

An
annual report
with
a focus
on innovation.

Key figures

	2018	2017
Consolidated sales revenues	1,631	1,579
Cash flow	128	148
Investments	116	138
Employees	10,785	10,567
Sales per employee	0.15	0.15

ACTUAL in EUR million, joint ventures prorated

Group structure

Greiner AG	Kremsmünster, AT <u>Management Board:</u> Axel Kühner, Hannes Moser
→ Greiner Packaging International GmbH	Plastic packaging for food and consumer goods, technical parts <u>Business Units:</u> Packaging, Assistec <u>Headquarters:</u> Sattledt, AT/ <u>CEO:</u> Manfred Stanek
→ Greiner Bio-One International GmbH	Medical technology, diagnostics, life sciences <u>Business Units:</u> BioScience, Preanalytics, OEM, Mediscan <u>Headquarters:</u> Kremsmünster, AT/ <u>CEO:</u> Rainer Perneker
→ Greiner Foam International GmbH	Foam for comfort, sport and technical applications, aircraft seat cushions, boiler insulation, interior parts and sound insulation for cars <u>Business Units:</u> Eurofoam, Greiner Perfoam, Unifoam, Greiner MULTIf foam, Greiner aerospace, Greiner PURTEC <u>Headquarters:</u> Kremsmünster, AT/ <u>CEO:</u> Michael Schleiss
→ Greiner Extrusion Group GmbH	Extrusion lines, tooling and plants <u>Business Units:</u> Windows & Doors, Building & Construction, Technical Profiles, Film & Sheet, Greiner Production Network <u>Headquarters:</u> Nußbach, AT/ <u>CEO:</u> Gerhard Ohler

We are only
satisfied with
perfection.



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Greiner – global success in four divisions.

Founded in 1868 in Nürtingen, Germany, today Greiner numbers among the leading players in the global plastics and foam industry.

The products of the corporate group, which is headquartered in Kremsmünster, Austria, are an omnipresent feature of everyday life. For example as yoghurt cups on the breakfast table, cozy foam mattresses, car and aircraft seats, blood collection tubes in medical practices, or as a part of plastic window frame production.

Under the Greiner AG umbrella the four divisions, comprised by Greiner Packaging, Greiner Bio-One, Greiner Foam and Greiner Extrusion, operate 140 locations around the globe. Continuous growth emanates from a basis formed by product and market diversification, innovation and globalization, in tandem with sustainability as a corporate orientation.

On the foundation of a unique corporate culture built on trust, responsibility and mutual respect, Greiner offers secure employment to a workforce of 10,785 in 33 countries. Greiner is successful internationally, however it also possesses regional roots and to the present day has remained a family-owned enterprise, which has people as its focus and regards satisfied personnel, customers and partners as key factors in positive corporate development.



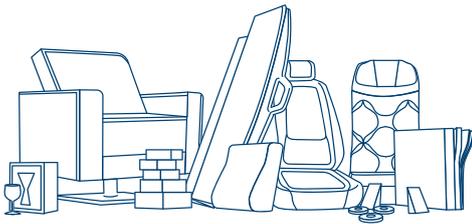
Greiner Packaging. Do the Innovation.

Greiner Packaging is one of the predominant manufacturers of plastic packaging in both the food and non-food sectors. The company is active worldwide via an efficient network of 34 locations, which employ a workforce of over 4,800.



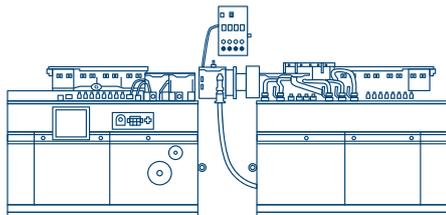
Greiner Bio-One. Your Power for Health.

Greiner Bio-One is a global player in the field of medical technology and life science. With over 2,300 employees and 27 locations, Greiner Bio-One is a leading producer of quality products for laboratory requirements.



Greiner Foam. Foam for Life.

Greiner Foam is regarded as one of the world's most successful manufacturers of special foams. With a network of 62 locations and more than 2,700 employees (joint ventures prorated), the company guarantees customer proximity, minimum delivery times and top quality.



Greiner Extrusion. Keeping you ahead in Extrusion.

Greiner Extrusion is the world's leading supplier of extrusion lines, tooling and complete systems for profile extrusion. With 12 production and service locations, and almost 800 employees, Greiner Extrusion is ideally equipped for the international market.

Stable development despite a challenging environment.

2018 was a special year in many respects, especially as Greiner celebrated 150 years as a family-owned enterprise. An event made possible by responsible business management, innovative foresight and untiring endeavor extending over generations.

However, all festivities aside, 2018 was also an extremely demanding year, characterized by currency fluctuations, high raw material prices and political uncertainty. It was also a year in which the discarding of the outdated was equally essential. Nonetheless, in spite of partially difficult underlying conditions and without losing sight of its social and ecological responsibilities, Greiner was able to further consolidate its market leadership and raise group sales revenues by 3 percent over the preceding year to EUR 1.631 billion. The systematic expansion strategy, the continued strengthening of innovative capacity and the further development of products and processes in a diversity of business areas all made a decisive contribution to this success.

Constant self-reinvention and the total avoidance of standstills are inherent to Greiner's DNA. Therefore, we are using 2019 as an opportunity for three additional steps towards the future. The first of these represents a historical debut in the form of Greiner's initial sustainability report, which will offer a detailed account of the group's commitment in this field. Secondly, we have updated our brand image in order to further boost our group presence from a visual perspective. And last, but not least, in spring we celebrated the opening of the enlargement of our headquarters in Kremsmünster, which will then form the modern Greiner Campus office and training complex.

Over 150 years of company history and stable development even in testing times constitute a success story that very few enterprises are able to emulate. Therefore, our sincere gratitude goes to our roughly 11,000 employees for their untiring efforts, as well as to our partners, customers and the owning family, which is now in its fifth generation. Our thanks and recognition are due equally to the members of the Supervisory Board for their trust-based cooperation.



Hannes Moser
CFO

Axel Kühner
CEO

Transformation and consistency.

In the world of today, those wishing to achieve success must possess inquisitiveness and the courage to forsake routine. Equally, they require an ability to preserve the status quo.

Greiner has been growing steadily and strongly for over 150 years, and apart from globalization and diversification, innovation constitutes one of the group's three strategic cornerstones. Moreover, intellectual curiosity and continual progress represent two of Greiner's fundamental principles as a family-owned enterprise. In tandem with innovative strength and outstanding professionalism, it is these intrinsic qualities that have propelled the transformation of a small general store with the manual production of cork stoppers into a leading global provider of plastics and foam solutions.

Greiner is able to demonstrate both a past and the future simultaneously. Sustainable development, entrepreneurial spirit, creative potential and the audacity needed to follow new paths have represented its constants as times have changed. In addition, the prescient combination of core business and out-of-the-box thinking, as well as the use of synergy effects and multidisciplinary processes, both contribute to expansion.

Progress is dependent upon reliable partnerships and invoked by persons possessing self-assurance, who remain true to their beliefs and always have their eyes focused firmly upon a vision of tomorrow. It is these tenets, alongside openness to the new, confidence in the owning family, the foresight of the Board, the motivation of the workforce and the cooperation with customers and suppliers that represent the key to Greiner's success. On behalf of the Supervisory Board may I thank you all for your enduring commitment and the trustful teamwork during the past financial year.



Erich Gebhardt
Chairman of the Supervisory Board



The Supervisory Board
 Erich Gebhardt, Chairman / Claus Bernhardt, Deputy Chairman / Regine Hagen-Eck, Member
 Christoph Greiner, Member / Andreas Ludwig, Member / Gerald Schinagl, Member
 Tilman Schad, Member / René Wollert, Member / Georg Kofler, Employee Representative
 Maximilian Gressenbauer, Employee Representative / Ernst Zimmermann, Employee Representative / Markus Rohrauer, Employee Representative

A focus on the future.

2018 was hallmarked by the 150th birthday of the Greiner AG. The main priority in this regard was to thank all the employees and business associates that have helped to turn our company into a successful global player.

However, as of now, we must look to the future. In the coming years, external factors emanating from the areas of sustainability, digitalization and mobility will exert a powerful influence upon our core business. As a result, irrespective of whether packaging for the circular economy, blood analyses involving only minimal samples, or upholstered furniture and mattress purchasing patterns are involved, today we must start to bring our business models into line with these new conditions.

For Greiner, this situation is nothing new. Indeed, for about a hundred years we solely processed cork and our focus only switched to new commodities and technologies due to tariffs and limited raw material availability. What followed were foam and plastics on the materials side and processes such as thermoforming, injection molding, continuous foaming and extrusion.



As a family of entrepreneurs, we think in terms of lifetimes and must therefore already pave the way for the handover of a healthy and prosperous enterprise to our sixth generation. This will take place at some time around 2050. Until then, numerous new technologies will be required, from 3D printing, to printed electronics and the complete digital traceability of every process and product. Moreover, these developments will also necessitate a departure from existing materials and procedures.

Our objective in 2050 must be identical to that of today. Namely, regardless of the material or processing technology involved, to offer our customers the very best products and services created by employees of equal standing.

We would like to thank all our employees for their major contribution to business success in 2018, as well as our customers, partners and suppliers for the splendid teamwork. We also wish to express our sincere gratitude to the Management Board for its rigorous pursuit of our corporate strategy.

The Board of Family Shareholders



Claus Bernhardt



Christoph Greiner



Dominik Greiner



Peter Greiner



Barbara Mechtler-Habig



Innovations
don't appear
out of thin air.





Innovation is what is, and what will be.

Positive current performance no longer represents a guarantee of future success. Digitalization, globalization, increasing customer demands and intensive competition are all pressurizing companies into launching innovations onto the market with ever-greater speed. Only those that show courage and are ready to question themselves remain able to compete.

Today, the key to sustained company success lies in organizational ambidexterity. This implies the ability to expand standard operations, while simultaneously pushing ahead with new opportunities, or in other words, the linkage of core business and renewal. While the former is focused on the optimization of existing products and processes for the enhancement of operative efficiency and requires established structures, proven processes and regulative conformity, the exploration of future business demands creativity, out-of-the-box thinking and a farewell to the comfort zone. It also leaves room for failure.



