
Annual Report 2018



Milestones 2018

va-Q-tec UK Ltd. moves into a new, second building in Rochester / UK.



Opening of the facility in Langhorne / USA.



Plant II is opened in Kõlleda.



The five locations in Würzburg are combined in Alfred-Nobel-Straße 33 (AN33). Completion of the extensive renovation works.



Foundation of va-Q-tec Uruguay Inc. in Montevideo / Uruguay and move to a new location.



Foundation of va-Q-tec Singapore Pte Ltd.



2018 the most important figures at a glance

444 | **23** | **8**

Employees

Nationalities

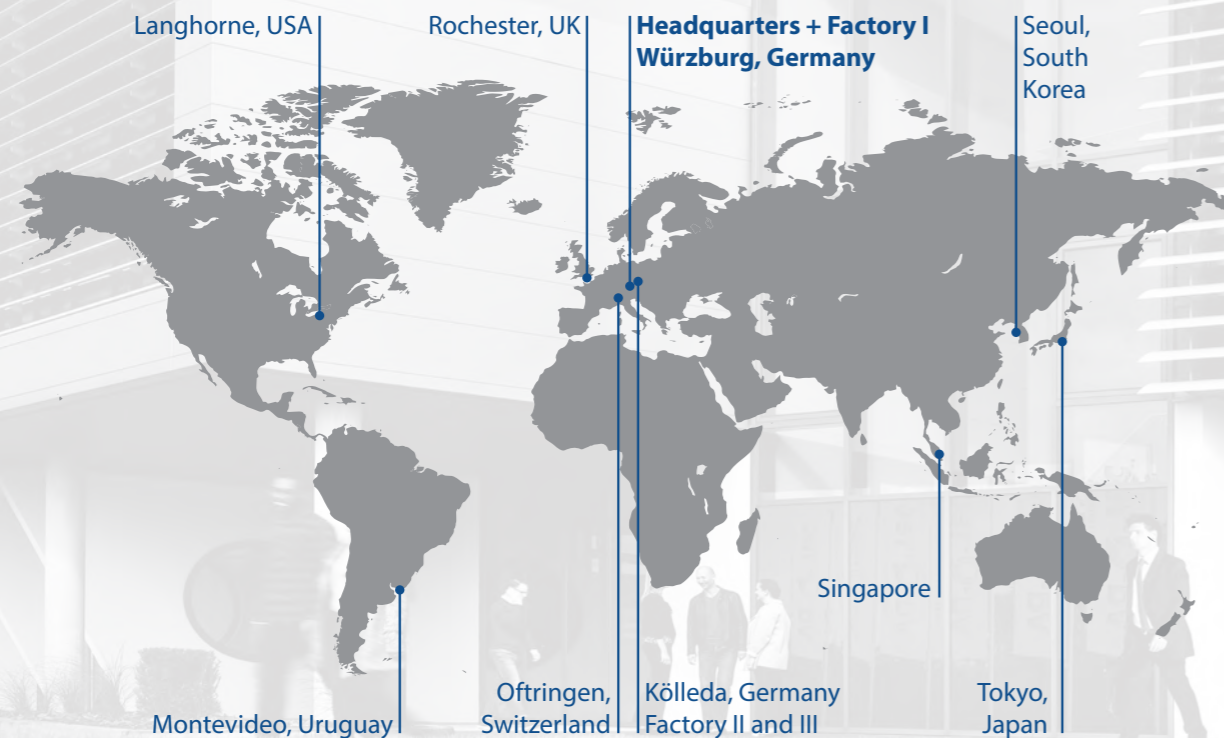
Group companies

1.8 Mio | **>400**

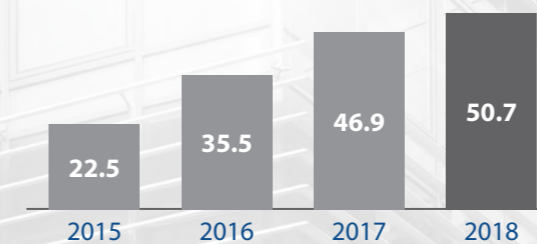
Vacuum Insulation Panels produced

New va-Q-tainers

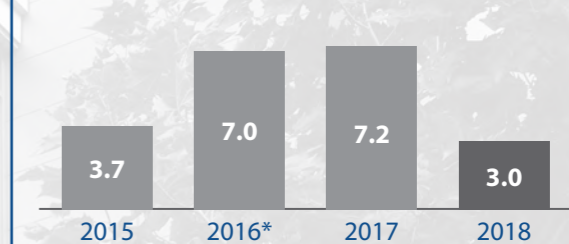
Global presence



Revenue 2015 - 2018 EUR million



EBITDA 2015 - 2018 EUR million



*Adjusted for one-off expenses for the IPO.
For further explanations see the chapter 2.2.4 on the results of operations.

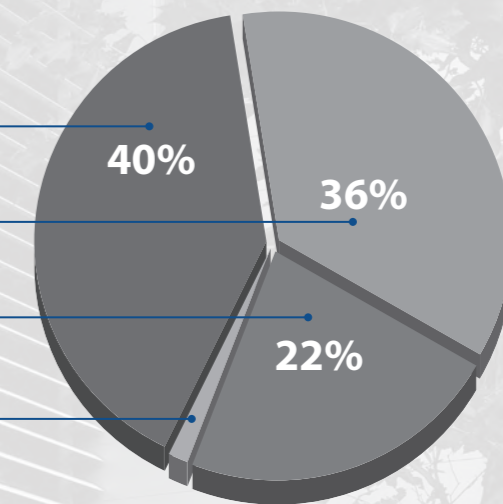
Revenue by Segments 2018

Products: 20.1 EUR million

Services: 18.4 EUR million

Systems: 11.3 EUR million

Other: 0.9 EUR million



Group financial figures

EUR millions (unless stated otherwise)	2018	2017	Change
Revenues	50.7	46.9	+8 %
EBITDA (IFRS)	3.0	7.2	-58 %
EBITDA margin (IFRS)	6 %	13 %	
Equity ratio	41 %	55 %	
Year-average number of employees	444	358	+86

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1 TO OUR SHAREHOLDERS

1.1 LETTER FROM THE MANAGEMENT BOARD



Dr. Joachim Kuhn (CEO), Stefan Döhmen (CFO)

Ladies and gentlemen, dear shareholders,

The 2018 financial year was a challenging year for va-Q-tec and fell short of our high expectations in terms of business. While it is a good sign that our vacuum insulation panels and thermal packaging systems continue to enjoy high demand in the market, projects in the high-margin service business – the rental of temperature-controlled boxes and containers – took longer than we expected due to complex decision-making processes at some major customers. In addition, the decline in the revenue of a major customer in this area, which led to a significant reduction in order volume for us, caused a considerable headwind, which was only offset at the end of the year by the strongest quarter in the company's history.

Throughout the financial year, we made substantial strategic investments in our targeted business expansion and internationalization for the coming years. This included processes, new products and capacity expansion investments. Since its IPO in September 2016, va-Q-tec has invested more than EUR 70 million and thereby successfully completed most of the growth investments it aimed for at that time. As a consequence, we have laid the foundations to meet steadily increasing market demand. The medium- to long-term market trend towards rental solutions for our high-performance packaging systems is unbroken. The positive outlook was already underpinned in the fourth quarter of 2018 by a significant pickup in demand (+32% compared with Q4 2017) and in many discussions with new and existing customers and partners.

In 2018, we successfully completed the relocation of production and all central divisions to the new building in Würzburg and the return of the old corporate headquarters to the lessor. As with the construction of the new production hall at Kölleda in the last 18 months, this relocation tied up considerable resources. At the same time, the container fleet in the Services area was expanded by a considerable number of around 400 units. We also realized particularly major investments in internationalizing our business in 2018: va-Q-tec invested in existing subsidiaries in the UK, the USA, Japan, Korea and Switzerland. At the beginning of 2018, our considerably expanded US TempChain Service Center was opened in Langhorne, Pennsylvania, which is conveniently located near Philadelphia, New York and Boston and their biotechnology and pharmaceutical clusters. In consequence, the assembly and delivery of thermal boxes and sale of all va-Q-tec products and services for the North American market will be realized locally in the future. In the UK, the local management was supplemented by experienced industry experts, in order to improve the visibility and controlling processes in container rental.

In 2018, two further new subsidiaries were founded, in Uruguay and Singapore. For many pharmaceutical industry customers, Uruguay represents the "Gateway to Latin America". The new unit in Singapore together with the existing subsidiaries in South Korea and Ja-pan forms the next step in va-Q-tec's expansion in Asia. Demand for "TempChain" high-performance solutions and products is to be met locally in one of the world's most climat-ically demanding regions. With the opening of the subsidiary and a TempChain Service Center in Singapore, va-Q-tec is expanding its network and product offering in the region together with local partners such as Singapore Airlines, Japan Airlines and Cathay Pacific Airlines. Singapore is a central logistics hub for Southeast Asia, offering modern airport and infrastructure facilities. It is one of the world's most prosperous economies and an important EU trading partner in the region.

2018 was a transitional year for va-Q-tec, in which an enormous amount of development and expansion work was carried out, although initially at the expense of expected profita-bility. EBITDA was significantly affected by the aforementioned one-off expenses and up-front costs.

On the basis of the growth investments, we launched our "Power 20+ " performance program in the fourth quarter of 2018. This program has two clear strategic priorities:

- 1. Focus on profitable revenue growth**, e.g. by optimizing sales processes in the Services business, including with a new CRM system
- 2. Focus on continuous cost efficiency**, e.g. in purchasing, network management and production

For each of the two strategic priorities of the Power 20+ program, we already have numerous specific projects. Not all of the projects will prove to be great successes in equal measure. We are aware of this. Our focus for 2019 is quite clearly on improving our EBITDA margin and on dynamic revenue growth. Our Power 20+ program will help us in this context. These measures aim to significantly re-accelerate sales revenue growth, especially in the attractive Services business, and further improve sales processes in this segment. At the same time, costs and investments are to be managed more closely and reduced overall, in order to further boost profitability. In addition, va-Q-tec's various sub-areas are to be more closely interlinked in order to leverage synergies. The Management Board also undertook specific measures to optimize Group liquidity and financing. Many growth investments, especially in real estate, plant and machinery, were largely refinanced in the course of the third quarter by long-term bank loans and public subsidies. This enabled the refinancing of long-term investments through low-cost, long-term loans, and generated additional liquidity for the company's further development.

Today, at the beginning of 2019, we are very confident that with these measures and our almost completed investment program, an excellent foundation for future sales growth has been laid successfully. We have largely completed the "build-up phase" and can now concentrate on leveraging the diverse market potential that vacuum technology offers:

Germany alone has almost 20,000 pharmacies which are increasingly subject to regulations for transport and temperature logistics according to "good distribution practice" (GDP). Our va-Q-tec transport solutions based on va-Q-med technology guarantee secure last mile logistics directly to the recipient without temperature deviations. Unlike conventional, inefficient one-way packaging or CO₂-prone transport with refrigerated vehicles in congested inner cities, the va-Q-med boxes enable environmentally compatible, traffic-reducing and, at the same time, safe transport logistics. The transport system consists to a large extent of vacuum insulation panels. Phase change materials ("PCMs") from va-Q-tec supplement the strong insulation performance of VIPs. They ensure reliable and energy-efficient temperature control in the required range. With the va-Q-med-Box, we have the opportunity to play a decisive role in shaping the future of pharmacy and last-mile logistics.

va-Q-tec is also working on thermal solutions for the mobility of the future: thanks to their thin and flexible construction, our vacuum insulation panels can find completely new applications in the automotive and aerospace industries. For example, vacuum insulation panels can significantly improve energy efficiency in cars and refrigerated trucks. Important modern aviation challenges lie in increasing energy efficiency, saving space and improving passenger comfort, which can be addressed with va-Q-tec VIPs. By using VIPs in galleys, cabin superstructures or aircraft doors, for example, it is possible to make their walls thinner and at the same time more energy-efficient.

In the future, the innovative combination of hardware and IT solutions – referred to as TempChain 4.0 – will become ever more important. Intelligent boxes, fleet data management and predictive analysis in the temperature-controlled transportation area constitute the pillars of our future growth. We are pleased to introduce this topic to you in a separate corporate story in this annual report.

Such future markets and new application areas are predestined for va-Q-tec as a technology pioneer and global player with its Products, Systems and Services businesses. They will drive our growth in the medium and long term.

The Management Board would like to thank our loyal employees, our investors, our business partners and customers, as well as the City of Würzburg, which has supported our growth investments positively in every respect. The Management Board would also like to thank the Supervisory Board for its constructive criticism, advice and support.

The entrepreneurial spirit and innovative strength that are inherent in va-Q-tec's DNA will continue to be in demand in the future. We look forward to leveraging these manifold potentials together with you.



Dr. Joachim Kuhn
(CEO)



Stefan Döhmen
(CFO)

1.2 SUPERVISORY BOARD REPORT



Dr. Gerald Hommel, Chairman of the supervisory board

Dear shareholders,

The past financial year proved to be particularly eventful and challenging for the va-Q-tec Group. In the 2018 reporting year, the Supervisory Board continued to fulfil with care the tasks incumbent upon it pursuant to the law, the company's bylaws and its rules of business procedure, on behalf of all shareholders, taking into consideration the claims of other stakeholders.

The Supervisory Board's main task is to consult with and supervise the Management Board. Focus areas of such activities in the reporting period especially included va-Q-tec's international orientation to further profitable growth, corporate planning overall, corporate finance and the considerable investments in the new Group headquarters in Würzburg, the expansion of the location in Kölleda, as well as in the container and box fleets. The company's second Annual General Meeting (AGM) after its IPO was held on 28 June 2018. More than 300 participants gathered in the Würzburg Congress Center to be informed in detail by the Management Board about developments and trends in the 2017 financial year and the further outlook. A very high presence of shareholders also attended this year, representing 73 % of the share capital. All resolutions were passed with approval rates between 94 % and 99 %. In particular, all Supervisory Board members were re-elected for a further period of office. The elections were held as individual elections in accordance with the recommendation of the German Corporate Governance Code (DCGK). Dr. Gerald Hommel will continue to act as Supervisory Board Chairman.

The Supervisory Board was involved in all Management Board matters and decisions of central importance to the company at an early stage and on an intensive basis. The collaboration between the Management and Supervisory boards was always trusting, constructive, appropriate, helpful and efficient. Following in-depth examination and consultation, the Supervisory Board passed resolutions where required by the law, the company's bylaws or the rules of business procedure.

The Supervisory Board also maintained close contact with the Management Board between the regular meetings during the 2018 financial year, conferring concerning various business transactions. The Management Board complied with its information obligations under the law and its rules of business procedure, and informed the Supervisory Board regularly, comprehensively and promptly in written and verbal form of all measures and events relevant to the company. In this context, the Management Board also dealt with deviations in the course of business from the plans and targets drawn up, stating the reasons. The Supervisory Board was thereby always informed about the business situation and development, the intended business policy, the short-, medium- and long-term corporate planning including investment, financial and personnel planning as well as the profitability of the company, organizational measures and the Group situation as a whole. In addition, a regular flow of information occurred on the risk situation and risk management as well as on compliance and corporate governance.

As described in this annual report, with the investments it has realized, va-Q-tec has created a strong foundation for the company's further development and growth. The Supervisory Board conducted a critical evaluation of business transactions central to the company's development, and contributed corresponding suggestions and ideas for discussion with the Management Board. Measures and transactions requiring approval were consulted upon between the Management and Supervisory boards, with appropriate decisions being taken.

Personnel changes in the Supervisory and Management boards

No personnel changes arose in the Supervisory Board in the reporting period. Dr. Joachim Kuhn continues as Management Board Chairman (CEO). During the course of the financial year under review, his appointment as Management Board Chairman was extended until 31 December 2023. Mr. Stefan Döhmen has been appointed as a Management Board member until 31 December 2019.

Due to the small number of Management Board members, the Supervisory Board has set the ratio of women on the Management Board at 0%. For itself, the Supervisory Board set a proportion of women at 16.66% from 30 June 2017 (fulfilment date), corresponding to one in six members.

Meetings of the Supervisory Board and its committees

The Supervisory Board consulted about the operative and strategic position of va-Q-tec as part of its regular consultations, with written and verbal reports by the Management Board providing it with extensive information about business and financial developments. For va-Q-tec, the beginning of the 2018 financial year was initially marked by unexpected reductions in revenue in the container rental sector, which presented the company with particular challenges. Their effects and the measures subsequently initiated by the Management Board consequently formed a regular focus of the Management Board's reporting as well as particularly intensive monitoring and advisory support provided by the Supervisory Board. Further focal points of the consultations in 2018 included the financing and liquidity situation and the medium-term strategy.

The Supervisory Board convened for a total of six plenary meetings in accordance with the company's bylaws, and for an extraordinary meeting. All meetings were held in Würzburg. The following table shows the individual participation of each member of the Supervisory Board:

Name	1. Meeting	2. Meeting	3. Meeting	4. Meeting	5. Meeting	6. Meeting	Extraordinary meeting
Dr. Gerald Hommel	✓	✓	✓	✓	✓	✓	✓
Uwe Lamann	✓	✓	✓	✓	✓	✓	✓
Winfried Klar	✓	✓	✓	✓	✓	✓	✓
Uwe Andreas Kraemer	✓	✓	✓	✓	✓	✓	✓
Dr. Barbara Ooms-Gnauck	✓	✓	✓	✓	✓	✓	✓
Dr. Eberhard Kroth	✓	✓	✓	✓	✓	✓	✓

The following table shows the individual attendance of the meetings of the Management Board members:

Name	1. Meeting	2. Meeting	3. Meeting	4. Meeting	5. Meeting	6. Meeting	Extraordinary meeting
Dr. Joachim Kuhn	✓	✓	✓	✓	✓	✓	✓
Stefan Döhmen	✓	✓	✓	✓	✓	✓	✓

At the **first meeting on 2 and 3 March 2018**, the Management Board reported on the status of the preparation and auditing of the 2017 financial statements for both the parent entity and the Group as well as on business trends during the first two months of 2018. The corporate governance statement and the statement of conformity with the German Corporate Governance Code were also discussed and approved. Furthermore, after extensive discussion by the Supervisory Board, the Supervisory Board approved the application by the Management Board to establish a subsidiary in Uruguay and discussed a patent infringement by a competitor. In addition, the risk inventory for 2017 was discussed.

A separate, detailed section was also dedicated to strategy considerations and new business areas of va-Q-tec. These include future markets and new application areas such as aircraft and vehicle insulation, supplies to pharmacies, and the TempChain 4.0 initiative. These are intended to drive growth in the medium and long term. In addition, the Supervisory Board discussed the financial strategy, which is intended to support and facilitate va-Q-tec's investment plans, which are now almost complete and which have been high overall.

The Supervisory Board convened for its second meeting on **9 April 2018**. After the auditor's report, the topic of the meeting was the presentation, discussion and preparation of the resolution to approve the annual report, separate annual financial statements, management report and notes to the financial statements for both the separate and consolidated financial statements for va-Q-tec AG for the 2017 financial year. Following in-depth discussion and numerous questions, the Supervisory Board passed a unanimous resolution concerning the approval and adoption of the 2017 separate annual financial statements as well as the approval of 2017 consolidated financial statements, including the management reports. Finally, options for greater involvement in the Asian region were discussed with the Supervisory Board. In addition, on the basis of the recommendation of the Nomination Committee, the necessary resolutions on the future composition of the Supervisory Board were passed on the occasion of the upcoming elections of all Supervisory Board members at the Annual General Meeting.

The **third ordinary meeting on 5 June 2018** focused on the development of the UK subsidiary after discussing the current business development of the Group with the figures for the first four months of 2018. For this purpose, the two managing directors Roland Rapp and Sven Larsen had been invited to give a report to the Supervisory Board. The management explained the reasons for the decline in revenue in the first quarter of 2018, including a comparison with the competition (market share, technology), the current trends of individual customers and operational measures. Measures were discussed and defined with the aim of providing even better support for core customers in their ramp-up. A further focus of the Supervisory Board meeting was the financing strategy and the status of investments in 2018. Against the backdrop of the sustained high pace of investment in 2018, it was agreed that the refinancing of long-term property, plant and equipment, which was initially financed from the company's own funds, should now occur gradually. In addition, the preparations for the forthcoming Annual General Meeting were presented to the Supervisory Board.

The main purpose of the **extraordinary meeting on 28 June 2018 following the Annual General Meeting** was to elect the Chair of the Supervisory Board as well as the Deputy Chair and to form the General, Audit and Nomination committees. Moreover, the Management Board explained the current business and financial situation and presented the figures for the first five months of 2018 for the va-Q-tec Group. In addition to the high share of revenue accounted for by the lower-margin Products business, EBITDA was negatively impacted by advance investments in additional personnel and internationalization as well as relocation and double costs incurred in connection with the expansion of locations. Furthermore, the Management Board provided information on its current initiatives with financing partners regarding long-term and short-term financing. Moreover, the Management Board explained the idea of establishing a subsidiary in Singapore.

At the fourth meeting on 20 September, Group business trends up until the end of July were analyzed and discussed intensively. The fact that especially revenue in the UK segment (Services) was well below expectations compared with the previous year was criticized. The cost of materials ratio was at the previous year's level due to the revenue mix, and other operating expenses also increased at a slightly faster rate than total income growth. A further important discussion point of the fourth Supervisory Board meeting was again the progress with renovation work at the new site in Würzburg. The relocations and double costs had a negative impact on EBITDA, especially in the first half of the year, with the relocations also partly contributing to the precautionary increase in inventories. An important topic of the meeting was again the status of the planned financing measures. The Supervisory Board also discussed the current share price performance. In summary, it was noted that many investors were disappointed after the adjustment of the forecast and had adopted a wait-and-see stance. Dr. Kuhn finally reported on market and competitive trends during the M&A process of a major Swedish competitor. A resolution relating to strengthening the equity of the UK subsidiary was also passed at the meeting.

In the **fifth meeting at the end of October**, the previous activities within the framework of a project to optimize the (sales) structure and internationalization of the organization were discussed. The aim is to clearly define and sharpen the responsibilities and interfaces within the increasingly international organization. In addition, the Supervisory Board discussed business trends during the first nine months. Accordingly, after nine months, total revenue was up compared to the previous year, but well below expectations for this financial year. Furthermore, profitability failed to report a satisfactory trend. At va-Q-tec AG, one-off expenses due to relocations and double costs (e.g. temporary employees) from the first half of the year continued to exert an effect. Mr. Kuhn once again explained the situation in the container rental business on the basis of the meeting document. While service revenues generated with a major pharmaceutical customer decreased year-on-year by almost a half due to the customer's own reduction in business, the revenue contribution generated by other customers grew significantly. Although it was possible to compensate for the decline in business with the key customer, which accounted for around 50% of total revenue in this segment three years ago, this proved to be at the expense of growth. The Management Board also reported that the planned long-term loans to refinance the real estate in Würzburg had been concluded and that further financing measures, particularly for the Kölleda site, are in final negotiations. Possibilities for financing measures from working capital were discussed. Mr. Kuhn informed the Supervisory Board that the founding of va-Q-tec Singapore had been completed and that the company would be operating for the first time from Q4 onwards.

The **sixth and final ordinary meeting** of the plenary Supervisory Board in the 2018 financial year was held on **14 December 2018**. The focus was on the presentation and explanation of the planning figures for 2019 by the Management Board and the management of va-Q-tec UK. Especially given the clear deviation from the revenue and earnings targets for 2018 as well as investor disappointment, the Management Board and management of the UK subsidiary showed in an analysis of root causes that lower revenue in existing business with key customers was responsible for the disappointing trend of the container rental business and that some new customers that were originally planned for the targeted growth had to largely compensate for the lack of "existing business". The managing directors of va-Q-tec UK and the Management Board then explained the measures that had been approved, implemented or initiated in the past months in order to achieve significant revenue growth again in 2019. At the same meeting, the Management Board also explained the initiatives planned and initiated as part of the Power 20+ program in order to improve earnings from the fourth quarter of 2018 onward. After in-depth discussion, the Supervisory Board approved the Group budget including the investment budget for the 2019 financial year as well as the medium-term planning.

The Management Board also provided information on the financing transactions successfully concluded in Q4 2018. The status of investments in 2018 and the expected trend until the end of the financial year had already been addressed as part of the budget discussion.

In the reporting year, all members of the Supervisory Board participated at more than half of the Supervisory Board meetings; all Supervisory Board members also participated in more than half of the meetings of committees of which they were members (section 5.4.7 DCGK). The Supervisory Board met regularly together with the Management Board, apart from when consulting about its compensation (section 3.6 DCGK). For more information, please refer to the corporate governance report that forms part of this annual report.

Committees

The Supervisory Board has formed subcommittees in accordance with the German Corporate Governance Code (DCGK). Specifically, these are the Nomination, Audit and General committees.

One topic of the Nomination Committee in the past financial year was the future composition of the Supervisory Board. Especially in times of dynamic corporate development, continuous consulting and supervision of the company is important. All members of the Supervisory Board are available for a further term of office. The Supervisory Board passed a corresponding resolution at its 9 April 2018 meeting.

No conflicts of interest occurred within the Supervisory Board in the reporting period.

Audit of the separate and consolidated financial statements

Pursuant to Section 315a of the German Commercial Code (HGB), the consolidated financial statements were prepared based on International Financial Reporting Standards (IFRS) as applicable in the European Union. The auditors elected by the AGM, Rödl & Partner GmbH Wirtschaftsprüfungsgesellschaft, Steuerberatungsgesellschaft, Jena, audited the separate financial statements of va-Q-tec AG as well as the consolidated financial statements, both for the financial year ending 31 December 2017, together with the respective management reports for va-Q-tec AG and the va-Q-tec Group, including the financial accounts, and in each case awarded them unqualified audit certificates on **25 March 2019**. The auditors also assured themselves that the Management Board has established an internal control and risk management system appropriate in its implementation and design to provide early warning of developments jeopardizing the company as a going concern.

At the Audit Committee meeting on 21 March 2019 and at the Supervisory Board meeting on 25 March 2019, the Supervisory Board discussed with the auditors and examined in depth the financial statements for va-Q-tec AG and for the va-Q-tec Group, as well as the reports prepared by the auditor. The auditor participated in the consultations on the financial statements at this Supervisory Board meeting and informed the Supervisory Board of its audit findings and its findings concerning the internal control and risk management system.

The Supervisory Board concurs with the recommendation of its Audit Committee and approved the separate financial statements and management report as well as the consolidated financial statements and Group management report of va-Q-tec AG for the 2018 financial year. The separate financial statements of va-Q-tec AG have been adopted as a consequence.

Thanks and outlook

The Supervisory Board would like to thank the Management Board for their constructive collaboration during the 2018 financial year. The very special thanks of the Supervisory Board are due to all staff at va-Q-tec. The 2018 year was characterized by significant work in relation to the establishment and expansion of the Group. Such achievements are not possible without the commitment and positive attitude of all employees.



Dr. Gerald Hommel
Chairman of the supervisory board of va-Q-tec AG



Two strong partners: va-Q-tec & ASML

“From the start of our partnership, va-Q-tec listened carefully to our needs and managed to deliver a service that lives up to ASML’s high standards and complex requirements.”

Jasper Verdaasdonk, Manager Supply Chain Programs for ASML

Always the right temperature – always the right **PARTNER**

ASML is one of the world's leading suppliers to the semiconductor industry and manufactures machines that are used to produce integrated circuits or microchips. Parts of these machines are highly temperature-sensitive. For this reason, they require temperature-controlled transportation as a part of globalized sourcing and production supply chain. Each machine is about the size of a bus and can require multiple Boeing 747s for delivery in parts. Up until 2018, ASML has been using an active solution for temperature-controlled air freight transportation, but due to high expenses and temperature deviations they were searching for a new service provider.

In February 2018, va-Q-tec and ASML initiated the commercial phase of the cooperation. From the start, va-Q-tec provided support with extensive consultation in order to provide risk assessments of temperature profiles on ASML's routes. va-Q-tec's thermal expert team provided ASML with in-depth analysis of thermal data on every part of the TempChain. Beyond that, the influence of humidity, pressure and shock on shipments was evaluated.

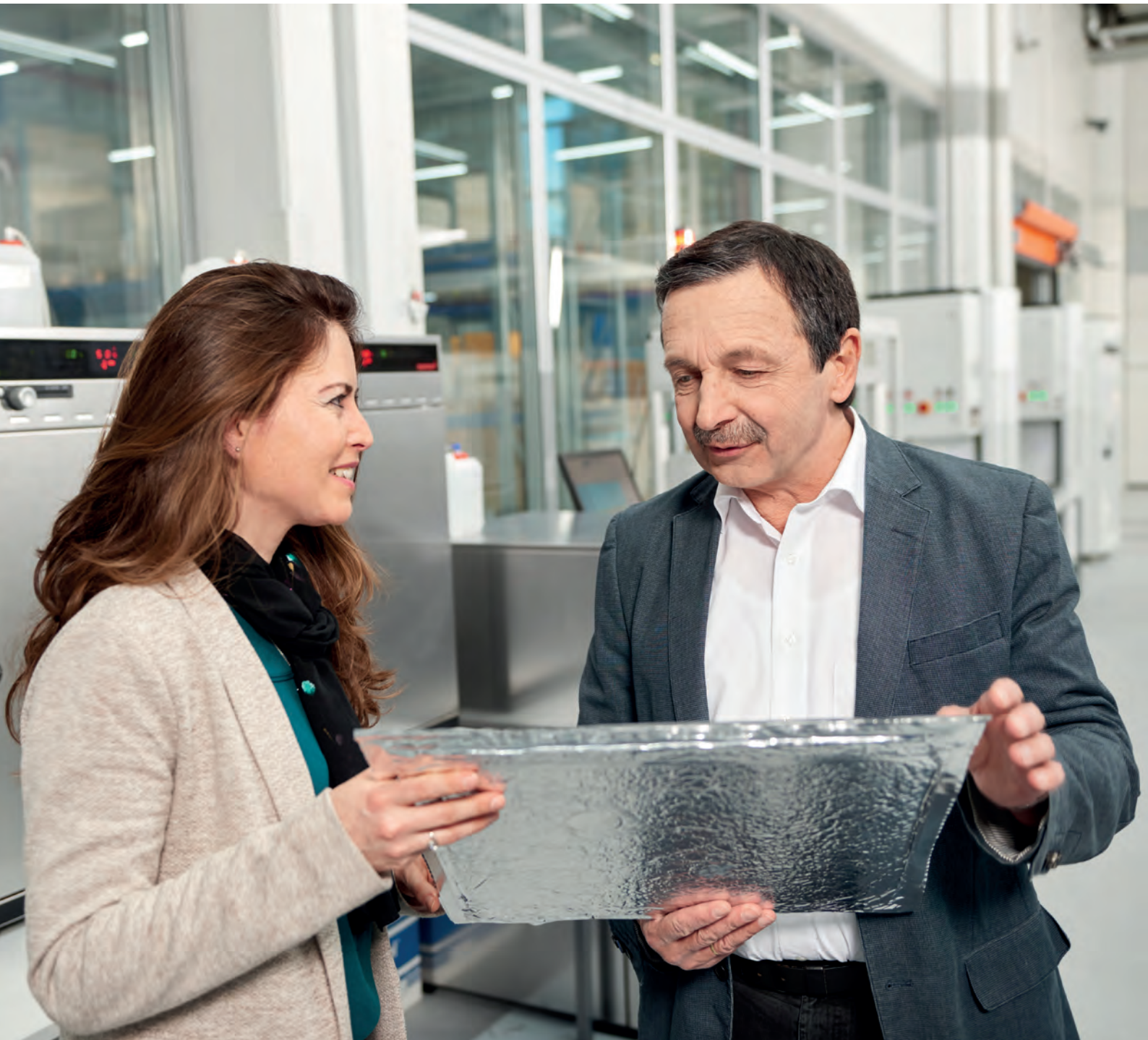
In this case, va-Q-tec delivered a passive temperature-controlled packaging solution with va-Q-tainers with more than 160 hours of temperature-stable performance to match ASML's demanding requirements. With the va-Q-tainers perfectly suited for airfreight transportation, ASML received a reliable and cost-efficient solution that secured TempChain transportation between production sites in Europe, US and Asia.

"From the start of our partnership, va-Q-tec listened carefully to our needs and managed to deliver a service that lives up to ASML's high standards and complex requirements. The results have exceeded our expectations in reliability and performance. We value our partnership with va-Q-tec and appreciate their professional and very qualified support."

Jasper Verdaasdonk, Manager Supply Chain Programs for ASML.

The cooperation reflects a cross-sector trend in logistic processes whereby many products are becoming high-performing and also more temperature-sensitive as a consequence. This is a new market with great prospects for va-Q-tec as the reliability of such services is becoming increasingly important. External sources perceive va-Q-tec as the clear quality-leader in the industry.

va-Q-tec's passive solutions based on PCMs (phase change materials) and VIPs (vacuum insulation panels) are both a more cost efficient and a more reliable solution than active packaging solutions. The partnership with ASML reflects the fact that va-Q-tec, with more than 18 years of experience and with an extensive thermal consulting team, is ready to support clients from initial request to the last phase of implementation in order to optimize and guarantee the best services and products in the temperature-controlled logistics industry.



“We produce all key components in-house and deploy our patented quality check system so we ensure the highest possible standards for evacuated thermal insulations.”

Roland Caps, Co-Founder and Head of R&D

Industry leading quality and performance since 2001

va-Q-tec's VIPs and PCMs are produced utilizing only high-quality materials which – along with quality assurance procedures – guarantee outstanding performance for many years. We spoke to va-Q-tec co-founder and Head of Innovation & Quality, Dr. Roland Caps, about what makes va-Q-tec's products so unique.

First of all, why does va-Q-tec refer to the VIP as a high-tech product?

The basis of va-Q-tec's products and services are the VIPs (vacuum insulation panels) which we both sell separately and within integrated systems. The basic idea behind VIPs is pretty simple. For example, in a thermos flask you create a vacuum. This vacuum is known to provide the precondition for the best insulation properties in the world. However, securing and maintaining the vacuum and VIPs' great insulation properties throughout the lifecycle of the respective products that are being transported requires advanced technology, innovative processes and high-quality materials. With our scientific background, 170 patents and patent applications, more than 18 years of experience and constant development we have created a superior VIP that makes this possible.

What makes va-Q-tec's products so unique?

Two main features separate va-Q-tec from competitors' products. First, va-Q-tec VIPs allow for 3D shapes as well as our 100% quality check system. We can produce our third-generation "va-Q-pro" panel in arbitrary shapes and with any cut-out depending on what clients require.

