

360°

The elumatec AG magazine

SBZ 137 – The next generation in profile machining

The new SBZ 137 profile machining centre made by elumatec opens up a new world of possibilities in aluminium and PVC processing. Learn more about the product features and background information on page 4.



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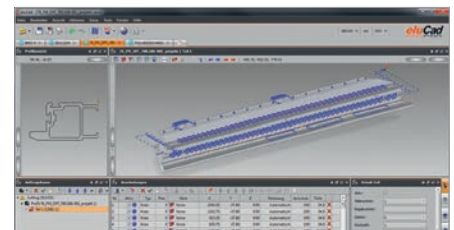
What you will also find in this issue:



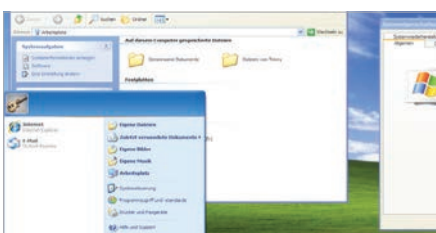
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Shaping the future together.

Dear customers, business partners and friends of the elumatec Group,

elumatec AG is charting a focussed course for the future. After launching a necessary restructuring last year, we are proud of the positive development that has taken place in our enterprise since the founding of the stock corporation in the first half of 2014.

The trust you have placed in us over the past months has truly inspired us and is a driving force for all of our employees as we seek to continue offering you outstanding service and new, innovative products. We strive daily towards this end, knowing that the process of improvement is a continuous one.

With the world premiere of the SBZ 137 at "fensterbau frontale", we presented a new profile machining centre in which we have successfully combined the demands of the highest product requirements, low energy costs and ease of operation. Further product innovations and ongoing developments are being prepared and we look forward to presenting them to you in the coming months.

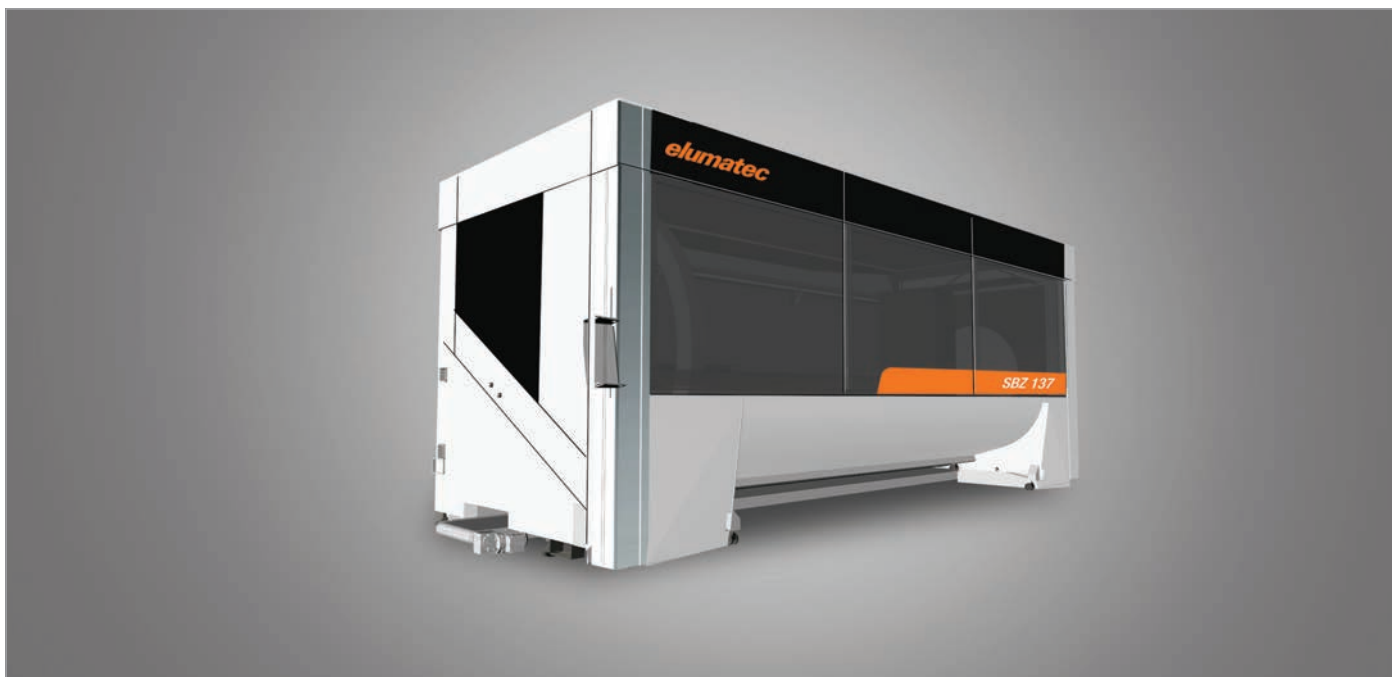
We are pleased to introduce this magazine as a vehicle for informing you of elumatec AG news, current product releases and innovations several times throughout the year.

