

K»MOBIL

THE KIRCHHOFF GROUP MAGAZINE



European Union faces severe strains

The unsolved sovereign debt crisis in Greece and lack of solidarity between Member States regarding the refugee issue strain the Community. Nevertheless, the economic situation in Germany appears to remain robust. The KIRCHHOFF Group also continued to grow in 2015. Find out more starting on page 4.

K-MOBIL

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Review of 2015

— The KIRCHHOFF Group continued to grow in 2015 and strengthened its position in all four business sectors. However, the macroeconomic success of the year was offset by a difficult political environment.

Dear customers and friends of our group of companies,
Dear employees,

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From an economic perspective, 2015 will draw to a successful close in the major global regions—the economies in North America, Europe, and China are in good shape. Although the problems in South America and Russia have less of an impact on our Automotive business unit, they have already affected the Ecotec and Tools business units. This stands in contrast to the good business there in past years, particularly in Russia.

We are monitoring the political development in Europe with great concern. Will the unity of the European Union be maintained, or will it break down due to the lack of solidarity among Member States? The sovereign debt crisis in Greece, which is still unresolved, did not receive a rational and consistent response, but was dealt with politically. The German Federal Minister of Finance, Wolfgang Schäuble, revealed recently that the vast majority of European finance ministers were in favour of the

temporary withdrawal of Greece from the common currency. However, attempts to maintain the economic and political unity of Europe have postponed the solution to this problem.

In the face of the greatest influx of refugees since the Second World War, the responses of the Member States, which are partly egoistic and driven by national interests, now threaten to destroy the unity of the European states. The current top priority is for Europe to reach an agreement together with the USA and Russia on how to bring peace to Syria and Iraq. A very important step in this process is to reintegrate Russia in the international community—with Germany in the role of mediator.

The objective should be to ensure that people in Syria and other countries will no longer have any reason to flee. Moreover, the consequences and burdens of



the influx of refugees are to be fairly distributed in Europe. The most recent EU accession countries cannot continue to accept the benefits of the Union while refusing the costs. Furthermore, it is essential that refugees are properly registered and checked when entering countries of the European Union. Economic refugees must be repatriated.

Due to our international positioning, all corporate divisions have developed well. We have penetrated new markets and presented our customers with new products. This year, the **KIRCHHOFF Group** will generate income of over EUR 1.8 billion and employ 10,500 people.

In 2015, **KIRCHHOFF Automotive** commissioned a new plant in Lansing, Michigan/USA, and started to construct another plant in Eastern Europe, in Gniezno/Poland. Both locations serve our customers with complex structural components and are perfectly connected in terms of logistics.

We are able to report that hot-formed steel as well as aluminium materials are continuing to gain ground in light-weight automotive construction. This is demonstrated by numerous start-ups and development projects both for premium and volume manufacturers.

We are pleased that our tool manufacturing at the Attendorn/Germany location was this year once again awarded first place as "Toolshop of the year". Our production system (KAPS) ensures further continuous improvement, and we also achieved significant increases

in efficiency thanks to our new global purchasing organisation. With 8,250 employees, **KIRCHHOFF Automotive** will achieve an overall turnover of EUR 1,350 million in the closing fiscal year.

KIRCHHOFF Ecotec increased its turnover this year by 5%. With the acquisition of the majority share in the Turkish company HIDRO-MAK, we were able to decisively strengthen our market position and are supplying the Arab countries and South Eastern Europe, in particular, from this location. We have also established new service centres in Stuttgart Gerlingen and Hanover Hemmingen, both in Germany. In the vehicle sector, a new generation of side loaders was successfully launched on the market.

KIRCHHOFF Mobility will achieve a single-digit percentage growth in turnover in the closing year. We were able to intensify our cooperation with vehicle manufacturers, became a Premium Partner of VW Commercial Vehicles, for example, and presented our "Easy Speed" driving aid at the IAA Cars in Frankfurt together with Mercedes-Benz.

In the current year, **WITTE Werkzeuge** was unable to continue its upward trend of 2014. Demand in some key markets, such as Russia, almost came to a complete halt and has been unsatisfactory in the EU as well. Nonetheless, we were able to increase sales revenue again by up to 20% in some Southern European markets. Going forward, we will offset the volatility of the markets with significantly improved marketing

campaigns and new products. Thanks to the addition of a new three-component injection moulding system, production has become more efficient and more flexible.

Dear customers of our company,
Dear employees,

The management of our company thanks you cordially for your loyalty, your great commitment and your active cooperation. We are looking forward to a furthermore good and successful cooperation.

My father, my brothers and I want to wish you and your family members a merry Christmas, all the best and health for the new year.

A cordial good luck!

Yours,

J. Wolfgang Kirchhoff



Haus Nordhelle—room of tranquility: the ecclesiastical conference centre Haus Nordhelle has been adapted to meet modern requirements and was recently given this small chapel. Metal sculptor Walter Schneider has created an overall construction that is designed to encourage reflection, contemplation, and concentration.

Multi-faceted commitment to the region

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— The Dr KIRCHHOFF Foundation has been involved in a large number of activities for the region in 2015 once again. A wide range of charitable projects in the field of education, culture, sports, and social causes was supported with almost TEUR 65.



Young Roosters—sometimes the small ones have a big impact too. The Dr KIRCHHOFF Foundation supports the promotion of new talent at the Iserlohn Roosters Ice Hockey Club.

Summer Reading Club

During the summer holidays, the library for children and youths invited schoolchildren from the fifth grade onwards (10+ years old) at Iserlohn's secondary schools to participate in the Summer Reading Club (SRC). Books were read under the motto "You can do it", and quite incidentally a positive step was made towards good grades in German. Anyone who finished by reading at least three books also received a certificate. To mark the end of the event, SRC organised a library festival with live music and much more.



Childrens' Lobby Iserlohn

Since 2001, the association has supported various projects to help children and youths in our town. The project for curative educational support is aimed at children with developmental difficulties. They receive special support from trained educationalists in the area of motor functions and perception. The project is currently offered at nine Iserlohn primary schools and is an important part of the development of these children.



International Women's Day 2015 in Iserlohn

Women from the Turkish town of Ayanik visited Iserlohn for one week. The Association of Iserlohn Women Groups extended an invitation to a workshop-type event under the motto "birlik beraberlik"—women on the move. An exhibition linked to this workshop took participants on a musical and culinary journey to Turkey. The programme also included readings, films, and panel discussions.

Top: Summer Reading Club—supported by the Dr Kirchhoff Foundation. **Bottom left:** KINDER LOBBY—curative educational project. Curative educationalist Sabine Dorner works with children at the Lichte Kammer primary school. **Bottom right:** International Women's Day 2015 in Iserlohn: in March 2015, the Association of Iserlohn Women Groups welcomed a delegation of women from the Turkish town of Ayanik.



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MENSCH mentoring for students—a project of the Checkpoint youth movement of the Protestant Reconciliation Church Parish. Through the MENSCH mentoring project for students, up to 17 young people from the international class of the Realschule am Hemberg secondary school receive active and long-term one-on-one support from mentors over a period of one year.

MENSCH mentoring for students

This is a project of the Checkpoint youth movement of the Protestant Reconciliation Church Parish. In recent months, a large number of young people from various origins have arrived in our town. They all have one thing in common: af-

ter often traumatic refugee experiences, they are looking for safety, support, and direction. As part of the MENSCH mentoring project for students, a specially trained mentor supports up to 17 young people from the international class of the Realschule am Hemberg se-

condary school for a period of one year. This mentor looks after each young person individually and tries to facilitate the integration of each student and his or her family in our society and culture.

Kerstin Garmatter



Receiving the honorary professorship award; f.l.t.r.: Dr Johannes F. Kirchhoff, Managing Partner KIRCHHOFF Group and CEO KIRCHHOFF GmbH & Co. KG, Prof Dr Eng Klaus Schuster, Prof Christoph Wagener, Dr Eng Jochen F. Kirchhoff, and Prof Dr Eng Erwin Schwab, Deputy Vice Chancellor for Research and Technology Transfer.

A perfect combination—science and business

For many years, Dipl.-Ing. Christoph Wagener has lectured on the Automotive course at the South Westphalia University of Applied Sciences in Iserlohn/Germany. On 20 November 2015, the Department of Mechanical Engineering at the South Westphalia University of Applied Sciences awarded him an honorary professorship in recognition of his outstanding achievements with regard to study and teaching.

After completing his mechanical engineering studies at the University of Siegen/Germany, Christoph Wagener became involved with sheet metal forming very early on. In 2003, he began to set up an internal research and development department at KIRCHHOFF Automotive. Since the 2008/2009 winter semester, Christoph Wagener has lectured on the Automotive course in Iserlohn, where he teaches the module "Passenger car concepts, packages, development processes".

The university has now recognised this exceptional commitment to teaching in a very special way by awarding an honorary professorship. "As Director Research and Product Development at KIRCHHOFF Automotive, where he is responsible for innovations in the area of automotive bodywork, he excels in bringing his knowledge and experience to the education of our students in his capacity as lecturer in our department", states the university assessment. Christoph Wagener is a popular and valued

lecturer among the students. "His key strength lies in the way he presents technically complex processes and facts in a simple, technically sound, and understandable manner", says Prof Dr Erwin Schwab, Deputy Vice Chancellor for Research and Technology Transfer, in praise of the commitment and character of Christoph Wagener in a laudatory speech. University Vice Chancellor Prof Dr Claus Schuster presented the certificate of appointment and emphasised: "We were very sure when it came to you, Mr Wagener, that this is the correct decision."

During the academic ceremony, Dr Eng Jochen F. Kirchhoff also offered congratulations on behalf of the owner family and added: "This great distinction is also an honour for all employees in the development department at KIRCHHOFF Automotive in Europe, North America, and Asia, for whom Christoph Wagener is responsible."



"We are proud to have a professor at the head of our technical development", congratulated Dr Eng Jochen F. Kirchhoff (r.).

More support for local sports

— KIRCHHOFF Automotive has featured on the shirts of the Iserlohn Roosters and FC Iserlohn for a long time. Starting this season, the logo will be represented in another sport: basketball. KIRCHHOFF Automotive is a new primary sponsor of the Iserlohn Kangaroos.

10 The basketball team has been playing in the second national league Pro B Nord since September. KIRCHHOFF Automotive already played an active role as sponsor of the Kangaroos in the past year. For a long time, the Company has been supporting the social life in Iserlohn through donations and sponsorship, in art and culture as well as in sports. The Company logo is therefore a traditional fixture on the shirts of the Iserlohn Roosters of the Iserlohn Ice Hockey Club and can also be seen in the football stadium whenever FC Iserlohn plays in front of the home crowd.

In this way, the Kirchhoff entrepreneurial family not only wants to do something for its own town and the people who live there. Sponsorship also boosts the positive location factors for the workforce of the Company, which employs around 1,500 people in Iserlohn, Attendorn, and Hagen (WITTE Werkzeuge). And it is well-known that Iserlohn has plenty to offer in this respect.

However, the new role as primary sponsor of the Kangaroos is also of great personal importance to Dr Jochen F. Kirchhoff, Chairman of the Advisory Board and the Shareholder Circle of KIRCHHOFF Group: "Ever since

my youth, I have been enthusiastic about the fast-paced game of basketball, which my brother Arndt and I picked up and practised together at the former TUS Iserlohn. I am pleased that the motivated Iserlohn team has become a real crowd-puller."

"We are very proud to present KIRCHHOFF Automotive as a new primary sponsor and to know that this family-led company is part of our team", says Michael Dahmen, Manager of the Iserlohn Kangaroos. "The claim of the KIRCHHOFF Group is WE.MOVE.FUTURE., and this immediately struck a chord with our own philosophy. The Kirchhoff family



The Iserlohn Kangaroos show their fighting spirit after moving up to the second national basketball league.

takes care of its employees in an exemplary way and therefore has a very positive impact on the region as a whole. In the very pleasant discussions we have held over the last few months, we recognised that the Kirchhoff family will offer us sustainable support over the long term”, adds Michael Dahmen, giving his perspective on the relationship for the next few years.

Andreas Heine



Top: The new look of the redesigned Iserlohn Kangaroos shirt. **Bottom:** Representatives of the Iserlohn Kangaroos (f.l.t.r.) Deion Giddens, Norbert Masztalerz, Matthias Grothe, Michael Dahmen, and Michael Brown with primary sponsor Dr Eng Jochen F. Kirchhoff (2. f.r.).

Disposal logistics 4.0: the future starts now.

— About digitalisation in the disposal industry

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Patrick Hermanspann, CEO FAUN Group, about opportunities for the digitalisation of disposal logistics.

The keyword Industry 4.0 is not only on everyone's lips, but is already being implemented in many cases. Most factories in the industrial nations are already interlinked. For example, machines communicate with each other and with the ERP (Enterprise Resource Planning) system. Production processes are thus better coordinated, existing equipment is used more efficiently, and it is possible to respond to customer requests on a more individual basis. Digitalisation has either arrived already or is being implemented at many plants of the KIRCHHOFF Group. In the private sector, digitalisation has touched many areas of life and changed lifestyle habits. We have long grown accustomed to the ready availability of all information. As shown in the TV series Starship Enterprise, we float through our lives and communicate using appliances that, inspired by Captain Kirk and Scotty, we could only dream about as children.

Thanks to digital technology, we are organising our lives in a way that is more individual and more efficient than ever before.

The keyword Industry 4.0 is used to emphasise that we are in the middle of an industrial revolution. From mechanisation using water and steam power to Taylor's view of mass production with assembly lines and electric energy, to the use of electronics and IT to further automate production, through to the considerable adaptation to meet customer requirements in individual batch sizes under the conditions of flexible series production.

For many years, systems in disposal logistics have weighed the collected material and simultaneously assigned the weighed amounts to one citizen using container identification. IT systems for route recording and route navigation





are also in use. These are currently special solutions that are subsequently added to the vehicles and installed in the administration. Furthermore, the data connection between vehicle and office is an individual solution. The roots of these systems lie, in the sense described above, in the third level of evolution—you could say Disposal logistics 3.0.

The pending fourth wave of development will be based on this valuable preliminary work.

In future, each ex-works disposal vehicle will be fitted with the technical means to allow it to collect data, for example about the vehicle, the route, or the collected tonnes, and to save this data at a suitable location. Sensors will not only record how heavy a rubbish container is, where it is located, and who it is assigned to, but they will also transmit service- and maintenance-rel-

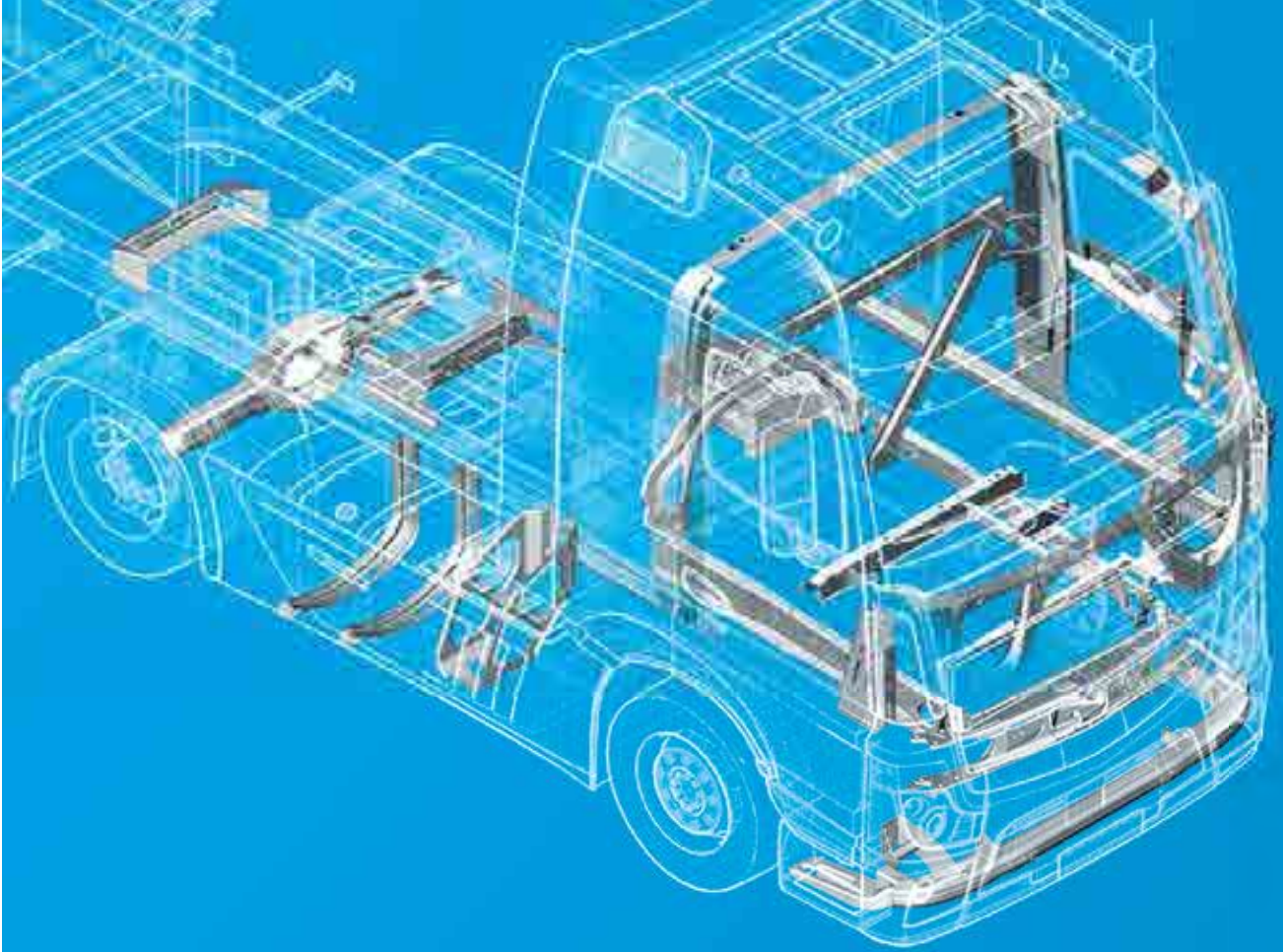
evant information about the vehicle's condition. This is the technical prerequisite that will allow us to work with our customers to design Disposal logistics 4.0. Our objective is to shape the collection and transport of recycled materials and waste in an even more efficient and need-based way.

As a group of companies, we have recently shown that it is possible to produce refuse collection vehicles used jointly with our customers on a daily basis that require 40% less fuel and dramatically reduce noise emissions at the same time. Through data collection, we will now be able to work with disposal companies to create systems that achieve significant savings by means of predictions regarding the required use of a vehicle and the associated energy set-up. Dynamic route planning for kerbside collection also appears to be possible, which currently still takes

place at weekly intervals. The availability of vehicle fleets will increase thanks to demand-actuated maintenance and warning systems.

With the digitalisation of disposal logistics, we have the opportunity to design disposal in a way that is more individual, need-based, and economical.

Patrick Hermanspann



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14-65



“Finding a balance between security of supply and reasonable prices”



Michael Rank, Executive Vice President Global Purchasing, on the challenges and opportunities of global central purchasing.

Andreas Heine: Mr Rank, thanks to the new structure of global central purchasing, a favourable price is no longer the most important reason for selecting a supplier. Why is this?

Michael Rank: In addition to quality and security of supply, in the selection of suppliers. However, greater consideration is also given to internationality and innovative capacity. The demands placed on us by our customers must be met by our suppliers as well. For us to be in a position to offer our customers global solutions in the requisite quality at a competitive cost, we also require an increasing number of suppliers throughout the world that can offer us raw materials and components or production facilities at a consistently high level of quality. Furthermore, we are

making greater use of the innovative capacity of selected suppliers and are coordinating innovation processes even more closely so that we can provide our customers improved solutions. More consideration is thus given to these aspects during the strategic alignment of the supplier portfolio.

Andreas Heine: Which factors influence security of supply?

Michael Rank: This topic is now more important than ever before and determined by a number of factors. In each case, the risks, probability, and impact must be assessed. Consider country risks, which must be taken into account when selecting suppliers and production locations, as well as when planning transport chains. There are currently

more than 400 centres of conflict in the world, of which over 230 are of high intensity and partly involve violence. Situations are changing more frequently and rapidly, often with an impact that extends far beyond national borders. We have to be able to adapt and respond to such developments.

