PFEIFFER VACUUM

RESEARCH & DEVELOPMENT FOR OUR FUTURE

ANNUAL REPORT 2018

III

CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED STATEMENTS OF INCOME PFEIFFER VACUUM TECHNOLOGY AG

in K€	Note	2018	2017
Net sales	7, 32	659,725	586,962
Cost of sales	8, 15	– 424,517	– 376,945
Gross profit		235,208	**210,017**
Selling and marketing expenses	8	– 68,371	– 63,313
General and administrative expenses	8	– 49,106	– 48,976
Research and development expenses	8	– 28,663	– 27,763
Other operating income	9	11,302	10,345
Other operating expenses	9	– 5,240	– 8,924
Operating profit	32	**95,130**	**71,386**
Financial expenses	10, 33	– 727	– 693
Financial income	10, 13, 33	208	347
Earnings before taxes	24, 32	94,611	**71,040**
Income taxes	24	– 25,732	– 17,192
Net income		**68,879**	**53,848**
Earnings per share (in €):			
Basic	35	6.98	5.46
Diluted	35	6.98	5.46

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME PFEIFFER VACUUM TECHNOLOGY AG

in K€	Note	2018	2017
Net income		**68,879**	53,848
Other comprehensive income			
Amounts to be reclassified to income statement in future periods (if applicable)			
Currency changes	21	4,904	– 13,252
Results from cash flow hedges	21, 33	– 13	588
Related deferred income tax effects	21	4	– 176
		4,895	– 12,840
Amounts not to be reclassified to income statement in future periods			
Valuation of defined benefit plans	21, 25	– 4,125	394
Related deferred income tax effect	21	1,374	– 515
		– 2,751	– 121
Other comprehensive income net of tax		**2,144**	– 12,961
Total comprehensive income net of tax		**71,023**	40,887

CONSOLIDATED BALANCE SHEETS PFEIFFER VACUUM TECHNOLOGY AG

ASSETS

in K€	Note	Dec. 31, 2018	Dec. 31, 2017
ASSETS			
Intangible assets	11	109,460	110,814
Property, plant and equipment	12	126,143	106,949
Investment properties	13	424	448
Other financial assets	14	4,282	3,840
Other assets	14	3,200	—
Deferred tax assets	24	24,895	23,037
Total non-current assets		**268,404**	**245,088**
Inventories	15	133,191	113,384
Trade accounts receivable	16, 33	92,164	80,061
Contract assets	3, 16	298	—
Income tax receivables		3,726	3,159
Prepaid expenses		3,504	2,475
Other financial assets	14	609	—
Other accounts receivable	17	13,884	11,792
Cash and cash equivalents	18, 33	108,380	97,402
Total current assets		**355,756**	**308,273**
Total assets	32	**624,160**	**553,361**

SHAREHOLDERS' EQUITY AND LIABILITIES

in K€	Note	Dec. 31, 2018	Dec. 31, 2017
SHAREHOLDERS' EQUITY AND LIABILITIES			
Share capital	19	25,261	25,261
Additional paid-in capital	19	96,245	96,245
Retained earnings	20	278,891	229,747
Other equity components	21	– 28,172	– 30,316
Equity of Pfeiffer Vacuum Technology AG shareholders		**372,225**	320,937
Financial liabilities	23, 33	60,182	60,248
Provisions for pensions	25	55,638	50,034
Deferred tax liabilities	24	4,638	3,988
Contract liabilities	3, 27	630	—
Total non-current liabilities		**121,088**	114,270
Trade accounts payable	26, 33	38,054	40,814
Customer deposits	3, 27	—	7,678
Contract liabilities	3, 27	18,271	—
Other accounts payable	28	25,740	22,333
Provisions	3, 29	41,626	39,894
Income tax liabilities		7,061	7,354
Financial liabilities	30, 33	95	81
Total current liabilities		**130,847**	118,154
Total shareholders' equity and liabilities		**624,160**	553,361

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY PFEIFFER VACUUM TECHNOLOGY AG

in K€	Note	Share Capital	Additional Paid-in Capital	Retained Earnings	Other Equity Components	Equity of Pfeiffer Vacuum Technology AG Shareholders
Balance as at January 1, 2017		**25,261**	**96,245**	**211,423**	**– 17,355**	**315,574**
Net income		—	—	53,848	—	53,848
Earnings after taxes recorded directly in equity	21, 33	—	—	—	– 12,961	– 12,961
Total comprehensive income		—	—	**53,848**	**– 12,961**	**40,887**
Dividend payment	20	—	—	– 35,524	—	– 35,524
Balance as at December 31, 2017		**25,261**	**96,245**	**229,747**	**– 30,316**	**320,937**
Net income		—	—	68,879	—	68,879
Earnings after taxes recorded directly in equity	21, 33	—	—	—	2,144	2,144
Total comprehensive income		—	—	**68,879**	**2,144**	**71,023**
Dividend payment	20	—	—	– 19,735	—	– 19,735
Balance as at December 31, 2018		**25,261**	**96,245**	**278,891**	**– 28,172**	**372,225**

CONSOLIDATED STATEMENTS OF CASH FLOWS PFEIFFER VACUUM TECHNOLOGY AG

CASH FLOW FROM OPERATING ACTIVITIES

in K€	Note	2018	2017
Cash flow from operating activities:			
Earnings before taxes	32	94,611	71,040
Adjustment for financial income/financial expenses		519	346
Financial income received		177	350
Financial expenses paid		– 900	– 1,053
Income taxes paid		– 22,703	– 17,441
Depreciation/amortization	11, 12, 13, 32	18,591	20,824
Gain/loss from disposals of assets		– 1,532	– 31
Changes in allowances for doubtful accounts	16	590	528
Changes in inventory reserves	15	1,467	2,702
Other non-cash income and expenses		6	116
Effects of changes in assets and liabilities:			
Inventories		– 20,035	– 15,248
Receivables and other assets		– 19,329	– 7,005
Provisions, including pensions, and income tax liabilities		– 425	5,983
Payables		11,510	10,286
Net cash provided by operating activities		**62,547**	71,397

CASH FLOW FROM INVESTING ACTIVITIES | CASH FLOW FROM FINANCING ACTIVITIES

in K€	Note	2018	2017
Cash flow from investing activities:			
Payments for acquisitions	6	—	– 74,594
Capital expenditures	11, 12, 13, 32	– 33,669	– 27,678
Proceeds from disposals of fixed assets		2,177	249
Net cash used in investing activities		**– 31,492**	– 102,023
Cash flow from financing activities:			
Proceeds from increase of financial liabilities	33	23	70,000
Dividend payments	20	– 19,735	– 35,524
Redemptions of financial liabilities	33	– 87	– 15,182
Net cash provided by/used in financing activities		**– 19,799**	19,294
Effects of foreign exchange rate changes on cash and cash equivalents		– 278	– 1,298
Net changes in cash and cash equivalents		**10,978**	– 12,630
Cash and cash equivalents at beginning of period		97,402	110,032
Cash and cash equivalents at end of period	18	**108,380**	97,402

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

REMARKS RELATING TO THE COMPANY AND ITS ACCOUNTING AND VALUATION METHODS

1. General remarks relating to the Company

The parent company within the Pfeiffer Vacuum Group ("the Company" or "Pfeiffer Vacuum") is Pfeiffer Vacuum Technology AG, domiciled at Berliner Strasse 43, 35614 Asslar, Germany. Pfeiffer Vacuum Technology AG is a stock corporation organized under German law and recorded in the Register of Companies at the Local Court of Wetzlar under Number HRB 44. The Company is listed in the Prime Standard of Deutsche Börse Stock Exchange in Frankfurt am Main, Germany, where it is included in the TecDAX index.

Pfeiffer Vacuum is one of the leading full-line vacuum technology manufacturers, offering custom solutions for a wide range of needs in connection with the generation, control, and measurement of vacuum. The products developed and manufactured at the Company's production facilities in Asslar and Göttingen, Germany, as well as in Annecy, France and Asan, Republic of Korea, Indianapolis and Yreka in the United States, as well as Ho-Chi-Minh-City, Vietnam, include turbopumps, a range of backing pumps, such as rotary vane, Roots and dry pumps, complete pumping stations, as well as custom vacuum systems, leak detectors and components.

Pfeiffer Vacuum markets and distributes its products through its own network of sales companies and independent marketing agents. Moreover, there are service support centers in all major industrial locations throughout the world. The Company's primary markets are located in Europe, the United States, and Asia.

2. Basis for preparing Consolidated Financial Statements

Statement of compliance with IFRS

The Consolidated Financial Statements of Pfeiffer Vacuum Technology AG for the fiscal year from January 1 to December 31, 2018, have been prepared in accordance with International Financial Reporting Standards (IFRS) and the interpretations of the IFRS Interpretations Committee (IFRS IC) as applicable in the European Union (EU). This includes the International Accounting Standards (IAS), which continue to retain their validity, the interpretations of the Standing Interpretations Committee (SIC) and the interpretations of the International Financial Reporting Interpretations Committee (IFRIC). Those standards that have been published but whose application is not yet mandatory have not been adopted at an earlier stage. The Notes to the Consolidated Financial Statements additionally include the information required by § 315e, Sub-Para. 1, of the German Commercial Code ("HGB").

Basic valuation principles

The Consolidated Financial Statements were prepared on the basis of historical acquisition and production costs. This does not include derivative financial instruments and plan assets in connection with defined benefit plans, which are measured at fair value. Pfeiffer Vacuum prepares its Consolidated Financial Statements in euros (€). Unless otherwise indicated, the presentation is in thousands of euros (K€). For mathematical reasons, the numbers presented in the Consolidated Financial Statements may include rounding differences.

Consolidated companies and principles of consolidation

All companies which Pfeiffer Vacuum directly or indirectly controls are consolidated. The Company is considered to control an entity if it is exposed to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

Inclusion in the Consolidated Financial Statements is made on the basis of individual financial statements prepared in accordance with consistent accounting and valuation principles. The balance sheet date of the individual financial statements of the included companies is the same as the balance sheet date of the Consolidated Financial Statements.

There were no investments in joint ventures or joint operations as of December 31, 2018, or in previous years. Nor were there any investments in unconsolidated structured entities.

Consolidation of investments is effected at the acquisition date in accordance with the acquisition method. In this connection, all assets (including, if applicable, intangible assets to be recognized additionally) and liabilities are first valued at their attributable fair values. The acquisition costs of the equity investment, i.e. the total compensation transferred, valued in accordance with attributable fair values, are then offset against the acquired, newly valued shareholders' equity. Any resulting positive difference is recognized as goodwill and written down in future periods only in the event of an impairment (impairment-only approach).

All intercompany receivables and liabilities, gains and losses, revenues and expenses are eliminated in connection with the consolidation process.

Foreign currency translation

The annual financial statements of subsidiaries domiciled outside the European Currency Union have been translated into euros (€) in accordance with IAS 21, "The Effects of Changes in Foreign Exchange Rates." Each company within the Corporate Group stipulates its own functional currency. The functional currency of the subsidiaries is the respective local currency. When translating financial statements presented in foreign functional currencies, year-end exchange rates are applied to assets and liabilities, while average annual exchange rates are applied to income statement accounts. The resulting translation adjustments are recorded in other equity components.

In the consolidated financial statements, foreign-currency transaction gains and losses from regular operations of consolidated companies are recorded as other operating income and expenses in the income statement.

3. Application of amended or new standards

The accounting and valuation principles used are essentially the same as those used the year before. In variance thereto, in 2018 the Company has applied the following new or amended IASB announcements that have been endorsed by the European Union (EU) for the first time, as their application was mandatory in fiscal 2018.

The first-time application of these IASB pronouncements had the following impacts on the presentation of Pfeiffer Vacuum's Consolidated Financial Statements.

First-time application of IFRS 9

On July 24, 2014, the IASB issued the final version of IFRS 9 "Financial Instruments". With its adoption, IFRS 9 replaces the previous provisions of IAS 39 "Financial Instruments: Recognition and Measurement". IFRS 9 introduces a uniform approach to the classification and measurement of financial assets. As a basis, the standard refers to the cash flow characteristics and the business model according to which they are managed. Upon initial recognition, financial assets need to be classified in the categories "fair value through profit or loss" or "fair value through other comprehensive income" or "amortized cost". It also provides for a new impairment model based on expected credit defaults. IFRS 9 also contains new rules on the application of hedge accounting to better present an entity's risk management activities,

NEW ANNOUNCEMENTS

	Issued by IASB/IFRS IC	Applicability[1]
Amendments to IAS 40: Transfers of Investment Property	December 2016	January 1, 2018
Amendments to IFRS 2: Classification and Measurement of Share-based Payment Transactions	June 2016	January 1, 2018
Amendments to IFRS 4: Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts	September 2016	January 1, 2018
Annual Improvements to IFRSs 2014 – 2016 Cycle	December 2016	January 1, 2018
IFRS 9 Financial Instruments	July 2014	January 1, 2018
IFRS 15 Revenue from Contracts with Customers (including amendments to IFRS 15: Effective date of IFRS 15)	May 2014	January 1, 2018
Clarifications to IFRS 15 Revenue from Contracts with Customers	April 2016	January 1, 2018
IFRIC Interpretation 22 Foreign Currency Transactions and Advance Consideration	December 2016	January 1, 2018

[1] Fiscal years beginning on or after the indicated date according to EU regulation

particularly with regard to managing non-financial risks. The classification of financial liabilities has not changed compared to IAS 39. With respect to financial liabilities, the amendments to IFRS 9 do not have any impact on the Pfeiffer Vacuum Group.

The new rules for the recognition of impairment losses contained in IFRS 9 will in future focus on expected loss models instead of incurred loss models. In contrast to the incurred loss model, the expected loss model takes expected losses into account without the existence of specific loss indicators. Accordingly, IFRS 9 specifies that a loss allowance for expected payment defaults must already now be set up. IFRS 9 provides for a 3-step model for determining the extent of loss allowance. Accordingly, from the time of initial recognition in principle the 12-month loss expectations are to be considered, and in the event of a significant deterioration in credit risk the expected total losses. In addition to the general approach for measuring expected losses, IFRS 9 permits a simplified approach for trade accounts receivable, lease receivables and contract assets as defined by IFRS 15. In the simplified approach, a loss allowance for possible defaults must be set up in the amount of the expected losses over the remaining term.

The application of the simplified approach model to trade account receivables and contract assets in accordance with IFRS 15 did not have any material impact on Pfeiffer Vacuum. There were also no impairment losses on cash and cash equivalents and other financial assets.

Instead of applying the hedge accounting provisions of IFRS 9, Pfeiffer Vacuum is voluntarily exercising its option and continues to apply the corresponding provisions of IAS 39.

Basically, the first-time application of IFRS 9 must be applied retrospectively.

The following overview shows a reconciliation of the financial assets and liabilities from the IAS 39 measurement categories to the IFRS 9 measurement categories as of January 1, 2018:

The book values equal their respective fair values.

The reconciliation of financial assets and liabilities from the IAS 39 measurement categories to the IFRS 9 measurement categories as of December 31, 2017/January 1, 2018 did not result in any measurement adjustments.

RECONCILIATION OF FINANCIAL INSTRUMENTS BY VALUATION CATEGORY (IAS 39/IFRS 9) AS AT JANUARY 1, 2018

in K€	Measurement category as per IAS 39	Carrying amount as at Dec. 31, 2017	Measurement category as per IFRS 9	**Carrying amount as at Jan. 1, 2018**
Assets				
Cash and cash equivalents	LaR	97,402	AC	97,402
Trade accounts receivable	LaR	80,061	AC	80,061
Other financial assets	LaR	3,840	AC	3,840
Derivative financial instruments (hedges)	n.a.	—	FVOCI	—
Liabilities				
Trade accounts payable	FLAC	40,814	AC	40,814
Financial liabilities	FLAC	60,329	AC	60,329
Derivative financial instruments (incl. hedges)	n.a.	—	FVOCI	—
Derivative financial instruments (excl. hedges)	n.a.	6	FVPL	6

LaR = Loans and Receivables; FLAC = Financial Liabilities Measured at Amortized Cost;
AC = Amortized Costs; FVOCI = Fair Value through other Comprehensive Income;
FVPL = Fair Value through Profit or Loss

First-time application of IFRS 15

IFRS 15 "Revenue from Contracts with Customers" was published by the IASB in May 2014 and endorsed by the EU in October 2016. The "Clarifications to IFRS 15 Revenue from Contracts with Customers" published by the IASB in April 2016 were transformed into EU law in November 2017. The new standard IFRS 15 replaced IAS 11 "Construction Contracts", IAS 18 "Revenue" and the related interpretations.

IFRS 15 provides for a uniform, principle-based, five-level model for the calculation and recognition of revenues from contracts with customers. The core principle of the standard is that revenue should be recognized when control of goods or services is transferred to the customer.

With respect to the first-time application of the standard, Pfeiffer Vacuum chose the modified retrospective method.