I wish you a successful second half of the year 2014 and much reading pleasure with the first edition of our magazine.

Regards, Ralf Haspel

Head of Sales & Marketing
elumatec AG





Perfect aluminium and PVC machining

The next generation in profile machining

The new SBZ 137 presented by elumatec at fensterbau frontale in March 2014 in Nuremberg represents a new generation of modern profile machining centres. This machine is just the beginning in a series of new products as elumatec responds to the changing needs of the market and sets new standards for innovation, cost effectiveness and ease of operation. A workpiece table inclined towards the operator and a fast moving ring module with a powerful spindle are among the highlights this newly developed product boasts.

The workpiece table inclined at 30 degrees affords the operator great ergonomic advantages: The machine can be loaded from an upright body posture which is easy on the back. The ergonomic concept for the compact SBZ 137 also means that all cleaning and maintenance tasks can be carried out simply. While chips naturally fall from the inclined workpiece table, a chips conveyor is also available for the machine. Moreover, the inclined machine table offers a further advantage: the operator has a very good overview of the 4-axis machine in all of its working positions.

The machine also cuts a good figure when compared in terms of speed. The ring module moves at up to 150 m/min. on the machine bed thereby shortening processing times. The remaining axes also all accelerate rapidly up to their maximum rates. The desired result is short machining times. The spindle is able to move around the profile quickly for machining tasks on different sides and requires only a small

safety distance.

One-off pieces can also be produced quickly

The SBZ 137 is designed for the sectors of metal construction, industry, furniture manufacturing and all enterprises which must regularly process

one-off pieces. The machine can be set up rapidly because support blocks can be attached to the clamps without the need for tools. "Our target groups often have profiles with lengths up to 3,000 mm that only require machining in the centre and at the ends. The ring module reaches these distant machining positions very quickly," explains Volker Schmidt, Head of Research and Development at elumatec, pointing out the high rate of

” New standards for innovation, cost effectiveness and ease of operation “

travel on all axes.

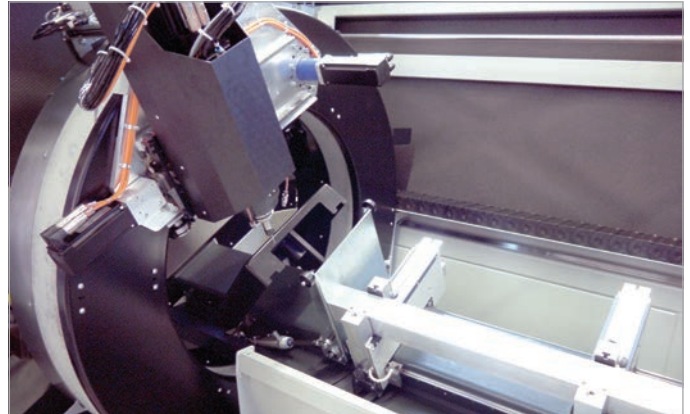
The machining spindle can travel around the profile in a semicircle on the

A-axis of the ring module meaning that profiles can be machined at any position between 0-180 degrees. In addition to profile machining from above, the front and the back, end machining is also possible. "At a tool length of 175 mm, the workpiece can be 300 mm wide, 250 mm high and 4,000 mm long," says Volker Schmidt, citing an example. If the tool selected is shorter, the profile can have larger dimensions accordingly.

Thanks to retractable stops at both ends of the machine table, the SBZ 137 is able to process extra-long profiles, for example, of 8 metres in length. In so-called push-through mode, the operator uses the left stop for machining the left half of the profile and the right stop for machining the remaining 4 metres.

