | 1,567 | 343 |
| Inventory written off | (1,099) | (2,128) |
| Balance at end of year | 5,194 | 4,726 |

5. Property, Plant and Equipment

Property, plant and equipment consist of the following (K €):

| | 2002 | 2001 |
|--|---------------|----------|
| Land | 980 | 980 |
| Machinery and equipment | 45,892 | 44,356 |
| Buildings and improvements | 29,617 | 29,514 |
| Construction in progress | 0 | 142 |
| Accumulated depreciation | (48,055) | (44,808) |
| Total property, plant and equipment – net | 28,434 | 30,184 |

6. Other Long-Term Assets

Other long-term assets consist primarily of accounts receivable from loans to employees in connection with acquisition of the Company’s convertible bonds.

7. Long-Term Debt

The Company has received a loan amounting to € 10.3 million from Kreditanstalt für Wiederaufbau, which promotes special research and development projects. The loan amount outstanding was € 9.0 million as of December 31, 2002, and € 10.3 million as of December 31, 2001. The current portion of this loan amounts to € 1.3 million. The loan bears interest at a rate of 4.25 %, which is applicable throughout its entire term. Quarterly payments of principal and interest are due during the period from March 31, 2002, through September 30, 2009.

In addition, the Company and its subsidiaries have various lines of credit available for operating purposes of approximately € 10.2 million. No amounts were used on these lines during 2002 or 2001.

The annual maturities on long-term debt as of December 31, 2002 were as follows (K €):

| | |
|--------------|--------------|
| 2003 | 1,291 |
| 2004 | 1,291 |
| 2005 | 1,291 |
| 2006 | 1,291 |
| 2007 | 1,291 |
| Thereafter | 2,582 |
| Total | 9,037 |

8. Convertible Bonds

Employee Participation Program, Term: 1996 through 2001

On July 15, 1996, the Company issued € 1.5 million in convertible bonds to members of management and key employees of the Company and its subsidiaries at a purchase price equal to 100 % of their principal amount. Each convertible bond with a principal amount of € 511 is convertible into 200 non-par value ordinary shares upon payment of a conversion price. The conversion price is based upon market price per share at date of grant. Accordingly the conversion price for the July 1996 issue was set at € 6.27 and includes the bond par value per equivalent share of € 2.56. There were no option shares, related to the convertible bonds for the 1996 issue, outstanding at December 31, 2002 and December 31, 2001, respectively. Fair value at the date of grant was € 2.25 per common share option.

Each holder of convertible bonds could convert up to 40 % of such bonds three years after issuance in July 1999, up to 70 % of such bonds four years after issuance in July 2000 and up to 100 % of such bonds five years after issuance in July 2001.

Notes to the Consolidated Financial Statements

The convertible bonds bore interest at 6 % per annum and were redeemable at 100 % of their principal amount on July 14, 2001 unless previously converted. The bonds were to be repurchased in the case of termination of employment.

The Company financed the employees’ purchase of such convertible bonds with interest-bearing loans. The loans must be repaid at the execution of conversion rights and are classified as other long-term assets on the balance sheet.

In July 2001, all remaining bonds under this program were called in and converted. During 2001, bondholders converted 857 bonds with an aggregate principal value of € 438,784 into 171,400 non-par value ordinary shares. The shareholder's contribution, amounting to € 637,307, is included in the additional paid-in capital.

During 2000, bondholders converted 840 bonds with an aggregate principal value of € 430,080 into 168,000 non-par value ordinary shares. The shareholder’s contribution amounting to € 624,665 is included in the additional paid-in capital.

Employee Participation Program, Term: 2000 through 2005

Within the scope of an employee participation program, in July 2000 the Company issued 4,400 convertible bonds valued at € 0.6 million at an issue price of 100 % to members of management and salaried employees of the Company and its subsidiaries in Germany and other countries. The conversion feature entitles the bearer to convert each bond into 50 non-par value shares of the Company. The conversion price is based upon 110 % of the average closing price on the Frankfurt Stock exchange for the last ten trading days prior to the resolution by the Management Board to issue the convertible bonds. Accordingly, the conversion price for the July 2000 issue was set at € 48.03 and includes the bond par value per equivalent share of € 2.56. There were 180,000 and 220,000 option shares, related to convertible bonds for the 2000 issue, outstanding at December 31, 2002 and December 31, 2001, respectively. Fair value at the date of grant was € 10.64 per common share option.