Ambidexterity as an organizational principle – the linkage of innovation with core business

Many successful companies find radical, disruptive innovation difficult to accept because, as opposed to incremental innovation, it generally involves only minor or no overlaps with core business. Therefore, firms that implement ambidexterity as an organizational principle have a clear lead in this regard. They master current business management issues efficiently and at the same time adapt flexibly to environmental changes. The fact that this is easier said than done and established enterprises frequently fail to achieve the strategic linkage of efficiency and innovation is illustrated eloquently by the examples of Kodak, Nokia, BlackBerry, Neckermann and Quelle. Due precisely to their prosperity, these model companies invested all their resources in what was they assumed to be a winning concept and the continual further development of their existing proficiencies. They thereby omitted to develop unconventional products and sustainable strategies for the future.

“Companies must achieve the balancing act between continual core business improvement and radical renewal. The former is vital for the maintenance of the current viability of an organization. The latter, for the safeguarding of this capability in the future.”

Hannes Möseneder,
CEO Greiner Technology & Innovation GmbH



Farewell to the comfort zone!



Systems trimmed for stability, like those found in successful companies, possess inherent resistance to change. This is because genuine disruption alters the rules of the game and replaces old business models with the new. At Greiner, we are of the opinion that such groundbreaking changes cannot be created during the day-to-day business conducted within our existing structures. Therefore, in 2010 a separate company, Greiner Technology & Innovation, was founded for the purposes of innovation management and technological foresight. This company provides start-up support, trend-watching and the identification and evaluation of future-oriented technologies. In addition, it also assists our operative divisions in the innovation management field, which involves the most efficient transition possible of an idea into an innovation.

Strategic cooperation with differing players

Via Greiner Technology & Innovation we seek to push back frontiers and envisage the big picture beyond the confines of our own organization. Together with external players we search for ideas and solutions, closed and open innovations supplementing each other in accordance with the respective question. Apart from teamwork with national and international research bodies and start-ups, 2014 saw the implementation of the Greiner Innovation Community, which is a group-wide idea platform. Over the years, our current workforce of more than 10,700 employees has submitted a variety of concepts to the platform regarding topics such as sustainability and printed electronics. These suggestions are evaluated annually in a multi-phase process and the most promising are subsequently developed further by Greiner Technology & Innovation through feasibility studies. Furthermore, in 2018 for example, we organized a "hackathon" in which numerous start-ups and university teams participated. Interdisciplinary exchanges, which also take place with artists, are primarily of interest during the strategic foresight process, as the artists outline future scenarios through the identification of trend reversals in society. We therefore extend our feelers in every direction with the aim of receiving new and creative ideas.

"The difficulty lies not so much in developing new ideas as in escaping from old ones."

John Maynard Keynes

Innovations
start small.



Greiner Technology & Innovation – centric intellectual curiosity.

As an adjunct to the innovation projects in our four divisions, which result in ongoing product and process improvements and the further development of new solutions, and thus make a significant contribution to efficient and profitable wealth creation, Greiner Technology & Innovation looks for completely original ideas and examines their suitability for current and future business areas. This takes place in the Greiner Opportunity Funnel, a multi-stage procedure that commences following the recognition of weak signals and ends in the handover of scalable business models with new products and services.

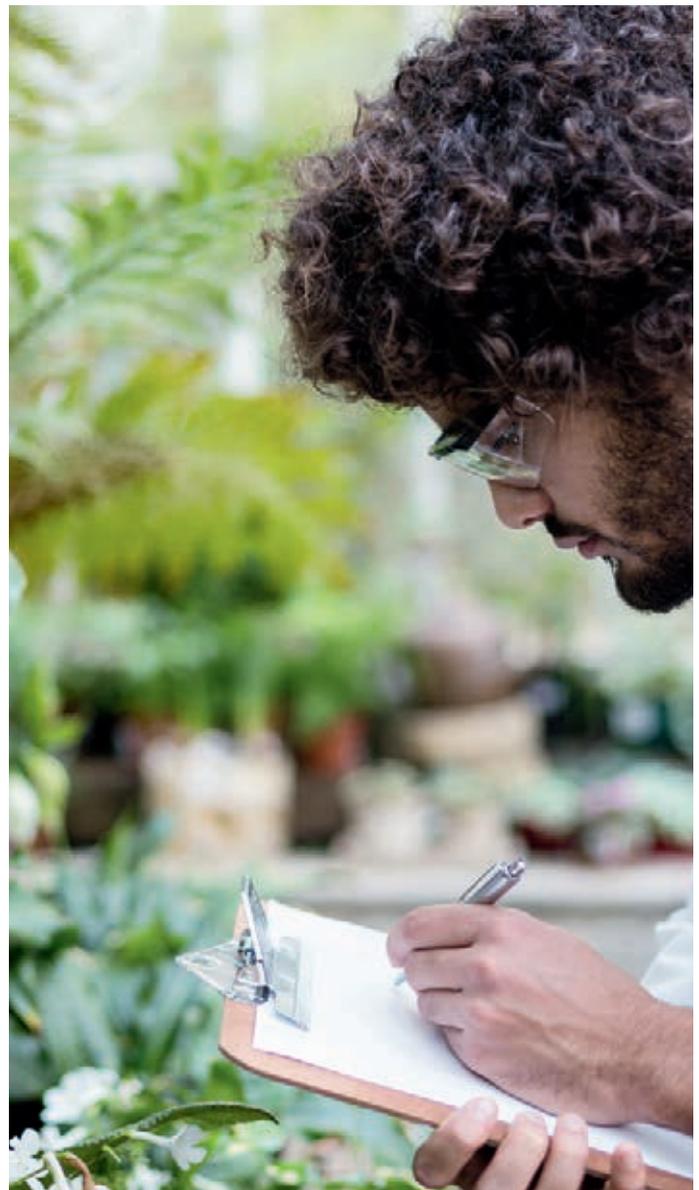
From weak signals to scalable business models

The Opportunity Funnel builds on the so-called "Signals Radar", which Greiner Technology & Innovation employs to monitor 28 technologies, all of which exert an influence on our business activities in one way or another. The aim is to obtain intelligence regarding technologies at such an early stage that this allows sufficient leeway for the planning or realization of suitable measures regarding the latent risks and/or opportunities that already exist. The list extends from the "A" in artificial intelligence and augmented reality, to the "B" in block chain and the "C" in circular engineering, to the "I" as in Internet of Things and the "W" in "Weconomics", the term we employ to designate our start-up involvement. High profile 3D printing and printed electronics, which represents the fundamental prerequisite for the Internet of Things and the resultant technological developments, are also registered on our Signals Radar and subjected to feasibility studies, in order to assess the possibilities for their use by Greiner.

Exciting technologies, which are also monitored by the Signals Radar and have already passed through the Opportunity Funnel, are to be found in the diagnosis and medical area. For example, in future painless drug administration, blood sampling and analysis may take place in a single step that will also include cell phone checks. In addition, other ideas generated within the Greiner Innovation Community that have been subjected to a viability studies include aquaponics and enzymatic recycling. The former is an indoor farming technology, which is capable of producing agricultural goods on a sustainable basis in the expanding urban conurbations, while the latter is aimed at the degradation of plastics by bacteria. Another idea is the use of a toolkit for a rapid drugs test at the point of care (PoC) using printed electronics.

"In our group, we work constantly on the steady, step-by-step improvement of the extant, which constitutes incremental innovation. Conversely, Greiner Technology & Innovation makes an important contribution, when radical, disruptive technologies and business models are the issue."

Axel Kühner,
CEO Greiner AG



Innovations
need a
bright idea.



Innovations in our four divisions – converting con- cepts into success.

Developing inventive ideas is one thing, but transforming these into viable, commercial innovations that make a profit is quite a different proposition.

Nonetheless, our four divisions master the challenge of maintaining value added stability during their daily business, while simultaneously creating the new with some panache. The exchanges with external stakeholders such as suppliers, customers, universities and start-ups also furnish important inputs in this regard. Indeed, it is frequently the case that merely viewing the same problem from another perspective provides associations, which without external help would have remained undiscovered.

As opposed to Greiner Technology & Innovation, our four operative divisions focus mainly on incremental innovation. They place their strategic emphasis upon efficiency, progressive process and product enhancement as well as quality assurance and cost reduction projects.

“The world is full of highly intelligent people and new technologies open up unlimited possibilities. However, a single company alone cannot discover all the resultant applications. This requires teamwork.”

Hannes Moser,
CFO Greiner AG





This K3-F® packaging solution won the Henkel Sustainability Award.

Greiner Packaging

“Do the Innovation” is Greiner Packaging’s brand claim and represents more than mere lip service. For almost sixty years the division has been creating unique packaging solutions in both the food and non-food sector that are targeted on individual customer demands and needs. Moreover, the development of innovative products is not the sole focal point, as the offer of optimum creative, customized overall solutions predominates. These are exemplified by barrier technologies, which counteract food waste through resultant extended shelf life, and packaging solutions such as K3®-F, which help to save plastic. Greiner Packaging’s primary and constant concern is the generation of value added for its clientele. An innovation roadmap, which visualizes thematic emphases extrapolated from consumer and packaging trends, serves as a guide and ensures that the company provides the right solutions at just the right moment in time.

Greiner Bio-One

Greiner Bio-One is continuously expanding its product portfolio across all its business units by means of pivotal strategic cooperation with research bodies, active market observation and responses to customer requests. With the aid of ongoing innovation, Greiner Bio-One creates the foundations for outstanding performance in the fields of basic research, active pharmaceutical drug discovery, preanalytics and diagnostics. As a result, Greiner Bio-One offers scientists an ideal platform for their research work, laboratories the groundwork for precise analytical results and physicians a basis for reliable diagnoses and therapy. In 1963, Greiner Bio-One already established a milestone with the development of the first plastic petri dish. Greiner was also the creator of the first vacuum blood collection system to use plastic and under the VACUETTE® brand name, innovative products for the taking of human and veterinarian samples are now manufactured and marketed around the world. For many years, the company has manufactured safety products, the employment of which has largely reduced needlestick injuries in the health sector. Special products for the analysis and cultivation of cell cultures and microplates for high-throughput screening also serve to personify Greiner Bio-One’s innovative strengths.



New from the bioscience field: microplates for 3D cell cultures.

Greiner Extrusion

As a technological division within the group, Greiner Extrusion provides extrusion equipment for the capital goods market and in order to actively counteract shifts and technological changes, it has a broad base in all its business segments. The company's innovative and technological leadership currently extends to digitalized extrusion and its latest innovation is FLOW.MATIC, which is a further development of FLOW.CONTROL. Using patented melt flow technology, the functional dimensions of the profile sections can now be established fully automatically within seconds. Consequently, profile manufacturers can achieve significant economies through material savings and higher output. Greiner Extrusion has also implemented a further cost-related innovation with its new co-extrusion technology, LAYER.COEX plus. This facilitates the employment of a large percentage of mixed granulate in combination with simultaneous processing safety and thus provides an overall reduction in costs of 18 percent as compared to virgin PVC. This technology is also highly advanced with respect to sustainability, as the layered structure of the plastic profile permits the increased use of recycled material.