Operational readiness in no time

The SBZ 137 design is compact and saves space. In more confined quarters, the machine can be installed directly against a wall. This compact design also shortens installation times. "We set up the machine completely in the factory and no longer need to dismantle it for transportation in a lorry or container. At the installation site, the technician aligns the machine, makes the power connection and the SBZ 137 is ready for profile machining to



the ring module.

The on-board tool magazine supports short machining cycles. It accommodates either 5 or 8 tools, depending on the equipment configuration chosen. Very flexible operations are made possible in that a saw blade with a diameter of 200 mm can be installed at one location. There are additional locations at the end of the machine bed for angle heads or other tools.



begin," comments Volker Schmidt on the short installation times.

Autonomous clamp positioning possible

The SBZ 137 is equipped with 4 clamps as standard so that two parts can be clamped and machined next to each other. In the motorized version, the clamps open in all directions so that the profile is entirely free: This protects profile surfaces and especially helps avoid scratches on visible surfaces.

elumatec offers two equipment configurations for the clamps: The autonomous clamp positioning version has clamps with their own motors. The standard equipment includes index clamps that are dragged into position by

An energy-efficient machine

Operations, such as routing, drilling, notching, sawing, tapping or thread milling, are performed while the profile stock is stationary in order to protect the surfaces of the profile. As standard, tapping can be performed using a compensation chuck, while elumatec also offers tapping without a compensation chuck as an option. The spindle with left-hand and right-hand rotation has more than enough power to turn the tap back out again. High cycle rates are supported by intelligently-controlled linear motors and servomotors which provide high acceleration rates. In spite of their power, the motors have small dimensions and are very energy efficient, a feature which is further enhanced by the high-performance controller. Collision monitoring that is always at the ready is provided by the eluCad profile machining software package. This software utilizes numerous optimization potentials to help create machining programs quickly and to process them efficiently.

In summary: With the SBZ 137, elumatec has met customer requirements for a profile machining centre that is characterized by low space requirements, an ergonomic design, fast setup, flexible profile machining, easy maintenance and energy efficiency, and which opens up new options for its users in terms of cost effectiveness.

Interview with Volker Schmidt - Head of Research and Development

“Innovation by customers for customers”

Volker Schmidt has been the head of the development department at elumatec for over two years. In an interview, he reveals a few details about the development phase of the SBZ 137 as well as what else he and his team are currently working on.

INSIDE: What were the fundamental criteria and requirements you defined for the SBZ 137?

Mr. Schmidt: It might sound a bit worn, but the main criteria for the development process were to start the conceptual phase with a blank piece of paper and to disengage from everything we've done up until now. The main focus was on creating maximal customer benefit with a sensible price/performance ratio and finding new approaches to meeting customer needs. Our many years of experience were a great help in determining customer needs, as were our customers in the target group for the new machine. These are processors of extruded aluminium profiles, for example in metal construction and increasingly, in the automotive and industrial sectors. Consequently, the SBZ 137 is an innovation from customers for customers.

INSIDE: What is the machine's most outstanding feature?

Mr. Schmidt: Well, the machine's most outstanding feature is that we were very successful in reaching our goal of obtaining maximal customer benefit with a good price/performance ratio. We see this confirmed by the feedback from various trade fair presentations of the machine in which visitors have expressed being impressed not only by the detailed solutions, but even more by the overall concept. The main concept has to do with highly dynamic operation of all axes to shorten the cycle and machining times as well as the uncompromising implementation of ergonomic aspects. The frequency of setup and the diversity of parts are typically very high for the main users of this type of machine. Consequently, we placed special emphasis on easy setup and ergonomic loading of the workpieces. Easy setup is achieved, for example, with clamps that are positioned automatically and provide uncomplicated adjustment for different workpiece sizes. But these are also augmented by reference stops that are always clean because they are covered during machining. This is a simple but effective approach that saves time and reduces waste. Workpieces can be positioned using a favourable body posture – even heavy profiles can be inserted without causing back problems.

A pleasant and thoroughly intentional side effect is the simple cleaning and maintenance of the machine, which is highly accessible.



INSIDE: Which groups of users will find the machine most appealing?