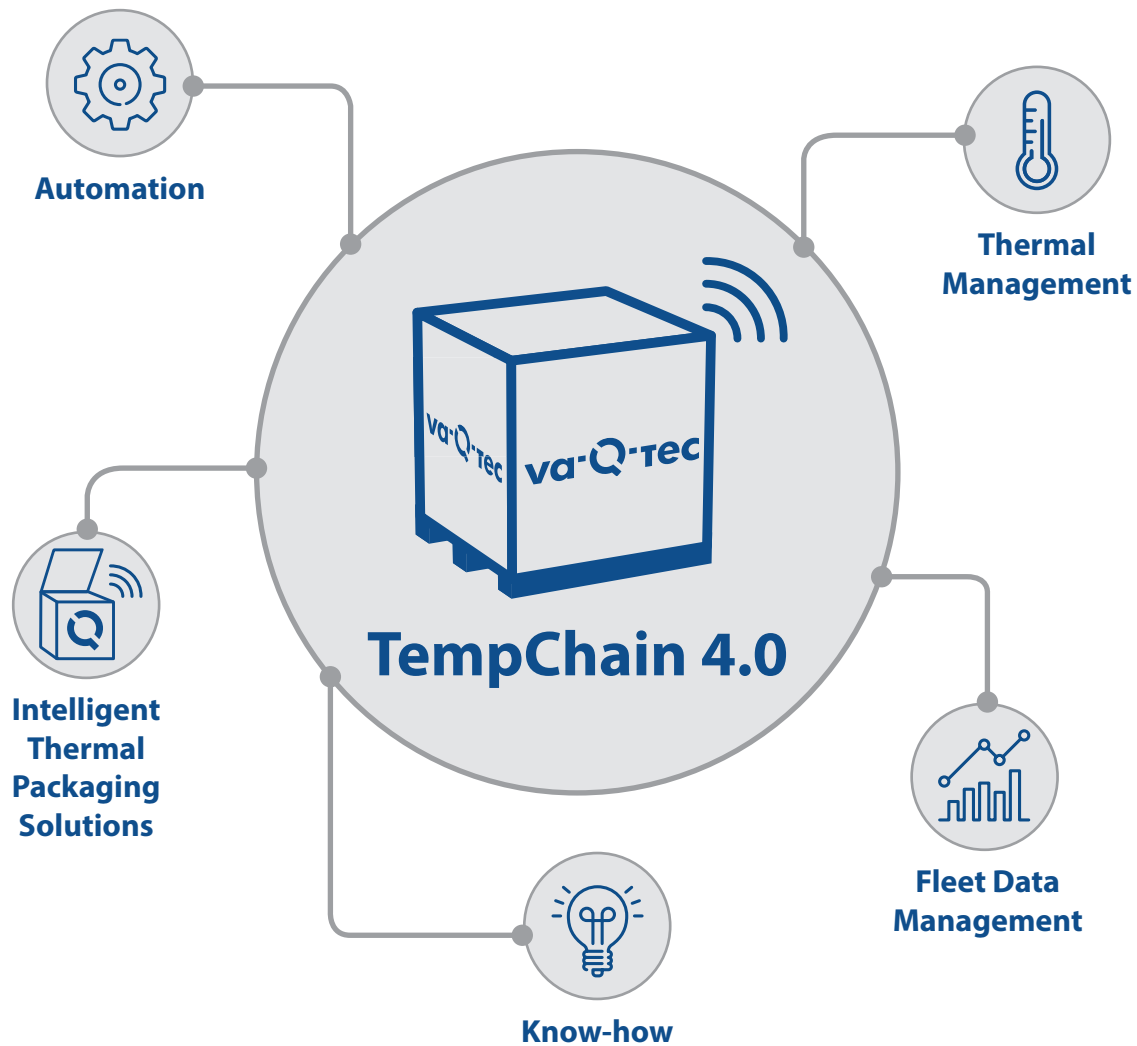
Such customization is unique within the VIP industry which is especially important for customers from the automotive or aviation industries. The second main feature is our "va-Q-check" vacuum sensor, which is a patented quality assurance system that enables us to test every single panel before it leaves production.

How does va-Q-check secure the quality of the panels?

We are aware of the fact that VIPs are often a completely new material class for our target industries. VIP quality and performance require careful checking in order to ensure high standards and to give customers comfort about their reliability. We utilize an external measurement head in combination with an internal sensor to test gas pressure or vacuum quality within the panel. All panels are checked after production to ensure they achieve the correct performance level and longevity. This process is fast and straightforward.

How does va-Q-tec intend to further improve reliability in the future?

We have an extensive R&D team that continues to research and improve technologies in our field. In order to be ready for Industry 4.0, we need to provide reliable hardware that enables technological developments. Along with an extensive team of dedicated thermal engineers and a modern laboratory with 40 thermal climate chambers, we are prepared for the future and can conduct tests under any climate conditions.



TempChain 4.0

the future of temperature-controlled transportation

At va-Q-tec we are always moving forward to provide leading-edge technology in megatrend-driven markets. With more than 170 intellectual property rights and patent applications our solutions are geared for the future.

“TempChain” is a new term that summarizes existing topics in the temperature-controlled supply chain. va-Q-tec coined this phrase to replace “cold chain” to encompass all areas and temperature ranges of temperature-controlled logistics regardless of the environment and whether the goods require higher or colder temperatures, or very specific temperatures such as CRT (controlled room temperature).

Challenges in the global TempChain

Globally transported temperature-sensitive goods such as biopharmaceuticals are at the core of globalized TempChains and new markets are added with sometimes complex requirements. Different factors such as long routes, customs and unforeseen events can create challenges. It is crucial that a stable temperature is maintained within the packaging during

transportation as deviations can make a critical difference. Every year, regulations concerning the monitoring and verification of the TempChain are becoming more stringent. The “proof” of goods transported without temperature deviation is no longer limited to the cold chain but also includes all temperature ranges. Along with other industry drivers and “megatrends” such as globalization, energy efficiency and safety, va-Q-tec is calling for a holistic and visionary approach covering all aspects ranging from the transported product through to the means of transportation and data collection.

Intelligent thermal boxes and containers

At present, va-Q-tec’s containers include a data logger and in most cases the data is read on arrival. Modern and future systems will also allow data-reading during the transport making it possible to verify, for example, the temperature, humidity and location from the start to finish of a route. “TempLogging” is key and ensures the quality and safety of the packaging. It also makes it possible to track and identify mishandling during the TempChain process. Boxes offer different performance levels and va-Q-tec can adapt box performance according to the given requirements on a specific route. Having the right packing saves resources and reduces costs for va-Q-tec’s clients.

Fleet Data Management

The data the boxes comprise is used for different purposes. It also allows clients to be updated with information about their valuable goods. Live fleet data offers data integration benefits such as optimized box utilization cycles and load-balancing. Risk assessment is very important for temperature-sensitive goods and a rich data source of historic live data for routes makes this easier. va-Q-tec’s comprehensive database of existing routes based on real-life examples can be matched with theoretical forecasting and advanced simulation. This provides clients with a much more reliable prediction compared to legacy solutions.

Automized TempChain Service Centers

In certain hubs for TempChain services, several thousand fulfilments are realized

weekly, and this volume will only increase as the TempChain evolves further to reach to the doorstep of the patient or customer. For this reason, manual loading and preconditioning is no longer sufficient to fulfil high volumes, and new requirements for the processes to be automated are crucial. As a consequence, semi-automated TempChain Service Centers represent the future for va-Q-tec.

The vision: TempChain 4.0

TempChain services are currently rendered up until the last mile of transportation, including when they arrive at pharmacies, for example. In the future, however, the medication should be able to arrive directly at the consumer at the correct temperature. Consumers will have greater freedom and the TempChain market will expand from not only including b2b but also b2c or direct-to-patient.

Thermal management, smart boxes / containers and software

Technology, AI and IoT play an important role in the TempChain 4.0. However, software developments alone are not enough. It is the combination of hardware with the proper software that is leading to advances in temperature-controlled transportation. To enable technological development in TempChain 4.0 you need to be able to predict the behavior of the box or container, and thereby ensure high standards for all products. va-Q-tec’s high-performance boxes and containers open up a variety of possibilities that are unmatched. In combination with advanced software, extensive insight and 18 years of experience, va-Q-tec continues to foster innovation and to play a pioneering role in the temperature-controlled logistics area.

1.3 CORPORATE GOVERNANCE REPORT

1.3.1 Corporate governance statement and conformity statement by the Management and Supervisory boards

The Management and Supervisory boards of va-Q-tec AG are always aware of the importance of national and international standards of good and responsible corporate governance, and are committed to such standards. Good corporate governance practice establishes and strengthens the trust and confidence of international and national stakeholders in the management and supervision of the Group. They underscore the objective of the Management and Supervisory Boards to create shared values for all the Group's stakeholders in accordance with the principles of the social market economy. Not least in order to also communicate with the capital market with a high degree of transparency, the IPO was implemented in the Prime Standard of the Frankfurt Stock Exchange – the segment entailing the highest transparency requirements.

The following subsections concern the corporate governance statement pursuant to Section 289f of the German Commercial Code (HGB). Specifically, the corporate governance statement comprises the conformity statement pursuant to Section 161 of the German Stock Corporation Act (AktG) and additionally relevant disclosures on corporate governance practices, a description of the working methodology of the Management and Supervisory boards as well as the composition of the Supervisory Board's committees.

1.3.1.1 Conformity statement by the Management and Supervisory boards

Statement by the Management and Supervisory boards of va-Q-tec AG on the recommendations of the "Government Commission German Corporate Governance Code" pursuant to Section 161 AktG

"Since issuing the last declaration of compliance on 6 June 2018, va-Q-tec AG has complied with the recommendations of the "Government Commission on the German Corporate Governance Code" published by the German Federal Ministry of Justice and Consumer Protection (BMJZ) in the official section of the Federal Gazette in the version of 7 February 2017 published on 24 April/19 May 2017 with

the deviations listed therein and will comply in the future with the exception of the deviations explained below:

- **Section 4.2.5 (3) and (4):** "In addition, for each Management Board member, the compensation report shall present:
 - the benefits granted for the year under review including the fringe benefits, and including the maximum and minimum achievable compensation for variable compensation components;
 - the allocation of fixed compensation, short-term variable compensation and long-term variable compensation in/for the year under review, analyzed the relevant reference years;
 - for pension provisions and other benefits, the service costs in/for the year under review. The model tables provided in the appendix shall be used to present this information."

Difference and reason: Management Board compensation is disclosed pursuant to statutory regulations and taking into account the resolution by the company's AGM on 31 May 2016. Accordingly, the disclosure of individualized Management Board compensation in the company's separate and consolidated financial statements, which are to be prepared for the 2016-2020 financial years (inclusive), are not presented pursuant to Section 286 (5) Clause 1 of the German Commercial Code (HGB). Pursuant to Section 315a (2) HGB, the company publishes a compensation report in the Group management report of the annual report.

- **Section 7.1.2 Clause 3:** "The consolidated financial statements shall be publicly accessible within 90 days of the end of the financial year; mandatory financial information to be published during the course of the year shall be publicly accessible within 45 days of the end of the reporting period."

Difference and reason: The German Corporate Governance Code recommends that the consolidated financial statements and the group management report are to be made publicly accessible within 90 days after the end of the financial year, and mandatory financial information to be published during the year within 45 days after the end of the reporting period. In part, the company has not complied and will not comply with the aforementioned deadlines relating to the publication of the consolidated financial statements and Group management report, and the binding financial information to be published during

the course of the year. Nonetheless, the company does comply with the statutory publication dates as well as the publication dates in the stock exchange regulations for the Frankfurt Stock Exchange in the subsegment of the Regulated Market with further admission obligations (Prime Standard) of four months for the annual financial report, three months for the half-year financial report and two months for quarterly statements."

Würzburg, 25 March 2019

For the Management Board



Dr. Joachim Kuhn



Stefan Döhmen

For the Supervisory Board



Dr. Gerald Hommel

1.3.1.2 Disclosures relevant to corporate governance practices

The Management and Supervisory boards set great store by an open corporate and management culture. Positive interaction within the company – a "good working climate" – is very important for the company's business and financial performance, and for satisfied customers, employees, partners and shareholders. This type of culture of interaction and open internal communication fosters awareness of, and compliance with, statutory regulations, ethical standards, as well as economic and social principles.

In order to ensure ethical behavior, va-Q-tec AG has established corresponding standards in a Group-wide corporate compliance policy. Core elements include, firstly, the basic values it codifies such as personal integrity, respect for diversity, and compliance in business life. The Corporate Compliance Policy also sets out – in Group guidelines – instructions for business behavior in any ethically dubious situations. The compliance program is translated into practice and further developed in collaboration between the Management and Supervisory boards.

va-Q-tec AG complies with all statutory requirements in terms of good corporate governance as well as the recommendations of the German Corporate Governance

Code, apart from the exceptions specified and explained in the conformity statement. The Management and Supervisory boards informed employees as part of the IPO on relevant matters of capital market law, including with related documents.

1.3.1.3 Description of the working methodology of the Management and Supervisory boards as well as the composition and working methodology of the Supervisory Board's committees

Working methodology of the Management Board

As a German public stock corporation, va-Q-tec AG operates a dual governance system in accordance with German stock corporation law regulations. This consists of the Management Board and the Supervisory Board.

The Management Board of va-Q-tec AG manages the company's business at its own responsibility. It is bound by the company's interests in this context, and obligated to enhance the company's sustainable value. It develops the company's strategic orientation, coordinates it with the company's Supervisory Board and ensures it is implemented. The Management Board discusses the status of strategy implementation at regular intervals with the Management Board. It also caters for appropriate risk management and risk controlling within the company. The Management Board members perform their tasks according to statutory provisions, the company's bylaws, AGM and Supervisory Board resolutions, their respective employment contracts as well as the rules of business procedure for the Management Board, and work to ensure that the company and its subsidiaries also comply with them.

The Management Board works together closely and on a basis of trust with the Management Board for the company's benefit. The joint goal of the Management and Supervisory boards is to implement the growth strategy and exploit the various application possibilities on offer for the Group's technologies. The Supervisory Board appoints the Management Board members, recalls them from office and determines the allocation of their responsibilities. It can also appoint a Management Board Chair (CEO).

The Management Board of va-Q-tec AG comprises two members as of 31 December 2018:

Name	Function	Management Board member since	Contract end
Dr. Joachim Kuhn	Management Board Chairman, Chief Executive Officer	2001	31/12/2023
Stefan Döhmen	Chief Financial Officer	2017	31/12/2019

The Management Board is jointly responsible for managing the company's business for the Group's benefit. The Management Board members are individually responsible for the areas allocated to them. The business allocation plan allocates the tasks to the individual Management Board members as follows as of 31 December 2018:

Dr. Joachim Kuhn: Chief Executive Officer – CEO:

- Technology
- Production
- Sales and marketing
- Personnel

Stefan Döhmen: Chief Financial Officer – CFO:

- Finance
- Financial communication (IR)
- Purchasing
- IT
- Legal

Besides his activity on the Management Board of va-Q-tec AG, Dr. Kuhn is a member of the Advisory Board of SUMTEQ GmbH, a company in which va-Q-tec AG holds a minority interest. The Management Board members do not engage in other secondary activities.

The Supervisory Board last updated and approved the rules of business procedure for the Management Board on 31 May 2016. These include in particular the regulations for the working methodology for the Management Board and the distribution of responsibilities between the Management Board members, as well as their collaboration with the Supervisory Board. They define a set of transactions requiring mandatory approval by the Supervisory Board. All Management Board resolutions are passed with a simple majority of the votes, unless the law requires another majority. Management Board meetings are held regularly several times a month. The Management Board also remains in close contact between its regular meetings, both with each other and with the Supervisory Board.

Working methodology of the Supervisory Board

The Supervisory Board of va-Q-tec AG regularly consults with and supervises the Management Board in its management of the company. The Supervisory Board performs its activities according to statutory provisions, the company's bylaws, and its rules of business procedure. The recommendations of the German Corporate Governance Code concerning the Supervisory Board are complied with, unless noted otherwise in the statement by the Management and Supervisory boards pursuant to Section 161 of the German Stock Corporation Act (AktG) published on the company's website. In performing its tasks, it works together closely and on a basis of trust with the Management Board for the company's benefit, and appoints and recalls from office the Management Board members. Moreover, it also pays attention to diversity in the composition of the Management Board, especially striving for an appropriate inclusion of women in this context. Together with the Management Board, it caters for long-term corporate planning.

Supervisory Board resolutions are generally passed at its meetings. They can also be passed without convening a meeting, and voting can also occur verbally, in writing, by telephone, fax or email, if so ordered by the Supervisory Board Chair and to the extent that no Supervisory Board member immediately objects to such a procedure. Supervisory Board resolutions are passed with simple majorities, unless prescribed otherwise by law or the company's bylaws.

All Supervisory Board members are obligated to pursue the company's interests. In its decisions it cannot pursue personal interests, or exploit the company's business opportunities for itself, for related natural or legal persons, or for another institution or association in which, or for which, it acts. All Supervisory Board members must immediately disclose to the Supervisory Board conflicts of interest, especially those arising based on a consultancy or board function at customers, suppliers, lenders or other third parties.



Dr. Gerald Hommel, Winfried Klar, Dr. Barbara Ooms-Gnauck, Uwe Lamann, Dr. Eberhard Kroth, Uwe Kraemer

Pursuant to Section 2 (1) of the rules of business procedure for the Supervisory Board, the members in their entirety should possess the knowledge, capabilities and specialist experience to perform their tasks properly. Furthermore, pursuant to Section 2 (4) of the rules of business procedure, at least one independent member of the Supervisory Board must possess specialist expertise in the areas of financial accounting or auditing. The Supervisory Board sets specific targets for its composition, taking into consideration the recommendations of the German Corporate Governance Code.

Composition of the Supervisory Board

The Supervisory Board currently consists of the following six individuals:

Dr. Gerald Hommel, born: 21/01/1959, Supervisory Board Chairman (appointed until 2023)

- German citizenship
- Undergraduate study of economic sciences at the universities of Mainz and Würzburg, degree in business management (1985)
- 1985 – 1997 Pharmaceutical wholesaling, most recently Managing Director at PHOENIX Pharma Einkauf GmbH, Dreieich
- 1997 – 1999 Central regulation, Management Board member of GESKO eG, Gerlingen and Cologne
- Independent pharmaceuticals entrepreneur since 1999
- Doctorate in economic and social history from the University of Frankfurt am Main (2014)
- Supervisory Board Chairman since 2014

Uwe Lamann, born: 17/11/1949, Deputy Supervisory Board Chairman (appointed until 2023)

- German citizenship
- Engineering degree in communications technology from Cologne University (1976)
- 1999 – 2012 Management Board of Leoni AG, Nuremberg, Head of Central R&D
- Member of the Supervisory Board of Nedschroef Holding B.V. since 2007
- Member of the Advisory Board of Baumüller Nürnberg GmbH since 2013
- Deputy Supervisory Board Chairman since 2014

Uwe Andreas Krämer, born: 27/10/1978 (appointed until 2023)

- German citizenship
- Degree in business information technology from the Technical University of Darmstadt (2006)
- 2006 – 2008: Investment Banking Division, Goldman Sachs, Frankfurt
- 2008 – 2014: Venture & growth capital investor focusing on software and internet technology, ViewPoint Capital, Frankfurt/Zürich
- 2016 – 2018: Managing Director & CFO/CCO of Fision AG, Zürich
- Since 2014 Growth capital investor focusing on cleantech, Zouk Capital, London
- Supervisory Board member since 2015
- Since 2018: Vice President Finance & Operations, Scandit AG, Zürich

Winfried Klar, born 10/10/1954 (appointed until 2023)

- German citizenship
- Degree in business administration from the University of Münster (1979)
- Auditor and tax consultant PwC Düsseldorf (1980-1990)
- 1991 – 1992 Head of Group development EVONIK (formerly RAG)
- 1993 – 2003 Managing Director, member of the Management Board, CFO of the RAG Group and other companies
- 2004 – 2009: Managing Director and CFO of VESTOLIT GmbH & Co KG, Marl
- 2009 – 2013: Managing Director and CFO of MAUSER Holding GmbH, Brühl
- Management consulting in the Middle East since 2013
- Supervisory Board member since 2013
- Audit Committee Chairman since 2016

Dr. Eberhard Kroth, born: 15/09/1956 (appointed until 2023)

- German citizenship
- Undergraduate studies and doctorate at the Technical University of Darmstadt (1985)
- 1986 – 1994 Company officer and Technical Director at Reis Robotics, Reis GmbH & Co KG
- 1994 – 2010 Managing Director at Reis Robotics, Reis GmbH & Co KG
- 2010 – 2016 Managing Director at Reis Group Holding GmbH
- 2014 – 2016 Managing Director & Chief Technical Officer (CTO) of KUKA Industries GmbH
- Since 2017 Managing Shareholder of RoPro4.0 GmbH
- Supervisory Board member since 2013

Dr. Barbara Ooms-Gnauck, born: 28/10/1957 (appointed until 2023)

- Belgian citizenship
- Study of chemistry and ecotrophology at the University of Bonn, degree in ecotrophology) (1983)
- Study of jurisprudence of the University of Göttingen, First State Examination (2001)
- Probationary Training Period at the District Court of Kassel, Second State Examination (2004)
- Lawyer, partner at GKMP Rechtsanwälte Steuerberater Wirtschaftsprüfer
- Doctorate awarded by the University of Constance (2012)
- Specialist lawyer for administration law (2016)

- Shareholder of Gnauck Rechtsanwälte GbR since 2010
- Supervisory Board member since 2014

Composition and working methodology of the Supervisory Board committees

The Supervisory Board of va-Q-tec AG has currently set up three committees: an Audit Committee, a Nomination Committee and a General Committee.

The Audit Committee consists of the following members until the end of their respective period of office:

- Winfried Klar: Chair
- Dr. Gerald Hommel: Deputy Chairman
- Dr. Eberhard Kroth: Member

The **Audit Committee** concerns itself especially with questions relating to financial accounting and supervising the financial accounting process, the efficacy of the internal control system, the risk management system, compliance and the internal audit system, as well as the audit of the financial statements. The latter especially in relation to the auditor's independence, the services additionally rendered by the auditor, the awarding of the audit mandate to the auditor, determining the audit focus areas and agreeing the audit fee.

The **Nomination Committee** consists of the following members until the end of the respective period of:

- Dr. Gerald Hommel: Chair
- Uwe Lamann: Deputy Chair
- Dr. Barbara Ooms-Gnauck: Member
- Uwe Andreas Kraemer: Member

The Nomination Committee proposes suitable candidates to the Supervisory Board for its election proposals to the AGM.

The **General Committee** consists of the following members until the end of the respective period of:

- Dr. Gerald Hommel: Chair
- Uwe Lamann: Deputy Chair
- Dr. Barbara Ooms-Gnauck: Member

The Supervisory Board Chair chairs the General Committee. The General Committee consults on key corporate governance topics and prepares Supervisory Board resolutions. Along with long-term successor planning for the Management Board, the General Committee prepares Supervisory Board resolutions especially concerning the following matters:

- Appointment and recall from office of Management Board members as well as appointment of a Management Board Chair (CEO)
- Concluding, amending and terminating appointment contracts with Management Board members
- Structure of the Management Board compensation scheme including key contractual elements and total compensation of the individual Management Board members

Interests held by the Management and Supervisory boards

As of the end of the 2018 financial year, the members of the Management Board, founders and members of the Supervisory Board held the following direct interests in the share capital of va-Q-tec AG:

Shareholder	Number of shares
Management Board members and founders	3,580,850
Supervisory Board	82,314





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2 GROUP MANAGEMENT REPORT

2.1 BASIS OF THE VA-Q-TEC GROUP

2.1.1 Business model, market and strategic orientation

2.1.1.1 Business model and market

va-Q-tec is a worldwide technologically leading supplier of highly efficient products and global solutions in the thermal insulation area. The offerings of va-Q-tec in the Group's divisions of Products, Systems and Services are applied in thermo-logistics, the refrigeration and food industry, in industrial and technical applications such as water boilers, the construction industry and in the mobility area.

In its Products division, the company develops, produces and markets innovative vacuum insulation panels ("VIPs") and phase change materials ("PCMs"). VIPs are high-performance insulation panels between 5 mm and 50 mm in diameter that are particularly suited to space-saving and energy-efficient thermal insulation. PCMs are cold and heat storage materials that absorb and store thermal energy. Various temperature ranges can be established through utilizing various storage materials such as paraffins and salt solutions.

In its Systems division, va-Q-tec manufactures passive thermal packaging, containers and boxes through combining VIPs and PCMs, which maintain constant defined temperature ranges for up to 200 hours without recourse to external energy.

In its Services division (Serviced Rental), va-Q-tec operates a fleet of rental containers it produces itself, which allow temperature-sensitive transports to be operated cost-efficiently and securely. va-Q-tec has run this business through its UK subsidiary since 2011. For this purpose va-Q-tec has built up an extensive global partner network consisting of airlines, forwarders and service partners such as Lufthansa, IAG, Qatar Airways and Cathay Pacific. Since 2015, va-Q-tec AG has also been operating a business for thermal transport boxes the company produces itself. In addition, va-Q-tec assumes accompanying services in

the area of preconditioning, preparation and dispatch preparation of thermal packaging systems for well-known customers such as Swiss Post. Such integrated transport solutions from a single source are increasingly in demand in the healthcare industry.

In addition, va-Q-tec offers consulting services for all aspects of thermal insulation, for example to bring technical equipment into higher energy efficiency classes.

With this extensive portfolio, va-Q-tec serves customers from the following target sectors:

- Healthcare & Logistics; e.g. containers and transport boxes for temperature-sensitive transports, plus rental service
- Appliances & Food, e.g. insulation of refrigeration/freezing equipment and food containers
- Technics & Industry, e.g. insulating water boilers, pipelines, laboratory equipment and ultra-low temperature refrigeration units
- Building, e.g. building insulation (façades, roofs, floors)
- Mobility, e.g. insulation in refrigeration trucks, cars, trains and aircraft

In the target industries, all solutions are subject to high requirements for the performance and service life of thermal insulation, and mostly given very restricted construction space.

FURTHER GROWTH POTENTIAL RESULT FROM GLOBALIZATION, INCREASING DEMANDS ON THE PRODUCT SAFETY AND INCREASING ENERGY EFFICIENCY

Growth potentials in the target market Healthcare & Logistics result from the increasing globalization of clinical research and pharmaceutical production. At the same time, demand for temperature-sensitive biotech drugs is rising constantly. Demands made of product safety ("good distribution practice of medicinal products for human use" – GDP) are becoming increasingly more stringent. Growth drivers for the Group's businesses in the target markets of Appliances & Food, Technics & Industry, Building and Mobility especially include rising energy efficiency, regulation and urbanization.

2.1.1.2 Strategic orientation

va-Q-tec operates in a very dynamic, innovation-driven and global market environment.

Within this market environment, va-Q-tec pursues the objective of expanding its position as one of the globally leading providers of highly efficient products and solutions in the thermal insulation area, and sustainably influencing temperature-managed logistics. To reach this goal, va-Q-tec pursues, in particular, three strategic approaches:

I. Technology leadership

va-Q-tec is focusing on securing and further expanding its innovation and technology leadership in the thermal insulation area. va-Q-tec stands for its "Always the Right Temperature" mission statement in the TempChain of the healthcare industry and many other end applications. The company works continuously on innovative technologies, process innovations and new business models that can change not only TempChain logistics but also thermal insulation in many industries in the future, such as in the mobility area and in the case of technical applications. va-Q-tec aims to constantly enhance its own innovative strength and capability. This approach focuses on advanced VIP types such as for higher temperatures, new thermal packaging and innovative materials. In addition, va-Q-tec strives to further improve thermologistics under the keyword "TempChain 4.0" with "intelligent" boxes and containers as well as accompanying software and simulation tools. In accordance with this objective, the Group invests in highly qualified personnel, product development and fundamental research. Selected investments, such as acquiring an interest in the Cologne-based materials start-up SUMTEQ to gain access to its new technologies, also form part of the strategy. Above and beyond this, va-Q-tec pursues cooperation ventures with technology partners in externally supported R&D projects. The medium-term target remains to defend the leading technology position and further expand it.

II. Growth

va-Q-tec's end markets offer great growth opportunities through the broad application of the technology platform, consisting of Products, Systems and Services. va-Q-tec is strongly focused on growth especially after the completion of the investments in 2018: the company's processes, organizational structure and business model are aligned to scalability and to the consistent leveraging of growth opportunities. The company is on a clearly defined expansion path with its increasingly international

presence, maintaining its solid financing base and focus on business relationships with major customers.

va-Q-tec is oriented to high-growth markets that at the same time offer the company attractive target margins, albeit also incurring high upfront costs. Pharmaceutical and biotech customers are of great significance for va-Q-tec: as its most important business pillar, the Healthcare & Logistics target market accounts for around 59% of the revenue of va-Q-tec in 2018 (previous year: 62%). In the temperature-managed logistics area, the global healthcare industry is relying increasingly on va-Q-tec's high-quality passive solutions.

At present, potential healthcare customers are still frequently using packaging solutions based on conventional insulation materials and basic water and ice mixtures. With the rising quality requirements made of cold chains – according to "good distribution practice" – customers are substituting these types of basic solutions with high-performance thermal packaging. At the same time, va-Q-tec's rental models ("Serviced Rental") are aimed at customers for which a purchase is not economically viable. With precisely customized rental solutions for high-performance thermal packaging, va-Q-tec also offers them a product with attractive price/performance relationship. For this reason, va-Q-tec expects to grow further globally in the Healthcare & Logistics target market over the coming years, while outperforming the growth rates of the underlying markets for (healthcare) cold chain logistics. The aim is to become the globally leading provider of services and packaging solutions in this market.

In the other target sectors, too, the company is endeavoring to benefit to an above-average extent from growth opportunities, such as the energy efficiency trend. The company's technology platform, which has grown over the past years, is to be established in defined target markets. In the medium term, va-Q-tec is aiming for significant growth in the Appliances & Food area. With higher regulatory requirements made of the energy efficiency classes of refrigerators, such equipment is increasingly being fitted with VIPs. VIPs from va-Q-tec – with their insulation performance testable in the manufacturing processes of OEMs – will benefit particularly from this trend. In the e-commerce area, major international providers and start-ups are currently implementing new business models to deliver food products purchased online directly to end-consumers.

We believe the transportation of easily perishable food to the end-customer will be regulated even more stringently in the future. The high-performance thermal packaging of va-Q-tec is very well suited to such transports. In addition, growth in VIP product sales is also anticipated in the target market of Technics & Industry through introducing energy efficiency classes for water boilers, for example. Here, too, manufacturers are increasingly equipping their premium products with va-Q-tec VIPs to achieve the best energy-efficiency class. At the start of 2018, for example, a leading German supplier of building services technology has already converted its entire range of heating system boilers to va-Q-tec VIP superinsulation, for instance. Here, too, the company expects that better insulated products will establish themselves increasingly in the mass market. The end markets of mobility and construction offer additional growth areas in the medium and long term. For example, va-Q-tec realized an important flagship project during the past financial year: in certain areas of building insulation, glass façade elements of the "Grand Tower" in the Europaviertel in Frankfurt – the highest residential high-rise building in Germany in the future – are being insulated with va-Q-tec's VIPs. This means that the leased space in one of the most sought-after inner-city locations in Europe can be significantly increased.

Overall, the company anticipates continued revenue growth in the low to mid double-digit percentage range year-on-year over the next three years.

III. Profitability

Profitability is indispensable in order to secure the company's long-term success and performance as well as its competitiveness. EBITDA profitability forms the third pillar of the corporate strategy and represents a significant corporate steering metric. In view of very high development, set-up and other start-up costs, this objective is of particular importance.

Various measures in the operational excellence area are being continuously advanced to deliver profitable growth. The Board of Management's cost-cutting initiatives were bundled under the "Power 20+ " performance program in the 2018 financial year and primarily concern measures to continuously optimize and harmonize quality, sales processes, organization, resource consumption and IT systems throughout the Group. Economies of scale accompany the expansion of the Group's business activities and corresponding sales revenue growth: the

terms on which the Group can purchase intermediate products and third-party services improve significantly with revenue growth, and the rising purchasing volumes that accompany such growth. The cost increases for Group support functions such as personnel, marketing, financial accounting and controlling do not match the top-line growth rate. However, the stock exchange listing requires the highest quality level, entailing corresponding expense. Various aspects of vertical integration into downstream stages of the value chain contribute to improving profitability. This includes services and business models such as the rental of boxes and containers ("Serviced Rental"). This forwards integration and control of upstream value steps to improve profitability forms a central element of the corporate strategy. In the phase of the company's development to date, the dominant focus continued to be on sales growth. As a result of the aforementioned operative and strategic measures, the company is aiming for a medium- and long-term improvement in the EBITDA margin to at least in excess of 20%.

Group structure, employees, investments and steering

At the start of the period under review, the Group consisted of six companies. Subsidiaries were established in Uruguay and Singapore during the reporting period. A total of eight companies thereby formed the va-Q-tec Group as of the end of the reporting period, comprising the German parent company and seven foreign subsidiaries. The Group's three reporting segments are derived from these eight companies – the German segment (va-Q-tec AG), the UK segment (va-Q-tec Ltd (UK) and the Other segment (va-Q-tec Ltd (Korea), va-Q-tec Inc. (USA), va-Q-tec Switzerland AG (Switzerland), va-Q-tec Japan G.K. (Japan), va-Q-tec Uruguay S.A. and va-Q-tec SG Pte. Ltd).

The parent company va-Q-tec AG wholly owned all seven foreign subsidiaries as of 31 December 2018.

In the German segment, va-Q-tec AG covers all three segments (Products, Systems and Services). Since 2015, the business with rental boxes has been shown in the "Services" segment. va-Q-tec Ltd (UK) primarily comprises the "Services" segment with its focus on the rental business of (returnable) containers. The "Other" segment comprises the business activities of the subsidiaries va-Q-tec Ltd. (South Korea), va-Q-tec USA Inc. (USA), va-Q-tec Switzerland AG (Switzerland) va-Q-tec G.K. (Japan), va-Q-tec Uruguay S.A. and va-Q-tec SG Pte. Ltd. (Singapore). The South Korean subsidiary is responsible for both the

purchasing of raw and input materials and the business development of all three of the Group's business areas in Asia. In addition to sales activities, the subsidiary in the USA is primarily engaged in business development in North America. The company has continued to make significant investments in personnel and business development at the US subsidiary during 2018. Warehousing and office spaces were rented, and a local management team was appointed on the US East Coast with the aim of establishing local production of thermal packaging systems, a repair station for rental containers and a local center to rent small boxes. This location was opened at the beginning of the reporting period. va-Q-tec Switzerland AG renders services (conditioning and cleaning of rental boxes, "fulfilment services") for Swiss Post in the cold chain logistics area. Through its fleet of thermal boxes, Swiss Post makes recourse to va-Q-tec's technology and process experience. As a sales company, the subsidiary in Japan pursues the objective of enhancing the perception of va-Q-tec as a locally rooted and reliable provider in the world's third-largest economy, and of distributing va-Q-tec products and services there. With the subsidiaries in Uruguay and Singapore, the aim is to further intensify the sales presence in Latin America and Singapore.

To manage the three reporting segments, the management monitors these areas individually and across the Group based on detailed and regular reports. The management steers the allocation of resources based on this information and institutes countermeasures where performance falls short of target. A streamlined Group structure ensures the Group management can effectively control and coordinate the subsidiaries' important business decisions.

Central metrics of the va-Q-tec Group that serve corporate steering by the management include revenue, earnings before interest, tax, depreciation and amortization (EBITDA) and the equity ratio. Compared with the previous year, the steering system at va-Q-tec AG has not changed. The Group's specific steering metrics are presented in greater detail below:

Sales revenue growth is the basic indicator of business performance and growth, and of the attractiveness of the Group's products, systems and services. Viewed at the level of the reporting segments and geographic distribution, revenue also serves as an indicator of the success and performance of the Group's business models.