Beginning in July 2002, each holder of convertible bonds can convert up to 30 % of such bonds to common stock, in July 2003 up to 60 % and in July 2004 up to 100 %. The final conversion date is December 9, 2005. Conversion is only possible during specific periods of time.

The convertible bonds bear interest at 6 % p. a. and are redeemable at par on December 10, 2005, unless previously converted. The bonds are to be returned at par upon termination of employment. Employees were given the opportunity to finance the purchase of the convertible bonds with interest-bearing employee loans. These loans are classified as other long-term assets in the balance sheet and are repayable upon conversion or return.

As of December 31, 2002, former employees had returned 800 of these convertible bonds having a par value of € 102,400 and correspondingly repaid the related employee loans.

Employee Participation Program, Term: 2002 through 2007

Within the scope of a further employee participation program, on July 7, 2002, the Company issued 4,600 convertible bonds valued at € 0.6 million at an issue price of 100 % to members of management and salaried employees of the Company and its subsidiaries in Germany and other countries. The conversion feature entitles the bearer to convert each bond into 50 non-par shares of Company stock. The conversion price is based on 110 % of the average closing price on the Frankfurt Stock Exchange for the last ten trading days prior to issuance. The conversion price for the July 2002 issue was set at € 42.86 and includes the bond par value per equivalent share of € 2.56. There were 215,000 option shares, related to the convertible bonds for the 2002 issue, outstanding at December 31, 2002. Fair value at the date of grant was € 10.35 per common share option.

Each holder of convertible bonds can convert up to 30 % of such bonds to common stock for the first time following the Annual Shareholders Meeting in 2004, up to 60 % following the Annual Shareholders Meeting in 2005 and up to 100 % following the Annual Shareholders Meeting in 2006. The final conversion date is December 9, 2007. Conversion is only possible during specific periods of time.

The convertible bonds bear interest at 6 % p. a. and are redeemable at par on December 10, 2007, unless previously converted. The bonds are to be returned at par upon termination of employment. Employees were given the opportunity to finance the purchase of the new convertible bonds with an interest-bearing employee loan. These loans are classified as other long-term assets in the balance sheet and are repayable upon conversion or return.

As of December 31, 2002, former employees had returned 300 of these convertible bonds having a par value of € 38,400 and correspondingly repaid the related employee loans.

Notes to the Consolidated Financial Statements

Accounting for Stock Based Compensation

Shares exercisable at December 31, 2002, 2001 and 2000 totaled 54,000 and 171,400, respectively.

SFAS No. 123 requires disclosure of pro forma information regarding net income and earnings per share as if the Company had accounted for its stock-based compensation to employees using the fair value method.

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions used for grants in 2002, 2000 and 1996: Risk-free interest rates ranging from 4 % to 5 %; expected lives ranging from 4.5 to 6 years; expected dividend yield of 1 % to 2 %; and expected volatility ranging from 30 % to 40 %.

For pro forma purposes, the estimated fair value of the Company's stock-based awards is amortized over the vesting period. For the years 2002, 2001 and 2000 the fair value method did not materially impact net income or earnings per share.

A summary of option shares related to the convertible bonds is as follows:

| | Number of Shares Outstanding | Weighted Average Exercise Price per Share |
|---|---------------------------------|---|
| Convertible shares outstanding on January 1, 2000 | 341,200 | 6.27 |
| Granted | 220,000 | 48.03 |
| Exercised | (168,000) | 6.27 |
| Forfeited | (1,800) | 6.27 |
| Convertible shares outstanding on December 31, 2000 | 391,400 | 29.77 |
| Granted | 0 | 0 |
| Exercised | (171,400) | 6.27 |
| Forfeited | 0 | 0 |
| Convertible shares outstanding on December 31, 2001 | 220,000 | 48.03 |
| Granted | 230,000 | 42.86 |
| Exercised | 0 | 0 |
| Forfeited | (55,000) | 46.65 |
| Convertible shares outstanding on December 31, 2002 | 395,000 | 45.23 |

9. Pension Commitments

United States and Germany

Most employees in the United States and Germany have pension entitlements against the Company, which are covered by defined benefit plans in their respective countries. In the U.S., the Company maintains a pension fund for all employees and a supplemental pension fund for executives (SERP), a non-qualified, non-funded pension plan for certain officers. In Germany, the Company sponsors two pension plans covering most employees.

