

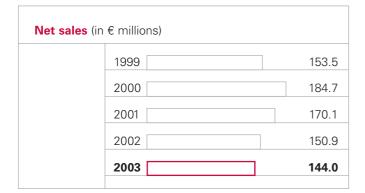
#### **Annual Report 2003**



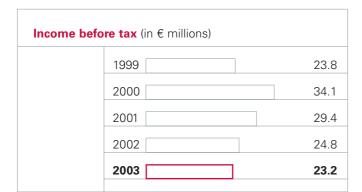
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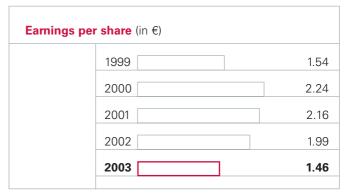
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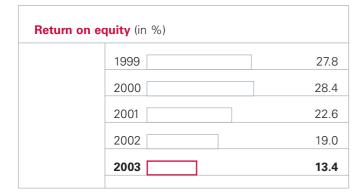
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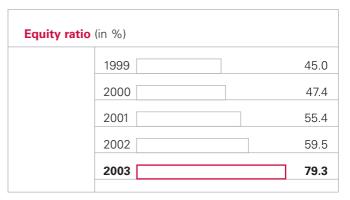




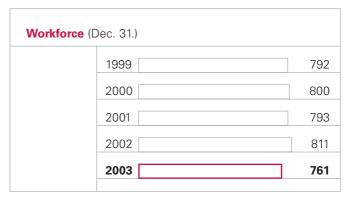












			2003	2002	Variation
Sales					
	Net sales	K€	144,018	150,942	-4.6 %
	Germany	K€	40,368	40,530	0 %
	Other countries	K€	103,650	110,412	-6.1 %
	Operating profit	K€	19,478	21,169	-8.0 %
	Net income	K€	12,746	17,535	-27.3 %
	Return on sales	%	8.9	11.6	
	Operating cash flow	K€	-13,446	19,601	-168.6 %
Balance sheet					
	Total liabilities and shareholders' equity	K€	119,780	155,496	-23.0 %
	Cash and cash equivalents	K€	29,432	72,264	-59.3 %
	Number of shares		8,790,600	8,790,600	0 %
	Shareholders' equity	K€	95,037	92,508	+ 2.7 %
	Equity ratio	%	79.3	59.5	
	Return on equity	%	13.4	19.0	
	Capital expenditures	K€	1,917	2,632	-27.2 %
Workforce					
	Workforce (average)		777	823	-46
	Germany		587	619	-32
	Other countries		190	204	- 14
	Personnel cost	K€	47,098	49,616	-5.1 %
	Per employee	K€	61	60	+ 1.7 %
	Sales per employee	K€	185	183	+ 1.1 %
Per share					
	Earnings	€	1.46	1.99	-26.6 %
	Cash dividend	€	0.70	0.56	+ 25.0 %

K€ = thousands of euros

**vac|u|um**, *n.*, *pl.* vac|u|ums, vac|u|a **1.** a space entirely devoid of matter. **2.** an enclosed space from which matter, esp. air has been partially removed so that the matter or gas remaining in this space exerts less pressure than the atmosphere (opposed to *plenum*). **3.** the state of degree of exhaustion in such an enclosed space. **4.** a space not filled or occupied; emptiness; void. ... [L. neut. of vacuus empty]



# acuum













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#### 2003 Highlights

#### **Finances**

Profitability continues to remain at a high level in 2003!

The year 2003 - A weak dollar, declining exports and a lackluster economy. Although we were unable to compensate for all of these influences, we were able to relativize them through enterprise and cost-consciousness.

The result is a highlight for us

- ▶ Income before tax of € 23.2 million
- ► An EBIT margin of 13.5 % and
- ▶ A income before tax return on sales of 16.1 %.
- > Page 65

#### **Research & Development**

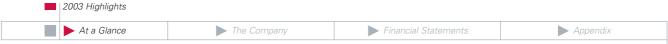
Since 1960, we have been one of the two companies that sponsor the Röntgen Prize, which is awarded annually to young researchers at Justus Liebig University in Giessen in recognition of outstanding research work performed by the coming generation of physicists. In 2003, Dr. Hermann Dürr, BESSY Berlin, received this distinction for his outstanding research findings in the field of X-radiation in solid state physics. > Page 45

In the spring of 2003, Pfeiffer Vacuum received a particular distinction: Working in collaboration with top-flight companies, the Production Systems Chair at the Technical University of Aachen (RWTH Aachen) conducted a benchmarking project on the subject of Research & Development (R & D) in Mechanical Engineering. The objective of this project was to identify successful R&D practices at over 100 of Germany's most successful companies in the field of mechanical and plant engineering. We numbered among the five companies that were honored at the project's concluding conference. > Page 45

#### Sales & Marketing

We are proud of our successful product development activities in Class 2,000 I turbo pumps. In 2003, these high vacuum flow rate turbo pumps generated sales in excess of € 24.0 million. > Pages 26, 29

One particular highlight during the year under review was our involvement in the construction of the world's biggest large-chamber electron beam welding system with a chamber volume of 600 m<sup>3</sup> and a length of 14 m, which is equipped with four large Roots pumping stations from us. Using this system, it is possible to weld aircraft engines made from differing materials, such as titanium or aluminum alloys and chrome-nickel steels. > Page 30



Novellus Systems, a prominent manufacturer of tools for the semiconductor industry, bestowed its Quality Award to Pfeiffer Vacuum for outstanding vendor quality. Another American customer, a leading manufacturer of ion implanters, named us a preferred supplier. > Page 28

In 2003, we succeeded in gaining a foothold in the American architectural glass coating market. A prominent manufacturer opted to employ our products. The contract volume will total some  $\in$  5 million. Various architectural glass coating systems in China were also equipped with our vacuum technology, consisting first and foremost of Class 2,000 I turbo pumps with high volume flow rates. > Page 29

We developed a special leak detection turbo pump (patent pending) for one of Japan's largest manufacturers of helium leak detectors. This year, the customer has already ordered 500 of these compact pumps, consisting of turbo pump, valve block and valves. > Page 27

#### Sustainability

Pfeiffer Vacuum received recognition for its ongoing efforts aimed at acting responsibly in our society through our inclusion in the new Kempen/SNS Smaller Europe SRI Index, which was established on October 1, 2003. Only companies that satisfy the highest standards and requirements in the three fields of business ethics, human resources and the environment are included in this index. Of the some 70 European companies contained in the index, only four German companies, including Pfeiffer Vacuum, presently satisfy the challenging inclusion criteria. > Pages 60, 61

#### **New Products**

We are proud of having brought important new products to market:

The high-performance HiMag 2400 turbo pump is characterized by its maintenanceand vibration-free mag-lev bearing system. This pump will be setting new standards, especially in the semiconductor industry. In addition, it is also highly suitable for employment in all other areas of process technology. > Page 46

At the ACHEMA 2003 tradeshow, we debuted a new series of magnetically coupled Roots pumps. By mid 2004, this series will include all models with volume flow rates of from 250 to 6,000 m<sup>3</sup>/h, and will supersede versions incorporating canned motors. This represents the world's first series of hermetically sealed Roots pumps. Its key advantages are greater process reliability and low maintenance. > Page 46



#### Organization

Fast, secure communication via short channels. All operating processes in our company conform to clear and transparent organizational structures, with the focus on information sharing between departments. > Page 43

Pfeiffer Vacuum has launched a special project called "Turbo Office." In a benchmarking process, organizational processes in the administrative departments are being critically scrutinized and compared in workshops with those of other small and medium enterprises. Our people are displaying a high level of enthusiasm and motivation in participating in this competition. > Pages 54, 59

#### **Human Resources**

In 2003, Pfeiffer Vacuum offered a total of 30 training slots (3.9 % of the total workforce), thus surpassing the industry average. > Page 58

In spite of the persistently difficult economic environment, we have faced up to the challenge of preserving as many jobs as possible while simultaneously reducing costs. Flexible worktime models have secured the jobs of our qualified people in difficult economic times. > Pages 57, 58

#### Manufacturing

Pfeiffer Vacuum manufactures in Germany. With our highly qualified specialists and modern processes in our manufacturing building, we are securing both the quality of our products as well as jobs. > Pages 57-59

#### **Service**

We are proud of our strong service presence worldwide, with service points in virtually all countries. In contrast to most of our competitors, we guarantee on-site service and a 24 hour response time for replacement or repair of our pumps in all major industrialized nations. > Page 37

#### Foreword from the Chief Executive Officer – Frankly Speaking

#### Dear Shareholders and Readers.



The good news is: Our income before tax in 2003 totaled € 23.2 million!

Why am I intentionally stating this figure at the outset of my foreword? The global economic environment doesn't necessarily offer much cause for celebration. Many people are either out of work or fear for their jobs. Many companies fear for their survival and are being overwhelmed by interest burdens – as a result of their weak equity capitalization.

None of this applies to Pfeiffer Vacuum:

- ▶ € 29.4 million in cash and cash equivalents
- ▶ 79.3 % shareholders' equity
- ▶ No bank debt

So we have good reason to sit back, be satisfied and let things run their course? Definitely not! There are some numbers for the year 2003 that we can't be satisfied with: Sales declined from €150.9 million in 2002 to €144.0 million. At the same time, net income slumped from €17.5 million to €12.7 million.

Following the boom years of 1999 and 2000, we were forced to sustain declines in sales and earnings for the third time in a row. Attributing all this to overall economic development - as can repeatedly be seen in annual reports - would be too simplistic, would not reflect our philosophy and is simply not true. We have also made mistakes and failed to identify all market trends early on, for example, and we were too late in developing and bringing some products to market.

But we promptly reflected upon our philosophy:

- ▶ We have to be better, day in and day out
- ▶ We have to critically call our processes into question, day in and day out
- ▶ We have to reduce costs, day in and day out

How else could we have succeeded - in spite of lower sales - in nevertheless achieving a before-tax return of 16.1 %? Many companies can't even accomplish that in boom times! So we can sit back and relax? Definitely not! As long as I am at the helm of this company, we're not going to be resting on our laurels.

But what we've done and accomplished is a success story too: We enthusiastically faced the challenges of today and did our homework, so that the company will be even better aligned for its future tasks. A high degree of flexibility, creativity and initiative continues to be expected of our people. And I would like to take this opportunity to express my sincere thanks to them for their commitment.

These successes - the highlights of the year 2003 - are like a common thread that extends throughout this Annual Report. Thus, for example, we have

- ► Entered new markets
- ► Developed new products
- ► Reduced our product mix
- ► Lowered costs

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▶ Streamlined processes in administration and manufacturing.

We will be reaping the fruits of these activities for you in the years that lie ahead. And our results for the year 2003 as well as our future prospects should at least bring a touch of satisfaction, pride, joy and confidence to your faces and ours.

That's my wish for you and for us.

Foreword from the Chief Executive Officer

#### **Pfeiffer Vacuum Profile**

Headquarters:	Asslar, Germany
Established:	1890
Purpose of the Company:	To develop, manufacture and market components and systems for vacuum generation, measurement and analysis
Manufacturing sites:	Asslar and Aschaffenburg, Germany
Workforce:	761 people worldwide
Operational floor space:	Approx. 80,000 m <sup>2</sup>
Sales and service:	15 sales subsidiaries and 20 agencies worldwide
Export share:	72 % in 2003 (2002: 73 %)
Quality management: Environmental management:	Certified under ISO 9001:2000 Certified under ISO 14001
Stock exchange listings:	
New York Stock Exchange:  Deutsche Börse:	1996, as the first German medium size enterprise 1998, second listing on the Neuer Markt Stock Exchange, today the Prime Standard/TecDAX
Accounting:	U.S. accounting principles (U.S. GAAP)
Capital stock:	K € 22,504
Number of shares:	8,790,600 no-par shares
Free-float:	100 %
Cash and cash equivalents:	€ 29.4 million
Equity ratio:	79 %



#### **Management and Supervisory Boards**

#### **Management Board**

#### **Wolfgang Dondorf**

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

#### Wilfried Glaum

Chief Financial Officer through June 30, 2003

#### **Amandus Waterkamp**

Chief Financial Officer since July 1, 2003, responsible for Administration, Controlling, Finance and Human Resources.

#### **Supervisory Board**

#### Dr. Michael Oltmanns (Chairman)

Attorney at Law, Law Offices of Menold & Partner, Frankfurt am Main 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, Essingen, Supervisory Board Chairman

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

Professor at the Giessen-Friedberg Technical University

#### Götz Timmerbeil (Chairman of the Audit Committee)

Certified Public Accountant and Tax Advisor, Gummersbach

#### **Michael Anderson**

Investment Banker, New York, U.S.A.

#### Günter Schneider

Chairman of the Employee Council, Leun, Employee Representative

#### **Edgar Keller**

Commercial Staff Member, Solms, Employee Representative

#### **Report of the Supervisory Board**

The 2003 fiscal year was characterized by an economic environment that continued to be weak and did not show any signs of improvement until late in the year. However the impact of the insipient recovery of the semiconductor market on the Company, as a supplier to this market, will lag noticeably. Given this environment, the Company achieved a respectable result in fiscal 2003, to which its stringent cost-reduction measures also contributed.

In four meetings during the 2003 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 17, August 4 and November 3, all of them in Asslar. Dr. Oltmanns, Mr. Anderson and Mr. Timmerbeil attended the meeting on August 4 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.

The Supervisory Board's Audit Committee maintained regular contact with the independent auditor, and regularly discussed with him and decided upon the course of the audit, the main focuses of the audit and particular questions relating to the audit.

Those measures requiring the consent of the Supervisory Board were deliberated and decided upon at its meetings. This included divestiture of pension obligations to the newly formed Pfeiffer Vacuum Trust e. V. registered association. 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 Germany Publication Transparency Act of 2002 ("TransPublG"), and diligently and fully supervised the management of the Company.

The Supervisory Board satisfied itself as to the Company's functioning risk management system 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 satisfied 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.



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. 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, with the development of Pfeiffer Vacuum Systems GmbH, in particular, being discussed in detail. The development of the economy was also the subject of intensive discussions between the Management and Supervisory Boards. The budget for the 2004 fiscal year was discussed and adopted. In accordance with the resolution adopted by the Annual Shareholders Meeting on June 17, 2003, KPMG Deutsche Treuhand-Gesellschaft AG, Wirtschaftsprüfungsgesellschaft, of Frankfurt am Main, 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"), as well as 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 2003 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 9, 2004.

The 2003 Corporate Governance Statement was submitted in a timely fashion by the Management and Supervisory **Boards** 

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 2003.

Asslar, March 2004

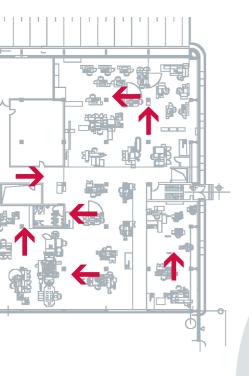
Supervisory Board



From left to right: Günter Schneider, Edgar Keller, Prof. Dr. Klaus-Jürgen Kügler, Dr. Michael Oltmanns, Götz Timmerbeil, Michael Anderson

Report of the Supervisory Board

The Company Financial Statements At a Glance Appendix



## **Communication** through Organization

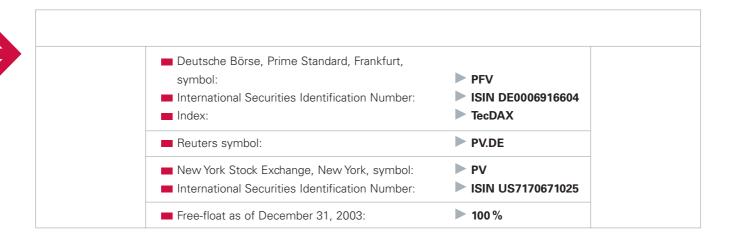
Whether in manufacturing or administration – all operating processes conform to clear organizational structures. We also value transparency and short channels in our financial communication.



#### **Pfeiffer Vacuum Share Performance**

The trading price of our shares rose by 45.8% in 2003. We are again paying a dividend – for the sixth time in a row. By buying our shares, you are investing in a reputable company with sound financial footing and good prospects.

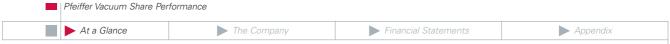
Pfeiffer Vacuum shares have been traded in New York since July 1996 and in Frankfurt since April 1998.



The year 2003 was once again a very difficult trading year on all stock exchanges, and thus for most shareholders. Only in the fourth quarter did the bear market gradually trend toward bullishness again. Prospects for 2004 are now being viewed in a more optimistic light by all market players.

#### On the stock exchange in Frankfurt

Included in the Prime Standard and the TecDAX technology index The reorganization of the stock market in Frankfurt at the outset of 2003 brought with it changes for many publicly traded companies. Pfeiffer Vacuum was listed under the Prime Standard effective January 1, 2003, and was included in the new TecDAX index with its introduction on March 24, 2003. The TecDAX index is made up of the 30 most important technology issues. Almost continually, our shares outpaced the TecDAX average. As a result of the persistent weakness of the economy, the company was forced to scale down its sales and earnings forecasts during the year 2003, which sometimes had a negative impact on share performance. However the positive overall development of our share price documents investor confidence in the Company's long-term strength.

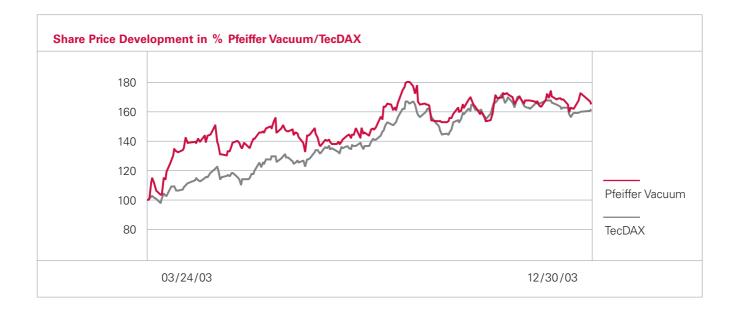


In November 2003, we commissioned a study to identify our institutional share-holders. The most important finding in this study is that over 30 % of our shares are held by American mutual and pension funds.

On June 16, 2003, Chicago-based Harris Associates L. P. informed us that it had crossed the 10 % reporting threshold with holdings of 10.3 % of our shares. On August 5, 2003, New York-based Arnhold & S. Bleichroeder Advisers informed us that it had crossed the 5 % reporting threshold with holdings of 5.2 % of our shares. However these reports do not have any influence on the Company's free-float position. 100 % of our shares are broadly held.

100 % of our shares are broadly held

Pfeiffer Vacuum shares began the year on January 2, 2003, at a trading price of € 19.20 in Frankfurt. They reached their low for the year of € 17.00 on March 24, their high for the year of € 30.49 on September 4. At year-end, our shares were trading at € 28.00. Their average daily trading volume was 15,729 shares.



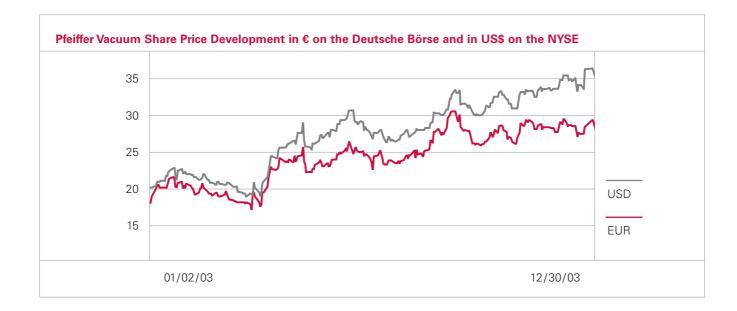
#### On the New York Stock Exchange

At year-end, 14.3% of all Pfeiffer shares were being traded as ADRs on the New York Stock Exchange

The trading volume of Pfeiffer Vacuum ADRs on the New York Stock Exchange was significantly lower than in Frankfurt. Trading prices in New York generally paralleled developments in Frankfurt. Their high for the year of US\$ 36.33 was reached on December 23, their low for the year of US\$ 18.86 on March 20. Of the total of 8,790,600 shares in circulation, 1,255,623 ADRs were being traded in New York at year-end, representing 14.3 % of total shares (2002: 11.8 %). No single fund or individual investor held more than 5 % of the Company's ADRs in 2003.

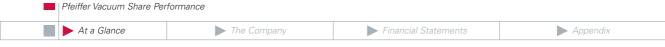


American investors continue to display keen interest in Pfeiffer Vacuum. Chief Executive Officer Wolfgang Dondorf presented the company at an NYSE Small Cap Conference on April 30, 2003. The subsequent roadshow went from New York to Boston, Chicago and Denver, winding up in San Francisco. Various American investors visited us in Germany in 2003 in order to get a first-hand look at Pfeiffer Vacuum. Many American funds and investment houses are now buying our shares in Frankfurt, as trading volumes there are higher than in New York. Some American investors have been invested in Pfeiffer Vacuum since its initial public offering in New York in July 1996, and continue to have great confidence in the management and medium-term development of the Company with its sound financial footing.