The first-time application of IFRS 15 in fiscal 2018 had the following impacts on the presentation of Pfeiffer Vacuum's Consolidated Financial Statements:

- In the case of certain product sales with extended warranty terms, this separate performance obligation leads to temporarily delayed revenue recognition. The result of the associated deferred income had no material impact on the profitability, financial position and liquidity of Pfeiffer Vacuum's Consolidated Financial Statements in the current reporting period. The mandatory first-time application did not lead to any adjustment effects on equity as of January 1, 2018, as the sales revenues of the relevant customer contracts were either already fully recognized at that date or were only to be fully recognized after that date. Pfeiffer Vacuum made use of a simplification option offered by IFRS 15 for this purpose.

- Revenues from contracts with vacuum solutions are recognized over a certain period of time based on the stage of completion, based on the ratio of costs already incurred at the balance sheet date to the estimated total costs (input-based method).

- When the contractual obligations of a party to a contract have been fulfilled, the entity shall present that transaction in accordance with IFRS 15. For this purpose, the items "contract assets" and "contract liabilities" were newly included in the Consolidated Balance Sheets. A contract asset is the right to receive consideration in exchange for goods or services that have been transferred to the customer. A contract liability is an obligation to transfer goods or services to a customer for which the customer has paid consideration.

- Payments made by customers prior to the transfer of goods or the provision of services to the customer are recognized as contract liabilities in the Consolidated Balance Sheet. This eliminates the item "customer deposits".

The following overview summarizes the disclosure and valuation differences in the balance sheet and income statement as of December 31, 2018 that would have arisen if IAS 18 "Revenue" which was applicable only December 31, was still applied in 2018:

RECONCILIATION OF ADJUSTMENT EFFECTS OF IFRS 15 AS OF DECEMBER 31, 2018

in K€	Dec. 31, 2018 before adjustment	IFRS 15 adjustment	Impact on deferred tax assets	**Dec. 31, 2018 after adjustment**
Consolidated Balance Sheets				
Assets				
Inventories[1]	134,323	– 1,132	—	133,191
Contract assets[2]	—	298	—	298
Deferred tax assets[3]	24,769	—	126	24,895
Other long-term and short-term assets	465,776	—	—	465,776
Total assets	624,868	– 834	126	**624,160**
Shareholders' equity and liabilities				
Retained earnings	279,212	– 388	67	278,891
Other equity	93,334	—	—	93,334
Total equity	372,546	– 388	67	**372,225**
Customer deposits[4]	17,736	– 17,736	—	—
Contract liabilities[5]	—	18,901	—	18,901
Other liabilities[6]	25,572	168	—	25,740
Provisions[7]	43,405	– 1,779	—	41,626
Deferred tax liabilities[3]	4,579	—	59	4,638
Other long-term and short-term liabilities	161,030	—	—	161,030
Total shareholders' equity and liabilities	624,868	– 834	126	**624,160**
Consolidated Statements of Income				
Net sales[8]	660,325	– 600	—	659,725
Cost of sales[8]	– 424,729	212	—	– 424,517
Gross profit	235,596	– 388	—	**235,208**
Operating expenses	– 140,078	—	—	– 140,078
Operating profit	95,518	– 388	—	**95,130**
Financial income	– 519	—	—	– 519
Earnings before taxes	94,999	– 388	—	**94,611**
Income taxes[3]	– 25,799	—	67	– 25,732
Net income	69,200	– 388	67	**68,879**
Earnings per share (in €)	7.01	– 0.04	0.01	**6.98**

[1] The difference in inventories corresponds to the proportion of cost of sales attributable to the period-related revenue recognition of certain vacuum solutions.
[2] Contract assets represent contractual entitlements to receive payments from customers for whom Pfeiffer Vacuum's contractual performance obligations under IFRS 15 have been met.
[3] The differences in deferred tax assets and liabilities relate to the tax effects on the recognition of contract assets and liabilities.
[4] The adjustment of customer deposits received is mainly due to the new disclosure requirement of IFRS 15 to record them under the contract liabilities item of the balance sheet. In addition, contract assets are reduced by customer payments that have already been made.
[5] The contractual liabilities essentially represent payments from customers for the products to be delivered and services to be rendered. In addition, the adjustment amount relates to performance obligations in connection with extended warranty promises for which the customer has already paid a consideration.
[6] The adjustment is to be seen together with the reclassification of deferred sales lines to contract liabilities. In addition, further deferrals for variable consideration that have formerly been recorded under provisions are shown here.
[7] Warranty provisions for the expected amounts for claims under product warranties were formed for sales revenues from the sale of vacuum products and the provision of services as of the balance sheet date and recorded under cost of sales. In accordance with IFRS 15, warranty promises that go beyond the statutory warranty promises („assurance-type warranties") for which the customer has already paid a consideration are deferred as separate performance obligations under contract liabilities to reduce sales.
[8] The adjustments to revenues and cost of sales result from the aforementioned adjustments following the new revenue recognition over time according to IFRS 15 and the adjustment of sales revenues due to not yet fulfilled performance obligations (warranty promises).

The balance sheet item "Customer deposits" (K€ 7,678) shown as at December 31, 2017 was reclassified to "Contract liabilities" as at January 1, 2018 due to the first time application of IFRS 15. In addition, the accrued variable consideration elements formerly shown under "Provisions" (K€ 908) was reclassified to "Other liabilities".

The first-time application of the other IASB pronouncements did not have any impact on the profitability, financial position and liquidity of Pfeiffer Vacuum's Consolidated Financial Statements.

The following IASB announcements were endorsed by the EU as European law, but their application was not mandatory in fiscal 2018. Pfeiffer Vacuum will only start applying these pronouncements from fiscal years in which their application is mandatory within the EU:

NEW ANNOUNCEMENTS

	Issued by IASB/IFRS IC	Applicability[1]
IFRS 16 Leases	January 2016	January 1, 2019
IFRIC Interpretation 23 Uncertainty over Income Tax Treatments	June 2017	January 1, 2019
Amendments to IFRS 9 Prepayment Features with Negative Compensation	October 2017	January 1, 2019
Amendments to IAS 28 Long-term Interests in Associates and Joint Ventures	October 2017	January 1, 2019

[1] Fiscal years beginning on or after the indicated date according to EU regulation

"IFRIC Interpretation 23", the "Amendments to IFRS 9" and the "Amendments to IAS 28" are not relevant for Pfeiffer Vacuum.

IFRS 16 "Leases"

In January 2016 the IASB published the accounting standard IFRS 16 "Leases", which was endorsed by the EU on November 9, 2017. IFRS 16 replaces the existing rules on leases, including IAS 17 "Leases", IFRIC 4 "Determining whether an Arrangement Contains a Lease", SIC 15" Operating Leases" and SIC 27 "Evaluating the Substance of Transactions in the Legal Form of a Lease".

This standard is mandatorily applicable for fiscal years beginning on or after January 1, 2019. An early adoption is permitted in case IFRS 15 is adopted before or at the same time as the initial adoption of IFRS 16. Pfeiffer Vacuum has not adopted this standard early.

IFRS 16 stipulates that all leases and the associated contractual rights and obligations must generally be shown in the lessee's balance sheet. A lessee recognizes a lease liability at the present value of the lease payments. The right to use the leased asset is generally measured at an amount equal to the lease liability plus initial direct costs. There are exceptions for, amongst others, short-term leases and leases involving low-value assets. Pfeiffer Vacuum does not make use of the exemption provisions for low-value assets or for short-term leases with respect to these options. Furthermore, the lessee can decide whether to subdivide the payment into leasing and non-leasing components. Here, Pfeiffer Vacuum decides not to subdivide the payment, but to treat the entire payment as a leasing component.

Pfeiffer Vacuum will apply IFRS 16 for the first time as of January 1, 2019, applying the modified retrospective approach. The comparative information for the 2018 fiscal year will therefore not be adjusted in the 2019 fiscal year.

On transition to IFRS 16, the Group may choose whether to:

- apply the definition in IFRS 16 for a lease to all its contracts;

  or to

- make use of an exception and therefore not reassess whether the contract is, or contains, a lease, if this was already analyzed and classified according to IAS 17.

The Group will make use of the exemption to maintain the definition of a lease on transition. This means that the Group will apply IFRS 16 to all contracts entered into before January 1, 2019 and identified as leases in accordance with IAS 17 and IFRIC 4.

In addition, Pfeiffer Vacuum has decided not to take initial costs into account when measuring the right of use at the time of first-time application.

For leases that expire within 12 months of the date of initial application, Pfeiffer Vacuum will report the costs associated with these leases as short-term lease expenses in fiscal 2019.

Lessor accounting is similar to the current standard – which means that lessors continue to classify leases as finance or operating leases.

The Group has largely completed its assessment of the potential impact on its Consolidated Financial Statements. This analysis as part of the Group-wide first-time adoption project has identified the following categories of leases for which the transition to IFRS 16 as of January 1, 2019 results in the recognition of leases previously classified as operating leases as leases defined by the new standard: land and buildings, vehicles and other leased assets. As a result of the first-time recognition of rights of use and leasing liabilities in accordance with IFRS 16, the balance sheet total will increase by 2–3 % according to provisional calculations. A significant effect on equity is not expected. Based on the leases existing as of January 1, 2019, the operating profit is not expected to change significantly. Moreover, there will also result a slight improvement in cash flow from operating activities and a corresponding reduction in cash flow from financing activities.

In addition, the nature of the expenses associated with these leases will change as IFRS 16 replaces the straight-line expenses for operating leases with a depreciation expense for rights of use and interest expenses for lease liabilities.

The following announcements were issued by the IASB or the IFRS IC but not yet endorsed by the EU:

NEW ANNOUNCEMENTS

	Issued by IASB/IFRS IC	Applicability
IFRS 17 Insurance Contracts	Mai 2017	January 1, 2021
Amendments to IAS 19 Plan Amendment, Curtailment or Settlement	February 2018	January 1, 2019
Annual Improvements to IFRSs 2015 – 2017 Cycle	December 2017	January 1, 2019
Amendments to References to the Conceptual Framework in IFRS Standards	March 2018	January 1, 2020
Amendment to IFRS 3: Definition of a Business	October 2018	January 1, 2020
Amendments to IAS 1 and IAS 8: Definition of Material	October 2018	January 1, 2020

Pfeiffer Vacuum intends apply the announcements mentioned above as of the effective date of mandatory application within the EU. The impact on the Consolidated Financial Statements resulting from the application of these not yet endorsed pronouncements are currently being analyzed.

4. Accounting and valuation methods

Income recognition

Revenue is recorded when control over the distinct goods or services is transferred to the customer, i.e. when the customer has the ability to control the use of the transferred goods or services and substantially obtains all of the benefits that remain from them. The prerequisite for this is that a contract with enforceable rights and obligations exists and that, among other things, it is probable that the consideration will be received, taking into account the creditworthiness of the customer. Most contracts with customers are fixed-price agreements in which Pfeiffer Vacuum acts as principal. Sales revenues correspond to the transaction prices according to the contracts with customers to which the Group is expected to be entitled.

In the case of individual contracts with variable consideration included in the transaction price, the amount of the variable consideration is determined either according to the expected value method or with the most probable amount and recorded as a reduction in sales revenue. Basically, transaction prices do not include any financing components, as the expected period between the transfer of the goods or services to the customer and the payment date does not exceed twelve months. If a contract includes several distinct performance obligations, the transaction price is allocated to the performance obligations on the basis of the relative individual selling prices. If individual selling prices are not directly observable, they are estimated on the basis of the "expected-cost-plus-a-margin" approach. Revenues within the meaning of IFRS 15 are recognized at Pfeiffer Vacuum either at a specific point in time or over a specific period of time, with revenue recognition based on the point in time prevailing.

Revenues from the sale of vacuum products are recognized at the time when control is transferred to the customer, generally upon delivery of the goods. Revenues from contracts with customer-specific vacuum solutions are recognized over a certain period of time based on the stage of completion, based on the ratio of costs already incurred at the balance sheet date to the estimated total costs (input-based method). In connection with the sale of vacuum products, Pfeiffer Vacuum in some cases offers extended warranty terms ("service & process-type warranties")that go beyond the statutory warranty obligations ("assurance-type warranties"). Performance obligations in connection with extended warranty terms, for which the customer has already paid a consideration, are recognized as contract liabilities and recognized over the period in which the services are rendered based on the time elapsed.

Revenues from the rendering of services are recognized after execution. They include invoiced working hours of service staff, spare parts and replacement parts. Interest income is realized when the interest has accrued. Rental income from investment property is recognized on a straight-line basis over the term of the contracts.

Cost of Sales

Cost of sales include the manufacturing costs for the products sold as well as the costs for the services rendered. This includes all directly attributable material and production costs as well as indirect costs including depreciation/amortization on production buildings and machines. In addition, freight costs, expenses for inventory valuation, and warranty expenses are included in here. Based on historical experience, warranty provisions for recognized revenues are recorded as of year-end.

Research and development expenses

Research and development costs are generally expensed as incurred. Development costs are capitalized, if the capitalization prerequisites in IAS 38, "Intangible Assets," are fully satisfied. In fiscal years 2018 and 2017, research and development costs were not capitalized.

Property, plant and equipment and intangible assets

Property, plant and equipment and intangible assets are stated at cost and depreciated/amortized on a straight-line basis over the customary useful lives of the assets. At the close of each fiscal year, the useful lives and depreciation/amortization methods, as well as the residual values in the case of property, plant and equipment, are reviewed and adjusted where necessary. The following useful lives are assumed:

ESTIMATED USEFUL LIFE

Production halls, production and administration buildings and similar facilities	20–40 years
Machinery and equipment (including IT equipment)	3–15 years
Intangible assets[1]	2–5 years

[1] With the exception of goodwill and a trademark recognized in connection with a purchase price allocation, there are no intangible assets with indefinite useful lives

Intangible assets recognized in connection with acquisitions, i.e. trademark rights or customer base, may have different, longer estimated useful lives of up to 20 years. Determination is made on an individual basis.

Scheduled depreciation and amortization are allocated to the expense lines in the income statement on the basis of the input involved. Repair and maintenance costs are expensed as incurred.

The Company reviews long-lived assets for impairment whenever events or changes in circumstances suggest that the carrying amount of an asset may not be recoverable. Should impairment indicators exist, the Company performs the analyses required under IAS 36, "Impairment of Assets," with the carrying amount of the asset being compared to the recoverable amount. The recoverable amount of an asset or a cash-generating unit is the greater of the fair value less its selling costs and value in use. The resulting amount must be determined for each individual asset, unless an asset generates cash flows that are dependent upon those from other assets or other asset groups. Should the carrying amount of an asset be higher than its recoverable amount, the asset is viewed as being impaired and is written down to its recoverable amount. To determine the value in use of an asset, the anticipated future cash flows are discounted to their cash value, taking into consideration a before-tax discount rate that reflects current market expectations with respect to the interest rate effect and the specific risks of the asset in question. An appropriate valuation model is employed to determine the fair value less selling costs. This model is based on valuation multiples and other available indicators for the fair value. Any required reversals of impairment losses are recorded in future-period income statements up to the amount of the impairment loss reversal limit. This limit is determined by the amount that would have resulted at the close of the respective fiscal year given scheduled depreciation of the asset.

At least once a year, the Company reviews goodwill for possible impairments. For the purpose of the impairment test, goodwill acquired within the context of a corporate merger is allocated at the acquisition date to those cash generating units of the Corporate Group that can be expected to be able to benefit from the corporate merger. This review is always made whenever events or changes in circumstances suggest that the carrying amount may not be recoverable. In this case, the above described process for impairments under IAS 36, "Impairment of Assets," is applied. Any resulting impairment loss is recorded in the income statement. A reversal of goodwill impairment losses in future periods is not permissible.

A fixed or intangible asset is derecognized either at the time of disposal or at such time as no economic benefit can any longer be expected from the further utilization or sale of the asset. Gains and losses from disposals of assets are determined and recorded in the income statement on the basis of the difference between selling costs and carrying amount, less any directly attributable selling costs, where applicable

Investment properties

Real estate properties are allocated to the portfolio of investment properties if they are held for the purpose of generating rental income. They are stated at cost and depreciated on a straight-line basis over their estimated useful lives (cost model). Assessment of their residual values, useful lifes and depreciation methods, as well as any impairment losses, is performed analogously to the procedure described in connection with property, plant and equipment. Investment properties are derecognized upon disposal or when they are no longer being permanently used and they are no longer expected to produce any further future economic benefit.

Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or an equity instrument of another entity. Accounting for financial instruments in the case of usual and customary purchase or sale is performed on the settlement date, i.e. the day on which the asset is delivered. According to IFRS 9, "Financial Instruments" financial instruments are allocated to the following categories upon initial recognition:

- „Fair value through profit or loss"
- "Fair value through other comprehensive income"
- "Amortized cost"

At the time of recognition accounts receivable, in particular trade accounts receivable and contract assets, are recorded with the amount of unconditional consideration and subsequently measured at amortized cost. Receivables generally do not contain any significant financing components. If they contain significant financing components, they must instead be recognized at fair value. A contract asset is the right to receive consideration in exchange for goods or services that have been transferred to the customer. Allowances on contract assets and receivables for credit risks are made on the basis of the expected loss model. Pfeiffer Vacuum applies a simplified approach to measure expected losses pursuant to IFRS 9, under which a provision for possible loan losses must be recognized in the amount of the expected losses over the remaining term of the asset. A reversal of an impairment loss is recognized in profit or loss up to a maximum of the amortized cost. Receivables are derecognized as soon as they become uncollectible.