Total pension expense for the U.S. and German plans included the following components (K €):

| | 2002 | 2001 |
|------------------|-------|-------|
| Service cost | 902 | 910 |
| Interest cost | 2,123 | 2,075 |
| Return on assets | 78 | 43 |
| Net other | (634) | 136 |
| | 2,469 | 3,164 |

The U.S. pension fund assets are invested in a pooled investment fund. As of December 31, 2002, the fund held 33,639 shares having a market value of € 969,000 (US\$ 1,015,000). The objective of the fund is to generate interest and dividend income in order to provide sufficient assets to cover future benefit payments, and to conform to the requirements of laws and regulations in the United States.

Consistent with German practice, the Company's German plans are not funded. Pension accruals have been determined on the basis of independent actuarial valuations. In Germany, future pension benefits are based upon the employee's compensation and years of service with the Company.

Notes to the Consolidated Financial Statements

The following table sets forth the funded status and amount recognized in the consolidated financial statements for the U.S. and German defined benefit pension plans (K €):

| | 2002 | 2001 |
|--|-----------------|----------|
| Change in benefit obligation | | |
| Beginning projected benefit obligation | 34,509 | 32,288 |
| Service cost | 902 | 910 |
| Interest cost | 2,123 | 2,075 |
| Assumption change | 185 | 83 |
| Plan change | (2) | 0 |
| Benefit payments | (1,407) | (1,327) |
| Liability (gains)/losses | 2,073 | 373 |
| Impact of the foreign currency exchange rate differences | (371) | 107 |
| Ending projected benefit obligation | 38,012 | 34,509 |
| | | |
| Change in plan assets | | |
| Fair value at beginning of year | 1,241 | 1,061 |
| Return on plan assets | (87) | (43) |
| Company contributions | 1,432 | 1,489 |
| Benefits paid | (1,407) | (1,327) |
| Impact of foreign currency exchange rate differences | (190) | 61 |
| Fair value at end of year | 989 | 1,241 |
| | | |
| Funded status of plan (underfunded) | (37,024) | (33,269) |
| Unrecognized actuarial (gain)/loss | 4,397 | 2,023 |
| Unrecognized prior service cost | 371 | 452 |
| Unrecognized transition obligation | 2 | 4 |
| Minimum liability adjustment | (1,361) | (93) |
| Accrued benefit obligation | (33,615) | (30,883) |
| | | |
| Amounts recognized in balance sheet | | |
| Intangible assets – minimum pension liability | 287 | 92 |
| Accrued pension | (33,615) | (30,883) |
| Minimum pension liability in excess of unrecognized prior service cost | 656 | 0 |
| Net amount recognized in balance sheets | (32,672) | (30,791) |

Significant actuarial assumptions used are as follows (K €):

| | 2002 | 2001 |
|---|--------|--------|
| Germany | | |
| Weighted average discount rate | 5.75 % | 6.25 % |
| Rates of increase in compensation levels | 3.00 % | 3.00 % |
| | | |
| United States | | |
| Weighted average discount rate | 6.75 % | 7.50 % |
| Rates of increase in compensation levels | 3.50 % | 4.00 % |
| Expected long-term rate of return on assets | 8.50 % | 8.50 % |

Due to a change in certain actuarial assumptions and as is required by Financial Accounting Standards Board Statement No. 87, “Employers’ Accounting for Pensions”, for plans where the accumulated benefit obligation exceeds the fair value of the plan assets, the Company has recognized a minimum liability equal to the amount of the unfunded accumulated benefit obligation in the accompanying consolidated balance sheets as a long-term liability with an offsetting intangible asset and decrease to equity at December 31, 2002. No corresponding adjustment to equity was required at December 31, 2001.

Supplemental Retirement Benefit Corporation

New legislation in Germany enables employees to participate in a government-sponsored, self-financed old-age pension benefit program. A limited amount of income is not subject to income tax or social security contributions if the employee pays this portion of his or her income to the supplemental retirement benefit corporation. The Company’s supplemental retirement benefit corporation was established in January 2001 and covers retirement, survivors’ and disability pension benefits.

Other Countries

Employees of the Company in certain other countries are covered by defined contribution benefit plans. Generally, contributions are based upon a percentage of the employee’s wages or salary. The costs of these plans charged to operations amounted to € 620,000 for 2002 and € 598,000 for 2001.