Mr. Schmidt: As mentioned previously, processors of extruded aluminium profiles that seek the highest degree of fully-automatic total workpiece processing on up to five sides are the primary target for this 4-axis machining centre. This includes the classic metal manufacturer of windows, doors and curtain walls that also needs to fabricate a fire door now and then, as well as automotive or industrial applications, such as in the manufacturing of furniture or lighting fixtures. The machine is easy to operate using our intuitive CAD-CAM software, elucam, and it will attract the interest of both newcomers to automatic fabrication as well as of enterprises that wish to increase their production capacities. An enclosure houses the machine, first to increase work safety in every respect, but also because the space

requirements for the machine have been optimized to such an extent that it is also ideal for use where space is limited. For example, the machine can be installed directly against a wall with no need to allow for the spacing otherwise required for maintenance and setup. On the SBZ 137, all such tasks can be accomplished from the very accessible front.

INSIDE: What other innovations are being planned by elumatec for the short and medium term?

Mr. Schmidt: The SBZ 137 is the beginning in a series of product innovations. Our customers' changing performance requirements as well as cost effectiveness are the focus for all new products. The SBZ 137 represents our debut in the lightweight segment as compared to classic machinery manufacturing. The stiffness required in the machine is not obtained through mass as has been customary, but instead through its structure and

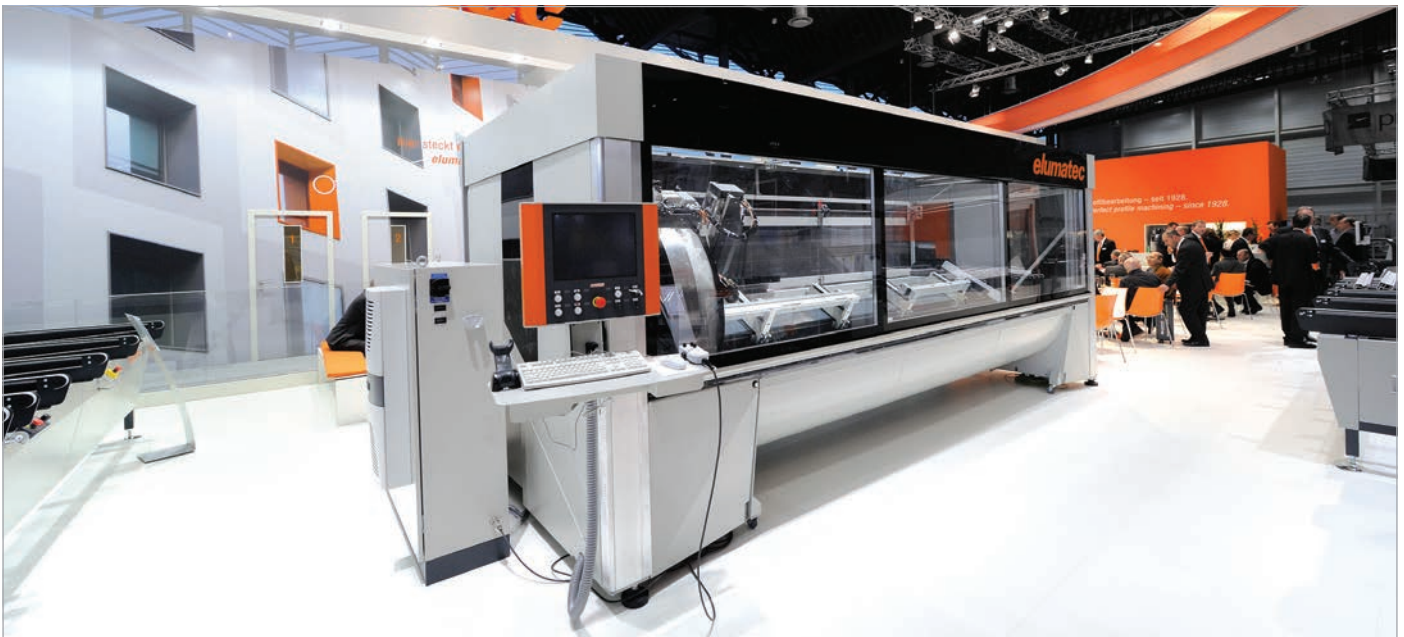
” Maximal customer benefit
with a sensible price/
performance ratio “

the use of modern analysis methods. This has many advantages; the targeted highly dynamic operation can be achieved using small, energy-efficient drives, which saves energy and, ultimately, conserves our resources themselves. We will continue to employ new and modern materials to exploit new design options. The SBZ 137 makes use of many high-quality synthetic parts. This allows design considerations to be met better and more easily than with any other material, because in our day, it is becoming increasingly important to build aesthetically attractive machinery as well. And, at the end of the machine's lifecycle, the entire system is 100% recyclable, to mention the topic of resource conservation once again.