EBITDA serves as the metric for profitability. To this is then added as a subsidiary measure the EBITDA margin measured in relation to total income as a benchmark for the Group's operative performance and profitability. As a fast-growing technology company, va-Q-tec AG invests significant shares of its financial resources in machinery, plant and its fleet of containers and boxes for rental services. Furthermore, in the 2018 reporting period the company completed the aggregation of its Würzburg locations into a single management, technology and logistics center. A high level of depreciation during the current phase of establishing infrastructure and fleet distorts the actual picture of financial performance. For this reason, EBITDA, as an earnings figure before depreciation presents a more meaningful metric of the company's performance.

The equity ratio provides information about the strength of the va-Q-tec Group's balance sheet, its capacity to withstand crises, its creditworthiness and its credit risk. In the medium term, the company regards an equity ratio with a target range between 35% and 40% as representing a balanced relationship between debt and equity, and consequently of the risk distributed among equity investors and creditors.

In the area of non-financial performance indicators, the number of employees serves as an indicator and central steering metric of the growth in the Group's operating activities.

The following overview shows the growth in the relevant steering metrics.

Section 2.2.4 "Financial position and performance" provides a detailed discussion of these key indicators.

kEUR unless stated otherwise	2018	2017
Revenue	50,708	46,926
EBITDA (IFRS)	3,027	7,210
<i>EBITDA margin (IFRS)</i>	5 %	13 %
Equity ratio	42 %	55 %
Year-average number of employees	444	358

2.1.2 Research and development

va-Q-tec is one of the leading technology innovators in the development and production of energy-efficient and space-saving VIPs, high-performance PCMs and thermal packaging systems. The research and development area is of strategic importance to secure and further extend the company's technology leadership in the thermal insulation areas. Group research at va-Q-tec operates across the whole company, developing technologies for future-viable products and solutions for the Group companies.

va-Q-tec operates a portfolio of internal and external R&D projects that not only serve basic research on VIPs but also relate to five of the target sectors defined by va-Q-tec that require advanced thermal heat insulation and energy storage.

As a spin-off from a university – the Bavarian Centre for Applied Energy Research (ZAE Bayern) – va-Q-tec maintains partnerships with international associations, research institutions, universities and colleges. Internally, the company has established its own R&D organization with extensive capacities for basic research and, in particular, application-oriented research.

VA-Q-TEC IS TECHNOLOGY LEADER IN THE VACUUM INSULATION AND THE TEMPCHAIN LOGISTICS

The past years' successful R&D activities have created a portfolio of patents which is reflected in the leading technology platform.

The worldwide unique va-Q-check® quality control system enables the insulation of VIPs to be controlled before use, or boxes and containers to be approved for reuse through measuring internal gas pressure. va-Q-tec VIPs are thereby the only heat insulation whose performance and efficacy can be measured and controlled at the place of use. This fosters confidence and trust in VIP technology and enables va-Q-tec to meet its high-quality requirements of a demanding customer group, including complying securely, and on an evidenced basis, with the thermal protection requirements for cold chain transportation, for example. The patented va-Q-pro is a largely freely

formable, powder-filled VIP, from which holes and sections can be cut on the production side and which can be manufactured in three-dimensional geometry. These properties and flexible structuring possibilities allow va-Q-pro to be deployed in very different application areas, including for batteries in e-vehicles or to insulate parts of aircraft, such as the galley, for example.

va-Q-tec conducted basic research in 2018 in applying VIPs in entirely new temperature ranges, for example. While conventional VIPs are typically deployed in the -80 to +80°C temperature range, va-Q-tec is working on expanding VIPs' deployment range through optimally combining various case materials and core materials, e.g. in temperature classes from 80 – 180°C as well as >400°C. The significant interest held in the Cologne-based start-up SUMTEQ is of strategic importance in the area of fundamental research for core VIP materials. The joint target of va-Q-tec and SUMTEQ is the pilot testing and market launch of SUMTEQ's submicroporous foams as a further high-performance insulation material. This strategic partnership offers both companies the opportunity to contribute their respective specialist and technical research and development expertise, and thereby generate added value for customers.

In the year under review, va-Q-tec worked mainly on expanding and improving its existing product portfolio: with va-Q-shell, va-Q-tec optimized a product in partnership with customers from the water boiler area: va-Q-shell consists essentially of two polyurethane shell halves with integrated VIPs. Deploying va-Q-shell enables 50-60% energy savings compared with traditional solutions with conventional insulation. With VIPs, water boilers achieve the A+ labelling according to the EU norm mandatory since September 2015.

With the stackable "va-Q-tray", a thermal packaging system, food can be transported in such a way that it remains warm, cold or frozen for hours or in some cases days. The temperature-holding time can optionally be extended by PCM rechargeable batteries. With the va-Q-tray, for example, bakery branches can be supplied efficiently with fresh produce: in contrast to existing styrofoam systems, va-Q-tray meets the highest hygiene and temperature chain requirements, can be used universally (e.g. as a portable refrigerator), and as a combinable system with non-insulated standard containers. In addition to the hygienic advantages, this also results in cost savings because additional refrigerated vehicles can be dispensed with.

Also in the Systems area, "va-Q-pal" was further developed as thermal packaging in pallet size for the temperature-controlled transport of valuable biological pharmaceuticals. It consists of a surrounding packaging consisting of carbon, VIPs, and PCM batteries that protect from temperature fluctuations due to external temperatures. In this context, va-Q-pal is being developed as a particularly cost-efficient and marketable solution for single use, rounding out the offering of va-Q-tec in this area.

"va-Q-med" was significantly further developed with external logistics partners in the past financial year. It ensures safe last-mile logistics without temperature deviations directly to the receiver. Unlike conventional, inefficient one-way packaging or CO₂-intensive extra transports with refrigerated vehicles in congested inner cities, the va-Q-med boxes enable environmentally compatible, traffic-reducing and at the same time safe transport logistics. The transport system consists to a large extent of vacuum insulation panels. Phase change materials ("PCMs") from va-Q-tec supplement the strong insulation performance of VIPs. They ensure reliable and energy-efficient temperature control in the required range.

The "va-Q-box", one of the company's first systems, was continuously further developed following the redesign in the previous financial year. The related aims included improvements to design and handling as well as adjusting to standard market sizes, in order to expand the potential customer base for the va-Q-box in the gastronomy sector. The va-Q-box is being marketed through a proprietary webshop directly to end-customers (B2C), among other channels, thereby also serving as the basis for an expanded portfolio in this sector.

In order to control these logistic processes, va-Q-tec is increasingly developing advanced software and simulation solutions under the key term "TempChain 4.0". In combination with the va-Q-tec thermal packaging, these enable the smart control of TempChains. To this end, IT resources were significantly strengthened in the period under review.

The technology platform is secured through around 170 industrial property rights and filings for industrial property rights. These relate mainly to efficient manufacturing methods for powder-filled VIPs as well as the va-Q-check® quality control system, a sensor technology to measure vacuums in VIPs. A total of 7 industrial property rights were filed, including 5 patents and 2 registered designs.

The company made further investments in its research and development area in the year under review. Expenditure for this area amounted to kEUR 2,451, up on the previous year's level (kEUR 1,938). Research and development costs of kEUR 144 in total (previous year: kEUR 104) were capitalized in the reporting period. Amortization of development costs capitalized in previous years amounted to kEUR 119.

2.2 BUSINESS REPORT

2.2.1 Macroeconomic environment and Group-specific conditions

In the course of the past financial year, a series of political crises and external shocks had a negative impact on major economies. In particular, trade tensions weighed on corporate sentiment. The export-oriented German economy is particularly dependent on unhindered and flourishing world trade. It has thereby responded to a more significant extent than others to trade tensions, the somewhat slower growth dynamic of the Chinese economy and economic problems in emerging markets. Growth in domestic demand also weakened from mid-2018 onwards. The high price of oil has caused problems for consumers. Consumer spending has recently fallen sharply. Supply-side difficulties have also affected the economy. Since October, increasing uncertainty about the Brexit process and the withdrawal of economic reforms in Italy have also dampened the business climate in Europe. Overall, growth in the Eurozone and Japan slowed considerably in the course of 2018. In the USA, positive fiscal stimuli (extensive tax relief at the beginning of 2018) and higher revenues for oil producers up until November currently outweigh the costs of trade wars and other shocks. With the fiscal stimulus, the USA had decoupled itself from the rest of the world in 2018. The UK must decide on the nature of its future relations with the European Union. At the time of final editing of this management report, it is still unclear which of the possibilities the country will opt for. "Hard Brexit" (no free trade agreement, trade conducted according to World Trade Organization rules), "May's half-soft Brexit", "soft Brexit" (UK remains part of the internal market and the customs union – i.e. "Norway plus") or "no Brexit" (UK revokes withdrawal from the EU) are only some of the possible shades and borderline cases of the current discussion. va-Q-tec has set up a dedicated team to evaluate the impact of Brexit on the Group's value chain.

Overall, assuming a constructive solution, va-Q-tec does not expect any significant negative effects, especially on business in the UK reporting segment. Although operational control derives from the United Kingdom, the real added value is generated by the globally distributed container fleet. For further information on the opportunities and risks arising from Brexit, please refer to section 2.4. of this annual report.

The International Monetary Fund (IMF) estimates that the world economy expanded by 3.7% in 2018. While the US is only slowly losing momentum and China could continue to report somewhat muted data, weak growth in Europe and Japan continues for the time being. Provided political risks ease slightly in 2019 and the Fed does not tighten its monetary policy excessively, economic growth could accelerate again in the second half of 2019. For 2019, the IMF expects a growth rate of 3.5%. Developing and emerging economies will make an above-average contribution to global growth, according to the forecast. As a globally active Group, va-Q-tec consequently sees itself exposed to both opportunities and risks in macroeconomic terms.

Key revenue drivers for the va-Q-tec Group include the two end-markets of Healthcare & Logistics as well as Appliances & Food, which together account for an 82% share of consolidated revenue.

With its German and UK segments, va-Q-tec is active in the market for thermal packaging systems – particularly for the healthcare industry as the most important sales market for va-Q-tec. Market research agency MarketsandMarkets takes an optimistic view of market growth over the coming years: over the 2016-2021 period, MarketsandMarkets expects an average annual growth rate of 9.1%, whereby va-Q-tec assumes the relevant market subsegments (high-performance packaging systems) will grow faster. More stringent regulatory requirements made of cold chain logistics (according to "good distribution practice") are making ever more efficient packaging systems necessary for pharmaceutical industry customers. Moreover, market research agency IMARC assumes that 27 of the 50 top-selling medications worldwide will require cold chain logistics in the 2-8°C range by 2020. va-Q-tec is convinced it can grow faster than the market with its

high-quality system solutions for sale as well as rental solutions ("Serviced Rental" of thermal packaging systems). Especially with groundbreaking rental solutions, va-Q-tec aims to enter markets that conventional thermal packaging systems have served to date.

After the healthcare industry, manufacturers of refrigeration and freezing equipment are the second most important customer. The market for vacuum insulation panels in refrigeration and freezing equipment is growing at an annual rate of almost 21% in the 2014-2019 period, according to an estimate produced by LUX Research. va-Q-tec expects to enjoy somewhat higher growth rates in this target market thanks to its particularly durable and high-quality products.

Overall, va-Q-tec addresses growing markets with its product business with VIPs: in Germany, approximately 60% of primary energy is harnessed for thermal purposes – refrigeration or heating in other words – according to the Working Group on Energy Balances (AGEB). With a worldwide increase in primary energy prices for consumers, greater awareness among customers about energy saving and more stringent statutory regulation, the economic and political incentive is increasing to invest in energy efficiency. This leads to very interesting business opportunities for va-Q-tec products.

2.2.2 Business trends

The Group's entrepreneurial activities in the 2018 financial year focused on continuing and completing the investment program as the basis for further growth. This created essential personnel, organizational and structural conditions for the further expansion of business. The company also further advanced the internationalization of its business and the expansion of its capacities in its production area and for rental containers.

Products division (sale of VIPs)

In the Products division, new customers were acquired, particularly in the target market of Technics & Industry, and business with existing customers was further expanded. This reflects, firstly, the high quality, performance and durability of VIPs. Secondly, regulatory changes exerted a favorable impact on business. Hot water tanks in heating systems with volumes up to 2,000 liters have formed part of Europe-wide energy efficiency labelling since September 2017, as has already been standard for refrigerators for some years. The currently highest energy efficiency class of A+ is technically feasible only with VIPs in this context.

Boilers with energy efficiency classes below the "C" category can no longer be produced. Blue-chip customers of va-Q-tec utilize VIPs to upgrade their products to the highest energy efficiency classes through better insulation. At the start of 2018, a leading German supplier of building services technology already converted all its range of heating system boilers to va-Q-tec VIP superinsulation, for instance.

Systems division (sale of thermal packaging systems)

New customers were acquired in 2018 with the "va-Q-one" thermal box, a cost-efficient one-way solution for secure temperature-sensitive freight transportation. This product is particularly suitable for transports with no return transport of the thermal box for economic reasons. At the same time, business with existing major customers proved stable.

Services division (rental and pre-cooling of thermal packaging systems)

Overall, the Services division presented a mixed picture in the reporting period:

In February 2018, va-Q-tec successfully launched a project in the temperature-controlled air freight transportation area with a leading supplier of systems for the semiconductor industry. This enabled a reference customer exerting a major impact on the entire industry to be acquired. Its extremely complex production machines play an important role in microchip manufacturing. The customer utilizes the va-Q-tec service to transport temperature-sensitive optical and mechanical systems more securely and considerably more cost-efficiently between production sites in Europe and Asia than previously. The va-Q-tec technology ensures the stability of these temperature-sensitive supply chains, including in extreme temperature conditions.

In the area of temperature-controlled air freight containers, revenue reported below-average growth. While revenues generated with a major pharmaceutical customer decreased by almost one half year-on-year due to the customer's own reduction in business, the revenue contribution generated by all other customers grew at a significant overall rate of over 30% in 2018. Although this major customer effect was offset by dynamic new business in 2018, the expected growth rates could not be achieved. Nonetheless, va-Q-tec recorded a significant upswing in the course of the year after an unusually weak start and, at EUR 5.6 million, achieved its highest quarterly revenue to date in the fourth quarter.

National and international business trends

During 2018, the aggregation of the three remaining Würzburg sub-locations into one technology and logistics headquarters was completed. This step serves to boost operating efficiency, expand capacities for production and logistics, and bundle technological competencies. Considerable rental and transport costs are thereby eliminated in the future. In the second quarter, all production lines at the former main premises of va-Q-tec AG were dismantled and transported to the new production site, where they were recommissioned. Costs in a high six-digit range in euros were incurred in this connection, which exerted a marked effect on the EBITDA of va-Q-tec AG. The company nonetheless continued to invest in the requisite production capacities and personnel in order to secure the continuation of va-Q-tec's planned growth track. Internal resources were significantly strengthened for this purpose, such as the IT, marketing and sales areas.

With the opening of a new branch operation in the USA in January 2018, va-Q-tec reached an important milestone in its internationalization overall and in the expansion of its business in North America in particular. Especially the production of small thermal boxes and sales operations are to occur locally from the USA in the future. The new fulfilment center in Langhorne, Pennsylvania, forms a central element of the va-Q-tec growth strategy, as its location adjacent to Philadelphia, New York and Boston and their renowned biotechnology, healthcare and pharmaceutical hubs provides ideal infrastructures. This close proximity enables the company to offer its customers even faster and more reliable service. The company sees high demand for high-performance thermal transport boxes in the USA and, with its new fulfilment center, is becoming a full-service provider in the temperature-controlled transportation of high-quality products in North America. Furthermore, the new head office in the USA comprises a network station for container rental, which will serve as the platform to supply customers with pre-cooled containers. Based on these potentials the North American business is to be further expanded.

During the period under review, va-Q-tec expanded its international presence with a new Latin American headquarters and network station in Montevideo, Uruguay. The new location will function in the future as a central hub for va-Q-tec's rental business and as a fulfilment station.

"Power 20+" performance program designed and launched in 2018

Since the IPO two years ago, most of the investments and measures intended for the proceeds as part of business expansion and internationalization have been realized. This creates the essential prerequisites for the next growth steps. Given this, and in light of revenue and earnings trends in the first three quarters of the year falling short of expectations, the Management Board of va-Q-tec AG has approved a package of measures to enhance sales and efficiency, and has started to implement the measures for the 2018 financial year and for the current 2019 financial year. The management's focus is now on the next growth and efficiency phase in the development of va-Q-tec AG.

These measures aim to significantly re-accelerate sales revenue growth, especially in the attractive Services business, and further improve transparency in relation to sales processes in this division. At the same time, costs are to

be better controlled and reduced as far as possible. Specifically, the steps aim at more dynamic sales revenue growth accompanied by a sustained improvement in the EBITDA margin in the current and subsequent financial year. Important measures to improve the sales dynamic are specifically as follows:

- In order to enhance sales performance and forecasting quality in the Services business, the Management Board as well as the senior management of va-Q-tec AG and of va-Q-tec UK Ltd have started to position sales overall, and especially in the Services division, with an even clearer orientation to core customers. Accordingly, a need for change at the head of the sales organization in the container rental area was identified and addressed in 2018.

COST EFFICIENCY AND PROFITABLE GROWTH ARE THE FOCUS OF THE POWER 20+ PROGRAM



- As a further measure, va-Q-tec has introduced an innovative order management system in the container rental in Q4 2018. As a consequence, va-Q-tec anticipates significantly improved visibility in this area. This visibility relates particularly to the number and progress of customers in the qualification and ramp-up process for temperature-controlled air freight containers.
- As a medium-term adjusting lever, the package of measures comprises an adapted go-to-market approach: this includes an adapted pricing model that is to be more aligned to the benefits of passive high-performance containers. Furthermore, partnerships that already exist in many areas are to be expanded and strengthened. External logistics partners are to increasingly serve their (pharmaceutical) customers with va-Q-tec rental solutions.
- The aforementioned initiatives also achieve a greater integration of the UK subsidiary with va-Q-tec AG, which also leads to improved cross-selling possibilities between container rental and "small" thermal boxes.

Since the IPO in the 2016 financial year, around 177 new employees have been hired across the Group at all qualification levels. This hiring has led to a marked rise in the personnel cost ratio from 27% in 2016 to 33% in 2018. The aim is to leverage economies of scale in the medium term with the currently available personnel cost block and thereby significantly further reduce the personnel cost ratio. Furthermore, the temporarily sharp increase in the number of temporary help staff was reduced considerably in Q3 2018 with the conclusion of the removal work and normalization of capacity utilization, especially at va-Q-tec AG. As part of the package of measures, all existing consultant contracts have been reviewed as to their necessity for the next growth phase. Further optimizations relate mainly to costs for IT and marketing. Establishing internal expertise will reduce demand for external resources in this context, for example. Overall, the program had no significant impact on earnings in the 2018 financial year. A noticeable impact is expected for the first time in H1 2019.

In the third and fourth quarters in particular, specific measures were taken to optimize liquidity and financing. Examples include the refinancing – through long-term bank loans and public subsidies for Würzburg and Kölleda – of significant growth investments, especially in real estate, plant and machinery, which were initially financed from equity. Further refinancing occurred in the fourth quarter. This has enabled us to achieve congruence of maturities for the long-term investments and to create financial scope for further business development.

2.2.3 Non-financial performance indicators

Employees at va-Q-tec

As a technology company with broad coverage of the value chain, va-Q-tec ascribes particular significance to its staff and their qualifications. The employees' knowledge, skills, further development and commitment are essential for the further success and performance of va-Q-tec. Staff received both in-house and external training measures during the year under review. Along with corresponding functional training sessions for employees, the focus was on the cross-functional topic of project management. va-Q-tec employs a high number of students, especially in research and development. A total of 18 working students were employed at va-Q-tec (previous year: 17). The average of employees (excluding Management Board members and trainees) grew in the previous by 86, from 358 in the previous year to 444 in the 2018 financial year.

2.2.4 Business results and analysis of the financial position and performance

Results of operations

kEUR unless stated otherwise	2018	2017	Δ 18/17
Revenue	50,708	46,926	8 %
Total income	61,364	57,447	7 %
Cost of materials and services	-25,722	-24,676	4 %
Gross profit	35,642	32,771	9 %
Personnel expenses	-20,403	-15,616	31 %
Other operating expenses	-12,212	-9,945	23 %
EBITDA	3,027	7,210	-58 %
<i>EBITDA margin</i>	5 %	13 %	-
Depreciation, amortization and impairment losses	-9,864	-7,528	31 %
EBIT	-6,837	-318	-
Result from equity accounted investments	-110	-79	-
Net financial result	-828	-513	-
EBT	-7,775	-910	-

Overall, incoming orders in the 2018 financial year were slightly above the previous year's level. Nonetheless, the order book position as of 31 December 2018 increased significantly compared with the previous year, supporting the company's positive outlook. Given this, va-Q-tec grew its revenues in the past financial year by 8% year-on-year to reach kEUR 50,708. The revenue growth in this context was driven particularly and to an extent beyond planning by the Products business (sale of VIPs). Business with Products was up by kEUR 2,091, from kEUR 18,031 to kEUR 20,122 (+12%). In the Systems division, revenues grew by kEUR 488, from kEUR 10,820 to kEUR 11,308 (+5%). With Services, the Group generated revenues of kEUR 18,386, compared with kEUR 17,366 in the previous year (kEUR +1,020, +6%).

Due to the development in 2018 – delayed ramp-up of projects in the high-margin Services business with simultaneous revenue declines with a major customer – the revenue dynamic in the 2018 financial year failed to correspond to the company's original expectations and planning. As a result of these developments, especially in the first half of 2018, it was not possible to achieve the original revenue forecast of EUR 56 million to EUR 63 million. In the course of the publication of the report on the first half of the year in August 2018, the revenue range was consequently adjusted to a new range of EUR 51 million to EUR 56 million. With revenue of around EUR 51 million, the lower end of this adjusted forecast for 2018 was reached.

The German segment (va-Q-tec AG) contributed kEUR 33,650 to consolidated revenue (previous year: kEUR 32,613), the UK segment (va-Q-tec UK) kEUR 14,737 (previous year: kEUR 13,986), and the Other segment kEUR 2,321 (previous year: kEUR 326).

Total income was up by 7% to kEUR 61,364 in the past financial year, reflecting the revenue growth. Work performed by the company and capitalized of kEUR 5,620 in 2018 (previous year: kEUR 6,702) was generated mainly from the continued expansion of the container and box fleets. Other operating income of kEUR 2,581 (previous year: kEUR 1,813) derived from releasing the special item deriving from container sale-and-leaseback transactions. This special liability item arises from the sale of self-produced containers by the parent company va-Q-tec AG or by va-Q-tec UK Ltd to leasing companies, and subsequent finance leaseback by the UK subsidiary. It represents the difference between the market price of the container and its production cost, and is released over a five-year depreciation period and added to other operating income (please see note 3.2.1 "Sale and finance leaseback transactions" in the notes to the consolidated financial statements for more information).

The cost of materials was up from kEUR 24,676 to kEUR 25,722, below the average rate of total income growth and leading to a cost of materials ratio of 42% (previous year: 43%). The cost of purchased services also formed part of costs of materials, and increased by kEUR 428 to kEUR 8,446 (previous year: EUR 8,018). The reason for the absolute increase was the significantly increased use of warehousing, logistics and fulfilment services at partner companies within the scope of "Serviced Rental" as well as more complex repositioning of air freight containers in the network.

Personnel expenses were up from kEUR 15,616 in the previous year to kEUR 20,403 in the 2018 financial year (+31%), thereby rising to 33% in relation to total income. This growth is attributable to the increase in the number of employees required to realize the targeted growth and the recruitment of highly qualified specialists to further optimize business processes. This sharp rise in costs is of a prefinancing nature.

Other operating expenses rose from kEUR 9,945 in the previous year to kEUR 12,212 (+23%) in the reporting period. Along with the growth-related expansion, this rise reflected higher expenses as part of business expansion (external IT implementation advice), as well as double and removal costs incurred temporarily and on a one-off basis due to the relocation to the new Group headquarters, as well as costs incurred as part of returning the former site. At the same time, greater recourse was made to temporary help labor in the production of VIPs during the transfer, in order to handle both demand peaks as well as the move.

In addition, marketing and sales expenses were further increased as a basis for continued growth. Rental expenses, especially for the locations of the newly established or significantly expanded foreign subsidiaries, also grew disproportionately and serve as a foundation for further growth. Measured against total income, this results in a higher other operating expense ratio of 20% for 2018 (previous year: 17%).

As a result of these developments, earnings before interest, tax, depreciation and amortization (EBITDA) fell from kEUR 7,210 in the previous year to kEUR 3,027. This corresponds to an EBITDA margin of 5% (previous year: 13%). The Group's forecast, adjusted as of H1 2018, of a significant decline in the EBITDA margin compared with the previous year and a simultaneous improvement in the margin in the second half compared with the first half, was thereby achieved (originally: strong year-on-year EBITDA growth).

Depreciation, amortization and impairment losses recorded an increase of 31% to kEUR 9,864 (previous year: kEUR 7,528), reflecting a high level of growth investments in buildings, infrastructure, containers and boxes.

Earnings before interest and tax (EBIT) reduced from kEUR -318 in previous year to kEUR -6,837. This is equally attributable to the higher level of depreciation and amortization charges incurred in line with the business growth and the higher personnel expenses and cost of materials, as well as an increase in other operating expenses.

The financial result amounted to kEUR -828 after kEUR -513 in the previous year. In the previous year, the company generated financial income of kEUR 359 as part of the acquisition and refinancing of loans assumed for the new location in Würzburg, which reduced borrowing costs accordingly in the previous year. After adjusting for this effect, the net financial result in the prior-year period would have been kEUR -872.

A pre-tax loss (EBT) of kEUR -7,775 is incurred for the 2018 reporting period, compared with a loss of kEUR -910 in the prior-year period.

German reporting segment (va-Q-tec AG)

kEUR unless stated otherwise	2018 (IFRS)	2017 (IFRS)	Δ 18 / 17
Revenue	44,565	43,174	3 %
EBITDA	580	5,740	-90 %
Equity ratio	57 %	71 %	-
Average number of employees	390	317	+73

The German reporting segment (va-Q-tec AG) grew its revenues by kEUR 1,391 (+3%), from kEUR 43,174 in the previous year to kEUR 44,565 in the 2018 financial year. The sales revenue growth was generated mainly thanks to additional business in the Technics & Industry target market (manufacturers of hot water storage units, boilers and other equipment), as well as to the sale and rental of thermal packaging. The sale of containers and the UK subsidiary also contributed to revenue growth, although the pace of growth slowed in some areas in the second half of 2018. In the past financial year, revenue also includes payments from customers for thermal boxes unreturned within the rental network in an amount of kEUR 629 (previous year: kEUR 921). The establishment of box fleets was reflected in a significantly higher level of work performed by the company and capitalized. EBITDA decreased to kEUR 580 (previous year: kEUR 5,740). The equity ratio stood at 57% as of 31 December 2018 (previous year: 71%). The average number of employees rose by 73 to 390 (previous year: 317).

UK reporting segment (va-Q-tec UK Ltd)

kEUR unless stated otherwise	2018 (IFRS)	2017 (IFRS)	Δ
Revenue	16,044	15,401	4 %
EBITDA	4,334	4,656	-7 %
Equity ratio	15 %	15 %	-
Average number of employees	37	32	+5

Sales revenues in this segment grew by 4% from kEUR 15,401 in the previous year to kEUR 16,044 in 2018. Here, the absolute number of rented containers continued to report a further rise compared with the prior-year period. A major customer significantly reduced its order volume due to a decline in its own sales of certain drugs.

The loss of a major customer from the network station in Puerto Rico as a result of the hurricane at the end of 2017 also had a negative impact on revenue and earnings. By contrast, business with other customers developed positively, with revenue up 32% on the previous year.

EBITDA was down by 7%, from kEUR 4,656 in the previous year to kEUR 4,334. The average number of employees rose from 32 to 37. Given the current business situation – characterized by the constant expansion of the container fleet and the operating business – it is anticipated that the parent company will continue to provide support for the capital backing of the UK subsidiary for two more years.

Other reporting segment

kEUR unless stated otherwise	2018 (IFRS)	2017 (IFRS)	Δ
Revenue	4,089	1,404	+191 %
EBITDA	53	14	+279 %
Equity ratio	10 %	24 %	-
Average number of employees	17	9	+8

The subsidiaries in Korea, Japan, Switzerland, the USA, Uruguay and Singapore together comprise the Other reporting segment. The subsidiaries in the Other reporting segment are important for local presence, the expansion of regional operating activities, and the perception of va-Q-tec as a reliable global and regional partner. The Other reporting segment reports higher revenue overall, reflecting Services revenue (Swiss subsidiary), an increased level of sales and purchasing commissions, as well as strengthened business activities in the USA in the reporting period. EBITDA grew to kEUR 53 in 2018 (previous year: kEUR 14). The average number of employees amounted to 17 individuals (previous year: 9), and the equity ratio stood at 10% (previous year: 24%).

Financial position

Principles and goals of financial management

The financing strategy of va-Q-tec is oriented to providing the funds required for strong growth. Recourse is made in this context to various financing instruments such as loans, leasing, factoring, overdrafts and government subsidies. Existing credit lines were optimized continuously in terms of their rate of interest. Interest-rate risks are hedged with corresponding swaps.

The most important investments for further growth towards EUR 100 million of revenue were already largely completed and at a faster than expected rate in 2018. Given this, and as the result of comprehensive financing measures, va-Q-tec had comfortable liquidity as of 31 December 2018 with bank balances plus open credit lines totaling EUR 16.7 million. Together with further financing facilities of up to EUR 6 million, which are in final negotiations, the financial scope would amount to almost EUR 23 million. Further improvements are expected from the normalization of working capital following the completed moves to the new headquarters. In consequence, despite the investments and the high burdens from the company's expansion (internationalization, fleet expansion, production capacities, product developments, personnel expansion, costly training for new customers), considerable relocation costs, significant research activity and burdens from stock market requirements, the available liquidity plus the further financing facilities would still amount to more than half of the funds provided by investors in 2016 in the initial public offering.

Liquidity

Net cash flow from operating activities before working capital changes stood at kEUR -419 in the period under review. In the prior-year period, this figure was kEUR 3,608 higher at kEUR 3,190. Including working capital changes, total net cash flow from operating activities reduced to kEUR -3,653 (previous year: kEUR 1,470). The changes are mainly due to the deterioration in earnings and the higher personnel and other operating expenses reported under this item. The increase in working capital is chiefly attributable to the kEUR 1,983 rise in inventories as of the reporting date, which were accumulated especially to ensure that the company was capable of making deliveries during the relocation-related standstill in the production lines, and partly to raise security stocks of materials required for production and to initially equip the subsidiaries abroad. While trade receivables hardly changed during the reporting period, trade payables report a marked reduction as of the reporting date, despite the inventory accumulation.

Cash flow from investing activities changed from kEUR -1,099 in the prior-year period to kEUR -11,965 in 2018. This includes kEUR 9,000 of proceeds from liquidating short-term deposits (previous year: kEUR 21,000). The purchase of property, plant and equipment resulted in kEUR -19,789 of this amount, compared with kEUR -22,439 in the previous-year period. This is particularly attributable to outgoing payments to purchase the new building complexes in Würzburg and Kölleda and to establish the container and box fleets. Cash flow from financing activities of kEUR 22,624 (previous year: kEUR 294) derives from the scheduled net increase in bank borrowings to finance the long-term investments in buildings as well as plant and machinery. In contrast, investments in the previous year were largely financed or pre-financed from existing liquidity.

kEUR	2018	2017
Net cash flow from operating activities before working capital changes	-419	3,190
Net cash flow from operating activities	-3,653	1,470
Net cash flow from investing activities	-11,965	-1,099
Net cash flow from financing activities	22,624	294
Net change in cash and cash equivalents	6,953	601



Net assets and capital structure**Assets**

kEUR	31.12.2018	31.12.2017
Non-current assets		
Intangible assets	2,437	885
Property, plant and equipment	69,390	55,402
Investment property	1,614	1,614
Capitalized contract costs	157	-
Equity accounted investments	580	357
Financial assets	184	283
Other non-financial assets	647	634
Deferred tax assets	2,961	2,880
Total non-current assets	77,970	62,055
Current assets		
Inventories	10,924	8,942
Trade receivables	7,557	8,005
Other financial assets - of which term deposits (6-12 months): kEUR 0 (previous year: kEUR 9,000)	334	9,117
Tax assets	135	67
Other non-financial assets	1,073	2,104
Cash and cash equivalents	12,154	5,201
Total current assets	32,177	33,436
Non-current assets held for sale	-	-
Total assets	110,147	95,491

The portfolio property at Alfred-Nobel-Strasse 33 in Würzburg, which had already been acquired in the previous year, was further expanded during the period under review as the company's central and sole location in Würzburg, with production machinery having been installed and with the building having been occupied by the end of the reporting period. Investments were also made in a second plant at the main production site in Kölldeda (Thuringia). The official opening was held in May 2018. Furthermore, the container fleet of the UK reporting segment and the box fleets of the German reporting segment continued to grow in the past financial year in order to provide sufficient capacity for the expected future demand. A total of kEUR 28,474 gross was invested in property, plant and equipment as well as intangible assets in the Group (previous year: kEUR 36,570). Taking depreciation and disposals into account, property, plant and equipment rose by a total of kEUR 13,988 from kEUR 55,402 in the previous year to kEUR 69,390 as of 31 December 2018.

Total non-current assets rose by kEUR 15,915, from kEUR 62,055 to kEUR 77,970 as of 31 December 2018.

Inventories rose by kEUR 1,982 to kEUR 10,924 (previous year: kEUR 8,942), which is attributable not only to the revenue growth but also to a higher level of security stocks and preproduction for the planned, relocation-related production interruption in Würzburg as well as the initial equipping of the foreign subsidiaries with warehouse stocks. Trade receivables were unchanged compared with 31 December 2017 at kEUR 7,557 as of 31 December 2018 (previous year: kEUR 8,005). Other current financial assets, which also include IPO proceeds invested without interest, decreased by kEUR -8,783 to kEUR 334 in 2018 (previous year: kEUR 9,117). This is chiefly attributable to the aforementioned investments, for which predominantly the company's own funds were also deployed on a temporary basis. Total current assets declined from kEUR 33,436 as of 31 December 2017 to kEUR 32,177 as of 31 December 2018. Total assets grew from kEUR 95,491 to kEUR 110,147 as of 31 December 2018.

The cash inflow from the IPO in the 2016 financial year led initially to an increase in liquid assets, which were invested on an interest-neutral basis as deposits with terms of between six and twelve months. These were gradually invested in accordance with the IPO plans.

Overall, borrowing capacity also improved significantly as a result of the stock market listing, so that the high cash outflows from growth were sufficiently financed with low-interest borrowings. This ongoing structuring of an appropriate financing structure from the point of view of the capital market was largely completed in 2018, but will be further optimized in 2019.