Notes to the Consolidated Financial Statements

10. Accrued Other Liabilities

Accrued other liabilities is comprised of the following (K €):

| | 2002 | 2001 |
|--------------------|-------|--------|
| Warranty | 3,774 | 4,351 |
| Personnel expenses | 4,635 | 5,336 |
| Other | 779 | 749 |
| | 9,188 | 10,436 |

11. Shareholders' Equity

As of December 31, 2002, 8,790,600 authorized, issued and outstanding shares of non-par value stock represented the Company's share capital. Each ordinary share is entitled to one vote. The shares are traded on the German Stock Exchange (Deutsche Börse) in Frankfurt and the New York Stock Exchange (NYSE) as American Depositary Receipts (ADR), each of which represents one share and is entitled to one vote.

Dividend distributions may only be declared based upon the retained earnings shown in the German corporation's annual unconsolidated financial statements adopted in accordance with the German Commercial Code (HGB). These amounts differ from the amounts calculated and presented in the consolidated financial statements in accordance with U.S. GAAP. As of December 31, 2002, a total of € 24.5 million was available for dividend distributions.

The Company's Management Board proposed a dividend in the amount of € 0.56 per share be paid in 2003 for the year 2002. This dividend requires the additional consent of the shareholders at the Annual Shareholders Meeting. A dividend in the amount of € 0.56 per share was paid in 2002 for the year 2001.

12. Income Taxes

Effective January 1, 2001, the German corporation tax rate for consolidated domestic companies was reduced to 25 %. Prior to January 1, 2001, distributed earnings were taxed at 30 % and undistributed earnings at 40 %. Including the solidarity surtax and trade taxes, a statutory tax rate of 38.9 % results for the German companies for the year 2002 (2001: 38.9 %).

Under German corporation tax law, the imputation method for taxing corporations was applied for the last time for the 2000 fiscal year. Retained earnings were initially taxed at a corporation tax rate of 40 % (plus the solidarity surtax of 5.5 % on the corporation tax liability). This resulted in an effective corporation tax rate of 42.2 %. In the case of distributions to shareholders of earnings generated in Germany, the corporation tax rate was reduced to 30 % (plus the solidarity surtax of 5.5 % on the corporation tax of 30 % paid) by refunding the amount in excess of the effective tax rate of 31.65 %.

Under the tax law applicable since January 1, 2001, a corporation tax credit or those portions of the applicable shareholders' equity not burdened with corporation tax was determined as per December 31, 2000, for the consolidated domestic companies. For distributions made within a transitional period of 15 years, income can continue to be produced through the refund of corporation tax credits still resulting from the old corporation tax system.

Effective January 1, 2002, a corporation and trade tax entity with corresponding profit and loss transfer agreements was established for the consolidated German companies.

Income before income tax was taxable in the following jurisdictions (K €):

| | 2002 | 2001 |
|---------|--------|--------|
| Germany | 18,048 | 18,972 |
| Other | 6,770 | 10,428 |
| | 24,818 | 29,400 |

Notes to the Consolidated Financial Statements

The components of the provision for income taxes are as follows (K €):

| | 2002 | 2001 |
|-----------------------------------|--------------|--------|
| Current | | |
| Germany | 4,679 | 5,142 |
| Other | 2,834 | 5,368 |
| | 7,513 | 10,510 |
| Deferred | | |
| Germany | 420 | (90) |
| Other | (650) | 109 |
| | (230) | 19 |
| Provision for income taxes | 7,283 | 10,529 |

The Company had net deferred tax assets as follows (K €):

| | 2002 | 2001 |
|--------------------------------|--------------|-------|
| Deferred tax assets | | |
| Pensions | 2,381 | 2,399 |
| Inventory | 519 | 356 |
| Intangible assets | 1,025 | 1,180 |
| Other | 364 | 301 |
| | 4,289 | 4,236 |
| Deferred tax liabilities | | |
| Property, plant & equipment | 675 | 734 |
| Other | 108 | 445 |
| | 783 | 1,179 |
| Net deferred tax assets | 3,506 | 3,057 |

The reconciliation of income taxes determined using the statutory rate to actual income taxes provided is as follows (K €):

| | 2002 | 2001 |
|--|--------------|--------|
| Income tax expenses at German statutory rate | 9,648 | 11,437 |
| Higher (lower) foreign tax rates | 149 | (78) |
| Tax credit on distributed earnings | (865) | (857) |
| Tax credit due to prior years' tax fillings | (449) | 0 |
| Lower German tax rate due to change to unified tax structure | (1,023) | 0 |
| Other | (177) | 27 |
| Provision for income taxes | 7,283 | 10,529 |

13. Rents and Leases

The Company has entered into rental/leasing agreements which expire at various dates, however not beyond the year 2008, some of which are renewable. Certain of these agreements contain rental escalation clauses.