A current hot topic for us is the availability of production processes and capacities. This relates especially to aluminium, which is gaining in importance in lightweight automotive construction. The availability of supplier production capacities poses a challenge for us in this respect. The drastically growing demand for aluminium is met by insufficient production capacities. In this case, the security of supply depends on our ability to assure a proportion of the

supplier production capacities for ourselves. Our team does an outstanding job to that end.

Andreas Heine: How can our teams maintain a global overview under the circumstances?

Michael Rank: First of all, we keep a close eye on the procurement markets that are relevant to us. Following the reorganisation, our teams are located on the ground in these markets or travel in them frequently. As a result, we receive information more quickly and directly. The analysis and assessment takes place in teams that include specialists in their material fields, who then draw up the respective purchasing strategies for our regions or plants. This enables us to be quicker and more coordinated at determining the correct course of action, to be more agile at responding to market changes, and ultimately to purchase in a more effective way.

Andreas Heine: Fewer suppliers sometimes means that the local dealer, even cheaper than the wholesaler, can no longer be used for a plant. How do you explain this at a local level?

Michael Rank: We want to benefit from synergy effects and economies of scale, as well as optimise solutions and results. Depending on the aggregation level in which we operate, we are looking for the most optimal solution for the Group, region, or location. The more aggregated or global the solution is, the stronger the focus on the interest of the Group. Of course, in doing so, we aim to produce the best possible result for each individual plant as part of the strategy. It is also understood, however, that the benefits cannot always be spread evenly across all areas, and in individual cases the best price cannot be obtained every time. We aim to make strategies as transparent as possible, as well as developing and coordinating them with the individual functions, so that the guidelines for selecting suppliers or awarding contracts are comprehensible and plausible.

Andreas Heine: If you take everything into account, what potential does global central purchasing offer to the Company as a whole on a global level?

Michael Rank: In terms of the proportion of material costs to our overall

product costs, the lever controlled by purchasing is relatively long. Economies of scale and bundling effects open up new potential to us. We will make better use of opportunities arising from the trends in commodity markets. In addition, we will continue to focus on the procurement markets in Asia, Central America, Eastern Europe, and the Middle East that are still attractive to us, in order to use global sourcing potential to our advantage. This has already led to significant material cost reductions this year and is anticipated for next year as well. Furthermore, I expect a more rapid realisation of the potential owing to the concentrated development of suppliers.

Andreas Heine: Many thanks for the interview.

The interview was conducted by Andreas Heine, Director Corporate Communication & Marketing.

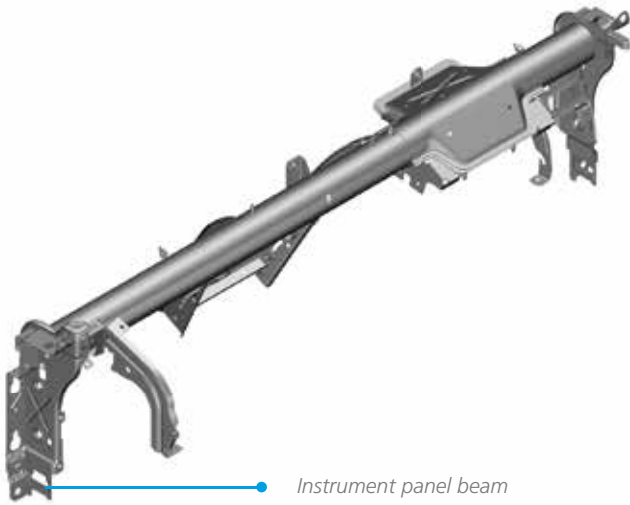


Michael Rank, Executive Vice President Global Purchasing, talks to Andreas Heine, Director Corporate Communication & Marketing, about the challenges and opportunities of global central purchasing.

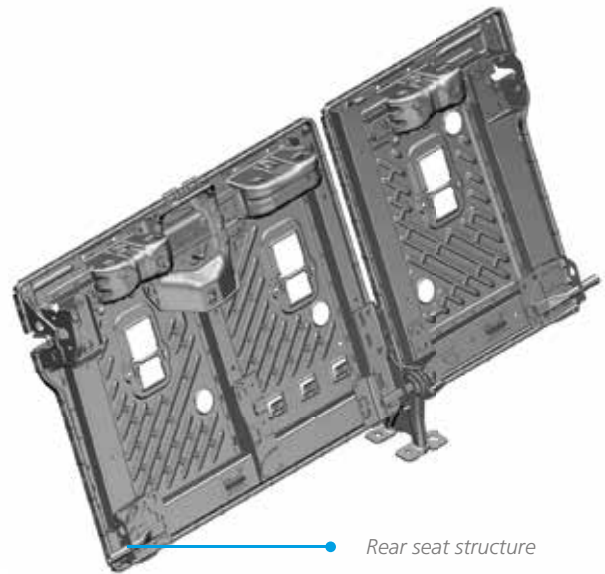
New products on the road

In many IAA premieres a KIRCHHOFF Automotive part can be found.

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Instrument panel beam



Rear seat structure



Opel Astra instrument panel beam

Technologies:

Forming, MAG-welding, stud welding, nut welding

Production plants:

Gliwice/Poland, Mielec/Poland, Shenyang/China, Waverly/USA, Querétaro/Mexico

Capacity/year:

1,0 Mio.

Customer/Model:

Opel Astra, Buick Verano, Chevrolet Cruze

Opel Astra rear seat structure

Technologies:

Forming, bending of profiles, laser welding, MAG-welding, projection welding, E-coating

Production plant:

Gliwice/Poland

Capacity/year:

450,000

Customer/vehicle:

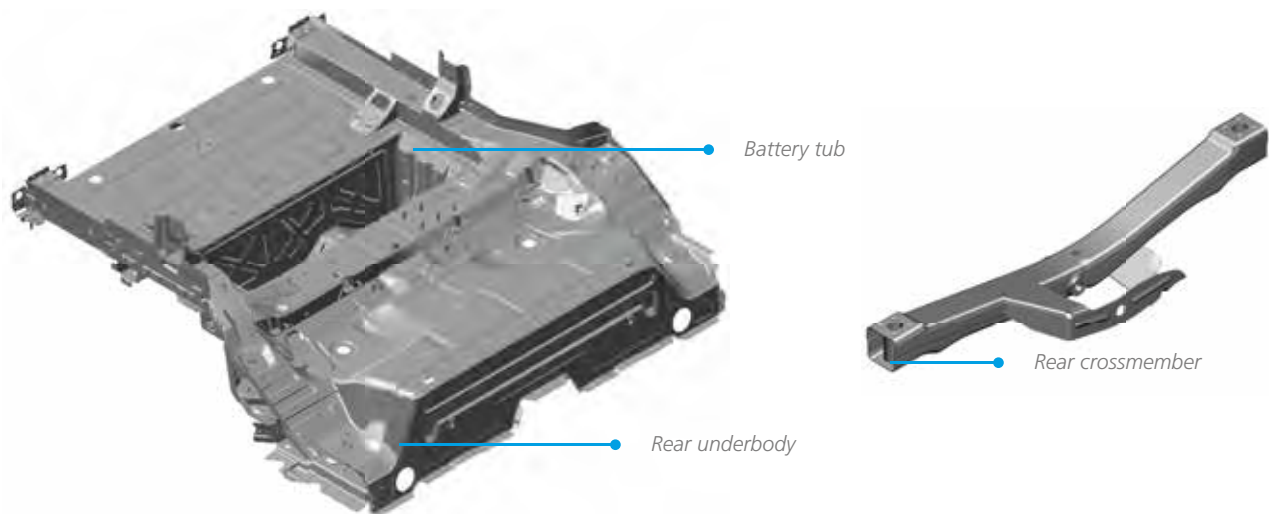
Opel Astra

Opel Astra battery tub, rear seat structure, cross car beam, rear crossmember and front and rear underbody

Just in time for this year's IAA Opel introduced its latest compact car, the Opel Astra, to the public. The Astra is build on the globally produced „Delta

platform“ which means that our parts are not only needed in Europe but also in Asia and North America. Due to our proximity to the customer site GM Polska in Gliwice, Poland we are also able to deliver large parts under cost-optimized conditions directly to the assembly line, like for example the underbody structure. Regarding such products like the

rear seat structure and the instrument panel beam KIRCHHOFF Automotive accompanied the development up to series-production readiness. For the battery tub we even were the developing partner which included a very intense collaboration with the Opel Development Center in Rüsselsheim.



Opel Astra underbody front/rear, battery tub

Technologies underbody front/rear:

Forming, spot welding

Technologies battery tub:

Forming, MIG brazing

Production plant underbody front/rear:

Gliwice/Poland

Production plants battery tub:

Gliwice/Poland, Mielec/Poland, Shenyang/China, Aurora/Canada

Capacity/year:

100,000 (underbody front/rear),
1.2 Mio. (battery tub)

Customer/vehicle:

Opel Astra, Buick Verano, Chevrolet Cruze

Opel Astra rear crossmember

Technologies:

Forming, MAG welding, E-coating

Production plants:

Gliwice/Poland, Mielec/Poland,
Shenyang/China

Capacity/year: 600,000

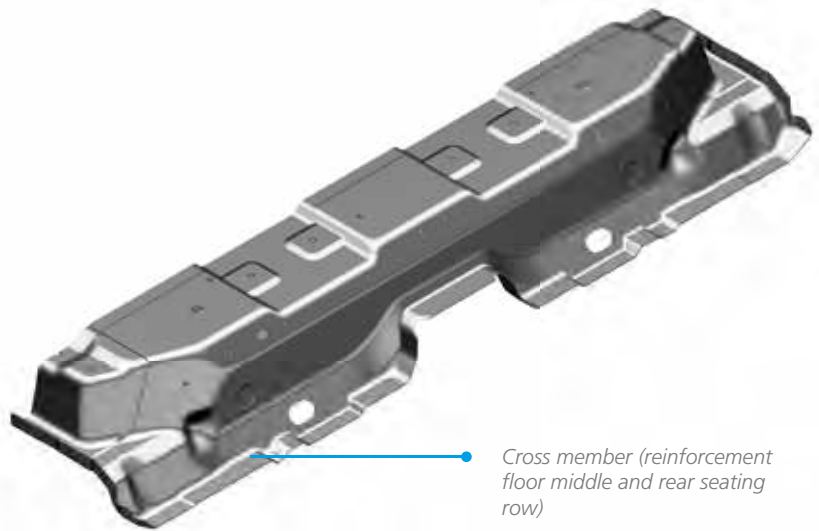
Customer/vehicle:

Opel Astra, Buick Verano, Chevrolet Cruze

**VW Touran rocker panel/
crossmember**

Volkswagen redeveloped Germany’s most successful family van. Since 2003 the Touran left the assembly line in Wolfsburg 1.9 Million times. The new Touran is the first van—and the third VW model in Wolfsburg—that is build on the basis of the newly developed modular transverse matrix (MQB). This makes him wider and longer than his predecessor but due to innovative light weight construction even 62 kg lighter. To support this progress in car body construction KIRCHHOFF Automotive uses super high strength steels processed at the hot forming line in Iserlohn (here especially the weight-optimized

tailor rolled crossmember) and assembles the lightweight parts on modern and highly automated systems in Attendorn. Both assemblies, rocker panel and crossmember, could be seen already at this year’s IAA in Frankfurt and are produced since May for about 150,000 vehicles per year for our customer.



Cross member (reinforcement floor middle and rear seating row)

20



**VW Touran rocker panel/
crossmember**

Technologies Rocker panel:
Hotforming, Forming, Spot welding

Technologies Crossmember:
Hotforming of flexible rolled blanks, Forming, Spot welding, Gluing

Production Plants:
Attendorn/Germany
Iserlohn/Germany

Capacity/year:
302,000 (rocker panel)
151,000 (crossmember)

Customer/vehicle:
VW Touran



Rocker panel left

Rocker panel right

BMW 7 series front-end

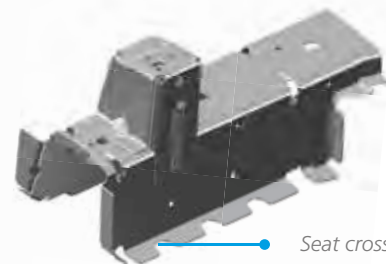
A central contribution to the lightweight construction topic is the BMW 7 front-end, developed and produced by KIRCHHOFF Automotive in Germany and Poland. Following the requirements of the luxury cars class for lightweight construction we used a total aluminum solution on profile and monocoque construction. That way a competitive solution was designed that can also be found in further derivatives of the platform with optimal material combinations at highest performance levels. A special development challenge was the

integration of the newest headlights generation from xenon to laser light. Here a complex aluminum sheet solution with the highest tolerance specifications was realized.

Audi Q7 seat crossmember

Audi's latest big SUV Q7, which drives on Germany's streets since June 2015 and has also been presented at the IAA, is being completely technically redesigned 10 years after the model's start. With a weight reduction of more than 300 kg a considerable contribution to reduced consumption could be

achieved. KIRCHHOFF Automotive supplies the front and rear seat crossmembers. Those are part of the underbody structure of the body-in-white at which finally the seats are fastened. Since the beginning of the year those components are produced in Mielec, Poland and installed at Volkswagen in Bratislava. A further application of the part in other vehicles of the group is in preparation. The cold forming of the high strength steels is subject to demanding tolerances which represented an exciting challenge for the polish employees.



@BMW

BWM 7 series front-end

Technologies:

Aluminum forming, processing of aluminum extrusion, aluminum welding, riveting

Production plants:

Attendorn/Germany, Gliwice, Mielec/Poland

Customer/vehicle:

BMW 7 series



Audi Q7 seat crossmember

Technologies:

Forming, spot welding

Production plant:

Mielec/Poland

Capacity/year:

300,000

Customer/vehicle:

Audi Q7 and further models of the group

Ford Galaxy rear bumper

As part of the crash management system we produce the rear bumper for the new Ford Galaxy. The crash management system absorbs the developing forces in case of an accident. The employees in Iserlohn, Germany manufacture the hot formed part and then deliver it to our plants in Cucujães and Ovar, Portugal for further processing. The coordination of the individual steps

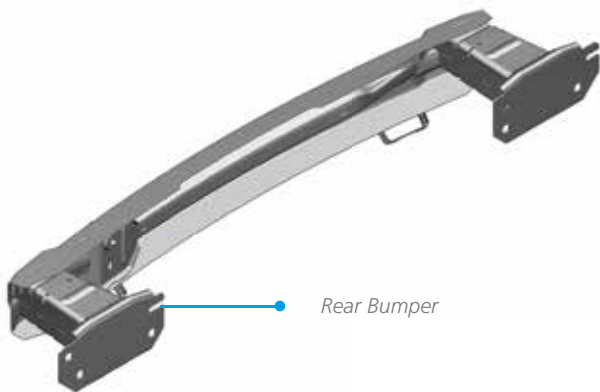
for the MAG welding process is a special challenge. In total, this way we produce 30,000 parts per year.

duction plant in Mielec, Poland supplies the KIA plant in Zilina, Slovakia with this product.

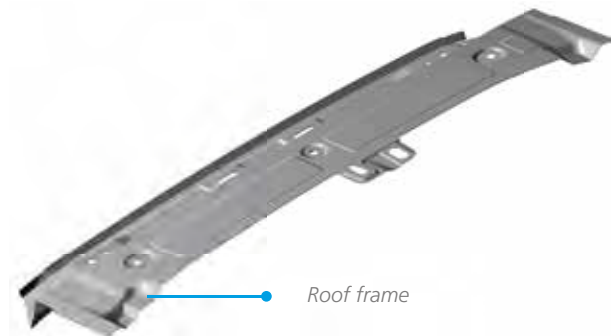
KIA Sportage roof frame

With the roof frame for the SUV Sportage KIRCHHOFF Automotive has received its first serial order from KIA. This is an optional component for the variant with sun roof and can be partly seen when the trunk is open. Our pro-

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Rear Bumper



Roof frame



Ford Galaxy rear bumper

Technologies:

Forming, Hotforming, MIG welding, E-coating

Production plants:

Iserlohn/Germany, Cucujães/Portugal, Ovar/Portugal

Capacity/year:

30,000

Customer/vehicle:

Ford Galaxy



KIA SUV Sportage roof frame

Technologies:

Forming, deep drawing

Production plant:

Mielec/Poland

Capacity/year:

66,000 vehicles

Customer/vehicle:

KIA Sportage (Sun Roof)

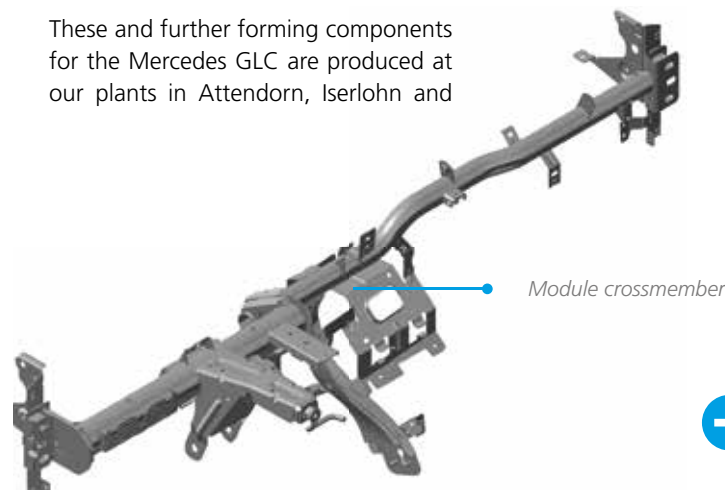
Module cross-member and further parts for VW

With the module cross-member for the VW T6 we could realize the first development project with Volkswagen. The product is our first cross car beam for VW. Furthermore, we successfully brought further stamping parts and components for the T6 and the Caddy to series production. In our new plant in Gniezno parts for the VW Crafter will be produced from 2016 onwards.

Mercedes-Benz GLC crossmember, roof frame, side impact member

These and further forming components for the Mercedes GLC are produced at our plants in Attendorn, Iserlohn and

Mielec. That way we for example manufacture the side impact member in Attendorn using high strength dual phase steel. This steel is mainly used for parts that have to fulfill a higher standard regarding crash performance. Mercedes-Benz produces 200,000 models of this vehicle per year in its plants in Bremen, Germany and Peking, China.



VW T6 module crossmember

Technology:
MAG welding

Production plant:
Mielec/Poland

Capacity/year:
175,000

Customer/vehicle:
VW T6



Mercedes-Benz GLC crossmember windshield, outer/inner roof frame, A-pillar outer/inner

Technologies:
Crossmember windshield: hotforming
A-pillars: hotforming, spot welding
Outer roof frame: hotforming
Inner roof frame: forming, projection welding

Production plants:
Crossmember windshield: Iserlohn/Germany
A-pillars: Attendorn, Iserlohn/Germany
Roof frame: Iserlohn/Germany, Mielec/Poland

Capacity/year:
ca. 200,000 vehicles

Customer/vehicle:
Mercedes-Benz GLC



A further step towards the future

— KIRCHHOFF Automotive opens its fifth plant in Poland. Besides Gliwice and Mielec the Company now is also present in Gniezno near Posen—regarding the region’s meaning for the automotive industry a forward-looking step.

The decision about the location for the new JIT plant fell on Gniezno, a historic city with 70,000 inhabitants about 25 km from Września and 50 km from Posen. KIRCHHOFF Automotive already supplies the VW plant in Posen-Antoninek, where models like the Caddy, Caddy Maxi and Transporter T6 are produced. Most convincing arguments for

the location were the proximity to the Volkswagen plants and the attractive labor market with good prospects. Also the excellent support of local authorities, regional media and business representatives from the region pleaded for the location Gniezno.

On 1st September the construction of the new KIRCHHOFF Automotive plant in Gniezno was officially launched with a groundbreaking. For this event, the management of KIRCHHOFF Automotive and representatives from Gniezno were on site. The first step will be the construction of a production area of approx. 5,000 m². The recruitment



Top: That is how it is going to look like, the new KIRCHHOFF Automotive plant in Gniezno. **Bottom:** Groundbreaking (f.l.t.r.): Paweł Arndt (delegate in Polish parliament), J. Wolfgang Kirchhoff (COO KIRCHHOFF Holding), Tomasz Budasz (mayor of Gniezno), Jarosław Grobelny (deputy mayor of Gniezno)

process for about 80 employees has already started this year. In the beginning of 2016 the plant is going to be production ready. In future welding components for the shell will be produced here. Those are then provided to the new VW plant in Września, where the VW Crafter is produced beginning in the second half of 2016.