Investments

Capital expenditure focused on continued investments in the central production and administrative headquarters in Würzburg and the main production site in Kölldeda as well as the expansion of the container fleet for the global container rental business and establishing the thermal box fleet. A total of kEUR 26,851 gross was invested in property, plant and equipment, with property, plant and equipment thereby rising from kEUR 55,402 to kEUR 69,390 net after depreciation and other movements. The existing production capacities at the two plants in Würzburg and Kölldeda were in some cases exhausted due to increased demand in all target industries and to relocation-related shutdowns at peak times. For this reason, the planning and almost complete implementation of new capacities was almost completed in the 2018 reporting period. In this respect, the investments that have now been made will enable the company to expand further in the direction of a target figure of EUR 100 million of revenue. A total of kEUR 10,517 was invested in the container fleet (previous year: kEUR 11,099). An amount of kEUR 1,124 was invested in intangible assets the company itself has created (previous year: kEUR 499).

Equity and liabilities

kEUR	31.12.2018	31.12.2017
Equity		
Issued share capital	13,090	13,090
Treasury shares	-54	-54
Additional paid-in capital	46,158	46,158
Cumulative other comprehensive income	-39	-28
Retained earnings	-13,895	-6,174
Equity attributable to parent company owners	45,260	52,992
Non-controlling interests	-	-
Total equity	45,260	52,992
Non-current liabilities and provisions		
Provisions	79	39
Bank borrowings	24,732	11,146
Other financial liabilities	6,814	3,949
Other non-financial liabilities	9,310	8,438
Deferred tax liabilities	-	-
Total non-current liabilities and provisions	40,935	23,572
Current liabilities and provisions		
Provisions	62	38
Bank borrowings	9,400	2,958
Other financial liabilities	4,873	6,507
Contractual liabilities	19	-
Trade payables	4,594	5,244
Tax liabilities	79	15
Other non-financial liabilities	4,925	4,165
Total current liabilities and provisions	23,952	18,927
Total equity and liabilities	110,147	95,491

Compared with 31 December 2017, changes to the capital structure occurred as of 31 December 2018 due to debt-financed investments. As a consequence of the losses incurred for the year, consolidated equity reduced by kEUR 7,732 to kEUR 45,260, which corresponds to an equity ratio of 41% on the basis of total assets (31 December 2017: 56%).

Non-current bank borrowings increased from kEUR 11,146 to kEUR 24,732 as a result of new loans to finance land and investments in real estate in Würzburg, the production plant in Kölleda and machinery and equipment. The real estate loans were concluded with terms of 15 to 20 years and fixed interest conditions at the current low level. Current bank borrowings reported a marked rise from kEUR 2,958 to kEUR 9,400 reflecting greater utilization of overdraft lines.

Non-current other financial liabilities increased from kEUR 3,949 to kEUR 6,814 due to sale-and-finance leaseback financing for the container fleet. Non-current other non-financial liabilities also increased, by kEUR 872, from kEUR 8,438 to kEUR 9,310. Development banks disbursed kEUR 1,664 of funds to va-Q-tec in the reporting period for investments (previous year: kEUR 795). Current other non-financial liabilities rose from kEUR 4,165 to kEUR 4,925 as a consequence of the further appreciation of the special item for container profits.

Bank borrowings plus plant leasing of kEUR 42,186 comprised 38% of total equity and liabilities (previous year: kEUR 21,220; 22%). At the level of the UK reporting segment, further container-sale-and-leaseback transactions were concluded as part of expanding the container fleet. The total volume of finance leases increased by kEUR 938, from kEUR 7,117 in the 2017 year to kEUR 8,054 in the 2018 financial year. Current liabilities and provisions stood at kEUR 23,952 in the financial year under review, representing 22% of total equity and liabilities (previous year: kEUR 18,927, 20%). The Group's non-current liabilities amounted to kEUR 40,935, corresponding to 37% of total assets (previous year: kEUR 23,572; 25%). Despite inventory accumulation, trade payables reduced to kEUR 4,594, compared with kEUR 5,224 in the previous year.

Apart from this, the credit terms for new borrowings, particularly in finance leasing, were significantly improved as a result of the enhanced credit standing following the IPO.

The talks initiated with the syndicate under the multi-bank agreement at the end of the first half of the year with the aim of adjusting the terms and conditions and covenants to the requirements of a company in a strong investment phase and with initiatives in advance of growth, such as is the case with va-Q-tec, have since been successfully completed after the balance sheet date. As a consequence, new conditions have been negotiated according to which va-Q-tec will in future make its inventories available to the syndicate banks as collateral for the credit lines and commit itself to maintaining a minimum equity ratio of 30%.

Overall statement on business progress

Overall, the Management Board believes that substantial progress for the company's future was achieved in 2018, although revenue and earnings failed to meet expectations. The massive investments in the future realized over the past 24 months, the relocation to new production facilities in Würzburg and Köllda and the associated additional

expenditure and start-up costs had a significant impact on EBITDA in 2018. Increased use of external consulting services, e.g. in the IT area, as well as expenses in the course of international business expansion led to higher additional expenses for future business development. Strong demand in the Products business as well as the preproduction of orders ahead of the relocation of the production lines and related capacity utilization (peak utilization) also incurred higher expenses, such as in the temporary help labor area. The significant increase in the number of employees – indispensable to the future growth trend – also generated higher personal expenses. However, as most of the planned investments and initiatives as well as hiring have meanwhile been completed, economies of scale are anticipated as revenue grows further. Continued demand in the Products division (VIP sales) continued to drive overall revenue growth. In its Services business, the company serves a growth market. Fleet capacities were further expanded, and the company advanced its internationalization. However, operational issues led to a temporary decline in revenue in the course of the financial year under review. A significant revival in growth already occurred during the course of the year, and especially in the fourth quarter.

**EVEN THOUGH BUSINESS TRENDS
IN 2018 FELL SHORT OF OUR
EXPECTATIONS, THE OUTLOOK AT
THE END OF THE YEAR BRIGHTENED
CONSIDERABLY AND ALL OF OUR
MAJOR GROWTH INVESTMENTS
HAVE BEEN COMPLETED.**

- STEFAN DÖHMEN, CFO

Gross profit proved unsatisfactory given the current product mix with lower-margin Products revenues and the temporarily elevated network costs in the Services business. Overall, however, the Management Board continues to appraise the target markets of va-Q-tec as highly attractive, and regards the company as well positioned to leverage the growth opportunities on offer thanks to the investments in personnel and infrastructure it has already completed.

2.3 FORECAST

2.3.1 Outlook

The following forecasts for the trend in management metrics were made under the assumption of the macroeconomic trends for 2019 described in section 2.2.1. Moreover, they are also based on the expected positive growth rates in the market for VIPs and insulation materials overall. A high growth dynamic is expected in the market for thermal packaging and services, particularly in the high-performance thermal packaging segment. These assumptions are underpinned by estimates produced by market research institute IMARC and Lux Research, which already expect growth in the low double-digit percentage range (see 2.2.1 Macroeconomic environment and Group-specific conditions). Above and beyond this, va-Q-tec expects to benefit to an above-average extent from the megatrends of energy efficiency, regulation of cold chains (product safety) and globalization of value chains. Also taking into consideration the opportunities and risks entailed in operating activities as outlined in section 2.4.2, the company identifies growth levers in tapping new markets and application areas in terms of both products (e.g. last mile to the pharmacy, the utilization of rental containers for temperature-sensitive goods outside the pharmaceuticals industry, TempChain 4.0 applications) and geography (new and further developed country markets such as North America).

Overall statement

After revenue had grown very strongly on average by 25% per year in the past five years and moderately by 8% in 2018, va-Q-tec expects medium to strong overall revenue growth for the 2019 financial year compared to 2018 in its three reporting segments and its underlying business segments. Strong revenue growth is expected in the Services division in particular.

As far as earnings before interest, tax, depreciation and amortization (EBITDA) are concerned, the company expects strong year-on-year growth for the 2019 financial year due to operating economies of scale and a changed product mix with a growing proportion of higher-margin services. The elimination of relocation-related and other temporary burdens should also have a positive impact compared with 2018.

The equity ratio will remain almost constant at 40% in the 2019 financial year.

The number of employees will remain almost constant in 2019.

As a consequence, the Management Board of va-Q-tec AG expects above-average revenue growth compared with the target markets, accompanied by a return to significantly improved EBITDA profitability compared with 2018.

2.3.2 Forward-looking statements

This report includes forward-looking statements based on current assumptions and forecasts of the management of va-Q-tec AG. Such statements are subject to risks and uncertainties. These and other factors can lead the company's actual results, financial position, development, or performance to differ significantly from the estimates provided here. The company assumes no obligation of any kind to update such forward-looking statements and adjust them to future events or developments.



2.4 REPORT ON OPPORTUNITIES AND RISKS

2.4.1 Risk management and internal control system

Risk management va-Q-tec is based on three main aspects:

- a risk-aware corporate culture
- a formalized risk management system
- the internal control system

Anchoring risk awareness within the corporate culture

All successful business activity is connected with the conscious assumption of risk. It is crucial to the corporate governance of va-Q-tec that existing and newly added risks be handled in such a way to enable them to be managed actively, and incur as few losses as possible. Opportunities in a business sense should also be utilized to enhance the company's value for all stakeholders. va-Q-tec enjoys a high degree of "risk awareness", which is communicated openly and transparently. From the Management Board's perspective, risk awareness that is translated into practice is one of the most efficient instruments for handling risks. If employees are aware of risks and manage them professionally, the risk of losses being incurred because of risks being realized is diminished. Risks are disclosed and managed proactively and transparently in such an environment. The establishment and company-wide communication of compliance guidelines also fosters greater awareness of compliant behavior. A compliance management system is in place that defines a code of conduct for both internal and external business activity. The compliance officer appointed in this context records, processes and reports to the Supervisory Board and its Audit Committee on all relevant compliance cases.

Risk management system

Risk management at va-Q-tec refers to the systematic engaging with risks, understood as negative events whose occurrence can incur losses and/or unforeseen costs

within the company. To meet this requirement, internal and external risks for all segments and subsidiaries are systematically surveyed, measured, steered, managed and reported to the Management and Supervisory boards with the risk management system.

To supplement the existing internal and external control system, the Group management of va-Q-tec already implemented a further developed and formalized risk management system (RMS) in the 2016 financial year for this purpose. The RMS incorporates the experience of the past years in identifying risks, e.g. those risks described in the prospectus for the IPO in 2016. In addition, the findings on the risk inventory gained since 2017 when preparing the risk inventories are taken into account. At the meetings of the Management Board, the Audit Committee and the Supervisory Board, the developments/changes in existing risks and the emergence of new risks regularly form the subject of consultations. As in the previous year, the risk situation in the 2018 financial year was evaluated on the basis of two risk inventories as of the reporting date. In between, a regular exchange of information on the risk situation also occurred between those responsible for risk officers, risk managers, the Management Board and the Supervisory Board. Furthermore, the RMS was continuously further developed during the course of the 2018 financial year.

A new data protection concept was implemented, and a new IT security manager was appointed to improve the protection of critical company data. A legal department was also created for the Management Board in order to efficiently support the legal evaluation of business matters in-house. Moreover, the RMS was integrated into the overarching quality management system according to ISO, and now forms part of the ISO-based auditing process.

The aims of the risk management system at va-Q-tec are, as a matter of principle, to avoid, reduce and transfer risks, including through corresponding insurance cover, for example. Besides compliance with regulatory requirements, systematic risk management secures sustainable competitiveness long-term. Such risk management also aims to identify potential going concern risks at an early stage. Risk management at va-Q-tec is not only a security instrument but also a management instrument. Identified risks also offer new business opportunities and competitive advantages.

The RMS is based on a reporting process, a defined risk inventory and risk assessment during the course of the year. As part of the risk inventory, the respective decision-makers and experts within the specialist areas appraise all significant risks. Risks identified within the va-Q-tec Group are measured according to their potential loss, taking event probabilities into account. The risks identified as part of the risk analysis are categorized into risk classes according to their event probability and impact, by multiplying their respective effect by their respective event probability. The bandwidth of event probabilities and effects starts at "very low" and ends at "very high". Risks can thereby be differentiated and prioritized according to the resultant expected risk value. The specialist areas are required to identify and report new risks as part of risk appraisal during the course of the year. The information that is aggregated in this manner is summarized in risk files that are addressed and reported to the Management Board of the va-Q-tec Group. All risks – newly added as well as existing – are also to be monitored and reported continuously. Requisite countermeasures are launched quickly, and monitored subsequently.

New risks and significantly changed risks also form fixed agenda items at all regular management meetings, at each Management Board meeting and at each Supervisory Board meeting. They are discussed as part of results briefings between the Management Board of the va-Q-tec Group and the managers of the specialist areas. A review is also conducted as to whether risk minimizing measures that have already been taken are sufficient, or whether further steps are to be initiated (such as in terms

of ad hoc capital market communications). The Group risk management system enables the company's management to identify significant risks at an early stage, to initiate countermeasures and to monitor their implementation. The auditor also examines the risk early warning system to ensure it is suited to the early identification of going concern risks.

Accounting-related internal control system

va-Q-tec operates a clear organisational, corporate, as well as control and supervision structure. Planning, reporting, controlling and early warning systems and processes exist across the company for the comprehensive analysis and management of earnings-relevant risk factors and going concern risks. The functions in all areas of the (Group) financial accounting process (e.g. financial accounting, bookkeeping and controlling) are clearly allocated. To date, va-Q-tec AG has refrained from operating a separate internal audit function due to the company's somewhat small dimensions and limited complexity.

Use is mainly made of standard software (Navision) as far as installed financial systems are concerned. Recourse is made to standard consolidation software to prepare separate and consolidated financial statements. Here, existing structures have to be adjusted constantly to reflect the company's growth and changing conditions, such as capital market requirements.

The IFRS consolidated financial statements are prepared based on a standard reporting format for submission by all Group companies to the central administration in Würzburg. The validation processes applied there and additional plausibility checks ensure that the separate financial statements of the subsidiaries and of va-Q-tec AG are complete and correct.

The internal control and risk management system relating to the financial accounting process ensures that business transactions are recorded, processed and appraised correctly from a financial accounting standpoint, before being transferred to external financial reporting.

Payment transactions are performed electronically with embedded control mechanisms (dual control principle with a selected group of individuals). External service providers implement payroll transactions.

The organisational, corporate as well as controlling and supervisory structure determines the framework of the ICS. Clear statutory and in-house regulations and guidelines ensure a standard and proper financial accounting process. Check mechanisms within the areas directly involved in the financial accounting process, review by the internal control function, backup from the independent auditors and early risk identification by the risk management function should ensure that (Group) financial accounting is free of error.

2.4.2 Operating risks

va-Q-tec measures risks based on their estimated event probabilities and potential effects on the company's financial position and performance, as well as reputation. Measurement of risk loss levels and event probabilities leads to the following examples of key risk indicators.

Event probability	Loss level in EUR	Risk indicator
very low	0 - 50,000	1
low	50,000 - 500,000	4
medium	500,000 - 1,000,000	9
high	1,000,000 - 5,000,000	16
very high	> 5,000,000	25

The Management Board applies the following scheme to measure the characteristic of a risk based on its risk indicator:

Risk indicators	Risk characteristic
0 - 5	Low
5 - 15	Medium
> 15	High

Overall, the following section presents risks after instituting countermeasures.

Risks in the value chain

As a manufacturing company, va-Q-tec has to make recourse to suppliers for intermediate products. va-Q-tec procures the main raw materials, consumables and intermediate products from a limited number of key suppliers. For some materials, only a few purchasing sources are available due to the specific characteristics. The purchasing strategy of va-Q-tec consequently aims to reduce dependency on individual or a few suppliers by qualifying and selecting new suppliers ("dual" or "multiple" sourcing). As in previous years, in 2018 the company continued to newly qualify and select second- and third-tier suppliers for intermediate products and materials. The company also intentionally includes international suppliers in its selection to avoid regional dependency. A medium risk exists for va-Q-tec AG overall due to its limited number of suppliers.

Production stoppages and operational interruptions represent a further risk. The company depends on the continuous operation of its production systems to ensure it can meet delivery requirements, especially to major industrial customers whose value chains are closely intermeshed with that of va-Q-tec. va-Q-tec produces at two geographically separate sites in Würzburg and Kölleda. Stoppage at one site has no significant effects on the other site, where production can continue. The individual production systems, where possible and economically feasible, are also decoupled from each other through technical measures, so the stoppage of an individual system does not restrict the operation of other plants.

Along with the outage of existing systems, a risk can also arise in the insufficient overall capacity of the production systems. Along with productivity and efficiency improvements to the existing systems, the company's strong growth can also require early and forward-looking investment in capacity expansions, as the requisite plants sometimes require long delivery times. The company could nevertheless be surprised by sudden market developments, potentially being unable to satisfy all customer orders on the customers' requested dates.

Through regular ad hoc reporting on new order trends between the sales areas and the Management Board, the company endeavors to identify such developments at an early stage and counteract them with appropriate measures. For example, these can temporarily consist of higher levels of security stocks, additional working shifts or the utilization of less appropriate plant for production, in order to bridge the time gap until additional capacities are commissioned. The Management Board also gauges the risk of long-lasting production outage from the aforementioned reasons as low, and also appraises the risk of insufficient capacity as low following the almost completed growth investments.

The rental services ("Serviced Rental") are particularly dependent on external logistics providers, which are not only responsible for operative processes at the network stations – for cleaning, warehousing and cooling processes, in other words – but also for transporting the preconditioned containers and boxes to the end-customers. This can lead to interruptions to operations, loss compensation claims and damage to reputation. Auditing and close-meshed controlling by the company's own logistics specialists serve to assure the quality of "Serviced Rental" for the pharmaceuticals industry globally. For this reason, the Management Board gauges this risk as medium.

Personnel risks

The company's operating activities and success depend on qualified managerial and key personnel. The company's very well-trained personnel has acquired specific knowledge, skills and commercial contacts, in part through working for the company for many years. va-Q-tec counters the risk of losing such staff not only through measures aimed at employee loyalty, but also through diversifying the knowledge base through the workforce: key staff departures at va-Q-tec are avoided through employee development, diversification of the knowledge base within the company, and compensation in line with the market. Employee motivation and satisfaction is also boosted through performance-based compensation components, regular further training and the good corporate culture with the possibility to help shape disruptive business models. The risks to which va-Q-tec is exposed due to a change of key staff are appraised as medium level risks.

Market and competition risks

The Group in its business activities has a strong focus on major industrial customers. This initially leads to a greater level of customer concentration. The company is constantly reducing the resultant risk through its growing number of customers, and diversification. Further protection exists thanks to a high level of customer loyalty, especially in the healthcare industry. The Group generally endeavors to establish and maintain a close, trusting and sustainable business relationship with all partners, employees and customers, and consequently gauges such risk as medium, and as a risk that can be reduced further.

As a young, fast-growing company, va-Q-tec might potentially be unable to effectively advance and shape its growth. The Group has almost completed a phase of significant investment in personnel, sales activities, rental fleets, infrastructure and research & development. To this extent, were actual growth to prove lower than planned, the risk exists of a negative effect on operating results. As a matter of principle, the Management Board decides on such future investments with due objectivity and sense of proportion, and always based on specific expectations about market trends, as well as taking into consideration the ability to finance such investments. Insufficiently researched and/or excessively early investments are avoided as a consequence.

At the same time, significantly higher actual growth than planned generates the risk of a negative effect on the customer relationship due to non-compliance with delivery deadlines, delivery bottlenecks etc., and thereby also on the operating results. Here, too, sound judgement and the early identification of market developments through regular coordination with the sales areas constitute an important instrument to reduce risk, thereby identifying in good time the requirement for capacity expansions, with early decisions being made by the Management and Supervisory boards concerning the necessary investments in production plants and buildings. The Management Board assesses the remaining risk as medium.

An intensification of the competitive environment also represents a significant risk. This can generate more pressure on prices and margins.

The company protects itself from such risk through two strategic levers, namely cost optimization measures and innovative products and services. Cost optimization includes, for example, increasingly automated production and the particularly efficient purchasing of intermediate

products, with selective backwards integration to upstream value chain steps. The innovation topic includes research and development activities, which have already led to commercially successful, high-quality and particularly differentiated products since the company was formed. The company's range of products and services is distinguished from that of its competitors in many aspects: examples include the unique possibility to test the quality of the insulation "in situ", or the production of VIPs with sections extracted and in three-dimensional form. Overall, the Group gauges the risk due to newly emerging competitors or a more aggressive competitive situation as medium.

Brexit

A cross-departmental and cross-border Brexit team was formed in order to prepare va-Q-tec for various UK withdrawal scenarios and to be able to react immediately to political decisions. Risks were identified together with the operating units in va-Q-tec UK, the other Group companies, customers and logistics partners, particularly in the event of a hard Brexit without a withdrawal agreement and transition phase, and measures were developed to avoid disruptions in the supply chain. This includes, for example, technical enhancements in our ERP systems in order to be able to respond to extended customs requirements on the system side. The imminent "Brexit" will entail risks for our business, for example through a possible weakening of the economy. Supply chains may also shift and medicines or their preliminary products may no longer be transported to the UK but rather to France, Germany and the Netherlands. If the drugs or preliminary products originate in the USA, they still have to be transported across the Atlantic. va-Q-tec's TempChain service centers on the European mainland provide opportunities to deal with such changed logistics chains. Generally, less revenue is calculated in pounds sterling than costs are incurred in pounds sterling. If the pound depreciates against the euro as a result of the Brexit, opportunities for va-Q-tec will arise as a consequence. Possible tax benefits could also create opportunities for va-Q-tec. Overall, va-Q-tec consequently considers the Brexit-related risk to be low.

Cyclical target markets

Especially the target sectors of Appliances & Food, Technics & Industry and Building are dependent on the economic situation. The Management Board gauges this risk as low, as the underlying drivers of va-Q-tec's business (increasing regulation and energy efficiency) are less susceptible to economic cycles.

Financial risks

The central finance department of va-Q-tec utilizes revolving liquidity plans to monitor liquidity risk. The Group was solvent at all times. Interest risks deriving from existing long-term lending facilities are partly hedged through interest-rate swaps. The Group is exposed to interest-rate risk on its short-term overdrafts, although such risk is currently unlikely to materialize. Currency risks are also limited due to the fact that most invoicing occurs in euros (the company's functional currency) as well as by way of the company's internationalization. Overall, the Group consequently gauges risks in its financial area as low.

Since the IPO, the company has invested more than EUR 70 million in its rental fleets of containers and boxes, further product development, real estate and machinery plant for capacity expansion, the internationalization of the business and general business development.

Major growth investments, particularly in real estate, plant and machinery, were initially financed from the company's own funds to save interest and were financed until the end of 2018 by means of long-term bank loans and public subsidies for Würzburg and Kölleda, in order to reduce the amount of capital tied up and to be able to deploy the funds released for the company's further development. In this respect, long-term debt financing was implemented downstream. According to the Management Board's current assessment, however, the now planned slowdown in the pace of investment exerts only an insignificant effect on the targeted growth, as most of the planned business expansion investments have already been realized and completed since the IPO.

The talks initiated with the syndicate under the multi-bank agreement at the end of the first half of the year with the aim of adjusting the terms and conditions and covenants to the requirements of a company in a strong investment phase and with initiatives in advance of growth, such as is the case with va-Q-tec, have since been successfully completed after the balance sheet date. As a consequence, new conditions have been negotiated according to which va-Q-tec will in future make its inventories available to the syndicate banks as collateral for the credit lines and commit itself to maintaining a minimum equity ratio of 30%.

Liquidity was secured and comfortable at over EUR 16.7 million at all times in the 2018 financial year and at the end of the year. Furthermore, additional liquidity of approximately EUR 6 million will be generated by the ongoing reduction of high inventories and further financing measures, which have meanwhile been extended further. For this reason, the Management Board gauges liquidity risk as low at present.

In an overall view of risks, va-Q-tec is predominantly exposed to general business risks (performance risks) and financial risks. The Management Board does not identify any individual or aggregated risks as going concern risks. The company is positioned both strategically and financially to leverage the business opportunities on offer to it.

2.4.3 Future development opportunities

Increasing regulation

Increasing regulation in cold chain logistics for pharmaceutical products is enhancing the requirements made of the reliability of thermal packaging and consequently demand for high-performance thermal packaging. In terms of their conformity with regulatory requirements, the passive packaging solutions of va-Q-tec offer significant benefits compared with conventional solutions based on styrofoam and ice. va-Q-tec possesses extensive knowledge concerning regulatory compliance in the respective countries and regions. Laborious and expensive qualification measures at healthcare industry customers – along with corresponding quality assurance and process documentation – deliver the requisite expertise for the successful implementation of packaging solutions for customers. Only a few companies are currently capable of successfully combining the necessary characteristics of thermal packaging within a complex, reliable and at the same time user-friendly offering. With its technology platform, va-Q-tec is one of the few companies worldwide to meet the high requirements. Increasingly complex regulation makes it necessary for a company to constantly further develop itself and research new technologies. In such an environment, high barriers to entering the market for thermal packaging are beneficial for va-Q-tec.

In other target sectors, too, demand for VIPs is increasing due to regulation: customers in the "Technics & Industry" target sector currently face a change in the regulatory

environment in important core markets – like many household devices, heating system boilers have since recently been subject to the European Union's Ecodesign Directive – in other words, their energy efficiency is made transparent to the end-consumer through a labelling system consisting of energy efficiency classes. Moreover, equipment with high energy consumption and a low energy efficiency class is excluded from the European domestic market. Customers of va-Q-tec currently use VIPs mainly to position premium boilers in the highest efficiency classes. In future, and with more stringent regulation, we believe VIP-insulated boilers from the premium segment will also penetrate the mass market.

New markets

Since it was founded, va-Q-tec has worked on developing new products and services that open up additional markets and application possibilities for vacuum insulation. Along with basic research and product predevelopment – such as VIPs for entirely new temperature ranges – examples in this context include food logistics and the mobility area.

COMPREHENSIVE PRACTICAL KNOWLEDGE, INNOVATIVE DEVELOPMENT SPIRIT, AND INCREASING GOVERNMENT REGULATIONS OPEN FUTURE MARKETS SUCH AS TEMPCHAIN DOOR-TO-DOOR TRANSPORTATION AND MOBILITY APPLICATIONS

To date, both existing thermal packaging and thermal packaging in development, as well as the "service rental" of va-Q-tec, are designed for deployment almost exclusively in the healthcare industry. A trend to increasingly temperature-sensitive goods and manufacturing processes is now identifiable in many industries, however. As a result, growth opportunities arise from the development of new application areas with va-Q-tec technologies, such as food transport and the opto-electronic industry.

In the e-commerce area, major international providers and start-ups are currently implementing new business models to deliver food products purchased online directly to end-consumers. We believe the transportation of easily perishable food to the end-customer will be regulated even more stringently in the future. The high-performance thermal packaging of va-Q-tec are very well suited to such transports.

Strong growth opportunities are also on offer to va-Q-tec in the target sector of mobility: in the future, thermal management in vehicles with both conventional and electric engines will become increasingly significant. CO₂ can be saved in conventional vehicles through insulation measures in vehicle cabins and through storing heat energy from the cooling cycle. In vehicles with electric engines, range depends on the optimal working temperature of the vehicle battery as well as the electricity consumed by peripheral functions such as heating and interior air conditioning. In the opinion of va-Q-tec, OEMs can extend the related vehicle range by deploying vacuum insulation.

In the building sector, the opportunity arises to benefit from the currently outstanding situation in the construction cycle, along with ever more stringent energy efficiency standards for new buildings and renovations. va-Q-tec VIPs could be deployed here to enhance energy efficiency.

Along with the aforementioned market opportunities in terms of products and services, the Management Board also identifies considerable future growth opportunities in geographic expansion. The internationalization of business activities and the company's entry into new global markets open up major sales opportunities for the Group. Equally, its international presence can be exploited to tap new sources of raw materials, consumables and intermediate products, and for efficient purchasing.

Innovative services and offerings

In the future, the innovative combination of hardware and IT solutions – referred to as TempChain 4.0 – will become ever more important. Such new services and offerings, consisting of intelligent boxes, fleet data management and predictive analysis in the area of temperature-controlled transports can be offered to customers with a premium.

By way of summary, the Management Board is of the opinion that the opportunities pertaining to the development and growth of the business outweigh the aforementioned risks.

2.4.4 Risk reporting on the deployment of financial instruments

The Group is exposed to various financial risks due to its operating activities. The Group's risk management aims to minimize the potential negative effects on the Group's financial position. Financial instruments are deployed to only a limited extent at va-Q-tec.

Currency risk within the Group was medium in 2018. In the German reporting segment, almost 100% of sales and approximately 96% of purchases were processed in euros. In the UK reporting segment, some sales revenues were generated in US dollars. The costs attributable to such revenues are largely also incurred in US dollars. Risk-reducing natural hedging consequently exists for the US dollar. The Management Board gauges the remaining currency risk relating to the US dollar as medium.

Interest-rate hedging instruments continue to exist to hedge interest payments on long-term loans at a standard market interest rate level. None of these hedges is recognized as a hedge in the meaning of IFRS 9. The real estate loans taken out in 2018 were largely financed on a long-term basis with fixed interest rates over the term on the basis of the current, low interest level. No interest-rate hedge was arranged for existing variable interest overdrafts.

No separate financial instruments are held to hedge against default on receivables. The risk of defaults on receivables is relatively low due to the high credit standing of the customer base. Reverse factoring is currently only implemented for a small number of customers with long receivables terms (e.g. in Italy) as is customary in the market.

In 2018, the financial investments reported under other financial assets in the consolidated financial statements exclusively comprise euro-denominated deposits with a term of up to twelve months held at German banks belonging to a German deposit guarantee fund.

Above and beyond the financial instruments described here, the Group holds no further financial instruments that are important for appraising the Group's position or prospective development. Please refer to the sections on "Financial instruments" and "Risk management" in sections 4.4 and 4.6 of the notes to the consolidated financial statements for more details.

2.5 COMPENSATION REPORT

In accordance with its corporate government principles, va-Q-tec aims for performance-based and sustainable compensation for the work of the Management and Supervisory boards. Compensation comprises both basic and variable components.

Management Board

In accordance with the requirements of the German Stock Corporation Act (AktG), and the recommendations of the German Corporate Governance Code (DCGK), the compensation of the Management Board members consists of both fixed and variable elements. Variable compensation comprises a cash component paid as an annual bonus. All compensation elements are appropriate both individually and in their entirety. The Supervisory Board concerns itself intensively with the appropriateness and standard nature of Management Board compensation, taking into consideration all criteria set out in Section 87 of the German Stock Corporation Act (AktG) and Section 4.2.2 Clauses 4 and 5 of the German Corporate Governance Code (DCGK), such as the individual Management Board members' tasks, personal performance as well as the financial situation, performance and future prospects of va-Q-tec AG.

In March 2017, external compensation experts confirmed to the Supervisory Board the fundamental appropriateness of the Management Board compensation. The fixed compensation corresponds to the annual basic salary; in addition, both Management Board members made use of a company car. D&O insurance is in place for all va-Q-tec Group boards. The Management Board members themselves bear the cost of the 10% deductible.

In the past 2018 financial year, a new remuneration system was defined for the members of the Management Board, in which the long-term component of bonuses is to be anchored and the German Corporate Governance Code is to be taken into account to an even greater extent. This compensation scheme is valid for all financial years from 1 January 2018. The current Management Board contracts were adjusted accordingly as of the 2018 financial year. The new compensation scheme was also examined by external experts, and consequently complies with the requirements of the German Corporate Governance Codex. The Supervisory Board intends to submit the main features of the remuneration system for the Management Board to this year's Annual General Meeting to be voted upon. In developing the new system, the Supervisory Board took as its starting point the basic features of the previous remuneration system, which was still considered to be reasonable, and aligned it even

more strongly to sustainable corporate development. Consequently, the annual variable remuneration is now divided into a short-term and a long-term variable remuneration component. For both, a bonus target amount is defined for 100% target achievement. Both components are either limited on the upside or can reduce to zero. The short-term variable compensation is based on three key figures, each of which is weighted 1/3: revenue, Group EBITDA and return on capital employed (ROCE). The Supervisory Board sets targets for each of these parameters, with the entry hurdle for receiving any short-term variable compensation at all being 80% of the respective target values. In the area of target achievement between 80% and 115%, certain factors are determined for the calculation of the bonus, whereby the maximum factor is always 1.3 and the respective remuneration component is thereby capped. The exception is the EBITDA component of short-term variable compensation, where the factor can increase to 1.5 under certain circumstances. The long-term variable remuneration is based on the performance of the company's share price between two comparison periods. Here, too, an entry hurdle applies in such a way that at least a positive price performance of 5% must have occurred. In addition, a cap applies if the share price performance exceeds 15%. Of any gross compensation received as long-term variable compensation, the Management Board member must invest at least 50% in the company's shares, which are subject to a four-year lock-up period. Remuneration amounts above the cap are not paid out but credited – again up to a certain maximum amount – to a virtual sustainability bonus account of the Management Board member and can be used within certain limits to offset stock market price increases in relevant comparison periods which are below 10% but above 5%. Portions of the long-term variable compensation resulting from such compensation are to be invested exclusively in shares of the company that are subject to the aforementioned vesting period.

The Supervisory Board approves the annual Group targets to measure the variable cash component. It also sets the targets.

The Management Board members' contracts include no separate payments for the instance of a termination of their contracts due to a change of control.

The total compensation of the Management Board amounted to kEUR 568 in the 2018 reporting year (previous year: kEUR 740). The basic compensation amounted to kEUR 440 (previous year: kEUR 593); this also includes payments for benefits in kind such as a company car. Variable cash compensation stood at a total of kEUR 112 (previous year: kEUR 126). Defined contribution pension commitments have existed for the Management Board members since 2014. To this end, kEUR 15 (previous year: kEUR 21) was paid into an external, congruently reinsured pension fund in the year under review. For this reason, no provisions for pensions have been formed on the balance sheet. Accordingly, fixed compensation including benefits in kind and pension fund contributions accounts for 80% of total compensation (previous year: 83%).

No loans or advances were granted to members of the Management Board.

kEUR	Management Board compensation 2018	Management Board compensation 2017
Fixed compensation	407	550
Ancillary payments	34	43
Short-term variable compensation	112	126
Defined contribution plans	15	21
Compensation, total	568	740

In accordance with the AGM resolution dated 31 May 2016, va-Q-tec discloses the total compensation of the Management Board, but not the individual shares for the individual members. This practice complies with Section 314 (1) No. 6, 286 (5) of the German Commercial Code (HGB).

Supervisory Board

The AGM sets Supervisory Board compensation. The compensation of the Supervisory Board of va-Q-tec AG is regulated in Section 14 of the bylaws of va-Q-tec AG.

With effect as of 1 July 2017, the compensation of the members of the Supervisory Board was re-regulated by way of AGM resolution of 19 June 2017, in order to ensure that the compensation complies with the recommendations of the German Corporate Governance Code: Each member of the Supervisory Board who is not the Supervisory Board Chair or Deputy Supervisory Board Chair receives monthly fixed compensation of EUR 1,200 ("fixed compensation"). The Supervisory Board Chair received twice the fixed compensation and the Deputy Supervisory Board Chair receives 1.5 times this amount. To the extent that he or she is not also the Supervisory Board Chair or Deputy Supervisory Board Chair, the Audit Committee Chair receives 1.5 times the fixed compensation. To the extent that he or she is not also the Supervisory Board Chair or Deputy Supervisory Board Chair, the chair of a Supervisory Board committee that is not the Audit Committee receives 1.25 times the fixed compensation. Each member of the Supervisory Board who is also a member of the committee or of several committees of the Supervisory Board receives a meeting fee equivalent EUR 1,500 per committee meeting, albeit to a maximum of six committee meetings per financial year. If a member of the Supervisory Board is the chair of several Supervisory Board committees, he or she receives only the compensation for one committee, and specifically for the committee where the highest compensation is paid to the Supervisory Board member.