The Company uses derivatives only to manage foreign currency exchange rate risks. Instead of applying the hedge accounting provisions of IFRS 9, Pfeiffer Vacuum is voluntarily exercising its option and continues to apply the corresponding provisions of IAS 39. Approximately 53 % of Group sales are invoiced in foreign currencies (non-euro, predominantly US dollars) (previous year: 56 %). The Company enters into forward exchange and option transactions to hedge its future sales invoiced in foreign currencies against exchange rate fluctuations. Derivative financial instruments are acquired exclusively for this purpose. Pfeiffer Vacuum does not engage in speculative hedging transactions. Derivative financial instruments employed for hedging purposes are recorded at their fair values both at the time they are first recorded as well as in subsequent periods. Derivative financial instruments are recorded as assets if their fair value is positive and as liabilities if their fair value is negative. Changes in the fair value of these derivatives are recorded in equity without any impact on the income statement if the hedging is classified as a cash flow hedge according to IAS 39 and is effective. The derivative is reclassified into other operating income and expenses as foreign exchange gains/losses at the time of realization of the underlying transaction that has been hedged. If derivatives were purchased for hedging purposes but do not formally qualify for hedging under IAS 39, they are recorded at fair value through profit and loss. The fair values of derivatives are determined on the balance sheet date using current reference quotations and taking into account forward premiums and discounts. Please refer to NOTE 33 for further information relating to financial instruments.

Trade accounts payable are financial liabilities and are measured at fair value at the time of first recognition and subsequently at amortized cost. Accordingly, they are recognized at the higher of nominal value or repayment amount, including any value-added tax, at the balance sheet date.

Bank loans are also categorized as financial liabilities and are measured at fair value upon first recognition and in future periods at amortized costs using the effective interest method. This takes into consideration all components of the effective interest rate. Interest income and expenses resulting from the application of the effective interest rate method are shown under financial results.

Cash and cash equivalents

Cash and cash equivalents consist of cash on hand, bank balances, and all highly liquid bank investments having original maturities of three months or less. Cash and cash equivalents are defined accordingly in the consolidated cash flow statements. Cash and cash equivalents are also subject to the expected loss model according to IFRS 9. Due to the short investment period, this line item is only subject to minor value fluctuations.

Inventories

Inventories are valued at the lower of net realizable value and acquisition or manufacturing costs. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated selling costs. Acquisition or manufacturing costs comprise all costs for acquisition or manufacturing as well as all costs incurred for bringing the inventories to their current place and to the current status. With regard to work in process and finished products, the manufacturing costs include besides directly attributable material and production costs also production related indirect costs. Removals from inventory are determined on a weighted average cost basis. Interests on borrowed capital are not considered as part of acquisition or manufacturing costs for inventories. Valuation adjustments on excess inventories are determined on the basis of internal procedures in accordance with the ratio between inventory turnover and future sales or usage. Excess inventories are stocks of individual inventory items that exceed anticipated sales or usage. Management utilizes its judgement in forecasting sales or usage.

Other accounts receivable and other assets

Other accounts receivable and other assets are recorded at amortized cost and less allowances, where applicable. Non-current receivables and assets are valued using the effective interest method.

Provisions

Provisions are formed when the Corporate Group presently has a legal or constructive outside obligation as a result of a past event and it is likely that settlement of the obligation will lead to an outflow of economic resources and the amount of the obligation can be reliably determined. The valuation is made on the basis of the best estimate of the extent of the obligation.

Pensions

Valuation of pension obligations under defined benefit plans is based upon the projected unit credit method in accordance with IAS 19 "Employee Benefits". Actuarial gains and losses from changes in the amount of either the defined benefit obligation (under pension plans), the actuarial present value of earned entitlements (under other plans) as well as those variances between actual returns and returns calculated with the discount rate or from changes in other actuarial assumptions are recorded directly in the other equity components. The pension provision thus shows the net benefit obligation resulting from the difference of the defined benefit obligation and the plan assets measured at fair value. Additionally, the return on plan assets is considered with the discount rate. The accounting for obligations under defined benefit plans is based upon actuarial reports calculated as per the close of the fiscal year. The existing pension plans are detailed in NOTE 25.

Expenses for defined contribution plans are recorded as expense in the income statement when the premium obligation is incurred. Provisions are formed only if the payment is not made in the year the premium was incurred.

Contract liabilities and other accounts payable

Contract liabilities and other liabilities are measured at fair value upon first time recognition. Subsequent measurement is at amortized cost. A contract liability is an obligation to transfer goods or services to a customer for which the customer has paid consideration. Thus, they are recorded at their notational value or at their higher redemption amount at the close of the fiscal year, including any value added tax.

Income taxes

Current income taxes are stated as a liability to the extent to which they have not yet been paid. General tax risks within the Group are additionally considered. Should the amounts already paid for income taxes exceed the amount owed, the difference is stated as an asset. Calculation of the amount is based upon the tax rates and tax legislation applicable at the close of the fiscal year.

Under IAS 12, "Income Taxes," deferred tax assets and liabilities are formed in the consolidated and taxation financial statements for temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases or for unused tax loss carryforwards (liability method). In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. In making this assessment, management considers the scheduled reversal of temporary differences, projected future taxable income, and tax planning strategies. Valuation of deferred tax assets and liabilities is performed using the local tax rates expected to be in effect at the time of realization of the asset or satisfaction of the liability, with the tax rates applicable at the close of the fiscal year being employed. The effects of changes in tax laws are recognized in the results of operations in the period in which the new tax rates go into effect. Deferred taxes that relate to line items recorded directly under shareholders' equity are recorded directly under equity and not in the income statement. An adjustment is recorded for deferred tax assets if it is unlikely that future tax advantages will be realized. Deferred tax assets and liabilities are offset if the entitlements and obligations relate to one and the same tax authority.

Leases

In accordance with IAS 17, "Leases," leasing contracts are classified as either finance or operating leases. Pfeiffer Vacuum is only acting as a lessee in this regard. Assets that are subject to operating leases are not capitalized. Lease payments are charged to income statement in the year they are incurred.

Under a finance lease, substantially all of the risks and rewards related to the leased asset are transferred. Assets that are subject to a finance lease are recorded at the present value of the minimum lease payments, with a leasing liability being recorded in the same amount. The periodic lease payments are divided into principal and interest components. While the interest component is recorded as an interest expense, the principal component reduces the outstanding leasing liability. Assets recognized are either depreciated over the term of the leasing agreement or over the estimated useful life of the respective asset.

Government grants

Government grants which compensate the Group for expenses (expense subsidies) are recorded in the income statement in other operating income in the same period the underlying expenses are incurred.

Determination of fair value

IFRS 13 "Fair Value Measurement" includes uniform regulations for fair value measurement and rules the determination of fair value in cases where other standards allow or require measurement at fair value. Pfeiffer Vacuum Group did not apply any fair value measurement options.

Use of estimates

The process of preparing financial statements requires the use of estimates and assumptions on the part of the management. These estimates are based upon management's historical experience, are verified regularly, and adjusted if necessary. Certain of the Company's accounting policies are considered critical, as they can have a major impact on the profitability, financial position, and liquidity of the Corporate Group and necessitate significant or complex judgement on the part of management. These estimates and assumptions could differ from the actual results. As of December 31, 2018, based on current estimate, no judgement uncertainties existed that could lead to the significant risk of the need for a material adjustment of book values in the 2019 fiscal year.

Material forward-looking estimates and assumptions exist, among others, in estimating the cash flows in connection with the good-will impairment test, with regard to the formation of pension and warranty provisions, in forecasting the useful lives of fixed assets, in determining the fair values of assets identified and liabilities assumed in connection with acquisitions, in the determination of individual selling prices within the meaning of IFRS 15 that are not directly observable, or in connection with deferred tax assets. The major assumptions are detailed in the Notes relating to the individual line items of the balance sheet or in the accounting principles. With regard to the assumptions the goodwill impairment test is based on, please refer to NOTE 11. The parameters underlying the pension accounting are detailed in NOTE 25. Information concerning the estimated useful life of tangible and intangible assets is included in NOTE 4, section "Property, plant and equipment, and intangible assets". With regard to sales revenues please refer to NOTE 4, section "Income recognition" and with regard to the composition of sales revenues to NOTE 7. Further details for provisions are described in NOTE 29 and for deferred tax assets in NOTE 24.

NOTES TO THE SCOPE OF CONSOLIDATION

5. Composition of consolidated companies

In addition to Pfeiffer Vacuum Technology AG, three German and 28 foreign subsidiaries are fully consolidated in the Company's Consolidated Financial Statements as at December 31, 2018 (Dec. 31, 2017: three German and 28 foreign subsidiaries).

PFEIFFER VACUUM GROUP AS AT DECEMBER 31, 2018

in %	Location	Holding
Pfeiffer Vacuum Technology AG	Germany	
Pfeiffer Vacuum GmbH	Germany	100.0
Pfeiffer Vacuum Austria GmbH	Austria	100.0
Pfeiffer Vacuum (Schweiz) AG	Switzerland	99.4
Pfeiffer Vacuum (Shanghai) Co., Ltd.	China	100.0
Pfeiffer Vacuum (India) Private Ltd.	India	27.0 [1]
Pfeiffer Vacuum Ltd.	Great Britain	100.0
Pfeiffer Vacuum Scandinavia AB	Sweden	100.0
Pfeiffer Vacuum Singapore Pte. Ltd.	Singapore	100.0
Pfeiffer Vacuum Taiwan Corporation Ltd.	Taiwan	100.0
Pfeiffer Vacuum Benelux B.V.	The Netherlands	100.0
Pfeiffer Vacuum (Xi'an) Co., Ltd.	China	100.0
Pfeiffer Vacuum Malaysia SDN. BHD.	Malaysia	100.0
Pfeiffer Vacuum Inc.	USA	100.0
Pfeiffer Vacuum New Hampshire Realty Holdings, LLC.	USA	100.0
Advanced Test Concepts, LLC.	USA	100.0
Pfeiffer Vacuum Indiana Realty Holdings, LLC.	USA	100.0
Nor-Cal Products Holdings, Inc.	USA	100.0
Nor-Cal Products, Inc.	USA	100.0
Nor-Cal Products Viet Nam Co., Ltd.	Vietnam	100.0
Nor-Cal Products Europe Ltd.	Great Britain	100.0
Nor-Cal Products Korea Co., Ltd.	Republic of Korea	100.0
Nor-Cal Products Asia Pacific Pte. Ltd.	Singapore	100.0
Pfeiffer Vacuum California Realty Holdings, LLC.	USA	100.0
Pfeiffer Vacuum Holding B.V.	The Netherlands	100.0
Pfeiffer Vacuum Italia S.p.A.	Italy	100.0
Pfeiffer Vacuum (India) Private Ltd.	India	73.0 [1]
Pfeiffer Vacuum Korea Ltd.	Republic of Korea	75.5 [1]
Pfeiffer Vacuum Components & Solutions GmbH	Germany	100.0
Pfeiffer Vacuum SAS	France	100.0
Pfeiffer Vacuum Romania S.r.l.	Romania	100.0
Pfeiffer Vacuum Semi Korea, Ltd.	Republic of Korea	100.0
Pfeiffer Vacuum Korea Ltd.	Republic of Korea	24.5 [1]
Dreebit GmbH	Germany	100.0

[1] Total Group holdings: 100.0 %

6. Changes in consolidated companies

In 2018 there have been no changes in consolidated companies. The following explanations refer to the changes in prior year.

Acquisition of Nor-Cal Group

With effect from June 22, 2017, Pfeiffer Vacuum Technology AG indirectly via a US subsidiary acquired all shares of Nor-Cal Products Holdings, Inc. (Nor-Cal Inc.), Yreka, California, USA. At the same time further economically integrated but legally independent subsidiaries of Nor-Cal Products Holdings Inc. having their legal sites in the United States, Great Britain, the Republic of Korea, Singapore and Vietnam, were acquired. With the acquisition of these 100 % shareholdings (Nor-Cal) Pfeiffer Vacuum significantly strengthened the position in the highly attractive market for vacuum components.

The fair values of Nor-Cal's identified assets and liabilities assumed as of June 22, 2017 (acquisition date) were comprised as follows:

FAIR VALUE OF ASSETS AND LIABILITIES ASSUMED

in K€	June 22, 2017
Assets	
Intangible Assets	24,196
Fixed assets	7,350
Inventories	18,268
Receivables	5,725
Cash and cash equivalents	4,033
Other assets	1,262
Total assets	**60,834**
Liabilities	
Deferred tax liabilities	– 6,237
Trade accounts payable	– 3,141
Provisions	– 1,627
Income tax liabilities	– 500
Financial liabilities	– 4,342
Other liabilities	– 1,451
Total liabilities	**– 17,298**
Total net assets (fair value)	**43,536**
Goodwill	20,832
Total consideration (purchase price)	**64,368**

Major differences between the fair values and the net book values related to the recognition of intangible assets previously not recorded, particularly customer base (€ 19.8 million), order backlog (€ 2.4 million) and developed technology (€ 1.8 million), as well as to the write-up of inventories (€ 4.1 million), tangible assets (€ 2.0 million), and the recognition of deferred tax liabilities for the fair value adjustments (€ 6.6 million).

The purchase price comprised only a cash component. Taking into consideration the cash and cash equivalents acquired from Nor-Cal (K€ 4,033), the anticipated net cash used in connection with this corporate acquisition totaled K€ 60,335.

The gross amount of receivables assumed totaled € 5.9 million. € 0.2 million were defined as not be collectible and were thus recorded with correspondingly reduced values.

The goodwill in the amount of € 20.8 million comprised the workforce taken over, existing contracts, implemented business processes and market position as well as the acquisition's general business opportunities. This included synergy effects stemming from the broader product portfolio and the opportunity of being able to market this product portfolio via the expanded and integrated sales and marketing network. The goodwill is not expected to be able to be applied for tax purposes.

Nor-Cal's sales and net income contribution since June 22, 2017 totaled € 28.6 million, and € 1.9 million, respectively. Had the acquisition been effected at the outset of fiscal 2017, there would have been consolidated sales revenues of € 611.3 million. The consolidated net income would have been € 57.5 million taking into consideration the acquisition. The transaction costs incurred in fiscal 2017, which are to be borne by the Corporate Group, totaled K€ 638. They were attributable to legal and expertise fees and were included under general and administrative expenses.

Acquisition of Advanced Test Concepts Inc.

With effect from February 14, 2017, Pfeiffer Vacuum Technology AG indirectly via a US subsidiary acquired all shares of Advanced Test Concepts Inc. (ATC Inc.), Indianapolis, USA. At the same time further economically integrated but legally independent sister company of ATC Inc., having the same registered site, was acquired. With the acquisition of these 100% shareholdings Pfeiffer Vacuum consequently expanded its leak detection product portfolio.

In the meantime the acquired sister company to ATC Inc. was merged into ATC Inc. and ATC Inc. legal form was changed to LLC.

The fair values of ATC's identified assets and liabilities assumed as of February 14, 2017 (acquisition date) were comprised as follows:

FAIR VALUE OF ASSETS AND LIABILITIES ASSUMED

in K€	February 14, 2017
Assets	
Intangible Assets	3,464
Fixed assets	1,652
Inventories	2,582
Receivables	1,047
Cash and cash equivalents	161
Total assets	**8,906**
Liabilities	
Trade accounts payable	– 297
Other liabilities	– 216
Total liabilities	**– 513**
Total net assets (fair value)	**8,393**
Goodwill	3,402
Total consideration (purchase price)	**11,795**

Major differences between the fair values and the net book values related to the recognition of intangible assets previously not recorded, particularly customer base (€ 1.6 million), developed technology (€ 1.6 million), and a brand right (€ 0.3 million), as well as to the write-up of inventories (€ 1.2 million) and a write-down in fixed assets (€ – 0.4 million).

The purchase price comprised only a cash component. Taking into consideration the cash and cash equivalents acquired from ATC (K€ 161), the anticipated net cash used in connection with this corporate acquisition totaled K€ 11,634.

The gross amount of receivables assumed equaled its fair value.

The goodwill in the amount of € 3.4 million comprised the workforce taken over and the acquisition's general business opportunities. This included synergy effects stemming from the broader product portfolio and the opportunity of being able to market this product portfolio via the expanded and integrated sales and marketing network. The goodwill is expected to be able to be applied for tax purposes.

ATC's sales and net income contribution since February 14, 2017 totaled € 6.2 million, and € – 0.2 million, respectively. Had the acquisition been effected at the outset of fiscal 2017, there would have been consolidated sales revenues of € 587.4 million. The consolidated net income would also have been € 53.8 million taking into consideration the acquisition. The transaction costs incurred in fiscal 2017, which are to be borne by the Corporate Group, totaled K€ 89. They were attributable to legal and expertise fees and were included under general and administrative expenses.

Acquisition of further 75.1 % of shares in Dreebit GmbH

With effect from February 13, 2017, Pfeiffer Vacuum Technology AG acquired all remaining shares of Dreebit GmbH, Dresden, Deutschland, and thus increased its shareholdings from 24.9 % to 100.0 %. The acquisition has to be seen in connection with strengthening the growth area service which is a major basis for the success of Pfeiffer Vacuum.