INSIDE: Let's take another look at the future. How do you think that profile machining will change in the coming years?

Mr. Schmidt: Looking back over recent years, it is apparent that there has been a fast-paced spread of aluminium in the most diverse sectors, both in general and as an extruded material. Today, not only windows, doors, curtain walls or modular design systems are manufactured in aluminium,

Speaking of profiles, we also see that fibre composite materials continue to make inroads; whether glass, carbon or other fibre materials depends on the price/performance ratio that the user seeks. Personally, I believe that these materials are the most promising for the future because they allow for a multitude of workpiece design possibilities that have precisely the desired properties yet involve a minimal use of material. Unfortunately, these materials are still relatively expensive when compared to aluminium, which offers similar properties. However, we will need to adjust to the idea that these materials will continue to become more widespread. At elumatec, we have already had opportunities in the past to gain experience with such applications on our machines. We will need to address the problems posed by the further processing of these materials, such as cutting, routing and drilling. This involves special issues that require attention and know-how – which is also a reason why, for some time now, we have been working together with universities engaged in research on these topics. As you can see, we're not going to run out of things to do any time soon.



but so are parts of railway wagons, semi-trailers, passenger cars and furniture. This has to do with the many advantageous properties of the material, including the combination of light weight and strength but also good workability and availability. While developing the SBZ 137, we ourselves also designed a profile which offers functional properties in addition to its purely aesthetic features. Another important point here is aluminium's good recyclability. We've already mentioned the topic of resource conservation and this is an aspect that continues to gain importance in all branches of industry. Consequently, it is safe to say that further and new applications will continue to be found for aluminium profiles and that their dimensions will increasingly become larger. There are already a few plants that can extrude very large cross-sections.



elumatec AG after eleven months: On the road to success with new drive

Eleven months after the launch, elumatec AG is on course for success – thanks to numerous new products, strategic partnerships and strengthened customer relationships.

With machines for precise processing of aluminium, PVC and steel profiles, elumatec AG continues to set new global standards for quality and innovative drive – for all users: from small craftsman's businesses to industrial profile processors. We have done a great deal in this regard over the past ten months. Customers and sector experts alike have already resoundingly affirmed the path we are on, even already at the "fensterbau/frontale 2014" trade fair which took place in Nuremberg in March. Orders with a total volume exceeding expectations, numerous new customers and the enthusiastic interest in our world-first innovations, such as the profile machining centre SBZ 137 underscore our strong performance and the trust customers place in us.

The compact SBZ 137 with its ergonomically inclined workpiece table and the fast-moving ring module shortens processing times significantly. Innovations like these, some of which are patented, play an important role in strengthening our top-ranking position.

And what's more, they are the result of the remarkable commitment of our employees who have invested their heart and soul, demonstrated personal

initiative and supplied an amazing number of ideas all contributing to our successful launch.

For example, we have been able to noticeably increase the efficiency of our processes in production and design. Moreover, we have enhanced our sales force for more impact, professionalized our service operations and improved the performance of our subsidiaries and foreign branches. The reason for these moves is that we expect growth impetus from our export business. For instance, a 48-member delegation with experts from Argentina, Chile, Ecuador, Colombia and Peru visited our plant in Mühlacker in April.

At the same time, we have enhanced our strategic partnership with Stürtz Maschinenbau GmbH in Neustadt/Wied. We will work in close cooperation with one another in future, both in the areas of sales and service as well as in machine configuration. This means our customers will have more direct access to their contact people. They also benefit from a product range boasting the very best technology in the areas of aluminium and PVC processing that can also be customized to meet the individual needs and requirements of each enterprise.