#### **Proposed dividend**

We propose a dividend distribution totaling € 6.1 million In times of unsatisfactory share price performance, dividend distributions have taken on greater significance. For six years in a row, Pfeiffer Vacuum has been enabling its shareholders to participate in the Company's success in the form of a dividend. Since earnings this year were lower than the year before, our shareholders actually would have had to expect a lower dividend. However given our high level of cash and cash equivalents, the Management and Supervisory Boards will propose to the Annual Shareholders Meeting that, in addition to a dividend of € 0.40, a special distribution in the amount of € 0.30 be made. A total of € 0.70 per share is to be distributed (2002: € 0.56). This represents a dividend yield of 2.5 %. We are thus enabling our shareholders to participate disproportionately in our earnings.



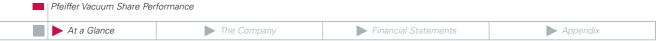
#### Investor relations - Shareholders are customers too

Ongoing contact with our investors is naturally an important commitment for us. In 2003, we participated in four investor conferences in New York, Kronberg, Hamburg and Frankfurt. In connection with publication of our 2002 annual results, an analyst conference attended by over 50 participants was conducted in Frankfurt in March 2003. In late November, we participated in the German Equity Forum in Frankfurt, an event conducted by Deutsche Börse.

At 15 roadshows in all major financial centers in Europe and the United States, the members of the Management Board presented the Pfeiffer Vacuum business model and the Company's results, as well as opportunities and risks. Some 30 visits to the company on the part of investors, as well as conference calls with analysts and investors, document our close contact with the financial world. With a view to small investors, an Internet chat was again offered and lively use was made of this opportunity.

A separate investor relations department on the Internet at www.pfeiffer-vacuum.net affords everyone an opportunity to obtain detailed information about everything 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. An interactive version of the 2003 Annual Report will also be available on the Internet.

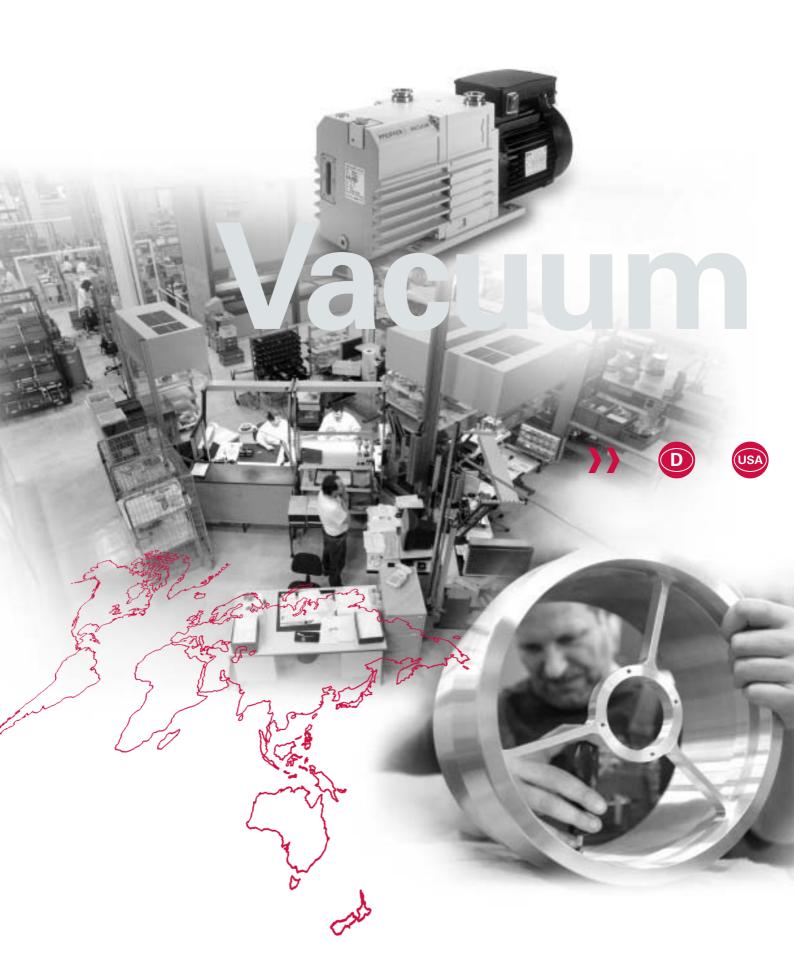
		2003	2002	2001
Number of shares		8,790,600	8,790,600	8,790,600
Highest trading price	€	30.49	41.80	51.36
Lowest trading price	€	17.00	15.80	24.40
Trading price at year-end	€	28.00	19.12	35.20
Market capitalization at year-end	millions €	246	168	309
Dividend per share	€	0.70	0.56	0.56
Base dividend	€	0.40	_	_
Special dividend	€	0.30	_	_
Dividend yield	%	2.5	2.9	1.6
Earnings per share	€	1.46	1.99	2.16



Effective October 1, 2003, we were included in the new sustainability index, the Kempen/SNS Smaller Europe SRI Index. Only companies that satisfy the highest standards and requirements in the three fields of business ethics, human resources and the environment are included in this index. Of the some 70 European companies contained in the index, only four Germany companies, including Pfeiffer Vacuum, presently satisfy the challenging inclusion criteria.

In Manager Magazin's rankings of the best annual reports, we took fourth place in the new TecDAX segment. Especially high marks went to our clear language and informative financial portion.

Over 20 analysts from Germany and other countries regularly follow our Company, assessing Pfeiffer Vacuum's current position and prospects in close contact with the Board and the Investor Relations Department. In their forecasts, most analysts anticipate that Pfeiffer Vacuum share prices will develop on a positive note as soon as the economy makes a sustained recovery and we can again report rising sales and earnings.



# Specialist













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# **Products with Power**





#### **Products and Markets**

Vacuum produces conditions that are similar to those encountered in outer 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 be inconceivable without products from Pfeiffer Vacuum.

Pfeiffer Vacuum is one of the leading full-line suppliers of vacuum technology and the world market leader with the turbomolecular pump, or "turbo pump" for short, an in-house development. Our objective is to sustain this position of technology leadership and to offer innovative solutions for our customers.

With its broad product portfolio, Pfeiffer Vacuum offers solutions for the widest possible range of requirements in connection with vacuum generation, measurement and analysis:

#### ■ Vacuum Generation

- Diaphragm pumps
- Dry pumps
- Oil diffusion pumps
- Roots pumps
- Rotary vane pumps
- Turbo pumps

#### Measurement and Analysis

- Leak detectors
- Mass spectrometers
- Total pressure measurement instruments
- ► Valves and components

#### Vacuum Systems

- Coating systems
- ▶ DVD coating systems
- Leak detection systems
- Process-adapted vacuum pumping stations

Many products that are used in daily life can only be manufactured under vacuum conditions. We supply our products to such widely varying market segments as

- ► Analytical Industry
- ► Research & Development
- ► Industrial
- ► Optical and Glass Coating
- ► Storage Media
- ► Chemical and Process Technology
- ► Semiconductor Industry

<b>Products</b>	and	Markets	

As can be seen from the following graphics, Pfeiffer Vacuum is not dependent upon any one product or market segment. This balance is one reason why we have been able to overcome the economic difficulties of recent years largely unscathed.

	Turbo pumps	Measurement and Analysis Equipment, Components	Service	Backing Pumps	Systems	
2001	38	28	16	13	5	
2002	38	27	17	13	5	

		2003 (as a percenta				0:	
	Analytical Industry	Research & Development	Industrial	Coating	Semi- conductor Industry	Storage Media	Chemical/ Process Technology
2001	29	19	10	24	14		4
2002	25	22	12	20	12	4	5
2003	22	21	18	14	13	8	<b>4</b>

This chapter explains in which of these markets our vacuum products are primarily employed, which market developments occurred during the year covered by this report, and which opportunities and risks we envision for the coming year.

#### High and ultra-high vacuum products and applications

Accounting for 37 % of total sales in 2003, our most important product is the **turbomolecular pump**, or "turbo pump" for short. This class of pumps was invented at Pfeiffer nearly 50 years ago, and has since been steadily evolved.

Turbo pumps generate vacuums in the high to ultra-high vacuum range of up to  $10^{-11}$  mbar (this represents the pressure conditions that prevail in outer space). The turbo pump rotor, whose elements are made from a special aluminum alloy



- like aircraft turbines -, rotates inside the pump at speeds of up to 90,000 revolutions per minute. This places the utmost demands on manufacturing precision, as well as on the bearing systems for these rotors. Various bearing system versions are provided, depending upon the application or customer need in question. In addition to maintenance- and vibration-free mag-lev bearings, a mechanical bearing system incorporating ceramic precision bearings is also available for the highest demands.

Turbo pumps 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, we have developed small, compact turbo pumps, on the one hand, while further optimizing performance and reliability specifications, on the other. Turbo pumps always require so-called backing pumps in order to compress the pumped gas against the atmosphere and expel it. Proven rotary vane or diaphragm pumps are employed as backing pumps. They cover the vacuum range from atmospheric pressure to a maximum of  $10^{-3}$  mbar.

The analytical industry is our largest market segment

We classify turbo pumps with volume flow rates of up to 500 l per second as small or medium turbo pumps. They are indispensable elements of analytical equipment. In the **analytical industry**, the trend is clearly moving toward small, compact, portable units. Innovative evolutions that enable these pumps to be more highly integrated in analytical equipment are opening up new market opportunities for Pfeiffer Vacuum. This kind of equipment is employed, for example, in DNA analysis, in medical technology for blood or tissue studies, or in both environmental and biotechnology, as well as in the cosmetics and pharmaceuticals industries. A special leak detection turbo pump (patent pending) was developed for one of the largest manufacturers of helium leak detection equipment in Japan. This customer has already ordered 500 of these compact pumps this year, consisting of turbo pump, valve block and valves.

An electron microscope, too, is an analytical instrument with which the composition of materials can be tested and surface analyses, in connection with the production of semiconductors, for example, can be conducted under vacuum. Our products – such as turbo pumps – are also employed in nuclear spin tomography equipment. Leak detectors with integral diaphragm and turbomolecular pumps are required in many industrial sectors, such as in the production of refrigeration appliances or in the automotive industry. The analytical industry, which is located primarily in Japan, the United Kingdom and the United States, saw growth compared to the year 2002 in the field of spectroscopy. The market for analytical instruments for the semiconductor industry, on the other hand, continued to suffer from the weak economy and the general trend of capital investment hesitancy.

#### **Products and Markets**

In 2003, the percentage of total sales accounted for by the analytical market segment decreased to 22 %. Pfeiffer Vacuum was able to retain its position of market leadership. With several new products for the analytical market, Pfeiffer Vacuum will be able to benefit from the forecast economic recovery and grow faster than the market.

The research & development market segment offers a constant utilization factor

We also supply our turbo pumps to a broad spectrum of customers in **research & development**. Our products are known and trusted in physics and chemical research laboratories at all universities throughout the world. Many research institutions need vacuum products for their projects. Our customers include major international research institutions like CERN, DESY and BESSY, as well as such overseas institutions as the Los Alamos National Laboratories and Argonne. Vacuum technology from Pfeiffer Vacuum is being employed to research replenishable energies, in accelerator rings, for cancer therapy and in work on neutron sources.

As in preceding years, individual publicly financed universities and institutes again suffered from budget freezes and cuts during the year under review. Pfeiffer Vacuum is a competent partner to universities and private-sector institutions, and naturally benefits from fast knowledge transfer. One spectacular research segment, although it does not involve high sales volumes, is space research. Pfeiffer Vacuum products, first and foremost turbo pumps, have flown along on virtually all space missions in recent years.

The research & development segment is the least cyclical of all our markets and offers us a constant utilization factor that accounts for some 18 to 22 % of total sales (2003: 21%).

The **semiconductor industry** is the market segment with the greatest volatility of all the markets we serve. Pfeiffer Vacuum is a supplier to manufacturers of systems for the production of semiconductor components and flat panel displays. We are proud of having received the Quality Award for outstanding vendor quality during the year covered by this report from a key customer, U.S.-based Novellus Systems. During the year under review, another customer in the United States – a leading manufacturer of ion implanters – named us a preferred supplier.

The semiconductor industry offers the greatest growth opportunities for 2004

The semiconductor industry places the utmost quality demands on our pumps: Corrosive gases have to be pumped, and the pumps have to be operational around the clock  $(24 \times 7)$ .

Our extremely dependable products are used to manufacture such end products as Athlon 4 and Pentium 4 processors, digital signal processors and microcontrollers for computers and mobile phones. Further examples include MEMS

✓ Im Überblick

(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, automotive electronics, positioning sensors and 100-Hz modules.

Following declining sales during the two preceding years, the percentage of total sales accounted for by the semiconductor industry rose again for the first time during the period covered by this report and now amounts to 13 % (2002: 12 %). Supported by a high installed pump base worldwide, we were able to generate sales primarily through replacement demand and service. In some cases, pumps in existing systems were also being replaced by more sophisticated and powerful pumps in order to put even more memory capacity on the chips. Through our ability to offer wall-to-wall solutions and the high reliability of our products, we were able to generate additional sales with chip manufacturers, over and above our originally forecast targets. Pfeiffer Vacuum anticipates a further recovery in the semiconductor industry for the coming year, as predicted by industry experts.

Vacuum produces conditions that are similar to those encountered in outer space, which are indispensable in the production of numerous high-tech products and many articles 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.

In 2003, Pfeiffer Vacuum succeeded in gaining a foothold in the American architectural glass coating market. A prominent manufacturer opted to employ Pfeiffer Vacuum products. Competitor products in an existing system are being replaced by ours, and a new, large coating system is being equipped exclusively with our vacuum pumps and components. The contract volume will total some € 5 million, and follow-on projects are anticipated. Various architectural glass coating systems in China were also equipped with vacuum technology from Pfeiffer Vacuum, consisting first and foremost of Class 2,000 I turbo pumps with high volume flow rates.

There are a wide variety of application examples for coating under vacuum. Eyeglass lenses, for example, can be provided with an antireflective or color coating with the aid of turbo pumps. Our vacuum technology also lends the brilliant sparkle to crystal figurines and jewelry from a famous Austrian manufacturer. Wear protection is a further application. Our customers coat drills, milling cutters and other tools with mechanically resistant coatings that can only be applied to the surface of these tools under vacuum. These coatings afford faster machining speeds and significantly longer tool life. The field of **optical and glass coating** frequently involves individual projects with long lead times; fluctuations are therefore naturally relatively high. Moreover, the tool coating segment also saw

The market segment of optical and glass coating consists predominantly of individual projects with long lead times

 a significant hesitancy to invest as a result of the economy. In spite of individual successes, the percentage of total sales accounted for by this segment declined from 20 to 14 %. We anticipate growth of 6 to 8 % for 2004.

#### Low and medium vacuum products and applications

**Rotary vane pumps** are required for generating vacuums in the low and medium vacuum range from atmospheric pressure to 10<sup>-3</sup> mbar. They frequently serve as vacuum backing pumps employed in combination with turbomolecular or Roots pumps in pumping stations. Rotary vane pumps are available in model series with volume flow rates of from 2.5 to 650 m<sup>3</sup> per hour. Rotary vane pumps are often employed in chemical research laboratories, as well as in the pharmaceuticals and biotechnology industries. Small rotary vane pumps are used by dentists, for example, to harden dentures.

**Roots pumps** are very robust pumps that are especially suitable for evacuating aggressive gases, for example in the chemical industry, or for employment in heat treatment furnaces (melting, sintering). Their volume flow rates range from 250 to 25,000 m<sup>3</sup> per hour. A Roots pump typically requires a backing pump from atmospheric pressure onward; these pumps offer a pressure range of up to 10<sup>-5</sup> mbar. Multiple Roots pumps are often combined into complete pumping stations. A pumping station additionally includes valves, flanges, gauges and controls for regulating the vacuum and the entire process.

One particular highlight during the year covered by this report was our involvement in the construction of the world's biggest large-chamber electron beam welding system with a chamber volume of 600 m³ and a length of 14 m, which is equipped with four large Roots pumping stations from Pfeiffer Vacuum. Using this system, it is possible to weld aircraft engines made from differing materials, such as titanium and aluminum alloys and chrome-nickel steels.

In space simulation chambers in Germany, in Italy and in India, Roots pumping stations enable a space-like vacuum to be produced in these chambers in order to conduct preparatory tests on satellites 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.

In 2003, Pfeiffer Vacuum expanded its line of proven Roots pumps to include a series in which the pumping system is hermetically sealed and driven via a maintenance-free magnetic coupling.

### **New Markets Secured**

Success in the coating technology market segment. With sales of some 5 million euros, we've tapped into new potential in the United States and China, winning out over our competitors.



European Directive 94/9/EG, "Atex," has to be observed if pumps are to be employed in explosion-hazard areas. Roots pumps for these applications from Pfeiffer Vacuum will be available with appropriate certificates during the course of 2004.

The backing pump 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 m<sup>3</sup> per hour make them especially suitable as backing pumps for small turbo pumps. They are predominantly employed in analytical equipment.

The OnTool™ DryPump is a compact 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.

In 2003, **backing pumps** accounted for 13 % of total sales, roughly the same level as the year before (13 %).

Chemical and process technology is a conservative and safety-minded market It is predominantly our new dry pumps, as well as our extremely reliable, well-known rotary vane and Roots pumps, that are employed in the **chemical and process technology** market segment. During the year 2003, this highly conservative and safety-minded market again suffered from the weak global economy. Its share of total sales amounted to 4 % in 2003, as opposed to 5 % in 2002. We do not anticipate any significant growth for the coming year.

In 2004, Pfeiffer Vacuum will strengthen its market position in the low and medium vacuum segment through the introduction of RevoDry, a series of dry screw-type vacuum pumps. In addition to opening up opportunities for individual business, this pump will also serve as an ideal base pump in Roots pumping stations. With this move, Pfeiffer Vacuum has closed a gap in its dry pump line.

#### 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. During the year under review, these systems accounted for 8 % of total sales, as opposed to 5 % in 2002. The increase was primarily attributable to sales of our own DVD systems.

Products in the vacuum systems segment also include helium leak detection systems. Environmental protection, quality assurance and cost optimization are placing very high demands on the leak-free integrity of numerous components, such as vehicle fuel tanks, aluminum wheel rims, chilled water piping and compressors for air conditioning systems, as well as food packaging and pressure vessels. With more than 15 supplied fuel tank leak detection systems, Pfeiffer Vacuum is the market leader in this segment of the automotive supply industry. Pfeiffer Vacuum is also providing forward-looking solutions for industrial users in other applications, such as testing heavy-duty switches or refrigerator compressors. One 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 and process-adapted automation technology to satisfy these requirements. Its custom-designed helium leak detection systems thus satisfy the highest demands with respect to efficient quality assurance.

We classify these highly heterogeneous applications under the **Industrial** market segment. This segment also includes metallurgy, the refrigerator and freezer industry, as well as the automotive supply and packaging industries. Depending upon the application in question, we also supply our entire spectrum of vacuum pumps and components to this segment, in addition to vacuum systems. The percentage of total sales accounted for by this segment rose significantly to 18 % in 2003, as opposed to 12 % in 2002. It is very difficult to forecast the further development of this market segment. However the experience of recent years shows that new applications are constantly emerging here, and that our competence in this niche segment is highly valued by our customers. Growing environmental requirements, driven by the Western industrialized nations, hold the prospect of steady growth for our products.

The industrial market segment is highly heterogeneous

Products in the vacuum systems segment also include Type Classic coating systems. These are single-chamber systems that are predominantly employed in the fields of optics, sensor technology and semiconductor fabrication. A Classic system can be used to provide an antireflective coating on eyeglass lenses, for example, or to coat watch dials with high-quality metals or color decors. A fullyautomatically controlled system for coating sensor components was delivered during the year covered by this report. These sensors are used in barcode scannerreader systems at supermarket checkout counters, for example.

One interesting activity with potential for the future is to retrofit existing vapor-deposition systems. Over a thousand of these systems for such optical systems as binocular lenses, night vision devices and eyeglasses are out in the market. Although fully functional, they are technologically outmoded. In many cases, for example, no replacement parts are any longer available for the control system. However since many customers shy away from the costs of a new acquisition, Pfeiffer Vacuum offers to fully modernize these systems

Products and Markets At a Glance Financial Statements The Company Appendix by bringing their vacuum technology to state-of-the-art condition and equipping the control system with modern computer technology. In 2003, three of these systems were modernized, and significantly more orders are anticipated for 2004.

Coating technology is also required for manufacturing optical storage media like CDs and DVDs. With its decision to expand its DVD activities, Pfeiffer Vacuum decided to enter a market that, although hotly contested, holds a great deal of promise for the future. One of the key elements 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 possessed by our new colleagues. At its second German manufacturing facility in Aschaffenburg, Pfeiffer Vacuum builds metalizers and complete lines for the production of DVDs.