The Supervisory Board received compensation of kEUR 157 for the 2018 reporting year (previous year: kEUR 159). This total includes the reimbursement of the outlays incurred by each Supervisory Board member as well as the VAT incurred on his or her compensation and reimbursement of outlays. The company bore the cost of the premium for the existing D&O insurance concluded for the Supervisory Board members in the 2018 financial year. By AGM resolution of 19 June 2017, a deductible for the Supervisory Board members to be borne personally in relation to the D&O insurance was implemented in an amount of kEUR 100 for each member. The Supervisory Board members themselves bear the cost of the 10% deductible. Consultancy and other services in an amount of kEUR 31 (previous year: kEUR 27) were also compensated. These were rendered especially as part of real estate purchasing and renovations, as well as in connection with the financing measures of va-Q-tec AG.

Financial year 2018

kEUR	Compensation	Expenses	Consulting
Dr. Gerald Hommel	36	4	-
Winfried Klar	31	4	24
Uwe Andreas Krämer	14	-	-
Dr. Eberhard Kroth	20	2	7
Uwe Lamann	26	2	-
Dr. Barbara Ooms-Gnauck	16	2	-
Total	143	14	31

Financial year 2017

kEUR	Compensation	Expenses	Consulting
Dr. Gerald Hommel	33	3	-
Winfried Klar	27	9	14
Uwe Andreas Krämer	14	-	-
Dr. Eberhard Kroth	20	1	13
Uwe Lamann	21	2	-
Dr. Barbara Ooms-Gnauck	22	3	-
Total	137	16	27

2.6 TAKEOVER LAW DISCLOSURES AND NOTES PURSUANT TO SECTION 315A HGB

The following section presents the disclosures as of 31 December 2018 pursuant to Article 9 (1) lit. c) (ii) of the Council Regulation (EC) No. 2157/2001 on the Statute for a European company (SE) (SE-VO), Section 22 (6) of the Act to Implement Council Regulation (EC) No. 2157/2001 on the Statute for a European company (SE) (SEAG) in combination with Section 289a, Section 315a (1) of the German Commercial Code (HGB). Matters relating to

Section 289a (1), Section 315a (1) HGB, which are not fulfilled at va-Q-tec AG, are not related. The following subsection provides an insight into the takeover law relationships as of the 31 December 2018 balance sheet date, and explains them in greater detail.

2.6.1 Composition of the subscribed share capital

The share capital of va-Q-tec AG amounts to EUR 13,089,502.00, and is divided into 13,089,502 ordinary registered shares. The share capital is fully paid in. The shares carry the same rights and obligations. Each share grants one vote at the general meeting of shareholders. Exceptions to this include shares the company itself holds (treasury shares), from which no rights accrue to va-Q-tec AG, such as the right to vote at the general meeting of shareholders. As of the balance sheet date, va-Q-tec AG held 13,566 treasury shares (previous year: 13,566). For information about changes in the treasury share position, please refer to the notes to the consolidated financial statements in this annual report.

2.6.2 Restrictions affecting voting rights or the transfer of shares

Above and beyond the time-delimited lock-up regulations for the Management Board, which were agreed as part of the IPO, the Management Board is not aware of any restrictions affecting voting rights all the transfer of shares.

2.6.3 Interests in the share capital exceeding 10% of the voting rights

Pursuant to the German Securities Trading Act (WpHG), all investors reaching, exceeding or falling short of voting rights thresholds pursuant to Section 21 WpHG through purchase, sale or in another manner are required to report such transactions to the respective company and to the German Federal Financial Supervisory Authority (BaFin). To this extent, the Management Board of va-Q-tec AG is aware of the following individuals and companies whose interests exceed 10% of the voting rights:

Name	Country	No. of shares	Interest in the share capital
Dr. Joachim Kuhn	DE	1,978,667	15.12%
Dr. Roland Caps	DE	1,581,433	12.08%
TOTAL		3,560,100	27.20%

Rules concerning the appointment and recall from office of Management Board members

Pursuant to Section 84 of the German Stock Corporation Act (AktG) and the bylaws of va-Q-tec AG, the Supervisory Board appoints the members of the Management Board. Pursuant to the company's bylaws, the Management Board consists of one or several individuals. The Supervisory Board determines the number of Management Board members. If the Management Board consists of several members, Management Board resolutions are passed with a simple voting majority. If the Supervisory Board has appointed a Management Board Chair and if the Management Board consists of at least three members the vote of the Management Board Chair is decisive given an equal number of votes on a resolution.

Rules concerning bylaw amendments

Amendments to the bylaws require an AGM resolution. AGM resolutions require a simple voting majority unless a greater majority is imperative by law.

Management Board authorizations relating to the issuing and repurchase of shares

va-Q-tec AG has both approved share capital and contingent share capital as follows:

Approved share capital

Based on an AGM resolution of 31 May 2016, the Management Board is authorized to increase the share capital, with Supervisory Board assent, once or on several occasions until 30 May 2021 against cash and/or non-cash capital contributions by a total of up to EUR 4,278,187, whereby shareholders' subscription rights can be excluded.

Contingent capital

Pursuant to Section 6.5 of the company's bylaws, the share capital is conditionally increased by EUR 1,000,000 through issuing up to 1,000,000 new ordinary registered shares (Contingent Capital 2016). The Contingent Capital 2016 serves exclusively to grant shares on the exercise of conversion and option rights.

Significant agreements in the case of a change of control due to a takeover offer and compensation agreements in the case of a takeover offer

No significant agreements on the part of the company exist that are subject to a change of control following a takeover offer.

2.7 CORPORATE GOVERNANCE STATEMENT

The company has published the corporate governance statement pursuant to Sections 289f and 315d of the German Commercial Code (HGB), including the statement relating to the German Corporate Governance Code pursuant to Section 161 of the German Stock Corporation Act (AktG), on its website at www.va-Q-tec.com within the Investor Relations area, under the link <https://ir.va-q-tec.com/websites/vaqtec/German/530/erklarungen-und-dokumente.html>.





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CONSOLIDATED FINANCIAL STATEMENTS AND NOTES

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3 CONSOLIDATED FINANCIAL STATEMENTS OF VA-Q-TEC AG FOR THE 2018 FINANCIAL YEAR

CONSOLIDATED INCOME STATEMENT

kEUR	Notes	2018	2017
Revenues	4.1.1	50,708	46,926
Change in inventories		1,288	671
Work performed by the company and capitalised	4.1.2	5,620	6,702
Other operating income	4.1.3	3,748	3,148
Total Income		61,364	57,447
Cost of materials and services	4.1.4	-25,722	-24,676
Gross profit		35,642	32,771
Personnel expenses	4.1.5	-20,403	-15,616
Other operating expenses	4.1.6	-12,212	-9,945
EBITDA		3,027	7,210
Depreciation, amortization and impairment losses	4.1.7	-9,864	-7,528
Earnings before interest and tax (EBIT)		-6,837	-318
Result from equity accounted investments	4.1.8	-110	-79
Finance Income		31	387
Finance expenses		-859	-900
Net financial result	4.1.9	-828	-513
Earnings before tax (EBT)		-7,775	-910
Income tax	4.1.10	47	52
Net income		-7,728	-858
Consolidated net income attributable to owners of va-Q-tec AG		-7,728	-858
Earnings per share - basic/ diluted in EUR	4.1.11	-0.59	-0.07

CONSOLIDATED STATEMENT OF COMPEHENSIVE INCOME

kEUR	Notes	2018	2017
Net Income		-7,728	-858
Consolidated other comprehensive income			
Currency translation differences	4.2.2.1	-11	6
Total other comprehensive income that will be reclassified to profit or loss		-11	6
Consolidated total comprehensive income		-7,739	-852
Consolidated total comprehensive income attributable to owners of va-Q-tec AG		-7,739	-852

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

Assets

kEUR	Notes	31/12/2018	31/12/2017
Non-current assets			
Intangible assets	4.2.1.1	2,437	885
Property, plant and equipment	4.2.1.2	69,390	55,402
Investment property	4.2.1.3	1,614	1,614
Contract assets	4.2.1.9	157	-
Equity accounted interests	4.2.1.4	580	357
Financial assets	4.2.1.5	184	283
Other non-financial assets	4.2.1.6	647	634
Deferred tax assets	4.1.10	2,961	2,880
Total non-current assets		77,970	62,055
Current assets			
Inventories	4.2.1.7	10,924	8,942
Trade receivables	4.2.1.8	7,557	8,005
Other financial assets - of which deposits (6 - 12 months) : 0 (previous year: 9,000)	4.2.1.5	334	9,117
Current tax assets		135	67
Other non-financial assets	4.2.1.6	1,073	2,104
Cash and cash equivalents	4.2.1.10	12,154	5,201
Total current assets		32,177	33,436
Total assets		110,147	95,491

Equity and liabilities

kEUR	Notes	31/12/2018	31/12/2017
Equity	4.2.2.1		
Issued share capital		13,090	13,090
Treasury shares		-54	-54
Additional paid-in capital		46,158	46,158
Consolidated total other comprehensive income		-39	-28
Retained earnings		-13,895	-6,174
Total equity		45,260	52,992
Non-current liabilities			
Provisions	4.2.2.2	79	39
Bank borrowings	4.2.2.3	24,732	11,146
Other financial liabilities	4.2.2.4	6,814	3,949
Other non-financial liabilities	4.2.2.5	9,310	8,438
Total non-current liabilities		40,935	23,572
Current liabilities			
Provisions	4.2.2.2	62	38
Bank borrowings	4.2.2.3	9,400	2,958
Other financial liabilities	4.2.2.4	4,873	6,507
Liabilities from contracts with customers	4.2.2.7	19	-
Trade payables	4.2.2.6	4,594	5,244
Tax liabilities		79	15
Other non-financial liabilities	4.2.2.5	4,925	4,165
Total current liabilities		23,952	18,927
Total Equity and liabilities		110,147	95,491

CONSOLIDATED STATEMENT OF CASH FLOW

kEUR	2018	2017
Cash flow from operating activities		
Net income	-7,728	-858
Current income taxes recognised income statement	52	-7
Income taxes paid	-	-
Net finance costs recognised income statement	828	513
Interest received	2	1
Interest paid	-819	-1,387
Depreciation on contract assets	42	-
Non-cash losses from equity accounted investments	110	79
Depreciation, amortisation and impairment losses	9,864	7,528
Gain/loss from disposal of non-current assets	-370	-418
Change in other assets	269	-1,578
Change in other liabilities	-174	1,649
Change in provisions	65	23
Other non-cash expenses or income	-2,560	-2,355
Cash flow from operating activities before working capital changes	-419	3,190
Change in inventories	-2,384	-3,147
Change in trade receivables	427	-862
Change in trade payables	-1,277	2,289
Net cash flow from operating activities	-3,653	1,470
Cash flow from investing activities		
Payments for investment in intangible assets	-1,391	-581
Proceeds from disposal of property, plant and equipment	661	921
Payments for investments in property, plant and equipment	-19,789	-22,439
Proceeds from the release from of short-term deposits	9,000	21,000
Payments for investments in contract assets	-124	-
Payments for acquisition of interests in associates	-322	-
Net cash flow from investing activities	-11,965	-1,099

kEUR	2018	2017
Cash flow from financing activities		
Payments to purchase treasury shares	-	-92
Proceeds from bank loans	26,994	5,411
Repayments of bank loans	-6,971	-5,060
Proceeds from sale-and-finance-leaseback transactions	7,887	6,726
Proceeds from government grants	1,664	795
Payments for finance leases liabilities	-6,950	-7,486
Net cash flow from financing activities	22,624	294
Change in cash and cash equivalents before exchange rate effects	7,006	665
Effect of exchange rate changes on cash and cash equivalents	-53	-64
Net change in cash and cash equivalents	6,953	601
Cash and cash equivalents at start of period	5,201	4,600
Cash and cash equivalents at end of period	12,154	5,201

For more information please see note 4.3 in the notes to the consolidated financial statements.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

kEUR	Issued share capital	Treasury shares	Additional paid-in capital
01/01/2017	13,090	-471	46,666
Net income	-	-	-
Consolidated other comprehensive income	-	-	-
Consolidated total comprehensive income	-	-	-
Purchase of treasury shares	-	-92	-
Issue of treasury shares	-	509	-509
31/12/2017	13,090	-54	46,158
01/01/2018 before applying new accounting standards	13,090	-54	46,158
Effects from accounting standards	-	-	-
01/01/2018 after application of new accounting standards	13,090	-54	46,158
Net income	-	-	-
Consolidated other comprehensive income	-	-	-
Consolidated total comprehensive income	-	-	-
Purchase of treasury shares	-	-	-
Issue of treasury shares	-	-	-
31/12/2018	13,090	-54	46,158

	Retained earnings	Cumulative other comprehensive income	Equity attributable to parent company owners	Total equity
		Currency translation reserves		
	-5,316	-33	53,936	53,936
	-858	-	-858	-858
	-	6	6	6
	-858	6	-852	-852
	-	-	-92	-92
	-	-	-	-
	-6,174	-28	52,992	52,992
	-6,174	-28	52,992	52,992
	7	-	7	7
	-6,167	-28	52,999	52,999
	-7,728	0	-7,728	-7,728
	0	-11	-11	-11
	-7,728	-11	-7,739	-7,739
	-	-	-	-
	-	-	-	-
	-13,895	-39	45,260	45,260

For more information please see note 4.2.2.1 in the notes to the consolidated financial statements.

1 GENERAL INFORMATION

1.1 INFORMATION ABOUT THE COMPANY

The company va-Q-tec AG, which has its headquarters at Alfred-Nobel-Strasse 33, 97080 Würzburg, Germany, is entered in the commercial register of Würzburg under commercial register sheet number 7368. Along with va-Q-tec AG itself, the consolidated financial statements of va-Q-tec AG also include its subsidiaries (hereinafter also referred to as "va-Q-tec", the "va-Q-tec Group" or the "company"). va-Q-tec is a technologically leading provider of highly efficient products and solutions in the thermal insulation area. The company develops, produces and markets innovative products for reliable and energy-efficient temperature control and insulation – vacuum insulation panels ("VIPs") and phase change materials ("PCMs"). Furthermore, va-Q-tec produces passive thermal packaging systems (containers and boxes) through the optimal combination of VIPs and PCMs. To implement temperature-sensitive logistics chains, va-Q-tec offers within a global partner network the rental of containers and boxes that meet demanding thermal protection standards. Along with Healthcare & Logistics as the main market, va-Q-tec addresses the following further markets: Appliances & Food, Technics & Industry, Building and Mobility.

This set of consolidated financial statements of va-Q-tec for the financial year from 1 January to 31 December 2018 was approved for publication by the Management Board on 25 March 2019.

1.2 BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS

va-Q-tec AG is the ultimate parent company of the va-Q-tec Group and consequently prepares the consolidated financial statements for the smallest and largest group of companies. va-Q-tec AG has been listed on the stock market since 30 September 2016 and has consequently been capital market oriented since this date. Despite falling short of the size criteria pursuant to Section 293 of the German Commercial Code (HGB), it is obligated pursuant to Section 293 (5) HGB to prepare consolidated financial statements as a consequence. va-Q-tec prepares its consolidated financial statements as of 31 December 2018 based on International Financial Reporting Standards (IFRS), as applicable in the EU, and the commercial law regulations to be applied additionally pursuant to Section 315a (1) HGB. The term IFRS also comprises all still valid International Accounting Standards (IAS) as well as all interpretations and amendments of the International Financial Reporting Standards Interpretations Committee (IFRS IC) – formerly the International Financial Reporting Interpretations Committee (IFRIC) – and of the former Standing Interpretations Committee (SIC).

These consolidated financial statements were prepared on the basis of historical cost. Exceptions to this include derivative financial instruments that were recognised at fair value on the reporting date. The corresponding note is provided as part of the respective accounting policies.

Historical cost is generally based on fair value, which represents the consideration rendered in exchange for the asset.

Fair value is the price that would be received to sell an asset or be paid to transfer a liability in an orderly transaction between market participants at the measurement date. This applies irrespective of whether the price is directly observable, or has to be estimated by applying a valuation method.

The fair value that is to be determined for certain disclosures and calculation methods is not always available as a market price. Frequently, it has to be calculated on the basis of various measurement parameters. Depending on the availability of observable parameters and the significance of such parameters for fair value measurement overall, the fair value is allocated to one of the levels 1, 2 or 3 (fair value hierarchy). This allocation occurs on the following basis:

- Level 1 inputs comprise quoted prices (unadjusted) on active markets for identical assets or liabilities to which va-Q-tec can access at the measurement date.
- Level 2 inputs comprise inputs other than Level 1 quoted prices, for which the value of the asset or liability is either directly observable, or can be derived indirectly from other prices.
- Level 3 inputs are unobservable inputs for the asset or liability.

As a rule, the Group classifies assets and liabilities as current if they will be realised or settled prospectively within twelve months after the reporting date. If assets and liabilities comprise both a current and a non-current element, they are divided into their term components and reported as current and non-current assets or liabilities in accordance with the balance sheet structure.

The consolidated income statement is prepared according to the nature of expense method.

The consolidated financial statements are prepared in thousands of euros (kEUR), which is both the functional and the reporting currency of va-Q-tec. Differences of up to one unit (EUR, %) relate to arithmetic rounding differences.

1.3 EFFECTS OF NEW ACCOUNTING STANDARDS

The va-Q-tec Group has applied uniform accounting methods for all the periods presented in its IFRS consolidated financial statements. These comply with the mandatory applicable IFRS in the EU in the 2018 financial year.

The accounting policies applied correspond to those applied in the previous year, as a matter of principle.

The following new standards and interpretations or amendments to existing standards and interpretations required mandatory application for financial years commencing from 1 January 2018, and were applied for the first time by the company.

Standard	Title	Mandatory application for financial years commencing from
Improvements to IFRS (2014-2016)	Annual Improvements to IFRS, Cycle 2014-2016	1 January 2017 and 1 January 2018 respectively
Amendments to IFRS 4	Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts	1 January 2018
IFRS 9	Financial Instruments	1 January 2018
IFRS 15	Revenue from Contracts with Customers	1 January 2018
Clarifications relating to IFRS 15	Revenue from Contracts with Customers	1 January 2018
Amendments to IAS 40	Transfers of Investment Property	1 January 2018
Amendments to IFRS 2	Classification and Measurement of Share-based Payment Transactions	1 January 2018
IFRIC 22	Foreign Currency Transactions and Advance Consideration	1 January 2018

The first-time application of IFRS 9 and IFRS 15 had an impact on the consolidated financial statements, which is described in detail below. All other new accounting policies presented in the table did not have a material impact on the consolidated financial statements.

Effect of IFRS 9

The new IFRS 9 sets regulations for the recognition of financial instruments and replaces IAS 39 Financial Instruments: Recognition and Measurement. In particular, IFRS 9 prescribes new classification methods for financial instruments, which has an effect on the classification and subsequent presentation of the company's financial assets. The new standard also introduces the model of expected losses for assets, which required adjustments across the company to the accounting principles for value allowances applied to trade receivables.

Despite the amendment to the accounting principles for value allowances applied to trade receivables, no significant quantitative effects arise for the consolidated financial statements due to the short-term nature of the trade receivables and the company's previous accounting method for value allowances for trade receivables. No significant effects arose in relation to the consolidated financial statements at the time of first-time application.

The following table shows the effects of IFRS 9 on the consolidated financial statements at the date of first-time adoption on 1 January 2018:

Consolidated statement of financial position

Assets

kEUR	31/12/2017	IFRS 9 Effects	01/01/2018 incl. IFRS 9 Effects
Non-current assets			
Non-current assets	59,175	-	59,175
Assets from contracts with customers	75	-	75
Deferred tax assets	2,857	-	2,857
Total non-current assets	62,055	-	62,055
Current assets			
Inventories	8,942	-	8,942
Trade receivables	8,005	-45	7,960
Other current assets	16,489	-	16,489
Total current assets	33,436	-45	33,391
Total assets	95,491	-45	95,446

Equity and liabilities

kEUR	31/12/2017	IFRS 9 Effects	01/01/2018 incl. IFRS 9 Effects
Equity			
Equity	59,166	-	59,166
Retained earnings	-6,174	-45	-6,219
Total equity	52,992	-45	52,947
Non-current liabilities	23,572	-	23,572
Current liabilities			
Other financial liabilities	6,167	-	6,167
Liabilities from contracts with customers	340	-	340
Other current liabilities	12,420	-	12,420
Total current liabilities	18,927	-	18,927
Total Equity and liabilities	95,491	-45	95,446

The following table shows the effects of IFRS 9 on the consolidated financial statements at the date of first-time adoption on 31 December 2018:

Consolidated statement of financial position**Assets**

kEUR	31/12/2018 without IFRS 9 Effects	IFRS 9 Effects	31/12/2018 incl. IFRS 9 Effects
Non-current assets	77,970	-	77,970
Current assets			
Inventories	10,924	-	10,924
Trade receivables	7,582	-25	7,557
Other current assets	13,696	-	13,696
Total current assets	32,202	-25	32,177
Total assets	110,172	-25	110,147

Equity and liabilities

kEUR	31/12/2018 without IFRS 9 Effects	IFRS 9 Effects	31/12/2018 incl. IFRS 9 Effects
Equity			
Equity	59,155		59,155
Retained earnings	-13,870	-25	-13,895
Total equity	45,285	-25	45,260
Non-current liabilities	40,935		40,935
Current liabilities	23,952		23,952
Total Equity and liabilities	110.172	-25	110.147

The following table shows the effects of IFRS 9 on the consolidated financial statements at the date of first-time adoption on 1 January 2018 and contains a reconciliation of the carrying amounts of the financial instruments. Changes in carrying amounts are due to the change in valuation allowances and relate exclusively to the amortized cost category, which was previously classified as loans and receivables (LaR). A breakdown by classes of the consolidated balance sheet and categories in accordance with IFRS 9 to the previous categories in accordance with IAS 39 was made.

kEUR	Measurement category		Carrying amount
	IAS 39	IFRS 9	01/01/2018
Financial assets			
Trade receivables	LaR	AC	8,005
Other financial assets			
of which: held to maturity	HtM	AC	9,115
of which: miscellaneous financial assets	LaR	AC	286
Cash and cash equivalents	LaR	AC	5,201
Financial liabilities			
Bank borrowings	FLAC	AC	14,104
Trade payables	FLAC	AC	5,244
Other financial liabilities			
of which: finance lease liabilities	IAS 17	IAS 17	7,117
of which: derivative financial instruments without hedging relationship	FVtPL	FVtPL	52
of which: miscellaneous other financial liabilities	FLAC	AC	3,287

Effect of IFRS 15

The effects of the first-time application of IFRS 15 for the va-Q-tec Group are presented below:

In May 2014, the IASB published IFRS 15 "Revenue from Contracts with Customers". IFRS 15 fully replaces the previous revenue recognition regulations, consisting of the standards IAS 18 and IAS 11 as well as various standard interpretations, and sets new regulations for various aspects. The new standard determines uniform basic principles applicable for all sectors and for all categories of sales revenue transactions. The level and timing, or period, for which revenue is to be recognized is to be assessed in future based on a five-step model. IFRS 15 also includes expanded requirements relating to disclosures in the notes to the financial statements and includes several further regulations concerning detailed presentations, such as the presentation of contract costs and contract amendments. EU endorsement occurred on 22 September 2016.

The clarification of IFRS 15 was published in April 2016 and includes three specific amendments as well as exempting transition regulations relating to IFRS 15. The transition regulations relate to two exceptions in practice. Firstly, a company must not re-present contracts concluded at the start of the earliest presented period. Secondly, the effects of all amendments implemented before the earliest presented period are reported on an aggregated basis. The published amendments are applicable for financial years beginning on or after 1 January 2018. The effective date is consequently the same date as the introduction of IFRS 15 itself. EU endorsement occurred on 31 October 2017.

As remarked upon in the notes to the consolidated financial statements in the 2017 annual report, no significant effects arose from the first-time application of IFRS 15. As of the first-time application date, total assets as well as equity increase due to the capitalization of contract costs (contract fulfilment costs) in the case of contracts that were not yet fully completed. Contract costs for which the amortization period would not exceed one year are expensed immediately. Including deferred tax of kEUR 23, the conversion as of 1 January 2018 generated an increasing cumulative effect that is to be recognized totaling kEUR 52.

First-time application of IFRS 15 also led to an amended reporting of liabilities as well as provisions for customer bonuses or prepayments received from customers, which to date have been recognized under other financial liabilities. As part of the conversion as of 1 January 2018, a modified reporting of such liabilities under contract liabilities occurred totaling an amount of kEUR 340.

In summary, the following adjustments were made to the amounts recognized in the balance sheet at the date of first-time application (1 January 2018):

Consolidated statement of financial position

Assets

kEUR	31/12/2017	IFRS 15 Effects	01/01/2018 incl. IFRS 15 Effects
Non-current assets			
Non-current assets	59,175	-	59,175
Assets from contracts with customers	-	75	75
Deferred tax assets	2,880	-23	2,857
Total non-current assets	62,055	52	62,107
Current assets	33,436	-	33,436
Total assets	95,491	52	95,543

Equity and liabilities

kEUR	31/12/2017	IFRS 15 Effects	01/01/2018 incl. IFRS 15 Effects
Equity			
Equity	59,166	-	59,166
Retained earnings	-6,174	52	-6,122
Total equity	52,992	52	53,044
Non-current liabilities	23,572	-	23,572
Current liabilities			
Other financial liabilities	6,507	-340	6,167
Liabilities from contracts with customers	-	340	340
Other current liabilities	12,420	-	12,420
Total current liabilities	18,927	-	18,927
Total Equity and liabilities	95,491	52	95,543

The following tables give an overview of the effects of IFRS 15 on the consolidated financial statements as of 31 December 2018:

Consolidated statement of financial position

Assets

kEUR	31/12/2018 without IFRS 15 Effects	IFRS 15 Effects	31/12/2018 incl. IFRS 15 Effects
Non-current assets			
Non-current assets	74,852	-	74,852
Assets from contracts with customers	-	157	157
Deferred tax assets	3,009	-48	2,961
Total non-current assets	77,861	109	77,970
Total current assets	32,177	-	32,177
Total assets	110,038	109	110,147

Equity and liabilities

kEUR	31/12/2018 without IFRS 15 Effects	IFRS 15 Effects	31/12/2018 incl. IFRS 15 Effects
Equity			
Equity	59,155	-	59,155
Retained earnings	-14,004	109	-13,895
Total equity	45,151	109	45,260
Non-current liabilities	40,935	-	40,935
Current liabilities			
Current liabilities	19,060	-	19,060
Other financial liabilities	4,892	-19	4,873
Liabilities from contracts with customers	-	19	19
Total current liabilities	23,952	-	23,952
Total Equity and liabilities	110,038	109	110,147

Statement of comprehensive income:

kEUR	2018 without IFRS 15 Effects	IFRS 15 Effects	2018 incl. IFRS 15 Effects
Revenues	50,708	-	50,708
Change in inventories	1,288	-	1,288
Other operating expenses	-12,171	-41	-12,212
Income tax	95	-48	47
Net income	-7,639	-89	-7,728
Consolidated total comprehensive income	-7,650	-89	-7,739

The following standards and interpretations and amendments to existing standards and interpretations were approved by both the IASB and the EU, and come into force for financial years commencing after 01/01/2019. The company has not applied these regulations early.

Standard	Title	Mandatory application for financial years commencing from
Annual Improvements to IFRS	Cycle 2015-2017	1 January 2019
IFRS 16	Leases	1 January 2019
Amendments to IFRS 9	Prepayment Features with Negative Compensation	1 January 2019
IFRIC 23	Uncertainty over Income Tax Treatments	1 January 2019
Amendments to IAS 28	Investments in Associates and Joint Ventures	1 January 2019
Amendments to IAS 19	Plan Amendment, Curtailment or Settlement	1 January 2019

Effects of IFRS 16

In January 2016, the IASB published IFRS 16 "Leases". IFRS 16 replaces IAS 17 "Leases", IFRIC 4 "Determining whether an Arrangement contains a Lease", SIC 15 "Leases – Incentives" and SIC 27 "Assessment of the substance of transactions in the legal form of leases" for financial years beginning on or after 1 January 2019. On 31 October 2017, the EU adopted the standard on lease accounting into European law.

With the new regulations, the distinction between finance and operating lease agreements will no longer apply in the future. Instead, the lessee must account for the economic right to the leased asset in the form of a right-of-use, which is depreciated over the term of the lease agreement. Correspondingly, a liability is recognized at the present value of the future lease payments and carried forward using the effective interest method. In contrast, the lessor's accounting will essentially not change compared to IAS 17.

The standard must be applied for financial years commencing on or after 1 January 2019. va-Q-tec plans to apply IFRS 16 using the modified retrospective method.

The transition to IFRS 16 is based on the assumption that it is possible to value the rights-of-use at the same value as the leasing liabilities.

The Group plans to apply the relief provisions of IFRS 16 to short term leases (leases with terms of less than 12 months) and low value assets. A benchmark of EUR 5,000 is used for the low-value assets.

va-Q-tec has also decided not to present leasing and service components separately.

A weighted average incremental borrowing rate (IBR) of 2.0% was applied for discounting as at 31 December 2018. The interest rate was determined on the basis of the average, risk-free reference interest rate for the relevant maturity bands of the leasing contracts in the relevant Group currency (EUR) plus a risk premium corresponding to va-Q-tec's rating. Leasing-specific adjustments were not necessary as, for example, collateral had no material impact on the interest rate.

The effects of IFRS 16 on the Group were analysed in the course of the past financial year. With the introduction of IFRS 16, the Group anticipates significant effects on parts of the consolidated financial statements and the presentation of the financial position and performance:

- Consolidated statement of financial position: First-time application led to the following increase in non-current assets and financial liabilities. The balance sheet lengthening will reduce the consolidated equity ratio and increase net debt accordingly.
 - Assets:

Right-of-use	+2,674 kEUR
--------------	-------------
 - Liabilities:

Leasing liability	+2,674 kEUR
• Of which long-term leasing liabilities	+ 1,904 kEUR
• Of which current leasing liabilities	+ 770 kEUR
- The application of the low-value exception relates to assets with a total historical cost of less than kEUR 20 as of 31 December 2018.
- Consolidated income statement: In contrast to previous reporting, amortization of right-of-use assets and interest expenses deriving from the reversal of discounts applied to lease liabilities will be recognized in the future. This leads to an improvement in EBIT. The interest expense from the lease payment initially affects earnings before tax. Assuming constant interest payments, earnings before tax are lower in the first years compared to a straight-line distributed expense pursuant to IAS 17 (Operating Lease).
- Consolidated statement of cash flows: The modified reporting of lease expenses leads to improvements in cash flows from operating activities and a deterioration in cash flows from financing activities.
- Notes to the consolidated financial statements: Expanded disclosures (leasing expense for low-value assets, leasing expense for current assets, interest payments on the lease liability, among other items). Moreover, a term analysis of the lease liabilities is to be implemented separately from other financial liabilities.
- For leases where the Group is the lessor, the Management Board does not expect the application of IFRS 16 to have a material impact on the consolidated financial statements.

As the container fleet from sale and finance leaseback transactions is already recognized as a finance lease, the Group expects no further adjustments in this area due to the introduction of IFRS 16.

Effects of amendment to IAS 28

On 12 October 2017, the IASB published amendments to the accounting treatment of non-current investments in associates and joint ventures. The amendments to IAS 28 clarify that IFRS 9 applies to non-current investments in associates or joint ventures that are not accounted for using the equity method. The amendment was adopted into EU law in the first quarter of 2019 and must be applied from 1 January 2019. The amendments currently have no effect on va-Q-tec, as the company accounts for its investment in Sumteq GmbH using the equity method.

The following standards will become effective in the forthcoming years, but have not yet been endorsed by the EU:

Standard	Title	Mandatory application for financial years commencing from
Individual standards	Amendments to References to the Conceptual Framework in IFRS Standards	1 January 2020
Amendments to IFRS 3	Definition of a Business	1 January 2020
Amendments to IAS 1 and IAS 8	Definition of Materiality	1 January 2020
IFRS 17	Insurance Contracts	1 January 2021

The company is currently analysing the potential effects from standards or amendments to standards that have not yet been endorsed by the EU on the consolidated financial statements of va-Q-tec.

1.4 SIGNIFICANT ACCOUNTING JUDGEMENTS AND ESTIMATES

In applying the accounting policies, the Group's management has made discretionary decisions that affect the amounts reported in the consolidated financial statements. Accordingly, assumptions and estimates are to be made to a certain extent when preparing consolidated financial statements that affect the amount and the reporting of recognized assets and liabilities, income and expenses, and contingent liabilities in the reporting period.

The assumptions and estimates are based on premises that in all cases reflect the currently available status of information at the time of each case. The expected future business trend also particularly reflects the circumstances prevailing at the time when the consolidated financial statements were prepared, as well as a realistically imputed future trend in the environment. As a result of developments in these overall conditions differing from the management's assumptions and lying outside its sphere of influence, the resultant amounts can differ from the originally expected estimated values.

The estimates and assumptions that are applied are presented in the notes to the individual items of the statement of financial position and income statement in section 3 "Accounting and Valuation policies". The main effects impacting the amounts arise in the following areas:

- Determining useful economic lives for intangible assets and for property, plant and equipment, including assets leased as part of finance leases
- Classification of leases as operating leases or finance leases
- Impairment testing of assets based on appraisal of identifiable risks
- Impairment testing of deferred tax assets in relation to tax loss carryforwards
- Assessing the derecognition criteria of trade receivables as part of factoring agreements
- Estimating market yield curves as part of measuring derivative financial instruments
- Best possible estimate of the most probable settlement amount as part of the recognition and measurement of provisions
- Assessing any requirement to separate, and measuring, embedded derivatives
- Recognition of additional costs during the period of initiation of contracts with customers
- Determination of the expected credit loss using the simplified approach for trade receivables and contract assets

2 CONSOLIDATION

2.1 CONSOLIDATION SCOPE

The consolidation scope is derived by applying IFRS 10 (Consolidated Financial Statements). In the consolidated financial statements of va-Q-tec AG as of 31 December 2018, the following subsidiaries were fully consolidated:

Name	Headquarters	Equity interest 31/12/2018	Equity interest 31/12/2017
va-Q-tec Limited (UK)	Rochester, UK	100 %	100 %
va-Q-tec Inc. (USA)	East Rutherford, NJ, USA	100 %	100 %
va-Q-tec Ltd. (Korea)	Joong-gu, Incheon, Republic of Korea	100 %	100 %
va-Q-tec Switzerland AG (Switzerland)	Zurich, Switzerland	100 %	100 %
va-Q-tec Japan G.K. (Japan)	Tokyo, Japan	100 %	100 %
va-Q-tec Uruguay S.A. (Uruguay)	Montevideo, Uruguay	100 %	0 %
va-Q-tec SG PTE. Ltd. (Singapore)	Singapore	100 %	0 %

va-Q-tec AG and its subsidiaries together form the va-Q-tec Group. Please refer to the segment reporting for key financial information about the subsidiaries.