As of December 31, 2002, these long-term, non-cancelable obligations were as follows (K €):

| | |
|--------------|--------------|
| 2003 | 1,946 |
| 2004 | 1,461 |
| 2005 | 953 |
| 2006 | 374 |
| 2007 | 195 |
| Thereafter | 372 |
| Total | 5,301 |

Rental expenses amounted to € 1.7 million for the year 2002 and € 1.3 million for the year 2001.

14. Contingent Liabilities

Management is not aware of any material obligations that could have a material adverse effect on the Company. Entrepreneurial risks are continuously compiled and monitored under the Company's risk management system.

15. Segment Information

The Company evaluates the success and performance of its subsidiaries on the basis of their income before income tax. The accounting principles used in regional reporting are identical to those described in Note 2.

The Company's business activities include the development, manufacture, sale and service of vacuum pumps, vacuum components and instruments, as well as vacuum systems and production equipment used in the manufacture of DVDs. The subsidiaries in the individual countries are independent legal entities with their own management. Consequently, segment reporting is therefore country-based.

Notes to the Consolidated Financial Statements

Information concerning the Company's geographic locations is summarized as follows (K €):

| | 2002 | 2001 |
|---------------------------------|----------------|----------|
| Net Sales | | |
| Germany | 114,194 | 121,414 |
| Unaffiliated | 68,219 | 72,298 |
| Intercompany | 45,975 | 49,116 |
| | | |
| Europe | 44,655 | 52,404 |
| United States | 35,936 | 44,553 |
| Rest of World | 3,999 | 2,467 |
| | 198,784 | 220,838 |
| | | |
| Intercompany eliminations | (47,842) | (50,698) |
| Total | 150,942 | 170,140 |
| | | |
| Operating profit | | |
| Germany | 13,797 | 17,415 |
| Europe | 2,674 | 3,375 |
| United States | 3,412 | 7,026 |
| Rest of World | 771 | 239 |
| | 20,654 | 28,055 |
| | | |
| Intercompany eliminations | 515 | 120 |
| Total | 21,169 | 28,175 |
| | | |
| Interest income – net | 1,703 | 1,835 |
| Foreign exchange gain (loss) | 1,946 | (610) |
| Income before income tax | 24,818 | 29,400 |
| | | |
| Total assets | | |
| Germany | 119,816 | 110,600 |
| Europe | 22,698 | 23,513 |
| United States | 10,625 | 14,903 |
| Rest of World | 2,357 | 1,588 |
| Total | 155,496 | 150,604 |

The Company's property, plant and equipment and capital expenditures by geographic area are summarized as follows (K €):

| | 2002 | 2001 |
|--------------------------------------|---------------|--------|
| Property, plant and equipment | | |
| Germany | 26,424 | 27,271 |
| Europe | 1,371 | 1,878 |
| United States | 408 | 729 |
| Rest of World | 231 | 306 |
| Total | 28,434 | 30,184 |
| | | |
| Capital expenditures | | |
| Germany | 2,064 | 7,466 |
| Europe | 392 | 1,350 |
| United States | 0 | 71 |
| Rest of World | 46 | 204 |
| Total | 2,502 | 9,091 |

Intercompany sales are valued at list price, less country-specific rebates.

Exports from Germany to unaffiliated third parties amounted to € 27.7 million in the year 2002 and € 24.3 million in the year 2001. Exports from other countries are insignificant.

Notes to the Consolidated Financial Statements

16. Financial Instruments

Fair value

The carrying value of financial instruments such as short-term cash on hand, as well as trade accounts receivable and payable, approximate their fair value based on the short-term maturities of these instruments or reference to similar instruments. The fair market value of investments are determined based upon quoted market prices.

The carrying value of the Company's long-term debt to Kreditanstalt für Wiederaufbau at December 31, 2002 approximates the fair value based on current market interest rates for similar loans. The fair value at December 31, 2001 was € 9,788,000.

Concentration of Credit Risks

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of accounts receivable and foreign exchange contracts. The Company's cash and cash equivalents are principally denominated in euros and are maintained principally with financial institutions in Germany.

The Company provides credit in its normal course of business to a wide variety of customers. The Company did not have sales exceeding 10% to any individual customer in the years ended December 31, 2002 and 2001. The Company performs ongoing credit evaluations of its customers and maintains allowances for potential credit risks.