3D printing at Greiner Perfoam.

Greiner Foam

The Greiner Foam Innovation Forum links differing business units and locations within the group. In addition, customers, employees, suppliers and the market, as well as diverse network partners such as universities and research bodies, all provide valuable inputs. The Foam Division also employs communities and platforms for the evaluation of ideas and their transposition into reality. Points of emphasis include biologically degradable, bio-based plastics, smart mattresses that during sleep monitor body functions, and the use of 3D printing technology for small batch production and the rapid prototyping of plastic components.



The new LAYER.COEX plus extrusion technology.

**Innovation
is a
creative act.**





Circular economy as an innovative concept.

Along with innovative action, responsibility is firmly anchored within Greiner's DNA.

In 2016, before the topic of plastic waste had attained the status of headline news in daily media reporting, we made a binding commitment to the socially and environmentally compatible handling of our plastics through our Plastics for Life sustainability strategy. Plastics for Life is a guideline for both product development and production, which was prepared in the course of intensive teamwork with Joschka Fischer & Company and apart from economic considerations also focuses on both the positive and negative ecological effects of plastics production. The establishment of a circular economy, in which at the end of their life cycle, the raw materials employed are returned in their entirety to the production process, plays a key role in this regard.

Plastics – a recyclable material with a future

During recent decades, modern lifestyle and the "convenience society" have resulted in an exponential increase in global plastic consumption. Unfortunately, especially in the developing and threshold countries of Asia and Africa, the establishment of appropriate waste management and recycling systems has failed to keep pace with this development. This is all the more problematic as for a healthy future, it is important that plastics be treated with greater care and disposed of correctly. At the same time, it is utopian to believe that in future we can live without plastics because if we wish to retain our current living standards, we will need these materials. This applies to the protection of foods and the counteraction of related waste, as well as the medical and transport fields, where plastics provide enormous weight savings and thus contribute to a reduction in CO₂ emissions. Nonetheless, we must close the loop, produce cyclically and transform used goods into new items.

Closed cycles are the answer for tomorrow

We at Greiner have nailed the topic of a circular economy to our mast and examine it in all its aspects. The recycling capacity of our output has maximum priority and forms the starting-point of all product developments and their design. We also see innovative potential in the use of bio-plastics and cardboard-plastic-combinations. At present, we are working on the provision of paper with a wafer-thin plastic layer. This offers the positive characteristics of glass as a packaging material, but with virtually no weight. In addition, we see great potential in barrier technologies with which it is possible to extend the shelf life of foods without the addition of preservatives and improve aroma protection. This represents a positive countermeasure to food waste. A further innovation has emerged from the mechanical engineering sector, where systems have been developed that slash the volume of water required for cooling by 70 percent and also facilitate highly efficient energy recuperation.

Reduce, reuse, recycle

At Greiner, we follow the motto, "reduce, reuse, recycle". Only recently, Greiner Packaging joined the UK Plastics Pact, in order to search for new solutions in teamwork with supermarkets and consumer goods manufacturers. In addition, at the end of October 2018, Greiner signed up to the Ellen MacArthur Foundation's New Plastics Economy Global Commitment, which is being realized in cooperation with the environmental program of the United Nations. The company has thus become one of the pioneers in the field of circular economy and recycling.



"It is time for a rethink! Plastics protect foods and prolong their shelf life. They thus help to reduce food waste and save emissions. Moreover, modern medicine and transportation without plastics are inconceivable. The lightness of plastics makes them a unique material, a fact that owing to defective and partially non-existent disposal systems has unfortunately become ignored."

Stefan Grafenhorst,
Head of Sustainability & Corporate Responsibility Greiner AG

Market,
environment
and
performance.





Economic slowdown in the wake of political crises.

The upturn in the world's developed nations has begun to show its age. Political crises and external shocks turned 2018 into an unexpectedly difficult year and led to a loss of economic equilibrium in parts of the Western World. The trade conflict between the USA and China, the tensions in the European Union caused by the uncertainties surrounding Brexit, Italy's domestic politics and the "gelits jaunes" in France, as well as the slump in exports to various threshold countries such as Turkey, resulted in an economic slowdown, albeit at a high level.

In the course of 2018, the fifth year of the upswing, growth in the Eurozone amounted to 1.8 percent, which as compared to the 2.4 percent attained in 2017, represented a marked weakening. This dip was caused primarily by unresolved conflicts like those relating to US trade policy, the controversy between the EU Commission and the Italian government, the Brexit confusion and the collapse of exports to a number of threshold states. In addition, higher fuel prices impacted consumer purchasing power, as reflected by lower spending on other goods and services.

In particular, during 2018 export-oriented Germany suffered from the trading tensions, China's falling growth rates and the economic problems in some threshold countries.

The turmoil surrounding the question regarding Brexit and the actual terms of Britain's departure from the EU also generated a sense of insecurity and hence a reduced propensity to invest in the UK. In 2018, this was mirrored by a tangible deceleration in the British economy and a correspondingly lower growth rate of 1.4 percent.

During 2018, the former crisis nations of Spain, Portugal and Ireland harvested the well-earned fruits of their structural reforms and this was also partly true of Greece. In France, President Macron's reform policies against persistent, low-level growth provoked the "gelits jaunes" demonstrations and subject to this pressure, without renouncing important reforms, he made concessions in the areas of minimum wages, reduced social security contributions and the exemption of overtime payments from taxation.

With 0.9 percent growth and the highest level of debt in the EU, during 2018 Italy contributed significantly to the economic easing in the Eurozone. This negative impact also emanated from the dispute with the EU regarding the draft budget proposals of the government, which took office in June 2018 and insisted on expensive socio-political projects rather than an overhaul of public sector finance.

In 2018, US economic growth was stronger than for quite some time

In the USA, the credit-financed tax reform of 2017, deregulation and high oil prices fueled growth and concealed the costs of the trade disputes. Following 2.2 percent in 2017, in 2018 the US economy grew by 2.9 percent. Owing to the tax reductions, company profits were markedly higher, as was corporate investment, which rose by roughly 7 percent over the preceding year.

China at the center of the trade conflict

China is currently engaged on numerous fronts and is growing at a slower rate than has been seen for almost three decades. Apart from self-inflicted problems, in 2018 the trade dispute with the USA proved to be particularly burdensome. The Americans imposed 25 percent customs duties on Chinese imports worth a total of USD 53 billion and 10 percent on other goods with a value of USD 200 billion. However, in spite of the economic slowdown, the East Asian giant nonetheless achieved its growth target of 6.5 percent.

Stable development despite a challenging environment.

In spite of the demanding economic conditions, as compared to the previous year Greiner was able to increase its consolidated sales revenues in 2018 by 3 percent to EUR 1.631 billion. At a time of high raw material prices, exchange rate volatility and political uncertainty, the diversification strategy thus proved its worth once again. The central topic of the past financial year was the agreed plastics strategy of the European Union, which Greiner explicitly welcomes.

2018 was a special year in many respects, primarily because Greiner celebrated 150 years as a family-owned company. However, away from the festivities, the year was somewhat demanding and characterized by currency fluctuations, expensive raw material prices and political disquiet. Nevertheless, in spite of these problematic conditions Greiner Packaging, Greiner Bio-One and Greiner Foam, which constitute three of the group's four operative divisions, were able to stay on their growth course. Greiner Extrusion saw a slight fall in sales revenues due in particular to a deterioration in the order situation.

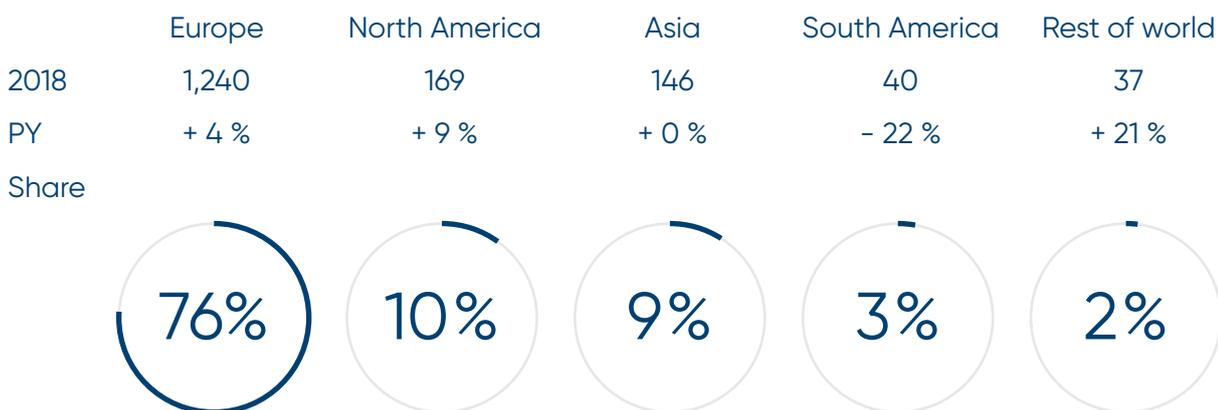
In 2018, consolidated sales revenues rose by 3 percent over the preceding year to stand at EUR 1.631 billion (FY 2017: EUR 1.579 billion). As

opposed to the previous year, cash flow declined to EUR 128 million (FY 2017: EUR 148 million). All of the investments initiated during the 2018 financial year were again financed from cash flow.

During 2018, Greiner invested EUR 108 million in non-current assets (FY 2017: EUR 119 million) and employed a total workforce of 10,785 (FY 2017: 10,567) at 140 locations in 33 countries. On the 31 December 2018 reporting date, Greiner personnel in Austria numbered 2,579, in the rest of Europe 6,347, in Asia 756, in North America 748, in South America 218 and in the rest of the world 137.