Besides the interests in the aforementioned fully consolidated subsidiaries, as of the reporting date va-Q-tec AG holds an interest of 18.5% in SUMTEQ GmbH, Cologne. Due to corporate law agreements that enable va-Q-tec to exert significant influence over financial and business policy decisions, this interest is to be classified as an associate, and accounted in the consolidated financial statements applying the equity method.

2.2 CONSOLIDATION SCOPE CHANGES AND OTHER ACQUISITIONS AND DISPOSALS

In April 2018, va-Q-tec AG founded a subsidiary in the Montevideo free-trade zone, Uruguay. A stronger local presence to support commercial activities in South America is to be established with va-Q-tec Uruguay SA. The new location will function in the future as a central hub for va-Q-tec's rental business and as a fulfilment station.

Moreover, va-Q-tec founded a subsidiary in Singapore in September 2018. A stronger local presence to support commercial activities in Asia is to be established with va-Q-tec SG PTE. LTD. No significant revenues have yet been generated with the two companies, and no significant effects on results arise.

2.3 CONSOLIDATION PRINCIPLES

The consolidated financial statements are based on uniform accounting principles. The annual financial statements of the companies included in the consolidation scope were adjusted where required in order to align them with the accounting policies applied in the Group. All of the annual financial statements of the companies included in the consolidated financial statements are prepared on the basis of the reporting date of the consolidated financial statements.

Subsidiaries are those companies where the Group holds existing rights that endow it with the current capability to manage the companies' relevant activities. Relevant activities are those activities that significantly affect the company's profitability. For this reason, control exists if the Group is exposed to variable returns from its relationship to a company, and as a result of its power over the relevant activities it has the capability to influence these returns. In the va-Q-tec Group, the ability of control is based in all cases on a direct voting majority held by va-Q-tec AG. Inclusion of companies in the consolidated financial statements of va-Q-tec AG begins on the date from which the possibility of control exists. It ends if such control ceases.

As part of capital consolidation (consolidation of the investment account), the carrying amounts of the participating interests are offset with the subsidiary's proportional equity. As all subsidiaries comprise companies that va-Q-tec has founded, initial consolidation has not resulted in any differential amount. Interests of other shareholders (non-controlling interests) are reported according to the interest in the net assets of the respective company that is attributable to them.

Intragroup transactions are fully adjusted. This entails the offsetting of significant receivables, liabilities and provisions between the consolidated companies, and the elimination of intercompany profits and losses. Intragroup revenues are offset with the corresponding expenses. Tax deferrals required pursuant to IAS 12 are applied to any temporary differences on consolidation.

Changes to the Group's percentage interests held in subsidiaries that do not result in a loss of control are recognised as equity transactions.

An associate is a company where va-Q-tec exerts significant influence. Significant influence is defined here as the ability to collaborate in the financial and business policy decisions of the participating interest without controlling it, or managing it jointly. If va-Q-tec AG directly or indirectly holds between 20% and 50% of the voting rights in the participating interest, the assumption exists that significant influence can be exercised. Given a directly or indirectly held voting rights interest of less than 20%, no significant influence is assumed unless it can be proven clearly.

Equity accounted investments are initially recognised at acquisition cost, before being recognised in subsequent periods at the proportionate value of their amortised net assets. This entails increasing or reducing the carrying amounts annually to reflect the proportionate profits and losses, dividend distributions, and all further equity changes. Unrealised gains based on transactions with associates are eliminated against the carrying amount of the participating interest according to the scope of the va-Q-tec interest. Unrealised losses are eliminated in the same manner, although only to the extent that no indications of impairment exist. Goodwill is not reported separately, but is instead included in the valuation of the participating interest. Goodwill is not amortised. Disclosed hidden reserves are amortised. Impairment losses are applied to equity accounted investments if their recoverable amount falls below their carrying amount.

As with the first-time inclusion of the acquired part, a status-preserving increase in the interest held leads to an assessment and disclosure of proportional hidden reserves and potential goodwill.

2.4 FOREIGN CURRENCY TRANSLATION

The consolidated financial statements have been prepared in accordance with the functional currency concept. The functional currency of va-Q-tec AG is the primary currency of the economic environment in which the va-Q-tec Group operates. This corresponds to the euro, which also corresponds to the reporting currency for the consolidated financial statements. The functional currency of the subsidiaries in the USA, South Korea, Switzerland Japan and Singapore is in each case the national currency, as these subsidiaries conduct their business independently in their respective markets. The functional currency of the UK company corresponds to the euro. The functional currency of the subsidiary in Uruguay is the US dollar.

In the financial statements of each Group company, business transactions denominated in foreign currencies are translated into the functional currency applying the rates valid on the transaction date. Monetary assets and liabilities denominated in foreign currencies are translated applying the rate prevailing on each reporting date. Non-monetary assets and liabilities measured at cost are translated at the exchange rate prevailing on the date when they are initially recognised on the statement of financial position. The foreign currency gains and losses arising from these translations are recognised in the consolidated income statement under other operating income or other operating expenses.

To prepare the consolidated financial statements, the assets and liabilities of the Group's foreign subsidiaries whose functional currency is not the euro are translated into euros applying the exchange rates on the reporting date. Income and expenses are translated at the average rate for the period, unless translation exchange rates during the period are subject to sharp fluctuations. In such cases, the exchange rates on the transaction date would be applied. Translation differences from the translation of foreign operations into the Group currency are recognised under consolidated other comprehensive income, and accumulated within equity.

The exchange rates into euros for the significant currencies in the Group applied for the translation are presented in the following table:

	Closing rate		Average rate	
	31/12/2018	31/12/2017	2018	2017
British pound	0.8945	0.8872	0.8847	0.8761
US dollar	1.1450	1.1993	1.1815	1.1293
South Korean won	1,277.9300	1,279.6100	1,299.2272	1,275.8267
Swiss Francs	1.1269	1.1702	1.1549	1.1116
Japanese Yen	125.8500	135.0100	130.4079	126.6544
Singapore-Dollar	1.5591	1.6024	1.5926	1.5588

3 ACCOUNTING AND VALUATION POLICIES

3.1 CONSOLIDATED INCOME STATEMENT

Revenues

In the 2018 financial year, va-Q-tec applied IFRS 15 "Revenue from Contracts with Customers" for the first time, applying the modified retrospective method to all contracts. All reported revenues represent revenues from contracts with customers. The previous year's figures were not adjusted and correspond to the accounting according to IAS 18 "Revenues".

Revenue from the sale of goods is recognized when an asset is transferred and the customer obtains control of the asset, a transaction price has been agreed or can be determined, and payment is probable. Sales revenues from services are recognised to the extent that the service has been rendered, and the amount of the revenue can be measured reliably. Payments for unreturned thermal boxes in connection with rental services rendered are reported as revenue. Rebates, bonuses, VAT and other taxes associated with the service are deducted from sales revenues.

Sales revenues are recognised at the transaction price of the consideration received or to be received, and reflect the amounts that are to be received for goods and services as part of ordinary business activity.

Sector-typical payment terms with customers not include any significant financing components. Warranty obligations under contracts between the company and its customers do not constitute separate performance obligations and are recognised as a provision.

With regard to the opening and closing balances and impairments of receivables from contracts with customers, we refer to the notes on trade receivables. For the composition of revenues by business segment, please refer to the notes on revenues, and for the composition by region please refer to the segment reporting.

In accordance with the simplifications under IFRS 15, no information is provided on the remaining benefit obligations as of the balance sheet date, as the underlying contracts have an expected original term of less than one year.

Net financial result

Interest income and interest expenses reported under the net financial result are deferred and accrued in accordance with their respective terms, taking the outstanding loan sum and the applicable interest rate into account. The effective interest method is applied in this context.

Income tax

The expense for taxes on income represents the sum of current income tax expense and deferred tax. The current income tax expense is calculated on the basis of taxable income for the year. Taxable earnings differ from the earnings before tax reported in the consolidated income statement, as these do not include income and expense items that were taxable or tax-deductible in other years, as well as items on which no tax is generally incurred, or which are generally not tax-deductible.

Deferred taxes are recognised in accordance with the balance sheet liability method as presented in IAS 12 (Income Taxes). This entails forming deferred tax items for temporary differences between tax valuations and valuations on the consolidated balance sheet, as well as for tax loss carryforwards. Deferred tax assets are only taking into consideration if it is probable that the corresponding tax benefits will also be realised. Loss carryforwards for which deferred tax assets have been formed are expected to be utilised within the five-year planning period. The carrying amount of deferred tax assets is reviewed each year on the reporting date, with an impairment loss being applied if it is no longer probable that sufficient taxable income will be available to fully or partially realise the asset.

Deferred tax liabilities are formed for taxable temporary differences arising from interests in subsidiaries, unless the Group can control the reversal of the temporary differences, and it is probable that the temporary difference will not reverse within the foreseeable future.

Deferred tax assets and deferred tax liabilities are offset to the extent that they relate to the same taxpayer, and exist in relation to the same tax authority.

To measure deferred tax, future years' tax rates are applied if the related legislation has already been enacted, or the legislative process has essentially been concluded. Deferred taxes are recognised in profit or loss, as a matter of principle. To the extent that the charges or reliefs underlying deferred taxes are carried directly to equity, the formation or release of deferred taxes also occurs directly in equity.

Earnings per share

Earnings per share (basic earnings per share) are calculated on the basis of IAS 33 (Earnings per share). Basic earnings per share are calculated by dividing the after-tax profits attributable to the parent company shareholders by the weighted average number of shares in issue during the financial year under review. At the end of the fiscal year under review, as in the previous year, only ordinary shares were issued, so that the consolidated net income does not have to be allocated to different classes of shares. Diluted earnings per share are not shown separately as, as in the previous year, no potentially diluting instruments were outstanding as of 31 December 2018.

3.2 CONSOLIDATED STATEMENT OF FINANCIAL POSITION

3.2.1 Assets

Intangible assets

Pursuant to IAS 38, intangible assets are capitalised if a future economic benefit is expected from utilisation of the asset, and the costs of the asset can be calculated reliably.

Individually purchased intangible assets are recognised at purchase cost on initial recognition, and intangible assets that the company has generated itself are recognised at production cost. In subsequent periods, intangible assets are measured at cost less cumulative amortisation and any cumulative impairment losses. Research costs are expensed in the period in which they are incurred.

Intangible assets with limited useful life are amortised straight-line over their useful life, and impairment-tested as soon as any indications emerge that they might have become impaired. The estimated useful life and amortisation method are reviewed at the end of the annual reporting period, and any changes to the estimated value are taken into account in subsequent measurement. Amortisation is based on the following useful lives:

Software	3 – 5 years
Internally generated intangible assets	6 years

Gains or losses on the disposal of intangible assets are calculated as the difference between net disposal proceeds and the asset's carrying amount, and recognised in profit or loss within other operating income or other operating expenses in the period in which the asset is disposed of.

An intangible asset arising from internal development (or the development phase of an internal project) is recognised if the corresponding criteria of IAS 38.57 are shown to have been met. Capitalised production costs of internally generated intangible assets comprise costs directly attributable to the development process, and development-related overheads.

Property, plant and equipment

Property, plant and equipment are utilised for business purposes, and measured at cost less cumulative depreciation and cumulative impairment losses.

The purchase costs of an item of property, plant and equipment comprise all costs attributable to the purchase of the asset. Repair and maintenance charges are expensed in the income statement in the financial year in which they are incurred. Internally generated assets are initially measured at directly attributable production cost plus production-related overheads.

Borrowing costs that are directly attributable to the acquisition, construction or production of a so-called qualifying asset as part of the cost of that asset are capitalised as part of cost pursuant to IFRS. The qualifying assets produced in the 2018 financial year were pre-financed by equity during the production phase.

Property, plant and equipment is depreciated straight-line in accordance with its type of use and duration of use. Depreciation starts on the date on which the assets are available for their intended use. The residual values, depreciation methods and useful lives are reviewed annually and adjusted where required. Depreciation is based mainly of the following useful lives:

Buildings	
Buildings	33 – 40 years
Outdoor and other facilities	5 – 20 years
Production equipment and machinery	
Production plants	8 – 21 years
Other production equipment and machinery	3 – 25 years
Operating and office equipment	3 – 15 years
Container fleet	5 years
Box fleet	2 – 5 years

If any indications of impairment exist, property, plant and equipment are tested for potential impairment accordingly.

Gains or losses arising from the disposal or derecognition of an item of property, plant and equipment are calculated as the difference between disposal proceeds and the asset's carrying amount, and recognised in profit or loss among other operating income or other operating expenses.

Investment property

Investment property comprises land and buildings held to generate rental income and for the purposes of value appreciation, rather than being utilised for the company's own production, to deliver goods or render services, for administrative purposes or for sale as part of ordinary operating activities. Investment property is measured at cost less accumulated depreciation and impairment losses.

If indications of impairment exist, investment property is tested for potential impairment accordingly.

Contract assets

Deferred contract assets include development costs that do not already meet the criteria for capitalisation in accordance with other standards. These are primarily customer-specific developments that are performed during the contract initiation period, are directly related to an expected contract, and are expected to recover the related costs. Firstly, such costs are incurred for the modification or qualification of products from the company's existing product range according to customer-specific requirements, and, secondly, for the implementation of va-Q-tec products or services into the customer's processes. In addition, these costs create new or improve existing resources for the company that will be used for the future fulfilment of performance obligations.

Additional costs for customer-specific developments during the contract initiation, for which the amortization period would not exceed one year are expensed immediately.

Capitalised contract assets are amortized simultaneously with the transfer of the goods or services to which the contract assets relate.

Impairment testing

Intangible assets with indefinite useful lives, as well as intangible assets that are not yet ready for utilisation, are not amortised, but are instead tested annually for impairment. Assets that are amortised are impairment-tested where an indication exists that the asset's carrying amount may no longer be recoverable. An impairment loss is recognised equivalent to the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount of an asset is the higher of an asset's fair value less costs to sell, and its value in use. The value in use in this context is calculated on the basis of the estimated future cash flows from the utilisation and disposal of the asset, applying the discounted cash flow method. A pre-tax interest rate in line with market conditions is applied as the discounting rate in this context. If no recoverable amount can be calculated for an individual asset, the recoverable amount is calculated for the smallest identifiable group of assets (cash-generating unit) to which the respective asset can be allocated.

If the reasons for the impairment loss no longer apply at a later date, a reversal of the impairment loss is realised up to the level of the new recoverable amount, as a matter of principle. Such reversals of impairment losses are limited to the amortised carrying amount that would have arisen without the impairment loss applied in the past.

No indicators of potential impairment were identified. Accordingly, no impairment losses or reversals of impairment losses pursuant to IAS 36 were applied in either the period under review, or in the previous year.

Leases***Group as lessee***

The Group leases or enters into hire-purchase agreements for certain intangible assets, and property, plant and equipment. Such transactions are categorised as either operating or financing leases at the start of the respective lease. Pursuant to IAS 17, leases are classified as finance leases if the lease agreement essentially transfers all risks and rewards connected with ownership to the lessee. Assets from finance leases are recognised on the date of addition at the lower of the present value of the minimum lease payments and the leased asset's fair value. At the same time, a lease liability equivalent to the same amount is recognised among other current and non-current financial liabilities. As part of subsequent measurement, the asset from a finance lease is depreciated straight-line over the shorter of its economic useful life or its lease duration. Where indications of impairment exist, impairment losses are applied to the leased asset. Minimum lease payments are divided into interest and capital repayment components. The interest component in this context is expensed within the net financial result in the consolidated income statement. The capital repayment component reduces the lease liability.

Leases where the significant proportion of the risks and rewards remain with the lessor are classified as operating leases. The related lease expenses are expensed under other operating expenses in the consolidated income statement.

Sale-and-finance-leaseback transactions

As part of sale-and-finance-leaseback transactions, the Group sells containers to leasing companies, and then leases them back. As a result of the leaseback, the Group re-assumes all significant risks and rewards connected with ownership, and classifies the lease as a finance lease. The revenues from these sale-and-finance-leaseback transactions are eliminated in full. As all containers are produced and leased back via sale-and-finance-leaseback transactions in the same period, the related additions from own work performed by the enterprise and capitalised are offset with the same disposals of equal amount, and reported under changes to the cost of the container fleet under property, plant and equipment. Initial recognition of the finance lease asset is according to the general regulations of IAS 17, and results in a capitalisation of the leased asset and the corresponding liability.

The excess of the cash accruing to va-Q-tec (sales price) resulting from the sale of containers over the carrying amount or the own work capitalised cannot be recognised immediately in profit or loss in the case of sale-and-finance-leaseback transactions, but is instead recognised on the liabilities side of the balance sheet under non-financial liabilities as deferred income (special item for deferred container profits). This deferred income is released through profit or loss over the 5-year lease duration, and reported under other operating income in the consolidated income statement.

Group as lessor

The Group acts as lessor in operating leases. This concerns the short-term rental of containers to third parties. Such leases are generally short-term in nature, and the risks and rewards connected with ownership do not transfer to the lessee. The leased containers are reported under non-current assets, and the lease income is presented within sales revenue.

Inventories

Inventories are measured at the lower of cost and net realisable value. When calculating purchase costs, ancillary purchase costs are added, and purchase price reductions are deducted. Production costs include direct materials and manufacturing costs, as well as the production-related share of fixed and variable overheads. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale. The loss-free valuation entails applying inter alia discounts accounting for marketability.

Financial instruments and financial assets

Financial assets comprise especially receivables and cash. Recognition and measurement is performed in accordance with IFRS 9. Financial assets are recognised if the Group is contractually entitled to receive cash or other financial assets from third parties. Purchases and sales of financial assets are recognised as of the settlement date, as a matter of principle. Financial assets are initially recognised at fair value, plus transaction costs where relevant. Transaction costs of financial assets that are measured at fair value through profit or loss are expensed. Subsequent measurement is performed in accordance with allocation to the categories of financial assets pursuant to IFRS 9.

The classification and measurement of financial assets is based, firstly, on the so-called cash flow condition (exclusively cash flows from interest and capital repayments) in accordance with the specific form of the contractually agreed cash flows from an individual financial asset. Secondly, this also depends on the business model according to which portfolios of financial assets are managed.

Financial assets at fair value through profit or loss include all financial assets whose cash flows do not represent exclusively interest and principal payments in accordance with the cash flow condition established in IFRS 9. Changes to the fair values of financial assets in this category, including derivative financial instruments, are expensed. The gain or loss arising from measuring derivative financial instruments is expensed under the net financial result, unless the derivative is included as a hedging instrument as part of the hedge (hedge accounting), and is effective as such. No hedge accounting was applied either in the current year or in the previous year.

Financial assets measured at amortised cost include all assets whose contractual provisions result in cash flows at specified dates that exclusively represent interest and principal payments on the outstanding principal amount in accordance with the cash flow condition of IFRS 9, provided that such assets are held with the intention to receive the contractual cash flows expected over their respective terms. Trade receivables, receivables included among other financial assets, and cash and cash equivalents are allocated to this measurement category. These assets are initially measured at fair value. This is regularly equal to the transaction price at the time of acquisition. Subsequent measurement through profit or loss is based on the effective interest method.

Pursuant IFRS 9, individual financial assets are tested for potential impairment on each reporting date. If any objective indications of impairment exist, an impairment loss is expensed equivalent to the difference between the asset's carrying amount and the present value of its expected future cash flows, and recognised within a separate impairment account. If the level of the impairment reduces in subsequent periods due to events that have occurred objectively after the date when the impairment was recognised, the impairment is reversed in the equivalent amount through profit or loss. Impaired receivables are derecognised if they are assessed as uncollectible. In accordance with IFRS 9, the simplified approach is also applied to the determination of expected credit losses on trade receivables, and expected credit losses are recognized as an impairment loss over the entire term of the receivable.

The Group derecognises a financial asset if the contractual rights to the cash flows from an asset expire, or it receives rights to receive cash flows in a transaction in which all significant risks and opportunities connected with the ownership of the financial asset are also transferred. A portion of such transferred financial assets that originate or remain within the Group is recognised as a separate asset or separate liability.

3.2.2 Equity and liabilities

Equity

Equity comprises cash and non-cash capital contributions that substantiate a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments are recognised at the issue proceeds received, less directly attributable transaction costs. Transaction costs comprise costs that would not have been incurred without the issue of the equity instrument. These are deducted from additional paid-in capital taking all tax effects into account. The consolidated statement of changes in equity presents the development of the consolidated equity of the va-Q-tec Group for the 2018 and 2017 financial years.

Treasury shares

va-Q-tec applies the cost method to recognise the treasury shares it acquired for the first time in 2016, whereby the costs to purchase the treasury shares are reported within a separate item within equity.

Share-based payment

The company currently has no arrangements for equity-settled share-based payment transactions with employees.

The "Other disclosures" section provides further information about share-based payment within the va-Q-tec Group.

Government grants

A government grant is not recognised until there is reasonable assurance that the company will comply with the conditions attaching to it, and that the grant will be received. They are recognised in profit or loss in the period in which the Group bears the corresponding expenses that are to be offset by the grants. Government grants whose most important condition is the purchase, construction or other type of acquisition of long-term assets are recognised as non-financial liabilities on the statement of financial position. They are released through profit or loss within other operating income based on the corresponding asset's useful life. In 2018, va-Q-tec AG received kEUR 1,664 of public grants to purchase non-current assets

(previous year: kEUR 795). Investments were already implemented in the financial year for kEUR 967 of the grants granted in 2018.

Provisions

Provisions are reported if a current legal or constructive obligation has arisen for the Group from a past event that is likely to result in a future outflow of resources embodying economic benefits, and the level of this obligation can be estimated reliably.

The amount recognised as a provision corresponds to the best possible estimate of the consideration required to settle the current obligation as of the reporting date, whereby risks and uncertainties connected with the obligation are taken into account. All significant cost factors are included in the measurement of provisions. If the interest effect is material, non-current provisions with a remaining term of more than one year are reported at the discounted settlement amount as of the balance sheet date. If it is to be expected that the economic benefit required to settle an obligation for which a provision has been formed will be reimbursed wholly or partly by third parties, the receivable is recognised as an asset if it is as good as certain that the reimbursement will occur, and the level of the receivable can be measured reliably.

Provisions for warranties are formed on the date when the respective goods are sold, or the corresponding services are rendered. The level of the provision is based on historical trends, and an estimate of future warranty cases.

Financial liabilities

Financial liabilities comprise mainly bank borrowings, trade payables, and other financial liabilities. They are measured at fair value on initial recognition, and subsequently – except derivative financial instruments measured at fair value – at amortised cost applying the effective interest method, less directly attributable transaction costs where relevant.

4 NOTES

4.1 CONSOLIDATED INCOME STATEMENT

4.1.1 Revenues

The revenues are comprised as follows:

kEUR	2018	2017
Products	20,122	18,031
Systems	11,307	10,820
Services	18,386	17,366
Other	893	709
Group, total	50,708	46,926

The Products business comprises the production and sale of vacuum insulation panels and heat storage components. These products are sold in the following sectors: Healthcare & Logistics, Appliances & Food, Technics & Industry, Mobility and Building. Revenue reported continued growth especially thanks to acquiring new customers in the target sectors of Appliances & Food as well as Technics & Industry, and through further expanding business with existing customers, reflecting the high quality, performance and durability of VIPs.

The Systems business comprises the sale of thermal packaging to customers in the Healthcare & Logistics sector. New customers were acquired in 2018 in the Systems area with the "va-Q-one" thermal box, a cost-efficient one-way solution.

The Services business comprises the container and box rental business for the transportation of temperature-sensitive goods, predominantly products from the pharmaceuticals and biotech sectors. Compared to the Products business, revenue growth was disproportionately low, as container business with a major pharmaceutical customer declined by almost one half due to a reduction in the latter's business. However, the revenue contribution of all other customers increased significantly by 32% overall in 2018 and compensates for this negative effect relating to a major customer. Other revenues are generated through thermal consulting and government-subsidised research projects.

Compared with the previous year, the business in the three main divisions of Products, Systems and Services together generated 8% sales revenue growth. Service division revenues also include compensation payments from customers for thermal boxes unreturned within the rental network in an amount of kEUR 629 (previous year: kEUR 921).

Please refer to the section on segment reporting for more information.

4.1.2 Work performed by the company and capitalised

The following table shows the trend in work performed by the company and capitalised in the 2017 and 2018 financial years. Due to the high investments made in the past in the container and box fleets, it was possible to reduce the investment volume in this area in 2018.

kEUR	2018	2017
Work performed by the company and capitalised arising from container sale-and-finance-leaseback transactions	3,780	4,557
Work performed by the company and capitalised arising from expansion of rental-boxes-fleet	647	1,312
Other work performed by the company and capitalised	1,193	833
Group, total	5,620	6,702

Of the total research and development costs of kEUR 2,451 incurred in 2018 (previous year: kEUR 1,938), kEUR 144 (previous year: kEUR 104) meet IFRS capitalisation criteria. The other research and development costs were recognised in the corresponding items of the consolidated income statement, mainly under personnel expenses.

4.1.3 Other operating income

kEUR	2018	2017
Income from release of special item for deferred container profits	2,581	1,813
Income from release of special item for grants	414	432
Exchange rate gains	354	268
Income from other accounting periods	114	456
Renewable energy subsidies	22	21
Gains on fixed asset disposals	31	2
Other income	232	156
Group, total	3,748	3,148

Other operating income of kEUR 3,748 (previous year: kEUR 3,148) derives mainly from scheduled and continuous releases from the special item from sale-and-finance-leaseback transactions and government grants, as well as foreign currency transactions and income relating to other accounting periods.

4.1.4 Cost of materials and services

kEUR	2018	2017
Cost of raw materials and supplies	17,276	16,658
Cost of purchased services	8,446	8,018
Group, total	25,722	24,676

The cost of materials was up from kEUR 24,676 to kEUR 25,722 (+4%), slightly less than the rate of total income growth, and corresponding to a lower cost of materials ratio of 42% (previous year: previous 43%). Costs of materials include costs for raw materials and for purchased services, especially logistics services in the container rental business.

4.1.5 Personnel expenses

The following table shows the trend in personnel expenses in the 2017 and 2018 financial years:

kEUR	2018	2017
Wages and salaries	17,174	13,243
Social security contributions	3,229	2,373
Group, total	20,403	15,616

Personnel expenses changed from kEUR 15,616 in the previous year to kEUR 20,403 in the 2018 reporting period (+31%), with the personal expense ratio in relation to total income thereby rising from 27% to 33%. The increase is attributable mainly to both the hiring of new staff in the production area as well as the recruitment of highly qualified specialist personnel. The growth of the va-Q-tec Group, the current product mix and the constant optimisation of business processes have caused this rise, which largely reflects preparatory hiring. Social security contributions contain mainly employer contributions to statutory social security. A defined contribution pension scheme exists as part of German statutory pension insurance for employees in Germany, to which the va-Q-tec Group is required to make payments at the contribution rate prevailing during the period under review of 9.3% (previous year: 9.4%) (employer component) of pension compensation. The contributions rendered amounted to kEUR 1,196 in the reporting year (previous year: kEUR 892). In addition, va-Q-tec AG renders contributions of kEUR 83 (previous year: kEUR 86) to direct insurance as part of its company pension scheme. A defined contribution pension plan also exists at the subsidiaries in the UK, Korea and Japan. Contributions expensed included kEUR 60 at the UK company (previous year: kEUR 57), kEUR 20 at the Korean company (previous year: kEUR 12), and kEUR 9 at the Japanese company (previous year: kEUR 0). Defined contribution commitments have also existed for the Management Board members since 2014, for which kEUR 15 (previous year: kEUR 20) was paid into an external, congruently reinsured, pension fund in the current financial year. As a consequence, kEUR 1,386 (previous year: kEUR 1,067) of expenses for defined contribution pension plans were recognised. Wages and salaries for the 2018 financial year again do not include any costs from granting options to staff (previous year: kEUR previous 0). See section 5.3 for more information about share-based payment.

The average number of employees in the 2017 and 2018 financial years is presented below:

	2018	2017
Male employees	318	258
Female employees	126	100
Group, total	444	358

4.1.6 Other operating expenses

kEUR	2018	2017
Legal, patents and consulting costs	2,652	2,208
Marketing and sales	1,962	1,551
Rent and leasing	1,934	1,092
Freight	1,200	728
Repair and maintenance	1,072	705
IT and other office costs	728	463
Other personnel expenses	546	516
Insurance and contributions	402	314
Exchange rate losses	278	723
Expense for asset disposal (boxes)	250	539
Supervisory Board compensation	157	164
Expenses relating to other accounting periods	35	260
Other	996	682
Group, total	12,212	9,945

Other operating expenses rose by 23% to kEUR 12,212 in the 2018 reporting period (previous year: kEUR 9,945). Related reasons included investments in marketing and sales as well as higher costs for IT consulting, legal advice and patent costs due to the greater requirements made as part of the stock market listing and as part of business expansion. Both insurance expenses and fees registered a rise, reflecting the company's growth.

4.1.7 Depreciation, amortisation and impairment losses

Depreciation and amortisation charges of kEUR 9,864 were expensed in the 2018 financial year (previous year: kEUR 7,528). No impairment losses or reversals of impairment losses occurred in either of these financial years. The 31% increase is chiefly attributable to the high level of investments in the container and box fleets.

4.1.8 Result from equity accounted investments

A proportional negative result of kEUR 110 (previous year: kEUR 79) was incurred from an equity accounted investment in the current financial year.

4.1.9 Net financial result

kEUR	2018	2017
Interest income	13	360
Income from derivative financial instruments	18	27
Financial income	31	387
Interest expense	-521	-377
Expenses from derivative financial instruments	-	-
Interest expense from finance lease	-338	-523
Financial expenses	-859	-900
Net financial result	-828	-513

In the previous year, the net financial result was characterised mainly by a one-off effect connected with the purchase of land and buildings for the new corporate headquarters in Germany. The obligations initially assumed from the buyer as part of the purchase agreement, measured at a fair value of kEUR 7,024, were reduced as part of the subsequent refinancing negotiations with the banks. Moreover, the fact that expenses for interest on finance leases reduced thanks to the improved rating, and despite the significant fleet expansion, also exerted a positive effect. The increase in interest expenses is attributable to the loans taken out in the financial year under review.

4.1.10 Income tax

kEUR	2018	2017
Actual tax expense (tax income)		
Current period	22	7
Prior periods	30	-
Deferred tax expense (tax income)	-99	-59
Group, total	-47	-52

Deferred tax is calculated applying tax rates that are valid or expected to be valid based on current legislation in the individual countries as of the realisation date.

The tax reconciliation account explains the connection between the expected tax expense and the actually reported tax expense, which derives from the IFRS consolidated result before income tax, applying a 30.3% income tax rate (previous year: 30.2%). In each case, the income tax rate applied corresponds to the average domestic tax rate of va-Q-tec AG comprised of corporation tax (plus the solidarity surcharge) and trade tax. This increased slightly in 2018 due to a higher applicable trade tax rate at va-Q-tec AG.

kEUR	2018	2017
Consolidated earnings before tax	-7,776	-910
Expected income tax expense	30.3%	30.2%
Expected income tax expense (tax income)	-2,353	-275
Tax-free income	-13	-13
Non-tax-deductible operating expenses	51	54
Non-capitalised deferred taxes on temporary differences and tax loss carryforwards	1,312	148
Not recognised deferred taxes for current income / loss (IAS 12.15b)	158	-254
Effects from tax rate changes	-1	154
Utilisation of non-capitalised loss carryforwards	394	-
Reported tax expense	-30	-48
Divergent foreign tax rates	388	232
Other effects	46	-50
Reported tax expense (tax income)	-48	-52

The following overview shows to which balance sheet items the deferred tax assets and deferred tax liabilities are to be allocated:

kEUR	Deferred tax asstes 31/12/2018	Deferred tax liabilities 31/12/2018
ASSETS		
Intangible assets	-	543
Property, plant and equipment	435	681
Contract assets	-	48
Interests in subsidiaries, joint ventures and associates	-	-
Non-current financial assets	-	19
Inventories	179	33
Trade receivables	-	-
Other current financial assets	-	-
Other current non-financial assets	-	-
EQUITY AND LIABILITIES		
Non-current provisions	-	-
Non-current bank liabilities	-	2
Non-current financial liabilities	10	-
Other non-current non-financial liabilities	1,875	153
Current provisions	12	11
Current bank liabilities	-	2
Trade payables	-	-
Other current financial liabilities	-	-
Other current non-financial liabilities	883	-
Loss carryforwards	1,058	-
Total before offsetting	4,452	1,492
Offsetting	-1,492	-
As reported	2,960	-

kEUR	Deferred tax asstes 31 / 12 / 2017	Deferred tax liabilities 31 / 12 / 2017
ASSETS		
Intangible assets	-	234
Property, plant and equipment	332	37
Interests in subsidiaries, joint ventures and associates	-	-
Non-current financial assets	-	10
Inventories	56	-
Trade receivables	-	14
Other current financial assets	-	1
Other current non-financial assets	-	-
EQUITY AND LIABILITIES		
Non-current provisions	-	-
Non-current financial liabilities	16	-
Other non-current non-financial liabilities	1,637	-
Current provisions	-	-
Trade payables	-	-
Other current financial liabilities	-	-
Other current non-financial liabilities	705	-
Loss carryforwards	439	-
Total before offsetting	3,185	305
Offsetting	-305	-
As reported	2,880	-

Deferred tax assets are only recognised if such tax benefits can be realised. This entails taking into account all currently known positive and negative factors affecting future taxable results. Of the deferred tax assets, kEUR 1,058 (previous year: kEUR 684) are attributable to individual companies that have incurred tax losses in either the current reporting period or in the previous period. Given the largely positive business trend, the Group generally assumes that the capitalised deferred tax assets can be utilised. Due to the largely positive business trend, the Group generally assumes that its deferred tax assets can be utilised. Especially at the production company (va-Q-tec AG) and in the container service business (va-Q-tec Ltd (UK)), extensive investments in personnel, technology and capacities were realised in the years from 2012 to 2018. These investments are prerequisites for growth. Sustained profitability is assumed in the medium term, thereby allowing the deferred tax assets to be utilised.

Due to a conservative approach and risk assessment, tax loss carryforwards, for which no deferred tax assets have been recognised, exist within the va-Q-tec Group in a total amount of EUR 4,583 as of 31 December 2018. These tax loss carryforwards derive from subsidiaries in the UK and the USA as well as the German parent company. In 2018, only deferred tax assets on loss carryforwards in the amount of deferred tax liabilities were capitalised at the UK subsidiary.

The tax loss carryforwards in the USA can be utilised for up to 20 years, in all other companies on an unlimited basis.

4.1.11 Earnings per share

The calculation of basic (undiluted) earnings per share is based on the earnings attributable to the holders of ordinary shares and a weighted average of the number of ordinary shares in issue.

A dilution of earnings per share it is not reported in the past financial year, as the stock options were already fully exercised in 2017.

Earnings per share are as follows:

Earnings per share	2018	2017
Consolidated net result after non controlling interests (kEUR)	-7,728	-858
Weighted average number of shares	13,075,936	12,992,236
Earnings per share (in EUR)	-0.59	-0.07

Weighted average number of shares

in shares	2018	2017
Shares issued as 1 January	13,075,936	12,955,036
Retrospective effect of capital increase from company funds (share split)	-	-6,390
Effect of purchase of treasury shares	-	43,590
Weighted average number of ordinary shares (undiluted / basic) / (diluted) as of 31 December	13,075,936	12,992,236

Please refer to the remarks about equity in section 4.2.2.1 for information about the composition of issued share capital.