The fair values of Dreebit's identified assets and liabilities assumed as of February 13, 2017 (acquisition date) were comprised as follows:

FAIR VALUE OF ASSETS AND LIABILITIES ASSUMED

in K€	13. Februar 2017
Assets	
Intangible Assets	189
Fixed assets	2,800
Inventories	1,284
Receivables	740
Cash and cash equivalents	375
Other assets	119
Total assets	**5,507**
Liabilities	
Deferred tax liabilities	– 207
Trade accounts payable	– 250
Provisions	– 597
Income tax liabilities	– 150
Financial liabilities	– 625
Other liabilities	– 556
Total liabilities	**– 2,385**
Total net assets (fair value)	**3,122**
Fair value of existing 24.9 % of shares as of the acquisition date	– 1,636
Goodwill	1,514
Total consideration (purchase price) of the remaining 75.1 % of shares	**3,000**

Major differences between the fair values and the net book values related to the write-up of fixed assets (€ 0.6 million) and the recognition of deferred tax liabilities for the fair value adjustments (€ 0.2 million).

The purchase price comprised only a cash component. Taking into consideration the cash and cash equivalents acquired from Dreebit (K€ 375), the anticipated net cash used in connection with this corporate acquisition totaled K€ 2,625.

The gross amount of receivables assumed equaled its fair value.

The goodwill in the amount of € 1.5 million comprised the workforce taken over and the acquisition's general business opportunities. This included synergy effects stemming from the expanded service offerings. The goodwill is not expected to be able to be applied for tax purposes.

Dreebit's sales and net income contribution since February 13, 2017 totaled € 6.6 million, and € 0.1 million, respectively. Had the acquisition been effected at the outset of fiscal 2017, there would have been consolidated sales revenues of € 587.8 million. The consolidated net income would have been € 53.9 million taking into consideration the acquisition. The transaction costs incurred in fiscal 2017, which are to be borne by the Corporate Group, totaled K€ 108. They were attributable to legal and expertise fees and were included under general and administrative expenses.

As of the acquisition date the fair value of the previously held equity portion equaled its book value.

Foundations in the prior year

To address the increasing importance of regional markets the sales and service company Pfeiffer Vacuum Malaysia SDN. BHD. was founded in Malaysia. This did not have any material impact on the Consolidated Financial Statements. In connection with the reconstruction and expanding of a facility in the USA, Pfeiffer Vacuum New Hampshire Realty Holdings, LLC., was founded. Formation of Pfeiffer Vacuum Indiana Realty Holdings, LLC., and Pfeiffer Vacuum California Realty Holdings, LLC., has to be seen in the context of acquiring ATC and Nor-Cal, respectively. Each of the latter three entities is a mere holding entity for the real estate acquired.

Liquidations in the prior year

In fiscal 2017 adixen Vacuum Technology (Shanghai) Co., Ltd., China, was liquidated and was thus disregarded from the scope of consolidation. This did not have any material impact on the Consolidated Financial Statements.

NOTES TO THE CONSOLIDATED STATEMENTS OF INCOME

7. Net sales

Pfeiffer Vacuum derives revenue from contracts with customers from the transfer of goods and services at a point in time and over time. The revenue, which is recognized at a point in time, is the major part of Pfeiffer Vacuum's net sales.

Presented below are the group sales with customers by products, regions and markets:

REVENUE BY PRODUCTS

in K€	Turbopumps	Instruments and components	Backing pumps	Service	Systems	Total
2018	192,111	193,755	143,414	111,582	18,863	**659,725**
2017	173,419	160,621	132,767	107,800	12,355	586,962

REVENUE BY REGIONS

in K€	Europe	Asia	The Americas	Rest of world	Total
2018	246,971	246,624	165,942	188	**659,725**
2017	222,547	220,304	143,808	303	586,962

REVENUE BY MARKETS

in K€	Semiconductors	Industry	Analytics	Coating	Research & Development	Total
2018	243,900	135,312	116,672	99,611	64,230	**659,725**
2017	225,358	129,135	100,067	74,232	58,170	586,962

The revenue with a major customer (> 10 % of total revenue) amounted to € 74.6 million in prior year and was realized in the segments South Korea, USA and Rest of Asia. In 2018 those revenues were below 10 % of the total revenue.

For further analysis of revenues we refer to the segment reporting in NOTE 32.

The order backlog as of December 31, 2018 was € 144.9 million (2017: € 127.4 million) and represents the extent of performance obligations which have not been fulfilled yet or are partially unfulfilled.

8. Functional expenses

Cost of Sales

Cost of sales predominantly include the manufacturing costs for the products sold as well as the costs for the services rendered. This includes all directly attributable material and production costs as well as indirect production costs (including depreciation on production buildings and machines). In addition, freight costs, expenses for inventory valuation, and warranty expenses are included here.

Selling and marketing expenses

Selling and marketing expenses predominantly include wages and salaries, marketing and advertising costs, costs relating to trade shows and conventions, as well as other merchandising costs (such as catalogs, brochures, etc.).

General and administrative expenses

General and administrative expenses predominantly include wages and salaries, expenses related to allowances for doubtful accounts, audit and other general consulting fees, as well as all costs relating to the Company as a whole.

Research and development expenses

Research and development expenses include personnel and material expenses allocated to this functional section. Amortization expenses for developed technology recognized in connection with the purchase price allocations totaled € 1.0 million in 2018 (2017: € 2.8 million) and are also included in research and development expenses.

For further analysis of operating expenses, please refer to NOTE 15 (relating to cost of sales), to NOTE 24 (relating to income tax expenses), to NOTE 25 (relating to the development of pension expenses), to NOTE 38 (relating to development of personnel expenses) and to NOTE 11 and NOTE 12 (relating to development of depreciation and amortization).

9. Other operating income and other operating expenses

Other operating income and expenses are comprised as follows:

COMPOSITION OF OTHER OPERATING INCOME AND EXPENSES

in K€	2018	2017
Foreign exchange gains	5,454	5,781
Government grants	3,568	3,117
Gains from disposals of assets	1,744	112
Other	536	1,335
Other operating income	**11,302**	**10,345**
Foreign exchange losses	– 4,682	– 8,748
Others	– 558	– 176
Other operating expenses	**– 5,240**	**– 8,924**

In respect to government grants reported under other operating income, there are no unfulfilled conditions or other contingencies existing.

10. Financial expenses and financial income

Financial expenses and financial income as recorded in 2018 and the previous year comprises as follows:

COMPOSITION OF FINANCIAL INCOME AND FINANCIAL EXPENSES

in K€	2018	2017
Interest expenses and similar	– 727	– 693
Total financial expenses	**– 727**	– 693
Interest income	208	347
Total financial income	**208**	347
Financial result	**– 519**	– 346

NOTES TO THE CONSOLIDATED BALANCE SHEETS

11. Intangible assets

The intangible assets item mainly includes software purchased within the consolidated Group and intangible assets recognized in connection with acquisitions (amongst others developed technology, customer base, trademark right) as well as goodwill. The development of intangible assets in 2018 and 2017 was as follows:

DEVELOPMENT OF INTANGIBLE ASSETS IN 2018

in K€	Software	Goodwill	Customer base	Other intangible assets	Total
Acquisition cost					
Balance as at January 1, 2018	8,410	79,299	40,495	33,108	161,312
Currency changes	6	1,422	1,137	308	2,873
Additions	801	—	—	372	1,173
Disposals	– 49	—	—	– 197	– 246
Balance as at December 31, 2018	9,168	80,721	41,632	33,591	165,112
Amortization					
Balance as at January 1, 2018	5,193	—	21,604	23,701	50,498
Currency changes	4	—	294	124	422
Additions	1,130	—	1,640	2,208	4,978
Disposals	– 49	—	—	– 197	– 246
Balance as at December 31, 2018	6,278	—	23,538	25,836	55,652
Net book value as at December 31, 2018	2,890	80,721	18,094	7,755	**109,460**
Thereof with an unlimited useful life	—	80,721	—	3,281	84,002

DEVELOPMENT OF INTANGIBLE ASSETS IN 2017

in K€	Software	Goodwill	Customer base	Other intangible assets	Total
Acquisition cost					
Balance as at January 1, 2017	7,130	56,800	21,435	26,920	112,285
Currency changes	– 14	– 3,249	– 2,289	– 633	– 6,185
Additions	1,104	—	—	524	1,628
Disposals	– 3	—	—	– 10	– 13
Additions from acquisitions	193	25,748	21,349	6,307	53,597
Balance as at December 31, 2017	8,410	79,299	40,495	33,108	161,312
Amortization					
Balance as at January 1, 2017	4,235	—	21,435	19,036	44,706
Currency changes	– 13	—	– 807	– 96	– 916
Additions	974	—	976	4,771	6,721
Disposals	– 3	—	—	– 10	– 13
Balance as at December 31, 2017	5,193	—	21,604	23,701	50,498
Net book value as at December 31, 2017	**3,217**	**79,299**	**18,891**	**9,407**	**110,814**
Thereof with an unlimited useful life	—	79,299	—	3,249	82,548

Impairment losses or respective reversals did not have to be recorded for intangible assets in fiscal 2018 and 2017.

For the purpose of testing the recoverability, goodwill and trademark rights with indefinite useful life recognized in connection with acquisitions, were tested on December 31, 2018 by means of an impairment test.

The determination of the cash generating units as a basis for the impairment test followed the segmentation according to IFRS 8 and was thus legal entity related. The recoverable amounts (values in use) for impairment testing of the goodwill were determined as at December 31, 2018 for those cash generating units goodwill was allocated to. Bases were cash flow forecasts for the years 2019 through 2021. These cash flow forecasts are developed from the distinguished yearly sales and cost planning for every year of the said period as approved by the Management and the corresponding operating results. In doing so, the current operating results as well as the expected market, economic, and competitor developments are considered and checked against the historical results. For the cash flow forecasts assumptions with regard to the development of working capital and the future capital expenditures are taken additionally. The cash flows expected after the detailed forecast were extrapolated using individual growth rates. Discounting of cash flows is carried out using weighted average cost of capital (WACC) that also reflect country specific risks.

For the goodwill recorded in connection with various acquisitions (€ 80.7 million; 2017: € 79.3 million) the recoverable amount (value in use) was determined as at December 31, 2018, based on cash generating units. The goodwill allocation to the cash generating units and the major assumptions used in calculating the recoverable amount are detailed in the following table.

ALLOCATION OF GOODWILL AND MAJOR VALUATION ASSUMPTIONS

	December 31, 2018			December 31, 2017		
	Goodwill	Pre-tax discount rate	Long-term growth rate	Goodwill	Pre-tax discount rate	Long-term growth rate
	in € millions	in %	in %	in € millions	in %	in %
Germany	13.1	11.7 – 12.4	1.0 – 1.5	13.1	9.0 – 9.4	1.5
Thereof Pfeiffer Vacuum Components & Solutions GmbH	8.2	12.1	1.5	8.2	9.4	1.5
France (Pfeiffer Vacuum SAS)	23.0	14.2	1.5	23.0	11.1	1.5
Rest of Europe	2.7	12.0 – 16.0	1.5	2.7	11.6	1.5
USA	31.2	11.0 – 11.1	1.5	29.8	8.5 – 12.9	1.5
Thereof Nor-Cal Products Inc.	20.3	11.0	1.5	19.4	9.7	1.5
Thereof Pfeiffer Vacuum Inc.	7.7	11.1	1.5	7.4	8.5	1.5
Republic of Korea (Pfeiffer Vacuum Semi Korea, Ltd.)	4.3	12.1	1.5	4.3	9.7	1.5
China	4.1	12.4	1.5	4.1	9.8	1.5
Rest of Asia	2.3	10.2 – 17.3	1.5	2.3	10.7	1.5
Total	**80.7**			**79.3**		

As of December 31, 218, the valuation of the aforementioned goodwill did not result in any impairment losses because for each individual valuation the value in use of the cash generating unit exceeded its respective book value.

A trademark right recognized in connection with an acquisition (net book value € 3.3 million; 2017: € 3.2 million) is still actively used by Pfeiffer and thus still has an indefinite useful life. It was allocated to the business segments based on sales portions. Here, amongst others, € 0.8 million related to France, € 1.0 million to the Republic of Korea, and € 0.6 million to the USA. No impairment was determined under the impairment test conducted on December 31, 2018.

Basically no reasonably possible change in a key assumption would cause each unit's carrying amount to exceed its recoverable amount. In contrast, an increase in discount rate by 0.3 %-points to 12.4 % with all other assumptions kept constant would cause the recoverable amount (value in use) of the goodwill allocated to the Italy region to match its net book value (2017: 0.15 %-points to 10.05 %). The same situation would result from a 0.2 %-point to 5.3 % reduction of the sustainable EBIT margin used for the cash flow extrapolation or a 0.3 % point reduction in the sustainable sales growth rate or a reduction of the sustainable free cash flow by K€ 20 to K€ 622 used for the cash flow extrapolation (2017: 0.1 %-points to 5.0 %, 0.2 %-points, and K€ 15 to K€ 459, respectively). An increase in discount rate by 1.3 %-points to 10.0 % with all other assumptions kept constant would cause the recoverable amount (value in use) of the goodwill allocated to Dreebit GmbH to match its net book value (2017: 0.25 %-points to 7.1 %). The same situation would result from a 1.2 %-point to 5.3 % reduction of the sustainable EBIT margin used for the cash flow extrapolation or a reduction of the sustainable free cash flow by K€ 100 to K€ 431 used for the cash flow extrapolation (2017: 0.3 %-points to 4.1 %, 0.3 %-points reduction in the sustainable sales growth rate or a reduction of the sustainable free cash flow by K€ 20 to

K€ 333, respectively). In 2017, an increase in discount rate by 0.3 %-points with all other assumptions kept constant would have caused the recoverable amount (value in use) of the goodwill allocated to China to match its net book value. The same situation would have resulted from a 0.3 %-point to 4.2 % reduction of the sustainable EBIT margin used for the cash flow extrapolation or a 0.4 %-point reduction in the sustainable sales growth rate or a reduction of the sustainable free cash flow by K€ 60 to K€ 853 used for the cash flow extrapolation. As of December 31, 2018, the amount by which the value in use exceeded the respective unit's net book value for the said two cash generating units in Italy and Dreebit totaled € 0.1 million, and € 1.0 million, respectively (2017: Italy, China and Dreebit € 0.1 million, € 0.8 million, and € 0.3 million, respectively).

12. Property, plant and equipment

DEVELOPMENT OF PROPERTY, PLANT AND EQUIPMENT IN 2018

in K€	Land and Buildings	Technical Equipment and Machinery	Other Equipment, Factory and Office Equipment	Construction in Progress	**Total**
Acquisition or manufacturing cost					
Balance as at January 1, 2018	87,373	91,396	33,330	11,246	223,345
Currency changes	600	301	106	100	1,107
Additions	4,443	15,178	3,412	9,463	32,496
Disposals	– 378	– 811	– 1,622	—	– 2,811
Reclassifications	7,407	828	130	– 8,365	—
Balance as at December 31, 2018	99,445	106,892	35,356	12,444	254,137
Depreciation					
Balance as at January 1, 2018	37,268	58,514	20,614	—	116,396
Currency changes	– 3	101	77	—	175
Additions	3,739	6,418	3,432	—	13,589
Disposals	– 197	– 553	– 1,416	—	– 2,166
Balance as at December 31, 2018	40,807	64,480	22,707	—	127,994
Net book value as at December 31, 2018	**58,638**	**42,412**	**12,649**	**12,444**	**126,143**

DEVELOPMENT OF PROPERTY, PLANT AND EQUIPMENT IN 2017

in K€	Land and Buildings	Technical Equipment and Machinery	Other Equipment, Factory and Office Equipment	Construction in Progress	Total
Acquisition or manufacturing cost					
Balance as at January 1, 2017	74,230	80,779	30,510	4,818	190,337
Currency changes	– 912	– 633	– 454	– 259	– 2,258
Additions	5,577	6,241	3,194	11,038	26,050
Disposals	– 162	– 1,707	– 717	—	– 2,586
Additions from acquisitions	7,746	3,455	601	—	11,802
Reclassifications	894	3,261	196	– 4,351	—
Balance as at December 31, 2017	87,373	91,396	33,330	11,246	223,345
Depreciation					
Balance as at January 1, 2017	33,549	53,388	18,347	—	105,284
Currency changes	– 40	– 286	– 273	—	– 599
Additions	3,917	7,052	3,110	—	14,079
Disposals	– 158	– 1,640	– 570	—	– 2,368
Balance as at December 31, 2017	37,268	58,514	20,614	—	116,396
Net book value as at December 31, 2017	**50,105**	**32,882**	**12,716**	**11,246**	**106,949**

In fiscals 2018 and 2017, no buildings and machinery were used as collateral to secure the Group's financial liabilities.

Neither in 2018 nor in the previous year there were any impairment losses or related reversals for property, plant, and equipment.

The yearly review of the remaining useful life of fixed assets in fiscal year 2018 led to an extension of useful lives for buildings, technical equipment and machinery in the France segment. Compared to the former useful lives the Group's net income was positively affected by net € 0.8 million. This amount will probably also incur in fiscal year 2019 and will balance gradually in future periods. There will be no earnings impact over the total useful lives of the respective assets.

