

# JULY 2017 furniture

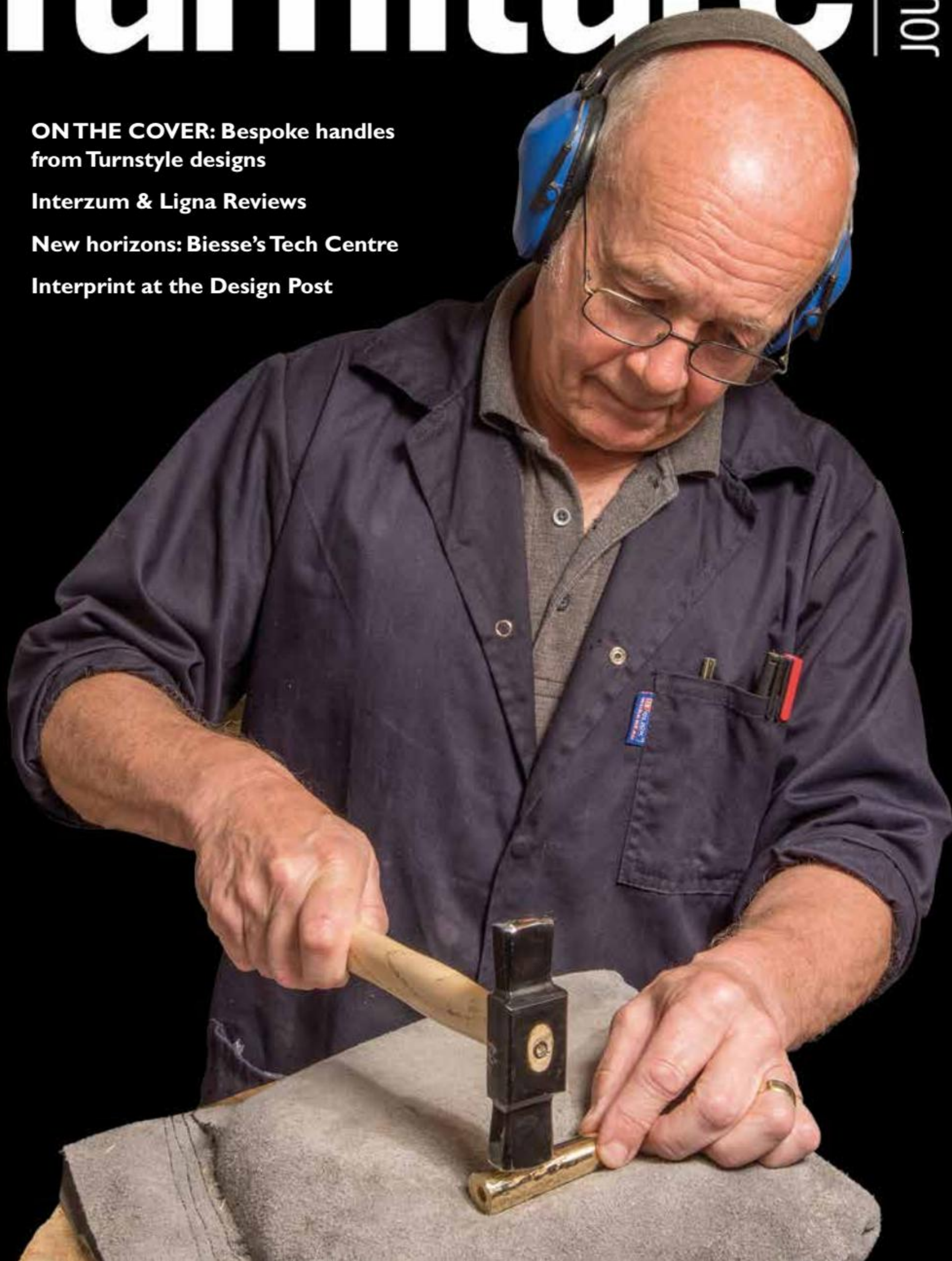
## JOURNAL

**ON THE COVER:** Bespoke handles  
from Turnstyle designs

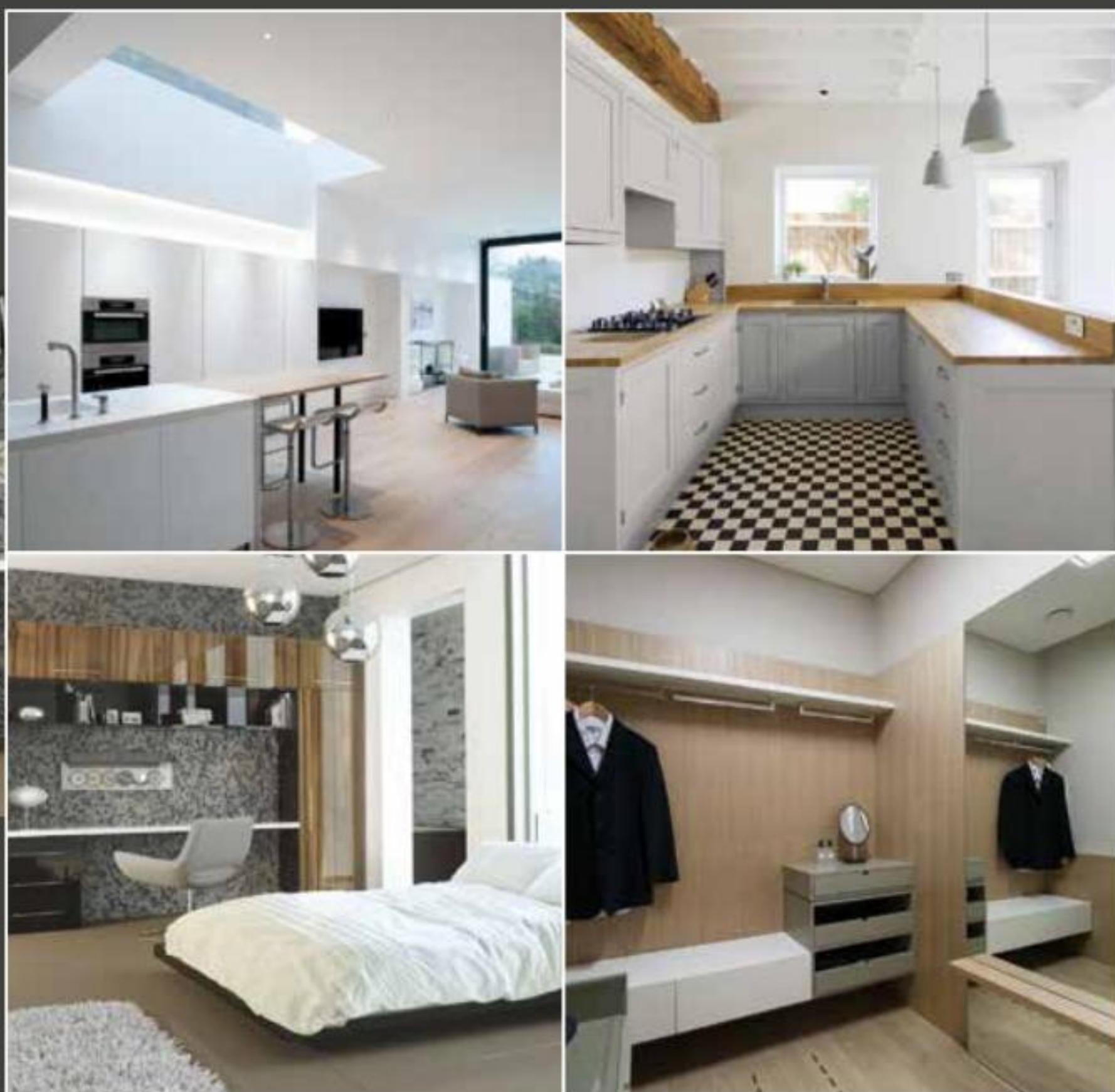
**Interzum & Ligna Reviews**

**New horizons: Biesse's Tech Centre**

**Interprint at the Design Post**



# rooms reshaped



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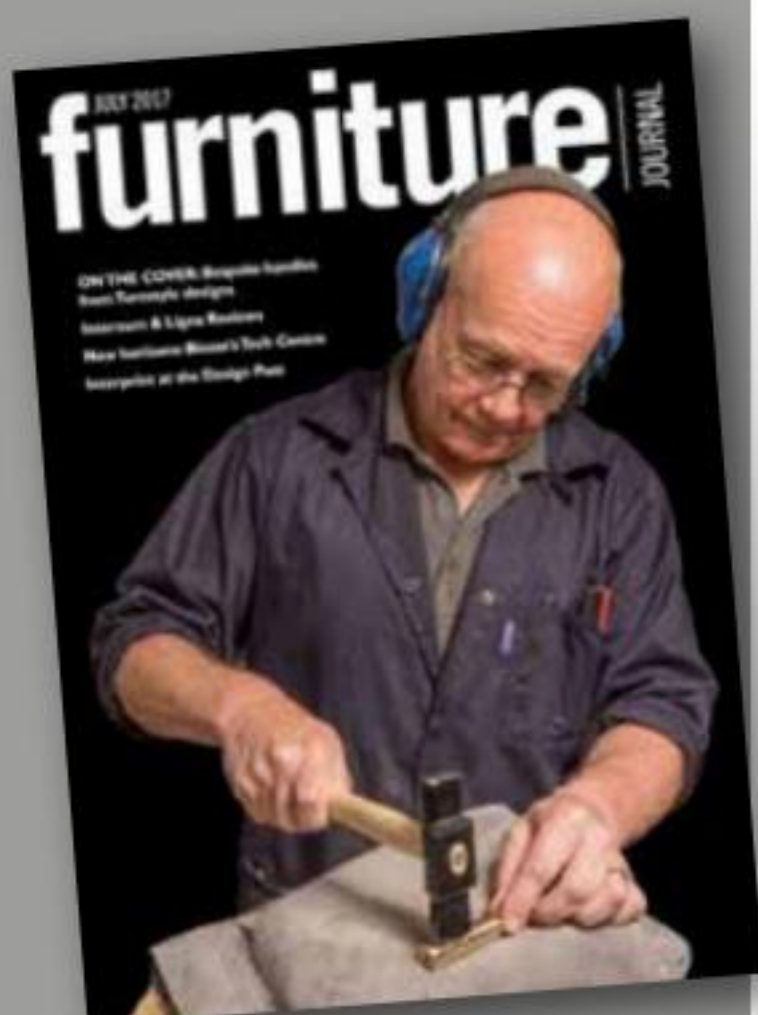
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## On the Cover

Dave Vogler from Turnstyle Designs planishes bespoke handles for real product differentiation.

Story: pages 4-6.

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LIGNA

**SICAM**

# Sicam Soon!

**The halls are full and the product spread will be wider than ever at Sicam 2017 – but book your hotel soon!**



**T**he ninth edition of Sicam, the International Exhibition of Components, Accessories, and Semi-Finished Products for the Furniture Industry, will take place from Tuesday 10th to Friday 13th of October at Pordenone. The organisers confirm that once more, this year's edition has grown in strength, both in the number of companies exhibiting and with regard to quality in terms of technologies, materials, and design ideas. The exhibition