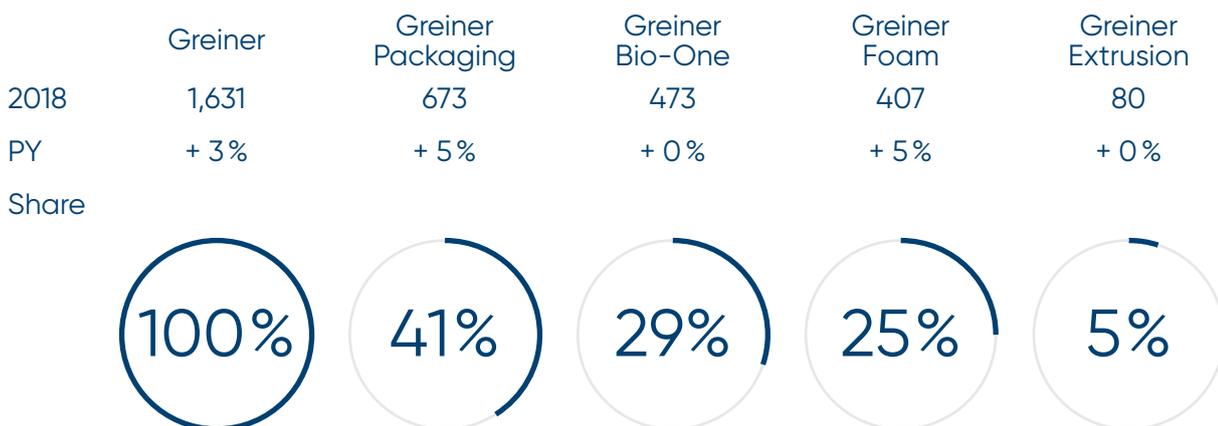
Sales revenues by region

ACTUAL 2018 in million euros, change over the previous year and share of 2018 sales revenue in %, joint ventures prorated



Sales revenues by division

ACTUAL 2018 in million euros, change over the previous year and share of 2018 sales revenue in %, joint ventures prorated



Currency fluctuations, high raw material prices, supply worries

As was the case in 2017, in 2018 Greiner had to battle against currency fluctuations and exchange rate losses. For although Greiner produces largely locally for the respective domestic market, which naturally counteracts price or exchange rate turbulence, part of its raw materials are purchased in foreign currencies. Therefore, depending upon developments, this has a direct influence upon results, as demonstrated in the past financial year by the negative impact on production center earnings performance triggered by the devaluation of the Turkish lira, the Brazilian real and the Hungarian forint.

As a plastics processor and foam manufacturer, Greiner is highly dependent upon raw material price trends. Consequently, the continuation in 2018 of the dramatic rise in raw material costs and the worsening price situation with regard to crude oil based products confronted the group with considerable challenges. Greiner Foam was particularly hard hit by this development in the first half-year of 2018 because in its area it suffered a partial doubling of prices, which were either impossible to pass on to the customers, or only with delays. This situation was further exacerbated by uncertainties with respect to deliveries from the main supplier, BASF, owing to the low water levels of the Rhine.

Globalization forges ahead

Greiner continued to consolidate its market position. The minority holding in the Italian company Simplas, which Greiner Extrusion purchased in 2018, strengthened the division's competences in the area of tooling for film and sheet extrusion, and also facilitated speedy local support and extensive tooling services at twelve locations. At the end of November, Greiner also purchased

the remaining shares in the Swedish Vigmed Holding AB, which since 2017 had already been supplementing the Greiner Bio-One portfolio with IV catheters. Moreover, 2018 saw the complete takeover of Greiner Packaging System, a joint venture founded in the Russian city of Noginsk by Greiner Packaging and the Russian company Plastic System. As a result of this purchase, the IML, direct printing and large packaging container areas for the food and non-food sectors in Russia were further strengthened. However, the rough also has to be taken with the smooth and in the summer of 2018 Greiner announced the planned closure in 2019 of the production plants in Wernberg (Austria) and Rastatt (Germany). Both locations had been subject to long-term losses and in spite of comprehensive restructuring measures in recent years, their international competitiveness could no longer be adequately secured in what is an increasingly demanding market environment.

The EU's plastics strategy

A central topic of the past financial year was also the strategy on plastics agreed by the EU. As a specialist for plastic and foam solutions, Greiner welcomed this initiative, which is mainly targeted on the enhancement of the recycling capacity of products, the increased use of recyclates and a reduction of single-use plastic products. Apart from the frequently mentioned drinking straws, cotton buds and disposable crockery, the main target in the latter area is formed by convenience products such as packaging for foodstuffs that are to be consumed directly. In the short-term, the strategy will produce few changes at Greiner because the pinpointed areas represent only a very small part of the group portfolio and Greiner is active in numerous markets in the field of medical technology and pharmaceuticals, as well as the furniture, sport and automotive industries, which are not caught in

the critical crossfire. Greiner regards the plastic strategy as a positive development, but is nonetheless of the opinion that a ban on individual products alone will be insufficient to stop the flood of waste. Rather, it is convinced that the future lies in a circular economy, which is the opposite of the throwaway society and offers the potential mastery of the challenges emanating from the use of plastics.



Outlook 2019

The first quarter of 2019 went well. The combination of the global economic slowdown and the high oil price in tandem with currency market volatility represents a challenge, but also a major opportunity for the current year and Greiner sees 2019 in a positive light. The fact that the group's development is not dependent upon cycles means that the economic downturn will affect it to a lesser extent than is the case with other companies. At the same time, beneficial effects are anticipated from the fall in raw material prices engendered by the economic downturn.

Innovation, globalization and diversification, as well as the implementation of the sustainability strategy and the establishment of a circular economy in which following the end of product life, the raw materials involved will be returned to the production process in their entirety, are all at the top of the group's agenda. Furthermore, with the enlargement of the managerial and administrative premises in Kremsmünster to form the Greiner Campus, a modern office and training center that was opened in the second quarter of 2019, Greiner has given a further commitment to Upper Austria as the location for its headquarters, while simultaneously creating space for the new.

Greiner
Packaging.
Do the
Innovation.



Innovativeness and a customer- orientation create a solid basis for sustained corporate development.

The issue of plastics was a major topic of public discussion in 2018. The effects of the material upon the environment, animal life and humans were dealt with extensively at European level and initial regulations for industry followed. Greiner Packaging welcomes the new EU plastics strategy, but has already been working for quite some time on sustainable packaging solutions, which was just one reason for the successful financial year.

4,864

Employees



“Using innovative solutions, we are able to fulfill customer requests and meet the challenges of the circular economy.”

Manfred Stanek
CEO Greiner Packaging
International GmbH

In 2018, Greiner celebrated its 150th birthday as a family-owned enterprise and as a division of the group, Greiner Packaging can also reflect upon a long history dating back almost sixty years as one of Europe's leading manufacturers of plastic packaging in both the food and non-food sectors. The company faces the challenges of the market with its Packaging and Assistec business units. The product range of the former is comprised by cups, as well as solutions such as tubes, containers and buckets made from plastic and cardboard-plastic combinations, while Assistec focuses on the production of customized plastic components and products, as well as their assembly and individual refinement.

673

Revenue (EUR million)

34

Locations

Positive business development in spite of a challenging environment

Greiner Packaging is a global player and employed in the 2018 financial year a workforce of 4,864 at 34 locations in 19 countries. If its joint ventures are included, Greiner Packaging achieved annual sales revenues of EUR 673 million, which corresponded with an increase of 5 percent over the preceding year (FY 2017: EUR 641 million). Despite this positive overall result, the decision was taken to close two locations and therefore the plants in Rastatt (Germany) and Wernberg (Austria) will cease operations in the spring of 2019. In 2018, the Brexit threat had no effect upon the plant in Dunganon (UK) as this location produces primarily for local customers. Apart from successful projects with new customers, the thoroughly positive company development was also based on a new strategy, which was drawn up in 2016/17 and focuses entirely upon the company's core competences and new growth opportunities.

Customer-orientation as a proven formula

The solid business result was also achieved in the face of challenging external pressures such as the politically unstable situation in Turkey that led to currency exchange rate losses, and labor shortages, which were especially acute in the Czech Republic and Romania. Consequently, personnel costs in Eastern Europe were at a correspondingly high level and rising energy and transport expenditure had to be accounted for worldwide. In 2018, raw material prices also demonstrated some unforeseen characteristics. While polystyrene was highly volatile, as was the case prior to the 2009 crisis, polypropylene remained stable despite shortages of pre-materials. Moreover, following a marked decline in the price of crude oil at the end of 2018, the polystyrene price is currently below that of polypropylene. During 2018, the supply of monomers was partially extremely restricted. In addition, polyethylene terephthalate was also in short supply and owing to strong demand remained at a high price level. However, owing to long-term supplier relationships and corresponding agreements, stable supplies at a competitive price level were secured at all Greiner Packaging locations.



In November 2018, the "Fresh Clip" won the prize in the Special Innovation category of the Austrian National Smart Packaging Prize awards.



The 250 ml cups stand out on the shelves due to their attractive embossing.

Prize-winning, innovative ideas

For Greiner Packaging's plastics experts, 2018 was also a highly successful year from an awards perspective and the company's innovative products picked up no less than five prizes. The Ayran cup for the Bayerische Milchindustrie eG cooperative dairy was presented with the 2018 German Packaging Prize for its hammertone look and at the "Crescents and Stars for Packaging Awards" in Istanbul, Greiner Packaging received the "Perfection Award" in the Food Category for a polypropylene yoghurt cup with offset decoration, as well as a bronze award for a lid with an integrated spoon. This convenience solution from the company's specialists was also selected as the "WorldStar Winner 2019". Furthermore, a K3®-H cup from Greiner Packaging emerged as the winner at the Czech-Slovak "PACKSTAR" packaging competition and at the Austria's "National Smart Packaging Awards 2018", the company also secured the special innovation prize with its "Fresh Clip" design concept.

Innovative ideas catch the eye



The 65 ml bottles represent a convincing complete solution. The bottle and the lid come from Greiner Packaging and in the course of the design project, production efficiency was optimized and closing safety improved.

Into the future with a new strategy

As a leading plastics industry company, Greiner Packaging sees one of its tasks in regular self-analyses and adaption of existing processes to current trends and future challenges. Therefore, within the framework of a strategy process, points of emphasis have been established for the coming years in preparation for the demands of tomorrow. Greiner Packaging's main focus continues to center on innovative products and the company also looks to operative excellence as a means of succeeding in international competition. Accordingly, strengths are pursued both efficiently and systematically with the result that security of delivery is improved, claims costs are cut and occupational accidents are reduced.

The Assistec Business Unit has also put itself on a fresh footing with a revised strategy and a new slogan. "Mastering complexity" is now the heading of the approach that the suppliers of complete solutions have selected for the future.