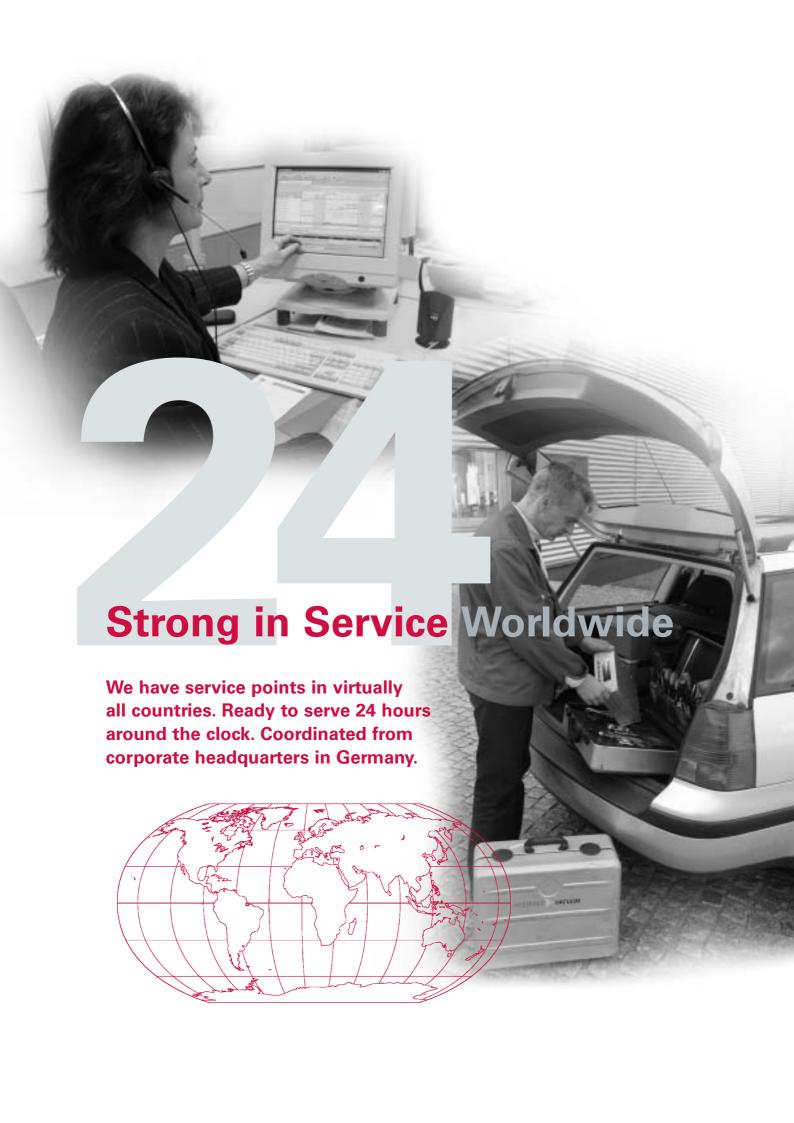
This product spectrum includes the **Single Layer Metalizer** for mass-producing prerecorded and writable CDs and DVDs. This product offers top performance in terms of layer homogeneity, productivity and cycle time. The Single Layer Metalizer has been in continuous service at a prominent manufacturer of writable media since the beginning of 2003, and is valued for its reliability and product quality.

The **DVD Line** is a production line for all DVD-ROM formats. It can operate at a cycle time of significantly less than three seconds, achieving production outputs of up to 26,000 DVDs per day. Six DVD Lines were delivered in 2003, and are providing customers with very good production results in terms of both quantities and product quality.

With the **DVD Bonder**, Pfeiffer Vacuum offers manufacturers of CD-Rs (writable CDs) the option of also utilizing their systems for DVD-Rs. The DVD Bonder incorporates the bonding unit from the DVD Line, with all of its performance features. It has passed its qualification tests at pilot customers, with the first delivery to the Far East being made in late 2003.

The **Multi Layer Metalizer** is a compact system for coating rewritable DVDs in mass production environments. This system's predecessor, the WAVE laboratory system, is providing outstanding results for a customer in Taiwan with respect to layer homogeneity and surface quality, and is being employed for layer development.

A fully automated production system for mass producing rewritable DVDs, the **DVD RW Line**, has been complementing the product portfolio since mid 2003. It is designed as a dual line that integrates the Multi Layer Metalizer with its nine process and cooling stations per line. The DVD RW Line incorporates the proven components of the DVD Line, and continues to be the only system on the market to contain an integral Inline Laser Crystallizer, which crystallizes the



media during the production process, without any loss of cycle time. This makes the DVD RW Line the most compact product of its type on the market. The first system was delivered to a German customer in the final quarter of 2003.

The rewritable DVD format dispute has since been resolved in that new recorders now accept all popular formats. Moreover, DVD recorders are affordable for everyone. This paves the way for replacing videocassettes with DVDs. Pfeiffer Vacuum will be participating in this growth market with its innovative products.

Reflecting the growing importance of the DVD segment, Pfeiffer Vacuum presents **storage media** as a market segment in its own right. 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 Pfeiffer Vacuum an acknowledged and dependable partner to CD and DVD manufacturers. While the percentage of total sales accounted for by the storage media market segment amounted to only 4 % in 2002, it rose to 8 % during the year under review. We anticipate a further rise in this percentage for the year 2004.

Optical storage media are a new growth market for Pfeiffer Vacuum

#### 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 important to generate a vacuum, it is equally important to be able to identify and control the quality of the vacuum. There is no one instrument that can measure the entire vacuum range of the vacuum that has been generated. 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, comprising 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 environments in research & development.

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

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 high 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**, such as valves, gaskets, seals, flanges and fasteners. Our customers require these components whenever they intend to build a vacuum system themselves. In 2003, the percentage of total sales accounted for by measurement and analysis equipment and components declined to 24 %, as opposed to 27 % in 2002.

#### **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 prompt assistance can be provided 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. In contrast to most of our competitors, we guarantee on-site service and a 24 hour response time for replacement or repair of our pumps in all major industrialized nations.

In times of economic weakness, the percentage of sales accounted for by the service segment increases significantly, as customers tend to want to utilize existing systems longer, instead of making new capital investments. Consequently, service accounted for 18 % of total sales in 2003, as opposed to 17 % in 2002.



# Success through Customization

A special leak detection pump was custom-developed on the basis of individual requirements for the Japanese market. Customization that's now translating into a



#### Pfeiffer Vacuum Worldwide

We did not lose any market share in 2003, even though we suffered from the general sluggishness of the economy and the weak dollar. We view growth potential in the markets of Asia, especially in China, as well as in the semiconductor industry.

> We are represented through our own sales and service subsidiaries in all major industrialized nations throughout the world. In addition, more than 20 exclusive agencies offer our customers competent advice and on-site service. This close-knit service presence clearly sets us apart from our competitors.

Competitive advantages through a close-knit network of sales and service points

All exports – except to the United States and the United Kingdom – are billed in euros. We have summarized our sales on a regional basis as follows:

- ▶ Germany
- ► Europe (excluding Germany)
- ▶ United States
- ► Asia and the rest of the world

The following table shows the development of sales by region over the past three years. As can be seen from this table, we are not solely dependent upon any one region. The percentage of our business accounted for by exports to the countries of Asia has developed on a positive note in recent years.

	Europe (Excluding Germany)	Germany	United States	Asia and Rest of World
2001	33	28	26	13
2002	34	27	24	15

We address the economic environment and the development of our sales in the individual regions in greater detail in Management's Discussion and Analysis on page 112. In this chapter, we would like to report on several of our particular successes – as well as difficulties – in marketing our products in the respective countries.

#### Germany

The market in Germany was characterized by a hesitancy to invest Sales: € 40.4 million Sales workforce: 19

In Germany, there was a significant decline in new orders from customers in the research & development segment, consisting primarily of universities and major research institutions. The reasons for this consisted of both cutbacks in government funding as well as an aggressive price war on the part of our competitors involving dumping prices. We were primarily successful when the need was for technically demanding vacuum technology, such as in European-sponsored nuclear fusion research or in the fields of plasma research and nanotechnology.

In the semiconductor industry, we were able to qualify ourselves at major German production facilities with our turbo pumps for ion implanters, in both retrofit and new product business.

All major German manufacturers in the field of mechanically resistant coating – which we define as the application of anti-wear coatings on drills and cutting tools – employ our vacuum products because of their engineering superiority. Stagnation among end-customers in Europe and the United States was able to be partially offset through growth in China.

There were new and innovative application examples at various industrial customers, such as electron beam welding systems for the aerospace industry, or in conjunction with recycling of galvanized steel by means of VOD (vacuum oxygen degassing) processes.

Following years of decline and stagnation, we now anticipate a moderate upswing in Germany for the coming year, especially in the industrial customer segment.

#### **Europe (excluding Germany)**

The new EU member countries will bring sales growth in Europe over the medium term

At a Glance

Sales: € 48.3 million Workforce: 102

In most of the countries of Europe, we suffered – just as our competitors – from a hesitancy to invest on the part of industry due to the unsettled state of economic development and a lack of government research grants. However we were able to note a significant increase in new orders during the final months of the year. This gives us reason to view the new year with cautious optimism.

Several highlights from various countries in Europe:

- ▶ Delivery of a solar cell production system from a prominent Dutch manufacturer to a customer in Germany; completely equipped with vacuum products from Pfeiffer Vacuum
- ▶ Delivery of vacuum pumps to a Dutch manufacturer of storage media production systems
- ▶ Displacing a competitor at an Italian manufacturer of thin layer systems that are used, among other things, for coating mobile phone displays (turbo pumps and vacuum gauges)
- ▶ Delivery of four large leak detection systems for an automotive supplier in the Czech Republic. These systems are used for testing air conditioning refrigerant lines in automobiles
- ► Growth shortfalls in Austria were able to be all but offset through growth in the Czech Republic, Hungary and Slovenia; expansion into Russia and Romania is planned for the future
- ➤ Displacement of the competition in Denmark at a manufacturer of ion implanters that are fully equipped with our vacuum products
- ▶ In England, mass spectrometers were able to be sold to a major manufacturer of metallurgy furnaces
- ► Four complete lines for the production of prerecorded DVDs were delivered to France in late summer

#### **United States**

Demand rose sharply in the United States during the second half of the year Sales: € 32.8 million Workforce: 58

Our colleagues in the American sales organization had reason to be satisfied with the past year's results: For the first time in three years, sales in U.S. dollars rose year on year from US\$ 33.9 million to US\$ 37.2 million; totaling US\$ 39.5 million, new orders in fact were up significantly from the previous year's level (US\$ 29.2 million). Beginning in the third quarter of 2003, demand for our products rose sharply, especially from the semiconductor market, as well as from various industrial customers. Our largest American customer this year was again Novellus Systems, a major manufacturer of tools for the semiconductor industry. Sales in the semiconductor segment in the United States were up by 18 % from the year before

Due to the weakness of the U.S. dollar relative to the euro, however, sales in the U.S. region, amounting to  $\in$  32.8 million when consolidated in euros, were down from the previous year ( $\in$  35.8 million). We anticipate a further increase in business in the United States for the coming year. However since the dollar is expected to continue to remain weak, this will have a negative impact on the consolidated numbers.

Several success stories from the United States:

- ► Employment of Pfeiffer Vacuum pumps in the coating systems of a major manufacturer of architectural glass; replacement of competition pumps in an existing system, equipping a new system exclusively with our pumps
- ► Replacement of existing turbo pumps by higher-performance models at several semiconductor manufacturers
- ▶ Replacement of outmoded competitor pumps in CD coating systems at a major American CD/DVD manufacturer by our turbo pumps
- ➤ Supply of all vacuum products for a manufacturer of semiconductor components after it had relocated its manufacturing operations from Germany to the United States
- ➤ Winning over 250 new customers during the year covered by this report (2002: 120)

#### Asia and the rest of the world

The Chinese market offers us huge growth opportunities Sales: € 22.5 million

Workforce in sales companies: 25

Workforce in agencies working exclusively for Pfeiffer Vacuum: 66

The most important growth market for us in Asia is China. However we will also additionally be further expanding our existing presence in Japan, Taiwan, India, Korea and the other countries of Asia. The most important countries outside Asia in which we are represented through agencies and service points include Australia, Israel, South Africa and Brazil.

In China, we further expanded our presence with the assistance of our agency. A new service center was established in Shanghai. Our greatest success this year in China was our breakthrough in the glass coating segment. The country's largest production system, as well as a further system, is being equipped with our pumps.

In Korea, we succeeded in displacing competition products with our turbo pumps on all tools at one of the largest manufacturers of semiconductor storage devices. The crucial factors for this customer were the better performance specifications and reliability of our pumps, as well as our better service.

In India, we succeeded in displacing competition products at two OEM manufacturers.

In Japan, we are the most important supplier of vacuum pumps for manufacturers of analytical equipment and for research & development facilities. The analytical market again suffered from economic stagnation this year. Even though sales

At a Glance

declined, we were able to retain our market share. For the fist time, we also succeeded in gaining a foothold in the Japanese semiconductor industry, which had previously been difficult to enter. 25 large turbo pumps from competitors in existing tools were replaced by higher-performance Pfeiffer Vacuum pumps.

We view growth potential in the coming year first and foremost in China, especially in the glass coating, flat panel display and semiconductor segments. In Japan, there are several projects in the analytical market that are up for decision in 2004, and our agencies in Japan, Taiwan, China and Korea are expected to benefit from the recovery of the semiconductor market.

#### Communication with our customers - A building block for business success

In 2003, we exhibited at a total of 26 tradeshows and exhibitions in our industry in Europe, the United States and Asia.

One particular highlight was ACHEMA in Frankfurt, the world's largest tradeshow for the chemical industry, at which we were the focus of particular attention with our series of magnetically coupled Roots pumps.

with creates satisfied customers

Customer visits,

communication

tradeshows, online contacts – Good

At Semicon West in San Francisco, the world's largest and most important semiconductor tradeshow, we were the only vacuum pump manufacturer to offer a true innovation, the HiMag – and interest on the part of customers (and competitors) was correspondingly keen.

An electronic newsletter informs our customers at regular intervals about new products and developments at Pfeiffer Vacuum.

Our online catalog enables our customers to quickly and easily order any products they might wish to purchase without technical advice. A "Fast-Tracking Service" enables our customers to track the exact location of a product on its way from the factory to the recipient.

Our Internet pages offer customers, suppliers, prospects and investors all of the information they need about our Company, our products, marketing channels or shares. In early 2004, these pages will have an even more modern and user-friendly look and feel.

## Award-Winning Research & Development



#### **Research & Development**

As the inventor of the turbo pump, we view it as our commitment to drive the development of vacuum technology through our own research projects as well as by rigorously fostering teaching and science.

> Developing new products and evolving our successful existing product portfolio enjoy high priority at Pfeiffer Vacuum. In addition to our own specialists in our engineering and development departments, we also collaborate closely with universities and with companies in Germany and other countries who possess key technologies. Pfeiffer Vacuum regularly sponsors postgraduate thesis work in the field of R&D and offers internships for physics or engineering students.

Röntgen Prize for outstanding research work

For over 40 years, we have been one of the two companies that sponsor the prestigious Röntgen Prize, which is awarded annually at Justus Liebig University in Giessen in recognition of outstanding research work performed by the coming generation of physicists. This year, Dr. Hermann Dürr, BESSY Berlin, received the prize for his outstanding research findings in the field of X-radiation in solid state physics.

Nearly 50 years ago, the turbomolecular pump was invented at Pfeiffer Vacuum. Today, it is still the vacuum pump of choice for high and ultra-high vacuum, offering an extremely varied range of potential applications. Pfeiffer Vacuum has steadily broadened its technology leadership in this class of pumps, bringing a number of evolved models to market during the year covered by this report.

In 2003, we again invested in evolving products for the DVD segment. We view expanding our DVD business as a forward-looking investment in a growth market. During the second half of 2003, we received several orders in this segment, which means that for the first time the start-up costs are now being offset by sales.

In the spring of 2003, Pfeiffer Vacuum received a particular distinction: Working in collaboration with top-flight companies, the Production Systems Chair at the Technical University of Aachen (RWTH Aachen) conducted a benchmarking project on the subject of research & development (R & D) in Mechanical Engineering. The objective of this project was to identify successful R&D practices at over 100 of Germany's most successful companies in the field of mechanical and plant engineering. We numbered among the five companies that were honored at the project's concluding conference.

Honored by RWTH Aachen for successful R&D concepts

### **Research & Development**

Research & development expenditures in 2003 totaled € 8.9 million, as opposed to € 10.8 million in 2002. Consequently, our research & development ratio amounted to 6.2 % of total sales (2002: 7.2 %).

Pfeiffer Vacuum employs 93 engineers, physicists and technicians in the field of research & development, 14 of them in the DVD segment. Twelve new patent applications were filed in the year 2003, one of them in the DVD segment. Nine patents were granted on pending applications. We hold a total of some 70 fundamental patents worldwide, along with 100 other patents.

Numerous patents and industrial property rights secure our technology edge

#### The following products were successfully launched during the year covered by this report:

#### Turbo pump product line for process technology

The type TPH 2303 and TPH 2301 turbomolecular pumps satisfy the highest demands in terms of reliability and gas throughput maximization required in the fields of semiconductor technology and coating. By optimizing the blade geometries, in combination with modified drive technologies, a new, customer-driven overall concept has now been brought to market.

These two mechanical-bearing turbo pumps were complemented by the HiMag 2400 high-performance turbo pump, which is characterized by its maintenance- and vibration-free mag-lev bearing system. This pump will be setting new standards, especially in the semiconductor industry. In addition, it is also highly suitable for employment in all other areas of process technology.

Our line of successful turbo pumps was rounded out by specific adaptations in both its pumping system and its drive electronics, thus affording even more flexible and versatile employment. Innovations in 2003 also included a remote drive unit for employment in radiation-hazard areas, as well as a high-performance drive that affords extremely fast cycles and short acceleration times.

#### First magnetically coupled series of Roots pumps

At ACHEMA 2003 - the world's largest tradeshow for the chemical industry -Pfeiffer Vacuum debuted a new series of magnetically coupled Roots pumps. By mid 2004, this series will include all models with volume flow rates of from 250 to 6,000 m<sup>3</sup> per hour, superseding versions incorporating canned motors. This is the world's first series of hermetically sealed Roots pumps. Their key advantages are greater process reliability and low maintenance.





Together with another technology company from the region, we foster young scientists by sponsoring the Röntgen Prize. And we've been doing it since 1960.



#### **DVD-R Bonder**

The DVD Bonder is a ready-to-use solution that enables manufacturers of CD-Rs (writable CDs) to upgrade their production lines to DVD-R (writable DVDs). The halves are then bonded offline on a bonder. The system incorporates the bonding module from the DVD production line, which offers the same performance specifications as this machine. The most important aspect of this product is its inline tilt control feature, which minimizes curvature of the finished product. The first system passed its practical test and has been delivered to the Far East.

#### **Production line for rewritable DVDs**

The DVD RW Line from Pfeiffer Vacuum is a fully automated production system for mass producing rewritable DVDs. As a special feature, the DVD RW Line incorporates the fully integrated ILC Inline Laser 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. The complete system has now been qualified in-house and is producing DVD+RW media. The first DVD RW was delivered in the fourth quarter of 2003.

#### Outlook

In 2004, we will be bringing innovations to market in all product segments Turbo pumps with even shorter pumping times are being developed for the semiconductor industry. Our extensive existing line of pumps with both conventional ball-bearing as well as mag-lev bearing technology is being rigorously expanded.

Four models from the Roots pump line are being certified under European Directive 94/9/EG, "Atex." With these models, featuring volume flow rates of from 500 to 4,000 m<sup>3</sup> per hour, Pfeiffer Vacuum will be able to cover the pump performance requirements of most explosion-hazard processes. Explosion-proof pumps are required in the pharmaceuticals industry, for example, if solvents are employed in the production process, as well as increasingly in the coating industry.

◀ At a Glance

A series of RevoDry screw-type dry vacuum pumps will be introduced.

Our developers are working on further shortening the cycle time in our DVD Lines. The cathodes in the Single Layer Metalizer have been evolved with respect to uniformity and coated discs per target.

New leak detectors, mass spectrometers and total pressure measurement instruments will be brought to market.

Overall, Pfeiffer Vacuum will be bringing innovations to market in all product segments during the coming year and living up to its reputation of being a vendor of high-quality, cutting-edge vacuum technology.



#### **Environment, Safety and Quality**

We have achieved exemplary standards in the fields of environment, safety and quality. With a view to sustainability, we have defined new and even more challenging goals for 2004 – for example in job safety and quality.

> Our commitment to sustainability is also documented by our inclusion in the new Kempen/SNS Smaller Europe SRI Index, which was established on October 1, 2003. Only companies that satisfy the highest standards and requirements in the three fields of business ethics, human resources and the environment are included in this index. Of the some 70 European companies contained in the index, only four German companies, including Pfeiffer Vacuum, presently satisfy the challenging inclusion criteria.

Our efforts in connection with sustainability have been rewarded through our inclusion in a sustainability index

#### Environmental protection - Important today and tomorrow

For us, environmental protection, environmentally compatible manufacturing conditions, job safety and economic success are not contradictions. Pfeiffer Vacuum's sophisticated environmental management system has been certified under ISO 14001 since 1996. In connection with a follow-up audit in November 2003, compliance with the requirements contained in ISO 14001:1996 was confirmed without restriction.

We regularly monitor and assess all relevant environmental factors. Twelve 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 legal requirements and the criteria defined in the quality handbook were identified.



Development of Energy and Water Consumption:						
			2003	2002	2001	
	Electricity	MWH	9,423	9,163	9,664	
	Gas	m³	771,634	735,237	840,481	
	Water	m <sup>3</sup>	17,888	17,344	32,945	

Our higher gas consumption in 2003 was primarily attributable to the very cold winter of 2002/2003 and the resulting higher heating demand.