13. Investment properties

DEVELOPMENT OF INVESTMENT PROPERTIES

in K€	2018	2017
Acquisition or manufacturing cost		
Balance as at January 1	861	861
Additions	—	—
Disposals	—	—
Reclassifications	—	—
Balance as at December 31	861	861
Depreciation		
Balance as at January 1	413	389
Additions	24	24
Disposals	—	—
Reclassifications	—	—
Balance as at December 31	437	413
Net book value as at December 31	**424**	**448**

The real estate shown in this line item was rented out in fiscal 2018 and 2017. Rental revenues amounted to K€ 56 (2017: K€ 55) and direct operating expenses amounted to K€ 28 (2017: K€ 27). Impairment losses or related reversals did not have to be recorded in 2018 and 2017.

The fair value of investment properties remains unchanged at € 0.5 million as per December 31, 2018 and 2017. Fair values were derived on the basis of the Company's own calculations by discounting expected net rental revenues during the estimated remaining life by an appropriate discount rate (level 3 of the fair value hierarchy according to IFRS 13).

14. Other financial assets and other assets

Other financial assets include mainly non-current cash items K€ 3,315 (2017: K€ 2,377) and deposits K€ 967 (2017: K€ 949). The short-term-part of cash items and deposits is reported under current financial assets.

The amount of other assets end of 2018 relates particularly to prepaid expenses in connection with a long-term use of factory and office properties.

15. Inventories

COMPOSITION OF INVENTORIES

in K€	2018	2017
Raw materials	36,420	31,816
Work in process	32,095	28,667
Finished products	64,676	52,901
Total inventories, net	**133,191**	113,384

Dec. 31

Materials consumption in fiscal 2018 amounted to € 256.6 million (2017: € 218.5 million) and is included in cost of sales.

In 2018, an amount of K€ 1,467 (2016: K€ 2,702) from the valuation of inventories at net realizable value was recorded as expense. This expense was shown under cost of sales.

16. Trade accounts receivable and contract assets

In connection with its normal course of business, the Company extends credit to a wide variety of business customers. The Company performs ongoing credit evaluations of its customers. Trade accounts receivable and contract assets do not bear any interest and have a remaining term of less than one year.

COMPOSITION OF TRADE ACCOUNTS RECEIVABLE AND CONTRACT ASSETS

in K€	2018	2017
Trade accounts receivable	93,331	80,780
Contract assets	298	—
Loss allowances	– 1,167	– 719
Trade accounts receivable and contract assets, net	**92,462**	80,061

Dec. 31

The closing loss allowances for trade accounts receivable and contract assets as at December 31, 2018 reconcile to the opening loss allowances as follows:

DEVELOPMENT OF LOSS ALLOWANCES

in K€

Loss allowances acc. to IAS 39 as at December 31, 2017	719
Revaluation	—
Loss allowances acc. to IFRS 9 as at January 1, 2018	719
Currency changes	17
Additions	590
Utlization	– 159
Loss allowances acc. to IFRS 9 as at December 31, 2018	**1,167**

Contract assets of 298 K € represent contractual rights to receive a consideration from customers, in such cases where Pfeiffer Vacuum fulfilled its obligations in according to IFRS 15 but the consideration did not become due. In this respect, Pfeiffer Vacuum recognizes revenue based on the group's progress to satisfy the performance obligation. The amount of contract assets was netted with customer's considerations which were already paid (1.026 K €). As at January 1, 2018 no major contract assets were registered.

Pfeiffer Vacuum applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables and contract assets.

To measure the expected credit losses, trade receivables and contract assets have been grouped based on shared credit risk characteristics and the days past due. The contract assets relate to unbilled work in progress and have substantially the same risk characteristics as the trade receivables for the same types of contracts. The group has therefore concluded that the expected loss rates for trade receivables are a reasonable approximation of the loss rates for the contract assets.

The expected loss rates are based on the payment profiles of sales over a period of 60 months before December 31, 2018 or January 1, 2018 respectively and the corresponding historical credit losses experienced within this period. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables. The group has identified the GDP (Gross Domestic Product) of the countries in which it sells its goods to be the most relevant factor, and accordingly adjusts the historical loss rates based on expected changes in this factor.

On that basis, the loss allowance as at December 31, 2018 was determined as follows for both trade receivables and contract assets:

COMPOSITION OF LOSS ALLOWANCES

in K€	Not overdue	Less than 30 days past due	More than 30 days past due	More than 60 days past due	More than 90 days past due	Total
December 31, 2018						
Expected loss rate	0.0%	0.2%	2.1%	7.7%	19.6%	
Gross carrying amount – trade accounts receivable	66,918	14,756	5,155	2,057	4,445	**93,331**
Gross carrying amount – contract assets	298	—	—	—	—	**298**
Loss allowance	—	29	108	159	871	**1,167**
December 31, 2017						
Gross carrying amount – trade accounts receivable	59,655	14,099	2,842	1,657	2,527	**80,780**
Gross carrying amount – contract assets	—	—	—	—	—	**—**
Loss allowance	—	—	40	145	534	**719**

Further loss allowances on financial assets were not registered in current reporting period and in prior year.

17. Other accounts receivable

This line item totaled K€ 13,884 as at December 31, 2018 (December 31, 2017: K€ 11,792). As in the year before, this position was characterized by expense subsidies of K€ 5,230 (December 31, 2017: K€ 5,313) and VAT claims of K€ 5,197 (December 31, 2017: K€ 3,239).

18. Cash and cash equivalents

The cash and cash equivalents item consists of cash at banks and cash on hand. Additionally, the Company records all bank deposits having an original maturity of three months or less as cash equivalents. The fair value of cash and cash equivalents corresponds to their net book value.

19. Share capital and additional paid-in capital

Unchanged compared to the previous year end, the share capital of Pfeiffer Vacuum Technology AG (parent company) consisted of 9,867,659 issued and outstanding no-par ordinary shares.

The Annual Shareholders Meeting on May 23, 2018, authorized the Management Board to increase the Company's share capital by K€ 12,631, or 4,933,829 shares, in consideration for contributions in cash and/or kind once or in partial amounts (authorized capital). This authorization is valid through May 23, 2023, and is subject to the consent of the Supervisory Board.

According to the resolution of the Annual Shareholders Meeting on May 22, 2014, the Management Board is authorized to issue fractional bonds with option or conversion rights or conversion obligations, profit participation rights or participating bonds (or combinations of these instruments) with an aggregate nominal value of up to € 200,000,000.00 and to grant the holders conversion rights for up to 2,466,914 no-par bearer shares of the Company having a pro-rata amount of up to € 6,315,299.84 of the share capital. This authorization is valid until May 21, 2019, and requires the consent of the Supervisory Board.

There were no changes of the additional paid-in capital in 2018 or 2017.

20. Paid and proposed dividends

The Annual General Meeting on May 23, 2018, resolved to pay a dividend of € 2.00 per share (Annual Shareholders Meeting on May 23, 2017: € 3.60 per share). The dividend payment carried out thereunder amounted to K€ 19,735 in 2018 (2017: K€ 35,524).

The Management Board proposes to let shareholders participate in the Company's success via a dividend in the amount of € 2.30 per share. This proposal is subject to the approval of the Supervisory Board and the Annual General Meeting. Because the proposal must be approved by the Annual General Meeting, the resulting payment of K€ 22,696 has not been recorded as a liability in the balance sheet for the fiscal year ended December 31, 2018.

21. Other equity components

Other equity components comprise unrealized gains/losses on hedges and actuarial gains/losses resulting from valuation of defined benefit obligations and plan assets at fair value. Furthermore this position comprises foreign currency translation adjustments.

DEVELOPMENT OF OTHER EQUITY COMPONENTS

in K€	Valuation of Defined Benefit Plans	Results from Cash Flow Hedges	Currency Changes	Total
Balance as at January 1, 2017	– 30,169	– 412	13,226	– 17,355
Changes in actuarial gains/losses (net of tax)	– 121	—	—	– 121
Changes in fair value of cash flow hedges (net of tax)	—	412	—	412
Changes in foreign currency translation	—	—	– 13,252	– 13,252
Balance as at December 31, 2017	– 30,290	—	– 26	**– 30,316**
Changes in actuarial gains/losses (net of tax)	– 2,751	—	—	– 2,751
Changes in fair value of cash flow hedges (net of tax)	—	– 9	—	– 9
Changes in foreign currency translation	—	—	4,904	4,904
Balance as at December 31, 2018	– 33,041	– 9	4,878	**– 28,172**

Due to the fact that the terms of all cash flow hedges are less than one year, the reported year-end balances as at December 31 of the respective years will be reclassified to the income statement the next year. The new year-end amounts result form changes during the respective year and thus not from prior years.

TAX EFFECT ON OTHER COMPREHENSIVE INCOME

	2018			2017		
in K€	Gross Amount	Tax Effect	Net Amount	Gross Amount	Tax Effect	Net Amount
Valuation of Defined Benefit Plans	– 4,125	1,374	– 2,751	394	– 515	– 121
Results from cash flow hedges	– 13	4	– 9	588	– 176	412
Currency changes	4,904	—	4,904	– 13,252	—	– 13,252
Total other comprehensive income	**766**	**1,378**	**2,144**	– 12,270	– 691	– 12,961

Dec. 31

22. Treasury shares

At the Annual Shareholders Meeting on May 21, 2015, the shareholders authorized the Management Board to acquire treasury shares pursuant to § 71, Sub-Para. 1, No. 8, German Stock Corporation Act ("AktG"). This authorization allows the Company to acquire treasury shares representing up to € 2,526,120.70 of the capital stock (986,766 shares equal to 10% of capital stock at the time of the resolution), requires the consent of the Supervisory Board for execution, and is valid through May 20, 2020.

23. Long-term financial liabilities

In connection with the acquisition of Nor-Cal Products Holdings Inc. and its subsidiaries, long-term financial liabilities having a net cash inflow of € 70.0 million were taken out in the course of 2017. With it, an existing credit line was amended. These liabilities have a Euribor-based variable interest rate including an arm's-length margin. Interest clearing is made quarterly. There were no changes in the financial liabilities drawn during the course of 2018. In fiscal year 2018, interest expenses totaling € 0.5 million were recorded (previous year: € 0.3 million). Under the loan agreement, the Group has committed to comply with a determined financial ratio. The Company has clearly complied with this ratio in 2018 and 2017.

Pfeiffer Vacuum and its subsidiaries have various lines of credit available to them for operating purposes, totaling approximately € 13.9 million (December 31, 2017: € 13.6 million).

Financial obligations as shown under short and long-term financial liabilities may result in cash flows from financing activities in future reporting periods. Changes of these financial liabilities in fiscal years 2017 predominantly consisted of cash-based changes, while there were no changes in 2018.

24. Income taxes

Under current German corporate tax law, taxes on the income of German companies comprise corporate taxes, trade taxes, and an additional surtax.

INCOME BEFORE TAX WAS TAXABLE IN THE FOLLOWING JURISDICTIONS

in K€	2018	2017
Germany	44,648	33,715
Outside Germany	49,963	37,325
Total	**94,611**	**71,040**

COMPOSITION OF INCOME TAX EXPENSE

in K€	2018	2017
Current taxes		
Germany	– 14,357	– 10,593
Outside Germany	– 11,297	– 11,304
	– 25,654	– 21,897
Deferred taxes		
Germany	1,369	344
Outside Germany	– 1,447	4,361
	– 78	4,705
Income tax expense	**– 25,732**	– 17,192

K€ 26,476 of current tax expense related to earnings in 2018 (2017: K€ 22,301). This line item additionally contained tax income for prior years amounting to K€ 822 (2017: K€ 404).

RECONCILIATION FROM EXPECTED TO ACTUAL INCOME TAX EXPENSE

in K€	2018	2017
Earnings before taxes	94,611	71,040
Expected tax expense using the tax rate of the parent company (28.95 %; 2017: 28.81 %)	– 27,390	– 20,467
Non-deductible expenses	– 1,285	– 1,019
Effects due to dividend payments	– 324	– 180
Deferred tax changes due to changes in tax laws	–	1,924
Non-taxable income	1,598	1,902
Difference foreign tax rates	854	257
Tax credits/debits due to tax filings in prior years	822	404
Other	– 7	– 13
Income tax expense	**– 25,732**	– 17,192

As opposed to 24.2 % the year before, the tax ratio for the Pfeiffer Vacuum Group amounted to 27.2 % in 2018. Prior year's tax ratio was positively impacted particularly by the one-time effects of the US tax reform and thus increased in the year under review.

DEFERRED TAXES RELATE TO THE FOLLOWING BALANCE SHEET ITEMS

in K€	2018	2017
Deferred tax assets		
Pensions	19,026	16,887
Inventories	6,507	5,184
Provisions and contract liabilities	3,920	4,106
Tax credits	1,297	2,152
Tax loss carry forwards	1,000	1,270
Property, plant and equipment	299	688
Receivables	313	328
Intangible assets	247	591
Derivatives	14	3
Other	68	73
Total deferred tax assets	**32,691**	**31,282**
Thereof long-term deferred tax assets	21,869	21,588
Thereof short-term deferred tax assets	10,822	9,694
Deferred tax liabilities		
Intangible assets	– 6,652	– 6,750
Property, plant and equipment	– 5,556	– 5,424
Receivables (including contract assets)	– 140	– 51
Inventories	– 82	– 8
Other	– 4	—
Total deferred tax liabilities	**– 12,434**	**– 12,233**
Thereof long-term deferred tax liabilities	– 12,208	– 12,174
Thereof short-term deferred tax liabilities	– 226	– 59
Total deferred taxes, net	**20,257**	**19,049**

Dec. 31

AMOUNTS RECORDED IN THE BALANCE SHEET

in K€	2018	2017
Deferred tax assets	24,895	23,037
Deferred tax liabilities	– 4,638	– 3,988
Total deferred taxes, net	**20,257**	**19,049**

Dec. 31

DEFERRED TAXES RECORDED IN THE INCOME STATEMENT

in K€	2018	2017
Inventories	1,216	333
Pension	746	– 781
Intangible assets	446	4,736
Derivatives	3	– 109
Property, plant and equipment	– 929	952
Tax credit	– 928	500
Tax loss carry forwards	– 308	– 1,300
Provisions and contract liabilities	– 214	8
Receivables (including contract assets)	– 112	337
Other	2	29
Total deferred taxes	**– 78**	**4,705**

As at December 31, 2018, the total deferred tax assets included income taxes recorded directly in equity in the amount of K€ 13,162 (December 31, 2017: K€ 11,784). The total deferred tax liabilities included no income taxes recorded directly in equity. The amount recorded directly in equity in 2018 related to actuarial gains/losses and derivatives/hedging (2017: only actuarial gains/losses).

For taxable losses totaling K€ 1,935 (thereof K€ 203 deductible until 2019, K€ 132 deductible until 2020, K€ 702 deductible until 2021, and K€ 218 deductible until 2022), no deferred tax assets have been recorded as these losses will presumably not be offset against taxable gains until the expiration.

Provisions have not been established for additional taxes on the 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. Under current German law, dividends from non-German and German subsidiaries are 95 % tax-exempt, i.e. 5 % of dividend income is not deductible from income for corporate tax purposes. The management estimates that the effects of this rule in Germany will be negligible.

25. Pensions and similar obligations

Defined benefit pension plans

COMPOSITION OF THE NET LIABILITY RECORDED IN THE BALANCE SHEET

in K€	2018	2017
Present value of funded defined benefit obligation	104,474	101,010
Present value of unfunded defined benefit obligation	10,313	10,526
Total present value of defined benefit obligation	114,787	111,536
Fair value of plan assets	– 59,149	– 61,502
Net defined benefit liability	**55,638**	**50,034**

Dec. 31

REGIONAL SPLIT OF THE NET LIABILITY RECORDED IN THE BALANCE SHEET

in K€	2018	2017
Germany	41,007	36,302
Europe (excluding Germany)	9,143	9,263
Rest of world	5,488	4,469
Net defined benefit liability	**55,638**	**50,034**

Dec. 31

For Pfeiffer Vacuum GmbH, there are plans in place consisting of old-age, invalidity, and surviving dependents benefits. These obligations are based upon plans reflecting period of service and final salary. However, these plans are closed for new employees since many years. For new employees, there is a retirement arrangement in place since December 31, 2007 which has been implemented as a direct commitment on a period of service and funded basis. Accordingly for all employees of Pfeiffer Vacuum GmbH an employer funded pension scheme is in place which is partially funded via the Pfeiffer Vacuum Trust e.V. There are no legally binding minimum funding requirements for these plans.

For Dr. Matthias Wiemer and former members of the Pfeiffer Vacuum Technology AG Management Board there are individually agreed plans in place, consisting of old-age, invalidity, and surviving dependents benefits. These obligations are based on period of service as well as final salary commitments and are also largely funded via the Pfeiffer Vacuum Trust e.V. Again, there are no legally binding minimum funding requirements. These benefit obligations are detailed in the compensation report (an element of the Group Management Report).