The future Crafter plant comprises an area of 220 ha, which is almost the area of 300 soccer fields. Through the settlement of Polish and foreign supplier companies numerous further jobs are created in the region.

Janusz Soboń



It all begins in Gliwice

— 29th of September 2015 signed up in history of General Motors in Gliwice, Poland: it was the launch of brand new Opel Astra fifth generation–hatchback version. And for more than ten years KIRCHHOFF Automotive is part of this success story and has been supplying the GM facility from the Gliwice plant.



"It all begins in Gliwice"—a motto shown at the official launch ceremony in Gliwice.

Days before the all-new model had its premiere at the 2015 International Motor Show (IAA) in Frankfurt. Presented to the press and public, the new Astra fifth generation was put in the spotlight during the two-week exhibition and admired by invited guests and crowds of visitors. What makes the new Astra so exceptional compared to its predecessor

is definitely the lightweight construction—it is up to 200 kg lighter than the outgoing model. Thanks to its clever design it is smaller on the outside and bigger inside. "When it comes to efficiency, connectivity and additional accessories the all-new Astra is a quality jump in the automotive premium compact segment. Thanks to new Astra model we

consistently fulfil our policy to make the high-tech solutions accessible to all Opel customers. Before the official launch of new model, we already received 30,000 orders which proves that we successfully met our clients' expectations"—said Peter Christian Kuspert, Vice President Sales and Aftersales of Opel Group.

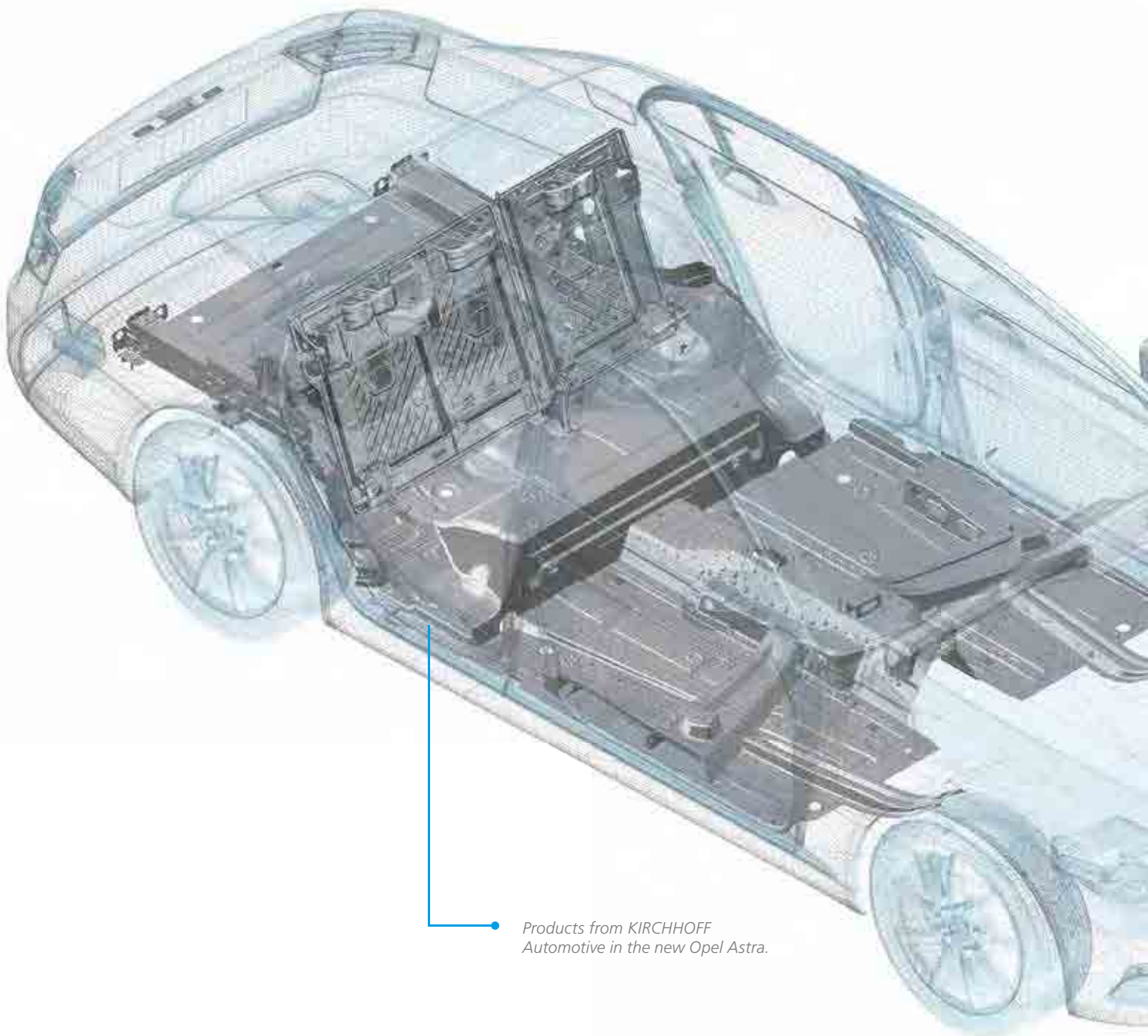
KIRCHHOFF Automotive in Gliwice invested already at an early stage in additional technologies in order to expand the conventional processes such as spot and arc welding and thus meet the specific customer requirements of the new Opel model. So at the beginning of 2015 the plant in Gliwice initiated the innovative process of laser welding and aluminum MIG welding. This facilitates the delivery of new parts for the Astra fifth generation at the highest quality and persistent efficiency.

From the first structure production for Opel Agila in 2004 until today KIRCHHOFF Automotive has come a long way with innovative technologies, dedicated suppliers and skilled employees. "It all begins in Gliwice" —this motto was shown at the official launch ceremony of the new Astra in September. Apart from high-ranking GM representatives guests from economy and politics like Janusz Piechociński (former Deputy Prime Minister and Minister for the Economy), Zygmunt Frankiewicz (President of Gliwice city) and the Consul

General of United States, Walter Braunohler, also Janusz Soboń (Chief Strategy Officer KIRCHHOFF Automotive) and Krzysztof Sypek (HR Manager KIRCHHOFF Automotive in Gliwice) had come to the gale. "As a longtime supplier to GM in Gliwice we are proud having been able to contribute to this innovative project and we look forward to further cooperation to continue our past success in the future", Janusz Soboń emphasizes.

Editorial Team

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Products from KIRCHHOFF Automotive in the new Opel Astra.



Top: The team in our Gliwice plant proudly presents the new rear seat structure for the Opel Astra 5th generation. **Bottom:** Production line for the new Opel Astra in the GM plant in Gliwice, Poland.





„The automotive supplier industry deserves credit“

— In summer 2015 Steve Kiefer visited the KIRCHHOFF Automotive plant in Gliwice, Poland. It was his first trip to Europe in his new function as Vice President Global Purchasing and Supply Chain at General Motors. He was impressed by the product portfolio of the plant and especially by the products for the new Astra generation.

Together with Katherine Worthen (Vice President Opel/Vauxhall Purchasing and Supply Chain), Tomasz Zwyrtek (Director Purchasing in Poland and Body Exterior) and his team members Marek Padiasek, Marek Zroski and Katarzyna Kandzia he spent 90 minutes of his very tight schedule to learn more about the KIRCHHOFF Automotive products. Stefan Leitzgen, COO and Janusz Sobon, CSO and Managing Director of KIRCHHOFF Automotive in Poland welcomed the group. After a brief company introduction Steve Kiefer and his team were guided through the plant. The guests were impressed by the range of products supplied by the

Gliwice plant—especially by the new products for the next Astra generation that was launched in September.

KIRCHHOFF Automotive was the only supplier Steve Kiefer visited during his stay in Europe. He wanted to know more about our ideas and future projects. Furthermore, the continuous development and further improvement of the business and supplier relationship were discussed.

On September 15th we could welcome further visitors of our customer General Motors in the Gliwice plant: Greg Warden

(Executive Director, Global Functional Leader Body Engineering), Bruce Jackson (Director, Global BOM Leader Body Engineering), Ralph Stenger (Director, Vehicle Engineering Europe) and Wolfgang Klein (Side Closure, System Lead Delta) as well as representatives of General Motors in Gliwice. A presentation by Grzegorz Stojanowski (Production Manager) and Krzysztof Sypek (HR Manager) followed by a plant tour offered the visitors the opportunity to get an insight into the planning and production of parts for the new Astra V.

Silvia Rauterkus, Janusz Sobon

Upper left: Rafał Lechowski (Managing Director Operations in Gliwice), on the right in the picture, guides the visitors from GM through the production in Gliwice, f.l.t.r.: Katarzyna Kandzia (GME Structures, Buyer), Marek Padiasek (GME Structures Commodity Manager), Steve Kiefer (GM Vice President, Global Product Development, Purchasing and Supply Chain), Rafał Lechowski (Managing Director Operations in Gliwice). **Left, picture bottom left:** Janusz Sobon (l., CSO and Managing Director of KIRCHHOFF Automotive in Poland) and Tomasz Zwyrtek (r., Director Purchasing Poland and Body Exterior) during the plant tour in Gliwice. **Left, picture bottom right:** During the visit on the 15th September Grzegorz Sochacki (2. f.r., Manufacturing Engineer KIRCHHOFF Automotive in Gliwice) shows the GM guests Greg Warden (2. f.l., Executive Director Global Functional Leader Body Engineering) and Wolfgang Klein (Side Closure System Lead Delta) on the right, a part of the rear seat structure for the new Opel Astra. **Bottom right:** J. Wolfgang Kirchhoff (Center r., COO KIRCHHOFF Holding) welcomes Steve Kiefer at the IAA in Frankfurt.



The person

Steve Kiefer started in August 2013 as Head of Global Powertrain Operations at General Motors. Before that he operated in various engineering and leading positions at GM and Delphi. Meanwhile he is Vice President Global Purchasing and Supply Chain at General Motors and highlighted in the beginning of this year his recognition for the automotive supply industry with the following words: "As I have been supplier once, I know how hard it is to make money in this sector."

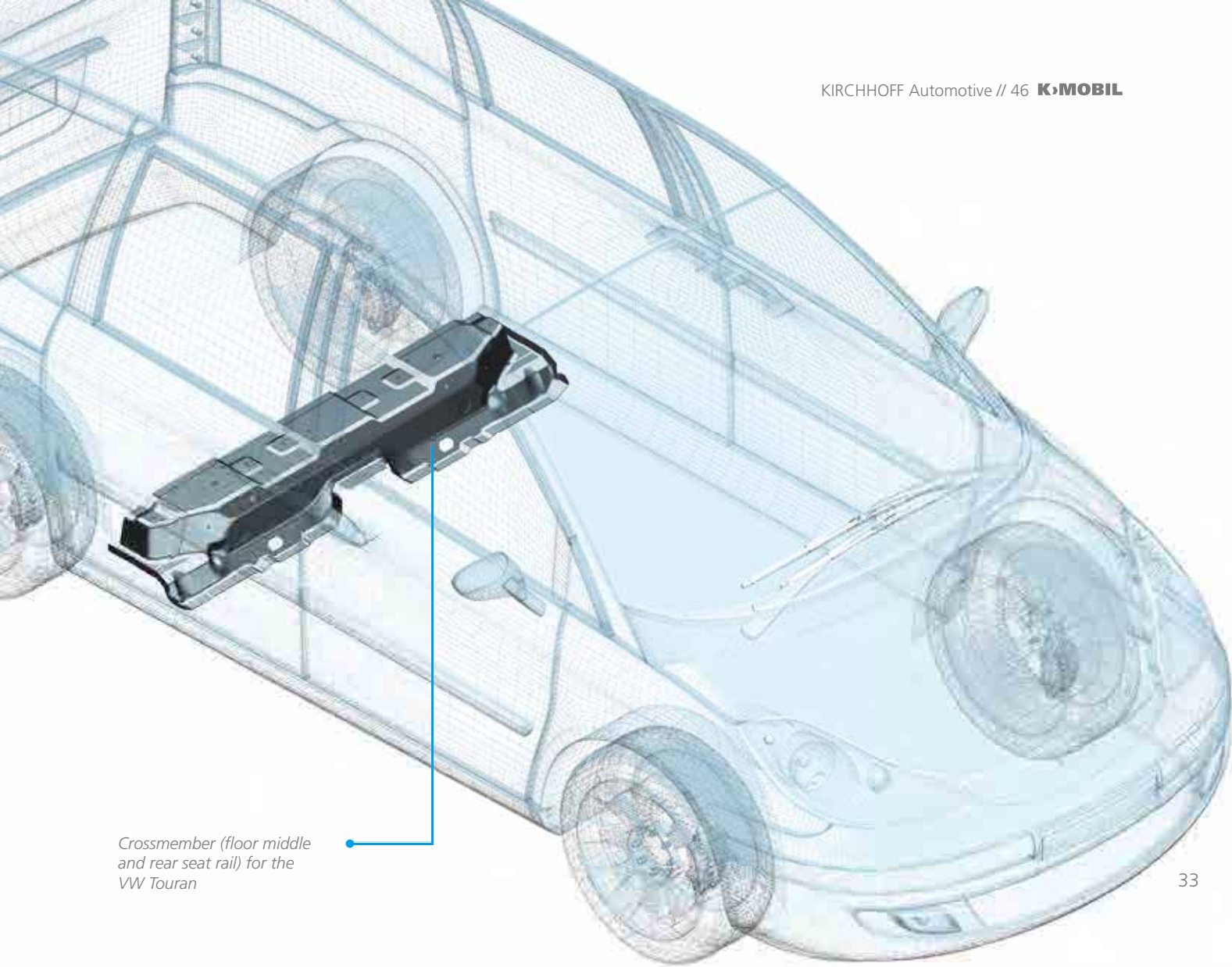


Powerful and future-oriented —the new welding system in Attendorn



— For the production of the crossmember for the new VW Touran it has been invested in a highly modern welding system at the Attendorn site. This system is engineered and designed in such a way that also crossmembers for future vehicle models can be produced on it.





Crossmember (floor middle and rear seat rail) for the VW Touran

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In Attendorn, Germany we produce for our customer Volkswagen the crossmember (floor middle and rear seat rail) for the Touran. It is part of the modular transverse matrix (MQB) of VW. The weight-optimized tailor rolled crossmember consists of a hot formed part as well as various cold formed parts. Nine different plate thicknesses allow an adjustment of individual areas of the part to high loads. For the assembly a new welding system has been purchased, which is engineered and designed in a way that also crossmembers for future vehicle models can be produced on this system—without big set-up efforts. The system includes 13 robots in different variations: handling robots, spot welding robots and 7-axis robots installed on a linear motion unit. Complex gripper systems with automated changing units support a version change in a few minutes. In addition to 113 welding spots we use an adhesive compound for the

assembly. Subsequently an integrated packing unit automatically stacks the components in special load carriers.

Tobias Halbe



Left: Overall 113 welding spots are used. **Top right:** Application of a compound adhesive during the assembly. **Bottom right:** Integrated automated stacking unit which puts the crossmembers in special load carriers.



Excellent atmosphere at the IAA

Record numbers at the largest automotive exhibition in the world: over 930,000 people visited the Frankfurt trade fair. Shiny limousines, high-powered SUVs, and fast sports cars set the hearts of auto enthusiasts racing. But not just the stands of the OEMs provided plenty to be excited about. The suppliers likewise showcased many novelties.



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This year, KIRCHHOFF Automotive's trade fair appearance focused on solutions for vehicle safety, lightweight construction technologies, and energy saving. Lightweight construction is becoming increasingly important, not only for the electric drive, but also for the classic combustion engine. According to VDA president Matthias Wissmann, the latter still has a great deal of potential for optimisation: "Reduced displacement, higher charging, lightweight construction—these are all key words in this respect."

In the long-term, however, there is no way around electric vehicles. "Electric mobility is another core component of the IAA. Many suppliers are showcasing their technologically innovative contributions in this field", said Wissmann in a press release.

Read more on page 38.



1. Steve Kiefer (l.), GM Vice President Global Purchasing and Supply Chain and Tomasz Zwyrtek (r.), Director Purchasing Poland and Body Exterior examine the battery tub for the new Opel Astra.

2. Vivid discussions during the booth tour: Klaus Lötters (l.), KIRCHHOFF Automotive Key Account Manager Mercedes-Benz with Dr. Klaus Zehender, Director Procurement Mercedes-Benz Cars and Vans, Daimler AG.

3. The booth team at the race car of the KIRCHHOFF Group. Normally the Porsche GT3 starts at the VLN Long Distance Championships. For example at the 24 hours race on the Nürburgring.

4. General Manager Purchasing, Yoshihiro Yamaguchi (centre l.), and Yohei Nakano (centre r.) from Honda Deutschland with Kenji Fukuyama, Country Manager Japan (r.) and Dr. Thomas Steinhaus (l.), Director Sales Cars, in front of the BMW 7series aluminum Front-end structure.

5. Annegret Kramp-Karrenbauer, Prime Minister of the Saarland, was listening the explanations of Dr. Thorsten Gaitzsch (centre), CTO KIRCHHOFF Automotive and Andreas Heine, Director Corporate Communication & Marketing, with interest. Evident highlight: the innovation area!

6. Conversations in relaxed atmosphere

7. High-ranking visit from Ford Motor Company (f.l.t.r.): Birgit A. Behrendt, Vice President, Global Programs & Purchasing Operation, Alan Draper, Director Global Powertrain Installations Purchasing and Keith Cooper, Global Director Body & Exterior and Raw Materials Purchasing.







KIRCHHOFF Automotive uses materials such as aluminium as well as a hybrid of aluminium and steel in different products. As a result, the Company makes a key contribution to lightweight construction, for example with its front end for the new BMW 7 Series that was developed and produced in Germany and Poland. For this product, a fully aluminium solution in shell and tube design was used. This has led to a competitive solution that can also be found in other derivatives of the platform with an optimal material combination and the best possible performance.



Our visitors were particularly interested in the innovation zone, where we presented a selection of research projects with specific tasks: weight reduction, cost saving, component reduction, best possible material utilisation, and simplified production process. This allowed us to demonstrate impressively how the combination of steel and continuous glass fibre-reinforced thermoplastic resin in the front-end area can achieve weight savings of 40%. Material utilisation is optimised through the use of different materials and is also improved by means of efficient component geometry. Comparatively low-cost glass fibres, among other things, contribute to this.



“At the IAA, we show our customers a condensed selection of the innovations that our Company currently offers. This leads to discussions about starting points for future vehicle generations”, remarks Dr Thomas Steinhaus, Director Sales Cars, summing up the product selection.

An innovative laser welding process, which KIRCHHOFF Automotive presented for the first time at the IAA, opened up an opportunity for further dialogue. Due to the use of an innovative laser flange welding optic, the flange width can be reduced by around 5 mm. This economical process lowers the weight of the component at the same time. Many visitors from business and politics informed themselves about our innovations, including the Governor of the



1. Garrelt Duin (m.), Minister for Economic Affairs, Energy, and Industry of the State of North Rhine-Westphalia, talking to Arndt G. Kirchhoff (l.), CEO KIRCHHOFF Holding, and J. Wolfgang Kirchhoff (r.), COO KIRCHHOFF Holding. 2. Based on the example of three B pillar prototypes, Christoph Wagener, Head of Research & Development, demonstrates partial heat treatment in the tool, softening by laser, and new materials for hot forming. Among the attentive audience were Paul van Rooij, Managing Director of KIRCHHOFF Automotive in Portugal, and board members of the German/Portuguese Chamber of Industry and Commerce. 3. Representatives from national politics and associations, including Member of the German Bundestag Dr Matthias Heider, came together at the regional meeting. 4. Rick Snyder (l.), the Governor of the US state Michigan, talked with Arndt G. Kirchhoff (CEO KIRCHHOFF Holding) about the current innovations and technologies at KIRCHHOFF Automotive. Thereby, he welcomed the automotive supplier's growth in Michigan.

U.S. State of Michigan, Rick Snyder, and Minister for Economic Affairs in the German State of North-Rhine Westphalia, Garrelt Duin. We welcomed representatives from top management of our customers, including Dr Klaus Zehender (Head of Purchasing, Mercedes-Benz Cars and Vans, Daimler AG), Steve Kiefer (GM Vice President Global Purchasing and Supply Chain), and Birgit A. Behrendt (Vice President, Global Programs & Purchasing Operations, Ford). The positive response of our customers to the projects and series products that we exhibited shows us that we are on the right track. As a development partner of automobile manufacturers,

we can make a key contribution to the automotive future.