	E   E	Environment, Safety and Quality			
← At a Glance		➤ The Company	Financial Statements	➤ Appendix	

#### **Environment, Safety and Quality**

Environmental measures conducted in 2003 included:

- ► A maximum current monitoring system to reduce electrical demand peaks. This resulted in less burden on the power grid as well as cost reductions
- ▶ Rigorous employment of reusable packaging and packaging consisting of such easily recyclable materials as paper or cardboard. This led to a more than 50 % reduction in packaging wastes
- ▶ A further reduction in the consumption of coolant-lubricants

#### Our paramount environmental goal for 2004

To provide our customers with even better information about environmentally suitable utilization of the products supplied by us.

## Sustainability in product development – An important factor in business success

We rigorously apply environmental design requirements in developing our new products. The guidelines for sustainable product development are contained in our quality handbook, which is available to all employees over the intranet. This relates both to the materials that are used, including their recyclability, as well as to customer-specific environmental aspects. For example, we engineer our pumps in such a manner as to ensure that they consume as little energy as possible. The HiMag, for instance, our new mag-lev turbo pump, consumes significantly less cooling water and energy than its predecessors.

#### Job safety - Important to both our people and our Company

In 2003, thirty-three job safety audits were conducted, twelve of them together with a plant physician and the Employee Council. The variances that were identified were rectified in a timely fashion. Four employees attended external accident prevention seminars in 2003. Our employees are familiarized with all requirements relating to noise abatement, handling of hazardous materials, accident and fire prevention, as well as other safety requirements. Every employee has access to the required EU safety data sheets and standard operating procedures under the point entitled "List of Substances" in our quality handbook.

Our Company's job safety organization and job safety measures were reviewed in November 2003 in connection with the audits under ISO 9001:2000 and ISO 14001:1996 and certified without restriction. The comprehensive annual job safety report was submitted in January 2004.

At a Glance

The number of reportable on-the-job accidents for the entire year 2003 again declined from the previous year's level (from 12 to 11, including one commuting accident). No on-the-job accident was found to have been caused by a technical deficiency or the lack of safety equipment.

#### Job safety targets for 2004

- ► Review of compliance with the EU-wide rules contained in the plant safety directive
- ▶ Initiation of measures for compliance with the new EU noise protection directive

#### Quality - Important to both our customers and our people

Within the framework of our quality management system, all business processes are continuously scrutinized and enhanced. A total of 12 internal quality audits were conducted in 2003 for this purpose, with no material variances being identified. All processes are documented in the quality handbook, to which all employees have access over the intranet.

Quality targets are defined and assessed annually, with compliance being measured. We work to continuously improve our products, beginning with the development of a product and continuing on right through to its employment by the customer.

All A-suppliers are visited at least once a year and subjected to an intensive "vendor check." During this check, complaints and correct, on-time deliveries are reviewed, and new targets are agreed upon. The achieved values are reviewed on a monthly basis 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.

Our on-time delivery status has been able to be steadily improved in recent years.  $95\,\%$  of all deliveries are made precisely on the desired delivery date.

### **Environment, Safety and Quality**

We are proud of having received the Quality Award for outstanding vendor quality from our largest customer in the United States, Novellus Systems.

One particular quality improvement project is the "Turbo Office" project. In a benchmarking process, organizational processes in the administration departments are being critically scrutinized and compared in workshops with those of other small and medium enterprises. The objective is to review and constantly optimize all internal business processes with a view to customer orientation and effectiveness. The project was launched in the autumn of 2003 for an initial term of two years.

In November 2003, the Company's entire quality management system was scrutinized by an external auditing company. Pfeiffer Vacuum satisfied all of the requirements of the new version of ISO 9001:2000 without any variances. The corresponding certificate was issued.

the stricter requirements of the quality audit under

ISO 9001:2000

We satisfied

#### **Quality targets for 2004**

- ► Further expansion of a continuous, customer-oriented improvement process and ongoing measurement of target satisfaction
- ► Further expansion of our complaint management system (shorter handling times, greater customer satisfaction, identification of potential for improvement)





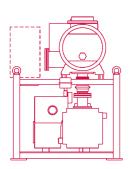
#### **Our People**

An important goal during this difficult fiscal year was to strike a balance between responsibility toward our people and cost control. Through the "Alliance for Work," it was possible to retain largely all of our qualified staff.

> On December 31, 2003, the corporate group employed a total of 761 people. That represents a decline of 6.2% from the previous year (811). This reduction resulted primarily by not renewing temporary employment contracts as well as through both regular and early retirement.

Personnel expenses in the year 2003 totaled € 47.1 million, as opposed to € 49.6 million in 2002.

kforce				
		2003	2002	
	Total employees worldwide	761	811	
	Male	631	668	
	Female	130	143	
	Employees in Germany	578	615	
	Employees at sales subsidiaries			
	outside Germany	183	196	Dec. 31



A high-tech company like Pfeiffer Vacuum is highly dependent upon the high level of training and education of its qualified employees. Consequently, the challenge for our Company was to retain as many of these people as possible, in spite of the persistently difficult economic environment, while simultaneously reducing costs. Together with the Employee Council, an "Alliance for Work" was therefore forged for our employees at corporate headquarters. All white and blue collar workers covered by the collective-bargaining agreement worked only four days a week for a period of six months, but were paid for five days. This enabled a total time cushion of 31,500 hours to be accumulated, which will then be available to the Company at no cost when the economy revives.

Since September 1, 2003, the workweek for employees covered by the collective-bargaining agreement has been reduced from 35 to 32.5 hours, with a corresponding reduction in pay. This agreement was limited until the end of February 2004.

Agreement on flexible worktime models secured jobs during economically difficult times

	Our People		
At a Glance	The Company	Financial Statements	► Appendix

An extension of their workday without any increase in pay was agreed with employees who are not covered by the collective-bargaining agreement; executives agreed to forego a portion of their annual vacation days.

In the fourth quarter of 2003, information technology, accounting and human resources activities were relocated from the Aschaffenburg facility to head-quarters. The resulting savings in personnel expense will not come to bear until 2004.

With all of these measures, we have succeeded in flexibly responding to the differing utilization factors during the year 2003, in reducing costs to reflect our lower sales and in being able to largely retain all key employees. This simultaneously served as a manifestation of our commitment to Germany as an industrial powerhouse.

#### Training and qualifications

Pfeiffer Vacuum trains significantly more people than the industry average, which represents an investment in the future of the Company and its people 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 prerequisites 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. Pfeiffer Vacuum is participating in the "University Plus" project, a work-study educational program under a collaborative effort between the Giessen-Friedberg Technical University and the chamber of industry and commerce. University openings for a total of seven business and mechanical engineering students are currently being promoted. This means that a total of 30 training slots are available – a good investment in the future of the Company and its people.

In close collaboration with general and technical universities, new blood for the future is being familiarized with life in a modern industrial enterprise by making jobs available for interns and awarding contracts to postgraduate thesis candidates. In 2003, three postgraduate theses were written at the Company under the coaching of staff from the development department.

To keep our people's knowledge up to date, continuing education measures are offered by our own staff and external lecturers. This included training in the subject of sales and price negotiations for staff from Purchasing and Sales, as well as on modern presentation techniques for sales and marketing staff. There are two dedicated in-house employees who provide technical training for employees and customers. Further employees from Marketing, Development and Service can be



called in on an as-needed basis to lecture at training courses. A broad course curriculum offers training in German and English on new and existing products to all sales and service staff.

One particular project that is expected to have a long-term effect is the "Turbo Office" project. In a benchmarking process, organizational processes in the administrative departments are being critically scrutinized and compared in workshops with those of other small and medium enterprises. All employees from the departments selected for the first phase are involved in the project, and are participating in this competition with a high level of enthusiasm and motivation.

Our people are participating in the "Turbo Office" benchmarking project with a high level of enthusiasm and motivation

176

10

7

Dec. 31

The following overview underscores the high level of education of our people:

	2003	2002
Development and Manufacturing		
College and university graduates	67	72
Employees with specialized training	289	301
Employees without specialized training	50	65
Trainees	19	20
Administration, Sales and Marketing		
College and university graduates	147	160

167

11

11

#### Attractive pay concepts

Trainees

Employees with specialized training

Employees without specialized training

In 2003, all employees again shared in the Company's success in the form of a 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.

#### **Old-age pensions**

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 pension fund will be offered in 2004.

Employees who joined the Company prior to June 1996 are additionally entitled to a Company-funded old-age pension. Effective year-end 2003, all of the Company's pension obligations under agreements relating to the Company-funded old-age pension were transferred to an asset management trust in the form of a registered association, Pfeiffer Vacuum Trust e. V. Detailed information on this subject is contained in Management's Discussion and Analysis on page 120.

Various pension plans that conform to country-specific conditions are in place at the sales subsidiaries.

During the year under review, five employees took advantage of the opportunity to gradually transition into retirement under a part-time contract for near retirees. This enabled all of our trainees to be offered a permanent job upon passing their final examination.

The following overview documents the balanced ratio between young and old at the Company:

Age Structure of	our Company			
		2003	2002	
	Under 30	87 (11 %)	103 (13 %)	
	30 to 50	503 (66 %)	551 (68 %)	
	Over 50	171 (23 %)	157 (19 %)	Dec. 31

#### Social and ethical responsibility

Modern workplaces, teamwork and flat hierarchies are what characterize Pfeiffer Vacuum. The Company takes its social responsibility toward its people seriously, meets its disabled-employee quota and is in compliance with official accident prevention and job safety regulations (see also "Environment, Quality and Safety" on page 51). The Company pays employees at its German locations either on the basis of the general collective-bargaining agreement for the metal-working and electrical engineering industries or at higher pay scales, and observes

Sustainability with a view to our social and ethical responsibility is important to us 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 models during the year under review. The principles of equitable treatment for all and the protection of minors are observed worldwide.

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 also sponsors regional sports clubs. Schools and universities are supported through non-cash donations.

For over 40 years, Pfeiffer Vacuum has been one of the two companies that sponsor the prestigious € 7,500 Röntgen Prize, which is awarded annually at Justus Liebig University in Giessen in recognition of outstanding research work performed by the coming generation of physicists. This year, the prize was awarded to Dr. Hermann Dürr, BESSY Berlin, for his outstanding research findings in the field of X-radiation in solid state physics.

Pfeiffer Vacuum received recognition for its ongoing efforts aimed at acting responsibly in our society through our inclusion in the new Kempen/SNS Smaller Europe SRI Index, which was established on October 1, 2003. Only companies that satisfy the highest standards and requirements in the three fields of business ethics, human resources and the environment are included in this index. Of the some 70 European companies contained in the index, only four German companies, including Pfeiffer Vacuum, presently satisfy the challenging inclusion criteria.



### **Consolidated Financial Statements (U.S. GAAP)\***









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<sup>\*</sup> This English-language version of the Annual Report is a courtesy translation of the audited and certified German-language Annual Financial Statements/Annual Report.

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### Balance Sheet in K€ \_\_\_\_\_

	December 31,	Note	2003	2002
Assets				
	Cash and cash equivalents	18	29,432	72,264
	Trade accounts receivable – net	1	22,224	21,937
	Other accounts receivable	3	2,125	3,164
	Inventories – net	2	20,360	22,403
	Prepaid expenses		593	562
	Deferred tax assets – net	15	1,016	775
	Other current assets	3	920	713
	Current assets		76,670	121,818
	Property, plant and equipment/intangible assets	5	25,734	28,434
	Note receivable	6	9,000	20,404
	Prepaid pension cost	4, 11	2,819	
	Deferred tax assets – net	15	3,323	2,731
	Goodwill	7	1,037	1,037
	Other assets	8	1,197	1,476
	Long-term assets	J	43,110	33,678
	Total assets		119,780	155,496
	iotal assets		113,700	133,430
Liabilities and				
Shareholders'	Current portion of long-term debt		-	1,291
Equity	Trade accounts payable	13	4,153	3,483
	Accrued liabilities	12	8,758	9,188
	Income tax liabilities	15	6,643	2,317
	Customer deposits	13	1,051	1,938
	Other payables		2,252	2,269
	Current liabilities		22,857	20,486
	Long-term debt	9	_	7,746
	Convertible bonds	10	845	1,011
	Accrued pension	11	1,041	33,615
	Minority interests		_	130
	Long-term liabilities		1,886	42,502
	Share capital		22 504	22,504
	Additional paid-in capital		22,504	
	·		2,821 73,713	2,821 65,870
	Retained earnings	.)		
	Accumulated other comprehensive income (loss	)   	- 1,563	1,313
	Treasury stock	1.4	- 2,438	00.500
	Shareholders' equity	14	95,037	92,508



### **Statement of Income in K€**

	Note	2003	2002
Net sales	17	144,018	150,942
Cost of sales		-81,721	-82,525
Gross profit		62,297	68,417
Selling and marketing expenses		-20,941	-24,162
General and administrative expenses		- 12,950	- 12,241
Research and development expenses		- 8,928	- 10,845
Operating profit	17	19,478	21,169
Interest expense		-246	-525
Interest income		1,803	2,228
Foreign exchange gain		2,142	1,946
Income before income tax	17	23,177	24,818
Current income taxes		-11,544	<b>-</b> 7,513
Deferred income taxes		1,113	230
Taxes	15	- 10,431	-7,283
Net income		12,746	17,535
Earnings per share (in €)	19		
Basic		1.46	1.99
Diluted		1.46	1.99

### Statement of Shareholders' Equity in K€

	2003	2002	2001
Shareholders' equity at January 1	92,508	83,402	67,107
Share capital			
Balance at January 1	22,504	22,504	22,065
Bonds converted	_	_	439
Balance at December 31	22,504	22,504	22,504
Additional paid-in capital			
Balance at January 1	2,821	2,821	2,184
Bonds converted	-	_	637
Balance at December 31	2,821	2,821	2,821
Retained earnings			
Balance at January 1	65,870	53,258	38,706
Net income	12,746	17,535	18,871
Dividends paid	- 4,903	-4,923	-4,319
Balance at December 31	73,713	65,870	53,258
Minimum pension liability			
Balance at January 1	- 656	_	- 19
Components of other comprehensive income	592	-656	19
Balance at December 31	- 64	-656	
Cumulative translation adjustment			
Balance at January 1	1,560	4,628	3,540
Components of other comprehensive income	- 3,609	-3,068	1,088
Balance at December 31	- 2,049	1,560	4,628
Unrealized gain/(loss) on hedges	,		
Balance at January 1	409	191	631
Components of other comprehensive income	141	218	-440
Balance at December 31	550	409	191
Treasury stock			
Balance at January 1	_	_	_
Additions	- 2,438	_	_
Balance at December 31	- 2,438	_	
Total shareholders' equity at December 31	95,037	92,508	83,402

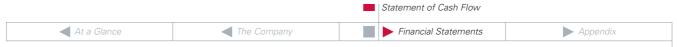


◀ At a Glance

The Company

### **Statement of Cash Flow in K€**

	2003	2002
Net income	12,746	17,535
Depreciation	3,959	4,627
Loss (gain) on disposal of fixed assets	350	-35
Change in deferred taxes	- 1,113	-230
Provision for doubtful accounts	824	850
Effects of changes in operating assets and liabilities		
Trade accounts receivable	-2,130	1,184
Other accounts receivable	1,021	533
Inventories	1,480	-881
Prepaid expenses	-65	603
Other current assets	-292	-560
Other long-term assets	-2,894	90
Accrued pension liabilities	4,482	1,789
Contribution to pension trust	-35,955	_
Trade and other accounts payable	746	-1,785
Income tax liabilities	4,435	-3,112
Accrued other liabilities	-181	-1,097
Customer deposits	- 859	90
Net cash provided by (used in) operating activities	- 13,446	19,601
Proceeds from disposals of fixed assets	165	194
Capital expenditures	-1,917	-2,632
Purchase of note receivable	-9,000	_
Acquisition of business assets	_	-2,403
Net cash used in investing activities	-10,752	-4,841
Repayments of borrowings	-9,037	-1,291
Dividend payment	-4,903	-4,923
Bonds payable repayments (issuance)	-12	103
Purchase of treasury stock	-2,438	_
Net cash used in financing activities	-16,390	-6,111
Foreign currency translation	-2,244	-1,420
Net increase (decrease) in cash and cash equivalents	-42,832	7,229
Cash and cash equivalents at beginning of year	72,264	65,035
Cash and cash equivalents at end of year	29,432	72,264
Cash paid for interest	170	453
Cash paid for taxes	6,719	7,033



### **Schedule of Fixed Assets in K€**

		Acq	uisition or ma	anufacturing cost	t	
	Balance at 01/01/2003	Currency Change	Additions	Reclassifica- tions	Disposals	Balance at 12/31/2003
Patents, licenses, trade- marks, and similar rights and assets, including licenses for such rights and assets	2,594	-52	67	_	_	2,609
Goodwill	1,227	_	_	_	_	1,227
Intangible assets – minimum pension liability	287	_	6	_	287	6
Intangible assets	4,108	-52	73	-	287	3,842
Land, leasehold improve- ments and buildings including buildings on land owned by others	30,597	-7	9	_	_	30,599
Other equipment, factory and office equipment	17,942	-348	720	_	913	17,401
Technical equipment and machinery	25,356	-91	1,133	_	1,367	25,031
Property, plant and equipment	73,895	-446	1,862	_	2,280	73,031
Note receivable	_	_	9,000	_	_	9,000
Other assets	1,167			_	412	755
Investments and	1,107	_		_	712	7.50
long-term financial assets	1,167	_	9,000	_	412	9,755
Total Fixed Assets	79,170	-498	10,935	_	2,979	86,628

	k value	Net boo		zation	ation/Amorti	Depreci	
	12/31/2002	12/31/2003	Balance at 12/31/2003	Disposals	Additions	Currency Change	Balance at 01/01/2003
Patents, licenses, trade- marks, and similar rights and assets, including licenses for such rights and assets	366	222	2,387	_	211	-52	2,228
Goodwill	1,037	1,037	190	_	-	-	190
Intangible assets – minimum pension liability	287	6	_	_	_	_	_
Intangible assets	1,690	1,265	2,577	_	211	-52	2,418
Land, leasehold improve- ments and buildings including buildings on land owned by others	17,746	16,881	13,718	_	871	-4	12,851
Other equipment, factory and office equipment	4,560	3,643	13,758	701	1,332	-255	13,382
Technical equipment and machinery	5,762	4,988	20,043	1,064	1,557	-44	19,594
Property, plant and equipment	28,068	25,512	47,519	1,765	3,760	-303	45,827
Note receivable	-	9,000	_	-	-	-	-
Other assets	1,167	755	_	_	_	-	-
Investments and long-term financial asse	1,167	9,755	_	_	_	-	_
Total Fixed Assets	30,925	36,532	50,096	1,765	3,971	-355	48,245

#### **Notes to the Financial Statements**

#### **Basis of Presentation**

The consolidated financial statements of Pfeiffer Vacuum Technology AG and subsidiaries ("the Company" or "Pfeiffer Vacuum") have been prepared in accordance with United States Generally Accepted Accounting Principles (U.S. GAAP).

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.

Section 292a of the German Commercial Code ("HGB") obviates the requirement to prepare consolidated financial statements according to HGB if consolidated financial statements prepared according to international accounting standards are of the same value and meaningfulness as consolidated accounts prepared in accordance with HGB. U.S. GAAP is one of the recognized international accounting standards.

The euro (€) is the official group currency.

#### **Consolidated Companies and Principles of Consolidation**

The Company

All companies which Pfeiffer Vacuum Technology AG directly or indirectly controls are consolidated. The Company is considered to control an entity if it either directly or indirectly holds a majority of the voting rights and can therefore exercise a controlling influence. In addition to Pfeiffer Vacuum Technology AG, two German (2002: 2) and fourteen foreign subsidiaries (2002: 14) are fully consolidated in the Company's consolidated financial statements.

All material intercompany receivables and liabilities, gains and losses, revenues and expenses are eliminated as part of the consolidation process.

◀ At a Glance

Subsidiaries	Location	Holdings	Share- holders' Equity*	Net Income/Loss*	Net Sales <sup>3</sup>
		%	K€	K€	K€
Pfeiffer Vacuum Technology AG	D-Asslar				
Pfeiffer Vacuum GmbH	D-Asslar	100.0	35,059	29,864 **	105,199
Pfeiffer Vacuum Austria GmbH	A-Vienna	100.0	585	113	6,449
Pfeiffer Vacuum (Schweiz) AG	CH-Zurich	99.4	1,216	607	6,549
Pfeiffer Vacuum Systems (International) AG	CH-Zuzwil	100.0	104	2,711	37
Pfeiffer Vacuum Systems GmbH	D-Aschaffenburg	100.0	2,427	-6,223 **	5,431
Pfeiffer Vacuum France SAS	F-Buc	100.0	1,005	319	6,382
Pfeiffer Vacuum Ltd.	GB-Newport	100.0	749	71	4,280
Pfeiffer Vacuum Asia Ltd.	HK-Hong Kong	100.0	-6	-91	_
Pfeiffer Vacuum Nederland B.V.	NL-De Meern	100.0	1,795	199	5,810
Pfeiffer Vacuum Scandinavia AB	S-Upplands Väsby	100.0	1,222	373	4,587
Pfeiffer Vacuum Inc.	USA-Nashua	100.0	10,405	2,649	32,853
Pfeiffer Vacuum Holding B.V.	NL-De Meern	100.0	2,276	-5	-
Pfeiffer Vacuum Belgium N.V.	B-Temse	100.0	1,085	186	3,013
Pfeiffer Vacuum Italia S.p.A.	I-Rho	100.0	1,884	117	5,404
Pfeiffer Vacuum (India) Ltd.	IND-Secunderabad	73.0	469	130	338
Pfeiffer Vacuum Korea Ltd.	KR-Yoinin City, Kyungki-Do	75.5	947	191	2,557

<sup>\*</sup> Amounts reflect the local individual U.S. GAAP year-end reports

### **Use of Estimates**

The preparation of the consolidated financial statements requires management to make estimates and assumptions that affect the amounts of assets and liabilities on the date of the financial statements and the reported amounts of revenues and expenses during the reporting period reported in the financial statements and accompanying notes as well as the commitments and contingencies. These estimates and assumptions could differ from the actual results.