Greiner Assistec

The Greiner Assistec Business Unit develops customized solutions of differing levels of complexity and is able to integrate several technologies in an intelligent and innovative manner. In 2018, the unit demonstrated highly satisfactory development and both the locations in Europe and that in Mexico were able to look back on healthy growth. This success can be traced back to the new strategy, as Greiner Assistec sees itself as a decathlete of the industry, that using its extensive technological know-how and innovative services, offers far more than just plastic components. For example, in 2018 the unit gave a clear demonstration of its competence in the course of teamwork with Philips. Milk frothing systems were implemented for both the latter's fully automatic Saeco Xelsis coffee machine and its 5000 LatteGo coffeemaker. In the course of production, various technologies including injection molding, silicone and injection stretch blow molding, and assembly were combined at a number of locations. Greiner Assistec also undertook the decorative process, which involved printing, laser engraving and labeling.

Greiner Assistec impresses in North America

Operative excellence secures success



Greiner Assistec produces the entire milk frothing system module. Various technologies were combined during the production process, thereby enabling the achievement of an optimum result.

Circular Economy – en route to a new economic system

Plastics and their impact upon the environment and society are currently a major topic of public debate. Following the European Commission's presentation of the EU's plastics strategy at the beginning of the year, at the end of 2018 the European Parliament voted in favor of a ban on plastic disposables such as drinking straws, cutlery and cotton buds. The EU's plastics strategy is also part of a circular economy strategy and is targeted on a reduction of plastic waste by means that also include recycling and a transition to a circular economic system.

Greiner Packaging has adopted a strong position with regard to these issues and in October signed the Ellen MacArthur Foundation's New Plastics Economy Global Commitment, thus becoming one of the world's first packaging companies to nail circular economy to its mast as a means of safeguarding the environment. In this connection, Greiner Packaging has set itself ambitious targets, which envisage the reuse, recycling or composting of all plastic packaging by 2025. At the same time, a considerable quantity of the materials employed should consist of recycle.

The circular economy as an opportunity for further development



This represents a best practice project in the sustainability field, as the shampoo bottle consists entirely of recycled polyolefins.

Trends

Although the current plastics controversy is not without its difficulties, Greiner Packaging greets this development and regards it as an opportunity for future innovations. As a plastics company, with its material expertise, research and development, product know-how and market proximity, Greiner Packaging is ideally equipped to create answers to the related social issues. The company supplements the future trend towards sustainability with tried and tested measures such as the further development of the IBT and MBT barrier technologies, which in the meantime are now available in combination with the entire technology range.



Packaging with barrier technologies prolongs product shelf life without preservatives, but with an equal degree of protection.

Outlook 2019

Greiner Packaging regards the coming year with optimism. In 2019, the company will continue to rely upon a reliable concept for success which incorporates the early recognition of trends, accounting for customer wishes and needs, and the realization of practical, top quality solutions that are also optically attractive. During all projects, a major emphasis will be placed on sustainability and the compatibility of products and processes with the circular economy. The task will be to establish equilibrium between convenience and sustainability, as practical solutions such as to-go products are frequently diametrically opposed to the demands of cyclicity. However, with its focus on innovations and further developments, Greiner Packaging possesses a concept that in future will continue to facilitate the penetration of new markets and the individualized customer service.

Greiner
Bio-One.
Your Power
for Health.





Major growth potential through sizeable investments in new capacity.

During 2018, Greiner Bio-One enlarged its global production capacities significantly and strengthened its presence in the Chinese market by means of a new sales branch. Moreover, the portfolio was supplemented with new product solutions in the core areas of blood collection and cell cultures.

"We are preparing for further growth through a significant increase in our production capacities."

Rainer Perneker
CEO Greiner Bio-One
International GmbH



2,301

Employees

473

Revenue (EUR million)

27

Locations

With its Preanalytics, BioScience and Mediscan business units, Greiner Bio-One numbers among the world's leading companies in the field of medical technology. Preanalytics, which is headquartered in Kremsmünster (Austria), specializes in the development and production of collection systems for human and veterinary blood, urine and saliva. In addition, the unit also provides customized digital systems solutions (Greiner eHealth Technologies) for the pre-analysis process. These innovative product solutions make a significant contribution towards greater efficiency and safety during daily routine tasks in hospitals, laboratories and medical practices.

The BioScience business unit, which is based in Frickenhausen (Germany), acts as a strong technological partner to universities and research institutes and the diagnostic, pharmaceutical and biotechnology industries. BioScience specializes in the development and production of

laboratory articles and vessels for the cultivation and analysis of cell cultures, as well as microplates for high-throughput screening during biochemical, genetic and pharmacological testing. Furthermore, the unit also offers molecular analysis methods such as DNA arrays, or rapid testing for the identification of adventitious viruses, as well as platforms for automated HPV genotyping. In Europe, Mediscan numbers among the leading suppliers and service providers in the field of medical product sterilization, germ reduction in food packaging materials and the functional enhancement of plastics and semi-conductors by means of ionizing radiation. Moreover, as an OEM and competent technology partner, Greiner Bio-One provides industrial customers from the biotechnology, diagnostics, medical technology and pharmaceutical industries with tailor-made product solutions and production processes, which extend from development to manufacturing.

A challenging environment in 2018

During the 2018 financial year, Greiner Bio-One employed a workforce of 2,301 at 27 locations in 19 countries and attained annual sales revenues of EUR 473 million (FY 2017: EUR 473 million). In spite of difficult market circumstances, currency effects and stagnation with regard to individual key accounts and major orders, business volume achieved the level of the preceding year and profitability maintained at an excellent level. In particular, solid growth was achieved in the safety products area and the company gained ground in the regional markets in Southern and Eastern Europe, and South America. However, rising material and raw material prices as well as higher freight costs all served to hinder an even better business development.



Increased efficiency and a doubling of storage capacity in Frickenhausen (Germany).

Good profitability level in spite of challenges



A 15 percent increase in capacity in the core blood collection area

Global capacity enlargement

Owing to continuing high demand and use of capacity in the core segments, both Greiner Bio-One and its suppliers invested significant sums in the enlargement of global production. The bulk of an investment volume of EUR 44.8 million flowed into new production facilities for existing core products and this more than 15 percent increase in capacity had a highly positive effect in the second half of the year. It also represents a platform for further expansion in the core area of blood collection. In addition, the storage space available in Frickenhausen (Germany) was more than doubled. After a construction period of only a year, a new, fully automated high-bay warehouse fitted with the latest storage technology was put into operation thereby replacing the facility used to date. The warehouse is part of an extensive infrastructure project that forms the basis for greater efficiency in the material supply and logistics areas, and will be concluded in 2019 with an increase in production capacity.

Internationalization and global market expansion

The Asian region is one of Greiner Bio-One's most important growth markets and for example, in China the company has been able to establish a solid position in the preanalytics field within the Beijing area. In October, a second major step followed with the foundation of an additional branch in Shanghai staffed by a focused and specialized team. The joint aim is to step up efforts in the biosciences market and move closer to the customers in this business segment.

A new sales subsidiary in Shanghai

Acquisition of 3D cell culture technology

In 2016, Greiner Bio-One entered into a successful cooperation with Nano3D Biosciences in Houston (USA) and during 2018 the company acquired the technology assets of this US biotechnology company and thereby moved into the attractive and growing 3D cell culture market. The cultivation of cells in three-dimensional structures by means of magnetization is employed in laboratories and research bodies during the development of new methods of treatment and therapies, and in combination with CELLSTAR cell culture vessels, which have a cell-repellent surface, represents an intelligent addition to the product portfolio. The clear advantage of 3D- over 2D-technology derives from the realistic depiction of cell growth and behavior within the body. During 2018, the Vigmed company, which was purchased during the previous year, successfully underwent both organizational and product integration, and developed as planned. The portfolio of CLiP Neo, CLiP Winged and Ported safety IV catheters and the SWiTCH safety arterial catheter is characterized by an excellent initial puncture success rate, as well as a passive and thus automatic safety mechanism for the prevention of needle injuries.



CELLdisc is a precisely coordinated system for mass cell cultures.

Positive development in the IV catheter area

New production solutions for blood collection and cell cultivation

Greiner Bio-One has extended its range of safety products with an additional VACUETTE® Safety Blood Collection Set, which as opposed to those offered to date, has a protective needle shield that is activated manually outside the vein. As a result of the activation of the safety mechanism, the cannula is safely and irreversibly stored inside the protective plastic housing. This starter product therefore represents an ideal supplement to the existing VACUETTE® Blood Collection Sets. Another product launch saw the VACUETTE® CAT Serum Fast blood collection tube come onto the market. As compared to standard serum tubes, this reduces the coagulation



IV and arterial catheters with a passive safety system.



The VACUETTE® CAT Serum Fast blood collection tube offers coagulation in 5 minutes.

period to around 5 minutes and thus cuts the turnaround time, including centrifugation, from around 40 to only 10 to 15 minutes. Therefore, especially in urgent cases, the use of a VACUETTE® CAT Serum Fast blood collection tube results in reliable test results within a far shorter time. With its integrated Luer-Lock connector, the new VACUETTE® SAFE-LINK tube holder ensures a secure and stable twist connection to the primary blood collection product and thus facilitates simple and safe blood collection from the vein or artery.