For Pfeiffer Vacuum Inc., USA, there is a plan in place consisting of old-age, invalidity, and surviving dependents benefits with the obligations being based upon period of service and final salary. These benefits are partially funded via a trust arrangement. There are no legally binding minimum funding requirements.

For Pfeiffer Vacuum SAS, France, and for Pfeiffer Vacuum Semi Korea, Ltd., Republic of Korea, there are plans in place with the obligations being based upon period of service and final salary to be paid as a one-time installment due at the beginning of the retirement. The plan of Pfeiffer Vacuum Semi Korea, Ltd. is partially funded. There are no legally binding minimum funding requirements in France or the Republic of Korea.

COMPOSITION OF THE NET PENSION EXPENSES

in K€	2018	2017
Current service cost	3,527	3,654
Net interest expense	1,111	936
Net pension expenses	**4,638**	4,590

Net pension expenses were allocated to the functional expenses according to the input involved.

DEVELOPMENT OF THE DEFINED BENEFIT OBLIGATION

in K€	2018	2017
Present value of defined benefit obligation as at January 1	111,536	110,013
Current service cost	3,527	3,654
Interest cost on the defined benefit obligation	2,335	2,099
Actuarial gains /losses from changes in demographic assumptions	796	– 341
Actuarial gains /losses from changes in financial assumptions	– 731	638
Actuarial experience gains /losses	593	115
Benefits paid	– 3,725	– 3,510
Currency changes	456	– 1,132
Present value of defined benefit obligation as at December 31	**114,787**	111,536
Thereof attributable to:		
Active employees	61,180	61,022
Deferred employees	9,716	9,677
Pensioners	43,891	40,837

DEVELOPMENT OF PLAN ASSETS

in K€	2018	2017
Fair value of plan assets as at January 1	61,502	58,825
Interest income	1,224	1,163
Experience gains/losses	– 3,412	656
Company contributions	3,243	5,137
Benefit payments	– 3,725	– 3,510
Currency changes	317	– 769
Fair value of plan assets as at December 31	**59,149**	61,502

ACTUARIAL ASSUMPTIONS

in %	2018	2017
Germany		
Discount rate	1.75	1.75
Wage and salary trend	3.00	3.00
Pension trend	2.00	2.00
Mortality tables	Heubeck 2018 G	Heubeck 2005 G
United States		
Discount rate	4.45	3.80
Wage and salary trend	2.00	2.00
Mortality tables	RP 2018	RP 2017
France, Republic of Korea		
Discount rate (weighted average)	1.89	1.99
Wage and salary trend (weighted average)	3.48	3.39
Mortality tables France	Insee M/F 2007–2060	Insee M/F 2007–2060
Mortality tables Republic of Korea	Insurance Development Institute of Korea	Insurance Development Institute of Korea

Dec. 31

The actuarial assumptions with regard to the mortality tables in the USA and Germany changed in 2018. This resulted in an actuarial loss of K€ 796. The impact on future periods presently cannot be conclusively determined.

COMPOSITION OF PLAN ASSETS

	2018		2017	
	in K€	in %	in K€	in %
Equity securities	14,635	24.7	20,289	33.0
Debt securities	40,246	68.0	36,002	58.5
Cash and cash equivalents	1,512	2.6	2,367	3.9
Other	2,756	4.7	2,844	4.6
Total	**59,149**	**100.0**	61,502	100.0

Dec. 31

With the exemption of plan assets in the category "Other" totaling K€ 1,604 (December 31, 2017: K€ 1,745), all plan assets are traded on an active market.

Plan assets do not contain financial instruments issued by the Company or other assets owned by the Company.

Accounting for 87 % the vast majority of plan assets related to the funding of the German benefit plans. To invest these funded amounts fiducially and insolvency protected, Pfeiffer Vacuum Trust e.V. was founded. Pfeiffer Vacuum Trust e.V. issued a mutual fund with a pursued target equity allocation of up to 30 % as well as a pursued fixed-income securities and cash allocation of at least 70 %. The fund is managed by an unrelated third-party asset management company with the major conditions regarding the asset allocation being given and adjusted when necessary. Funds are invested conservatively using also a value safeguarding approach. Underlying risks in connection with the investment of plan assets, for example fair value and default risks, are minimized accordingly.

The risks relating to the defined benefit plans within Pfeiffer Vacuum Group predominantly relate to the determination of discount rates. Changes to this parameter impact disproportionately the present value with the current relatively low interest rate level leading to a comparably high benefit obligation. In addition, benefit obligation is impacted by the other actuarial assumptions (for example life expectancy, wage and salary trend, pension trend). Depending on the elements of the pension plan life expectancy or pension trend are of subordinate importance. The following table shows the respective impact of an isolated adjustment of individual assumptions with all other parameters including the basic methodology kept constant compared to the original calculation.

SENSITIVITY ANALYSIS 2018

	Change in actuarial assumption	Impact on defined benefit obligation	
		in K€	in %
Present value of defined benefit obligation as at December 31, 2018		114,787	
Discount rate	1.0 %-point increase	– 14,545	– 12.7
	1.0 %-point decrease	18,423	16.0
Pension trend	0.25 %-point increase	2,657	2.3
	0.25 %-point decrease	– 2,538	– 2.2
Wage and salary trend	0.5 %-point increase	1,788	1.6
	0.5 %-point decrease	– 1,693	– 1.5
Life expectancy	increase by 1 year	4,524	3.9
	decrease by 1 year	– 4,555	– 4.0

Dec. 31

SENSITIVITY ANALYSIS 2017

	Change in actuarial assumption	Impact on defined benefit obligation	
		in K€	in %
Present value of defined benefit obligation as at December 31, 2017		111,536	
Discount rate	1.0 %-point increase	– 14,472	– 13.0
	1.0 %-point decrease	18,392	16.5
Pension trend	0.25 %-point increase	2,592	2.3
	0.25 %-point decrease	– 2,476	– 2.2
Wage and salary trend	0.5 %-point increase	1,844	1.7
	0.5 %-point decrease	– 1,746	– 1.6
Life expectancy	increase by 1 year	4,252	3.8
	decrease by 1 year	– 4,265	– 3.8

Dec. 31

EXPECTED MATURITY OF UNDISCOUNTED PENSION PAYMENTS

in K€	2018	2017
Less than 1 year	3,649	3,494
Between 1 and 2 years	3,881	3,652
Between 2 and 3 years	4,117	3,940
Between 3 and 4 years	4,535	3,976
Between 4 and 5 years	4,657	4,515
More than 5 until 10 years	**27,437**	**26,273**

Dec. 31

The weighted average duration of the defined benefit obligation at December 31, 2018 amounted to 15.9 years (December 31, 2017: 16.1 years). The expected contributions for defined benefit plans in 2019 will be approximately € 3.6 million.

Defined contribution plans

Employees of the Company in certain countries are covered by defined contribution 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€ 12,721 in 2018 (2017: K€ 11,805).

26. Trade accounts payable

Trade accounts payable do not bear any interest and, as in the year before, have maturities of less than one year.

27. Contract liabilities

Contract liabilities as of December 31, 2018 include obligations to transfer vacuum products or render services to Pfeiffer Vacuum's customers from whom payments have already been received. Therefore, Pfeiffer Vacuum does no longer disclose such payments received under "Customer deposits." Presumably K€ 630 of the contract liabilities will be realized or fulfilled after more than 12 months.

28. Other payables

Other payables (K€ 25,740 as at December 31, 2018, and K€ 22,333 as at December 31, 2017) mainly consist of payroll taxes and VAT, as well as payables from social security contributions and legally binding participation programs. They do not bear any interest and, as in the year before, have maturities of less than one year.

29. Provisions

COMPOSITION OF PROVISIONS

in K€	2018	2017
Personnel provisions	23,574	19,896
Warranty provisions	15,939	15,769
Other provisions	2,113	4,229
Total	**41,626**	**39,894**

Dec. 31

Provisions for employee-related expenses primarily include provisions for profit-sharing obligations and bonuses. Warranty provisions include the amounts expected due to claims in connection with product warranties. They are recorded as per the close of the fiscal year for realized revenues based on management's estimates and experience.

DEVELOPMENT OF PROVISIONS

in K€	Personnel	Warranty	Other	Total
Balance as at January 1, 2018	19,896	15,769	4,229	39,894
Currency changes	170	65	– 13	222
Additions	18,080	7,576	1,729	27,385
Utilization	– 14,095	– 7,471	– 3,787	– 25,353
Releases	– 477	–	– 45	– 522
Balance as at December 31, 2018	**23,574**	**15,939**	**2,113**	**41,626**

30. Short-term financial liabilities

As in the year before short-term financial liabilities included bank liabilities in the amount of € 0.1 million maturing within one year.

31. Commitments and other financial obligations

The Company has entered into leases and maintenance agreements which expire on various dates, some of which are renewable. The tables below present the maximum amount of the contractual commitments as at year end, classified by the periods in which the contingent liabilities or commitments will expire.

CONTRACTUAL OBLIGATIONS AS AT DECEMBER 31, 2018

in K€	Total	Payments Due by Period			
		< 1 Year	1–3 Years	3–5 Years	> 5 Years
Operating leases	14,615	4,427	5,267	2,285	2,636
Purchase obligations	35,325	34,070	1,255	—	—
Repair and maintenance	5,087	2,834	310	179	1,764
Total	**55,027**	**41,331**	**6,832**	**2,464**	**4,400**

CONTRACTUAL OBLIGATIONS AS AT DECEMBER 31, 2017

in K€	Total	Payments Due by Period			
		< 1 Year	1–3 Years	3–5 Years	> 5 Years
Operating leases	11,624	3,742	4,736	2,072	1,074
Purchase obligations	23,430	19,556	3,874	—	—
Repair and maintenance	2,665	2,410	188	57	10
Total	**37,719**	**25,708**	**8,798**	**2,129**	**1,084**

Purchase obligations include long-term arrangements for future supplies of materials. Rental expenses amounted to € 5.4 million (2017: € 5.0 million) and mainly related to the local sales companies' rented premises. The contracts have different terms and extension rights.

32. Segment reporting

The Company's business operations include the development, manufacture, sale and service of vacuum pumps, vacuum components and instruments, as well as vacuum systems. The subsidiaries in the individual countries are independent legal entities with their own management, which distribute products and provide services. Some entities within the Group additionally execute production functions. The entire product portfolio is offered by all sales subsidiaries.

Controlling of business development by corporate management is carried out on the level of the legal entities. Accordingly, the Company identifies its primary operating segments by legal entity. Due to the similarity of their economic environment, the same product portfolio sold, same sales markets, same cost structures and same sales channels, the Company basically aggregates its European and Asian subsidiaries into one reporting segment, "Europe (excluding Germany and France)" and "Asia (excluding Republic of Korea)". In contrast, the production companies in Germany, France and the Republic of Korea were presented separately each as an individual segment. This was caused by the different functions of these entities, predominantly resulting from the existing production function. For this reason the prerequisites for an aggregation with the other segments are not given. The purely sales-oriented entity in the US is thus also presented separately. After the entities acquired in 2017 had been fully integrated during the course of 2018 the segment reporting was delineated according to the aforementioned aggregation criteria, particularly with regard to the expectations for the long-term profitability development (mainly gross margins). All operating segments that individually or as a group do not have to be reported separately are included in the segment „All others." Accordingly this segment mainly includes the entities producing instruments and components that had formerly been shown in the segments „Germany" and „USA." For comparison reasons the prior year numbers were adjusted accordingly. Unchanged compared to previous year, all information is based upon the geographic location of the Group Company in question.

Transactions between segments are based upon the arm's length principle. The internal reporting on which the disclosures are based is IFRS. Segment sales and segment results in the primary reporting format initially include the effects of inter-segment transactions. These effects are eliminated in connection with the consolidation process.

SEGMENT REPORTING AS AT DECEMBER 31, 2018

in K€	Germany	France	Rest of Europe	USA	USA (production)	Republic of Korea	Rest of Asia	All Others	Consolidation	Group
Net sales	244,616	224,226	113,217	112,405	48,683	84,154	111,488	53,648	– 332,712	659,725
Third party	116,012	57,042	112,807	112,237	44,495	81,618	101,153	34,361	—	659,725
Intercompany	128,604	167,184	410	168	4,188	2,536	10,335	19,287	– 332,712	—
Operating profit	44,726	15,863	9,265	5,842	– 626	6,021	11,504	2,535	—	95,130
Financial income	– 237	– 179	4	1,318	– 1,269	42	13	– 211	—	– 519
Earnings before taxes	44,489	15,684	9,269	7,160	– 1,895	6,063	11,517	2,324	—	94,611
Segment assets	150,673	123,824	48,544	64,075	69,344	45,561	72,597	49,542	—	624,160
Thereof: Assets according to IFRS 8.33 (b)[1]	48,415	61,376	3,808	20,656	45,838	16,736	19,740	26,940	—	243,509
Segment liabilities	121,876	65,314	17,577	11,066	6,732	11,110	13,667	4,593	—	251,935
Capital expenditures:										
Property, plant and equipment[2]	6,838	7,633	477	5,030	306	1,745	2,806	7,661	—	32,496
Intangible assets	482	373	—	7	—	95	1	215	—	1,173
Depreciation[2]	4,646	3,964	431	577	754	702	1,225	1,314	—	13,613
Amortization	620	845	4	2	2,704	82	16	705	—	4,978

[1] Non-current assets other than financial instruments, deferred tax assets and prepaid pension cost
[2] Including investment properties

SEGMENT REPORTING AS AT DECEMBER 31, 2017 (ADJUSTED)

in K€	Germany	France	Rest of Europe	USA	USA (production)	Republic of Korea	Rest of Asia	All Others	Consolidation	Group
Net sales	218,432	209,902	95,355	113,439	25,673	93,658	84,938	45,361	– 299,796	586,962
Third party	110,023	45,546	95,073	113,092	22,820	91,416	77,996	30,996	—	586,962
Intercompany	108,409	164,356	282	347	2,853	2,242	6,942	14,365	– 299,796	—
Operating profit	31,145	13,871	6,803	2,614	– 2,758	11,110	5,638	2,963	—	71,386
Financial income	– 113	– 116	14	—	– 11	– 38	105	– 187	—	– 346
Earnings before taxes	31,032	13,755	6,817	2,614	– 2,769	11,072	5,743	2,776	—	71,040
Segment assets	122,357	113,641	39,889	57,325	66,852	51,430	58,490	43,377	—	553,361
Thereof: Assets according to IFRS 8.33 (b)[1]	46,738	58,171	3,799	15,325	46,225	15,343	15,475	20,975	—	222,051
Segment liabilities	113,970	70,167	7,971	6,923	5,543	13,193	8,917	5,740	—	232,424
Capital expenditures:										
Property, plant and equipment[2]	3,577	8,245	421	6,953	214	1,740	1,998	2,902	—	26,050
Intangible assets	734	631	—	4	13	—	30	216	—	1,628
Depreciation[2]	4,400	5,078	418	450	467	1,222	999	1,069	—	14,103
Amortization	620	3,316	5	—	2,145	—	12	623	—	6,721

[1] Non-current assets other than financial instruments, deferred tax assets and prepaid pension cost
[2] Including investment properties

33. Financial instruments

Fair value

The net book value of financial instruments (e.g. cash and cash equivalents, trade accounts receivable and trade accounts payable, other accounts receivable and payable) essentially equals their fair value.

Interest rate risks

The interest-bearing portion of cash and cash equivalents involves interest rate risks. All investment forms have variable interest rates and are invested on a short-term basis. There are no further investment forms that result in interest rate risks within the Pfeiffer Vacuum Group.

Due to the short investment period for cash and cash equivalents, the agreed interest rate equals the market rate. Even if the market rate should change significantly, there will be no material impact on the fair value of cash and cash equivalents because the interest rate can be adjusted after only a short period of time.

As at December 31, 2018, as in the year before, there were no more interest-sensitive financial assets. As a result of cash and cash equivalents as at December 31, 2018, an increase (decrease) in interest rate by 50 basis points would increase (decrease) earnings by K€ 542 (December 31, 2017: increase/decrease by K€ 487). As a result of financial liabilities shown as at December 31, 2018, an increase (decrease) in interest rate by 50 basis points would decrease (increase) earnings by K€ 300 (December 31, 2017: increase (decrease) by K€ 302).

Credit risks

Due to the Company's vastly heterogeneous customer structure, there are no material credit risk concentrations within the Group. Credit risks are additionally minimized through rigorous accounts receivable management and by monitoring our customers' payment patterns. Furthermore, deliveries to new customers are essentially made only after credit assessment, against payment in advance or credit limit. As a result, Pfeiffer Vacuum is able to keep the level of its allowance for doubtful accounts low, even in difficult economic times. The maximum theoretical credit risk equates the gross book value less already recognized allowance. For further details in respect to risk provision for trade accounts receivables please refer to note 16.

Liquidity risks

Due to the above-average level of cash and cash equivalents, no liquidity risks can be identified.

Foreign exchange rate risks

Approximately 53 % (2017: 56 %) of the Company's net sales are denominated in currencies other than the euro, primarily in U.S. dollars. The Company enters into foreign currency forward contracts and options to hedge the exposure of its forecasted sales against currency fluctuations. All derivative financial instruments are entered into only within this scope.