Notes to the Financial Statements

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<sup>\*\*</sup> Before profit or loss transfer

### Reclassifications

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

### **Foreign Currency Translation**

Under the functional currency concept, all assets and liabilities of foreign subsidiaries whose functional currency is not the euro are translated using yearend mid-market exchange rates, while income statements are translated using average annual rates and shareholders' equity using historical rates. The functional currency is the applicable local currency in which the entity conducts its business. Translation variances are recorded in a separate item (accumulated other comprehensive income) under shareholders' equity, without affecting net income.

Foreign currency translation gains and losses are recorded in the income statement.

The exchange rates of the significant currencies of non-euro countries included in the Company's consolidated financial statements were as follows:

Exchange rate at December 31 (€ 1=):						
			2003	2002		
	U.S.A.	USD	1.26100	1.04770		
	Great Britain	GBP	0.70700	0.65050		
	Switzerland	CHF	1.55900	1.45270		
	Sweden	SEK	9.07100	9 18200		

Annual average exchange rate (€ 1=):					
			2003	2002	
	U.S.A.	USD	1.13087	0.94486	
	Great Britain	GBP	0.69185	0.62877	
	Switzerland	CHF	1.52064	1.46714	
	Sweden	SEK	9.12279	9.15949	

■ The Company

### **New Accounting Rules**

In June 2001, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") 143, "Accounting for Asset Retirement Obligations." This statement applies to legal obligations associated with the retirement of tangible long-lived assets that result from the acquisition, construction, development and/or the normal operation of a long-lived asset, except for certain obligations of lessees. SFAS 143 requires that the fair value of a liability for an asset retirement obligation be recognized in the period in which it is incurred if a reasonable estimate of fair value can be made. The associated asset retirement costs are capitalized as part of the carrying amount of the longlived asset and subsequently allocated to expense over the asset's useful life. Enterprises are required to adopt SFAS 143 for fiscal years beginning after June 15, 2002. The adoption of SFAS 143 did not have any impact on the Company's consolidated financial statements.

In April 2002, the FASB issued SFAS 145, "Rescission of FASB Statements 4, 44 and 64, Amendment of FASB Statement 13 and Technical Corrections." SFAS 145 requires gains and losses on extinguishments of debt to be classified as gains or losses from continuing operations rather than as extraordinary items as previously required under SFAS 4, unless the gains and losses meet the criteria for being classified as extraordinary pursuant to APB 30. SFAS 145 also amends SFAS 13, "Accounting for Leases," to eliminate an inconsistency between the required accounting for sale-lease back transactions and the required accounting for certain lease modifications that have economic effects that are similar to sale-lease back transactions. The rescission of SFAS 4 is effective for fiscal years beginning after May 15, 2002. The provisions of SFAS 145 that relate to SFAS 13 are effective for transactions occurring after May 15, 2002. The adoption of these provisions had no impact on the Company's consolidated financial statements.

In July 2002, the FASB issued SFAS 146, "Accounting for Costs Associated with Exit or Disposal Activities." SFAS 146 replaces EITF 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)," and addresses the formation of accrued liabilities for obligations relating to the termination or sale of enterprise activities. This Statement essentially applies to accounting of expenses arising from the grant of employment termination benefits that do not result from an ongoing exit plan, the termination of contracts (except for capital lease contracts), the relocation of employees and the consolidation or closure of locations.

Under Emerging Issue Task Force ("EITF") 94-3, merely a concrete plan, i.e. an unambiguous commitment on the part of management to close or sell an element of an enterprise, was sufficient to justify the formation of an accrual. Under SFAS 146, this is no longer sufficient as a criterion for recording an obligation. Instead, accruals relating to restructuring measures (termination or sale of enterprise activities) may not be recognized until the criteria for a liability have been satisfied, e.g. when management has committed to provide benefits to employees resulting from an exit plan. A further new requirement is that the accruals be valued at their present value. This Standard is effective for all exit or disposal activities initiated after December 31, 2002. The application of this Standard did not have any impact on the Company's consolidated financial statements.

In December 2002, the FASB issued SFAS 148, "Accounting for Stock-Based Compensation, Transition and Disclosure." Statement 148 amends SFAS 123, "Accounting for Stock-Based Compensation," to provide three 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 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. As permitted under SFAS 123, "Accounting for Stock-Based Compensation," as amended, the Company applies the intrinsic valuebased method in accordance with APB 25 for its stock-based compensation plans. No personnel expenses of this nature were incurred in 2002 and 2003.

In April 2003, the FASB issued SFAS 149, "Amendment of Statement 133 on Derivative Instruments and Hedging Activities." This Statement provides consistency with existing or planned pronouncements and clarifies various application problems. For example, SFAS 149 defines which transactions are to be classified as normal purchase or sale and are thus excluded from accounting as a derivative under SFAS 133. Moreover, it strengthens the strict documentation requirement for forward transactions, in particular, as a condition for exclusion from the requirements of SFAS 133. In addition, it expresses in concrete terms the circumstances resulting in a failure to satisfy a payment obligation, which in turn is a condition for not recording these guarantees as derivatives in the sense of SFAS 133. SFAS 149 is effective for contracts entered into or modified after June 30, 2003. The application of this Statement for the first time for the past fiscal year did not have any impact on the Company's consolidated financial statements.

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In May 2003, the FASB issued SFAS 150, "Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity." This Statement governs the accounting of financial instruments that have characteristics of both equity and capital from outside sources (e.g. certain forms of preferred stock, written put options or financial instruments that are manditorily redeemable in the form of shares). Such instruments must be measured at fair market value and recorded as a liability. SFAS 150 does not apply to stock options that are accounted for under SFAS 123 or to convertible bonds. SFAS 150 is effective for financial instruments entered into or modified after May 31, 2003. In the case of existing financial instruments, the Statement is effective from the first quarter beginning after June 15, 2003. However an FASB Staff Position issued in November 2003 excludes the applicability of SFAS 150 to certain financial instruments. However since no financial instruments that are subject to the applicability of SFAS 150 presently exist at Pfeiffer Vacuum, the adoption of this Statement did not have any impact on the Company's consolidated financial statements.

In December 2003, the FASB revised SFAS 132, "Employers' Disclosures about Pensions and Other Postretirement Benefits." The new Statement primarily expands disclosure obligations relating to assets, obligations, payment flows and expenses of and/or under pension and other plans involving pension-like benefits. For U.S. plans, the new regulations are applicable to the fiscal year ended after December 15, 2003. For non-U.S. plans, adoption of the rules does not apply until fiscal years ending after June 15, 2004. Pfeiffer Vacuum utilizes this subsequent adoption.

In November 2002, the FASB issued FASB Interpretation ("FIN") 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others – an interpretation of FASB Statements 5, 57 and 107 and rescission of FASB Interpretation 34." This Interpretation elaborates on the disclosures to be made by a guarantor in its financial statements regarding obligations under guarantees that it has issued. FIN 45 also clarifies that a guarantor is required to recognize, at inception of a guarantee, a liability for the fair value of the obligation due to the issuance of the guarantee. The disclosure requirements are mandatory for interim reports and consolidated financial statements covering all periods ended after December 15, 2002. The recognition and measurement provisions are effective for guarantees or commitments issued or modified after December 31, 2002. The adoption of this Statement did not have any material impact on the Company's consolidated financial statements.

In December 2003, the FASB issued FIN 46R, "Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51 revised," under which consolidation is required regardless of whether a business enterprise can exercise control over another entity on the basis of how that entity's voting rights are distributed, even if it does not hold a majority of the voting rights. Under the FASB Interpretation, the obligation to consolidate a variable interest entity is governed by the equity investor's level of economic interest in that entity. If the opportunities and risks stemming from a variable interest entity are not distributed among the various equity investors in accordance with the ratio of their holdings, the business enterprise that is considered to be the primary beneficiary or that bears the predominant risk must consolidate the variable interest entity. FIN 46R replaces FIN 46, which was issued in January 2003. This rule is effective December 31, 2003, for specialpurpose entities and March 31, 2003, for all other entities. Pfeiffer Vacuum did not hold variable interests in special-purpose entitles and does not expect the full adoption of FIN 46R to have any impact on the Company's consolidated financial statements.

At the end of November 2002, following renewed discussion the EITF reached a final consensus on EITF 00-21, "Revenue Arrangements with Multiple Deliverables." EITF 00-21 addresses the question of how revenues from so-called complete or package solutions involving the delivery or performance of multiple products, services and/or rights are to be apportioned and recognized. The rule defines characteristics for delineating billable units of package solutions and thus for proportionate profit reduction. The modified version of EITF 00-21 is effective for contracts entered into in fiscal years beginning after June 15, 2003, and was therefore applied for the first time by Pfeiffer Vacuum in the past fiscal year. The application of this Statement did not have any material impact on the Company's consolidated financial statements.

In May 2003, following renewed discussion the FASB adopted EITF 01-8, "Determining Whether an Arrangement Is a Lease." Under this rule, it is necessary to determine whether a contract for purchase or sale, in particular in connection with outsourcing arrangements, contains a hidden leasing element. This can generally be assumed if a seller is acting nearly exclusively on behalf of a purchaser or is obligated to it, and if no fixed purchase prices similar in nature to market prices have been agreed. EITF 01-8 is initially applicable to accounting periods beginning after May 28, 2003. This rule did not have any impact on the Company's consolidated financial statements.

The Company

### **Accounting and Valuation Methods**

### **Revenue Recognition**

Revenue for product sales is recognized when persuasive evidence of an agreement exists, delivery has occurred, the price is fixed or determinable and collection of the related receivable is reasonably assured. If product sales are subject to customer acceptance, revenues are not recognized until customer acceptance has occurred. For product sales which require the Company to install the product at the customer location, revenue is recognized when the equipment has been delivered to and installed at the customer location, provided the product sale does not qualify for separation from the service element and recognition of revenue upon delivery of the product, as discribed in EITF 00-21. Revenues from services are recognized when the underlying services are performed.

Warranty accruals are established in the period in which the related product revenue is recognized. Management's estimates are primarily based on an assessment of specific exposure and historical experience by product type.

### Advertising

All advertising and promotional costs are expensed as incurred.

### Research & Development

All research and development costs are expensed as incurred.

### **Income Taxes**

The Company applies SFAS 109, "Accounting for Income Taxes." Under the asset and liability method set forth in SFAS 109, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and tax loss carryforwards. The effect of a change in tax laws on deferred tax assets and liabilities is recognized in the results of operations in the period in which the new tax rates are enacted. A valuation allowance is recorded to reduce the carrying amounts of deferred tax assets unless it is more likely than not that such assets will be realized. Deferred tax assets and liabilities are measured on the basis of the respective national tax rate which, on the basis of the legal situation prevailing at the close of the fiscal year, will be applicable at the point in time at which the temporary differences are expected to be cleared or the loss carryforwards are likely to be utilized.

### **Earnings per Share**

Basic earnings per share are determined by dividing consolidated net income by the weighted average number of shares in circulation during the accounting period. Diluted earnings per share are calculated by adjusting the number of shares in circulation to reflect the potentially dilutive convertible bonds.

### **Stock-Based Compensation**

As called for by SFAS 123, "Accounting for Stock-Based Compensation," business enterprises can continue to apply the rules set forth in APB 25, "Accounting for Stocks Issued to Employees," in determining their annual net income. Pfeiffer Vacuum has elected to utilize this option. The compensation that employees receive for their services to the Company in the form of shares or similar instruments is valued at the trading price of the shares on the relevant valuation day, less any amount to be paid by the employee. This value is termed the intrinsic value. Since on the relevant valuation date the conversion price (exercise price) of the bonds issued to the employees was higher than the trading price of the shares at the time of issue, no personnel expense was recorded.

### **Derivative Financial Instruments**

The Company recognizes derivative financial instruments either as assets or liabilities at their fair values. Changes in the fair value of derivatives that do not qualify for hedge accounting are recognized through current income. If the derivative is a hedge, depending on the nature of the hedge, changes in the fair value of the underlying transaction are either offset against changes in the fair value hedging instrument in current income or changes in the fair value of the derivative are recognized in other comprehensive income until the hedged item is recognized in income.

### **Cash and Cash Equivalents**

The Company

This item records all freely available liquid assets, such as checks, cash on hand, bank balances and quickly liquidatable money market paper possessing only an immaterial risk of value fluctuation and maturing in up to three months.

### **Trade Accounts Receivable**

Trade accounts receivable are recorded at the invoiced amount and typically do not bear interest. 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 writes off accounts only after all means of collection have been exhausted.

### **Inventories**

Inventories are valued at cost of acquisition or production. In addition to direct costs, cost of production also includes manufacturing and materials overheads and depreciation charges resulting from the production process. If necessitated by the market situation, allowances are established (on the basis of a comparison between cost of acquisition or production and relevant market value).

### **Property, Plant and Equipment**

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

▶ Buildings▶ Machinery and equipment20-50 years3-15 years

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Repair and maintenance costs are expensed as incurred.

During the fiscal year, the tax simplification rule was applied under which full annual depreciation is recorded for additions of non-real assets during the first half of the fiscal year and one-half of the annual depreciation for additions made during the second half of the fiscal year. The resulting effects are of only subordinate importance in assessing the Company's net assets, financial and earnings positions. Low-value assets of up to € 410 are expensed in the year of their addition and recorded as a retirement in the statement of fixed assets. The resulting effects are of only subordinate importance in assessing the Company's net assets, financial and earnings positions.

### **Long-Lived Assets**

Pursuant to SFAS 144, "Accounting for the Impairment or Disposal of Long-Lived Assets," the value of long-lived assets (including certain intangible assets) is reviewed if events or changes in circumstances suggest that the carrying value of an asset is higher than its current fair market value.

### **Goodwill and Other Intangible Assets**

Intangible assets acquired for valuable consideration are capitalized at cost of acquisition. Intangible assets with finite useful lives are amortized on a straight-line basis over their estimated useful lives. Estimated useful lives for software, patents, licenses and similar rights generally range between three to five years.

Goodwill represents the deferred charges resulting from the difference between the cost of acquisition of an equity investment and the fair market value of the acquired assets and liabilities. Prior to the close of the 2001 fiscal year, goodwill had been amortized on a straight-line basis over its estimated period of benefit of ten years. Since the 2002 fiscal year, goodwill has been tested for impairment at least annually by reporting units pursuant to SFAS 142, "Goodwill and other Intangible Assets." If the fair market value of the reporting unit's goodwill is less than the carrying amount, the difference is amortized. Fair market value is determined on the basis of estimated future cash flows. The impairment test did not produce any need for adjustments at year end.

### **Debt**

Debt is recorded at the amount repayable.

The Company

### **Accrued Liabilities for Pension Benefits and Similar Obligations**

The measurement of pensions is based upon the projected unit credit method in accordance with SFAS 87, "Employers' Accounting for Pensions." As permitted under SFAS 87, changes in the amount of either the projected benefit obligation (for pension plans) or plan assets resulting from experience different from that assumed and from changes in assumptions can result in gains and losses not yet recognized in the Company's consolidated financial statements. The expected return on plan assets is determined based on the expected long-term rate of return on plan assets and the fair value or market-related value of plan assets.

Amortization of an unrecognized net gain or loss is included as a component of the Company's net periodic benefit plan cost for a year if, as of the beginning of the year, that unrecognized net gain or loss exceeds 10 percent of the greater of 1) the projected benefit obligation or 2) the fair value or market-related value of the plan's assets. In such case, the amount of amortization recognized by the Company is the resulting excess divided by the average remaining service period of active employees expected to receive benefits under the plan.

# Notes to the Consolidated Balance Sheets and Consolidated Statements of Income

### 1. Trade Accounts Receivable

Trade accounts receivable consist of the following (in K €):						
		2003	2002			
	Trade accounts receivable	23,977	23,675			
	Allowance for doubtful accounts	-1,753	-1,738			
Dec. 31		22,224	21,937			

The Company provides credit in connection with its normal course of business to a wide variety of customers. The Company performs ongoing credit evaluations of its customers and establishes allowances for identified credit risks.

Summary of a	ctivity in the allowance for doubtful accounts (in K€):		
		2003	2002
	Balance at beginning of year	1,738	1,160
	Provision for doubtful accounts	824	850
	Collections on previously reserved accounts	-576	-240
	Accounts written off	-233	-32
Dec. 31	Balance at end of year	1,753	1,738

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

### 2. Inventories

Inventories co	onsist of the following (in K€):		
		2003	2002
	Raw materials	7,648	7,078
	Work in process	8,848	10,018
	Finished products	8,749	10,501
	Reserves	-4,885	-5,194
Dec. 31		20,360	22,403

Where required by the market situation, a lower valuation was applied due to lower replacement costs/realized proceeds on disposal or realized proceeds on disposal as reduced by a profit margin (lower of cost or market rule).

Summary of the activity in the inventory reserves (in K€):					
		2003	2002		
	Balance at beginning of year	5,194	4,726		
	Provisions	336	1,567		
	Inventory written off	-645	-1,099		
Dec. 31	Balance at end of year	4,885	5,194		

## 3. Other Short-Term Accounts Receivable and Current Assets

These items contain accounts receivable from tax authorities in the amount of € 1.4 million and derivative financial instruments in the amount of € 0.9 million. The remainder consists of numerous individual items. The accounts receivable and assets recorded under this item have a remaining term of up to one year.

### 4. Prepaid pension cost

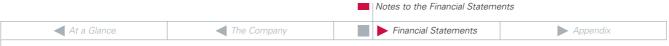
The transfer of liquid assets (€ 36.0 million) to Pfeiffer Vacuum Trust e. V. resulted in a higher allocation of funds than the transferred pension entitlements (€ 33.2 million).

### 5. Property, Plant and Equipment and Intangible Assets

The development of the Company's fixed assets is shown in the consolidated statement of fixed assets. The intangible assets recorded as of December 31, 2003 (€ 0.2 million), essentially consisting of DP software, will be amortized in full over the next three fiscal years.

### 6. Note receivable

This item relates to an adjustable rate bank loan which will be held until final maturity and is consequently valued at carrying cost of acquisition ( $\in$  9.0 million). This item does not reflect an unrealized loss of K  $\in$  295.



### 7. Goodwill

The recorded goodwill resulted from the acquisition of shares in Pfeiffer Vacuum Systems (International) AG in June 2000.

### 8. Other Long-Term Assets

This item contains € 0.8 million in employee loans in conjunction with the financing of the convertible bonds issued.

### 9. Long-Term Debt

In 2000, the Company received a loan in the amount of € 10.3 million from Kreditanstalt für Wiederaufbau. The loan was repaid in 2003; the amount outstanding as of December 31, 2002, was € 9.0 million. The loan bore interest at a fixed rate of 4.25 %.

In addition, the Company and its subsidiaries have various lines of credit available for operating purposes in the amount of approximately € 12.3 million. No amounts were drawn on these credit lines during 2003 or 2002.

### 10. Stock-Based Compensation

### 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 having an aggregate principal amount of € 0.6 million to members of management and salaried employees of the Company in Germany and other countries. The conversion feature entitles the bearer to convert each bond into 50 no-par ordinary 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 was set at € 48.03 per share. There were 120,000 and 180,000 option shares, relating to convertible bonds for the 2000 issue outstanding at December 31, 2003, and December 31, 2002, respectively. Fair value at the date of grant was € 10.64 per ordinary share option.

Beginning in July 2002, each holder of convertible bonds can convert up to 30 % of such bonds to ordinary shares, 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 their principal amount on December 10, 2005, unless previously converted or called. The bonds may be called by the Company at their principal amount upon termination of employment. Employees were given the opportunity of financing the purchase of the convertible bonds through interest-bearing employee loans. These loans bear interest at the same fixed rate as the bonds, have identical terms, are classified as other non-current assets in the balance sheet and are repayable

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upon conversion of the bonds or if the bond is called by the Company upon termination of employment. There is a right of setoff for both principal and interest between the loan and the bond.

In 2003, employees had returned 2,000 of these convertible bonds having an aggregate principal value of € 256,000 and repaid the corresponding 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 having an aggregate principal amount of € 0.6 million to members of management and salaried employees of the Company in Germany and other countries. The conversion feature entitles the bearer to convert each bond into 50 no-par ordinary 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 issuance. The conversion price for the July 2002 issue was set at € 42.86 per share. There were 210,000 and 215,000 option shares, relating to the convertible bonds for the 2002 issue outstanding at December 31, 2003, and December 31, 2002, respectively. Fair value at the date of grant was € 10.35 per ordinary share option.

Each holder of convertible bonds can convert up to 30 % of such bonds to ordinary shares subsequent to 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 their principal amount on December 10, 2007, unless previously converted or called. The bonds may be called by the Company at their principal amount upon termination of employment.

Employees were given the opportunity of financing the purchase of the convertible bonds through interest-bearing employee loans. These loans bear interest at the same fixed rate as the bonds, have identical terms, are classified as other non-current assets in the balance sheet and are repayable upon conversion of the bonds or if the bond is called by the Company upon termination of employment. There is a right of setoff for both principal and interest between the loan and the bond.