Foreign Currency Exchange Hedging

The Company enters into foreign currency forward contracts to hedge the exposure of its forecasted sales to fluctuations in foreign currency exchange rates. Approximately 36 % of the Company's net sales are denominated in currencies other than the euro. These forward contracts are limited to currencies in which the Company has significant sales that are denominated in foreign currencies (primarily U.S. dollars and British pounds) and are designed to protect specifically against the impact of changes in exchange rates on these sales.

The Company has assessed these contracts to be highly effective hedges against the impact of foreign exchange rate changes on its sales. The Company does not engage in speculative hedging for investment purposes. The maturities for all forward contracts are aligned with the date the sales are anticipated to occur. As of December 31, 2002, and December 31, 2001, no contracts held by the Company had a maturity date greater than six months from the contract dates. The Company's derivative contracts result in little to no ineffectiveness due to the nature of the foreign currency forward hedging activities.

All of the Company's contracts are marked to market at period end using quoted forward rates. The fair value recorded in other assets for the periods ending December 31, 2002, and December 31, 2001, was € 670,000 and € 313,000, respectively, and recognized a gain of € 409,000 and € 191,000, respectively, net of income tax effect of € 261,000 and € 74,000, respectively, in other comprehensive income.

The Company reclassified into earnings realized gains/losses for foreign currency hedges, previously recorded in other comprehensive income (net of tax), at December 31, 2001, 2000 and 1999 maturing in the subsequent periods ending December 31, 2002, 2001, and 2000 under foreign exchange gain (loss) in the amounts of € 191,000, € 631,000, and (€ 486,000), respectively.

As of December 31, 2002 and 2001, the notional amount of the forward contracts was € 8.9 million and € 13.3 million, respectively. All realized gains and losses upon settlement of foreign currency forward contracts are recorded in the income statement as foreign exchange gains/(losses).

The Company performs ongoing credit evaluations of the parties to these contracts and enters into contracts only with well-established financial institutions.

17. Earnings per Share

The following table sets forth the computation of basic and diluted earnings per share:

| | 2002 | 2001 |
|---|-----------|-----------|
| Net income (€ in thousands) | 17,535 | 18,871 |
| Denominator for basic earnings per share – weighted-average shares | 8,790,600 | 8,719,507 |
| Convertible bonds (Note 8) | 0 | 0 |
| Denominator for diluted earnings per share – adjusted weighted average shares and assumed conversions | 8,790,600 | 8,719,507 |
| | | |
| Basic earnings per share (€) | 1.99 | 2.16 |
| Diluted earnings per share (€) | 1.99 | 2.16 |

Notes to the Consolidated Financial Statements

18. Acquisition

In January 2002, the Company formed Pfeiffer Vacuum Systems GmbH, domiciled in Aschaffenburg, Germany for the development, production and marketing of systems for manufacturing DVDs. In addition the Company acquired various business assets, consisting of fixed assets and inventories, in consideration for payment of a purchase price of € 2.4 million.

The Company’s consolidated earnings were impacted by start-up costs (primarily research and development costs) in the amount of € 6.0 million, which were expensed as incurred. Pfeiffer Vacuum Systems (International) AG (formerly Memex Optical Media Solutions AG) in Zuzwil, Switzerland, whose purpose is also the development, manufacture and marketing of DVD systems, had already been acquired in the year 2000. The manufacture of metalizers and DVD lines was centralized in Aschaffenburg.

Due to the adoption of SFAS No. 142, “Goodwill and Other Intangible Assets”, effective January 1, 2002, goodwill is no longer being amortized over its anticipated useful life; instead, an annual review is being conducted on its carrying value within the context of a fair value-based test. Goodwill due to previous acquisitions in the amount of € 1.2 million at December 31, 2001, had been amortized on a straight-line basis in 2001 and 2000. The Company performed the first required review of the carrying value of the goodwill as of June 30, 2002. No impairment adjustment was necessary.

19. Related Party Transactions

The aggregate amount of compensation paid by the Company during the year ended December 31, 2002, to all members of the Management Board of the Company, as a group, for services in all capacities, was € 0.8 million, including a fixed component amounting to € 0.5 million and a variable component amounting to € 0.3 million.

The fixed compensation paid to the members of the Supervisory Board, as a group, during the year ended December 31, 2002, amounted to € 0.1 million (without any variable component).

Independent Auditors’ Report

To the Supervisory Board and Shareholders Pfeiffer Vacuum Technology AG

We have audited the accompanying consolidated balance sheets of Pfeiffer Vacuum Technology AG and subsidiaries as of December 31, 2002 and 2001 and the related consolidated statements of income, shareholders’ equity and cash flows for each of the three years in the period ended December 31, 2002. These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in Germany and in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Pfeiffer Vacuum Technology AG and subsidiaries as of December 31, 2002 and 2001, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2002, in conformity with accounting principles generally accepted in the United States.