"The atmosphere is excellent, not only among the customers, but also among the suppliers, who have helped to develop the majority of the new technologies showcased here at the IAA", states CEO Arndt G. Kirchhoff.

Sabine Boehle

IAA career days—pupils and students impressed by nature of event

— KIRCHHOFF Automotive stands for an excellent employer brand. However, we do not only want to express this in terms of performance, but also through special activities. This year, we therefore introduced a new concept for our pupil and student career days at the 66th IAA Cars.

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Facts and Figures of the IAA 2015

With 931,700 IAA-visitors in total the worldwide most important mobility fair could count 6% more guests than two years ago. That is the best result since eight years. With 1,103 exhibitors from 39 countries and 219 world premieres—60 world premieres more than two years ago—the IAA has further strengthened its position as the international leading fair of mobility. “Networking and digitalization characterized this IAA and point far forward”, emphasized Matthias Wissmann, President of the German Automotive Association (VDA).

The next IAA cars will take place from the 14 to the 24 September 2017 in Frankfurt/Main. Press days are the 12 and 13 September 2017.



Top: A day in the life of an engineer—Alexander Günther, an employee in Advance Product Development, talks about this topic and finds an interested audience in a group of students. **Bottom:** Tatjana Schutte (l.) gives some advices with regards to the pupils rally across the IAA.

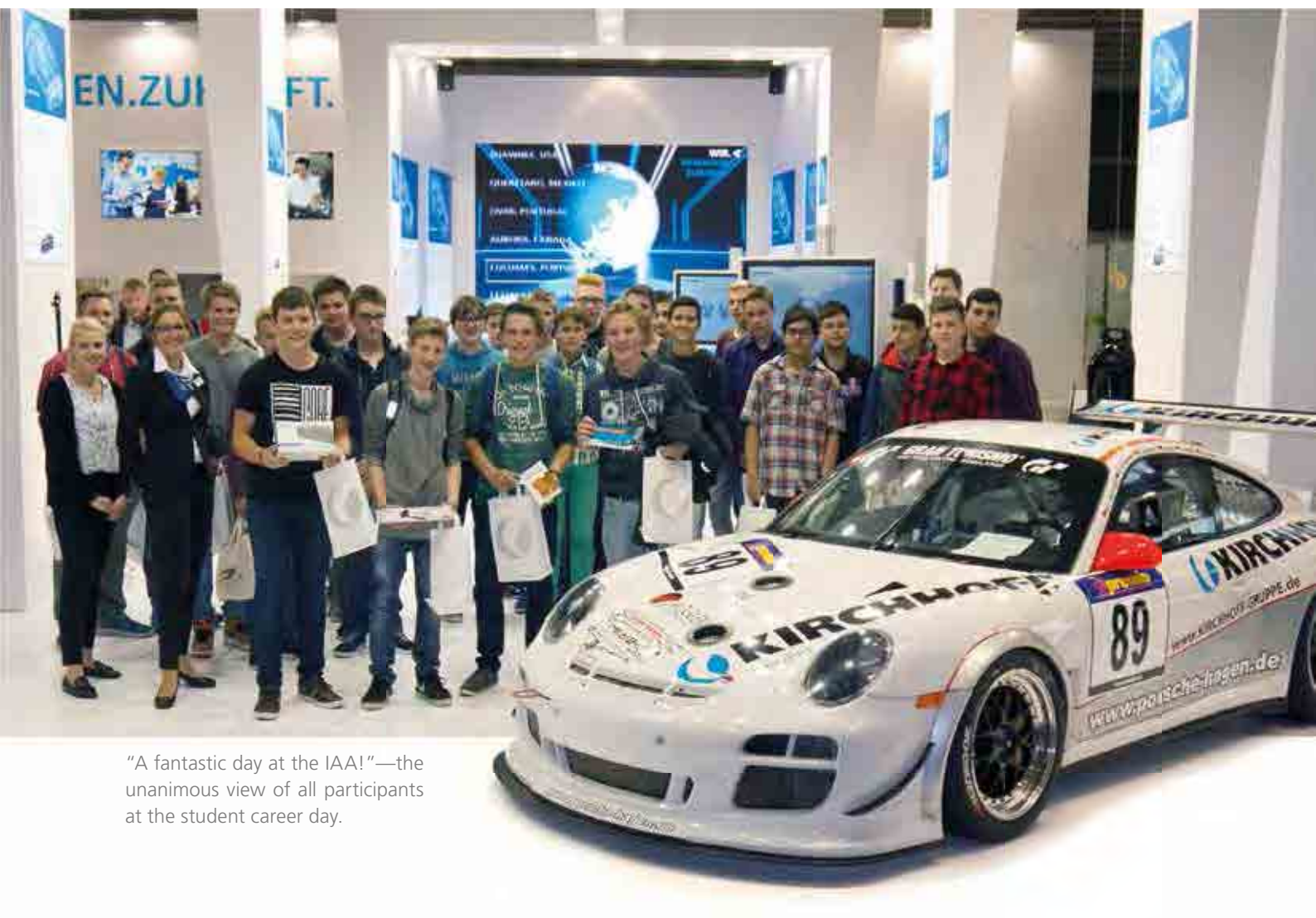
Earlier in the year, we prepared our new trade fair concept together with career counsellors at the schools. We discussed topics such as how schools select the “right” students for the IAA career days and, conversely, which aspects of our programme might inspire these students, as well as when we need to send out the actual invitations for schools to finalise their scheduling in good time. It quickly became clear that the key element and success factor in the recruitment of young talent for

KIRCHHOFF Automotive will continue to be direct communication with our contacts in schools and higher education institutions.

The students that we invited had one more hurdle to overcome in order to take part in the coveted career day: they had to apply to participate by means of a letter of motivation. This letter had to express why they would like to find out more about KIRCHHOFF Automotive, what they hoped to achieve

from their visit to the trade fair stand, and the questions they wished to ask during their visit.

The career day started for anyone who cleared this hurdle with a meet and greet session with the CEO of KIRCHHOFF Holding, Arndt G. Kirchhoff, who took time to answer all the questions asked. This was followed by an exclusive speed dating event with our marketing, sales, engineering, and co-operative student departments at KIRCHHOFF Automotive,



“A fantastic day at the IAA!”—the unanimous view of all participants at the student career day.



The day of apprentices has a long tradition: 66 apprentices from Iserlohn and Attendorn had an exciting day at the IAA. They learned a lot about the company and the current projects in research and development.



excellent chances of winning. The winner was delighted to receive a high-quality cable-free Bluetooth loudspeaker. In the shortest time, he correctly answered all questions about the customers and vehicle models for which KIRCHHOFF Automotive supplies parts.

as well as presentations on career opportunities in family-owned companies and current trends in research and development. During a guided visit to the automobile manufacturer stands, members of our team highlighted practical examples of how our products are employed in the latest vehicle models. One participant summed it up this way: "One of the highlights was that the CEO personally took the time to talk to

us—and in a very pleasant atmosphere. That says a lot about this company."

An interesting programme was also prepared for the pupils. In addition to providing an insight into the working day of an engineer, career opportunities at KIRCHHOFF Automotive were presented. And for the first time, an exciting question rally was organised that covered the entire IAA area and offered

KIRCHHOFF Automotive covered all the transport, entry, and catering costs for the pupil and student days.

In summary: wonderful days that would not have been possible without close cooperation between the human resources and marketing departments, as well as the willingness to cooperate of all our specialist departments.

Tatjana Schutte



A competitive solution

— In July 2015 KIRCHHOFF Automotive started with the production process for the new BMW 7 model facilitated by new aluminum welding technology.

For this model KIRCHHOFF Automotive produces front-end structure parts in Mielec and Gliwice. After the forming and an artificial ageing process in Mielec the parts undergo an oil cleaning process, MIG welding, e-coating and riveting in Gliwice. The front-end structure for the BMW 7 series presents

a central contribution to lightweight construction. KIRCHHOFF Automotive actively participated also in the design and development as well as early prototype phase. The result is a complete aluminum solution in profile and monocoque construction. This way a competitive solution was developed which

can also be found in the further derivatives of the platform with optimal material combination and best possible performance.

Editorial Team



Impressing Road Show at Great Wall

After the successful participation in Auto Shanghai in April, KIRCHHOFF Automotive presented its innovative lightweight components to the Chinese vehicle manufacturer Great Wall in summer 2015. With success—Great Wall showed great interest in our product portfolio, especially in the application of aluminum.

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Also the Chinese automotive manufacturer Great Wall starts to focus on lightweight body-in-white for his vehicles. The reason for this is the government's call for environment-friendly and sustainable development of the country's mobility. Thereby, especially energy has to be conserved and vehicle emissions have to be reduced. As an experienced development supplier for lightweight products KIRCHHOFF Automotive took the opportunity to present its portfolio in the area of lightweight construction during a road show, which took place in the Technology Center of Great Wall in Baoding. The presented lightweight products included aluminum cross car beams, steel/aluminum hybrid cross car beams, aluminum bumpers and steel/aluminum hybrid parts. Great Wall's

employees from the departments Material Development, Body-in-white as well as Interior and Exterior came to visit the booth and gathered information about the latest lightweight innovation products from KIRCHHOFF Automotive employees from the departments Sales and Process and Product Development. Especially great was the interest in the application and advantages of aluminum in lightweight construction and the future prospects for hybrid design in product development.

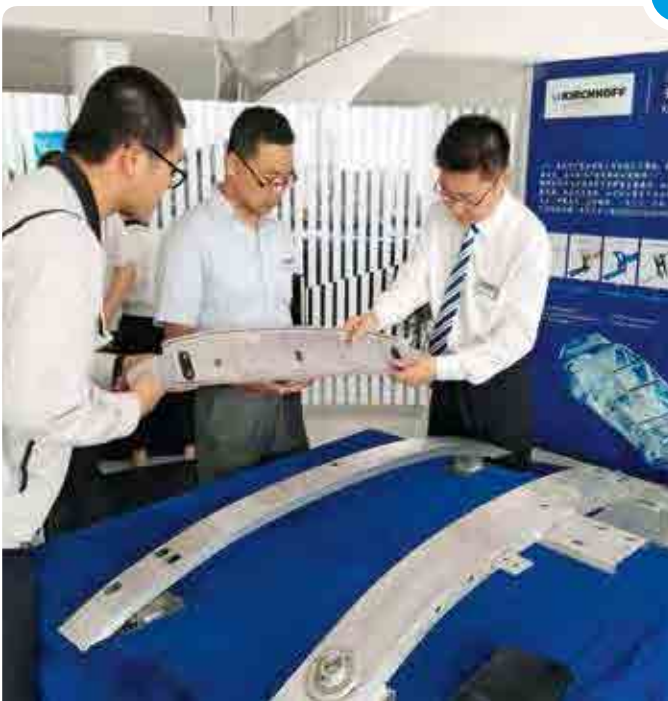
KIRCHHOFF Automotive underlined its longtime experience in the area of development and production of aluminum parts and presented a concept for an aluminum cross car beam, which can substitute the steel-aluminum cross

car beam of a new SUV. Great Wall's Technology Director Wang Guangdong acknowledged the quality of the proposal and as well as the competence of KIRCHHOFF Automotive a lot. Based on the data of the bumper for the new sedan model KIRCHHOFF Automotive is going to test the feasibility of an aluminum application.

Veronica Gao



Left: Cross car beams made of aluminum or of laser-welded steel arose great interest among the visitors of Great Wall. **Bottom:** Wang Guangdong (center), Technology Director of the Automotive Material Engineering Research Institute and the Department of Material Application examines the aluminum products from KIRCHHOFF Automotive.



Great Wall

Great Wall is a large, privately-run automotive manufacturer in China. It's product portfolio includes sedan models, SUVs, multi-purpose vehicles and pick-up series. The SUV model Haval, which is completely developed and designed by Great Wall, is the number one in the sector of middle class SUVs in China. Only in the first half of the year the manufacturer has sold more than 330,000 SUV—and therefore, achieved the highest domestic SUV sales figures.



World debut in regards of automatization

— In order to ensure the competitiveness of hot forming in Germany in the long term, KIRCHHOFF Automotive invested in the new end-of-line solution at the 1200 to hot forming production line at the Iserlohn site in Germany.



A look at the new automatic stacking line

In close inter-divisional cooperation our technology development, process development and CME department worked together with the plant in Iserlohn and the company Strothmann to develop a system that is able to prepack the up to 200°C hot parts automatically.

The special feature is, that we can continue using our standard containers despite the automatization and therefore, do not need special load carriers. This simplifies the container management and makes high packaging densities possible.

So far the formed components were removed from the press by the unloading feeder and then put on a conveyor belt. The new automated stacking line now assumes the handling of the hot parts and is able to pack them regardless of the component's temperature and geometry.

The stacking line has been decoupled in terms of time from the press: The unloading feeder removes the formed parts from the press and passes them to a shuttle. The unloading feeder can go back to the press and therefore, is immediately ready for the next stroke. The shuttle drives on with the components to the stacking line. There robots pass the parts to so-called pushers which drive sideways into the intermediate buffers and form component layers. As soon as one component layer is completed, the entire intermediate buffer slopes into the underneath standing load carrier and drops it there. The employee then only needs to exchange the load carrier. During the carrier exchange there is no production downtime as the prepacking into the intermediate buffer can be continued. In the future, parts like A-pillars, roof frames, heel parts, etc. will only be prepacked automatically.

The ability to prepack standard containers automatically makes the stacking line unique in the world.

Thomas Lozinski



Safety first!

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Employee safety is paramount at all KIRCHHOFF Automotive locations throughout the world. Our employees should return home safe and uninjured at the end of each working day. A success story from our Waverly plant.

It is now two years since safety awareness was deteriorating at the Waverly location in Ohio/USA. The leadership team realised that it was not only individual aspects that needed to improve, but that safety at the workplace could only be controlled if all departments were taken into account. Plant managers Deepak Kalwani, Richard Ross, and Bill Fellure carried through this approach with the objective of improving safety awareness in all relevant departments of the Waverly plant.

In a first step, a project team examined operating procedures and actual conditions at the workplace. The operating procedures and ergonomic situation were looked at with the company physician and the responsible occupation-

al health care service. On this basis, it was possible to draw up clear process guidelines to reduce the number of days lost and occupational accidents. Changes to the work environment and improvements to work processes were gradually implemented. Corporate management and company physicians have become true partners for our employees during the recovery from an occupational accident.

In a second step, the team assessed the recorded occupational accidents—and concluded that many could have been prevented if the **5-S rules** had been observed.

These rules are the foundation for the design and preparation of an attrac-

tive and safe workstation, because the chance of an occupational accident occurring is significantly lower in a well-organised workstation. Employees have now developed a specific awareness of these rules. As a result, 5-S is reviewed during the daily rounds. Safety in operations is also a topic that is always covered in the short daily managerial meetings. Operational safety takes priority on the agenda of every employee forum, and statements relating to industrial law provide information about occupational safety and environmental protection on a clearly visible noticeboard. The message is recognised in all departments: safety is paramount.

Although the plant has not yet reached its target, the initiative is making prog-



Left: Employees at Waverly can be proud of having reached one million hours without a lost-time day. **Right:** Michael Walsh, Long Nguyen, Bill Fellure, and Tony Parente (f.l.t.r.) with an award for 1,000,000 hours without a lost-time day.

ress: on 17 December 2013, the Waverly plant recorded its last lost-time day. There have been no further lost-time days since then. At a barbecue event in the summer of 2015, the location and all its employees celebrated one million hours without a lost day. President and COO of KIRCHHOFF Van-Rob Tony Parente, Plant Manager Bill Fellure, Production Manager Long Nguyen, Corporate Operations Manager Eddy Ang, and Corporate Environment Health & Safety Manager Michael Walsh thanked the employees and paid tribute to their contribution to this success.

Bruce Martin



5-S Rules

5-S stands for sort, set, shine, standardize and sustain. These rules form the basis for the layout and equipment of an appealing and safe workplace.



Multifunctional joining cell with automated process control.

Bundling of competences for the region

— The Automotive Center Südwestfalen (acs) in Attendorn has now been designated the competence centre for economical lightweight construction in the nationwide competition “Germany—land of ideas”. KIRCHHOFF Automotive is a founding shareholder of acs and maintains a close working relationship.

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The initiative “Germany—land of ideas” recognises ideas and projects that offer solutions to the challenges of rural regions. The theme of the competition was “Cross-country innovations—rethinking rural areas”. Around 1,000 research institutions, companies, and associations submitted their projects. Of these, 100 qualified as “Places in the land of ideas”.

Among them was acs, whose competition entry had the motto “On the go is easier together”. In the Economy category, acs supplied an answer to the question of how the development of innovative automotive parts can be supported through the cooperation of suppliers, higher education institutions, and communities in a rural region such as the district of Olpe. And therefore how it can be used in a targeted way for the economic success of mid-sized suppliers in the region.

In 2013, automotive suppliers, higher education institutions, and communities collaborated with the joint venture acs as part of the “Regional Südwestfalen” to drive forward the development of hybrid components made of metal and plastic. acs has already worked on over 460 projects and currently employs 34 people.

Experienced developers impart their knowledge to young engineers who have recently graduated from higher education institutions. Together they work for and with mid-sized businesses to create solutions for economical lightweight construction. This enables mid-sized suppliers to seek out new high-tech orders from vehicle manufacturers. Chairman of the Supervisory Board of acs and CEO of KIRCHHOFF Holding, Arndt G. Kirchhoff, pointed out at the award presentation: “Mutual knowledge transfer strengthens higher



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1,000 to servo eccentric press with modular servo drawing cushion, pre-heating unit and handling robot.



Managing Director Karsten Westerhoff (r., center of image) and acs founding shareholder Prof Helmut Schulte (l., center of image) received the award on behalf of acs.

education institutions and companies and makes the region more attractive to young talent.”

Managing Director Karsten Westerhoff and his predecessor Helmut Schulte accepted the award on behalf of acs. “We are very proud to be an ‘Outstanding place in the land of ideas’ and therefore to be able to showcase a solution to the challenges of rural regions”, said acs founding shareholder Prof Helmut Schulte.

The editorial team



Ryszard Czachor (center) and Céline Gast (left) with Christine Mauzac, Director Supplier Quality and Development at PSA.

This plant is one of the best

— The KIRCHHOFF Automotive plant in Mielec, Poland received the official confirmation to provide highest standards in management, production and logistics: On June 16th PSA Peugeot Citroën awarded the “Best Plants Award 2015”.

The honor of the best suppliers took place in Poissy/France. Céline Gast, KIRCHHOFF Automotive Key Account Manager PSA, and Ryszard Czachor, Quality Manager of KIRCHHOFF Automotive in Mielec/Poland, had come to Poissy to receive the award from Carlos Tavares, Chairman of PSA Peugeot Citroën’s Managing Board, and Yannick Bézard, Executive Vice President Purchasing. During the award ceremony Carlos Tavares highlighted that he would wish an even closer cooperation between purchase, technical development and suppliers. He stressed: „Cross-functional cooperation can ensure even better results. Without the

support of its key partners no automotive company would be able to be successful.”

Only in the last year PSA introduced the “Best Plants Award” for the best suppliers. This price is awarded to such supplier plants that have achieved outstanding performance in the areas of best efficiency, high quality standards and on time production. For their performance in 2013, 96 plants were awarded last year, among them the KIRCHHOFF Automotive plant in Ovar/Portugal. This year 74 plants received the award for their performance in 2014. Only 18 of

them had already been among the awardees for 2013.

The KIRCHHOFF Automotive plant in Mielec fulfilled the demanding customer expectations and therefore, was awarded as one of the best suppliers. This is a great success for the plant and its employees. But also the result of mutual efforts of management and employees, to continuously check and improve processes.

Céline Gast, Ryszard Czachor



We can do even better

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— Top management is working on further improving global cooperation.

The rhythm has proven successful. For the second time now, shareholders and management met with the directors of central functions responsible for Europe, Asia, and North America before the International Motor Show in Frankfurt, Germany. The objective of the two-day event in the Falkenstein Grand Kempinski hotel in Königstein was to further improve global cooperation. The focus was on internal processes and their standardisation, in particular. The team was supported by the business consultants Dr Ulrich Beckendorff and Annika Farin. They had already held numerous conversations in advance to determine where there might still be potential

for improvement. All participants also completed an extensive written survey beforehand, the results of which were also included. The two moderators were thus able to steer the work of the group to specific areas of cooperation.