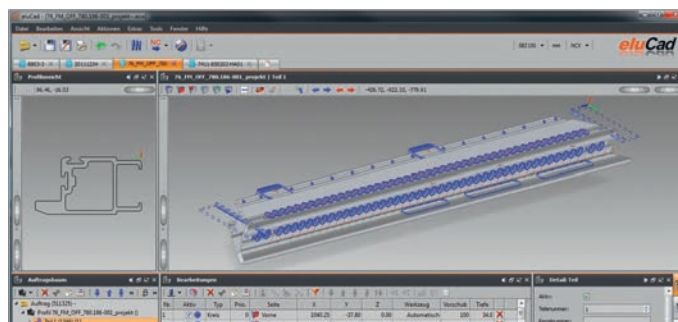
**“The new
benchmark”**

elusoft GmbH – Solutions for intelligent and cost-effective profile processing



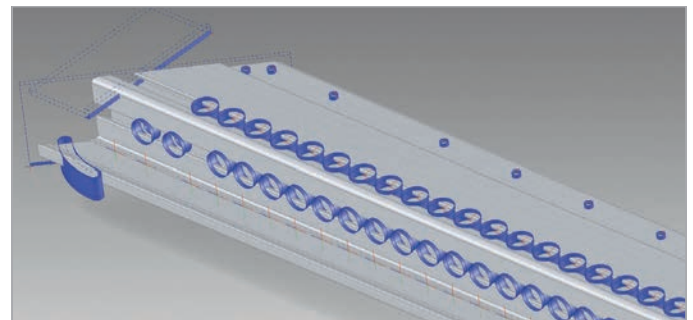
elusoft GmbH develops software solutions that allow machining programs to be created for elumatec profile machining centres quickly and easily. Among these is “eluCad”, a software package that has proven itself in practice and is employed in various sectors around the globe. The elusoft range of services encompasses support, seminars and production consulting. elusoft GmbH is a subsidiary of elumatec AG.

eluCad makes it easy to program profile machining centres. This user-friendly software is designed so that the user does not have to program using ISO code directly – all that is required is the entry of the data in a logically structured graphical user interface. The program is intuitive to use, can be adapted as needed and stands out with its practical functionality. A 3D view provides a clear and realistic display of the designed parts on the screen. The profile machining software can import and use data from various different design programs. eluCad generates the machining program and optimizes the tools and machining paths for the selected profile machining centre. A collision check prevents expensive machine crashes and associated downtimes. New tools can be created quickly and easily in the software.



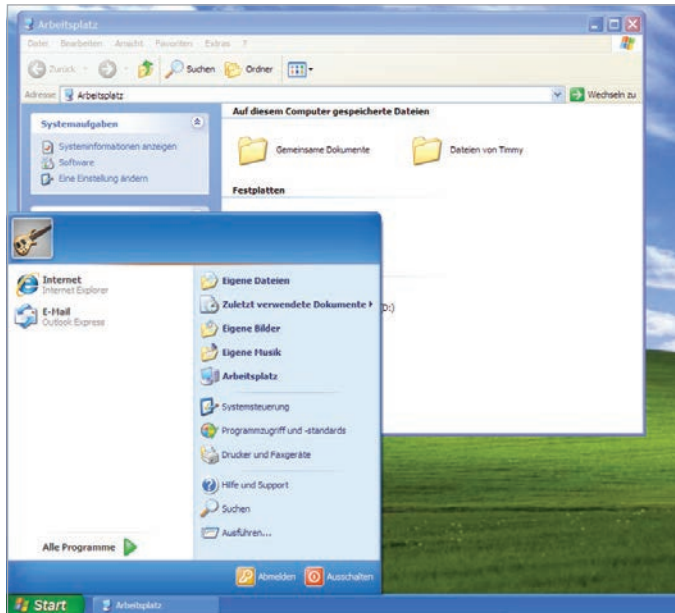
Automatic recognition and programming of machining tasks

The greatest benefit you gain from being our customer comes from the know-how of the team that stands behind the products: It consists of experienced practitioners who use their creativity, know-how and passion to develop our targeted solutions. These characteristics have enabled the team to take and maintain a leading role in what they do best. The constantly changing variety of products offered by our customers requires continuous innovation and adaptability on the part of elusoft. The team is



both ready and able to meet this challenge. Among the product highlights is a 3D converter which in mere seconds recognizes and programs the information about profile length, profile cross-section and machining tasks that a 3D model contains. This automatic conversion eliminates the need to enter the data by hand. Instead, create your machining programs quickly and transfer them to the machine easily. The converter arranges profiles in the correct clamping configuration right away based on data-base information. For example, curtain wall elements with multiple profile parts can be imported as a complete assembly.