Frankfurt am Main, Germany
February 2003

Ernst & Young
Deutsche Allgemeine Treuhand AG
Wirtschaftsprüfungsgesellschaft

Vacuum Glossary

Backing pump

A vacuum pump employed in combination with another vacuum pump to enable work to be performed by producing the required low pressure on the outlet side.

Dry pump (9)

A mechanical pump for generating low and medium vacuum (see “Vacuum”) that compresses the advanced gas to atmospheric pressure. It operates “dry” in the pump chamber, i. e. it does not require lubricants.

Gas analysis

A method of determining the composition of a gas mixture.

Leak detector (4)

A device used to find leaks.

Mass spectrometer (5)

A device used for performing gas analyses.

Metalizer (7)

A device used for slicing thin metallic layers under vacuum, e. g. in manufacturing CDs and DVDs.

Pressure

The force exerted by a gas on the walls of a recipient. In vacuum technology, the unit of pressure is expressed in millibars [mbar].

Recipient

A container that is evacuated by vacuum pumps.

Roots pump (2)

A mechanical pump for generating low, medium to high vacuum (see “Vacuum”). It requires a backing pump in order to operate.

Rotary vane pump (3)

A mechanical pump for generating low and medium vacuum that compresses the advanced gas to atmospheric pressure.

Total pressure measurement

Physical measurement principles for determining the pressure in a vacuum system.

Total pressure measurement instrument (8)

A vacuum meter for measuring the total pressure of a gas or gas mixture.

Turbomolecular pump (turbopump) (1)

A mechanical pump for generating high and ultra-high vacuum (see “Vacuum”). It requires a vacuum backing pump (see “Backing pump”).

Vacuum

The surface of the Earth is surrounded by a layer of air (atmosphere) that exerts a given pressure (atmospheric pressure). A vacuum exists if the pressure prevailing in a vessel is lower than the atmospheric pressure that surrounds it. Vacuum technology differentiates between four vacuum ranges:

- Low vacuum: 1,000 – 1 mbar
- Medium vacuum: 1 – 10⁻³ mbar In decimal form: 1 – 0.001 mbar
- High vacuum: 10⁻³ – 10⁻⁷ mbar In decimal form: 0.001 – 0.0000001 mbar
- Ultra-high vacuum: Less than 10⁻⁷ mbar In decimal form: Less than 0.0000001 mbar

Vacuum pumping station (6)

A combination of multiple vacuum pumps interconnected by means of vacuum components like valves and flanges.

Vacuum system (10)

A combination of vacuum pumping station, recipient and electrical/electronic controls.