Just the same as two years ago, the working atmosphere was excellent. Everyone pulled together and kept their focus on the same goals, regardless of whether their offices were located in Europe or North America. Very quickly and with great determination, the individual working groups identified areas where we can still get better, where cooperation can be made even

more efficient. Suggestions for improvement were compiled with creativity, while always keeping in mind real-life circumstances. In a subsequent step, the results are now being translated into specific projects by the Executive Board, and the respective implementations are being dated by priority. And in two years, we will continue along these lines, high above the clouds of Frankfurt. Because the process of continual improvement never ends.

Andreas Heine



Inspiring: the view from the hotel Kempinski Falkenstein to Frankfurt's skyline.



Top: The participants of the strategy workshop. **Bottom:** Lively discussions shaped the workshop. Here in the picture a working group of the Chief Officers, f.l.t.r.: Andreas Haase, Stefan Leitzgen, Tony Parente, Ken Gibbons, Dr Thorsten Gaitzsch,. Behind standing: Janusz Sobon.

The best of the best!

— KIRCHHOFF Automotive once again honours its best suppliers with the “Supplier of the Year” award.



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The awarded companies—Boltun Corporation, Hoesch Hohenlimburg GmbH, and Hujer Lasertechnik GmbH—display their certificates in the presence of KIRCHHOFF Automotive managers from logistics, purchasing, and quality assurance.

The certificates were presented in a festive ceremony at the relevant KIRCHHOFF Automotive locations. In the presence of managers from purchasing, logistics, and quality assurance, the Company management handed over the award to the best suppliers. In the past year, these suppliers stood out through their outstanding performance in the assessed categories of raw materials, purchased parts, and subcontracting.

The title of “Supplier of the Year” for each product category is awarded on the basis of the annual average of the monthly supplier assessments. This is derived from the assessment of perfor-

mance in terms of quality, logistics, and service, as well as the status of the quality and environmental management system of the suppliers.

The “Supplier of the Year” award is presented for the seventh time already at KIRCHHOFF Automotive. “We are pleased that we have been able to create a widely recognisable and established label in the procurement markets for outstanding partnerships with our leading suppliers and service providers”, says J. Wolfgang Kirchoff, CEO of KIRCHHOFF Holding.

Klaus Lawory



“Suppliers of the Year”

For raw materials:

Germany: Hoesch Hohenlimburg GmbH (Germany)
 Ireland: Sebden Steel (Ireland)
 Poland: Thyssen-Krupp Stal Serwis Polska Sp. z. o. o (Poland)
 Portugal: Thyssen-Krupp Materials Iberica (Spain)
 Hungary: Steel Center Europe s. r. o. (Czech Republic)
 China: Suzhou Lilai Iron & Steel Co. Ltd. (China)

For purchased parts:

Germany: Boltun Corporation (Taiwan)
 Ireland: Arnold & Shinjo GmbH & Co. KG (Germany)
 Portugal: DF-Elastomer Solutions LDA. (Portugal)
 Spain: TSF Navarra de Técnicas S. L. (Spain)
 Hungary: Bimex-Boellhoff Sp. z. o. o. (Poland)
 China: Shanghai SQB Automotive Fasteners Co. Ltd. (China)

For subcontracting:

Germany: Hujer Lasertechnik GmbH (Germany)
 Poland: Zakład Metalowy S.C. Anna i Stefan Babiński (Poland)
 Portugal: Edaetech S. A. (Portugal)
 Hungary: Uni-PP Kft. (Hungary)
 China: Shanghai Rongsheng Coating Co. Ltd. (China)

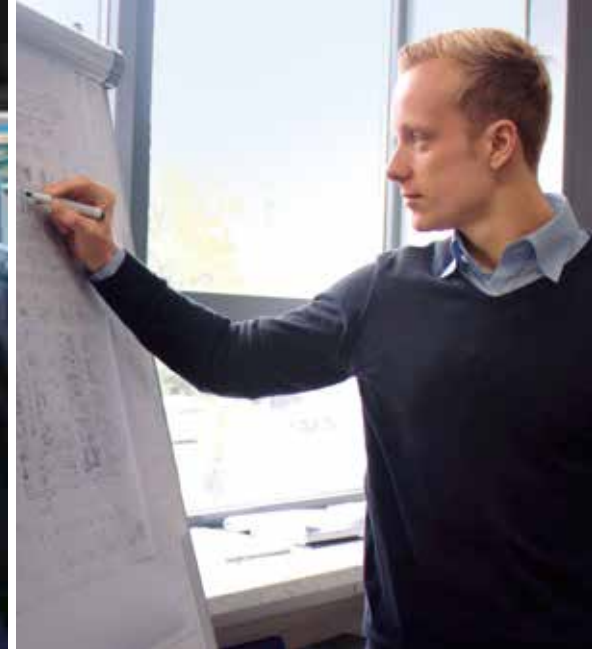
We support the next generation

Far beyond processes and technologies, it is qualified employees that form the foundation of the Company at KIRCHHOFF Automotive. Our most important task is therefore not only to continue training our employees, but also to support our new talent—on an international basis.

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Interns at the Polish plant in Mielec.



Left: Justyna Otremba completes her internship in quality assurance at the Gliwice plant and receives information from a colleague. **Right:** Intern Moritz Petereit is working on a project in the engineering department.



At several KIRCHHOFF Automotive locations, we offer an internship programme for students who wish to gain their first experiences in the professional world. A win-win situation for both sides. The students gain valuable insights into the tasks and requirements of the automotive supply sector. If they perform well and stand out by demonstrating great potential, commitment, and creativity, this could even result in a permanent employment at KIRCHHOFF Automotive. Our Polish plants in Mielec and Gliwice have recruited many of their engineers and specialists from the ranks of former interns. Even some of our managers started their careers with an internship.

Another reason to maintain and cultivate contact with students. This is achieved, on the one hand, through regular participation at regional and national job fairs. On the other hand, we cooperate closely with technical colleges and universities. In Poland, these include the AGH University of Science and Technology in Krakow, the Rzeszow University of Technology, and the

Silesian University of Technology in Gliwice, where we encourage students to complete internships lasting between one and three months at our plants in Gliwice or Mielec during their semester breaks.

If they choose an internship in Mielec, it begins with a four-day orientation training course. This includes a presentation on the corporate divisions, while individual departments report on their fields of activity. Students are then assigned project tasks and receive support from the relevant department managers in carrying them out. Sometimes students are able to gain experience in more than one department.

In 2015, a total of 38 people participated in the internship programme in Poland. This number included students from Germany and Poland, who are studying abroad.

Agnieszka Jadwiszczok, Bartosz Jalocho

We want to help!

— KIRCHHOFF Automotive in Romania stands up for disadvantaged children. It all began with the participation in the action "The gift in the shoe box". Now it is about to make a ramshackle kindergarten building available for use again.





Top left: Just a short time ago the kindergarten was in a desolate condition. **Top right:** The restoration works at the building are proceeding: At first the leaking roof is to be repaired and then the heating system will be modernized. **Bottom:** The children and their caretaker are happy about the exemplary relief campaign and are looking forward to the end of the restoration work.



In December 2014 employees of KIRCHHOFF Automotive in Romania have supported the project "The gift in the shoe box". Thereby, they collected more than 100 boxes with gifts and gave them to disadvantaged children in foster families in the district Dolj in the southwest of Romania. According to the General Directorate for Social Care and Childcare at that time 350 children lived in foster families, most of them on the countryside. The living standard there is often low. Some families live at the poverty level.

During the distribution of the gifts the attention came to a kindergarten in the commune Leordoasa, that urgently needed to be renovated. 20 children played and studied in a small and not well-heated room. The roof and the floor of the over 100 years old building were damaged. On rainy days planks in the inner courtyard prevented from stepping in the mud. In short: The building was in a desolate condition from which the children and caretakers had to suffer.

The employees of KIRCHHOFF Automotive in Romania wanted to help. In February 2015 they began with great commitment to acquire volunteer helpers and to raise funds. Also the plants in Germany and Poland offered their help. Together

the team collected 7,500 Euros for the restoration and modernization of the building. Support came also from the local authorities in the region.

After the contract signing between the local authorities and a construction company the restoration work could start in September 2015. At first the leaking roof has to be repaired and the classrooms should be processed. Furthermore, the heating system will be improved and the whole building structure will be made saver. Once the renovation works at the building are completed, a team of several volunteers from KIRCHHOFF Automotive in Romania is going to design the backyard with trees, flowers and a new path.

We want to thank everybody involved in this project for their selfless efforts and the willingness to help destitute people. We think: A great project which shows how we all can contribute in small matters and in large to an improvement of living conditions in our closer environment.

Cristina Ursu

Family event with folk festival character



“Bring your family to work!” This invitation to the family festival at the Attendorn location was extended by the Company management and the Works Council. Aside from a tour of the premises, exciting attractions were organised for young and old.

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Over 1,000 guests accepted the invitation and turned it into a real family event with a folk festival atmosphere. A varied programme offered something for everyone. The KiCo Kids performed an English song accompanied by the Attendorn fanfare band. During the tour of the premises, many were impressed by the new state-of-the-art welding system that is used to manufacture the floor for the middle and back seat rails of the VW Touran (see report on page 34).

The show of the second national league basketball team “Iserlohn Kangaroos” attracted a large number of spectators in the afternoon. KIRCHHOFF Automotive has supported the team since the start of this season as a new primary sponsor. The players demonstrated professional basketball first hand and encouraged young and old to participate. Trainer Matthias Grothe was impressed: “We are having a good time here presenting our sport.” Skill, concentration, and above all courage was needed for the bull riding event. After Arndt G. Kirchhoff, CEO of KIRCHHOFF Holding, had a few

noteworthy runs, more and more visitors dared to attempt this spirited attraction.

Joining the festivities for the first time was Nathalia Abreu, the new Communications & Marketing Manager at KIRCHHOFF Van-Rob, who had never been to Germany before. Even during her journey there she was taken aback by the scenery and charming towns and villages. She will remember the family festival as a very special event: “Kids giggling and lots of laughter—that was the first thing I remember about walking into the Attendorn plant during family day. Having been my first time in Germany I was excited to witness the culture, but especially to witness the Kirchhoff culture that I had heard so much about. I was told many wonderful things about the cheerful, family-oriented way in which the shareholders treated their employees, and at family day I saw just that!

I was captivated by the way in which the families of the employees were one big family under the Kirchhoff umbrella,

how the kindergarten kids sang and played with each other, how different families shared a meal together at the table, and how the Kirchhoff family joined in celebrating with such warm demeanors. I will fondly remember this day, what a great way to foster the company culture!”

Artur Rath, Nathalia Abreu





1. The KiCo Kids perform by singing an English song. 2. Visitors to the Family Day in Attendorf experienced a real folk festival atmosphere. At the heart of the event: Arndt G. Kirchhoff, CEO of KIRCHHOFF Holding. 3. Over 1,000 people attended the Family Day in Attendorf. 4. It was four against four in the tabletop football tournament. 5. Players of the second national league team "Iserlohn Kangaroos" demonstrated professional basketball first hand and encouraged young and old to participate. 6. Arndt G. Kirchhoff, CEO KIRCHHOFF Holding, had a few noteworthy runs on the rodeo bull. 7. The Attendorf fanfare band added to a great atmosphere.





Both of the toolshop directors Jürgen Wlochowicz and Andreas Willmes (5th and 6th f.r.) are very happy about the award.

Toolshop of the year 2015

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That is how the toolshop of KIRCHHOFF Automotive may call itself now officially. Because in the nationwide competition "Excellence in Production" the team from Attendorn was awarded the winner in the category "internal toolshop under 50 employees".

The Machine Tools Laboratory WZL of the Rhenish Westphalian Technical University (RWTH) Aachen and the Fraunhofer Institute for Production Technology (IPT) announced already for the 12th time within the competition "Excellence in Production" the "Toolshop of the year". Out of 295 competitors—as many as never before—50 companies were audited on site. In the end, 13 finalists were defined, among those KIRCHHOFF Automotive.

A prestigious jury with representatives from politics, associations, science and economy chose the "Toolshop of the year 2015". The ceremonial award took place within the 15th International

Colloquium "Toolshop with future" in Aachen.

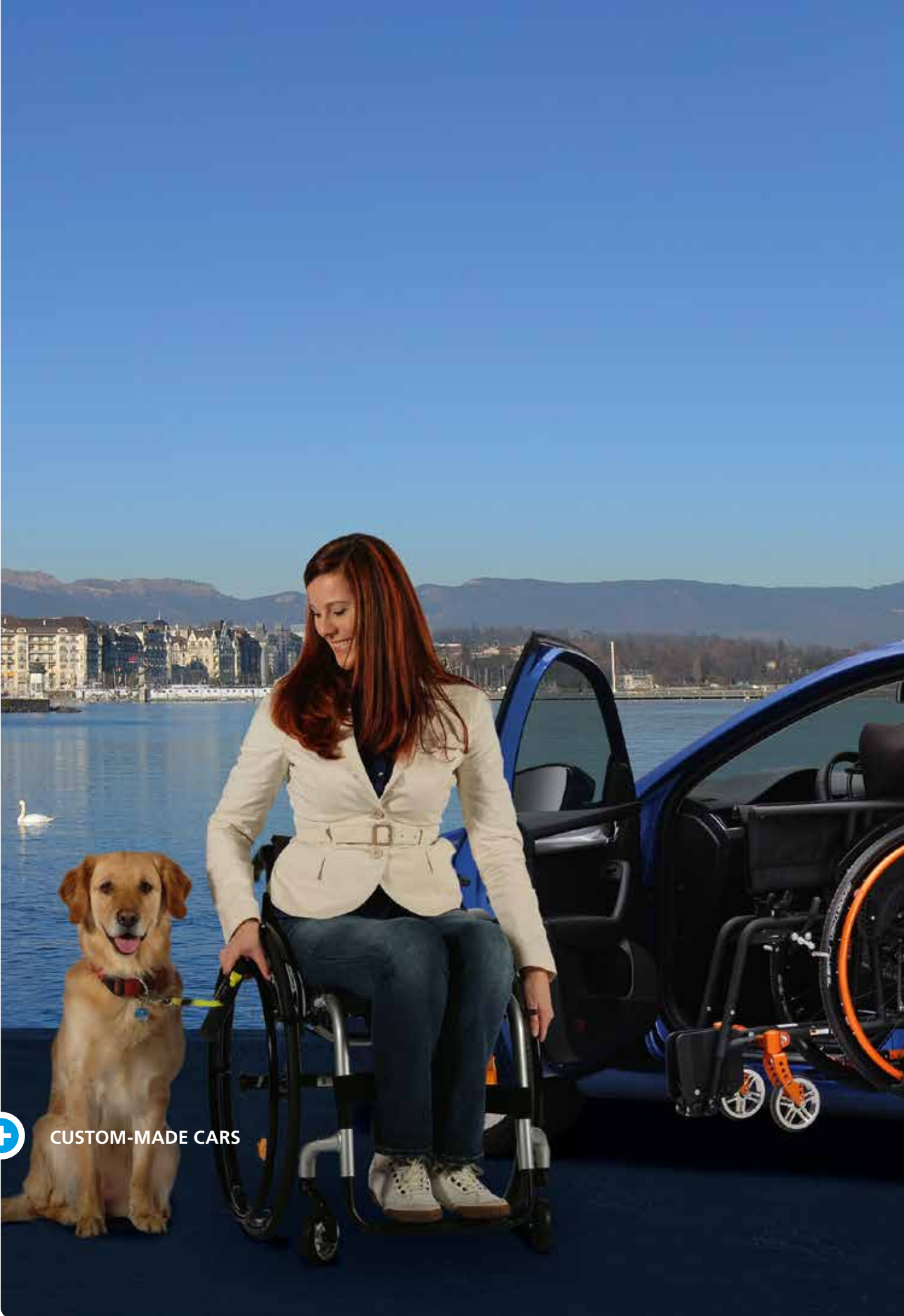
The laudator praised the high competence of KIRCHHOFF Automotive's toolshop. The judges were especially impressed by the clearly defined future strategies, clearly defined milestones and in particular the very good visualization of the order situations through big screens in the toolshop. "The award is an honor and motivation at the same time and shows that we are on the right track with our excellent team in the toolshop", Jürgen Wlochowicz and Andreas Willmes stated happily after the award ceremony.

On an area of about 2,200 m² tools can be produced under optimal conditions in Attendorn. The flow production is a central part of the project "Synchronous Toolshop" and leads together with the production layout to reduced production costs. Transport and storage times are decreased, the transparency on the other hand improved once more. The competitiveness of the tools "Made by KIRCHHOFF Automotive" therefore, is considerably improved.

Sabine Boehle



A look at the toolshop: Two portal cranes and four cantilever cranes ensure a smooth material flow during the whole production from the incoming material to the shipping of the ready tools. With this method, heavy parts can be moved and, independently from that, the single assembly boxes can be supplied at the same time.



CUSTOM-MADE CARS



KIRCHHOFF
MOBILITY

Custom-made cars

66-75





REHACARE 2015 Düsseldorf —great momentum for an independent life

— The international trade fair over four days in October was the lively meeting place for almost 39,000 visitors. They learnt about innovations and ongoing developments in the area of rehabilitation and care as presented by 700 exhibitors from 37 countries—including KIRCHHOFF Mobility.



Individual automobile conversions that are perfectly adapted to specific requirements and offer increased mobility are the core competency of KIRCHHOFF Mobility. The Company gave an insight into its latest product range using the example of the new fourth-generation VW Caddy, which generated great surprise with its versatile, user-friendly, and individually adapted solutions for series vehicles. Its equipment included the EASY conversion system developed by Jelschen GmbH, featuring a wheelchair securing system and an easy-to-use ramp. The “weightless” ramp, which minimises the effort required by the user, is due to a specially engineered spring mechanism. This design detail is especially appealing to the so-called “best agers”.

Visitors were also able to test the new “closing aid” on the VW Caddy. In vehicles with a relatively large interior volume, it is normally necessary to use a great amount of force to close the boot lid. With the electric closing aid, the boot lid is pulled shut after it is closed with light pressure. This aid is available both for vehicle retrofits and as part of the conversion to include a rear entry.

In addition, a variety of special equipment was installed in the display vehicle, for example the “Turnout” swivel seat on the passenger side, which makes it easier for people with limited mobility to enter the vehicle or move into the vehicle from a wheelchair. This seat is more comfortable than a wheelchair, particularly for longer journeys. The Easy Speed manual controls were also showcased in Düsseldorf/Germany. A report on this development from the subsidiary Haag-Rehatechnik in Kronau/Germany is available on page 54 of the summer 2015 edition of K>MOBIL via the following link: <http://www.kirchhoff-automotive.com/deEN/media/downloads/>.

In conclusion: a successful trade fair appearance with a considerable level of customer interest. The lower number of exhibitors attracted by the “smaller” REHACARE event, which is held every two years, results in higher numbers of visitors at individual exhibitor stands. Small trade fair, big impact!

Rolf Mättig

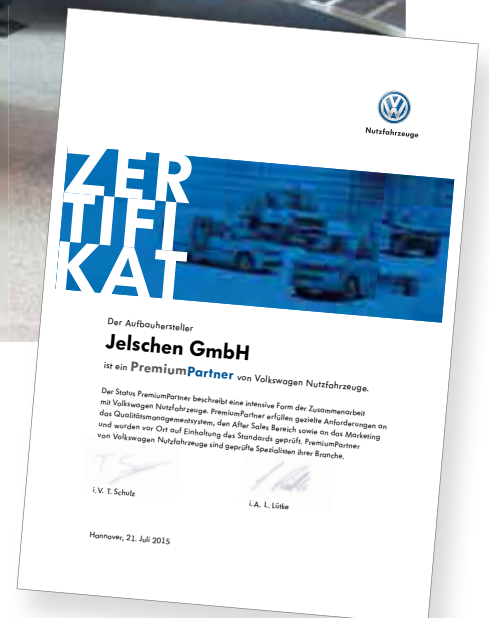
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Left: KIRCHHOFF Mobility used the VW Caddy to illustrate versatile, user-friendly, and individually adapted solutions for series vehicles at REHACARE in Düsseldorf/Germany. **Right:** The KIRCHHOFF Mobility team at REHACARE.





Top: Exhibition pavilion in Bad Zwischenahn/Germany with ready-for-sale, converted series vehicles. **Right:** Jelschen is a Premium Partner of VW Commercial Vehicles.