Elusoft's range includes software products such as Bar Optimization, Bar Machining, Clamp Management, Cycle Machining (for fast production of small parts) and CSV interfaces as well as other interfaces. The range of services includes: Support by experienced application engineers, seminars on the eluCad profile machining software and the supplementary modules, product consulting on the customer's premises, the development of specialized production software or special solutions, the integration of optional features on the machine, support with problematic jobs, ISO-code training, start-up of programs and monitoring the quality of the milling and routing results. For more information, please visit our homepage at www.elusoft.de



Windows XP security

The news in April that Microsoft was discontinuing its support for the Windows XP operating system caused quite a stir in the media. However, elumatec customers presently have no cause for alarm regarding the operability of their systems because we have used the Windows XP Embedded operating system in the profile machining centres concerned. Microsoft has ensured that support for this operating system will continue until January 2016. "We will be informing all of our customers with this operating system about options for conversion to a more recent system in the coming weeks and months," emphasizes Andre Gwosdek, Head of the Aftersales Department at elumatec. Of course, Mr. Gwosdek and his team are available to you at any time until then as well.

elumatec supports EU aid programme



The number of overweight children has increased starkly in recent years. In addition to an adequate amount of exercise, a balanced and healthy diet is the most effective means of counteracting this trend. The European Union has begun an initiative in this connection.

The aim of the EU school fruit programme is to guide children as early as possible towards nutritional habits that promote health and to build awareness that fruit and vegetables are not only healthful, but also taste good. In addition to this direct outcome, the programme is also intended to counteract the downward trend in the consumption of fruit and vegetables. To accomplish this, the EU provides 90 million euros annually (150 million

euros as of the 2014/2015 school year) to member states for the co-financing of fruit and vegetable deliveries to preschools and schools. Nonetheless, schools are still dependent on additional sponsors and supporters for the implementation. elumatec is pleased to be one of these sponsors by supporting the Uhland Special Needs School in Mühlacker.

For more information, please see: www.schulfrucht.eu (German only)

ALUMINIUM 2014 in Düsseldorf

Shiny prospects

The demand for aluminium and semi-finished products is growing unabated. This fact is emphasised by the new visitor record at the global flagship trade fair ALUMINIUM 2014, that took place in Düsseldorf from 7 to 10 October, a show at which elumatec AG set an exclamation mark with their new-generation solutions.

More than 24,000 visitors, one sixth from outside Europe, prove that the growth story of light metal is continuing. The main driving forces around the globe are automotive engineering and the transport and construction industries. Therefore, the most sought-after applications at the ALUMINIUM show were in these fields, a fact reflected by the large number of in-depth conversations with customers and prospects at the elumatec stand. "We are extremely satisfied with our trade fair appearance. The solutions we showcased here, above all our new flagship automatic saw, the SBZ 616 profile machining centre met with a great response", says Ralf Haspel, Director of Sales and Marketing at elumatec.

The trade fair appearance focused on giving profile machiners an answer to how to fulfil orders even more quickly and cost-efficiently while at the same time delivering a perfect finish. "Our product innovations are geared to ensuring extremely high quality and, at the same time, reducing machining time and energy consumption", Mr Haspel explains.



The drive and control technology of the SBZ 616 and the SAS 142 automatic saws not only cuts energy requirements but also keeps speed at a constant level even if motor load changes. There was also a great deal of interest in the 5-axis SBZ 151 centre, that has increased speed and production reliability thanks to new control technology. Visitors also had the opportunity to test-drive eluCad modules from elumatec's subsidiary elusoft in a simulated production environment and to get an idea of how to save valuable time with the aid of "3D import", for example. "Our solutions really hit home with visitors. The numerous leads and orders we secured at the fair prove that", Mr Haspel sums up.

Trade Show BAU 2015

At the BAU 2015, which will be held from 19 to 24 January 2015 in Munich, elumatec will be unveiling a new generation of solutions for machining aluminium, plastic, and steel profiles. elumatec AG give their customers solutions that are one step ahead of market demands, for example the world première of the SBZ 628 profile machining centre, the SBZ 122 Facelift, and the intelligent, new generation of controllers in the SBZ 122 and SBZ 151 profile machining centres and double mitre saws. We warmly invite you to visit us in Hall C1, Stand 502. If you require tickets, please contact us at:

www.elumatec.com/ticketservice





elumatec wishes you a Merry Christmas and a happy new year!

A preview of the next issue

In the next issue, we will take a look behind the scenes in the group's headquarters at Lomersheim and will also give you a thorough introduction to the new visitor's centre. You will also find out how you can save costs in the long term using our unique energy recovery system and protect the environment at the same time. A look-back at the Aluminium trade fair in Düsseldorf will also be included.

IMPRINT

Many thanks to all of our colleagues who contributed to this issue.

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