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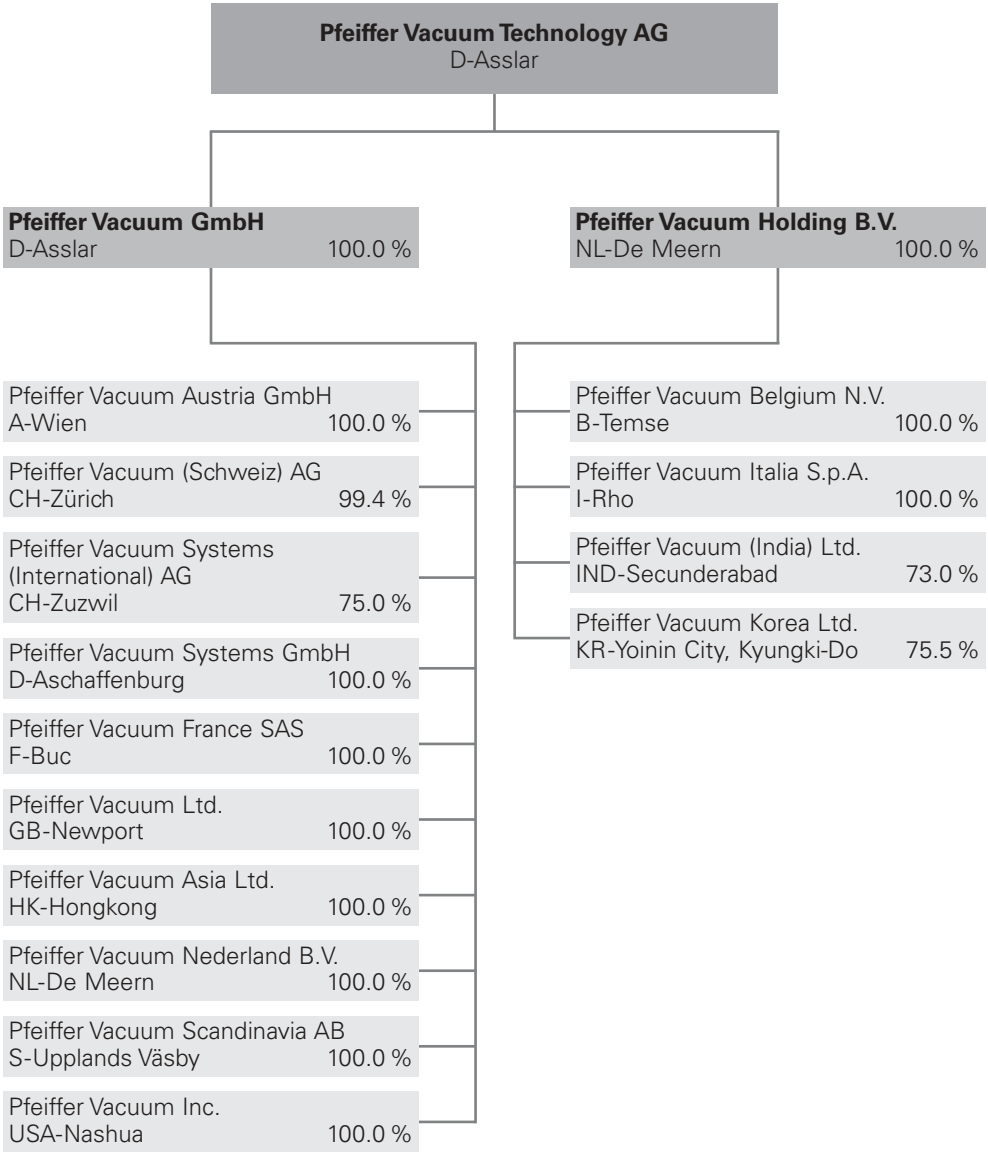
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Group Structure



Financial Calendar 2003

- 2002 Annual Results
Tuesday, March 25, 2003
- 1st Quarter 2003
Tuesday, May 6, 2003
- 2nd Quarter 2003
Tuesday, August 5, 2003
- 3rd Quarter 2003
Tuesday, November 4, 2003
- Annual Shareholders Meeting
Tuesday, June 17, 2003, 2:00 P.M.
Wetzlar Municipal Hall


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Financial Glossary

In our Financial Glossary you'll find formulas for calculating the key numbers and ratios, as well as definitions of financial terms. 

Financial Glossary

Cash and cash equivalents
Bottom line in the statement of cash flow/Total liquid assets

Cash flow from investment activities
Net cash used/provided from investments/divestitures

Cash flow from operating activities
Net cash used/provided, not influenced by investment, divestiture or financing activities

Corporate governance
Responsible corporate management and supervision with a view to long-term economic value added (EVA)

Dividend yield
 $\text{Dividend} : \text{Trading Price} \times 100$

Equity ratio
 $\text{Shareholders' Equity (as presented in the balance sheet)} : \text{Balance Sheet Total} \times 100$
(the higher the ratio, the lower the debt level)

Free-float
Broadly held shares

Gross domestic product (GDP)
Value of economic performance stemming from the domestic production of goods and services during the reporting period

Gross profit
Net sales less cost of sales

Market capitalization
 $\text{Number of Shares} \times \text{Trading Price}$

Net total current assets rate
 $\text{Total Current Assets} - \text{Liquid Assets} : \text{Current Liabilities} \times 100$

Operating profit
Earnings before interest and taxes (EBIT)

Operating profit margin
 $\text{Operating Profit} : \text{Net Sales} \times 100$ (the higher the percentage, the higher the profitability)

Research & development expense ratio (R & D ratio)
 $\text{R \& D Expense} : \text{Net Sales} \times 100$

Return on equity
 $\text{Income Before Income Tax} : \text{Shareholders' Equity} \times 100$

Concept and content
Pfeiffer Vacuum Technology AG, Asslar

Photos
vario-press, Ulrich Baumgarten, Bonn
Frank Wiegand, Werbe- und Industriefotograf, Gladenbach

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Filusch & Fiore Werbeagentur GmbH, Lich

A German-language version of this Annual Report is also available.