The Company

Summary of option	on shares related to the convertible bonds:		
		Number of Shares	Weighted Average Exercise Price per Share
	Convertible shares outstanding at January 1, 2001	391,400	29.74
	Granted	_	_
	Exercised	-171,400	6.27
	Forfeited	_	_
	Convertible shares outstanding at December 31, 2001	220,000	48.03
	Granted	230,000	42.86
	Exercised	_	_
	Forfeited	-55,000	46.62
	Convertible shares outstanding at December 31, 2002	395,000	45.22
	Granted	_	_
	Exercised	_	_
	Forfeited	-65,000	47.63
	Convertible shares outstanding at December 31, 2003	330,000	44.74

In 2003, employees had returned 400 of these convertible bonds having an aggregate principal value of  $\leqslant$  51,200 and repaid the corresponding employee loans.

72,000 and 54,000 options were exercisable at December 31, 2003, and 2002, respectively. The Company did not recognize any compensation expense for the stock-based compensation awards in the years 2003, 2002 and 2001.

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 being used for grants in 2002 and 2000: 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%.

SFAS 123 requires disclosure of pro forma information regarding net income and net income per share as if the Company had accounted for its stock-based compensation to employees using the fair value method. For pro forma purposes, using the fair value method the Company's net income would have been K € 11,721 and net income per share would have been € 1.34. For the year 2002 the fair value method did not materially impact net income or net income per share.

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### 11. Pension Benefits and Similar Obligations

Most employees in Germany, the United States of America, the Netherlands and Belgium are entitled to receive pension benefits from the Company, which are covered by defined benefit plans in their respective countries. In the United States, the Company had established 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 for employees. Consistent with German requirements and practice, the Company's German plans traditionally were unfunded. In November the Company established Pfeiffer Vacuum Trust e. V. ("the Trust"), a registered association. It is an independent, bankruptcy-protected, separate legal entity whose sole purpose is to act in a fiduciary capacity as trustee for the assets held. In connection with the formation of the trust, the Company made a cash contribution of K € 35,955. The trust has invested this cash in a mutual fund managed by an unrelated third party that pursues a target allocation of 30 % in equities and 70 % in fixed-income securities and cash.

The Trust has contracted with an asset management company belonging to a prominent German banking group to perform the financial investment. The asset management company has established a special fund for this purpose.

Total pension	expense for all plans included the following components (in $K \in$ ):		
		2003	2002
	Service cost	970	902
	Interest cost	2,163	2,123
	Expected return on assets	-73	-97
	Amortization of:		
	Unrecognized net actuarial (gains) losses	46	1
	Unrecognized prior service cost	77	79
	Other	-	1
Dec. 31		3,183	3,009

The Company

The following table presents the funded status and amount recognized in the consolidated financial statements for all defined benefit pension plans:

		2003	2002
	Change in benefit obligation		
	Beginning projected benefit obligation	38,012	34,509
	Service cost	970	902
	Interest cost	2,163	2,123
	Benefit payments	-1,479	- 1,407
	(Gains)/losses	-1,223	2,258
	Other	1,863	-2
	Impact of foreign currency exchange rate differences	-436	-371
	Ending projected benefit obligation	39,870	38,012
	Change in plan assets		
	Fair value at beginning of year	989	1,241
	Return on plan assets	171	-87
	Company contributions	36,099	71
	Benefits paid	-41	-46
	Other	1,204	_
	Impact of foreign currency exchange rate differences	- 193	-190
	Fair value at end of year	38,229	989
	Funded status of plans (underfunded)	-1,641	-37,023
	Unrecognized actuarial (gain)/loss	2,963	4,396
	Unrecognized prior service cost	292	371
	Unrecognized transition obligation (SFAS 87)	276	2
	Minimum pension liability	-112	-1,361
ec. 31	Prepaid (accrued) pension cost – net	1,778	-33,615

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Amounts recogn	nized in balance sheets (in K€):		
		2003	2002
	Intangible assets – minimum pension liability	6	287
	Prepaid pension costs	2,819	_
	Accrued pension	-1,041	-33,615
	Minimum pension liability in excess of unrecognized prior service cost – net of tax	64	656
Dec. 31	Net amount recognized in balance sheets	1,848	-32,672

Significant a	actuarial assumptions used:		
		2003	2002
	Germany		
	Weighted average discount rate	5.50 %	5.75 %
	Rates of increase in compensation levels	2.75 %	3.00 %
	Expected long-term rate of return on assets	5.50 %	_
	United States		
	Weighted average discount rate	6.25 %	6.75 %
	Rates of increase in compensation levels	3.00 %	3.50 %
	Expected long-term rate of return on assets	7.50 %	8.50 %

The measurement date used to determine pension benefits was December 31, 2003.

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Projected future	benefit payments to retired employees of the German operations (in K €):	
	2004	1,604
	2005	1,671
	2006	1,724
	2007	2,037
	2008	2,061
		9,097

Employees of the Company in certain other countries are covered by defined contribution benefit plans. Under these plans, the obligation does not rest with Pfeiffer Vacuum, but with the respective plans. Generally, contributions are based upon a percentage of the employee's wages or salaries. The costs of these plans charged to operations amounted to  $K \in 642$  for 2003 and  $K \in 620$  for 2002.

### 12. Accrued Liabilities

Accrued liabilitie	s consist of the following (in K€):		
		2003	2002
	Warranty	3,625	3,774
	Employee-related expenses	4,492	4,635
	Other	641	779
Dec. 31		8,758	9,188

Warranty prov	visions consist of the following (in K€):		
		2003	2002
	Balance at beginning of year	3,774	4,351
	Warranties issued during the year	2,668	2,323
	Utilization of accruals	-2,070	-2,031
	Releases	-634	-764
	Foreign exchange translation adjustment	-113	-105
Dec. 31	Balance at end of year	3,625	3,774

Employee related costs primarily include accruals for vacation pay, bonuses, accrued overtime.

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### 13. Liabilities

Liabilities (in K€	E):				
		Total Dec. 31, 2003	Less than 1 year	1 – 5 years	More than 5 years
	Convertible bonds	845 (1,011)	_ (_)	845 (1,011)	_ ( <u>-</u> )
	Long-term debt	(9,037)	- (1,291)	– (5,164)	(2,582)
	Total financial liabilities	<b>845</b> (10,048)	(1,291)	<b>845</b> (6, 175)	<b>–</b> (2,582)
	Trade accounts receivable	4,153 (3,483)	4,153 (3,483)	_ ( <u>-</u> )	_ (_)
	Customer deposits	1,051 (1,938)	1,051 (1,938)	_ ( <u>-</u> )	_ (_)
	Other payables	2,252 (2,269)	2,252 (2,269)	_ ( <u>-</u> )	(-)
	thereof for taxes	1,003 (1,087)	1,003 (1,087)	_ ( <u>-</u> )	_ (_)
	thereof for social security	853 (859)	853 (859)	_ ( <u>-</u> )	_ (_)
(Prior-year	Total other liabilities	<b>7,456</b> (7,690)	<b>7,456</b> (7,690)	_ (_)	(-)
amounts in brackets)	Total	<b>8,301</b> (17,738)	<b>7,456</b> (8,981)	<b>845</b> (6,175)	(2,582)

The bond issue relates to the convertible bonds issued to employees. Due to the fact that its interest rate largely conforms to market conditions, it is assumed that its carrying value approximates its fair market value.

The maturities of the bond issue within the next five years will depend upon exercise of the conversion right by the employees in question. Should no conversions be effected, the maturities will be as follows:

Remaining matur	rity through December 31 (in K€):	
	2004	-
	2005	307
	2006	-
	2007	538
		845

All liabilities are unsecured.

# 14. Shareholders' Equity Subscribed Capital

At the close of the fiscal year, the subscribed capital of Pfeiffer Vacuum Technology AG totaled K € 22,504. The shares are bearer shares and are classified into 8,790,600 no-par shares.

### **Authorized Capital**

Authorized Capita	l:			
		Resolution of the Annual Share- holders Meeting on	Valid Through	Amount in €
	Authorized Capital I	June 6, 2000	June 5, 2005	8,640,000
	Authorized Capital II	June 6, 2000	June 5, 2005	2,160,000
				10,800,000

With the consent of the Supervisory Board, the Management Board is authorized to increase the share capital of the Company through one or more issues of no-par shares against contributions in cash.

### **Conditional Capital**

Through a resolution of the Annual Shareholders Meeting on June 6, 2000, the share capital of the Company was conditionally increased by a total of  $K \in 1,152$ , classified into up to 450,000 bearer shares. The purpose of the conditional increase of capital is to assure the conversion rights of the holders of convertible bonds in connection with the employee participation program.

## **Capital Reserves**

There has been no change from the year before in the capital reserves in the amount of  $K \in 2,821$  recorded on December 31, 2003.

### **Accumulated Other Comprehensive Income**

	2003	2002
Balance at beginning of year	1,313	4,819
Change in unrealized gains from derivative instruments for capitalizing payment flows (cash flow hedges)	228	357
Tax effect from derivative instruments	-87	-139
Change in derivative instruments	141	218
Currency translation differences	-3,609	-3,068
Pension valuation differences (minimum pension liability)	967	-1,074
Tax effect from pension valuation	-375	418
Change in pension valuation	592	-656

## **Treasury Stock**

Dec. 31

Balance at end of year

Under the authorization resolved by the Annual Shareholders Meeting on June 11, 2002, the Company acquired treasury stock pursuant to § 71, Sub-Para. 1, No. 8, German Stock Corporation Act. In the 2003 fiscal year, a total of 100,076 no-par shares were acquired at a cumulative average value of K € 2,438. The authorization expired after December 10, 2003, and was limited to 10 % of the share capital.

The following table presents the shares purchased by Pfeiffer Vacuum Technology AG during the 2003 fiscal year:

Date	Price per	Number of	Value of	Cumulative	Cumulative	Average
	Share	Shares	Shares	Number of	Value of	Share Price
	(€)		(€)	Shares	Shares (€)	(€)
05/16/2003	22.43	25,626	574,842.43	25,626	574,842.43	22.43
05/23/2003	23.00	8,000	183,984.00	33,626	758,826.43	22.56
06/06/2003	22.86	2,000	45,724.00	35,626	804,550.43	22.58
07/30/2003	22.93	500	11,467.00	36,126	816,017.43	22.59
08/08/2003	24.03	14,600	350,838.73	50,726	1,166,856.16	23.00
08/19/2003	24.63	7,205	177,458.43	57,931	1,344,314.59	23.21
09/26/2003	26.04	17,205	448,018.20	75,136	1,792,332.79	23.85
10/02/2003	26.08	15,879	414,092.56	91,015	2,206,425.35	24.24
10/29/2003	25.60	9,061	231,961.60	100,076	2,438,386.95	24.37
		100,076	2,438,386.95			



1,313

-1,563

### **Dividends**

Any dividend payments can only be made from unappropriated retained earnings as presented in the unconsolidated annual financial statements of Pfeiffer Vacuum Technology AG under German accounting principles (HGB). The amount of these unappropriated retained earnings differs from the amount presented in the consolidated financial statements under U.S. GAAP accounting principles. As of December 31, 2003, a total of € 37.6 million was available for dividend distributions

#### 15. Income Taxes

Tax accruals in the amount of K € 5,577 were formed for obligations in Germany, and K € 1,066 for obligations outside Germany.

Under current German corporate tax law, taxes on income are composed of corporate taxes, trade taxes and an additional surtax, and amounted to a combined tax rate of 39.5 % for the German companies for the year 2003 and 38.9 % for 2002.

Effective January 1, 2002, a corporation and trade tax entity with corresponding profit and loss transfer agreements was established for the consolidated German companies. Additionally, the Company had an entitlement to a tax credit on distributed earnings in 2003 for the fiscal year 2002 amounting to € 0.9 million. In conformity with German tax legislation, this claim reduced income tax expense and the income tax rate for the year 2002. Consequently, the effective calculated tax rate for the year ended December 31, 2002 was 29.3 %.

On April 11, 2003, the German Tax Authorities issued a resolution – effective April 12, 2003 - relating to the refund of corporation tax credits resulting from distributed earnings to shareholders. The Company's dividend payments for the year 2002, paid in 2003, are no longer eligible for tax credit. Accordingly, the Company's tax credit for the year 2003 retroactively became uncollectible. Beginning on December 31, 2005, it will be possible to claim partial utilization of the corporation tax credit in light of the circumstances of the individual case. As a result of this new legislation and other factors, the Company's effective tax rate increased to 45.0 % for the 2003 fiscal year.

Income before in	come tax was taxable in the following jurisdictions (in K€):		
		2003	2002
	Germany	12,868	18,048
	Outside Germany	10,309	6,770
		23,177	24,818

	2003	2002
Current		
Germany	8,783	4,679
Outside Germany	2,761	2,834
	11,544	7,513
Deferred		
Germany	-800	420
Outside Germany	-313	-650
	-1,113	-230

Measurement of deferred taxes is performed on the basis of the respective national tax rates, which, according to the legal situation applicable on the date of the close of the fiscal year, will apply at the time at which the temporary differences are likely to be cleared or the last carryforwards are likely to be utilized.

Deferred tax assets and liabilities are formed for all temporary differences between the valuations presented in the financial statements for tax purposes and the financial statements presented in accordance with U.S. GAAP that flow into the consolidated financial statements, as well as for certain consolidation measures. In addition, deferred tax assets are recorded for loss carryforwards.

The Company

		2003	2002
	Deferred tax assets		
	Pensions	2,966	2,381
	Inventory	430	519
	Intangible assets	518	1,025
	Tax loss carryforward	532	_
	Derivatives	348	260
	Other	349	104
		5,143	4,289
	Deferred tax liabilities		
	Property, plant and equipment	-693	-675
	Other	-111	-108
		-804	-783
Dec. 31	Net deferred tax assets	4,339	3,506

The deferred tax assets relating to the "goodwill" item reflect goodwill capitalized and amortized on a straight-line basis in the financial statements for tax purposes of the Company's U.S. subsidiary, which had already been fully amortized in the Company's commercial financial statements (I).

		2003	2002
	Deferred tax assets		
	Short-term	1,127	883
	Long-term	4,016	3,406
		5,143	4,289
	Deferred tax liabilities		
	Short-term	-111	-108
	Long-term	-693	-675
		-804	-783
Dec. 31	Net deferred tax assets	4,339	3,506

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As of December 31, 2003, the Company had net operating loss carryforwards of a non-German subsidiary amounting to  $K \in 2,127$  which may be used to offset future taxable income and will expire if not used by 2008. The management of the Company assumes that the deferred tax assets are valuable assets and will be able to be realized in future fiscal years.

Reconciliation of income taxes determined using the statutory rate to actual income taxes provided (in K €):

	2003	2002
Income tax expenses at German statutory rate	9,146	9,648
Higher (lower) foreign tax rates	-507	149
Tax credit on distributed earnings	_	-865
Taxes due to new legislation on distributed earnings in prior years	865	_
Withholding taxes due to dividend payments	336	_
Tax credits due to tax filings in prior years	-3	-449
Lower German tax rate due to change to unified tax structure	_	-1,023
Non-deductible expenses	245	206
Other	349	-383
Provision for income taxes	10,431	7,283

Provision has not been made for additional taxes on undistributed earnings of non-German subsidiaries. These earnings are considered to be permanently reinvested and could become subject to additional tax if remitted or deemed remitted as dividends; however calculation of such additional tax is not practical. Following recent changes in German law, dividends from non-German subsidiaries are only 95 % tax-exempt, i. e. 5 % of dividend income is not deductible from income for corporate tax purposes for fiscal years beginning in 2003. Management estimates that the effects of this new rule will be negligible, since the German investments are consolidated for tax purposes.

### 16. Commitments and Other Financial Obligations

In 2003, liabilities under guarantees amounted to K € 91 (2002: K € 123). The liabilities under guarantees relate to rental guarantees. The terms of the guarantees are unlimited. Moreover, warranty commitments that are customary in the industry also exist. The other financial obligations relate to rental and leasing contracts.

The Company has entered into leases and maintenance agreements which expire at various dates, some of which are renewable. Certain of these agreements contain rent escalation clauses. The table below presents the maximum amount

of the contractual commitments as of December 31, 2003, classified by the periods in which the contingent liabilities or commitments expire:

Rents and leases (in K€):							
		Total	Less than 1 year	1–3 years	3-5 years	More than 5 years	
	Operating Leases	3,594	1,290	1,467	423	414	
	Maintenance Contracts	102	87	9	4	2	
	Total	3,696	1,377	1,476	427	416	

Rental expenses amounted to  $\in$  1.6 million for the year 2003 and  $\in$  1.7 million for the year 2002.

### 17. Segment Information

Under SFAS 131, "Disclosures about Segments of an Enterprise and Related Information," segment reporting must be made on the basis of the business enterprise's internal organizational and reporting structures (management approach). The internal organizational and reporting structures differ from country to country. The success and performance of the subsidiaries, which are independent legal entities with their own management, are assessed on the basis of their operating results before taxes. Presented below are various parameters on the basis of internal segmentation:

	2003	2002
Net Sales		
Germany	108,440	114,194
Third party	65,974	68,219
Intercompany	42,466	45,975
Europe (excluding Germany)	46,774	44,655
United States	32,870	35,936
Rest of world	3,557	3,999
	191,641	198,784
Intercompany eliminations	- 47,623	-47,842
Total	144,018	150,942

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Segment o	operating profit (in K€):		
		2003	2002
	Germany	13,762	13,797
	Europe (excluding Germany)	6,103	2,674
	United States	4,148	3,412
	Rest of world	406	771
		24,419	20,654
	Intercompany eliminations	-4,941	515
		10 //70	21 160

Segment income	before tax (in K €):		
		2003	2002
	Interest income – net	1,557	1,703
	Foreign exchange gain (loss)	2,142	1,946
		23,177	24,818

Segment tota	al assets (in K €):		
		2003	2002
	Germany	84,694	119,816
	Europe (excluding Germany)	19,633	22,698
	United States	13,442	10,625
	Rest of world	2,011	2,357
Dec. 31		119,780	155,496

Segment lone	g-lived assets (in K€):		
		2003	2002
	Germany	24,690	26,424
	Europe (excluding Germany)	771	1,371
	United States	86	408
	Rest of world	187	231
Dec. 31		25,734	28,434



Segment cap	oital expenditures (in K€):		
		2003	2002
	Germany	1,501	2,194
	Europe (excluding Germany)	328	392
	United States	30	_
	Rest of world	58	46
Dec. 31		1,917	2,632

Segment depreciation (in K€):					
		2003	2002		
	Germany	3,217	3,516		
	Europe (excluding Germany)	518	840		
	United States	162	198		
	Rest of world	62	73		
		3,959	4,627		

Net sales between segments are effected on the basis of customary transfer prices. The capital expenditures relate to paid acquisitions of both intangible assets as well as property, plant and equipment. Depreciation and amortization reflect decreases in the value of both intangible assets as well as property, plant and equipment.

Sales by produc	et are as follows (in K€):		
		2003	2002
	Turbo pumps	53,571	56,698
	Measurement and analysis equipment, components	35,218	41,728
	Service	25,931	26,145
	Backing pumps	18,040	19,312
	Systems	11,258	7,059
		144,018	150,942

The Company's complete product portfolio is marketed in all segments/countries.

# 18. Financial Instruments Fair Value

The carrying amounts of financial instruments such as cash and cash equivalents, current accounts receivable and payable, approximate their fair value due to the short-term maturities of these instruments. The note receivable will be held until final maturity and is valued on the basis of its net book value under U.S. GAAP. The fair value of the note receivable based upon an estimate provided by the issuer.

### 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 35 % of the Company's net sales are denominated in currencies other than the euro. Foreign currency exchange hedging transactions are conducted only for U.S. dollars.

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.

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 ended December 31, 2003, and December 31, 2002, were  $K \in 898$  and  $K \in 670$ , respectively, and recognized a gain of  $K \in 550$  and  $K \in 409$ , respectively, in 2003 and 2002 net of income tax effect of  $K \in 348$  and  $K \in 261$ , in other comprehensive income.

As of December 31, 2003 and 2002, the principal amounts of the U.S. dollar forward contracts were € 7.7 million and € 8.9 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.

The Company

# 19. Earnings per Share

The weighted average of shares issued reflects the Company's purchases of treasury stock at various times during the 2003 fiscal year. The stock options issued to employees were antidilutive.

Earnings per	share:		
		2003	2002
	Net income (K €)	12,746	17,535
	Denominator for basic earnings per share – weighted-average shares	8,750,201	8,790,600
	Earnings per share		
	Basic (€)	1.46	1.99
	Diluted (€)	1.46	1.99

### Major Differences between German and U.S. Accounting Principles

The Company utilizes the exempting provision of section 292a of the German Commercial Code (HGB), which states that consolidated financial statements and consolidated management reports may be prepared according to international accounting standards. The consolidated financial statements have been prepared in accordance with the current U.S. Generally Accepted Accounting Principles (U.S. GAAP). They are consistent with the 4th and 7th EU Directives based on the interpretation according to DRS No. 1 of the German Accounting Standards Committee. For the Company, the accounting, valuation and consolidation methods under U.S. GAAP differ from the German provisions of the HGB primarily in the following respects:

# Differences in the Principles of Consolidation Goodwill and Acquisition Accounting

Goodwill represents the excess purchase price over the fair market value of assets acquired and liabilities assumed. U.S. GAAP state that goodwill must be capitalized and, in contrast to the HGB, may no longer be amortized over its estimated useful life. Instead, it must be tested for impairment at least once a year and, if necessary, written down. Offsetting goodwill against shareholders' equity, which is an option under § 309 of the HGB, is not permitted.