4.2 CONSOLIDATED STATEMENT OF FINANCIAL POSITION

4.2.1 Assets

4.2.1.1 Intangible assets

Non-current assets

KEUR	Aquisition and production cost					Balance on 31 / 12 / 2018
	Balance on 01 / 01 / 2018	Exchange rate differences	Additions	Reclassifications	Disposals	
1. Software and other purchased intangible asstes	840	-	500	5	-	1,345
2. Internally generated intangible assests	427	-	1,111	599	-	2,137
3. Internally generated intangible assests in production stage	179	-	12	179	-	12
Intangible assets, total	1,446	-	1,623	425	-	3,494

Non-current assets

KEUR	Depreciation, amortisation and impairment losses					Carrying amount		
	Balance on 01/01/2018	Exchange rate differences	Depreciation, amortisation and impairment losses in the fiscal year	Reclas-sifications	Dispo-sals	Balance on 31/12/2018	Balance on 31/12/2018	Balance on 31/12/2017
1. Software and other purchased intangible asstes	523	-	146	-	-	669	676	317
2. Internally generated intangible assests	38	-	350	-	-	388	1,749	389
3. Internally generated intangible assests in production stage	-	-	-	-	-	-	12	179
Intangible assets, total	561	-	496	-	-	1,057	2,437	885

Non-current assets

kEUR	Aquisition and production cost					Balance on 31/12/2017
	Balance on 01/01/2017	Exchange rate differences	Additions	Reclassi- fications	Disposals	
1. Software and other purchased intangible asstes	758	-	82	-	-	840
2. Internally generated intangible assests	107	-	320	-	-	427
3. Internally generated intangible assests in production stage	-	-	179	-	-	179
Intangible assets, total	865	-	581	-	-	1,446

Non-current assets

kEUR	Depreciation, amortisation and impairment losses					Carrying amount		
	Balance on 01/01/2017	Ex- change rate diffe- rences	Depre- ciation, amortisati- on and im- pairment losses in the fiscal year	Reclas- sifica- tions	Dispo- sals	Balance on 31/12/2017	Balance on 31/12/2017	Balance on 31/12/2016
1. Software and other purchased intangible asstes	415	-	108	-	-	523	317	343
2. Internally generated intangible assests	9	-	29	-	-	38	389	98
3. Internally generated intangible assests in production stage	-	-	-	-	-	-	179	-
Intangible assets, total	424	-	137	-	-	561	885	441

The additions to the internally generated intangible assets item include the company's product and software development work, which it has capitalised.

No indicators of potential impairment were identified. Accordingly, no impairment losses or reversals of impairment losses pursuant to IAS 36 were applied in either the period under review, or in the previous year.

4.2.1.2 Property, plant and equipment

Non-current assets

in TEUR	Aquisition and production cost					Balance on 31/12/2018
	Balance on 01/01/2018	Exchange rate differences	Additions	Reclassifications	Disposals	
1. Land and buildings	19,836	-	10,855	4,035	24	34,702
2. Production equipment and machinery	14,843	-	2,221	2,318	-	19,382
3. Other plant, operating and office equipment	7,323	16	1,552	341	630	8,602
4. Container fleet	26,396	-	10,517	-	3,773	33,140
5. Plant under construction	8,334	-1	1,707	-6,694	6	3,340
Property, plant and equipment, total	76,732	15	26,852	-	4,433	99,166

Non-current assets

KEUR	Depreciation, amortisation and impairment losses					Carrying amount		
	Balance on 01/01/2018	Exchange rate differences	Depreciation, amortisation and impairment losses in the fiscal year	Reclassifications	Disposals	Balance on 31/12/2018	Balance on 31/12/2018	Balance on 31/12/2017
1. Land and buildings	1,312	-	487	-	9	1,790	32,912	18,525
2. Production equipment and machinery	6,584	-	1,477	-1	-	8,060	11,322	8,260
3. Other plant, operating and office equipment	3,341	2	1,355	1	386	4,313	4,289	3,983
4. Container fleet	10,095	-	6,050	-	532	15,613	17,527	16,300
5. Plant under construction	-	-	-	-	-	-	3,340	8,334
Property, plant and equipment, total	21,332	2	9,369	-	927	29,776	69,390	55,402

Non-current assets

in TEUR	Aquisition and production cost					Balance on 31/12/2017
	Balance on 01/01/2017	Exchange rate differences	Additions	Reclassifica- tions	Disposals	
1. Land and buildings	6,636	-	14,842	-1,642	-	19,836
2. Production equip- ment and machinery	11,890	-	1,563	1,366	-24	14,843
3. Other plant, operat- ing and office equip- ment	5,275	-5	2,725	399	1,071	7,323
4. Container fleet	18,534	-	11,099	179	3,416	26,396
5. Plant under construction	3,910	-1	6,341	-1,916	-	8,334
Property, plant and equipment, total	46,245	-6	36,570	-1,614	4,463	76,732

Non-current assets

kEUR	Depreciation, amortisation and impairment losses					Carrying amount		
	Balance on 01/01/2017	Ex- change rate diffe- rences	Depre- ciation, amortisati- on and im- pairment losses in the fiscal year	Reclassi- fications	Dispo- sals	Balance on 31/12/2017	Balance on 31/12/2017	Balance on 31/12/2016
1. Land and buildings	980	-	340	-9	-	1,311	18,525	5,656
2. Production equipment and machinery	5,386	-	1,336	-169	-30	6,583	8,260	6,505
3. Other plant, operating and office equip- ment	2,526	2	1,324	65	577	3,340	3,983	2,749
4. Container fleet	5,942	-	4,391	113	350	10,096	16,300	12,591
5. Plant under construction	-	-	-	-	-	-	8,334	3,910
Property, plant and equip- ment, total	14,834	2	7,391	-	897	21,330	55,402	31,411

Assets arising from finance leases are reported under property, plant and equipment. As of 31 December 2018, these are attributable in a net carrying amount of kEUR 15,996 to the container fleet (previous year: kEUR 14,634). Technical plant and machinery includes assets from finance leases with a net carrying amount as of 31 December 2018 of kEUR 1,875 (previous year: kEUR 961).

Plant under construction reduced to kEUR 3,340 as of the balance sheet date (previous year: kEUR 8,334). This reduction derives mainly from the completion of the production building in Kölleda, and the planned redevelopment of the new location in Würzburg.

The following items of property, plant and equipment serve to collateralise financial liabilities:

- All buildings and land in Kölleda serve as collateral for long-term bank loans (land charge of kEUR 6,672).
- The AN33 property in Würzburg serves as collateral for two long-term bank loans with a land charge of kEUR 14,300.
- The "Heuchelhof" buildings and land in Würzburg serves as collateral for two long-term bank loans with a land charge of kEUR 4,280.
- The photovoltaic plant and a production plant at the Kölleda site with a carrying amount of kEUR 1,153 (previous year: kEUR 881) serve as collateral for the financing from the bank and from the leasing company respectively. Of the company's other technical plant and machinery, a proportion with a carrying amount of kEUR 8,910 (previous year: kEUR 5,607) serves as collateral for long-term bank loans.
- From the "Other equipment" category, assets amounting to kEUR 1,009 (previous year: kEUR 1,037) serve as collateral for the company's long-term bank loans.
- The block-type thermal power station under construction at the Würzburg site with a carrying amount of kEUR 569 (previous year: kEUR 0) was pledged as security for the bank's long-term financing.
- The entire container fleet deriving from sale-and-finance-leaseback transactions serve the leasing companies as collateral for the financing they grant.

No indicators of potential impairment were identified. Accordingly, no impairment losses or reversals of impairment losses pursuant to IAS 36 were applied in either the period under review or the previous year.

4.2.1.3 Investment Property

Non-current assets

kEUR	Aquisition and production cost					Balance on 31.12.2018
	Balance on 01.01.2018	Exchange rate differences	Additions	Reclassifications	Disposals	
Investment Property	1,614	-	-	-	-	1,614

Non-current assets

kEUR	Depreciation, amortisation and impairment losses					Carrying amount		
	Balance on 01/01/2018	Exchange rate differences	Depreciation, amortisation and impairment losses in the fiscal year	Reclassifications	Disposals	Balance on 31/12/2018	Balance on 31/12/2018	Balance on 31/12/2017
Investment Property	-	-	-	-	-	-	1,614	1,614

Non-current assets

kEUR	Aquisition and production cost					Balance on 31.12.2017
	Balance on 01.01.2017	Exchange rate differences	Additions	Reclassifications	Disposals	
Investment Property	-	-	-	1,614	-	1,614

Non-current assets

kEUR	Depreciation, amortisation and impairment losses					Carrying amount		
	Balance on 01/01/2017	Ex-change rate diffe-rences	Deprecia-tion, amor-tisation and impair-ment losses in the fiscal year	Reclassi-fications	Disposals	Balance on 31/12/2017	Balance on 31/12/2017	Balance on 31/12/2016
Investment Property	-	-	-	-	-	-	1,614	0

In February 2017, a plot of land including warehouse adjacent to the plot of land that was already acquired in 2016 was purchased in Würzburg to construct an integrated production and administration site there. Due to a market opportunity arising short-term, a further large plot of land along with existing production and administrative buildings was acquired in April 2017 in Alfred-Nobel-Strasse 33 in Würzburg, in order to use it to aggregate the Würzburg locations into a management, technology and logistics headquarters. The merger of the Würzburg locations was completed in 2018.

By contrast with the original planning, the undeveloped land plots acquired in 2016 are held for value appreciation purposes as of 31 December, as the company is currently examining to which future utilisation the land plots are to be allocated. For this reason, these land plots were recognised as of the balance sheet date as "investment property" with a carrying amount of kEUR 1,614. Given the prices that can be achieved at present for this type of land, the land plots' fair value corresponds to their reported carrying amount. The fair value of investment property is measured according to hierarchy Level 1 in the meaning of IFRS 13.

No indicators of potential impairment were identified. Accordingly, no impairment losses pursuant to IAS 36 were applied in the period under review.

4.2.1.4 Equity accounted investments

In September 2015, va-Q-tec AG acquired a non-controlling interest in Sumteq GmbH, Cologne, for kEUR 375, and raised it by a further kEUR 125 in November 2016. SUMTEQ is a young technology company, which is still research-oriented and develops innovative foams that are to be employed in the future as high-performance core materials for VIPs. The interest was increased in 2016, as contractually arranged, after SUMTEQ GmbH reached an important development milestone.

In July 2017, a convertible loan agreement was arranged between va-Q-tec AG, a further investor and SUMTEQ GmbH. According to the agreement, and under certain conditions, SUMTEQ can draw down kEUR 450 of loans from va-Q-tec AG within 12 months. In return, va-Q-tec AG has received the right to waive the repayment of the loan amount and to receive further shares in SUMTEQ on reduced terms instead. On the basis of the agreement, SUMTEQ initially took out a loan of kEUR 300 in January 2018. This was converted as acquisition costs including the interest accrued in the amount of kEUR 11 and an additional payment of kEUR 22, taking into account the favorable conditions in June 2018 as part of a Series B capital increase to acquire further shares in SUMTEQ, so that the interest in SUMTEQ GmbH after this and a further capital increase of SUMTEQ GmbH in December 2018 (from the conversion of a convertible loan from another shareholder) continues to amount to 18.5%. The proportional capital increase was implemented in order to avoid dilution of the share. The value of the investment of va-Q-tec AG in SUMTEQ GmbH was demonstrated by the entry of external investors at a market price above the participation value of va-Q-tec AG.

The following table summarises the financial information for SUMTEQ, adjusted for fair value on the respective acquisition date, and extrapolating the effects to the reporting date. The table also provides a reconciliation of the summarised financial information with the reported carrying amount of the va-Q-tec interest in SUMTEQ. The information in the table that is presented includes the results of SUMTEQ for the 2018 financial year as well as for the comparable 2017 period.

Financial information for Sumteq GmbH

kEUR	31 / 12 / 2018	31 / 12 / 2017
Non-current assets	1,585	1,402
Current assets	1,484	72
Non-current liabilities	-391	-420
Current liabilities	-313	-196
Net assets (100 %)	2,364	858
Group share of net assets (18,5%; previous year: 18,5%)	437	159
Goodwill	142	198
Carrying amount of equity accounted investments	580	357

Financial information for Sumteq GmbH

kEUR	2018	2017
Revenues	140	132
Net results for the period	-595	-426
Other comprehensive income	-	-
Total comprehensive income (100 %)	-595	-426
Group share of total comprehensive income (18,5%; previous year: 18,5%)	-110	-79

4.2.1.5 Other non-current and current financial assets

Other financial assets

kEUR	Non-current	Current	Balance on 31.12.2018
Fixed term deposits > 3	-	-	-
Suppliers with debit balances	-	51	51
Deposits	158	16	174
Miscellaneous	26	267	293
Group, total	184	334	518

Other financial assets

kEUR	Non-current	Current	Balance on 31.12.2017
Fixed term deposits > 3	-	9,000	9,000
Suppliers with debit balances	-	33	33
Deposits	170	2	172
Marketable securities	-	-	-
Miscellaneous	113	82	195
Group, total	283	9,117	9,400

The other financial assets are neither overdue nor impaired.

4.2.1.6 Other non-current and current non-financial assets

Other non-financial assets

kEUR	Non-current	Current	Balance on 31.12.2018
Advance payments on intangible assets	368	-	368
Advance payments on property, plant and equipment	-	-	-
Advance payments on inventories	-	42	42
VAT receivables	-	614	614
Advance payments and accrued income	194	365	559
Miscellaneous	84	52	136
Group, total	646	1,073	1,719

Other non-financial assets

kEUR	Non-current	Current	Balance on 31.12.2017
Advance payments on intangible assets	458	-	458
Advance payments on property, plant and equipment	1	-	1
Advance payments on inventories	-	12	12
VAT receivables	-	1,623	1,623
Advance payments and accrued income	175	306	481
Miscellaneous	-	163	163
Group, total	634	2,105	2,739

Besides prepayments rendered in relation to intangible assets, other non-financial assets comprise mainly claims to reimbursement of energy tax as well as claims arising from customer relationships.

4.2.1.7 Inventories

The level of inventories rose by kEUR 1,982 overall (previous year: kEUR 3,258) thanks to the higher level of business activity at va-Q-tec.

Inventories

kEUR	31 / 12 / 2018	31 / 12 / 2017
Raw materials and supplies	5,213	4,994
Work in progress	99	307
Finished products and goods	5,612	3,641
Group, total	10,924	8,942

Inventories as of 31 December 2018 include kEUR 765 of impairment losses (previous year: kEUR 356). All of the changes in valuation allowances were recognised in profit or loss under changes in inventories. No reversals of valuation allowances were applied in either the reporting year or the previous year. The carrying amount of inventories recognised at net realisable value stands at kEUR 1,925 as of 31 December 2018 (previous year: kEUR previous 912).

4.2.1.8 Trade receivables

Where a risk of default relates to a customer, specific valuation allowances are applied. The respective business unit head assesses the risk level on the basis of an analysis of specific cases.

In addition, trade receivables are written down applying the simplified model of expected credit losses for receivables in accordance with IFRS 9.

Changes in valuation allowances to trade receivables

kEUR	2018	2017
Balance at 1 January	46	31
Effects due to to new accounting standard IFRS 9	45	-
Balance at 1 January after application of new accounting standards	91	31
Consumption	-	-
Release	41	-
Addition	84	15
Balance at 31 December	134	46

A total of kEUR 106 of the impairments shown are impairments on receivables from contracts with customers. Lifetime expected credit losses of trade receivables amounted to kEUR 29 as of the balance sheet date.

For further information about the trade receivables, please refer to the remarks concerning financial instruments (section 4.4) and risk management (section 4.6).

4.2.1.9 Contract assets

In the financial year under review, the company recognized contract assets as follows in addition to trade receivables for contract costs (contract fulfilment costs):

Assets from contracts with customers

kEUR	31/12/2018	31/12/2017
Assets from contracts with customers	157	-

No significant changes occurred to the balances of contract assets. No indications existed of impairment to the capitalized assets on the balance sheet date. Due to the small number of individual circumstances, no value adjustment had to be made due to significant expected credit losses.

4.2.1.10 Cash and cash equivalents

The cash and cash equivalents comprise cash balances as well as cash accounts and short-term deposits at banks that had a remaining term of up to three months on addition.

kEUR	31/12/2018	31/12/2017
Current account balances	12,141	5,189
Savings account balances	10	10
Cash balances	3	2
Group, total	12,154	5,201

4.2.2 Equity and liabilities

4.2.2.1 Equity

The consolidated statement of changes in equity provides a separate presentation of the changes in equity and comprehensive income. The components of comprehensive income are presented on an aggregated basis in the statement of comprehensive income.

Issued share capital

The share capital of the parent entity va-Q-tec AG is reported as the issued share capital in the consolidated financial statements. The share capital of va-Q-tec AG amounts to kEUR 13,090 and is divided into 13,089,502 ordinary no par registered shares. The share capital is fully paid in. The shares are listed in the "Prime Standard" stock market segment of the Frankfurt Stock Exchange. All of the shares carry the same rights and obligations. Each share grants one vote at the general meeting of shareholders. Exceptions to this are shares that the company itself holds (treasury shares), from which no rights accrue to va-Q-tec AG, such as the right to vote at the general meeting of shareholders. As of the balance sheet date, va-Q-tec AG held 13,566 treasury shares. For this reason, the company's issued capital amounts to 13,075,936 shares as of the balance sheet date.

	Number of shares	Nominal value kEUR
Ordinary shares	13,089,502	13,090
Balance on 31.12.2018	13,089,502	13,090
Ordinary shares	13,089,502	13,090
Balance on 31.12.2017	13,089,502	13,090

Approved share capital

Based on an AGM resolution of 31 May 2016, the Management Board is authorised to increase the share capital, with Supervisory Board assent, once or on several occasions until 30 May 2021 against cash and / or non-cash capital contributions by a total of up to kEUR 4,278, whereby shareholders' subscription rights can be excluded.

Contingent capital

The company's share capital was unchanged in 2018. The contingent capital serves to grant shares on the exercise of conversion and warrant rights, or in the satisfaction of conversion or warrant obligations, to the holders or creditors of convertible bonds, bonds with warrants, participation rights and / or participation bonds, or a combination of such instruments, based on the authorisation resolution of the AGM of 31 May 2016. An increase in the share capital from the contingent capital was not implemented in 2018.

Treasury shares

No changes occurred to treasury shares in 2018 and the number remains at 13,566 shares.

Additional paid-in capital

Additional paid-in capital mainly comprises shareholders' cash and non-cash capital contributions. Additional paid-in capital amounted to kEUR 46,158 as of the balance sheet date (previous year: kEUR 46,158).

Consolidated total other comprehensive income

Consolidated total other comprehensive income includes the reserve arising from the foreign currency translation of the foreign subsidiaries' financial statements.

Retained earnings

Retained earnings mainly comprise cumulative profits carried forward, differential amounts arising from the first-time application of IFRS, and the share of periodic consolidated earnings that is attributable to the owners of va-Q-tec AG.

4.2.2.2 Non-current and current provisions

Provisions

kEUR	Warranties	Archiving	Litigation costs	Other	Total
Balance on 01 / 01 / 2018	-	17	25	35	77
Addition	35	-	45	9	89
Utilisation	-	-	12	-	12
Release	-	-	13	-	13
Balance on 31 / 12 / 2018	35	17	45	44	141
Non-current	35	17	-	27	79
Current	-	-	45	17	62

Provisions

kEUR	Warranties	Archiving	Litigation costs	Other	Total
Balance on 01 / 01 / 2017	-	13	26	16	55
Addition	-	4	25	35	64
Utilisation	-	-	26	12	38
Release	-	-	-	4	4
Balance on 31 / 12 / 2017	-	17	25	35	77
Non - current	-	17	-	22	39
Current	-	-	25	13	38

Provisions for litigation costs include the expected costs from both current and pending litigation. The other provisions are mainly provisions for pending losses arising from sales of products to customers where such sales have failed to cover their costs, and provisions for open services by suppliers.

The company refrained from discounting non-current provisions for reasons of materiality.

4.2.2.3 Non-current and current bank borrowings

The bank borrowings consist of long-term investment loans to finance land, buildings and plants, and short-term current account overdrafts to finance current assets.

Non-current investment loans are secured through land charges and the collateral assignment of machinery and fixtures. Most of the long-term loans have terms of between 15 and 20 years with fixed interest rates. The risk arising from variable-interest loans was partly hedged through interest-rate swaps. Hedge accounting according to IFRS 9 is not applied in this context.

A multibank agreement was concluded with the house banks of va-Q-tec AG in September 2016, which bundles and expands the existing overdrafts and creates a unified and scalable facility for the short-term financing of current assets. This financing facility amounts to kEUR 11,000 and covers the overdrafts of both the parent company and the UK subsidiary. The contract was extended in March 2018 on different terms and is currently limited until 31 December 2020.

The talks initiated with the syndicate under the multi-bank agreement at the end of the first half of the year with the aim of adjusting the terms and conditions and covenants to the requirements of a company in a strong investment phase and with initiatives in advance of growth, such as is the case with va-Q-tec, have since been successfully completed after the balance sheet date. As a result, new conditions have been negotiated according to which va-Q-tec will in future make its inventories available to the syndicate banks as collateral for the credit lines and commit itself to maintaining a minimum equity ratio of 30%.

4.2.2.4 Non-current and current financial liabilities

Financial liabilities

kEUR	Non-current	Current	Balance on 31 / 12 / 2018
Finance leases	5,942	2,112	8,054
Derivative financial instruments	35	-	35
Deferred liabilities for outstanding invoices	-	2,498	2,498
Accrued liability for financial auditors	-	195	195
Debtors with credit balance	-	45	45
Miscellaneous	837	23	860
Group, total	6,814	4,873	11,687

Financial liabilities

kEUR	Non-current	Current	Balance on 31/12/2017
Finance leases	3,793	3,323	7,116
Derivative financial instruments	52	-	52
Deferred liabilities for outstanding invoices	-	2,573	2,573
Accrued liability for financial auditors	-	233	233
Debtors with credit balance	-	32	32
Miscellaneous	104	346	450
Group, total	3,949	6,507	10,456

The lease liabilities arise from property, plant and equipment capitalised by way of a finance lease. These primarily concern leases to finance the UK subsidiary's container fleet assets, which are financed chiefly through sale-and-finance-leaseback transactions, as well as production plants at the locations in Kölldeda and Würzburg. The leased assets are reported under non-current assets.

The table below presents the lease payments due in the future, with their present values.

31/12/2018 kEUR	Future minimum lease payments	Interest	Present value (finance lease liabilities)
Up to one year	2,368	256	2,112
Longer than one year and up to five years	6,128	319	5,809
Over five years	134	1	133
Total minimum lease payments	8,630	576	8,054

31/12/2017 kEUR	Future minimum lease payments	Interest	Present value (finance lease liabilities)
Up to one year	3,612	288	3,324
Longer than one year and up to five years	4,042	249	3,793
Over five years	-	-	-
Total minimum lease payments	7,654	537	7,117

The derivative financial instruments position includes the negative market values from interest-rate swaps to hedge variable-interest non-current bank borrowings in an amount of kEUR 35 (previous year: kEUR 52).

4.2.2.5 Other non-current and current non-financial liabilities

Non-financial liabilities

kEUR	Non-current	Current	Balance on 31.12.2018
Special items for grants	4,100	436	4,536
Special items for deferred container profits	5,210	2,866	8,076
Employee bonuses	-	308	308
Liabilities for unutilised vacation	-	174	174
Prepayments received for orders	-	276	276
Liabilities from other taxes	-	371	371
VAT liabilities	-	16	16
Miscellaneous other non-financial liabilities	-	478	478
Other personnel liabilities	-	348	348
Liabilities for social insurances	-	60	60
Miscellaneous	-	70	70
Group, total	9,310	4,925	14,235

Non-financial liabilities

kEUR	Non-current	Current	Balance on 31.12.2017
Special items for grants	3,560	423	3,983
Special items for deferred container profits	4,878	2,272	7,150
Employee bonuses	-	415	415
Liabilities for unutilised vacation	-	163	163
Prepayments received for orders	-	271	271
Liabilities from other taxes	-	219	219
VAT liabilities	-	10	10
Miscellaneous other non-financial liabilities	-	392	392
Other personnel liabilities	-	267	267
Liabilities for social insurances	-	76	76
Miscellaneous	-	49	49
Group, total	8,438	4,165	12,603

Government grants

In 2018, the company received an investment grant of kEUR 838 from the Government of Lower Franconia to invest in the new site at Würzburg (previous year: kEUR 795). The investment grants serve the construction investments, machinery and facilities as well as the overall investment for the building in Würzburg. In addition, the company received investment grants of kEUR 826 from the Thüringische Aufbaubank for the construction, machinery and equipment of the new production hall in Kölleda. These grants do not need to be repaid as long as the conditions are complied with, as expected.

Special item for grants

kEUR	2018	2017
Balance at 1 January	3,983	3,620
Addition	967	795
Release	414	432
Neutral release	-	-
Balance at 31 December	4,536	3,983
- of which non-current	4,100	3,560
- of which current	436	423

Deferred income from sale-and-finance-leaseback transactions

In 2018, containers worth kEUR 6,724 (previous year: kEUR 6,726), deployed as part of the container fleet, were sold via sale-and-finance-leaseback transactions. Profit margins in excess of manufacturing costs arising from the sale of containers are recognised as deferred income under liabilities (special item for deferred container profits). This deferred income will be released to other operating income over the containers' respective five-year useful life.

4.2.2.6 Trade payables

Trade payables are recognised at amortised cost. Their recognised values essentially correspond to their market values; they are due within one year.

4.2.2.7 Contractual liabilities

In the financial year under review, the company accounted for obligations arising from contracts with customers as follows:

Liabilities from contracts with customers

kEUR	31/12/2018	31/12/2017
Liabilities from contracts with customers	19	-

Contract liabilities include in particular obligations from advance payments received and provisions for customer bonuses.

The following table shows which of the revenues recognised at the start of the period from the first-time adoption of IFRS 15 were included in the balance of contract liabilities at the beginning of the period and the recognised revenues from performance obligations that were settled in earlier periods.

kEUR	31/12/2018	31/12/2017
Revenue recognised that was included in the contract liability balance at the beginning of the period	265	-
Revenue recognised from performance obligations satisfied (or partially satisfied) in previous periods	2	-

4.3 CONSOLIDATED STATEMENT OF CASH FLOWS

The cash flow statement shows how the cash position has changed at va-Q-tec over the course of the reporting year due to cash inflows and outflows. Pursuant to IAS 7 (Statement of Cash Flows), a distinction is drawn between cash flows from operating, investing and financing activities. The change in liquid assets due to changes in exchange rates is presented separately.

The cash and cash equivalents in the cash flow statement comprise all cash positions reported on the statement of financial position, as well as cash accounts and short-term deposits at banks that have a remaining term of up to three months on addition, are subject to only minor value fluctuations, and their availability is not restricted.

The cash inflows and outflows from investing and financing activities are presented in accordance with the direct method. The cash inflows and cash outflows from investing activities in the current business comprise not only additions to intangible assets, disposals and additions to property, plant and equipment, but also the release of the term deposits with a term of between six and twelve months, which reflected the initial investment of the IPO proceeds, as they were utilised to finance the capital expenditures. Financing activities include cash inflows from real estate financing and cash outflows from the repayment of bank borrowings, as well as outgoing payments for finance leases. Cash inflows from sale-and-finance-leaseback transactions as well as investment allowances and grants received are shown within separate items within cash flows from financing activities.

By contrast, cash inflows and cash outflows from operating activities are derived indirectly, starting from the consolidated net profit. To this end, the consolidated net profit is adjusted to reflect non-cash expenses and income, primarily depreciation, amortisation, impairment losses, deferred tax, the release of special items, the measurement of financial instruments, the fair value measurement of the loan assumed (in 2017), and changes in provisions. These adjustments are supplemented by changes in other assets and liabilities, as well as working capital.

Investing and financing processes that have not resulted in a change in cash and cash equivalents are not reflected in the cash flow statement.

Reconciliation of liabilities from financing activities in accordance with IAS 7

kEUR	Carrying amount	Cash transactions	Non-cash transactions			Carrying amount
	31 / 12 / 2017		Currency translation	Change in valuation	Other	31 / 12 / 2018
Bank borrowings	14,104	20,023	-	-	5	34,132
Finance leases	7,117	937	-	-	-	8,054
Financial liabilities	21,221	20,960	-	-	5	42,186

kEUR	Carrying amount	Cash transactions	Non-cash transactions			Carrying amount
	31 / 12 / 2016		Currency translation	Change in valuation	Other	31 / 12 / 2017
Bank borrowings	7,583	351	-	-	6,170	14,104
Finance leases	7,877	-760	-	-	-	7,117
Financial liabilities	15,460	-409	-	-	6,170	21,221

The sharp increase in bank borrowings is attributable to the fact that investments in land and real estate, which were initially made largely from the company's own funds, have since been financed. In the previous year, the other changes are attributable to the assumption of an existing loan liability in an amount of kEUR 6,170 in connection with the acquisition of the land plot complex in Würzburg (non-cash).

4.4 FINANCIAL INSTRUMENTS

The following table presents financial instruments with their carrying amounts and fair values, analysed by IFRS 9 measurement categories (previous year: IAS 39). All of the fair values are allocated to one of the measurement levels of the fair value hierarchy. Where no corresponding allocation has occurred, it is assumed that the carrying amount corresponds to fair value. This relates mainly to trade receivables, cash and cash equivalents, miscellaneous current financial assets, trade payables and miscellaneous current financial liabilities, all of which have short remaining terms.

Section 1.2 "Basis of preparation of the financial statements" provides a definition of the fair value hierarchy levels. All allocations to levels are reviewed at the end of the reporting period. No reclassifications between levels occurred in either the reporting year or the previous year.

The following table shows the carrying amounts and fair values of financial assets and financial liabilities, including their levels in the fair value hierarchy.

Values by measurement categories 2018

kEUR	Meas- urement category as per IFRS 9/ IAS 17	Carrying amount		Fair value	Of which: fair value		
		Aquisition cost	Fair value		Level 1	Level 2	Level 3
		31/12/2018	31/12/2018	31/12/2018			
Financial Assets							
Trade accounts receivables	AC	7,557	-	7,557	-	-	-
Other financial assets	AC	518	-	513	-	-	-
Cash and cash equivalents	AC	12,154	-	12,154	-	-	-
Total		20,229	-	20,224			
Financial liabilities							
Bank borrowings	AC	34,132	-	34,936	-	34,936	-
Trade payables	AC	4,593	-	4,593	-	-	-
Other financial liabilities		-	-	-	-	-	-
of which: finance lease liabilities	IAS 17	8,054	-	8,125	-	8,125	-
of which: derivative financial instruments without hedging relationship	FVtPL	-	35	35	-	35	-
of which: miscellaneous other financial liabilities	AC	3,598	-	3,582	-	3,582	-
Total		50,377	35	51,271			

Of which aggregated by measurement category as per IFRS 9

kEUR		Carrying amount	Fair value
Amortised Cost (asset)	AC	20,229	20,224
Amortised Cost (liability)	AC	42,323	43,111
At fair value through P&L (liability)	FVtPL	35	35

Values by measurement categories 2017

kEUR	Meas- urement category as per IAS 39 / IAS 17	Carrying amount		Fair value	of which: fair value		
		Acquisition cost	Fair value	31/12/2017			
					31/12/2017	31/12/2017	Level 1
Financial Assets							
Trade accounts receivables	LaR	8,005	-	8,005	-	-	-
Other financial assets							
of which: held to maturity	HtM	9,115		9,115	-	-	-
of which: miscellaneous financial assets	LaR	286	-	286	-	-	-
Cash and cash equivalents	LaR	5,201	-	5,201	-	-	-
Total		22,607	-	22,607			
Financial liabilities							
Bank borrowings	FLAC	14,104	-	14,320	-	14,320	-
Trade payables	FLAC	5,244	-	5,244	-	-	-
Other financial liabilities							
of which: finance lease liabilities	IAS 17	7,117	-	7,338	-	7,338	-
of which: derivative financial instruments without hedging relationship	FVtPL	-	52	52	-	52	-
of which: miscellaneous other financial liabilities	FLAC	3,287	-	3,260	-	3,260	-
Total		29,752	52	30,214			

Of which aggregated by measurement category as per IAS 39

kEUR		Carrying amount	Fair value
Loans and Receivables	LaR	13,492	13,492
Held to Maturity	HtM	9,115	9,115
Financial liabilities measured at amortised cost	FLAC	22,635	22,824
At fair value through P&L (liability)	FVtPL	52	52

The fair value of Level 2 interest-bearing bank borrowings and finance lease liabilities is derived as the present value of the expected future cash flows. They are discounted at market interest rates on the balance sheet date. In the case of variable interest liabilities, the carrying amounts generally correspond to fair values.

The fair value of Level 2 interest-rate swaps is calculated by discounting expected future cash flows on the basis of market interest rates valid on the respective reporting date for the contracts' remaining terms.

4.5 NET RESULT FROM FINANCIAL INSTRUMENTS

The net result relating to financial instruments as presented in the consolidated income statement is composed as follows:

2018 net results from

Measurement category as per IFRS 9/IAS 17	Interest income	Interest expense	Impairment losses	Reversals of impairment losses	Currency translation
Amortised Cost (asset)	-	-	-	-	46
At fair value through P&L	-	-	-	18	-
Amortised Cost (liability)	13	-521	-	-	28
IAS 17	-	-338	-	-	-
Other	-	-	-	-	2
Total	13	-859	-	18	76

2017 net results from

Measurement category as per IAS 39/IAS 17	Interest income	Interest expense	Impairment losses	Reversals of impairment losses	Currency translation
LaR	-	-	-	-	-405
FVtPL	-	-	-	27	-
FLAC	360	-377	-	-	-45
IAS 17	-	-523	-	-	-
Other	-	-	-	-	-5
Total	360	-900	-	27	-455

4.6 RISK MANAGEMENT

As a company active internationally, va-Q-tec is exposed to credit, liquidity, and market risks during the course of its ordinary business activities. Market risks particularly result from changes to exchange rates and interest rates. Financial risk management measures are designed to manage and limit these market risks within the scope of operating and financial activities. Depending on the risk assessment, derivative hedging instruments are deployed, although generally only cash flow risks are hedged. Derivative financial instruments are used for operational hedging purposes, and are consequently not held for trading. Hedge accounting according to IFRS 9 is not applied in this context. To reduce default risk, hedging transactions are entered into only with financial institutions with excellent credit ratings.

The basic principles of the financial policy are regularly controlled by the Management Board and monitored by the Supervisory Board.

Credit risks

Credit risk is the risk that business partners will not be able to meet their contractual obligations, and that the va-Q-tec Group will incur a financial loss as a consequence. In the course of its operating activities, the Group is exposed to default risk, especially in the case of trade receivables, as well as risks as part of its financing activities, including its derivative financial instruments.

The credit risk from trade receivables is managed at the company level (i.e. locally), and monitored constantly. Identifiable default risks applying to financial assets are reflected through impairment losses.

The maximum credit risk on the financial assets corresponds to the carrying amount recognised on the statement of financial position. The maximum credit risk stood at kEUR 8,075 as of the 31 December 2018 reporting date (previous year: kEUR 17,405). Thanks to the investments realised in the financial year under review, the reported credit risk has reduced accordingly, as most of the short-term deposits acquired in the previous year were utilised for the investments. The acquired short term deposits position amounted to kEUR 0 as of the financial year-end (previous year: kEUR 9,000).