In the area of mass cell culture monitoring and analysis, Greiner Bio-One has also decisively enlarged its CELLdisc series portfolio. A perfectly coordinated system for mass cell cultures is now available, consisting of a single-layer version of the CELLdisc™, the CELLring equilibration aid, the CELLhandle holder and CELLswing automa-

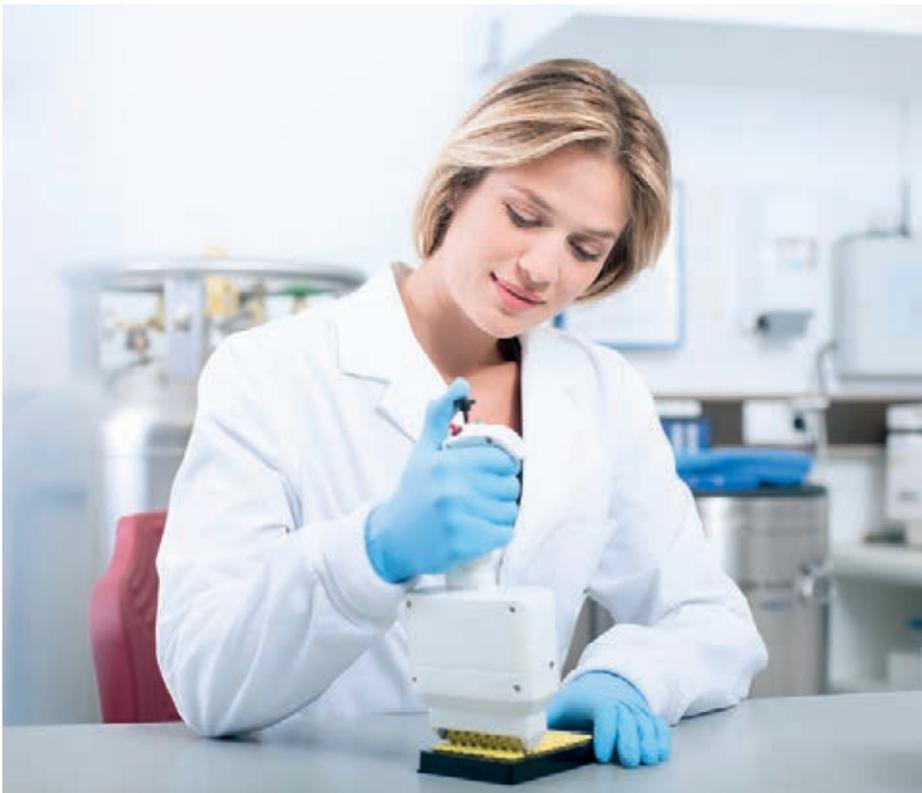
Rounding off the portfolio of the CELLdisc series

tion. The single-layer version of the CELLdisc™ serves the surveillance of cell morphology, adherence and comprehensive confluence as a reference, with the result that for all CELLdisc formats, which are cultivated in parallel over large areas under identical conditions, decisions can be made with respect to the required media changes or possible cell harvests.

For the frozen storage of biological samples in biobanks, Greiner Bio-One now also offers Cryo.s refrigeration storage tubes with double coding in the form of a data matrix code together with linear bar code. The representation of the unequivocal sample code number as a machine-readable code allows processing in automated systems, while the plain text representation of the code content serves manual use.

Outlook 2019

Greiner Bio-One sees the coming year in a highly positive light and is confident of being able to achieve solid growth. In particular, the newly created capacities, which will secure the provision of customers with top quality, will make a major contribution in this connection. The strong, global network of our production and sales companies will also ensure the best possible supply of international customers and in addition, during 2019 new product innovations are to be presented in the core segments and launched in a range of markets. In this connection, a strong emphasis is to be placed on gaining increased market shares in Asia and the USA.



Cryo.s biobank tubes for the frozen storage of diverse samples.

Greiner

Foam.

Foam for

Life.



greiner

FOAM



Growth in all business units thanks to solid use of capacity and innovative product solutions.

Greiner Foam International is one of the world's leading manufacturers of special foams and foam products. In spite of the prolongation of challenging general conditions, the division was able to further increase its sales revenues in 2018 and the expansion strategy will continue to ensure good business development in the years to come.



2,717

Employees
50% share in joint venture

“We are investing in new product solutions and services with the aim of fulfilling the needs of our customers and securing further growth.”

Michael Schleiss
CEO Greiner Foam
International GmbH



With its companies Greiner Perfoam, Greiner aerospace, Greiner MULTI-foam, Greiner PURTEC and the joint ventures Eurofoam and Unifoam, Greiner Foam unites all of the foam competences within Greiner. Greiner Foam represents a strategic division with 62 locations in 18 countries and more than 2,700 employees, which is active in the business areas of polyurethane (PU) foam, automotive, aviation and building technology. Eurofoam, which has a tightly-knit network of locations in Central and Eastern Europe, and Unifoam, which is located in Durban (South Africa) are leading producers and processors of flexible polyurethane foam for the mattress, upholstered furniture and automotive industry, and the environmental and building technology sectors. Greiner Perfoam is a leading international Tier-1-developer and manufacturer of functional, interior trim parts, as well as specially designed acoustic components for the engine and passenger compartments in premium class cars. With plants in Europe, USA and China, Greiner aerospace is a globally active specialist for seat

407

Revenue (EUR million)
50% share in joint venture

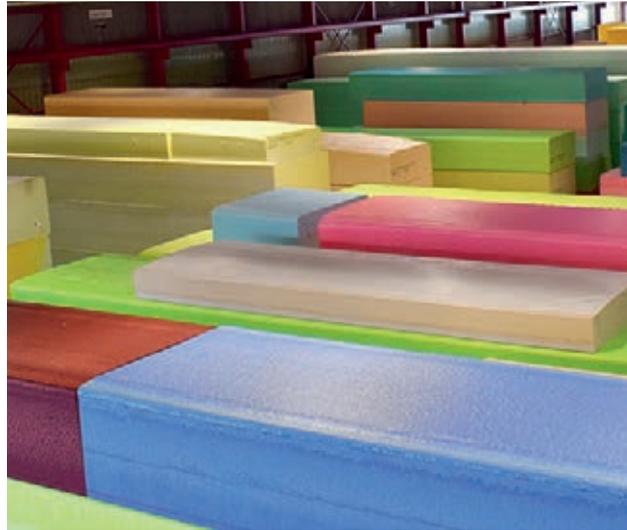
62

Locations

cushions and covers for passenger aircraft, while Greiner MULTifoam manufactures recycling composite foam for the sport, shoe and construction industries. Its subsidiary, GuKoTech, produces top quality rubber and cork products for the construction industry, cargo safety, acoustic attenuation and insulation. Greiner PURTEC specializes in highly efficient heat insulation for hot water boilers.

High competitive intensity in all regions

Owing to the good use of capacity in all business units during the 2018 financial year, Greiner Foam was again able to raise its sales revenues from EUR 387 million to EUR 407 million. Following an unprecedented increase in the price of raw materials for polyurethane foam production since the second half of 2016 and in particular during 2017, rise continued in the first half of 2018 and prices turned to the long-term average range until the end of the year. The surge in prices and the related massive fluctuations triggered lasting uncertainty in the foam application branches and at least in Europe, the market for PU foam showed a downward tendency. This resulted in a sharp rise in competitive intensity in all regions.



Long block warehouse in Austria.

New roll production in Romania



meelu – Mattress-in-a-box concept.

Internationalization strategy

Especially in the PU foam area, Greiner Foam continued to pursue an expansion strategy. During the 2018 financial year, Mexico, Dubai, Egypt, India, Malaysia and Indonesia remained the focus of M&A activities, but for a variety of reasons to date the discussions have not resulted in actual acquisitions. Nonetheless, further efforts will be made with regard to these projects in 2019.

Eurofoam back on a successful track

With over 2,100 employees at 36 locations in 12 countries of Central and Eastern Europe, Eurofoam numbers among Europe's largest producers of PU foam. In spite of what were partially difficult general conditions, in 2018 Eurofoam was able to improve its overall result markedly while retaining the same market shares. In particular, during the year the German mattress market demonstrated a genuine slump, while in Poland market saturation led to extremely tough competition. Nonetheless, the negative influences emanating from the historical high in raw material prices, which continued throughout 2017 until mid-2018, were successfully overcome. At the location in Sibiu (Romania), the expansion of the technical foam product portfolio through the inclusion of polyester foam production for rolls was implemented as planned.

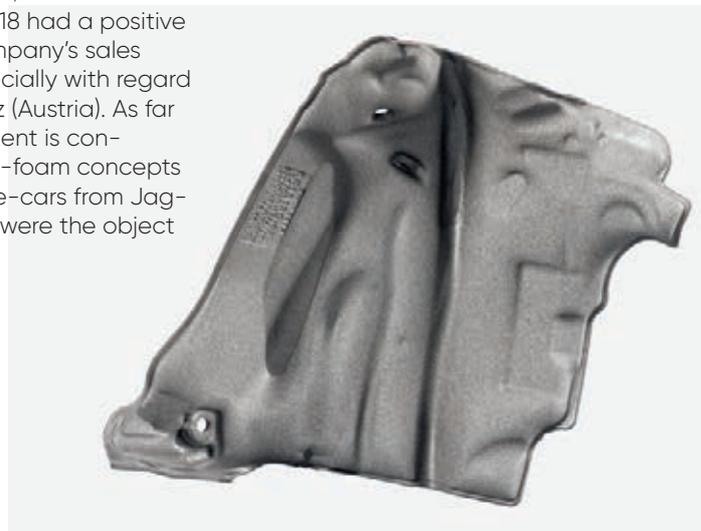
Unifoam achieves success in a turbulent market

The beginning of 2018 saw a political change at the head of the South African government. However, criminality, corruption, unemployment and poverty continued to pose massive challenges to South Africa's socio-political and economic environment. For companies, a new minimum wage law, which has doubled related expenditure, constitutes an immense cost factor. Moreover, although there are visible signs of improvement, years will pass until lasting stability is achieved. Fortunately, thanks to the exceptional commitment of its workforce, Unifoam has survived these turbulent times well and outpaced the overall market with regard to both its sales revenues and margin development. Development in the new business

areas such as technical foams, mattresses for hotels and hospital beds, as well as compressed mattresses, was positive and this also applied to neighboring countries such as Botswana, Zimbabwe and Swaziland. In mid-2018, as contractually agreed Greiner Foam increased its participation in Unifoam from 50 to 80 percent.

Perfoam focuses on acoustics

Greiner Perfoam has focused its activities on the rapidly growing area of engine compartment acoustics, which also applies to e-drive systems. Key account management, business development, as well as know-how and technology competence have all been further strengthened with the aim of extending the success achieved to date, and strategically important acoustic projects have been obtained from BMW, Daimler and Audi. Moreover, a new customer in the shape of VOLVO has been won over with PERcap® engine/transmission encapsulation. The production record achieved by Perfoam with PERcap® engine/transmission encapsulation in 2018 had a positive effect upon the company's sales revenue trend, especially with regard to its location in Linz (Austria). As far as the interior segment is concerned, beam-form-foam concepts for the trunk lids of e-cars from Jaguar, BMW and Audi were the object of intensive efforts.



Injection cover for a 4-cylinder BMW diesel engine.

Takeover of a majority participation in Unifoam

Seat cushion production record



Top comfort and first class workmanship for seat cushions and covers.

aerospace passes the planned milestones

In 2018, Greiner aerospace passed the milestones established as part of Strategy 2020. Sales revenues rose from around EUR 36 million to almost EUR 44 million and the delivery volume of seat cushions and covers hit an all-time high. At the plants in Nýrsko (Czech Republic), Brankovici (Bosnia) and Dallas (USA) a major emphasis was placed on production process optimization with a special focus on issues such as digitization, lean management and key indicator systems. Both delivery punctuality and product quality were enhanced as a result of investments in machine pool refurbishment and a special quality checking station. Moreover, in December an extensive recertification audit by Quality Austria at the Pettenbach (Austria), Shanghai (China) and Dallas (USA) locations was concluded successfully.