Prestigious prize from VW Commercial Vehicles

In mid-2015, VW Commercial Vehicles awarded Jelschen GmbH, which is part of KIRCHHOFF Mobility, the distinction of “Premium Partner” for its high-quality conversions. To achieve this status it was necessary to maintain a sustained, committed, and successful cooperation with the Wolfsburg-based automotive group during the design and realisation of super-structures and conversions.

For almost 40 years, Jelschen GmbH has equipped series vehicles with user-friendly mobility aids that are adapted to individual requirements. The focus has always been on the provision of a competent service to customers. The company offers solutions to people with restricted mobility due to illness, accident, or age to increase autonomy and independence. From a simple steering wheel knob to a radical change in the bodywork, Jelschen therefore always provides a comprehensive, personal service with a national mobility guarantee.

The basis for admission to the VW partnership system was the fulfilment of the strict VW standards, which were verified on site by Volkswagen AG audi-

tors. All conversions must be performed and documented in strict accordance with the installation guidelines of the vehicle manufacturer. For approval, the company must present the converted vehicles at the VW main plant in Wolfsburg, where specially trained vehicle engineers carry out the tests in the development laboratories. The CNO (Certificate of Non-Objection) is only granted for defect-free conversions. Jelschen already received the CNO for the successfully presented Caddy conversion in the spring of 2015. In the VW conversion portal (www.umbauportal.de), Volkswagen Commercial Vehicles certifies the technically flawless work of the Jelschen conversions. Customers and dealers of Volkswagen Commercial Vehicles can use this portal to easily and

quickly search for a suitable partner for superstructures or conversions.

As a new Premium Partner, Jelschen GmbH will continue to work more closely with Volkswagen Commercial Vehicles as part of the partnership system. Customers of Volkswagen and Jelschen will benefit from tried-and-tested conversion solutions that are offered on an individual and customer-specific basis. The focus is on safety, ergonomics, comfort, and economy, as well as on flexibility of conversion and versatility of use.

Jörg Brach



The Caddy 4 – with versatile conversion options

Since its market launch in July 2015, Jelschen has offered the conversion with a variety of options:

- Boot lid closing aid
- Head and back supports
- Electric winch
- LED lighting
- Enlargement of standard seating area to create wheelchair user space
- Rear seats can be individually folded, turned around, and completely removed
- Two-part aluminium access ramp into vehicle cabin
- Three-point occupant restraint system for wheelchair user
- Four-point restraint system for wheelchair



A look at a converted fourth-generation VW Caddy: maximum flexibility thanks to NIVO® conversion for wheelchair rear entry.

Depending on the base vehicle (Caddy/Caddy Maxi), up to five additional people can be transported. If the wheelchair space is not required, both variants of the Caddy can optionally be used as seven-seater vehicles.



Opel workshop—barrier-free automobiles

— In summer 2015, already the second workshop for automotive sales representatives took place in the Berlin subsidiary of REHA Group Automotive GmbH & Co. KG. The main topic was “Individual mobility—barrier-free automobiles”.



Left: The numerous already converted vehicles that were showcased gave everyone present an overview of the many options available for barrier-free vehicle conversions adapted to the needs of persons with restricted mobility. **Top right:** Satisfied faces at the end of the event. The “Individual mobility—barrier-free automobiles” workshop demonstrated how people with limited mobility can regain some of their freedom through individual vehicle modifications. An exciting experience for all participating sales representatives, sales managers, and regional managers from Opel and Opel Commercial Vehicles. **Bottom right:** During the workshop tour, participants had the opportunity to look over the shoulders of the mechanics at work.

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The first workshop of this type took place three years ago, arranged at that time for employees of VW Commercial Vehicles. This summer, sales representatives, sales managers, and regional managers were invited from Opel and Opel Commercial Vehicles. Further participants at the event were employees of OSV GmbH in Rüsselsheim/Germany, the Opel competence centre for the construction and conversion of special vehicles. We welcomed Ilona Köhler, Marketing Manager Vehicle Conversions Opel Special Vehicles, as a special guest in Berlin.

Following the invitation by Heike Herzog, Regional Manager of Adam Opel AG, and our subsidiary manager Heiko

Richter, around 40 sales employees had the opportunity to find out about the almost limitless possibilities and high technical standard of conversions in passenger cars and commercial vehicles. In addition to many interesting facts about vehicle conversions for people with reduced mobility, a detailed plan was drawn up for further intensifying the cooperation between the sales organisation of Adam Opel AG and KIRCHHOFF Mobility, which the REHA Group is part of. REHA Group Automotive has been the exclusive development partner and converter of Adam Opel AG for many years. On this basis, a further increase in efficiency should be achieved in the future.

The numerous already converted vehicles that were showcased gave everyone present an overview of the many options available for barrier-free vehicle conversions adapted to the needs of persons with restricted mobility. At the end of the day, this workshop was a complete success from the perspective of everyone involved. It aroused and increased the interest of many sales representatives in “individual mobility” and even managed to break down barriers.

Heiko Richter



Wheelchair-friendly access ramp in Ford (Grand) Tourneo Connect

New name for Swiss subsidiary

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With immediate effect, Fritz Haueter AG in Switzerland will trade under the name KIRCHHOFF Mobility AG. This should further strengthen the cooperation with customers and partners in the KIRCHHOFF Mobility network with its 12 locations in Central Europe.

The two locations in Stäfa/Switzerland and Romanel-sur-Morges/Switzerland will be retained and further extended. As early as in April 2014, Fritz Haueter AG in Stäfa was acquired by REHA Group Automotive, a company of the KIRCHHOFF Mobility business unit. In future, cooperation with the other locations is to be further intensified. The objective is to exploit synergy effects and ensure knowledge transfer in the specialisation on specific conversions. Until now, Haueter in Switzerland has focussed more on trade than on vehicle conversions. Under the umbrella

brand KIRCHHOFF Mobility, the company aims to strengthen its position in Switzerland as a vehicle conversion specialist. Against this backdrop, Pascal Fossa was appointed Deputy Managing Director. He is responsible for the "German-speaking Switzerland sales area". Every year, more than 3,000 customised vehicles for drivers or passengers leave the operations of the KIRCHHOFF Mobility business unit. An ever closer, extensive network of subsidiaries offers customers rapid and easy accessibility.

Catherine Junker



Barbara Woltmann, member of the German Parliament, with plant manager Jörg Brach during the workshop tour.

Skilled workers wanted

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As part of the “Week of operations” campaign, the Member of the German Bundestag Barbara Woltmann also visited a company of KIRCHHOFF Mobility, the company Jelschen in Bad Zwischenahn/Germany. An important topic during the visit was the shortage of skilled workers in the region.

Jörg Brach, plant manager for Jelschen GmbH at the Bad Zwischenahn industrial estate, welcomed Barbara Woltmann and showed her around the operations. The company specialises in vehicle conversions for versatile, user-friendly, and individually adapted mobility aids in series vehicles. Its customers include people who have restricted use of a motor vehicle due to illness, age, or accident. Barbara Woltmann was impressed by the variety of products as well as the high level of independence that customers can regain through a tailor-made vehicle conversion.

With 25 employees on site, Jelschen GmbH, which is part of KIRCHHOFF Mobility, also develops its own solutions for drivers and passengers. This requires experience and specialised knowledge.

As the company is continuing to grow and has been a Premium Partner of VW Commercial Vehicles since the middle of this year (see report on page 70), the intention is to strengthen the workshop team. However, this is not as easy as it sounds. Jörg Brach reported considerable difficulties when looking for the right employees: “We have spent a long time searching for mechatronics engineers and motor mechanics for self-drive conversions and body work in particular. Thus far we have not been successful.” The search will continue in 2016. Next year, three apprentices will be employed in the workshop and office.

“It is always impressive to see how many internationally operating and successful family-run companies have

settled in Ammerland/Germany. This is yet another reason to rectify the shortage of skilled workers in the region”, stressed Barbara Woltmann after the interview.

In the context of the increasing shortage of skilled workers, she asks for an assessment of all ways in which companies can be assisted in this respect. This should also include ideas on introducing well-qualified refugees with the right of residence to the employment market and thus also supporting their integration.

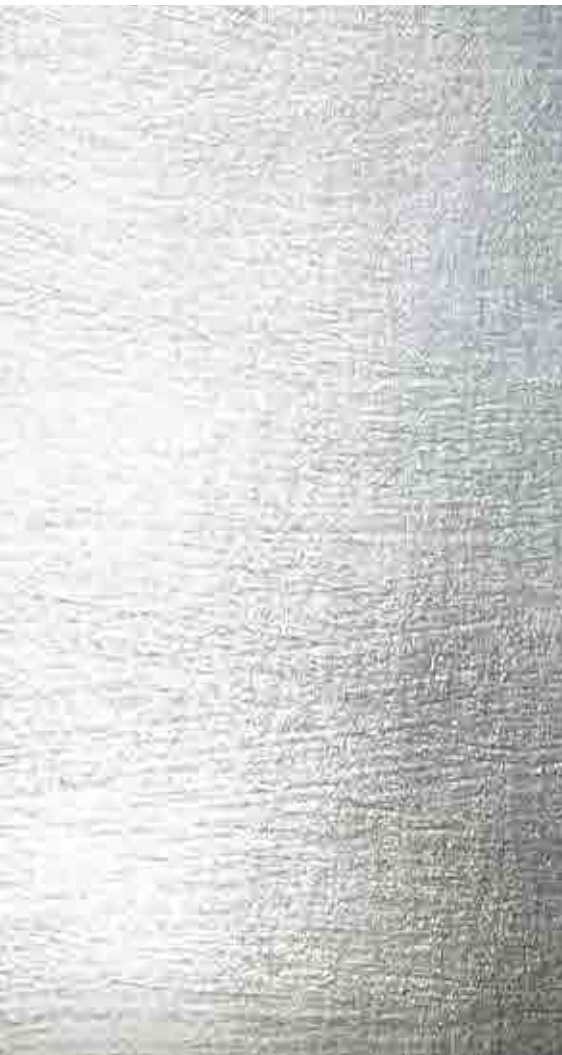
Jörg Brach






When function and effect are in line.

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More flexibility thanks to new robot system

— The production of three-component screwdrivers at WITTE Werkzeuge will now run simultaneously on two automated robot systems. This ensures a significant increase in flexibility. For example, it enables two different designs to be produced at the same time.

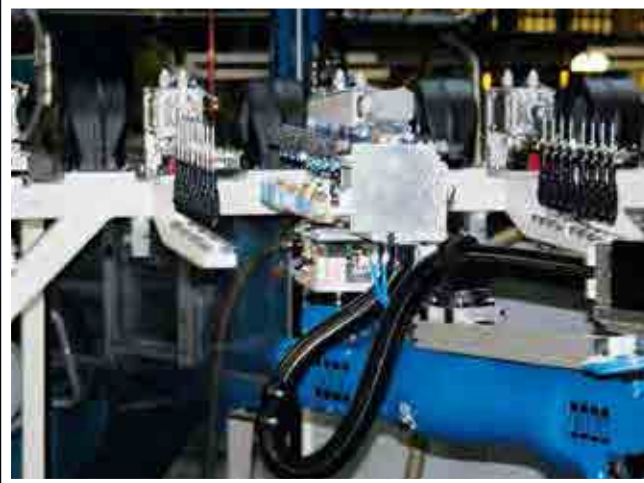


This has been achieved by installing and optimising a new robot system. As early as January, the system itself was set up and linked together with existing machines. The implementation of the automation process then commenced in cooperation with the supplier. It was further optimised in recent months and adapted to the manufacture of Maxx-Pro screwdrivers. As a result, production now runs smoothly. The new system

comprises three interlinked injection moulding machines; the handling is carried out by a Kuka robot. The Maxx-Pro screwdrivers are created in three production steps. Initially, the inserted blades are picked up by the robot and placed into the first machine, where they are injection-moulded with the first plastic component. The semi-finished parts are then removed and cooled. The second and third plastic components

are injected one after the other without a cooling phase. By expanding its production in this way, WITTE Werkzeuge is able to respond to the increased demand for high-quality screwdrivers.

Frank Rohlfs



Large image: The finished MaxxPro screwdrivers leave the robot system via a conveyor belt. **Top left:** The screwdrivers are placed into the cooling station. **Top right:** A look at the new robot system.

For a strong brand awareness

Since 1785, WITTE has stood for high-quality products “made in Germany”. WITTE Werkzeuge has made this tradition and its many years of experience the focus of its new marketing strategy and design guidelines.

The WITTE Werkzeuge range will in future extend to pliers.



A uniform colour scheme promotes awareness of the WITTE Werkzeuge brand.

The overhaul of its corporate identity is designed to raise the profile of WITTE Werkzeuge as a brand as well as promote its connection to the KIRCHHOFF Group. Not only is the WITTE lettering on the tools now larger, but the colours are standardised and correspond to the KIRCHHOFF blue. All product lines now appear in the same colour combinations. This uniform look raises awareness of the WITTE Werkzeuge brand. At the same time, dealers benefit from the attractive appearance of the product portfolio.

The new design has already been used in the past for individual products, but now covers the entire range. The product catalogue is being updated accordingly to incorporate up-to-date product images.

The WITTE Werkzeuge product portfolio should be even more interesting for specialist tool dealers. Soon, pliers "made in Germany", among other items, will round off the sales range. User-specific tool sets for relevant target groups can then be assembled individually, for example, the VDE set for electricians in a belt bag (see image).

The "Made in Germany" characteristic of the tools will be particularly important in communications. Alfons Bolling, Sales and Marketing Manager at WITTE Werkzeuge, explains: "In the

past, larger specialist dealers relied on cheap products from Asia. As a result, they incurred many risks: exchange rate fluctuations, high capital commitment through a large stock volume, and losses due to poor quality mean high levels of investment as it is always necessary to purchase large quantities." The sustained, uniform quality of these imports was not always guaranteed, because manufacturers were frequently changed.

Things are different at WITTE Werkzeuge: "We offer flexible sales and brand concepts. It is not only possible to order individual packaging and designs from us, but even smaller quantities too. This benefits small national specialist dealers." Bolling is convinced that the WITTE Werkzeuge brand will also become more prominent again in Germany, because buyers are once more focussing on quality. "We have very high standards when it comes to our products. We are therefore constantly developing them and would like this to be reflected in our communications." Because our company stands for quality "made in Germany".

Nadine Bartzik



Individually compiled: the WITTE Werkzeuge VDE set for electricians



Visit us at the Hardware Fair

You can discover our new design concept at the upcoming International Hardware Fair in Cologne from 6 to 8 March 2016. Visit us in Hall 10.2, Stand B4/C5. You can also find our products at the DIY Boulevard in Hall 5.1, Stand C99, where our portfolio will be presented as in a hardware store.





KIRCHHOFF
ECOTEC

82-119





Two continents, three companies and the combined love of refuse collection vehicles

— In September KIRCHHOFF Ecotec, with its two strong brands FAUN and ZOELLER, acquired major shares in the Turkish construction manufacturer HIDRO-MAK. With the addition of Turkey as a location, the international presence of the group will be extended.



The 60 guests celebrated the cooperation in Bosphorus. (L-r) Patrick Hermanspann (CEO FAUN Group), Dr. Jochen Kirchhoff (Chairman of the KIRCHHOFF group advisory board), Ahmet Bazmanoğlu (CEO HIDRO-MAK) and Dr. Johannes F. Kirchhoff (CEO KIRCHHOFF Ecotec)

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“We are excited to welcome the HIDRO-MAK team and the proprietor families Bazmanoğlu, Beşer, Özbarut and Kargın into our network. “With HIDRO-MAK we have a particularly strong and flexible partner on site.” In saying this Patrick Hermanspann, CEO FAUN Group, representing the ZOELLER and FAUN teams, is welcoming the third company to the KIRCHHOFF Group. This co-operative move will strengthen the strategic focus and paves the way for progress in the Arab and Asian regions.

Since its founding in 1961, HIDRO-MAK has produced refuse vehicles and sweepers as well as dumping vehicles. There are currently 100 employees at both the Istanbul and Ankara sites. The long-standing HIDRO-MAK mark remains prospective as an independent mark and the company will be managed from within the family. The product portfolio remains independent, but is

expanding optimally. Ahmet Bazmanoğlu, CEO HIDRO-MAK, also sees the cooperation to be nothing but advantageous: “We will benefit from the experience and technical expertise of the FAUN and ZOELLER brands. We can learn from each other and strengthen our positions. We both want to offer optimal, market-conforming products and to further drive our growth.”

Claudia Schae

We love refuse collection vehicles, sweepers and lifters

After a 6 month construction break, the new ZOELLER and FAUN service centre in Stuttgart/Gerlingen was transferred over from the building contractor on 6th August. The quick implementation is also thanks to the team effort and good work of the architect Eva Kirchhoff, ZOELLER CFO Volker Schröder and Service Center leader Michael Ambruch and the trade companies.

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Gutenbergstraße 21
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At the same time the service teams pulled down the old and cramped walls on Mauserstraße in the new branch. Now customers in the Baden-Württemberg area benefit from a modern customer services centre, which meets today's sales and service requirements. Six well-organised service parking spaces, two pits, storage area, as well as a wash hall are all part of the new service base.

In the context of a service day, the official launch took place on 24th September. Customers came in their droves and took a close look at the new site. The modern and technically well-equipped workshop building with direct storage and administrative areas is convincing and gives the good feeling that sales and service are in good, knowing hands. The service friendly structure offers space and room to build and intensify activities. A customer lounge allows for short stays in more pleasant atmospheres



The team has welcomed many guests during the opening day.

KIRCHHOFF Ecotec CEO and Managing Director Dr. Johannes F. Kirchhoff wishes both FAUN and ZOELLER teams lots of luck and during his speech gave all present an appropriate credo from Steve Jobs on the way: "The only way to do great work is to love what you do." In this sense: We love refuse collection vehicles sweepers and lifters and wish

ourselves a positive development at this site. We always provide our customers with competence in sales and service, any time and on time on site.

Sven Walter



Lift me up. Further lifting variations for side loaders.

Since the exhibition debut at IFAT 2014, the new SIDEPRESS has become a huge success story. Meanwhile some vehicles are already in the area and were culminating in an order over 13 vehicles for the Donau-Wald Waste Disposal Association (Zweckverband Abfallwirtschaft—ZAW).



The ZAW Donau-Wald team is responsible for the disposal of more than 220,000 households' waste in lower Bavaria. ZAW has decided on the following equipment at SIDEPRESS:

Lifter

- C1100 for the absorption of a 1.1 m³ vessel or two two-wheel vessels using lift pins.
- After the locking of the comb bar the containers can be centralised and automatically emptied on demand.

Options

- "Birdview" camera package
- Oncoming traffic surveillance camera
- Possibility of energy reclamation over an intelligent hydraulic system energy management
- Additional equipment in an integrated lift system bag collection pan

FAUN Service package: The vehicle will be served by FAUN in full service. A mobile FAUN service technician is always there with the ZAW team on site.

Decision for FAUN: The most efficient vehicle with the widest and most conclusive technical service concept

Area: Districts Regen and Passau

Fractions: Household & biowaste and paper



Meanwhile 13 SIDEPRESS C1100s are in use at ZAW Donauwald.



As well as the lifter C1100, further lifting machines complement the FAUN side loader programme:

SIDEPRESS F3000:

- Ideal for marks with stationary large containers
- For containers of up to 3.2 m³
- Even centred gripper arms
- As an alternative to south European containers

Advantage: More volume on fewer poles, which uses the entire vehicle space.

- The containers are picked up from the inside and not the outside. Therefore the containers are save space being directly next to each other.

SIDEPRESS with grabber:

Another lifting machine is the “Grabber” (clamp), which was developed especially for the Benelux countries or the export market.

For each use of the right SIDEPRESS. Take your pick.

Claudia Schae

THANK YOU

— A big thank you to all German customers who this year chose to use a FAUN refuse collection vehicle or sweeper. We introduce five customers.