The derivatives that qualify for cash flow hedges under IFRS 9/IAS 39 are recognized either as assets or liabilities at their fair values. Changes in the values of these cash flow hedges are recorded in equity under other equity components, net of applicable taxes. These amounts are subsequently reclassified as earnings (foreign exchange gains/losses) in the same period as the underlying transactions affect operating income. For the fiscal years ended December 31, 2018, and 2017, there were no amounts that were recognized in earnings due to hedge ineffectiveness. For the same periods, no gains or losses had to be reclassified to earnings from other equity components as a result of the discontinuance of cash flow hedges. If derivatives are kept, these derivatives are marked to market at period end using quoted forward rates.. The negative fair values of the cash flow hedges recorded under other accounts payable for the period ended December 31, 2018, totaled K€ 13. Because the changes in fair value for cash flow hedges are recorded directly in equity, other equity components decreased by K€ – 9, net of taxes of K€ 4, as at December 31, 2018. As at December 31, 2017, there were no contracts to be classified as cash flow hedges. The derivatives classified as fair value hedges totaled K€ – 15 as at December 31, 2018, were recorded through the income statement, and shown with an amount of K€ 14 under other accounts receivables and with an amount of K€ 29 under other payables (December 31, 2017: K€ – 6). The Company does not engage in speculative hedging for investment purposes. As at December 31, 2018, and at December 31, 2017, no contracts held by the Company had a maturity date greater than one year.

As at December 31, 2018, the Company has entered into foreign currency forward contracts (U.S. dollar and Korean Won) totaling € 9.7 million (December 31, 2017: only Korean Won, € 1.6 million) with a remaining term of less than one year. Pfeiffer Vacuum performs ongoing credit evaluations of the parties to these contracts and enters into contracts only with well-established financial institutions. Currency risks as defined by IFRS 7 arise as a result of financial instruments being denominated in a currency that is not the functional currency and being of a monetary nature; differences resulting from the translation of financial statements into the Group's presentation currency are not taken into consideration. Relevant risk variables are generally all non-functional currencies in which Pfeiffer Vacuum has entered into financial instruments. The vast majority of non-derivative monetary financial instruments within the Pfeiffer Vacuum Group are directly denominated in functional currency. In variance thereto, exchange rate risks arise from the securities available-for-sale, from a portion of trade accounts receivable, and from derivative financial instruments. If derivative financial instruments classify as cash flow hedges, changes in the exchange rate do not impact the income statement but are recorded directly in equity. Exchange rate-based changes in securities available-for-sale are also recorded directly in equity.

Had the euro, as at December 31, 2018, depreciated 10 %, net income would have been lower by K€ 2,442 and the total equity lower by K€ 2,600. A 10 % appreciation in the euro as at that balance sheet date would have increased net income by K€ 2,160 and the total equity by K€ 2,334. Had the euro, as at December 31, 2017, appreciated 10 %, net income would have been lower by K€ 1,992. A 10 % depreciation in the euro as at December 31, 2017, would have increased net income by K€ 2,473. In all cases, net income and equity were affected mostly by the sensitivity of the U.S. dollar which is predominantly material for the Consolidated Financial Statements.

Composition of financial instruments

The following tables show the composition of financial instruments by balance sheet line item and valuation category and fair value as well as net results by valuation category.

COMPOSITION OF FINANCIAL INSTRUMENTS AS AT DECEMBER 31, 2018

			Amounts Recognized According to IFRS 9			
in K€	**Category according to IFRS 9**	**Net Book Value**	Amortized Cost	Fair Value Recognized in Equity	Fair Value Through Profit and Loss	Fair Value
Assets						
Cash and cash equivalents	AC	108,380	108,380	—	—	108,380
Trade accounts receivable and contract assets	AC	92,462	92,462	—	—	92,462
Other financial assets	AC	4,891	4,891	—	—	4,891
Derivative financial instruments (excl.hedges)	FVPL	14	—	—	14	14
Liabilities						
Trade accounts payable	AC	38,054	38,054	—	—	38,054
Financial liabilities	AC	60,277	60,277	—	—	60,277
Derivative financial instruments (incl. hedges)	FVOCI	13	—	13	—	13
Derivative financial instruments (excl. hedges)	FVPL	29	—	—	29	29
Totals by valuation categories:						
Amortized Costs (AC)		107,402	107,402	—	—	107,402
Fair Value through other Comprehensive Income (FVOCI)		– 13	—	– 13	—	– 13
Fair Value through Profit or Loss (FVPL)		– 15	—	—	– 15	– 15

AC = Amortized Costs;
FVOCI = Fair Value through other Comprehensive Income;
FVPL = Fair Value through Profit or Loss

COMPOSITION OF FINANCIAL INSTRUMENTS AS AT DECEMBER 31, 2017

			Amounts Recognized According to IFRS 9			
in K€	**Category According to IFRS 9**	**Net Book Value**	Amortized Cost	Fair Value Recognized in Equity	Fair Value Through Profit and Loss	Fair Value
Assets						
Cash and cash equivalents	AC	97,402	97,402	—	—	97,402
Trade accounts receivable	AC	80,061	80,061	—	—	80,061
Other financial assets	AC	3,840	3,840	—	—	3,840
Derivative financial instruments (incl.hedges)	FVOCI	—	—	—	—	—
Liabilities						
Trade accounts payable	AC	40,814	40,814	—	—	40,814
Financial liabilities	AC	60,329	60,329	—	—	60,329
Derivative financial instruments (incl. hedges)	FVOCI	—	—	—	—	—
Derivative financial instruments (excl. hedges)	FVPL	6	—	—	6	6
Totals by valuation categories:						
Amortized Costs (AC)		80,160	80,160	—	—	80,160
Fair Value through other Comprehensive Income (FVOCI)		—	—	—	—	—
Fair Value through Profit or Loss (FVPL)		– 6	—	—	– 6	– 6

AC = Amortized Costs; FVOCI = Fair Value through other Comprehensive Income; FVPL = Fair Value through Profit or Loss

NET RESULTS BY VALUATION CATEGORY

		From subsequent valuation				Net Result	
in K€	From Interest/ Dividends	At Fair Value	Currency Translation	Impairment/ Reversal of Impairment	From Derecognition	**2018**	2017[4]
Financial Instruments (AC)[1]	– 517	—	772	– 590	159	– 176	– 3,691
Derivative Financial Instruments incl. hedges (FVOCI)[2]	—	– 13	—	—	—	– 13	—
Derivative Financial Instruments excl. hedges (FVPL)[3]	—	– 15	—	—	—	– 15	– 6

[1] AC = Amortized Costs; [2] FVOCI = Fair Value through other Comprehensive Income;
[3] FVPL = Fair Value through Profit or Loss; [4] Adjusted according to the new categories (IFRS 9).

Determination of fair values of financial instruments

Determination of the fair value of derivative financial instruments (K€ – 28 as at December 31, 2018; K€ – 6 as at December 31, 2017) was done according to level 2 of the fair value hierarchy as set out in IFRS 13 "Fair Value Measurement" using accepted valuation principles and directly obtainable and up-to-date market parameters. A significant default risk is not given for these financial instruments.

In respect to the determination of fair value of financial liabilities the agreed variable interest rates are equal to the current rates customary in the market. Accordingly, the net book values correspond to their fair values.

Due to the underlying short terms fair values of trade accounts receivable and payable, other accounts receivable and payable and cash and cash equivalents equal their respective net book values.

Maturity of financial instruments

The following table shows the maturity of finance liabilities according to expiry date classes based on the maturity as of the balance sheet date. This analysis only relates to financial instruments and finance lease liabilities and includes undiscounted cash-flows. Reconciliation to the amounts in the balance sheet is thus basically not possible.

MATURITIES AS OF DECEMBER 31, 2018

in K€	up to 1 year	1 year up to 5 years	> 5 years	Total
Financial liabilities	23	60,000	—	60,023
Finance lease liabilities	72	182	—	254
Trade accounts payable	38,054	—	—	38,054

MATURITIES AS OF DECEMBER 31, 2017

in K€	up to 1 year	1 year up to 5 years	> 5 years	Total
Financial liabilities	5	60,000	—	60,005
Finance lease liabilities	76	248	—	324
Trade accounts payable	40,814	—	—	40,814

The following table shows the changes in financial liabilities that were deemed as financing activities in the Consolidated Statements of Cash flows.

NET DEBT RECONCILIATION

in K€	Loans	Lease-liabilities	Other liabilities	Total
Net book value as at 1 January 2017	—	—	224	**224**
Additions from acquisitions	5	411	4,967	5,383
Proceeds from financial liabilities	70,000	—	—	70,000
Repayment of financial liabilities	– 10,000	– 63	– 5,119	– 15,182
Thereof cash flow-relevant	60,000	– 63	– 5,119	54,818
Foreign exchange differences	—	– 24	– 72	– 96
Net book value as at 31 December 2017	60,005	324	—	60,329
Proceeds from financial liabilities	—	—	23	23
Repayment of financial liabilities	– 5	– 82	—	– 87
Thereof cash flow-relevant	– 5	– 82	23	**– 64**
Foreign exchange differences	—	12	—	12
Net book value as at 31 December 2018	60,000	254	23	**60,277**

34. Management of financial risks

With an equity ratio of 59.6 % as at December 31, 2018, even after the partly externally funded acquisitions, Pfeiffer Vacuum still has an equity base that is high. Additionally, cash and cash equivalents totaled € 108.4 million as at December 31, 2018. Despite the financial liabilities taken out totaling € 60.3 million as of December 31, 2018 (December 31, 2017: € 60.3 million) the Group shows no indebtedness on a net basis. Again, the required liquidity range to successfully develop Pfeiffer Vacuum does exist.

Liquid assets are invested on a short-term conservative basis. Due to its high equity ratio and its good liquidity, even after the acquisition, Pfeiffer Vacuum will not depend upon interest-bearing liabilities to fund its capital expenditures for replacement and expansion or the dividend payment. Moreover, there are sufficient liquidity reserves to respond to changes in the economic situation.

35. Earnings per share

COMPUTATION OF EARNINGS PER SHARE

in K€	2018	2017
Net income (in K€)	68,879	53,848
Weighted average number of shares	9,867,659	9,867,659
Number of conversion rights	—	—
Adjusted weighted average number of shares	9,867,659	9,867,659
Earnings per share in € (basic/diluted)	6.98	5.46

There were no transactions with ordinary shares or ordinary shares issued during the period between the balance sheet date of December 31, 2018, and the preparation of the Consolidated Financial Statements.

ADDITIONAL NOTES AND SUPPLEMENTAL INFORMATION

36. Related party disclosures

Related party transactions predominantly consist of all transactions with those companies included in the Consolidated Financial Statements. The amounts of these transactions are detailed in the segment reporting in NOTE 32, which also includes intercompany sales. All transactions are carried out at conditions that are usual and customary in the market and are entirely eliminated during the consolidation process. Therefore, there is no impact on financial position or results. Pfeiffer Vacuum does not have holdings in any jointly controlled entities. Furthermore, no control exists with respect to special purpose entities.

Please refer to NOTE 40 and NOTE 41 regarding the compensation paid to the members of the Management and Supervisory Board, as well as regarding potential transactions with members of these corporate bodies. Aside from their activities on the Supervisory Board, the members of the Supervisory Board do not provide individual services for the Group or any of its companies. In contrast thereto, the employee representatives on the Supervisory Board receive salaries under the rules of the respective employment contracts for their work at the Company.

In 2018, the reimbursements from Pfeiffer Vacuum Trust e.V. amounted to € 2.5 million (2017: € 2.4 million). Contributions to Pfeiffer Vacuum Trust e.V. totaled € 2.7 million in 2018 (previous year: € 3.0 million).

The law firm of Menold Bezler Partnerschaft, Stuttgart, was contracted for the last time in 2017 on the basis of usual and customary terms and conditions, to perform consulting projects. The expenses recorded in this context totaled € 0.1 million in 2017. The Chairman of the Supervisory Board Dr. Michael Oltmanns, who resigned on October 25, 2017, is a partner in that firm.

As of December 31, 2018, Dr. Karl Busch, Ms. Ayhan Busch, Ms. Ayla Busch, Mr. Sami Busch, and Mr. Kaya Busch, all Germany, together had 50.02 % of the voting rights of the Company according to the data available (December 31, 2017: 38.96 %). The shares are indirectly held through Pangea GmbH, Maulburg, Germany, and further independent legal entities belonging to the family-run Busch group. Based on unchanged arm's length conditions, goods in an aggregated purchasing value of a very low single digit million Euro amount were received from an operating company of the Busch group in the fiscal years 2018 and 2017. Busch SE, Maulburg, is the parent company of the Busch Group and thus also the parent company of Pfeiffer Vacuum.

Members of the Management and Supervisory Boards held an aggregate total of 4,937,639 shares of the Company as at December 31, 2018 (2017:3,846,765). The change resulted from the shareholdings of Busch group which are also attributable to the new Chairwoman of the Supervisory Board Ayla Busch.

37. Events after the balance sheet date

Since the beginning of the 2019 fiscal year, there have not been any significant changes in the company situation or the industry environment.

38. Personnel expenses

PERSONNEL EXPENSES

in K€	2018	2017
Wages and salaries	– 174,536	– 157,709
Social security, pension and other benefit cost	– 37,436	– 33,261
Thereof for pensions	– 17,359	– 16,395
Total	**– 211,972**	– 190,970

39. Number of Employees

Zum 31. Dezember 2018 und 2017 setzt sich die Anzahl der Mitarbeiter wie folgt zusammen:

NUMBER OF EMPLOYEES

	2018	2017
Annual average		
Male	2,559	2,330
Female	542	479
Total	3,101	2,809
Balance sheet date		
Male	2,646	2,440
Female	558	505
Total	**3,204**	2,945

The number of employees includes apprentices (December 31, 2018: 96, previous year: 113).

40. Management Board

Since November 27, 2017, the Management Board has consisted of Dr. Eric Taberlet, Diplom-Ingenieur, (Chairman of the Management Board and CEO), Ms. Nathalie Benedikt, Diplom-Betriebswirtin (Chief Financial Officer), Dr. Ulrich von Hülsen, Diplom-Physiker, and Dr. Matthias Wiemer, Diplom-Ingenieur.

Total compensation recorded in the income statement for the aforesaid members of the Management Board for fiscal 2018 totaled € 1.9 million (2017: € 1.4 million). € 1.1 million thereof related to short-term fixed compensation (2017: € 0.6 million) and € 0.6 million to short-term variable benefits (2017: € 0.5 million) and for the first time € 0.2 million to long-term variable benefits. Short-term variable benefits recorded in the income statement in 2017 were paid out in 2018. Open balances with the Board Members as of December 31, 2018, only related to the provisions for the variable compensation and totaled € 0.8 million (2017: € 0.6 million). Total pensions expenses in 2018 again totaled € 0.2 million. For active members of the Board of Management, a net pension obligation of € 1.6 million was recorded (2017: € 1.1 million). Pursuant to § 289a, Sub-Para. 2, Sentence 2, German Commercial Code ("HGB") or § 315a, Sub-Para. 2, Sentence 2, German Commercial Code ("HGB"), the compensation paid to the members of the Management Board is detailed in the compensation report (an element of the Group Management Report) GROUP MANAGEMENT REPORT PAGE 82. Additionally, the distribution of responsibilities within the Management Board is shown in the Group Management Report GROUP MANAGEMENT REPORT PAGE 77.

Benefits to former members of the Management Board (pensions) again amounted to € 0.4 million. As of December 31, 2018, the net benefit obligation recorded for this group totaled € 5.3 million (2017: € 4.7 million).

41. Supervisory Board

Pursuant to § 96, Sub-Para. 1, § 101, Sub-Para. 1, German Stock Corporation Act ("AktG"), § 4, German One-Third Participation Act ("DrittelbG") of 2004, and § 9, Sub-Para. 1, Articles of Association and Bylaws, the Supervisory Board comprises four members elected by the Annual Shareholders Meeting and two members elected by the Company's employees.

The Supervisory Board members elected by the shareholders Dr. Michael Oltmanns and Dr. Wolfgang Lust resigned from their Supervisory Board mandate with effect from October 25, 2017 and left the Supervisory Board at that time. By decision of the Wetzlar District Court on October 5, 2017, Ayla Busch was legally appointed to the Supervisory Board for the period from October 26, 2017 until the end of the next ordinary Annual General Meeting. Ayla Busch was elected as Chairwoman of the Supervisory Board at the Supervisory Board meeting on October 26, 2017. By resolution of the Wetzlar District Court dated March 19, 2018, Henrik Newerla was legally appointed as a member of the Supervisory Board for the period from March 19, 2018 until the end of the next Annual General Meeting.

Accordingly, new elections to the Supervisory Board took place at the last Annual General Meeting on May 23, 2018. The Annual General Meeting approved the proposal of the Supervisory Board and elected Ayla Busch and Henrik Newerla as full members of the Supervisory Board. In turn, at the constituent meeting of the Supervisory Board on May 23, 2018, Ms. Busch was appointed Chairwoman of the Supervisory Board.