MULTIfoam expands in Poland

During 2018, MULTIfoam was able to further consolidate its market position as the leading producer of products with two new items made from environment-friendly and sustainable rebonded flake foam. Under the acousticbase® brand name, footfall insulation for buildings was presented, which meets the most stringent demands and offers customers considerable advantages. Moreover, during the year, the matchbase®.pro sport shockpad range was optimized further with the result that in future an even better response can be made to customer requirements in Europe and the USA. The enlargement of production capacity at the Ozorków location in Poland represented a logical step in this connection and now the entire range of semis and finished products can be offered on an even more competitive basis.

PURTEC focuses on vacuum insulation

With the launch of the Modul® VIP product innovation in May 2018, Greiner PURTEC again demonstrated its excellence in the field of thermal insulation. For the first time, Class A energy efficiency can now be attained with regard to the insulation of hot water boilers with capacities of up to 1,000 l. The minimization of heat losses by as much as 50 percent means that Greiner PURTEC has been able to further consolidate its market status as an innovative, long-term manufacturer of heat insulation. The emphasis of production in Nýrsko (Czech Republic) in 2018 was on an additional improvement in efficiency through the optimization of production plant, process improvements and the introduction of an operational data logging system, as well as the stabilization of workforce numbers.

Launch of the Modul® VIP product innovation



PURTEC: Hot water boiler sheathing.



matchbase®.pro,
the premium class sport shockpad.

Enlarged capacity in Poland

Outlook 2019

In general, it is assumed that 2019 will see both a slowdown in the global economy and economic policy preconditions that are difficult to predict. Above all, Greiner Foam will feel the related impact in economically sensitive business areas such as automotive, although in the past the foam area was less affected by economic fluctuations. In 2019, work started on the implementation of the digitization and lean management road map, and in 2019 Eurofoam will focus on the realization of a variety of measures in order to accommodate consolidation in the European market. Investments are to be made in the expansion and update of PU foam production in Sajóbáony (Hungary) and a further point of emphasis

will be on the sustainable use of PU foam. At Perfoam, preparations are moving ahead at speed for the start of production at the joint ventures in China and Mexico, which will be manufacturing interior components for BMW and Mercedes. At Greiner aerospace attention will center on the strengthening of the international sales team, the installation of new production lines and the provision of additional services for airline customers. In the spring of 2019, MULTIfoam launched the new matchbase®.play product onto the market, which will improve child safety in playgrounds.

Greiner
Extrusion.
Keeping you
ahead in
Extrusion.



Globally active with a 97 percent export ratio.

2018 saw outstanding machine business on the one hand and lower tooling sales on the other. Production orders for plastics machinery made an important contribution to divisional success.



777

Employees

80

Revenue (EUR million)

12

Locations

“The highlights of 2018 were comprised by record machinery sales and growth in manufacturing for new market segments.”

Gerhard Ohler
CEO Greiner Extrusion
Group GmbH



Greiner Extrusion is the world's leading supplier of extrusion lines, tooling and turnkey plants for profile extrusion. During the 2018 financial year, the company employed a workforce of around 800 in seven countries and attained annual sales revenues of EUR 80 million (FY 2017: EUR 80 million). At twelve locations in Europe, the USA and Asia, complete solutions are provided for all the requirements of profile manufacturers around the globe.

The 2018 financial year was characterized by significant shifts in the global market environment. In Europe, high PVC prices applied lasting pressure on the margins and liquidity of profile producers and in various countries outside the continent, sizeable currency devaluations led to more expensive imports and hence greater difficulties with regard to financing. By contrast, there was brisk investment activity on the part of customers in North America and Australia. The USA provided the driving force for core business growth and to a large extent compensated for the lower order volume emanating from other countries. In addition, the positive development of GPN's (Greiner Production Network) production services in the new "ALL EXTRUSION" business area was higher than budgeted and thus delivered a valuable contribution to Greiner Extrusion's result pattern.

Greiner.Solutions inside every extrusion

The new film and sheet business

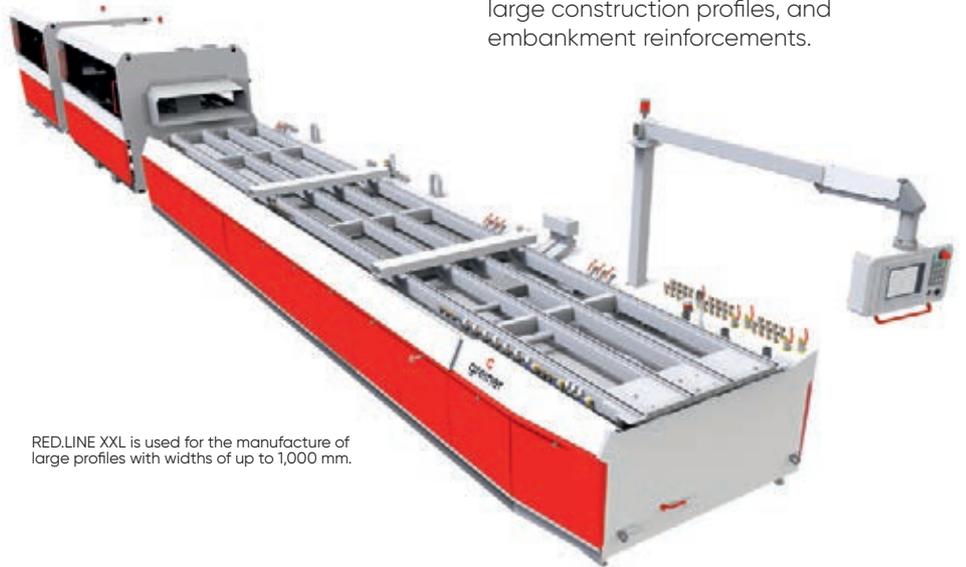
In line with the "Greiner.Solutions inside every extrusion" concept, during 2018 Greiner Extrusion entered the field of film and sheet extrusion technology. A participation was acquired in the Italian company Simplas S.p.A. and subsequently a global cooperation was launched. With over fifty years of experience, Simplas numbers amongst the leading suppliers of tooling for film and sheet extrusion, as well as for finishing and coating applications. As a result of the cooperation with Greiner Extrusion, customers around the world can reap the benefits of considerably larger production capacities, faster on-the-spot support and extensive tooling services from locations in Europe, North America and Asia. Concrete success was already achieved in the first few months of the teamwork with Simplas and consequently the use of capacity in the new GPN processing centers rose steadily. Moreover, the market outlook in the film and sheet business area is also highly promising.

RED.TOOLING also gains ground in price-sensitive markets

If in the past price was the predominant factor in tooling business in the so-called low-budget markets, other considerations such as overall equipment effectiveness (OEE) and improved profile quality are now of growing significance. As a consequence, Greiner Extrusion has succeeded in convincing profile manufacturers in India and South America of the merits of the RED.TOOLING premium tooling system. Higher productivity in tandem with enhanced profile quality improves cost efficiency over the course of service life and facilitates a short amortization period.

RED.LINE XXL: profiles of up to 1,000 mm

As a result of the latest mechanical engineering development, Greiner Extrusion's RED.LINE is now capable of producing large profiles with widths of up to 1,000 mm. Among many other products, this Greiner machine technology enables the manufacture of door panels in hollow chamber and foamed versions, large construction profiles, and embankment reinforcements.



RED.LINE XXL is used for the manufacture of large profiles with widths of up to 1,000 mm.



An example from the new films & sheets segment, a slot die for the extrusion of films with widths of 800 mm.

Thousandth tooling delivered to a key account

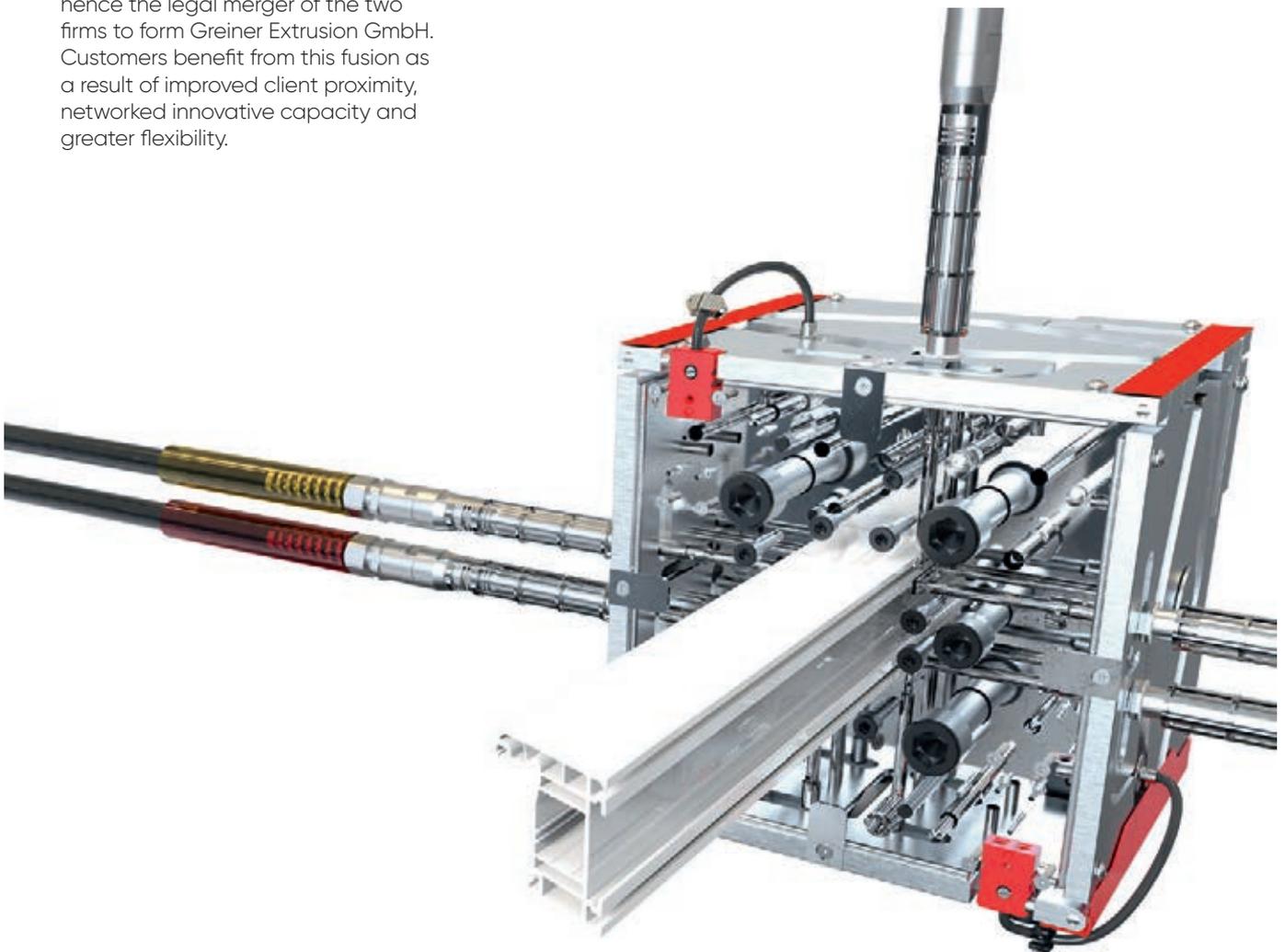
The 2018 financial year also saw the festive handover of the one thousandth tooling to a German key account in the windows and doors sector. This represented the passing of another milestone in a partnership with Greiner Extrusion, which has now existed for over thirty years.