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MARKTOBERDORF

Customer: Hubert Schmid Recycling und Umweltschutz GmbH, Marktoberdorf

Quantity: 9 vehicles

Structures: 8 x ROTOPRESS 523L
1 x VARIOPRESS 524

Operating site: Allgäu



MURRHARDT

Customer: Schäf Städtereinigung GmbH, Murrhardt

Anzahl: 9 vehicles

Structures: 4 x ROTOPRESS 520
4 x VARIOPRESS 522
1 x POWERPRESS 522

FAUN Service package: Full-service premium

Special equipment: Hydraulikpumpe für niedrige Arbeitsdrehzahl

Special equipment: Hydraulic pumps for low operating speeds

Operating sites: Rems-Murr-Kreis and Hohenlohekreis



LIMBURG AN DER LAHN

Customer: Bördner City Governments

Quantity: 16 vehicles

Structures: 10 x ROTOPRESS 521L
6 x VARIOPRESS 524

FAUN Service packet: Full-service premium

Operating sites: Rural districts Limburg-Weilburg, Westerwald, Lahn-Dill-Kreis, Gießen, Hochtaunuskreis, Rhine-Lahn-Kreis

Quantity of households: more than 200,000

Collection of: Household and organic waste, DSD and paper

Decision for FAUN: State of the art



KOBLENZ

Customer: AZV Rhein-Mosel-Eifel

Quantity: 22 vehicles

Structures: 18 x VARIOPRESS 520
2 x ROTOPRESS 521
2 x POWERPRESS 524

Special equipment:

Hydraulic pumps for low operating speeds

Operating sites: Landkreise Mayen-Koblenz, Cochem-Zell and City of Coblenz



MUNICH

Customer: Waste management (AWM) Munich (AWM)

Quantity: 1 vehicle

Superstructure body VARIOPRESS 521 light
— Concept vehicle in joint development with AWM, Daimler AG and FAUN

Special equipment:

- EVO rear part
- Load sensing hydraulic for optimal energy distribution
- PALL pressure filter

FAUN Service packet Full-service premium

Operating site: City of Munich

Limburg
an der Lahn

Koblenz

Murrhardt

Munich

Marktoberdorf



The E-POWER battery package sits between the driver's cab and VARIOPRESS construction containers.

Shhht. Rubbish will be collected quietly here.

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Compliance of environmental balance is an important topic. Disposal companies can make a decisive contribution through the use of energy efficient vehicles, the reduction of noise emissions and the decline of fuel consumption.

An appropriate solution which can make a contribution to fulfilling the life cycle assessment by using refuse collection vehicles, is offered by FAUN with the ECOPOWER Option E-POWER. Refuse collection vehicles need less fuel and noise emissions are reduced with E-POWER, a "plug-in procedure" chargeable battery pack. The battery pack, which can be charged overnight at low power consumption times, provides the energy for the electrical drive of the body and lifter. The fuel saving averages up to 20%.

Stadtreiniger Kassel have decided from now on to use this environmentally-friendly variation refuse collection vehicle.

Body Type: VARIOPRESS with E-POWER

Fractions: Residual waste

Decision for FAUN:

As a reliable, competent partner for refuse collection vehicles, the combination of VARIOPRESS with E-POWER is optimal for use in cities. Here we place noise reduction and fuel saving as a top priority which is evidenced in the fact that the vehicles are well received by the guarantor.

Claudia Schae

Great service from a great service team

— Nice guys are ten a penny, but really great guys, the type that you can trust 100%? They are rare but FAUN has these great guys. Men whose word still counts, who have a strong handshake and whose vision is straight from the heart. Men that know exactly what the customer wants. That's the great guys' service philosophy.

Then these great guys do everything so that the customer vehicle runs. Therefore FAUN built its offer on service performance. Concerning this FAUN service initiative, three further colleagues in Germany are on the way to provide customers with technical support and individually customised service - as well as full service performance for the vehicles on site.

Hello, Florian Knödseder

Alongside the new Donauwald branch management, which FAUN opened thanks to the full service job for the maintenance of VARIOPRESS and SIDEPRESS vehicles for ZAW Donauwald, Florian Knödseder will push for-

ward the consultation and sale of full service as well as service performance and the sale of spare parts in Bavaria.

Direct dial:
+49 162 8239651

Hey, Phil Kestner.

In western Germany this job is carried out by Phil Kestner. Phil Kestner is the youngest member of the team and was previously working in the customer centre in Herne.

Direct dial:
+49 173 3975390

Hey you, Hans-Peter Frankenberg.

Hans-Peter Frankenberg is in the process of keeping customer vehicles running with original spare parts and full service packages in the northern and eastern regions. Hans-Peter Frankenberg is no stranger to the branch and knows the strictest demands.

Direct dial:
+49 172 3817669

All men of service preach: You can count on us—our service is the best:

→ pfundskerle-fuer-starken-service.de

Claudia Schaeue

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Technical support and development of special service packs. That is Florian Knödseder's, Hans-Peter Frankenberg's and Phil Kestner's benchmark (left to right).



Not just clean but pristine

— A large construction site such as the Stuttgart 21 project is a dusty environment. Tonnes of sand and construction material are moved on a daily basis on the construction site. The Oberheiden company from Neckarwestheim was commissioned to clean the surfaces and has chosen four FAUN Viatec VIAJET 7 STREAMLINE for the job.

The STREAMLINE Generation VIAJET 7 is a versatile machine which can be used not only for “normal” street cleaning but also for high-pressure cleaning of surfaces, for example as preparation for resurfacing. Through the spacious dirt-collection container and the flexible configurable water tank—with a volume of up to 3,000 litres—, without that here the wheelbase must be

extended, this machine is the optimal solution for the cleaning of specialised construction sites, such as Stuttgart 21, for example.

The Oberheiden company combine volume extraction on their VIAJET with a 140 l/min - 200 bar HF water pump. This attachment guarantees an optimal high pressure cleaning of milled sur-

faces with minimal water use. The sweeper is powered by a FAUN HS 200 hydrostatic drive, which gives the customer a seamless and exact speed control of 0 and 30 km/h. This allows the driver to completely and totally concentrate on the handling of the machine and the chassis’ powertrain is not excessively burned. Special vehicles are built on VOLVO chassis. Another



In use on the Stuttgart 21 construction site: VIAJET 7 Streamline

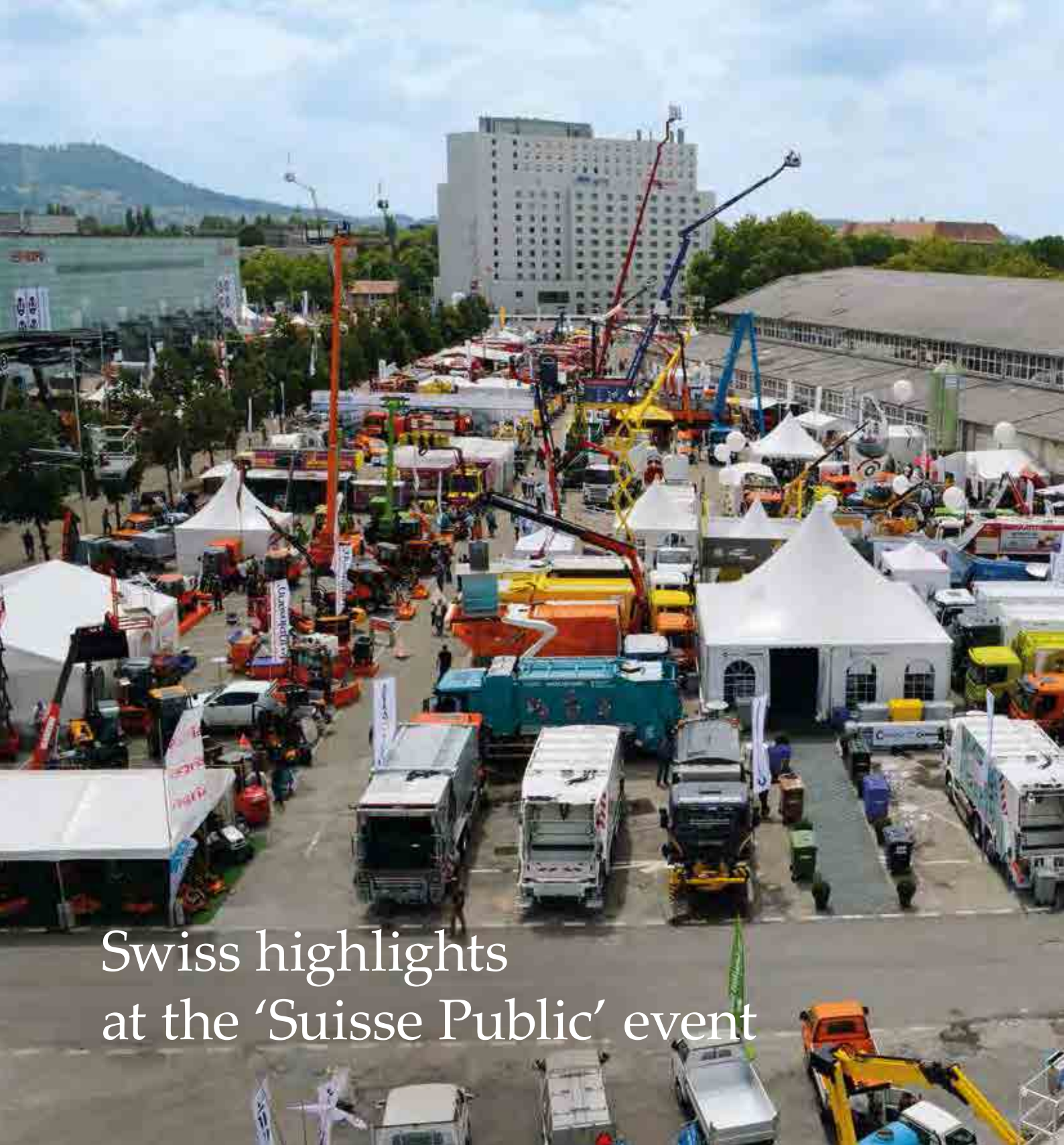


bonus point for the FAUN VIAJET 7. "Thanks to the air circulation system's air return, we can re-inject over 70% of the air volume into the machine and in combination with the high pressure system with vacuums we can achieve an extensive, immaculate clean" according to satisfied Managing Director Heiko Oberheiden.

Mario Ringl



Above: Together they planned the sweeper machine project and the FAUN Viatec team put on the wheels: (From left to right) Nico Gürtler (IKB Leasing GmbH area director), Edgar Baumgartner (FAUN sales representative), Ronald Sonnenburg (FAUN Services GmbH) and Andre Puschbeck (Volvo Group Truck Centre South, Heilbronn) as well as Bianca and Heiko Oberheiden. (Photo: Patrick Rupp, PR Arts/Volvo Trucks) **Below:** strong vacuum for an extensive clean.



Swiss highlights at the 'Suisse Public' event

— This year's Suisse Public was a complete success for **Contena-Ochsner AG**. An increase in the number of visitors, innovative vehicles and the first FAUN sweeper for Switzerland are good results for the exhibition. The exhibition takes place every two years and this year pulled in 20,000 visitors and 600 exhibitors to Bern.



Contena-Ochsner AG exhibited for the first time since the merger with Suisse Public. Above all the large exhibition space and the number of exhibiting vehicles impressed visitors. 14 vehicles, including some new features, were presented by the team to the expert audience. They presented customer vehicles exclusively, which are made available for exhibitions before they are delivered to the customer. Visitors could see almost the entire product portfolio and very often test it out too. Above all the super structure STUMMER Waschkombi evoked an extraordinary amount of interest. The exhibition was all the kickoff for the sale of FAUN sweepers, which will be available exclusively through Contena-Ochsner AG in Switzerland. The VIAJET presented was delivered directly to the Kunz Kanalreinigung GmbH from the exhibition.



Contena-Ochsner Managing Director Renato Heiniger gives a positive summary of the exhibition: "I am very satisfied with the trade fair and our performance there. We were able to greet many new customers and also take home some orders. This success is down to the entire team and I'd like to thank everyone who worked with us and of course the customers, who provided their vehicles as exhibits."



The next Suisse Public takes place on 13th—16th June 2017.

www.suissepublic.ch

Renato Heiniger



Left: View from above of the Contena Ochsner stand at this year's Suisse Public event. **Middle:** A STUMMER rear loader with washing device. **Below:** VIAJET with rear loader. With immediate effect Contena-Ochsner will sell FAUN sweepers exclusively at Swiss confederations.



The whole exhibition team. Simon G. Hyde (6.f.r.) and his team welcomed ZOELLER Group CEO, Thomas Schmitz (middle).

RWM Show 2015—Bringing the Industry Together

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— The **RWM Exhibition is Europe's premier event for resource efficiency and waste management solutions.** Bringing the industry together to rethink waste as a resource, RWM is the perfect event for anyone responsible for resource and waste management in their organisation or working within the waste sector.

It is also a great opportunity to meet with some of the 700 exhibitors and sponsors including Viridor, SITA, Novelis, Stobart and JCB and also hear from a fantastic line up of over 150 speakers from Kingfisher, Rolls-Royce, ESA, The Resource Association, The Green Investment Bank to name just a few.

In partnership with CIWM (Chartered Institution of Wastes Management) the RWM exhibition spans each element of the industry and is shaped around the demands of this rapidly growing sector. This year the exhibition, held at the National Exhibition Centre in Birmingham, welcomed over 13,000 visitors over the 3 days of the show.

FAUN ZOELLER UK Limited were once again very pleased to have a stand at this prestigious event and this year we were showcasing the

- VIAJET 6 sweeper,
- VARIOPRESS with ZOELLER Rotary XL
- MICROPRESS.

The new Lifter:

- Rotary Electric and Omega Lifters

The **FAUN VARIOPRESS** is our best-selling body in the UK and perhaps the solution for the future as far as the disposal of household and commercial recyclables and other waste materials is concerned and when coupled with the **Rotary XL Lifter** it provides unri-

valled operational benefit. The ZOELLER Rotary XL lifter has been specifically designed for the UK market to contribute to the operational performance for the customer. The width of the lift is the actual size of the hopper width giving a greater aperture for loading and bulkier waste streams. The overhang is considerably reduced giving greater weight distribution, payload for the vehicle and having a dramatic improvement to the overall vehicle manoeuvrability.

The **FAUN VIAJET 6** is the next generation, made to measure sweeper specifically for clients requirements and tailored to individual needs. Clean streets, neat squares—wherever the VIAJET has been, the quality of life improves. The VIAJET makes communities look more



Impressions from the FAUN ZOELLER booth

attractive, even road and construction projects will be transformed easily and quickly, with significant reductions in both fuel usage and CO² emissions.

Last but not least is the **FAUN MICROPRESS** which is ideal for open loading in pedestrian, inner-city and rural areas. The overall lightweight construction uses high strength materials, delivering a compact, solid construction and high payload. The one-man operated Micropress avoids the HGV requirement of larger vehicles, and has excellent manoeuvrability.

We were very proud to have many of the Group staff at the show this year including Dr. Johannes F. Kirchhoff, Patrick Hermanspann and Thomas

Schmitz and, as we are very proud of our German heritage we arranged an 'Oktoberfest' event to celebrate the first night of the show. VIP guests, customers and suppliers were entertained by a German Oompah band and an excellent comedian accompanied by a German style buffet and the odd 'stein' or two.

It was back on stand the next day for possibly the busiest of the 3 day exhibition, we had more visitors than ever before which was fantastic. Also worth mentioning was, for the first time, we had vehicles actually been demonstrated outside the main hall. This meant customers could actually see, in real time just how effective our product is —this year we demonstrated the Viajet

6 which we are now seeing a lot of interest in, in fact this year we have beaten internal sales records for the UK!

The RWM event is just one of the exhibitions that we show our product at but this year I think it was the best, the feedback from all that attended; our clients, peers and suppliers, has been excellent and I have no doubt that next year the RWM will be bigger and better than ever, make a note of the dates in your diary 13th September – 15th September 2016 and we hope to welcome you to our stand.

Simon Hyde

First the cleanest beaches, now the cleanest streets.



— The original town of Tenby was called Dinbych y Pysgod in Welsh or „little town of fishes“. It was established by The Normans as a fortified town and many of old town walls remain, enclosing the medieval town behind them.

Of the old castle, that oncedefended Tenby, only one small keep tower remains, but inside the old townwalls, narrow cobbled streets and medieval houses remain today to add to Tenby's charm. During Georgian and Victorian-times, Tenby became a popular seaside resort with the promenades on both sides of the old town on the Esplanade and the Norton both contribute to the outstanding architectural look of the town. Indeed the classic postcard view of Tenby harbour is taken from The Norton, a road that runs along the cliff top above North Beach and Tenby is also home to the oldest golf club in Wales!

The Victorian seaside development on the west side of town, outside the town walls, was fairly limited so hasn't detracted from the general ambience of the town and today the centre of Tenby is a maze of narrow little streets. The roads are pedestrian only during the day in summer when the bars and restaurants are set up for al fresco dining. Tenby was designated as a conservation area by the Pembrokeshire Coast National Park in 1972 and was awarded a Silver for the best UK coastal resort at the British Travel awards in 2014 and recently Harbour Beach in the town has secured the top spot as 'Best Beach in Europe' due

to the quality of its water, the beauty of its environment and its reputation among visitors.

Pembrokeshire County Council is responsible for the cleaning of the town with a local population of just under 5000 but Pembrokeshireas a county attracts over 4,000,000 visitors a year and brings in an estimated £544 million pounds to the economy and if course many of those visitors will pay a visit to Tenby. This is clearly an achievement to be proud of and with that in mind, Pembrokeshire County Council also take great pride in keeping the streets clean. With over 2600 km of streets



Beautiful Tenby

and roads to maintain and clean within the borough, they need products that perform professionally and efficiently. In April 2015, Pembrokeshire County Council placed an order for two new FAUN VIAJET 6 Road sweepers.

„We were delighted with this order“, said Stewart Gregory, FAUN ZOELLER Commercial Director, “I have dealt with Gerald at Pembrokeshire for many years, and with it being one of my „native“ Welsh authorities, I was particularly pleased that they chose a product that will provide them with many years of good service. With the extensive demonstrations that we have carried

out, not only at Pembrokeshire, but all over the UK, the clear, proven, and tangible benefits of our products speak for themselves. The fuel savings alone, make the VIAJET a clear challenger to the UK sweeper market“.

We talked to the Fleet Manager, Mr Gerald Rowlands, who has been with Pembrokeshire County Council for 37 years, and he said “We demonstrated several types of sweepers prior to the tender and the FAUN VIAJET impressed us on fuel consumption, effectiveness of the sweep and suction and also with the air recycling system. The crews liked the machine and it proved to

perform better than the other machines that we tried“

Pembrokeshire CC operate the machines on a 10 hour, 7 days a week basis, so the standard features of the VIAJET 6, such as increased water capacity, and air recycling, clearly swept the others aside!

Mae Cyngor Sir Benfro a FAUN ZOELLER, yn gweithio gyda'i gilydd i greu Cymru lanach which translates as Pembrokeshire Council and FAUN ZOELLER, working towards a cleaner Wales.

Simon Hyde

FAUN TRACKWAY wins award for helipad packaging solution

FAUN TRACKWAY has launched another world first in the aid, humanitarian and defence industries.

The Made in Wales Award ceremony is an annual event run by Wales Business Insider, the country's leading monthly business magazine. Our CEO, Chris Kendall, said: "This is a truly innovative solution, a world first and it's designed and made by our team in Llangefni which makes this particular prize a fitting tribute. Winning the 'New Product' category is an achievement. I'm hugely proud of and everyone in our business can each take credit for this prize."

Once the helipad has been deployed, the container can be used as an operational base. It is fitted with power, air conditioning and storage area furniture to create a secure working space. It can also be configured to include two sleeping spaces and can even be used off shore. Compatible with PSA-FT and PSA-FT R helipad panel variants – each designed by FAUN TRACKWAY to create stable, temporary landing surfaces – the modular structure allows the panels

to be laid in varying configurations to accommodate helicopters of different sizes.

The system was designed after our teams identified a need in the market for a solution that could offer additional operational features alongside a landing solution to armed forces active in remote areas. Following extensive consultations with a number of our clients, along with the UN, the product's development encompassed new levels of versatility for both expeditionary and civilian operations.

Rachel Roberts



Above: Alan Jones, Factory Manager (l) and Rob Ewing, Design-Ingenieur during the Made in Wales Awards 2015 ceremony. **Below:** Helipad Multi-Role Packaging Solution

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Helipad Multi-Role Packaging Solution for start and landing.



Quick help

— The Heavy Ground Mobility System-Independent Variant (HGMS-IV) showcased to the global defence industry.

Our constant strive for engineering excellence has seen us re-innovate one of our landmark systems. The HGMS-IV is a specially designed hybrid of the flagship Heavy Ground Mobility System (HGMS) that has been customised to include a stand-alone power supply. It enables 30 metres of MLC 70 TRACKWAY aluminium matting to be deployed and recovered without requiring power from the transportation vehicle, widening the range of compatible chassis to more economical models.