# Differences in Accounting, Valuation and Reporting Reinstatement of Original Values for Long-Lived Assets

The Company

If an asset has been written down due to impairment pursuant to § 253 (2) and (3) of the HGB, the requirement to reinstate its original value under § 280 (1) of the HGB states that this value may not be retained if the reasons for the write-down no longer apply at a later balance sheet date. In such cases, the asset must be written up. Under U.S. GAAP, the carrying amount of a long-lived asset has to be reviewed for impairment if events or changed circumstances indicate that the asset's carrying amount may exceed its fair value. Impairment is measured by comparing the estimated future discounted pre-tax cash flows of the related asset to its carrying amount. SFAS 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of," states that original values may not be re-instated even if the reasons for such a write-down no longer apply.

### **Leasing Agreements**

The treatment of leasing agreements is not explicitly governed under HGB. As a general rule, the opinions relating to the treatment of leasing agreements for tax purposes issued by the tax authorities are therefore applied in the accounting of leasing agreements. With a view to these opinions, leasing agreements are generally written in such a manner that the items leased are capitalized by the lessor.

There are extensive rules under U.S. GAAP governing the accounting of leasing transactions, in particular SFAS 13, "Accounting for Leases." Under these rules, a fundamental distinction is made between capital leases and operating leases, depending upon which party to the transaction enjoys the major opportunities and bears the major risks resulting from the employment of the item leased and is thus viewed as being its beneficial owner. In the case of a capital lease, the leased item is capitalized by the lessee as its beneficial owner; in the case of an operating lease, it is capitalized by the lessor.

### Valuation of Inventories

Inventories are valued at cost of acquisition or production. Pursuant to § 255 (2) HGB, cost of production can include a proportionate share of administrative costs, depreciation as well as certain expenses for fringe benefits, in addition to the mandatory elements of cost of inputs and prime cost. U.S. GAAP (ARB 43), on the other hand, mandates that production-related production overheads, depreciation as well as product-related administrative costs be included in the cost of production, in addition to direct costs.

## **Long-Term Construction Contracts**

For long-term construction contracts, the HGB and Germany's generally accepted accounting principles basically only permit profits to be realized once the entire contract has been supplied and accepted or partially billed, i. e. not until contractually agreed delivery has been largely completed and the residual risks are insignificant (completed-contract method). U.S. GAAP (SOP 81-1 and ARB 45), however, allow profits on long-term contracts to be partially recognized prior to completion, provided a sufficiently reliable computation of the total proceeds, aggregate costs and percentage of completion is possible. The percentage of completion is defined within the Group as the ratio of contract costs incurred at fiscal year-end to total estimated costs for the entire contract (cost-to-cost method).

### Mark-to-Market

The imparity principle of the HGB states that unrealized losses have to be accounted for, but not unrealized profits. Under U.S. GAAP, however, unrealized profits are also reported, which is reflected in the following items: – Under the HGB, assets and liabilities denominated in foreign currency are valued at the lower of cost or market at the balance sheet date. Under U.S. GAAP SFAS 52, "Foreign Currency Translation," however, all assets and liabilities denominated in foreign currency have to be translated at their market rate at the balance sheet date, so that unrealized profits are recognized in income.

#### **Deferred Taxes**

Section 306 of the HGB states that deferred taxes must be recognized for all temporary differences between the carrying amounts in the tax accounts and those reported in the consolidated financial statements (timing concept); they are computed at the current tax rate. This recognizes timing differences between the tax accounts and the statutory financial statements (Financial Statements I) as well as the financial statements prepared for inclusion in the consolidated accounts (Financial Statements II). The effects of consolidation measures that are subsequently reversed over the course of time also have to be recognized. The HGB does not permit deferred taxes to be recognized for either quasi-permanent differences or losses carried forward.

U.S. GAAP (SFAS 109, "Accounting for Income Taxes") state that deferred taxes have to be recognized for temporary differences arising between the tax bases of assets or liabilities and their carrying amounts in the consolidated financial statements, with quasi-permanent differences being classified as temporary (temporary concept). As under the HGB, this recognizes differences between the tax accounts and Financial Statements I and II and the effects of consolidation measures. Unlike the HGB, it only recognizes such differences if they are temporary. Additionally, deferred taxes are recognized on net operating loss (NOL) carryforwards to the extent that their future tax benefit or utilization can be realized. Tax is computed at the rate applicable under current law to retained earnings at the balance sheet date, taking account of future known changes to the tax rate. If deferred tax assets are unlikely to be realized, a valuation allowance is reported.

The Company

### Other Provisions and Accruals

In addition to the requirement to report provisions for liabilities and impending losses pursuant to § 249 (1), the HGB also states that provisions and accruals may be recognized for certain expenses that do not constitute an obligation toward a third party (expense provisions pursuant to § 249 (2) of the HGB). Provisions and accruals are calculated pursuant to § 253 (1) of the HGB in accordance with customary commercial principles and the prudence principle.

The reporting of provisions and accruals under U.S. GAAP (CON 6, "Elements of Financial Statements," and SFAS 5, "Accounting for Contingencies") is much more restrictive. Accruals and provisions may only be established if an obligation toward a third party exists, there is a likelihood of its crystallization and its amount can be reasonably estimated. Expense provisions are not permitted. When such provisions and accruals are accounted for, the most probable value is reported; if there is a range of equally probable values, the lowest one is reported.

### **Provisions for Pensions and Similar Obligations**

Under both the HGB and U.S. GAAP, provisions for pension liabilities are formed on the basis of expected, discounted future payments. Under the HGB, the entry age normal method is generally applied pursuant to § 6a of the German Income Tax Act. Under U.S. GAAP, the projected unit credit method is used in accordance with SFAS 87, "Employers' Accounting for Pensions." This method takes account of future salary increases and inflation-related pension adjustments. Furthermore, the discount rate used is the prevailing market interest rate, generally the long-term capital market rate rather than the 6 % used under German tax law and generally applied to financial statements prepared according to the HGB.

The minimum pension liability recognized under SFAS 87 meets the provision requirements of the HGB. However, additions are not always recognized as an expense under U.S. GAAP; the full amount is accounted for by reporting an intangible asset or by offsetting it against shareholders' equity ("Other comprehensive income"). This is not permitted under the HGB.

In the case of funded plans, certain qualifying assets are deducted from the total amount of the liability or, if there is an excess of assets over the liability, capitalized. This is also not permitted under the HGB.

Calculation of the old-age part-time benefit liabilities under U.S. GAAP is based upon signed contracts between the Company and its individual employees. HGB accounting principles require that accrual be made for the aggregate amount of all employees who are legally entitled to utilize the old-age part-time retirement option. Under U.S. GAAP the increase is regularly expensed over the remaing period of service. Under HGB, the increase must be accrued in full at the beginning of the part time retirement and recorded as expensed.

### **Reporting Requirements**

The structure of the balance sheets and the statements of income meets the requirements of the 4th and 7th EU Accounting Directives, with the exception of minority interests.

In order to ensure compliance with the EU Accounting Directives, certain supplemental information has been provided in the Notes, such as the Consolidated Schedule of Fixed Assets, which is not required by U.S. GAAP.

#### **Additional Information**

The following information has been added to the Company's consolidated financial statements in order to exempt the Company from the obligation to prepare consolidated accounts in accordance with German law:

## **Personnel Expenses**

Personnel expens	es were as follows (in K€):		
		2003	2002
	Wages and salaries	38,172	39,591
	Social security, pension and other benefit cost	8,926	10,025
	thereof for pensions	3,085	3,338
	Total	47,098	49,616

## **Number of Employees**

The number of employees was as follows at December 31, 2003 and 2002:

	2003	2002
Annual average	2000	2002
Salaried employees	529	560
Wage earners	248	263
Total	777	823
Balance sheet date		
Salaried employees	509	547
Wage earners	252	264
Total	761	811

## **Notes to the Financial Statements**

### **Management Board**

- ▶ Wolfgang Dondorf (Chairman), Diplom-Ingenieur
- ▶ Wilfried Glaum, Betriebswirt, until June 30, 2003
- ▶ Amandus Waterkamp, Diplom-Ingenieur, Diplom-Kaufmann, since April 1, 2003

The aggregate amount of compensation paid by the Company during the year ended December 31, 2003, to all members of the Management Board of the Company, as a group, for services in all capacities was  $\in$  1.1 million, including a fixed component amounting to  $\in$  0.6 million and a variable component amounting to  $\in$  0.5 million. Former members of the Management Board did not receive any compensation in the 2003 fiscal year. A pension accrual in the amount of  $\in$  3.0 million (2002:  $\in$  2.8 million) exists for members of the Management Board.

#### **Supervisory Board**

- ▶ Dr. Michael Oltmanns (Chairman), Attorney at Law and Tax Advisor Further supervisory board posts:
  - HPC AG, Weinheim (Chairman)
  - HyChem AG, Steinau an der Straße (Vice Chairman)
  - Jetter AG, Ludwigsburg (Chairman)
  - Scholz AG, Essingen (Chairman)
- ▶ Prof. Dr. Klaus-Jürgen Kügler (Vice Chairman), Professor at the Giessen-Friedberg Technical University
- ► Michael J. Anderson, Investment Banker
- ▶ Günter Schneider (Employee Representative), Chairman of the Employee Council
- ▶ Götz Timmerbeil, Certified Public Accountant and Tax Advisor
- ► Edgar Keller (Employee Representative), Commercial Staff Member

Committees of the Supervisory Board of Pfeiffer Vacuum Technology AG:
Audit Committee: Götz Timmerbeil, Dr. Michael Oltmanns,

Michael J. Anderson

Administration Committee: Dr. Michael Oltmanns, Prof. Dr. Klaus-Jürgen Kügler,

Günter Schneider

Management Board Committee: Dr. Michael Oltmanns, Prof. Dr. Klaus-Jürgen Kügler,

Götz Timmerbeil

The aggregate amount of fixed compensation paid to all members of the Supervisory Board was K€75; no variable compensation component is agreed.

#### Exempting Provision under § 264 (3) of the HGB

Pfeiffer Vacuum GmbH, Asslar, which is included in the consolidated financial statements of Pfeiffer Vacuum Technology AG, has made use of the exempting provision under § 264 (3) of the HGB.

#### **Corporate Governance**

In 2002, a government commission formed by the German Federal Ministry of Justice issued the German Corporate Governance Code. The objective of the Code is to make internationally and nationally accepted standards of good and responsible corporate governance more transparent to investors. The recommendations and suggestions contained in the Code have already been a firm element of Pfeiffer Vacuum's corporate governance for years. Pursuant to § 161 of the German Stock Corporation Act, the Management and Supervisory Boards issued the statement of compliance for the year 2003 in December 2003. With the following exceptions, this statement reflects compliance with the recommendations of the German Corporate Governance Code Government Commission:

No agreement was able to be reached in negotiations with our D & O insurance carrier to obtain a lower premium if a deductible is arranged. The Company will therefore not arrange for a deductible. A deductible would not improve the overall motivation and sense of responsibility of the Management and Supervisory Boards. Both the Management and Supervisory Boards work to the benefit of the enterprise.

(Point 3.8 of the Code)

▶ The compensation of the members of the Management Board has in the past been and presently still is stated collectively in the Notes to the Consolidated Financial Statements.

(Point 4.2.4 of the Code)

▶ The members of the Supervisory Board have in the past received and presently still receive fixed compensation, which does not contain any performance-related variable income components. Their compensation is stated collectively in the Notes to the Consolidated Financial Statements.

(Point 5.4.5 of the Code)

The full text of the Code is available at the following Internet address: www.corporate-governance-code.de

## **Proposal Relating to Appropriation of Retained Earnings**

The Management Board will propose to the Supervisory Board that the unappropriated retained earnings of Pfeiffer Vacuum Technology AG for the 2003 fiscal year in the amount of  $K \in 37,621$  be employed to distribute a base dividend of  $\in 0.40$  per share of no-par stock as well as a bonus dividend of  $\in 0.30$  per share of no-par stock to the Company's shareholders. This represents a total distribution of  $K \in 6,083$ . A dividend of  $\in 0.56$  per share was paid in 2003 for the 2002 fiscal year.

Asslar, February 24, 2004

Management Board

Wolfgang Dondorf

Amandus Waterkamp

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# Management's Discussion and Analysis - Overall Economic Environment

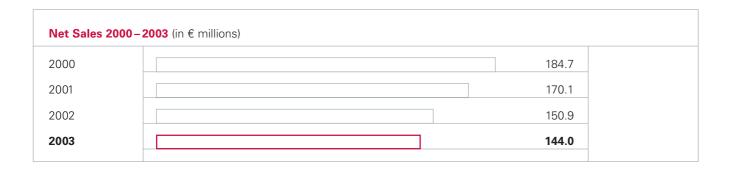
It is not satisfying to suffer declining sales, but it is very satisfying to note that we can hold our own even in economically difficult times.

The year 2003 – A weak dollar, declining exports and a lackluster economy. Although we were unable to compensate for all of these influences, we were able to relativize them through enterprise and cost-consciousness. The result is a highlight for us

- ▶ Income before tax of € 23.2 million
- ► An EBIT margin of 13.5 % and
- ▶ A before-tax return on sales of 16.1 %.

◀ The Company

In the year 2003, we generated sales of  $\in$  144.0 million, a total of  $\in$  6.9 million less than the year before. In the face of these lower sales, our income before tax was  $\in$  23.2 million (2002:  $\in$  24.8 million). This enabled the lower sales and the resulting impact on profitability to be nearly completely compensated for through cost-reduction measures and higher financial income – a result of which we can be proud for the year 2003 – even though it was not possible to achieve our original sales target for 2003.



#### **Economic environment**

#### World economy

There were no signs of recovery in the world economy in 2003. While the first half of the year 2003 was characterized by recessionary trends, there were signs of a moderate recovery in the third quarter. Only moderate growth was able to be achieved.

#### **United States**

The main engine that fueled this moderate world economic growth was the development of the U.S. economy, which grew by 3 %. During the third quarter, the gross domestic product of the world's largest economy advanced by 8 %. This growth in the American economy was attributable, in particular, to consumer demand as well as government spending in the armaments sector. Tax refunds and low interest rates had a positive impact on consumer demand.

#### **Europe**

Economic recovery failed to materialize in Europe. Economic growth was virtually 0 %. This lack of growth stemmed, in particular, from declining capital investments as well as from uncertainty about the introduction of reforms in various EU member countries and the relief these reforms would be providing.

#### Asia

Economic growth differed significantly in the countries of Asia. While Korea battled against a slump in growth, the Chinese economy grew by some 9 %. Thailand, Malaysia and Indonesia also posted positive growth signals. Even the Japanese economy, which in the past had suffered particularly from structural problems, achieved growth of 2 %.

#### Vacuum industry

The growth of the vacuum industry in 2003 was limited by the economic weakness of the target markets. On balance, the industry posted negative growth year on year.

## Management's Discussion and Analysis - Business in Fiscal 2003

### Regional sales distribution

In fiscal 2003, we generated net sales of € 144.0 million (2002: € 150.9 million). This represents a decline of € 6.9 million, of which € 6.5 million was attributable to the weakness of the U.S. dollar. The decline in sales did not stem from a loss of market share.

	Europe (Excluding Germany)	Germany	United States	Asia	Other Regions
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

#### **Europe**

In Europe (excluding Germany), sales declined by 5.1% from  $\leqslant 50.9$  million in 2002 to  $\leqslant 48.3$  million in 2003. We incurred the greatest declines in sales in Sweden, Great Britain and Belgium, where sales fell by 16.3% from a total of  $\leqslant 14.1$  million to  $\leqslant 11.8$  million. In Switzerland, we increased sales by  $\leqslant 1.5$  million to  $\leqslant 6.5$  million (2002:  $\leqslant 5.0$  million).

Accounting for 45.5 % of European sales, Germany is our largest market in Europe. Amounting to € 40.4 million (2002: € 40.5 million), sales in Germany were able to be sustained at the previous year's level.

The share of total sales accounted for by Pfeiffer Vacuum Systems GmbH in Aschaffenburg (DVD line of business), which was acquired as of January 1, 2002, amounted to € 5.4 million this fiscal year (2002/year of formation: € 0.3 million). During the final quarter of 2003, in particular, several orders were received for lines for the production of prerecorded DVDs, as well as for various individual components.

Accounting for 61.6 % of total sales, the European market generates the highest share of the Company's sales (2002: 60.6 %).

The Company

#### **United States**

Totaling € 32.8 million, sales in the United States declined by € 3.0 million (2002: € 35.8 million). This reduction was attributable solely to the weakness of the U.S. dollar. Expressed in local currency, sales rose by 9.7 %. The United States ranks second, accounting for 22.8 % of total sales.

Following nearly three years of recession/stagnation, the semiconductor industry, a major line of business at our American subsidiary, was able to post initial growth impulses during the final quarter of 2003. With the recovery in the semiconductor industry, we anticipate noticeable sales growth in the United States. Back in 2001, when the semiconductor industry slumped dramatically, we increasingly began to focus on other markets, moved into new lines of business and won new customers, such as in the glass coating industry. On balance, there has been a rise in the number of markets and customers served.

#### Asia and the rest of the world

In 2003, we generated € 19.2 million in the Asian region (2002: € 18.6 million). Following growth of 5.1 % in 2002, we were again able to achieve growth of 3.2 % in 2003 – an extremely positive result. The lion's share of sales in Asia, € 11.5 million, was generated in Japan (2002: € 10.2 million) – followed by South Korea with € 2.6 million (2002: € 3.1 million).

The activities of our Hong Kong-based subsidiary Pfeiffer Vacuum Asia Ltd. were assumed by the Hakuto agency. We enjoy a long history of successful collaboration in other Asian countries with Hakuto, which possesses a widespread sales and service network.

13.3% of total sales was generated in Asia (2002: 12.3%). A further 2.3% is distributed through the rest of the world (2002: 3.4%).

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# Management's Discussion and Analysis - Business in Fiscal 2003 \_

### Sales by product

The turbo pump – The bestseller in our portfolio Accounting for 37.2 % of total sales, turbo pump sales were down  $\in$  3.1 million from the previous year's level of  $\in$  56.7 million. In 2003, demand predominantly centered on turbo pumps with medium and low volume flow rates. Our turbo pump line was broadened to include three new developments in 2003.

With sales of  $\leqslant$  35.2 million, measurement and analysis equipment and vacuum components ranked second. Sales in this segment declined by  $\leqslant$  6.5 million year on year.

	Turbo pumps	Measurement and Analysis Equipment, Components	Service	Backing Pumps	Systems
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
2003	53.6	35.2	25.9	18.0	11.3

Ranking third was service business with sales of € 25.9 million (2002: € 26.1 million). We are represented by a total of 40 service points worldwide – which clearly sets us apart from our competitors. We offer our customers on-site service 24 hours a day – without any long waiting times!

Sales of backing pumps totaled € 18.0 million, down € 1.3 million from the previous year's level of € 19.3 million, thus ranking this product segment fourth. Our line of backing pumps includes rotary vane, Roots and dry pumps.

The Company

Ranking fifth was systems business. In 2003, this segment generated sales of  $\in$  11.3 million, an increase of  $\in$  4.2 million over the year before. This rise was primarily attributable to our new DVD line of business. During the fourth quarter of 2003, we received orders for DVD Lines and individual components, some of which generated sales during the very same quarter.

Further interesting information about our products is contained in "Products and Markets" beginning on page 25.

#### New orders and orders on hand

New orders were up sharply during the fourth quarter of 2003 At  $\in$  150.2 million, new orders rose by  $\in$  4.7 million from the previous year's level of  $\in$  145.5 million. Viewed on a quarterly basis, it can be seen that this increase primarily stemmed from the fourth quarter of 2003. The level of new orders received during the fourth quarter was 26.4 % higher than the average level of new orders received during the first three quarters of 2003. We hope that this trend will be sustained in the year 2004. Analysis of new orders by region shows that virtually all regions contributed to this success during the fourth quarter.

At year-end 2003, the book-to-bill ratio – the ratio between new orders and sales – amounted to 1.04 (2002: 0.96). This means that the value of new orders was higher than sales. Overall, this represents a sound point of departure for the year 2004.

The level of orders on hand also developed on a positive note. At  $\leqslant$  27.2 million, orders on hand were up  $\leqslant$  6.3 million from the previous year's level of  $\leqslant$  20.9 million.

At year-end 2003, it was possible to see that the recovery was accelerating. With our flexible worktime models and our optimum manufacturing operations, we are poised to swiftly respond to stronger demand.

# Management's Discussion and Analysis - Business in Fiscal 2003 \_

#### **Purchasing**

Significant reduction in purchase prices

Overall, we were able to achieve significant price reductions in the purchasing market in 2003. Running counter to this trend was the development of energy prices, where there was a sharp rise in expenditures for natural gas. As a result of favorable contract terms, the purchase price for electricity remained stable in 2003.

Further progress in the field of purchasing was achieved through the rigorous utilization of electronic aids like the Internet, enabling Purchasing's sourcing expense to be significantly reduced.