Window and Tech.Profile under one roof

In 2017, Greiner Extrusion started an initiative aimed at the merger of Greiner Tech.Profile GmbH and Greiner Extrusion GmbH at its Nußbach (Austria) location. The objective was to generate synergy effects between the Window and Tech.Profile areas in order to be still better equipped to face the future. In May 2018, there then followed an entry in the company register and hence the legal merger of the two firms to form Greiner Extrusion GmbH. Customers benefit from this fusion as a result of improved client proximity, networked innovative capacity and greater flexibility.

A stronger foothold in India

In India, Greiner Extrusion has moved closer to existing and prospective customers. Local support has been intensified and profile manufacturers offered specific national and specialist assistance from an Indian employee during the establishment of extrusion operations. To this end the Greiner Extrusion team in India has been strengthened through the addition of an expert with long-term industry and extrusion experience.



Greiner Extrusion maintains its outstanding market position by means of technological and innovation leadership.

One step ahead



Greiner Extrusion has been actively involved in shaping the digitization trend from the outset.

Digitalization – Extrusion 4.0

In the near future, Greiner Extrusion technologies will allow the digital control of the entire extrusion process and optimization in real time. This will extend all the way from the raw materials, material handling, extruders, tooling technology and downstream processes including utilities, to the finished profile. The latest FLOW.MATIC innovation has already been subjected to extensive field-testing under the tough production conditions found at customer plants. This proved successful and FLOW.MATIC has now attained market maturity and thus enables the fully automatic, long-term securing of the functional dimensions of profile sections within seconds.

LAYER.COEX plus increases the recycling ratio

Multilayer profile versions provide a simultaneous combination of improved profile characteristics and primary material savings. Moreover, with LAYER.COEX plus, Greiner Extrusion's latest multilayer technology, a high percentage of mixed granulate permits even greater economies. As compared to mono-extrusion employing virgin PVC, apart from the highest processing safety, the overall cost reduction for the customer amounts to around 18 percent. Numerous projects in this area were already completed in 2018.



Co-extrusion technology facilitates a layered profile structure using recycled material. The photo shows a cross-section of a multilayer window frame.

Major diversity, new special applications

During 2018, Greiner know-how was also in demand for numerous special applications. One highlight was the development and completion of a special extrusion line for plastic railway sleepers. This involved the particular challenge of the uniform and precise forming of heavy, solid profiles with dimensions of up to 240 x 260 mm.

The fact that plastic profiles find a wide range of applications is also demonstrated by a recent project in South America, where Greiner Extrusion was commissioned with the design and production of a special tooling system for the extrusion of profiles for bus luggage racks and air conditioning units.



Greiner technology has recently also been employed for bus interior profiles.

In 2018, the largest extrusion tooling to date (profile size 300 x 250 mm) was supplied to an Australian customer for a PVC formwork system for prefabricated wall elements. Four extrusion lines and tooling were already manufactured for this application in 2017 and in various markets such wall elements are extremely popular for cellars, dividing and retaining walls, tanks and garages. In close cooperation with a customer, Greiner Extrusion also developed and delivered the tooling technology for the production of windows using a combination of aluminum, wood and WPC foam for employment in passive houses. The window system is characterized by a high level of heat insulation and load bearing capacity, and is also entirely recyclable.

GPN: success with "ALL EXTRUSION"

The core competence of GPN, which is a Greiner Extrusion subsidiary, relates to the manufacture of tooling, machinery and components for extrusion based on customer designs. With its "ALL EXTRUSION" strategy, since 2017 GPN has been steadily extending its performance range in the conventional profile area to include solutions for the entire extrusion industry. During 2018, the company was able to further consolidate its position in this young segment and obtain new customers. Business in the compounding industry was particularly successful and the production of parts for compounders was developed further. In addition, the share of production for film and sheet dies was increased with European customers. Access to neighboring market segments in the large world of plastic machinery production was also obtained through a new and extremely modern machining center. A development exemplified by components for pultrusion and multilayer co-extrusion.



With its "ALL EXTRUSION" strategy, GPN has captured new areas in the extrusion sector. In the picture is a spiral mandrel distributor for multilayer tube extrusion.

Production for the entire extrusion industry



25 years GPN in Trhové Sviny (Czech Republic).

25 years GPN in the Czech Republic

In 2018, GPN Czech Republic celebrated its 25th birthday. The founding of this location following the fall of the Iron Curtain pointed the way ahead for the entire Greiner Extrusion division and today a workforce of around 200 manufactures numerous tooling, machines and components. In addition, the interplay between the Czech and Austrian locations offers significant competitive advantages in respect of capacity, flexibility and cost structure.

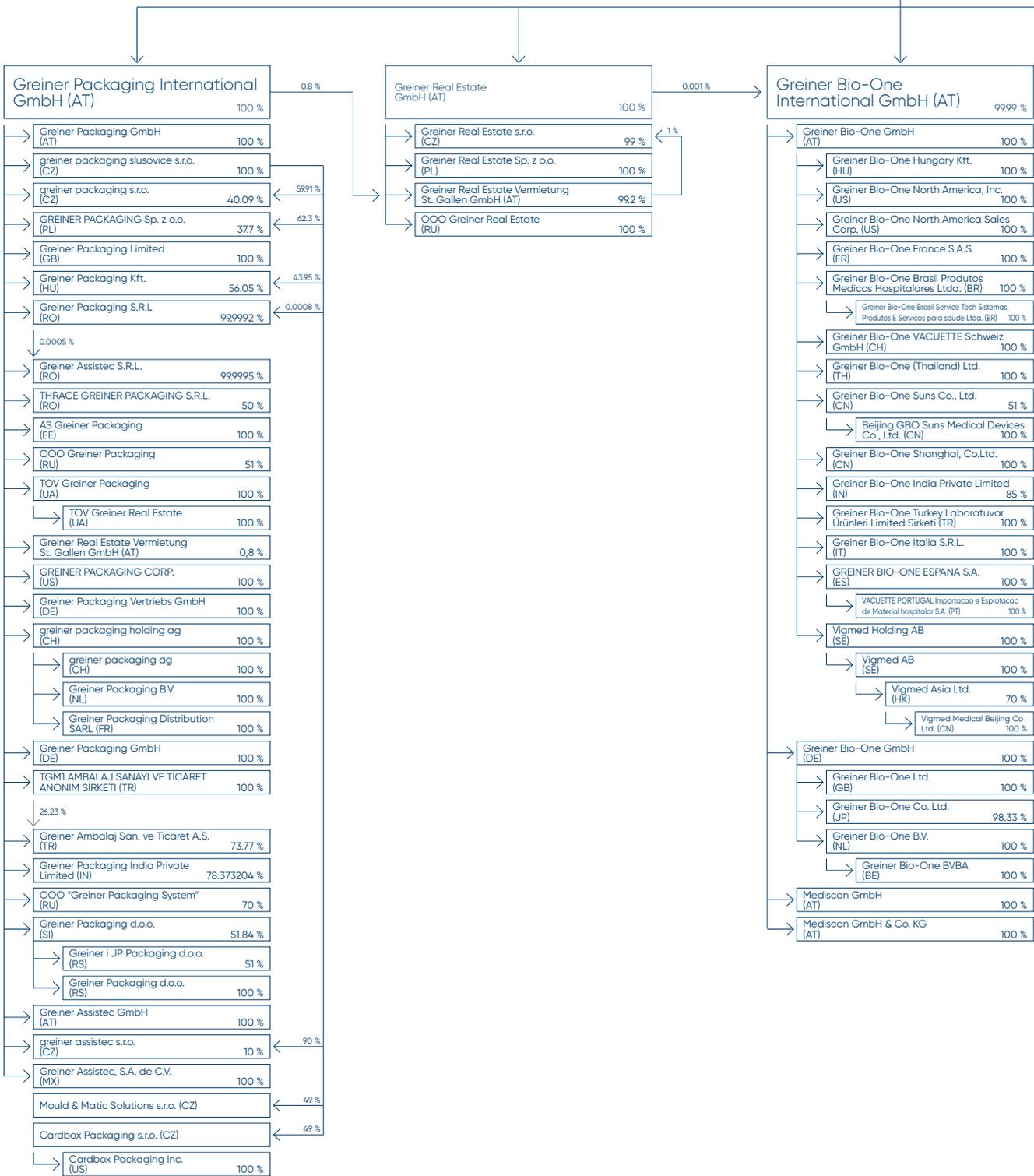
Outlook 2019

At the end of 2018, the European profile manufacturers transmitted more positive signals and a number of major orders were obtained for premium application tooling and machinery. In this connection, innovative technologies such as LAYER.COEX plus have engendered a special response. This again confirms the probity of our technological and innovation leadership strategy with which we create pioneering developments for digital profile extrusion. Indeed, FLOW.MATIC represents the birth of a new, digitalized product family from Greiner Extrusion.

**We never
stop.**



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(AT)



Greiner AG & Co KG (AT)	0.25 %
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Greiner Foam International GmbH (AT)	100 %
→ Eurofoam GmbH (AT)	50 %
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Note

Actual developments may differ from the expectations expressed in statements relating to the future.