This latest addition to our product portfolio will allow armed forces to reinforce their capabilities by providing quick and easy portable road access for tanks and vehicles in both military and disaster relief scenarios. Like the original HGMS system, the HGMS-IV prevents military vehicles from getting bogged down in difficult terrain such as sand, snow and marshland, as well as being used as a bridging egress to protect banks from erosion caused by heavy traffic. The technology was launched at De-

fence and Security Exhibition International (DSEI), the world's largest defence show, in London this September and was also showcased at AUSA, the largest land power exposition and professional development forum in North America, in Washington in October.

Rachel Roberts



Heavy Ground Mobility System-Independent Variant.



A planning board in the construction (AKON): Fast access to tasks, processes and resources of all parties.

Raising the bar

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— In the last decade, global change has accelerated considerably in markets and industries. Therefore the challenges and expectations of customers on manufacturers such as FAUN have steadily increased. For many years our products were really standard products. Today they are so much more.

Today our customers want much more diversity in the equipment variants of refuse collection vehicles. Moreover, changing legal provisions and environmental protection ever more prominent means we are constantly updating our processes and guidelines. Four decisive factors that we should never lose focus of our efforts: The **industrial safety** and welfare of our employees of which we are responsible for. This is followed by the drivers of **quality, costs and delivery time**. A higher requirement of quality with similarly moderate costs and the optimal Total Cost of Ownership (TCO) is accompanied by a fast delivery performance,

which is mirrored in the expectations on us. As a result of this we are judged daily by our customers on what we deliver and whether this matches these factors. Only then are our customers ready to once again by our new products.

Continually improve

We face these challenges with the FAUN Process System (FAPS for short) which has been in place for years. This system is an integrated system which integrates on the one hand all processes and on the other hand integrates all employees. From the increase in workplace

efficiency, bearing in mind economic aspects, to the absolute error avoidance in steel construction by means of po-ka-yoke approaches, employees work on building robust processes.

Based on this stable basis we constantly question our actions and adapt to these new factors which influence us from the outside. At this point we are beginning a continual improvement process which will be sustained by our process experts. Furthermore local benchmarking, along with similar industry partners, is the key to aligning our FAPS and building with the right materials. The cooperation with a few companies have shown



us new directions and possibilities. Initial good results strengthen our belief that we have taken the right road with FAPS.

Use of resources

We can find a good example in the construction (AKON): Here the development has so far been placed on a weekly list of the jobs in order of planned production. Determination and adaptation in the order allowed us to be effective from a production technician view (e.g. availability of chassis and spare parts). Efforts and resources in AKON were not considered. The changeover of the manufacturing space resulted in

a new attention handling space would have to be responded to quickly. This was often not detected until very late that there was an insufficient time window to process orders and the contacts would not have their scheduled deadlines met.

By employing a visually built planning board the distribution of tasks was consistently associated with resource availability. This board ensures that important tasks are completed in order of importance. Furthermore the dependence on input givers is also transparent. Predicted expenditure times will also be shown in the course of comple-

tion of the important tasks. By doing this we are improving interface communication with related areas, are able to demonstrate the lack of resources and initiate the employees' capacity to stabilise and more as punctual countermeasures. All departments benefit from the outcome, and our ultimate goal is that the customer must be satisfied.

Sven Hechmer

On high seas. We do support top athlete.

From the Mediterranean, over the Atlantic Ocean through to the Channel and North Sea, France has a coast of over 3,427 km. Many people who live in coastal towns are passionate sailors and the many regattas enjoy great popularity! The media interest events is continually on the up.

FAUN Environnement has therefore decided to support a young, talented sailor - Arnaud Godart-Philippe - this year. Born in 1981 in Auxerre, Arnaud discovered his passion for sailing as a young boy, which he practised in Brittany every year. In his younger years he joined the French marines, where he gained valuable experience. Eight years later he hung up his navy uniform and devoted himself to sailing exclusively. He won the "Solitaire du Figaro" race three times (in 2009, 2010 and 2011) and once took part in the "Bretagne Martinique" transatlantic regatta.

All captains are "in the same boat" at the French solo highseas championship race, that boat being a Figaro Bénéteau II. This makes the regatta as exciting as it would be if all entrants in the Formaul 1 World Championships were driving the same car. The captains will be judged on their skills alone. Firstly on their technical competencies, then the sails will be checked, just like Formual 1 bolides. But also on their personal competencies, which the captains bring to the three-day stages of the race, more sleepless days alone on the high seas.

This year Arnaud-Godart Philippe's Figaro Bénéteau No. 38 wore the FAUN colours in the "Solitaire du Figaro", "Tour de Bretagne" and "Generali Solo" races. Because the FAUN Environnement team identifies with the values of sailing on a high level:

- **Environmental protection is natural, be it onshore or on the high seas.**
- **Above all it is qualities such as determination, persistence, stamina and the desire for excellence, innovation, higher quality and high tech, which drive not only sailors, but also the FAUN Environnement team.**

Customers were invited to the numerous harbour stops to visit the ship and have a small sail with Arnaud Godart-Philippe. All guests really loved this maritime event. The "Solitaire du Figaro" stops off in French borders, and also Great Britain and Spanish Basque country, while the "Generali Solo" is in Barcelona.

Etienne Blaise





The Figaro Bénéteau II

The new Figaro Bénéteau II is the best of the Bénéteau-Class, the Bénéteau shipyards and designer Marc Lombard. It is *the" international single-hand and crew sailing boat.

Length: 10.11 m

Width: 3.43 m

Draught standard: 2.10 m

Displacement 3,050 kg

Mainsail surface: 36 m²

Front sail surface: 30 m²

Spinnaker surface: 85 m²



We are education and training

Newcomers and old hands. The ten 2015 apprentices with their mentors. In total 37 young people are learning their trade at FAUN in Germany.



On exchange: both industrial clerks apprentices, Charlotte Suckert (left) and Laura Prigge (right), worked for four weeks with KIRCHHOFF Automotive colleagues in Ovar, Portugal.



The FAUN Viatec colleagues also offer extensive training on sweepers. Here with a team from Iraq.



The 1st FAUN health day was entirely dominated by healthy nutrition, fitness checks and general health measures. In collaboration with the German health insurance all employees could choose from a comprehensive selection and learn about it. This response was great and meanwhile regular massages for employees were on offer.

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Woman power on a VIAJET 6. Ursula Muhn from the Aschaffenburg public utility drives a sweeper with heart and soul. We find that fantastic and forever wish her a good drive.



FAUN ERNTEPRESS - a home-made slogan car made by the FAUN apprentices - caterers for wondering stories at the harvest pageants in the north.



SLF with Lifter Flex

New side loader successfully brought to market

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Innovative variants of ZOELLER side loaders on the market

Currently the side loader product package is defined in the ZOELLER SLF, the SLF XL and the LoToS SL.

With the SLF XL, ZÖLLER-KIPPER GmbH has now presented a new side loader concept for a one-man operation with a wide choice of lifter variants.

The side loader superstructures are suitable for chassis in right or left-hand drives. The emptying of the vessel takes place automatically from the driver's cab and is controlled with a joystick or partially automatically from a control station near the lifter. Two large rubbish containers (MGB) with 120/210 litres or a 4-Wheel MGB with 1,100 litres can be integrated by default to the Kammlifter Flex 1100 and drain. The maximum capacity of the lifter is 550 kg.

Particular attention allowed ZOELLER to provide maximum availability with minimal maintenance costs. As a result the compressor hydraulic cylinders were arranged outside of the press room and did not come into contact with the waste disposal group. Easier access is possible through the protected arrangement. The pendulum press compressor provides a special large space volume: The press room, with an area of 3.2 m³ allows for the emptying of several large waste containers directly one after the other.

The input of the control of the superstructure takes place over the colour-graphic monitor in ergonomic ZOELLER operator terminals. An external control near the lifter provides, among others, the possibility of the semi-automatic emptying of containers with further functions. Three cameras

support the surveillance of the work space in front of the rear areas and the hoppers.

The ZOELLER SLF XL is different with a Grabber or Heavy-Lifter available for SUB 2.3 and 3.2 m³ containers.

The Bohmann company group from Rastede in Lower Saxony has, as a first disposal companies, opportunity to use the side loader collection vehicle. At the group of companies the vehicle could be used daily through its manoeuvrability, the comfortable operation and possibility to empty two vessels at once in one cycle. The driver appeared to be "very satisfied" with the achieved vehicle capacity in paper removal.

Sven Walter



Above: SLF 22 with Grabber **Left:** Heavy Lifter for an increased lifting force of 1,200 kg **Right:** Operator terminal in SLF XL

The demopark 2015 The littlest on the “green stage”

— The very small MICRO series refuse collection vehicle was the focus at the ZOELLER exhibition stand.



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“Mediocre weather, but sun in your heart”—this motto describes the demopark + demogolf 2015 municipal technology. In total 36,500 interest exhibition visitors came to the biggest European outdoor exhibition in the Thuringian Eisenach, in spite of a rain shower. The event is a popular meeting place and innovation showcase for the “green sectors”. On 250,000 m² machines and devices can be experienced practically.

ZOELLER presented a MICRO XL with E-Power system, a MICRO HG HK with an inclusion for containers of the Firma Contex Hydrobox and a MICRO HG with lifter SL 240, to the professional guests of operators and workshop staff from the MICRO series segment. Since the first demopark in 2013 the number of visitors to the ZOELLER stand has been permanently on the up, the continuation

through the ZÖLLER-KIPPER GmbH and the continuous market support combined with the chassis manufacturers, achieved a consistently positive response. The general feeling was the the customers are happy to once again find a proven product under a strong name. This is especially true for the numerous refuse collection vehicles on the marker from the Hagemann & Partner company. Whose guaranteed nationwide service through ZOELLER is a further bonus point. In this spirit ZOELLER umbrellas have ensured that customers came to the exhibition day dry—a not so underestimated advertising effect.

Volker Hengstenberg





Above: The smallest refuse collection vehicle of the MICRO series on the ZOELLER exhibition stand: MICRO XL with E-Power system, MICRO HG HK, MICRO HG with lifter SL 240. **Middle:** Small, multifunctional, versatile—MICRO SL with E-Power system.





New customer service all around Hannover

— Since 1st January 2014 the FAUN ZOELLER service base in Hannover-Hemmingen, with very good customer response, in the integrated service concept.



Left: FAUN ZOELLER Customer centre Hannover-Hemmingen **Right:** The diverse requirements of the Hannover-Laatzen removal are fulfilled optimally through the ease of use of the ZOELLER ROTARY Lifter system 2405.

A possible big close service as well as a quick reaction time for our customers in the Hannover region and in mid and south-eastern Lower Saxony is the basic idea from ZÖLLER-KIPPER GmbH for a service base greater Hannover. Due to the strategic alignment and logistically very good location of the site, both axes Bad Oldesloe-Mainz and Herne-Berlin are very well connected to each other and the distance between them is significantly reduced.

The team in Hannover-Hemmingen launched a sales force service technician with a workshop manager/technician as well as in terms of sales the support for Lower Saxony. Since July 2015 there has

been a back office technician on site due to the success and the greatly positive customer feedback in the team. Such as in the past, the area is also recognised by the external work technician for the northern branch support.

Currently for the "Zweckverband Abfallwirtschaft Region Hannover (aha)" over the Hemmingen service base 12 refuse collection vehicle XL-S of the MEDIUM segments with the lifter system ROTARY 2405 on the ECONIC-chassis are ready for delivery. The vehicles are intended for the Laatzen removal area, in south Hannover. Here the diverse requirements, such as manual insert and diverse waste containers, are optimally

and efficiently fulfilled through the ROTARY 2405 Lifter system used and the MEDIUM XL-S construction.

ZÖLLER-KIPPER GmbH wishes "aha—Abfallwirtschaft Region Hannover" a good drive every time, and to "always have enough water under the keel" and furthermore is looking forward to a very good collaboration with all Lower Saxon customers.

Ric Ehrenberg-Martin

New year, new staff

From January 2016 ZOELLER will be optimising the sales activities in mid and south-west Germany.

With the forthcoming enlargement of ZOELLER sales and service activities as well as the new construction of the Stuttgart-Gerlingen branch, the ZOELLER sales structure will be newly divided as of 1st January 2016.

The former mid and south regions will be optimised as regards to routes, newly structured and expanded to the south west region.

Michael Ambruch transferred the mid sales region to Manuel Schmitt. From now on Mr. Schmitt is the designated contact person for Hessen, Rhineland-

Palatinate, Saarland and for part of Northern Bavaria. He is responsible for the Service centre branch, which is directly affiliated to the ZOELLER production plant. He is also responsible for the central Management in Mainz and manages the sales and services in this area.

The south west region, which is Baden-Wuerttemberg as well as Luxembourg, will soon be managed by Michael Ambruch with a central headquarters for sales and service in Stuttgart-Gerlingen.

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Left: On the way from January 2016 for our ZOELLER customers in the south-west region: Michael Ambruch.

Right From January 2016 Manuel Schmitt will be looking after the interests of ZOELLER customers in the mid region.

Success as an incentive for future product improvement

— ZOELLER Tech, RG-Techno and KAMAZ: Collaboration brings new refuse collection vehicles for the Russian market.

Collaboration between ZOELLER and RG Techno began in 2008. Over the course of these 7 successful years, just under 500 refuse collection vehicles with different chassis and ZOELLER superstructures were delivered. These are being used successfully in 50 Russian regions.

The RG Techno workshop is in Ljubertsy, roughly 20 km southeast of Moscow. Here ZOELLER superstructures are mounted on different chassis from European, Japanese and Korean manufacturers such as Scania, Mercedes-Benz, Volvo, MAN, Mitsubishi, Hyundai, ISUZU and Hino. Since 2014, and with the status of an official FAUN partner, all FAUN refuse collection vehicles are mounted and maintained by RG Techno.

have a discussion on the opportunity of cooperation between the Russian market and CIS countries. Likewise, further collaboration between ZOELLER Tech and KAMAZ engineers was discussed, which was already in place before this meeting. The engineer's task lay therein, to efficiently match chassis and superstructures with each other in order to ensure the special requirements of a refuse collection vehicle.

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In 2014 the turnover of ZOELLER products, which were sold through RG Techno, amounted to over 40 per cent of the Russian sales volume in the LKW Premium Segment. Furthermore, according to the market research results carried out by AT Consulting (commissioned by the "Municipal Solid Waste Magazine"), in the same year RG Techno obtained an excellent customer rating of out of 10 points in the "maintenance" category. The reasons why are obvious: due to a further development of customer services, but also due to the creation of a comprehensive network of service centres and spare parts depots.

In March 2015 the Managing Directors from KIRCHHOFF Ecotec, ZÖLLER-KIPPER, KAMAZ and RG Techno met in KAMAZ headquarters in the Russian Naberezhnye Chelny. Dr. Johannes F. Kirchhoff (CEO KIRCHHOFF Ecotec with both FAUN and ZOELLER names), Thomas Schmitz (CEO ZOELLER Group), Vladimir Roytman (Co-Founder and General Director of RG Techno) and Serge Kogogin (General Director of PJSC Kamaz) took part in the meeting. The chief aim of the meeting was to

The result of this meeting and collaboration is a new product line of refuse collection vehicles on KAMAZ chassis. Three types of chassis models are available: 53605 (4x2), 65115 (6x4) and 65111 (6x6). It was agreed to implement an important change to the chassis before production of the new refuse collection vehicles begins. In that way some problems are solved, which are type of this type of refuse collection vehicle: an improvement of the steering, manoeuvrability and the robustness of





Left: KAMAZ 53605 with ZOELLER MINI XL-H SK200 at the COMTRANS exhibition in Moscow **Right:** KAMAZ 65.111 ZOELLER MEDIUM XL Welaki SK200 **Below:** Employees from more than 40 companies met in September 2015 for a presentation of the new ZOELLER refuse collection vehicles on KAMAZ chassis.

the chassis was agreed upon. Special attention put upon the optimisation of the axle load distribution in order to guarantee a prolonged durability. To maximize the distance between the rear wheels and the rear part of the structure, the rear overhang has been reduced to a minimum in the two-axle chassis. The rear mechanical leaf suspension have been replaced with an air suspension. This is the first KAMAZ chassis with such a solution and will help to reduce the overloading of rear axles. The overall structure can be built closer to the driver's cab by rearranging various chassis components. This leads to a further optimisation of the overall axle load distribution.

The newly configured line of rear loaders consists of three various types with different axle load configurations:

- 4 x 2 with a structure volume ca. 13 m³**
- 6 x 4 with a structure volume ca. 19 m³**
- 6 x 6 with a structure volume ca. 20 m³**

All superstructures are equipped with Euro containers with a volume from 120 to 1,100 litres with a manual low level beam lifter. The third vehicle can also be optionally equipped with an tipping lifter for the emptying of 8 m³ skips.

Roman Lobov/Krzysztof Sosnowy



Info

Presentation of the new ZOELLER refuse collection vehicles

A presentation of the new refuse collection vehicles on KAMAZ chassis took place at RG Techno in Lyubertsy. This meeting was a large specialist event at which the participants were able to share their experience of refuse collection vehicles. More than 40 companies from various Russian regions and RG Techno partners from Germany, Poland and the CIS countries meet there.

Biggest Russian exhibition for commercial vehicles COMTRANS 2015

During the biggest Russian exhibition for commercial vehicles, "COMTRANS 2015", a model for the new refuse collection vehicles was presented on the PJSC KAMAZ exhibition stand and awoke much interest and enthusiasm from visitors.





Two becomes one—Collection and Cleaning in one step

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STUMMER communal vehicles successfully brought the third generation of its combined collection construction with its integrated washing device to market.



Left: The so-called waterpack is mounted between the structure and cabin. Excellent manoeuvrability is possible through the small wheelbases from 3,600 mm + 1,350 mm. **Right:** All important construction parts are easily accessed through the opening of the maintenance doors. A hot water system can be upgraded at any time, without a problem.



Left: ZOELLER ROTARY automatic lifter and 800 litre steel containers in washing position. In Switzerland the cleaning power of the STUMMER “Waschbär” is also appreciated. The cleaning power can be exceptionally combined in conjunction with the automatic or manual lifting system. **Right:** The pivoted robotic arms with the wash heads provide perfect cleaning of the waste containers. Around three litres of water are needed per container, with a water pressure of 120 bar.

For almost 20 years STUMMER has been offering its customers the perfect complete solution for the collection of biogenic waste, residential waste and, at the same time, cleaning of the containers: All in one step with a vehicle and a vehicle crew. Thereby allows the implementation of household requirement of hygienic containers to be very economical. Also, the acceptance of organic waste bins can, in this way, be increased. Odours caused by very dirty containers belong in the past.

“We have adapted the assembly concept of the new LKW series on the frameworks. Because of the introduction of the Euro-6, as attachment manufacturers we have considerably less space to mount our attachments to the framework. That’s why we have mounted all washing system components in a stainless steel framework construction. All tanks, pumps, filters etc. are now mounted between structures and cabins and are optimally available for maintenance and cleaning. All components

are made from stainless steel. Together with our customers we have implemented the wishes and requirements of the drivers, and loading and service personnel, explains STUMMER Works and Project Manager Andreas Mayr.

The new washing device has many advantages over other competitors’ products:

- Completely automatic operation without manual opening of the container cover
- Completely automatic cleaning of the inside of the container and the lid
- Completely automatic cleaning of the dirty water tank
- Completely automatic cleaning of the bottom collection after each emptying

Drivers and loading personnel have additional expenditure when it comes to the cleaning of the containers—the system works completely automatically. The wash times and individually adjustable. Generally two wash programmes with a duration of four or eight seconds

are adjusted. The average water use per two-wheel vessel amounts to roughly three litres of water per cleaning. The water pressure on the washing robot amounts to roughly 100 bar. If desired a hot water system can also be delivered. The water temperature can be up to around 50 degrees Celsius. The cleaning takes place without cleaning agents. The addition of fragrances gives the organic waste bins a pleasant smell.

The STUMMER refuse collection vehicles with washing devices are very highly in demand not only at home but also particularly successful as exports. The main export markets are Slovenia, Croatia, Germany and Switzerland. For some time we have also been active in the United Arab Emirates. “In the first year we had already made sales in Dubai, Sharjah and Ajman” explains STUMMER Managing Director Johann Streif.

Johann Streif