#### **Environmental protection**

Protecting the environment – A fundamental challenge that we accept In 2003, we were included in the Kemper/SNS Smaller Europe SRI Index, which was established in October of that year. Only companies that satisfy the highest standards and requirements in the three fields of business ethics, human resources and the environment are included in this index. Moreover, our environmental management system was certified without restriction under DIN ISO 14001 in November 2003 in connection with a follow-up audit. Further interesting information on this subject is contained in "Environment, Safety and Quality" beginning on page 51.

## **Human resources and social aspects**

The Company

On December 31, 2003, the corporate group employed a total of 761 people, 576 of them at our manufacturing locations in Asslar and Aschaffenburg, as well as 102 at our subsidiaries in Europe (excluding Germany), 58 in the United States, as well as 25 in Asia. More detailed information on the subject of human resources in contained in "Our People" beginning on page 57.

Workforce World	wide			
	Germany	Europe (Excluding Germany)	United States	Asia
<b>2003</b> (Dec. 31)	576	102	58	25
<b>2003</b> (average)	587	105	60	25

#### **Earnings**

We are profitable – Even in difficult economic times Until 2002, depreciation had been stated as a separate item in the Statement of Income. In the Statement of Income for 2003, depreciation expense in the amount of € 4.0 million (2002: € 4.6 million) is allocated to the respective cost categories, thus impacting cost of sales, selling and marketing expenses, general and administrative expenses, as well as research and development expenses. Prior-year values have been adjusted to provide comparability.

Amounting to 43.3 %, our gross profit margin was 2.0 percentage points lower than the previous year's level of 45.3 %. In particular, this was attributable to the higher percentage of total sales accounted for by systems business with its lower gross margin. Another reason was the lower utilization factor in our manufacturing operations. On balance, we succeeded in partially compensating for the decline through more favorable purchases of inputs.

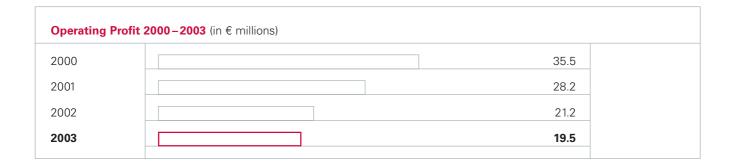
Selling, general and administrative expenses totaled  $\in$  33.9 million in 2003. This represents a reduction of  $\in$  2.5 million, or 6.9 %, resulting in a cost-to-sales ratio of 23.5 % (2002: 24.1 %). We were able to reduce costs by swiftly implementing a variety of cost-reduction measures. The workforce, for example, was lowered from 811 to 761 in a socially compatible manner by not renewing temporary employment contracts and not re-staffing the jobs of retiring employees. The 35-hour workweek under the collective-bargaining agreement was reduced for a stipulated period of time to 32.5 hours per week, with a corresponding reduction in pay. Saving on external services and postponing capital investments produced further cost reductions. Another measure that was instituted, although it will not translate into cost savings until the economy revives, was to expand the flexible worktime hours-worked accumulation total to minus 150 hours. These paid but unworked hours will then be available at no cost when the economy recovers.

We invested € 8.9 million in research & development in 2003 – as opposed to € 10.8 million in 2002. This decline was attributable to a reduction in outside services and the socially compatible reduction of our workforce. This resulted in a research & development expense ratio of 6.2 % relative to sales (2002: 7.2 %). Research & development expenses are an investment in our future. It is important to be able to identify market needs early on and to satisfy them with the appropriate new developments. Only so can we remain competitive and further expand our market share. Consequently, the research & development expense ratio will continue to remain at this level in the future.

We succeeded in earning significant income before taxes last year, in spite of declining sales and a lower gross margin: € 23.2 million, or a before-tax return on sales of 16.1 %

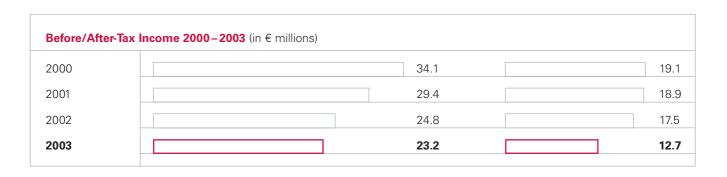
# Management's Discussion and Analysis - Business in Fiscal 2003 \_

Through these cost reductions, we succeeded in countering the decline in sales and gross margins and achieved an operating profit margin of 13.5 %. In absolute terms, this represents an operating profit of € 19.5 million, as opposed to € 21.2 million in 2002. This reduction was attributable to the above-indicated development of net sales, gross margin, selling, general and administration expenses, as well as research and development costs. Operating profit was impacted by the start-up losses incurred in the DVD line of business.



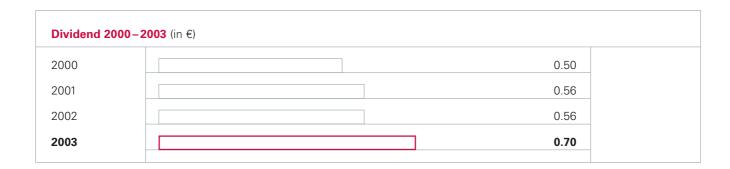
Financial income for 2003 totaled  $\in$  3.7 million. Interest income amounted to  $\in$  1.8 million, interest expense  $\in$  0.2 million. Interest expense was essentially attributable to the loan from Kreditanstalt für Wiederaufbau, which was obtained in the year 2000 and redeemed ahead of schedule in June 2003. Because we invest our money conservatively, the interest income earned does not result from speculative financial investments. The foreign exchange gain of  $\in$  2.1 million was  $\in$  0.2 million higher than the year before, and resulted primarily from foreign exchange hedging transactions in U.S. dollars. On balance, the U.S. dollar had been hedged at a higher exchange rate in the past than its actual exchange rate in 2003.

At € 23.2 million, income before taxes was down € 1.6 million from the previous year's level, while sales were 6.9 million lower. The above-indicated cost-reduction measures and our financial income were thus able to nearly completely offset the decline in net sales.





After-tax income was burdened by the 2003 tax rate, which rose by 15.7 percentage points year on year, from 29.3 % to 45.0 %. The primary reason for this increase was the change in German tax legislation. In April 2003, the tax-advantaged disbursement of dividends that had existed in 2002 was revised. This necessitated reversing a corporate income tax refund entitlement in the amount of  $\in$  0.9 million in 2003 that had been stated in 2002, which impacted income. Earnings per share amount to  $\in$  1.46 (2002:  $\in$  1.99).



At the Annual Shareholders Meeting, the Management and Supervisory Boards will propose that our shareholders participate disproportionately in the Company's success in fiscal 2003. In addition to the base dividend of  $\in$  0.40 per no-par share, a special dividend of  $\in$  0.30 will be proposed in order to distribute a portion of our high cash assets to our shareholders. A total of  $\in$  6.1 million will thus be distributed to our shareholders.

#### Capital expenditures and financing

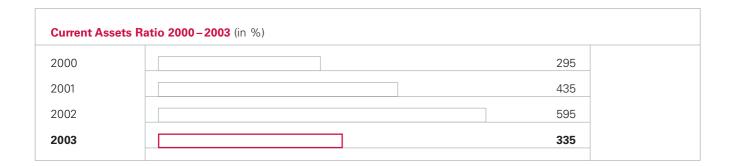
All capital investments needed to secure the Company's future were made. At  $\in$  1.9 million, capital expenditures in 2003 were 26.9 % lower than the year before. Of the  $\in$  1.9 million,  $\in$  1.1 million was invested in our machinery.



# Management's Discussion and Analysis - Business in Fiscal 2003 \_

In 2003, cash flow from operating activities amounted to  $\in$  –13.4 million, representing a decline of  $\in$  33.0 million from the previous year. This significant reduction was primarily attributable to the divestiture of pension entitlements to Pfeiffer Vacuum Trust e. V.

Pension obligations were consolidated in a pension trust A registered association, "Pfeiffer Vacuum Trust e.V.," was formed in November 2003. The purpose of this association is to manage assets divested from the corporate group with the objective of assuring coverage of pension entitlements at all times. Two major advantages of the divestiture are to secure pension entitlements and to provide greater balance sheet transparency by international comparison. This is because netting liquid assets against pension accruals will provide greater comparability between our balance sheet and international balance sheets. A total of € 36.0 million was divested to the trust, thus making these assets the legal property of the registered association. These assets are available only for satisfying pension entitlements. The assets of the trust are managed by the Executive Board of the registered association, consisting of three executives from the corporate group, in close collaboration with a prominent German financial institution. The Executive Board of the association reports to the Management Board of Pfeiffer Vacuum Technology AG. This divestiture will not have any effect on persons with pension entitlements.



Net cash used in investing activities in the amount of  $\in$  10.8 million includes  $\in$  1.8 million for capital expenditures as well as  $\in$  9.0 million for acquiring a bank loan. On balance, it was  $\in$  6.0 million higher than the previous year's level of  $\in$  4.8 million.

◀ The Company

Primarily as a result of our stock buy-back and redemption ahead of schedule of the long-term loan from Kreditanstalt für Wiederaufbau, net cash used in financing activities increased by  $\in$  10.3 million to  $\in$  16.4 million (2002:  $\in$  6.1 million). The repurchased shares in the amount of  $\in$  2.4 million are stated as a reduction of shareholders' equity. Redemption of the loan had a  $\in$  9.0 million impact on cash flow.

On balance, cash and cash equivalents declined by € 42.8 million.

A total current asset ratio of 335 % reflects our company's high creditworthiness (2002: 595 %).

#### Key balance sheet parameters

Our profitability is reflected in our key balance sheet parameters Our balance sheet parameters again reflect our profitability and business policies in 2003. Once again, we were able to demonstrate our profitability with an

- ▶ Equity ratio of 79.3 % (2002: 59.5 %) and a
- ► Return on shareholders' equity of 13.4 % (2002: 19.0 %).

The significant rise in our equity ratio was primarily attributable to the divestiture of pension accruals to Pfeiffer Vacuum Trust e.V. The reduction in the return on shareholders' equity resulted from the increase in the tax rate. Adjusted for these effects and on the basis of the previous year's tax rate, a return of approximately 17 % would have been achieved.

Group inventories decreased by  $\in$  2.0 million to  $\in$  20.4 million. Amounting to  $\in$  25.7 million, property, plant and equipment declined by  $\in$  2.7 million. During the 2003 fiscal year, there were only few additions to property, plant and equipment to offset retirements.

The dramatic reduction in liabilities, from  $\leqslant$  42.5 million to  $\leqslant$  1.9 million, was attributable, in particular, to the above-indicated divestiture of pension accruals and to redemption of the loan ahead of schedule. Accrued liabilities for taxes increased by  $\leqslant$  4.3 million to  $\leqslant$  6.6 million, which resulted from the higher 2003 effective tax rate and lower advance payments in 2003.

# Management's Discussion and Analysis - Risk Report

In order to be able to specifically deal with risks, we utilize suitable instruments for identification, analysis and action in our risk management system and evolve these instruments in the individual departments. We have defined the risk areas of risk management within the individual departments and have put in place the necessary procedures, early warning and monitoring systems. We take the risk factors we have defined into consideration in our annual budgeting process and our multiple-year strategic planning. Our planning processes are accompanied by comments from the planning and supervising bodies. Moreover, our strategic planning, budget and current business position are comprehensively deliberated with the Supervisory Board. The Supervisory Board receives detailed monthly overviews of our financial results by region, as well as reports from the Management Board. The Supervisory Board is involved in the entire risk management process.

The major areas of risk for the corporate group are as follows:

#### Market risks

As a globally operating enterprise, we are highly dependent upon the development of the world economy. Declining world economic growth has a direct impact on our sales and earnings. In addition, the strong competition that prevails in our market poses the risk of loss of market share and name recognition. In order to limit these market risks, we constantly analyze our environment and the competitive situation. We relativize negative economic changes through measures aimed at adjusting capacities to provide swift cost reduction.

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 enhance our competitive position and name recognition.

#### Technology risks

These risk factors include insufficient innovativeness, as well as a decline in the quality of our products, poses a risk for us. We continuously invest in the development of new and innovative products in order to be able to continue to satisfy our customers' needs in the future. In fiscal 2003, we spent a total of € 8.9 million on research and development, representing 6.2 % of our total sales. With these research and 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.

#### Purchasing and manufacturing risks

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. Insurance coverage is in force to minimize the manufacturing risk.

We primarily combat the risk of supply bottlenecks as well as dependence upon specific vendors by continuously reviewing alternative supplier options.

#### Foreign exchange risks

As a result of our strong international activities and the high percentage of non-euro business that this involves, we are subject to a foreign exchange risk, in particular relative to the U.S. dollar and the pound sterling. In spite of an active foreign exchange management system, our results could be significantly impacted by a sustained decline in the parity between the euro and the above-indicated currencies.

#### Financial and liquidity risks

Because we limit creditworthiness risks through strict, early monitoring, there have been no material losses of accounts receivable in past years. Due to the current economic situation, our attention has been increasingly focusing on the rising number of insolvencies. We reduce our accounts receivable loss risk with the aid of our rigorous system of accounts receivable management and by monitoring our customers' payment patterns. Our dependence upon individual customers is very limited, as none of them accounts for more than 10 % of our total sales. Overall, we possess sufficient liquid assets to finance our operative business, to cushion negative developments and to continue to grow from within. Derivative financial instruments are employed exclusively for hedging purposes.

## Human resources risks

As a high-tech manufacturer, we are dependent upon the high level of training and education possessed by qualified employees, and one potential threat is the risk of losing these people. Training and educating young, qualified employees is a strategic method for minimizing risk. To minimize operative risks, we provide continuing training and education for our employees and foster self-direction in order to create incentives for our people and gain ideas from them. An attrition rate of less than 1 %, which is clearly below the industry average, represents a positive signal for us.

#### Information technology risks

The greatest information technology risk is the loss of data and extended system downtimes. We minimize data losses by performing daily backups of our complete enterprise data. Our enterprise 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 copies are stored in secure, fireproof locations. The activities of our in-house support team reduce system downtimes to a low level.

## Management's Discussion and Analysis - Early 2004 and Outlook

#### **Early 2004**

There were no significant occurrences during the initial months of the 2004 fiscal year.

#### Outlook

Since the autumn of 2003, confidence indicators and an increasingly dynamic course of development have been pointing to a global recovery. The leading German economic institutes anticipate world economic growth of around 3 % for the year 2004. In all likelihood, this growth will be fueled by the recovery of the American and Asian economies. Moreover, the development of the U.S. dollar will also impact our results.

Against this backdrop, we intend to significantly improve our sales and earnings during the 2004 fiscal year. We anticipate growth of from 8 to 10 % in our core business (vacuum generation, measurement and analysis). One of the factors upon which our growth prospects are based includes the development of new orders during the fourth quarter of 2003. This trend can also be seen in our DVD business; we received several orders for DVD Lines and individual components. However this segment is not yet anticipated to make a significant contribution to profitability in 2004.

In the field of purchasing, we will continue to work on optimizing our ordering processes in order to assure a high level of availability of inputs, while keeping inventories low.

We anticipate a moderate rise in administration and selling as well as research & development expenses. The same also holds true with respect to capital investment volume.

During the 2004 fiscal year, we will be critically analyzing and further optimizing all of our major business processes within the framework of our "Turbo Office" project. We want to use this project to continue to keep our company "in shape" for the future and to counter future challenges.

We are well equipped for the growth we anticipate in 2004 through:

- ► Enthusiastic, committed and well-trained people
- ► Outstanding products
- ► Creative developers
- ► Flexible manufacturing

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# **Independent Auditors' Report**

#### **Independent Auditors' Report**

We have audited the consolidated financial statements, comprising the balance sheet, the income statement and the statements of changes in shareholders' equity and cash flows as well as the notes to the financial statements prepared by the Pfeiffer Vacuum Technology AG, Asslar, for the business year from January 1 to December 31, 2003. The preparation and the content of the consolidated financial statements in accordance with Accounting Principles Generally Accepted in the United States of America (U.S. GAAP) are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit.

We conducted our audit of the consolidated financial statements in accordance with German auditing regulations and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (IDW). Those standards require that we plan and perform the audit such that it can be assessed with reasonable assurance whether the consolidated financial statements are free of material misstatements. Knowledge of the business activities and the economic and legal environment of the Group and evaluations of possible misstatements are taken into account in the determination of audit procedures. The evidence supporting the amounts and disclosures in the consolidated financial statements is examined on a test basis within the framework of the audit. The audit includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion. In our opinion, the consolidated financial statements give a true and fair view of the net assets, financial position, results of operations and cash flows of the Group for the business year in accordance with Accounting Principles Generally Accepted in the United States of America

Our audit, which also extends to the group management report prepared by the Company's management for the business year from January 1 to December 31, 2003, has not led to any reservations. In our opinion on the whole the group management report provides a suitable understanding of the Group's position and suitably presents the risks of future development. In addition, we confirm that the consolidated financial statements and the group management report for the business year from January 1 to December 31, 2003, satisfy the conditions required for the Company's exemption from its duty to prepare consolidated financial statements and the group management report in accordance with German law.

Frankfurt am Main, February 24, 2004

KPMG Deutsche Treuhand-Gesellschaft, Aktiengesellschaft Wirtschaftsprüfungsgesellschaft

Wagenseil

Certified Puplic Accountant Certified Puplic Accountant

Giebermann

## **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 analysis.

#### 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.











■ | Vacuum Glossary

◀ At a Glance

The Company

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#### **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 (turbo pump) (1)

A mechanical pump for generating high and ultra-high vacuum (see "Vacuum"). It requires a 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 (recipient) 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 <sup>-3</sup> 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<sup>-7</sup> 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.











| Vacuum Glossary

At a Glance

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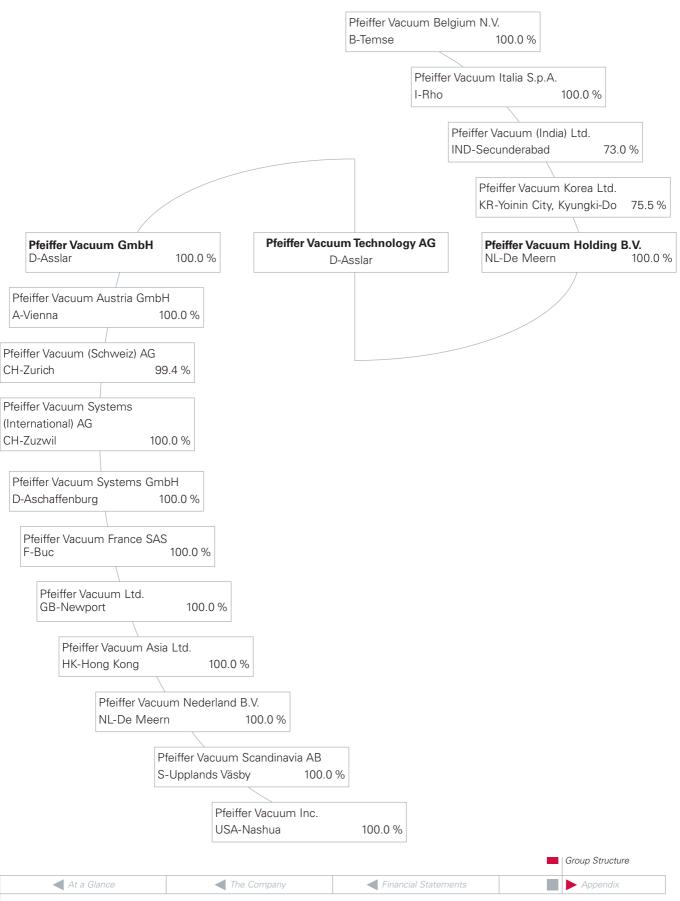
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Addresses Worldwide

# **Group Structure**



# **Financial Glossary**

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

## **Concept and content**

Pfeiffer Vacuum Technology AG, Asslar

## **Photos**

vario-press, Ulrich Baumgarten, Bonn Level One, Jens Graubner, Sinn Frank Wiegand, Gladenbach Skibbee Photography, Tewksbury, USA Karl-Heinz Brunk, Illustrated Book "Giessen"

## Grafic design and typesetting

Filusch & Fiore Werbeagentur GmbH, Lich

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

## **Financial Glossary**

#### Cash and cash equivalents

Bottom line in statement of cash flow/total liquid assets

#### Cash flow from investment/divestiture 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)

#### **Current assets ratio**

Current Assets: Current Liabilities x 100

#### Dividend yield

Dividend: Trading Price x 100

## **Equity ratio**

Shareholders' Equity: Balance Sheet Total x 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**

Number of Shares x Trading Price

## Operating profit (EBIT)

Earnings before interest and taxes

## Operating profit margin (EBIT margin)

Operating Profit: Net Sales x 100 (The higher the percentage, the higher the profitability)

## Research & development expense ratio (R&D ratio)

R & D Expense: Net Sales x 100

#### Return on equity

Net Income: Shareholders' Equity x 100

## **Financial Calendar 2004**

- ➤ 2003 Annual Results Thursday, March 25, 2004
- ► 1st Quarter 2004 Tuesday, May 4, 2004
- ➤ 2nd Quarter 2004 Tuesday, August 3, 2004
- ➤ 3rd Quarter 2004 Tuesday, November 2, 2004
- Annual Shareholders Meeting Wednesday, June 16, 2004,
   2:00 P.M., Wetzlar Municipal Hall

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