Membership during the course of the year 2018 was therefore as follows:

- Ayla Busch (Chairwoman)
  Co-CEO of Busch SE, Maulburg
- Götz Timmerbeil (Vice Chairman),
  Certified Public Accountant and Tax Advisor
- Filippo Th. Beck,
  Attorney of Swiss law,
- Helmut Bernhardt (Employee Representative),
  Development Engineer
- Manfred Gath (Employee Representative),
  Chairman of the Employee Council
- Henrik Newerla, Retiree,
  since March 29, 2018

The following members exercised further mandates. These are supervisory board mandates unless otherwise indicated:

- Ayla Busch:
  - Busch Taiwan Corporation, New Taipei City, Taiwan, Supervisor, until January 17, 2019
  - Busch Clean Air S.A., Pruntrut, Switzerland, Member of the supervisory organ, until December 31, 2018
  - Busch Vakuumteknik A/S, Ry, Denmark, Member of the supervisory organ, until January 16, 2019
  - Busch Vacuum Israel Ltd., Kiryat Gat, Israel, Director, until December 31, 2018
  - Busch Vacuum India Pvt. Ltd., Manesar, India, Non-Executive Director, until December 31, 2018
  - Busch Consolidated Inc., Virginia Beach, United States, Non-Executive Director, until December 31, 2018
  - Busch Vacuum South Africa (Pty.) Ltd., Johannesburg, South Africa, Non-Executive Director, until December 31, 2018

- Götz Timmerbeil:
  - Arena Gummersbach GmbH & Co. KG, Gummersbach (Deputy Chairman)
  - Richard Stein GmbH & Co. KG, Engelskirchen, (Chairman of the Advisory Board), from July 1, 2018
  - VfL Handball Gummersbach GmbH, Gummersbach (Chairman of the Advisory Board), until June 30, 2018

- Filippo Th. Beck:
  - Candoria Group, Baar (Switzerland), member of the supervisory organ of Candoria Holding AG, president of the supervisory organ of Progresa Holding AG and Sendaya Holding SA (formerly: Candoria Luxembourg Holding SA), Luxembourg;
  - Tenro Group, Bottmingen (Switzerland), member of the supervisory organ of various companies in the group,
  - Biamathea AG, Basel (Switzerland), member of the supervisory organ,
  - Polyterra Liegenschaften AG in liquidation, Küsnacht (Switzerland), member of the supervisory organ and liquidator,
  - Tainn-Immobilien AG, Berne (Switzerland), member of the supervisory organ,
  - Bellavista Services AG, member of the supervisory organ, from April 10, 2018,
  - IKFE Properties I AG, Zurich (Switzerland), president of the supervisory organ, until November 1, 2018

The members of the Supervisory Board received a fixed short-term remuneration of K€ 308 (previous year: K€ 309) in the period under review. Open balances with the Supervisory Board Members as of December 31, 2018, totaled € 0.1 million (2017: –).Pursuant to § 289a, Sub-Para. 2, Sentence 2, German Commercial Code ("HGB") or § 315a, Sub-Para. 2, Sentence 2, German Commercial Code ("HGB"), the compensation paid to the members of the Supervisory Board is detailed in the compensation report (an element of the Group Management Report)
GROUP MANAGEMENT REPORT PAGE 85.

42. Exempting provision under § 264 Sub-Para. 3, German Commercial Code ("HGB")

Pfeiffer Vacuum GmbH, Asslar, Germany, is included in the Consolidated Financial Statements of Pfeiffer Vacuum Technology AG. Accordingly, this company has made use of the exempting provision under § 264, Sub-Para. 3, German Commercial Code.

43. Audit fees for independent auditors

The expenses for services rendered by the auditor of the Consolidated Financial Statements recorded in the statements of income were as follows for fiscal 2018 and 2017:

AUDIT FEES FOR THE AUDITOR OF THE CONSOLIDATED FINANCIAL STATEMENTS

in K€	2018	2017
Fees resulting from:		
Audit services	– 836	– 1,121
Other certification and consulting services	—	– 27
Tax advisory services	– 26	– 6
Other services	– 299	—
Total	**– 1,161**	– 1,154

The total for the year 2018 comprised also fees to PricewaterhouseCoopers GmbH, Wirtschaftsprüfungsgesellschaft, Frankfurt am Main in the amount of K€ 439 for audit services, K€ 21 for tax advisory services and K€ 268 for other services (2017: Ernst & Young GmbH, Wirtschaftsprüfungsgesellschaft, Eschborn/Frankfurt am Main: K€ 814 for audit services).

The audit of the Consolidated Financial Statements as of December 31, 2018, was carried out by PricewaterhouseCoopers GmbH, Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, while the prior year 2017 was audited by Ernst & Young GmbH, Wirtschaftsprüfungsgesellschaft, Eschborn/Frankfurt am Main. Significant other services rendered by the auditor for Pfeiffer Vacuum Technology AG related to advisory in connection with the application of new laws and with the enhancement of the compliance management system.

44. German Corporate Governance Code/ Declaration pursuant to § 161, German Stock Corporation Act (“AktG”)

On December 5, 2018, the Management and Supervisory Boards of Pfeiffer Vacuum Technology AG submitted the Statement of Compliance for the year 2018 required pursuant to § 161 of the Germany Stock Corporation Act (“AktG”). It was made permanently accessible to shareholders on the Corporation’s website ↗ GROUP.PFEIFFER-VACUUM.COM.

Since the submission of the last statement of compliance on January 24, 2018, Pfeiffer Vacuum Technology AG complies with all recommendations of the German Corporate Governance Code, as amended in February 2017, with the following two exceptions:

- The German Corporate Governance Code recommends a deductible for the Supervisory Board’s D&O insurance (Paragraph 3.8). The Supervisory Board’s actual D&O insurance does not contain a deductible. A deductible would not improve the Supervisory Board’s overall motivation and sense of responsibility as the members work for the benefit of the Group.

- The German Corporate Governance Code recommends that a term limit is established for the period on the Supervisory Board (Paragraph 5.4.1). In the financial year 2018, the Supervisory Board has set a specified limit of 15 years for the period of membership on the Supervisory Board. All members of the Supervisory Board fulfil this requirement, with the exception of Mr. Götz Timmerbeil; the Supervisory Board made an exception for him, since he possesses a high level of expertise and many years of knowledge of the Company, which the Supervisory Board would not like to forgo at this point in time and after the resolved changes to the Supervisory Board in the past three years.

45. Authorization for issuance of Consolidated Financial Statements

Through a resolution by the Management Board on February 28, 2019, the Consolidated Financial Statements were authorized for issuance.

Asslar, February 28, 2019

The Management Board

Dr. Eric Taberlet

Nathalie Benedikt

Dr. Matthias Wiemer

Dr. Ulrich von Hülsen

CERTIFICATION OF LEGAL REPRESENTATIVES

To the best of our knowledge, and in accordance with the applicable reporting principles, the Consolidated Financial Statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Group management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Asslar, February 28, 2019

The Management Board

Dr. Eric Taberlet	Nathalie Benedikt	Dr. Matthias Wiemer	Dr. Ulrich von Hülsen

INDEPENDENT AUDITOR'S REPORT

To Pfeiffer Vacuum Technology AG, Asslar

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE GROUP MANAGEMENT REPORT

Audit Opinions

We have audited the consolidated financial statements of Pfeiffer Vacuum Technology AG, Asslar, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2018, and the consolidated statement of comprehensive income, consolidated statement of income, consolidated statement of changes in equity and consolidated statement of cash flows for the financial year from January 1, 2018 to December 31, 2018, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of Pfeiffer Vacuum Technology AG for the financial year from January 1, 2018 to December 31, 2018. In accordance with the German legal requirements, we have not audited the content of those parts of the group management report listed in the "Other Information" section of our auditor's report.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to § 315e Sub-Para. 1 HGB ["Handelsgesetzbuch": German Commercial Code] and full IFRSs and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at December 31, 2018, and of its financial performance for the short financial year from January 1, 2018 to December 31, 2018, and

- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the group management report does not cover the content of those parts of the group management report listed in the "Other Information" section of our auditor's report.

Pursuant to § 322 Sub-Para. 3, sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the Audit Opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with § 317 HGB and the EU Audit Regulation (No. 537/2014, referred to sub-sequently as "EU Audit Regulation") in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 Sub-Para. 2 point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 Sub-Para. 1 of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

Key Audit Matters in the Audit of the Consolidated Financial Statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the short financial year from January 1, 2018 to December 31, 2018. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In our view, the matters of most significance in our audit were as follows:

1. Recoverability of goodwill

2. Impact of the initial application of IFRS 15 on revenue recognition

Our presentation of these key audit matters has been structured in each case as follows:

I. Matter and issue

II. Audit approach and findings

III. Reference to further information

Hereinafter we present the key audit matters:

1. Recoverability of goodwill

I. In the Company's consolidated financial statements goodwill amounting in total to EUR 80.7 million (12.9 % of total assets) is reported under the Intangible assets balance sheet item. Goodwill is tested for impairment by the Company once a year or when there are indications of impairment to determine any possible need for write-downs. The impairment test is carried out at the level of the groups of cash-generating units to which the relevant goodwill is allocated. The carrying amount of the relevant cash-generating units, including goodwill, is compared with the corresponding recoverable amount in the context of the impairment test. The recoverable amount is generally determined using the value in use. The present value of the future cash flows from the respective group of cash-generating units normally serves as the basis of valuation. Present values are calculated using discounted cash flow models. For this purpose, the adopted medium-term business plan of the Group forms the starting point which is extrapolated based on assumptions about long-term rates of growth. Expectations relating to future market developments and assumptions about the development of macroeconomic factors are also taken into account. The discount rate used is the weighted average cost of capital for the respective group of cash-generating units. The impairment test determined that no impairments were necessary.

The outcome of this valuation is dependent to a large extent on the estimates made by the members of the management board with respect to the future cash inflows from the respective group of cash-generating units, the discount rate used, the rate of growth and other assumptions, and is therefore subject to considerable uncertainty. Against this background and due to the complex nature of the valuation, this matter was of particular significance in the context of our audit.

II. As part of our audit, we assessed the methodology used for the purposes of performing the impairment test, among other things. After matching the future cash inflows used for the calculation against the adopted medium-term business plan of the Group, we assessed the appropriateness of the calculation, in particular by reconciling it with general and sector-specific market expectations. In addition, we assessed the appropriate consideration of the costs of Group functions. In the knowledge that even relatively small changes in the discount rate applied can have a material impact on the value of the entity calculated in this way, we focused our testing in particular on the parameters used to determine the discount rate applied, and assessed the calculation model. In order to reflect the uncertainty inherent in the projections, we evaluated the sensitivity analyses performed by the Company. We verified that the necessary disclosures were made in the notes to the consolidated financial statements relating to groups of cash-generating units for which a reasonably possible change in an assumption would result in the recoverable amount falling below the carrying amount of the cash-generating units including the allocated goodwill.

Overall, the valuation parameters and assumptions used by the members of the management board are in line with our expectations and are also within the ranges considered by us to be reasonable.

III. The Company's disclosures on the balance sheet item Intangible assets are contained in section 11 of the notes to the consolidated financial statements.

2. Impact of the initial application of IFRS 15 on revenue recognition

I. Revenues totaling EUR 659.7 million are reported in the consolidated statement of income in the Company's consolidated financial statements. The revenues result in particular from the sale of turbo pumps, instruments and components, systems, backing pumps and the provision of services in particular in connection with maintenance. The Company has established extensive systems and processes throughout the Group for the purposes of accurately recognizing and deferring revenue. In this financial year, due to the first-time adoption of the new accounting standard on revenue recognition (IFRS 15) the Company analyzed in detail the previous revenue recognition and deferral of revenue. The first-time adoption of IFRS 15 required the Group-wide review of systems and processes in line with the new rules for revenue recognition and deferred revenue as well as a new assessment of existing contracts throughout the Group.

The first-time adoption of IFRS 15 throughout the Group is considered to be complex. Against this background, revenue recognition was of particular significance during our audit.

II. Our audit included assessing the appropriateness and effectiveness of the processes and controls established by the Group within the Group's internal control system for recognizing and deferring revenue during the entire financial year, including the IT systems used.

In addition, as part of our audit and together with the help of internal specialists we assessed the Company's analyses of the impact of the first-time adoption of IFRS 15. With the knowledge that the calculation of the effects of the first-time adoption is primarily based on the members' of the management board assessments and assumptions, and that these have a significant effect on the amount of reported revenues, we in particular assessed the information used as well as the appropriateness of the procedure used to calculate the impact of the first-time adoption of IFRS 15. We also examined contracts with customers, reviewed the identification of performance obligations, and evaluated whether these services are performed over time or at a point in time. In connection with the disclosure requirements arising from the first-time adoption of IFRS 15, we assessed among other things the appropriateness of the procedure used, including the impact analyses conducted within the Group, and assessed the estimates and judgments made by the members of the management board with respect to the recognition and deferment of revenue for the various business models of the Group companies.

We verified the appropriateness of the systems, processes, and controls which are in place, and that the estimates and assumptions made by the members of the management board are sufficiently documented and substantiated to ensure that revenue is properly recognized in accordance with IFRS 15 as applied for the first time.

III. The Company's disclosures on revenues as well as the impact of the first-time adoption of IFRS 15 are contained in sections 3, 4, 7 and 32 of the notes to the consolidated financial statements.

Other Information

The members of the management board are responsible for the other information. The other information comprises the following non-audited parts of the group management report:

- the group statement on corporate governance pursuant to § 315d HGB included in section "Corporate Governance Report and Declaration on the Corporate Governance" of the group management report
- the corporate governance report pursuant to No. 3.10 of the German Corporate Governance Code

The publication "Annual Report 2018" and the separate non-financial group report pursuant to § 315b Sub-Para. 3 HGB are expected to be made available to us after the date of the audit opinion.

Our audit opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the Members of the Management Board and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

The members of the management board are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Sub-Para. 1 HGB and full IFRSs and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition the members of the management board are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the members of the management board are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the members of the management board are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the members of the management board are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by the members of the management board and the reasonableness of estimates made by the members of the management board and related disclosures.

- Conclude on the appropriateness of the members' of the management board use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Sub-Para. 1 HGB and full IFRSs.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.

- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.

- Perform audit procedures on the prospective information presented by the members of the management board in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the members of the management board as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on May 23, 2018. We were engaged by the supervisory board on October 10, 2018. We have been the group auditor of the Pfeiffer Vacuum Technology AG, Asslar, without interruption since the financial year 2018.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Christian Kwasni.

Frankfurt am Main, February 28, 2019

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Christian Kwasni	ppa. Daniel Spengemann
Wirtschaftsprüfer	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]

CONSOLIDATED STATEMENTS OF INCOME

6-YEAR-OVERVIEW

in K€	2018	2017	2016	2015	2014	2013
Net sales	659,725	586,962	474,244	451,521	406,642	408,727
Cost of sales	– 424,517	– 376,945	– 293,769	– 276,010	– 263,259	–259,345
Gross profit	**235,208**	210,017	180,475	175,511	143,383	149,382
Selling and marketing expenses	– 68,371	– 63,313	– 55,330	– 59,850	– 52,789	–51,343
General and administrative expenses	– 49,106	– 48,976	– 35,733	– 35,838	– 29,853	–29,407
Research and development expenses	– 28,663	– 27,763	– 26,282	– 25,479	– 23,936	–22,900
Other operating income	11,302	10,345	10,818	13,297	10,176	8,268
Other operating expenses	– 5,240	– 8,924	– 5,972	– 6,882	– 2,237	–3,477
Operating profit	**95,130**	71,386	67,976	60,759	44,744	50,523
Financial expenses	– 727	– 693	– 662	– 691	– 978	–1,217
Financial income	208	347	301	383	507	644
Earnings before taxes	**94,611**	71,040	67,615	60,451	44,273	49,950
Income taxes	– 25,732	– 17,192	– 20,583	– 18,535	– 11,854	–15,135
Net income	**68,879**	53,848	47,032	41,916	32,419	34,815
Earnings per share (in €)	**6.98**	5.46	4.77	4.25	3.29	3.53
Number of shares (weighted average)	9,867,659	9,867,659	9,867,659	9,867,659	9,867,659	9,867,659

CONSOLIDATED STATEMENTS OF INCOME

6-YEAR-OVERVIEW

in K€	2018	2017	2016	2015	2014	2013
Profitability figures						
Gross margin	35.7%	35.8 %	38.1 %	38.9 %	35.3 %	36.5 %
Operation profit margin	14.4%	12.2 %	14.3 %	13.5 %	11.0 %	12.4 %
After-tax return on sales	10.4%	9.2 %	9.9 %	9.3 %	8.0 %	8.5 %
Sales by region						
Europe	246,971	222,547	188,860	187,003	183,181	182,070
Asia	246,624	220,304	174,604	151,511	130,323	143,863
The Americas	165,942	143,808	110,542	112,412	92,636	81,447
Rest of world	188	303	238	595	502	1,347
Sales by product						
Instruments and components	193,755	160,621	105,520	98,777	96,899	101,151
Turbopumps	192,111	173,419	144,518	144,777	124,693	125,351
Backing pumps	143,414	132,767	114,989	102,381	89,419	92,075
Service	111,582	107,800	99,698	96,730	84,967	81,653
Systems	18,863	12,355	9,519	8,856	10,664	8,497