In accordance with IFRS 9, valuation allowances for expected credit losses ("expected loss model") are recognised for all financial assets measured at amortized cost and for debt instruments measured at fair value through equity.

In principle, IFRS 9 provides for a three-stage procedure for this purpose. Risk provisions are formed either on the basis of the expected 12-month credit losses (stage 1) or on the basis of the expected credit losses over the term if the credit risk has increased significantly since initial recognition (stage 2) or if an impaired credit quality is determined (stage 3). For the majority of financial assets, including trade receivables that do not contain a significant financing component, the simplified procedure is applied. In this context, expected credit losses are always determined over the entire term of the financial instruments.

The application of the simplified procedure results in the following default risk classifications for the financial assets:

kEUR	Trade receivables	Contract assets	Other financial assets	Cash and cash equivalents
credit risk rating grade 1	-	-	334	12,154
credit risk rating grade 2	7,520	157	184	-
credit risk rating grade 3	66	-	-	-
Total	7,586	157	518	12,154

Individual value adjustments are made in the event of corresponding individual circumstances and risk indications. Both historical data, such as historical default rates, and forward-looking information, such as individual and macroeconomic conditions, are included in determining the amount of valuation allowances. For the initial determination of the default rates, data from external providers was utilised, and also determined based on actual defaults. In future, this information will be determined solely on the basis of expected defaults.

The default of a counterparty results in the value adjustment of all open positions with the counterparty. In this context, the default is determined on the basis of an individual assessment, for example in the event of conspicuous changes in payment behaviour or insolvency filing. A financial instrument is derecognised when a reasonable evaluation cannot assume that a financial asset will be recoverable in whole or in part, for example after insolvency proceedings have ended or subject to other local conditions.

The age structure of trade receivables to which no individual valuation allowances have been applied is shown for the previous year in the following table:

Trade receivables

kEUR	31/12/2017
Not overdue	5,341
Less than 30 days	1,486
30-90 days	806
91-360 days	364
More than 360 days	3
Unimpaired receivables	8,000
Carrying amount of impaired receivables	5
Group, total	8,005

For the unimpaired trade receivables, value adjustments were made in accordance with IFRS 9 in the amount of the expected credit losses of kEUR 29. The recoverability of receivables that are not overdue is regarded as very high. This assessment is due, above all, to the long-standing business relationships with most buyers, and our customers' credit ratings. The other financial assets are neither overdue nor impaired.

Due to the relatively high concentration of sales revenue on a few major customers, the sales function focuses to a great extent on acquiring new customers in all market areas addressed by va-Q-tec.

Liquidity risks

Liquidity risk i.e. the risk that va-Q-tec is unable to meet its financial obligations, is limited through the creation of the requisite financial flexibility, and through an effective cash management system. To manage its future liquidity position, va-Q-tec employs corresponding liquidity planning instruments. No liquidity bottlenecks were identifiable as of the reporting date. Unutilised overdraft lines existed were available to a sufficient extent.

Specific liquidity risks for the Group arise from the relatively high proportion of individual major customers with which no long-term contracts exist, and such customers' theoretical default risks or risks of departure, as well as from potential repayment obligations to banks given non-compliance with covenants, and in relation to development agencies, given non-compliance with subsidy terms. The management steers these potential liquidity risks through targeted commercial, financial and organisational measures.

The following lists show the contractually agreed, undiscounted interest and principal payments for the non-derivative and derivative financial liabilities as per IFRS 7. If the maturity date is not fixed, the liability is related to the earliest due date. Interest payments with variable interest yield are taken into account according to the terms applicable as of the reporting date. We mainly assume that the cash outflows will not occur earlier than shown.

The following table includes the repayment amount (including assumed future interest payments to be rendered) at the respective stated maturity date:

2018 | Repayment amounts on respective due date

kEUR	Other financial liabilities					Total
	Bank borrowings	Finance lease liabilities	Derivative financial instruments	Miscellaneous other financial liabilities	Trade payables	
2019	9,972	2,368	16	2,807	4,572	19,735
2020	3,217	2,154	10	836	-	6,217
2021	3,100	1,811	4	-	-	4,915
2022	2,793	1,463	-	-	-	4,256
2023	1,842	701	-	-	-	2,543
2024 and after	17,403	134	-	-	-	17,537
Total 31/12/2018	38,327	8,631	30	3,643	4,572	55,203

2017 | Repayment amounts on respective due date

kEUR	Other financial liabilities					Total
	Bank borrowings	Finance lease liabilities	Derivative financial instruments	Miscellaneous other financial liabilities	Trade payables	
2018	3,186	3,612	23	3,184	5,244	15,249
2019	1,251	1,429	18	103	-	2,801
2020	1,238	1,216	12	-	-	2,466
2021	1,150	872	6	-	-	2,028
2022	872	524	1	-	-	1,397
2023 and after	8,029	-	-	-	-	8,029
Total 31/12/2017	15,726	7,653	60	3,287	5,244	31,970

Collateral in the form of land charges on land and buildings at the Kölleda site and at the new headquarters in Würzburg, collateral assignments of machinery and installation items, as well as collateral for finance leases in the form of production plants exist for va-Q-tec loans and bank overdrafts utilised as of the reporting date. Above and beyond this, the UK subsidiary's containers, which are leased as part of the container fleet, are assigned as collateral for finance leases. The current account lines used under the multi-bank agreement are not collateralised as of the balance sheet date. However, va-Q-tec AG has undertaken to maintain a minimum equity ratio.

Currency risks

Foreign currency exchange rate risk is the risk that the fair value or future cash flow of a financial instrument will fluctuate due to changes in foreign currency exchange rates. va-Q-tec is exposed to this risk mainly from its operating activities (if revenues and/or expenses denominated in a currency differing from the functional currency of the respective Group company). Where financially feasible, va-Q-tec hedges its significant exchange rate risks by employing forward currency transactions. The hedging of value fluctuations of future cash flows from expected transactions involves planned costs denominated in foreign currency. Differences caused by exchange rates when financial statements are translated into the Group currency are not taken into consideration.

For the disclosure of market risks, IFRS 7 requires sensitivity analyses that show how changes to relevant risk variables (e.g. exchange rates, interest rates) might affect earnings and equity. To gauge periodic effects, a potential change in the risk variables is applied to the financial instruments position on the reporting date. This approach assumes that this year-end position is a representative for the financial year concerned.

The following sensitivity analysis is based on USD, GBP, CHF and KRW as the significant foreign currencies for the va-Q-tec Group. The analysis is based on the status as of 31 December 2018 of the positions of receivables, liquid assets and liabilities denominated in USD, GBP, CHF and KRW. Effects on consolidated results and equity were calculated that are derived from the simulated USD, GBP, CHF and KRW exchange rates as of the reporting date.

The following currency scenarios arise: If the value of the USD had been 10% higher against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 269 (previous year: kEUR 208) higher, and consolidated equity would have been kEUR 269 (previous year: kEUR 208) higher. If the value of the USD had been 10% lower against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 269 (previous year: kEUR 208) lower, and consolidated equity would have been kEUR 269 (previous year: kEUR 208) lower. If the value of the GBP had been 10% higher against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 78 (previous year: kEUR 107) higher, and consolidated equity would have been kEUR 78 (previous year: kEUR 107) higher. If the value of the GBP had been 10% lower against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 78 (previous year: kEUR 107) lower, and consolidated equity would have been kEUR 78 (previous year: kEUR 107) lower. If the value of the CHF had been 10% higher against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 76 (previous year: kEUR 9) higher, and consolidated equity would have been kEUR 76 (previous year: kEUR 9) higher. If the value of the CHF had been 10% lower against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 76 (previous year: kEUR 9) lower, and consolidated equity would have been kEUR 76 (previous year: kEUR 9) lower. If the value of the KRW had been 10% higher against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 15 (previous year: kEUR 22) higher, and consolidated equity would have been kEUR 15 (previous year: kEUR 22) higher. If the value of the KRW had been 10% lower against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 15 (previous year: kEUR 22) lower, and consolidated equity would have been kEUR 15 (previous year: kEUR 22) lower.

Interest rate risks

Interest rate risk is the risk that the fair value or future cash flow of a financial instrument will fluctuate due to changes in market interest rates. The risk of fluctuations in market interest rates to which the Group is exposed results primarily from variable rate loans and overdrafts. To a minor extent, the Group manages its interest rate risk in relation to financial liabilities through employing interest rate derivatives in the form of interest rate swaps for long-term loans, whereby no hedge accounting is applied.

Interest rate risks according to IFRS 7 are calculated by means of a sensitivity analysis. The following sensitivity analysis includes both the effects on the net interest result due to variable interest financial instruments existing on the respective reporting date, and the value changes of the interest-rate swaps that have been concluded. The effects of variable market interest rates on consolidated results in equity were calculated.

If the market interest-rate level as of the reporting date had been 100 basis points higher, the consolidated profit/loss would have been kEUR 13 lower (previous year: kEUR 12 lower), and consolidated equity would have been kEUR 13 lower (previous year: kEUR 12 lower). If the market interest-rate level as of the reporting date had been 100 basis points lower, the consolidated profit/loss would have been kEUR 13 higher (previous year: kEUR 7 higher), and consolidated equity would have been kEUR 13 higher (previous year: kEUR 7 higher).

Capital management

The primary objective of capital management at va-Q-tec is the continuous and long-term enhancement and growth of the company's value, and the securing of its liquidity. A high credit rating and a good equity ratio represent important building blocks to this end. The Group manages its capital structure and implements adjustments while taking changes in economic conditions into account.

va-Q-tec regularly monitors its capital on the basis of various key figures. The equity ratio represents an important key indicator in this context. The Management Board has set a minimum 40% equity ratio as the medium-term target. The equity ratio stood at 41% as of the balance sheet date (previous year: 55%), thereby lying in the 2018 financial year above the target set by the Management Board. According to current plans, it is not assumed that the company's equity ratio will fall below 40% in the coming years.

With the IPO and current account overdrafts available as part of the multibank agreement arranged in September 2016, va-Q-tec AG has created a solid liquidity basis for the next years' business planning.

As of 31 December 2018, financial liabilities of the parent company va-Q-tec AG in amount of kEUR 1,595 (previous year: kEUR 2,094) were subject to financial covenants relating to the separate and consolidated financial statements of va-Q-tec AG. The corresponding loan agreements were adjusted to the company's situation in the financial year under review with regard to their covenant regulations and stipulate a minimum equity ratio of 40% in addition to land charges and other collateral. As in the previous year, this covenant was complied with. The talks initiated with the syndicate under the multi-bank agreement at the end of the first half of the year with the aim of adjusting the terms and conditions and covenants to the requirements of a company in a strong investment phase and with initiatives in advance of growth, such as is the case with va-Q-tec, have since been successfully completed after the balance sheet date. As a result, new conditions have been negotiated according to which va-Q-tec will in future make its inventories available to the syndicate banks as collateral for the credit lines and commit itself to maintaining a minimum equity ratio of 30%. Financial liabilities of va-Q-tec Ltd (UK) from finance leases of kEUR 6,404 as of 31 December 2018 (previous year: kEUR 5,729) have been subject to a covenant based on the separate financial statements of va-Q-tec Ltd (UK). This covenant requires equity as recognised on the balance sheet of at least kEUR 2,500 as of the balance sheet date. This covenant was met as of the balance sheet date, as in the previous year.

5 OTHER DISCLOSURES

5.1 SEGMENT INFORMATION

For the purpose of segment reporting, the activities of the va-Q-tec Group are separated by operating segments based on the regulations of IFRS 8 (Operating segments). The structure is based on internal management and reporting on the basis of legal entities. The va-Q-tec Group operates in the three reporting segments of "va-Q-tec AG", "va-Q-tec Ltd (UK)" and "Other".

The activities of the German and UK reporting segments are unchanged compared with the previous year. In the Other reporting segment, the two newly founded subsidiaries in Uruguay and Singapore strengthen local presence in their respective regions. A fulfilment centre (conditioning and cleaning of rental boxes) is operated in Switzerland. In addition to purchasing and sales services, the Korean subsidiary also generates independent third-party sales for the Group. In addition to sales services, the subsidiaries in the USA and Japan generate independent third-party sales.

The reporting and reporting management of the individual segments at va-Q-tec is directly according to IFRS. Insofar they are material, the supply and service relationships between the reporting segments are presented on a consolidated basis.

Starting from the total sum of the reporting segments, intragroup transactions are eliminated in the "Consolidation" column, particularly taking into account effects from the sale-and-finance-leaseback transactions.

Segment reporting FY 2018

	va-Q-tec AG	va-Q-tec Ltd. (UK)	Other	Operating divisions, total	Conso- lidation	Group
kEUR	IFRS	IFRS	IFRS			
External revenue	33,650	14,737	2,321	50,708	-	50,708
Internal revenue	10,915	1,307	1,768	13,990	-13,990	-
Total sales revenue	44,565	16,044	4,089	64,698	-13,990	50,708
At a point in time	40,973	42	3,507	44,522	-12,200	32,322
Over time	3,592	16,002	582	20,176	-1,790	18,386
Total income	49,294	16,381	4,109	69,784	-8,420	61,364
Cost of materials and services	-20,752	-7,194	-1,736	-29,682	3,960	-25,722
Personnel expenses	-17,263	-2,390	-1,011	-20,664	261	-20,403
Other operating expenses	-10,699	-2,463	-1,309	-14,471	2,259	-12,212
EBITDA	580	4,334	53	4,967	-1,940	3,027
Depreciation, amortisation and impairment losses	-3,565	-6,908	-56	-10,529	665	-9,864
EBIT	-2,986	-2,574	-3	-5,563	-1,275	-6,838
Result from equity accounted investments	-	-	-	-	-110	-110
Financial income	267	-	-	267	-236	31
Financial expenses	-497	-575	-23	-1,095	236	-859
EBT	-3,216	-3,149	-26	-6,391	-1,385	-7,776
FY 2018 investments	17,202	15,928	141	33,271	-4,797	28,474
Assets 31/12/2018	107,218	27,515	2,530	137,262	-27,115	110,147
Non-current assets 31/12/2018	53,003	20,621	322	73,946	-2,118	71,828
Equity accounted investments 31/12/2018	-	-	-	-	580	580
Liabilities 31/12/2018	46,224	23,483	2,281	71,988	-7,100	64,888
FY 2018 employees ¹	390	37	17	444	-	444

1) The number of employees includes members of the Management Board and trainees (2018: 16; previous year: 17)

Segment reporting FY 2017

	va-Q-tec AG	va-Q-tec Ltd. (UK)	Other	Operating divisions, total	Conso- lidation	Group
kEUR	IFRS	IFRS	IFRS			
External revenue	32,613	13,987	326	46,926	-	46,926
Internal revenue	10,561	1,414	1,078	13,053	-13,053	-
Total sales revenue	43,174	15,401	1,404	59,979	-13,053	46,926
Total income	47,354	15,867	1,416	64,637	-7,190	57,447
Cost of materials and services	-20,615	-6,273	-152	-27,040	2,364	-24,676
Personnel expenses	-13,297	-2,044	-353	-15,694	78	-15,616
Other operating expenses	-7,702	-2,894	-897	-11,493	1,548	-9,945
EBITDA	5,740	4,656	14	10,410	-3,200	7,210
Depreciation, amortisation and impairment losses	-2,990	-4,908	-13	-7,911	383	-7,528
EBIT	2,750	-252	1	2,499	-2,817	-318
Result from equity accounted investments	-	-	-	-	-79	-79
Financial income	549	-	-	549	-162	387
Financial expenses	-354	-690	-18	-1,062	162	-900
EBT	2,945	-942	-17	1,986	-2,896	-910
FY 2017 investments	25,400	16,467	216	42,083	-4,934	37,149
Assets 31/12/2017	90,718	24,742	934	116,394	-20,902	95,493
Non-current assets 31/12/2017	39,202	18,359	225	57,786	-1,499	56,287
Equity accounted investments 31/12/2017	-	-	-	-	357	357
Liabilities 31/12/2017	26,239	21,049	714	48,002	-5,503	42,501
FY 2017 employees	317	32	9	358	-	358

In the 2018 financial year, va-Q-tec AG had one customer accounting for more than 10% of total consolidated revenue. Sales revenues of EUR 6,356 (previous year: kEUR 5,765) were generated with these customers.

The revenues are distributed geographically as follows:

kEUR	2018	2017
Germany	17,833	15,386
Rest of European Union	14,620	15,949
Other	18,255	15,591
Group, total	50,708	46,926

The allocation of revenues with external customers to a geographic region is based on the customer's location. The geographic allocation of non-current assets is based on the domicile of the asset's owner, and is shown in the segment reporting according to legal entities presented above.

The allocation of revenues to Products, Systems and Services is as follows: Sales revenues of kEUR 20,122 (previous year: kEUR 18,031) were generated with Products (vacuum insulation panels and individually sold heating storage components) in the financial year under review. The Group generated kEUR 11,307 of sales revenue with Systems (thermal packaging and related components) in the reporting year (previous year: kEUR 10,820). Sales revenues of kEUR 18,386 were generated from Services in the financial year under review (previous year: kEUR 17,366). Other sales revenues amounted to kEUR 893 in the financial year (previous year: kEUR 709).

5.2 CONTINGENCIES AND OTHER FINANCIAL OBLIGATIONS

Other financial obligations exist that derive mainly from acceptance commitments and marketing costs, operating leases for IT equipment and company vehicles, as well as from rental obligations for buildings.

The due dates of the other financial obligations are as follows:

Other financial obligations (contingent liabilities)

kEUR	31/12/2018	31/12/2017
Group, total	4,488	12,793
due within one year	1,944	10,720
due between one and five years	2,533	2,052
due after five years	11	21

The sharp year-on-year decline is primarily attributable to the completion of the new building in Kölleda and the almost completed refurbishment of the Würzburg property. In the previous year, both new construction and renovation resulted in high financial obligations compared with the previous financial year due to purchase commitments. Moreover, a bill guarantee line in an amount of kEUR 24 (previous year: kEUR 24) exists with Commerzbank AG, under which va-Q-tec AG is liable for lending to third parties.

The stock option program for va-Q-tec staff announced in December 2017, which includes the rendering of part of the price paid for demonstrably purchased va-Q-tec shares, led to outgoing payments of kEUR 18 in 2018. The program, which was initially limited until 30 June 2018, was extended until 31 December 2019, which also leads to a minor scope of contingent liabilities in 2019. The "va-Q-share" share purchase program of va-Q-tec AG forms part of the additional benefits for company employees aimed at the company's sustained a positive development and growth with individual contractual target agreements. The va-Q-share Plus 2018 program creates a long-term incentive for participants to commit themselves to the company's performance and success. For this purpose, program participants are granted a monetary subsidy for them to independently purchase the company's shares in the market. The program has no material effects or payment obligations.

5.3 SHARE-BASED PAYMENT

va-Q-tec currently has no arrangements for equity-settled share-based payment transactions with employees.

5.4 RELATED PARTIES

IAS 24 requires the disclosure of the existence of related companies, and transactions with, and outstanding balances in relation to, related companies, if they are not already included as consolidated companies in the consolidated financial statements, as well as related individuals. va-Q-tec AG is the Group's ultimate parent entity.

As a matter of principle, key management personnel and their close relatives are regarded as related individuals at the va-Q-tec Group. Key management personnel comprised the members of the Management and Supervisory Boards of va-Q-tec AG, as well as the managing directors of the foreign subsidiaries in Korea and the UK.

Related companies within the va-Q-tec Group are regarded as those companies over which va-Q-tec AG, the Management and Supervisory Board members and their close family relatives, can at least exercise significant influence, or which, for their part, can exert significant influence over va-Q-tec. As associate company of va-Q-tec, SUMTEQ GmbH, Cologne, is also a related company. As of the reporting date, no open receivables or payment obligations with related companies existed. In July 2017, a convertible loan agreement was arranged between va-Q-tec AG, a further investor and SUMTEQ GmbH. According to the agreement, and under certain conditions, SUMTEQ can draw down kEUR 450 of loans from va-Q-tec AG within 12 months. In return, va-Q-tec AG has received the right to waive the repayment of the loan amount and to receive further shares in SUMTEQ on reduced terms instead. On the basis of the agreement, SUMTEQ initially took out a loan of kEUR 300 in January 2018. This was converted as acquisition costs including the interest accrued in the amount of kEUR 11 and an additional payment of kEUR 22, taking into account the favorable conditions in June 2018 as part of a Series B capital increase to acquire further shares in SUMTEQ, so that the interest in SUMTEQ GmbH after this and a further capital increase of SUMTEQ GmbH in December 2018 (from the conversion of a convertible loan from another shareholder) continues to amount to 18.5%. With regard to the capital increase and the investment in SUMTEQ GmbH, we refer to the information on investments accounted for using the equity method in section 4.2.1.4 of the Notes.

Key management personnel of the va-Q-tec Group

Management Board

Dr. Joachim Kuhn	since 01/04/2001
Stefan Döhmen	since 01/07/2017

Supervisory Board

Dr. Gerald Hommel Chairman	since 27/06/2014
Uwe Lamann Deputy Chairman	since 27/06/2014
Dr. Barbara Ooms-Gnauck	since 27/06/2014
Winfried Klar	since 20/03/2013
Uwe Krämer	since 01/10/2015
Dr. Eberhard Kroth	since 20/03/2013

Managing Directors of the subsidiaries in the UK, Korea and Japan

Insook Yoo – va-Q-tec Ltd. (Korea)	since 07/07/2011
Insook Yoo – va-Q-tec G.K. (Japan)	since 05/04/2017
Sven Larsen – va-Q-tec Ltd. (UK)	since 01/01/2017
Roland Rappl – va-Q-tec Ltd. (UK)	since 01/03/2018

Total compensation of key management members of the va-Q-tec Group

kEUR	2018	2017
Short-term employee benefits	1,229	1,333
Post-employment benefits	24	37
Total compensation of key management members of the va-Q-tec Group	1,253	1,370

Management Board compensation

kEUR	2018	2017
Short-term employee benefits	553	719
Post-employment benefits	15	21
Total Management Board compensation	568	740

Compensation totalling kEUR 568 was paid to the Management Board in 2018 (previous year: kEUR 740). This compensation consisted of basic compensation of kEUR 440 (previous year: kEUR 593), performance-based annual bonuses of kEUR 112 (previous year: kEUR 126) and contributions to the company's pension scheme. Defined contribution pension commitments have existed for the Management Board members since 2014. To this end, kEUR 15 (previous year: kEUR 21) was paid into an external reinsured pension fund in the year under review.

As in the previous year, no advances or loans were extended to Management Board members in the year under review.

As of 31 December 2018, one member of the Management Board had a personal guarantee outstanding to the Thüringer Aufbaubank in an amount of kEUR 200 (previous year: kEUR 200). This guarantee was issued in 2011 without consideration being granted in return by va-Q-tec AG.

va-Q-tec does not disclose the total compensation of the individual Management Board members specifying their names, as Section 314 (3) Clause 1, 286 (5) of the German Commercial Code (HGB) makes this expressly subject to a differing AGM resolution with a qualified majority of the share capital represented at the resolution. The AGM of va-Q-tec AG on 31 May 2016 passed a corresponding resolution with the requisite majority.

Supervisory Board compensation

Total remuneration of the supervisory board 2018

kEUR	Remuneration	Expenses	Consulting
Dr. Gerald Hommel	36	4	-
Winfried Klar	31	4	24
Uwe Andreas Krämer	14	-	-
Dr. Eberhard Kroth	20	2	7
Uwe Lamann	26	2	-
Dr. Barbara Ooms-Gnauck	16	2	-
Total	143	14	31

Total remuneration of the supervisory board 2017

kEUR	Remuneration	Expenses	Consulting
Dr. Gerald Hommel	37	3	-
Winfried Klar	27	9	14
Uwe Andreas Krämer	14	-	-
Dr. Eberhard Kroth	20	1	13
Uwe Lamann	21	2	-
Dr. Barbara Ooms-Gnauck	22	3	-
Total	141	18	27

Compensation of kEUR 157 was granted to the Supervisory Board members for the 2018 financial year (previous year: kEUR previous 159). In both the previous year and in the year under review, compensation included only a short-term component, and consists of compensation for normal Supervisory Board activity and expenses. In addition, consultancy services in an amount of kEUR 31 (previous year: kEUR 27) were compensated, rendered especially as part of the acquisition and renovation of real estate and in connection with the financing strategy.

As of 31 December 2018, this Supervisory Board compensation generates kEUR 28 of payment obligations for the company (31 December 2017: kEUR 48).

As in the previous year, no advances or loans were extended to Supervisory Board members in the year under review.

Other transactions with related parties

Apart from the above-mentioned transactions with SUMTEQ GmbH, no transactions with related parties occurred in the 2018 financial year, as in the previous year.

5.5 EVENTS AFTER THE REPORTING DATE

The talks initiated with the syndicate under the multi-bank agreement at the end of the first half of the year with the aim of adjusting the terms and conditions and covenants to the requirements of a company in a strong investment phase and with initiatives in advance of growth, such as is the case va-Q-tec, have since been successfully completed after the balance sheet date. As a result, new conditions have been negotiated according to which va-Q-tec will in future make its inventories available to the syndicate banks as collateral for the credit lines and commit itself to maintaining a minimum equity ratio of 30%.

5.6 AUDITOR'S FEES

The fees for the services of the auditor Rödl & Partner GmbH Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft, Nuremberg, of kEUR 180 (previous year: kEUR 330) comprise the following amounts:

kEUR	2018	2017
Financial statements audit (previous year: 24)	135	189
Tax advisory services (previous year: -1)	10	12
Other services (previous year: 10)	35	129
Group, total	180	330

5.7 STATEMENT OF CONFORMITY TO THE GERMAN CORPORATE GOVERNANCE CODE/CORPORATE GOVERNANCE STATEMENT

va-Q-tec AG has published on its website at www.va-Q-tec.com within the Investor Relations area the corporate governance statement pursuant to Section 289f of the German Commercial Code (HGB) including the statement relating to the German Corporate Governance Code pursuant to Section 161 of the German Stock Corporation Act (AktG).

<https://ir.va-q-tec.com/websites/vaqtec/German/530/erklarungen-und-dokumente.html>

Würzburg, 25 March 2019

va-Q-tec AG

The Management Board



Dr. Joachim Kuhn



Stefan Döhmen

RESPONSIBILITY STATEMENT

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.

Würzburg, 25 March 2019



Dr. Joachim Kuhn
(Management Board
Chairman, CEO)



Stefan Döhmen
(Management Board
member, CFO)

INDEPENDENT AUDITOR'S REPORT

To va-Q-tec AG, Würzburg

Report on the audit of the consolidated financial statements and Group management report

Audit opinions

We have audited the consolidated financial statements of va-Q-tec AG and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2018, the consolidated income statement, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the financial year from 1 January to 31 December 2018, and the notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the Group management report of va-Q-tec AG for the financial year from 1 January to 31 December 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 appendix.

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 Section 315e (1) of the German Commercial Code (HGB) and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2018, and of its financial performance for the financial year from 1 January to 31 December 2018, and
- the accompanying Group management report as a whole provides an appropriate view of the Group's position. In all material aspects, this Group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks entailed in future development. Our audit opinion on the Group management report does not cover the content of the parts of the Group management report listed in the appendix.

Pursuant to Section 322 (3) Clause 1 HGB, we declare that our audit has not led to any reservations concerning the legal compliance of the consolidated financial statements and 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 Section 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits as 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 (2) (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (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 judgement, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 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 presented below were the most significant as part of our audit.

Revenue recognition from contracts with customers in the appropriate period (first-time adoption of IFRS 15)

- Significance for the consolidated financial statements

The operative business of the va-Q-tec Group can be subdivided into the sale of transport containers (containers and boxes), vacuum insulation panels and phase change materials as well as the short-term rental of order-specific pre-tempered transport containers containers and boxes. In addition, va-Q-tec offers consulting and services which form part of the sales and rental business (fulfillment) (e.g. thermal consulting, development of a solution for customers). In the context of a contract inventory, va-Q-tec's delivery and service relationships were analyzed for realization on an accrual basis, taking into account the new accounting requirements of IFRS 15. As a result of the implementation of IFRS 15, va-Q-tec capitalizes contract fulfillment costs incurred since the 2018 financial year. These are costs that are directly related to existing customer-specific contracts and lead to the creation of resources. These costs are capitalized if they are to be used in the future to meet performance obligations and are expected to be recovered. For these customer-specific projects, va-Q-tec has implemented a process that supports the completeness of the capitalization of contract fulfillment costs and, at the same time, standard-compliant depreciation.

In the context of the first-time application of IFRS 15, the realization of revenues from contracts with customers, in our view, an area of particular importance. For this reason, the assessment of existing contracts with regard to the new accounting-relevant criteria was relevant for our audit.

- Our approach in the audit

As part of the preliminary audit, we analyzed the procedural sequence of the sales and rental business. We have identified and tested company-wide control mechanisms in the sales process. In addition, we examined the IFRS-compliant recognition of revenue from contracts with customers on a case-by-case basis using a deliberate selection of contracts. Our selection was risk-oriented and based on qualitative and quantitative characteristics. In addition, we have comprehended the effects of the first-time application of IFRS 15 in the notes to the consolidated financial statements.

- Our conclusions

On the basis of our audit procedure, we satisfied ourselves that IFRS 15 had been properly applied for the first time in accounting and reporting for revenue recognition.

Recognition and measurement of expansion and new investments in fixed assets at the Würzburg headquarters and the Kölleda production site

- Significance for the consolidated financial statements

In 2017, va-Q-tec AG acquired a business property including an office and production building at the Würzburg site. This property serves as the new corporate headquarters and was generally usable for va-Q-tec AG on transfer. The property did not correspond to the condition planned by the management for its intended utilization as an administrative headquarters and production site. To this end, comprehensive renovation, modernization and conversion measures (construction costs) were necessary, as planned, which were implemented in stages or will be implemented to a minor extent in the following year. The complete relocation to and use of the property occurred in the 2018 financial year. The property was recognized under property, plant and equipment under the "land and buildings" item and, to the extent that completion had not yet occurred, under the item "plant under construction". With the relocation and full use of the property, the transfer between the above items was implemented. The measurement is based on purchase costs plus ancillary purchase costs taking straight-line depreciation into account, applied from the date of usability and taking subsequent capitalizations into consideration. In addition, the so-called "Plant 2" at the Kölleda site was commissioned in 2018 as a new investment to accommodate the expansion of production and storage capacities.

Overall, the capitalized carrying amounts for the aforementioned properties stand at EUR 26.6 million as of 31 December 2018. The recognition on the balance sheet of the property and the newly constructed building is partly subject to uncertainty due to the scope for the Management Board members to exercise discretion in producing estimates. Given this, and due to the one-off nature and related value level, the aforementioned matter was particularly important for our audit.

- Our approach in the audit

In order to audit the recognition and the measurement of the further construction measures at the acquired business premises in Würzburg and the new building in Kölleda, we had the management explain to us in detail the balance sheet presentation and the internal control system established for this purpose. We have assessed the accounting treatment in terms of regularity and the control system in terms of reliability. We also gained certainty concerning the existence of the construction measures as recognized on the balance sheet by way of examination as part of the preliminary audit, as of the balance sheet date, and for the main audit. By means of a risk-oriented and deliberate selection of individual facts determined on the basis of qualitative and quantitative characteristics, we checked whether the intended procedure had been implemented in this way and whether the costs underlying the valuation could be substantiated.

- Our conclusions

On the basis of our audit procedure, we satisfied ourselves that the investment measures had been properly accounted for.

Other information

The Management Board members are responsible for the other information. The other information comprises:

- The remaining parts of the annual report, with the exception of the audited consolidated financial statements and Group management report and our auditor's report,
- Unaudited content of those parts of the Group management report listed in the appendix to the auditor's report,
- The corporate governance report pursuant to No. 3.10 of the German Corporate Governance Code, and
- The confirmation pursuant to Section 297 (2) Clause 4 HGB regarding the consolidated financial statements and the confirmation pursuant to Section 315 (1) Clause 5 HGB regarding the Group management report.

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 Management and Supervisory boards for the consolidated financial statements and the Group management report

The Management Board members 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 Section 315e (1) HGB 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 Management Board members are responsible for such internal controls 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 Management Board members 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 the company as a going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless an intention exists to liquidate the Group or to cease operations, or no realistic alternative exists but to do so.

Furthermore, the Management Board members 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 Management Board members 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 responsibility for the audit of the consolidated financial statements and 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 Section 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 judgement 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 Management Board members and the reasonableness of estimates made by the Management Board members and related disclosures.
- Conclude on the appropriateness of the Management Board members' 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 Section 315e (1) HGB.
- 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 the legal provisions law, and the view of the Group's position it provides.

- Perform audit procedures on the prospective information presented by the Management Board members in the Group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the Management Board members 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. A substantial unavoidable risk exists 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 28 June 2018. We were engaged by the Supervisory Board on 29 October 2018. We have been the auditor of the separate annual financial statements of va-Q-tec AG since the 2011 financial year and of its consolidated financial statements since the 2014 financial year.

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 Thomas Rattler.

Nuremberg, 25 March 2019

Rödl & Partner GmbH
Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft

Fehlauer
(German Public Auditor)

Rattler
(German Public Auditor)

Appendix to the auditor's report: Parts of the Group management report whose contents are unaudited

We have not audited the content of the following parts of the Group management report:

- the Group statement on corporate governance included in section 2.7 of the Group management report.

IMPRINT

PUBLISHER

va-Q-tec AG

Alfred-Nobel-Straße 33
97080 Würzburg
Germany

Tel.: +49 (0)931 35 94 2-0
Fax: +49 (0)931 35 94 2-10

E-mail: ir@va-q-tec.com
www.va-q-tec.com

EDITING

va-Q-tec AG

Alfred-Nobel-Straße 33
97080 Würzburg
Germany

Tel.: +49 (0)931 35 942 0
Fax: +49 (0)931 35 942 10

E-mail: ir@va-q-tec.com
www.va-q-tec.com

IR-CONTACT

va-Q-tec AG

Felix Rau

Tel.: +49 (0)931 35 94 2-2973
E-mail: felix.rau@va-q-tec.com

PICTURE CREDITS

va-Q-tec AG

LAYOUT & DESIGN

cometis AG

Unter den Eichen 7
65195 Wiesbaden

Tel.: +49 (0)611 20 58 55-0
Fax: +49 (0)611 20 85 55-66

E-mail: info@cometis.de
www.cometis.de

PRINT & PROCESSING

bonitasprint GmbH

Max-von-Laune-Str. 31
97080 Würzburg

Tel.: +49 (0)931 900 83 -0
Fax: +49 (0)931 900 83-50

E-mail: mail@bonitasprint.de
www.bonitasprint.de

FINANCIAL CALENDAR

10/05/2019	Publication quarterly financial report (call-date Q1)
24/05/2019	Annual General Meeting
14/08/2019	Publication half-yearly financial report
10/11/2019	Publication quarterly financial report (call-date Q3)

va-Q-tec AG

Alfred-Nobel-Str. 33
97080 Würzburg
Germany

Tel.: +49 931 35942-0
Fax: +49 931 35942-10

E-mail: ir@va-Q-tec.com
www.va-Q-tec.com