layout is almost complete in the halls at the Pordenone Trade Fair with manufacturers from over thirty countries exhibiting. Last year, there were 560 exhibitors and operators from over seven thousand companies from all over the world (from 101 different countries) came to visit the trade fair.

The market figures recorded at international level for 2016 show that worldwide consumption of furniture valued at production prices (excluding distribution mark-up) was

approximately 395 billion US dollars. Large exporters (Germany, Italy, and Poland), not including China, continued to grow: Italy returned to 8% of the global total, the same as Germany, while Poland counted for 7%. These are the countries that have recorded the largest attendances at Sicam for a number of years.

Sicam's growth trend is supported by its effective format and the service it provides both exhibitors and visitors. The relaxed atmosphere provides perfect conditions for business, and the organisers pay particular attention to the requests of both. This year, in particular, there will be three international airports linked to the trade fair area via a special shuttle bus service. Venice and Treviso airports, which offer over one hundred destinations via direct connections are joined by Trieste airport, with its additional eight national destinations and five European connections.

For more information visit [www.exposicam.it](http://www.exposicam.it)

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## Zenith Collection



Main image and inset:  
Hand-planishing is  
labour-intensive but the  
finish sparkles like a  
beautifully cut diamond.

# Turning

**The handle is often the forgotten pièce de résistance in the quest for product differentiation. Turnstyle Designs could give you the edge.**

**M**aking your product different to everybody else's and making it stand out and get noticed for all the right reasons are challenges most furniture manufacturers face. Achieve real product differentiation and if consumers like the way your designs look, feel and work, you will most probably achieve higher margins at the same time. Go the next step and give your clients a genuine element of individuality - a bespoke product - and there's no doubt you'll be able to command a premium.

At the very top end of the market, unique elements, finely figured veneers, beautiful timbers and fittings that look, feel and work impeccably are the norm. In the middle

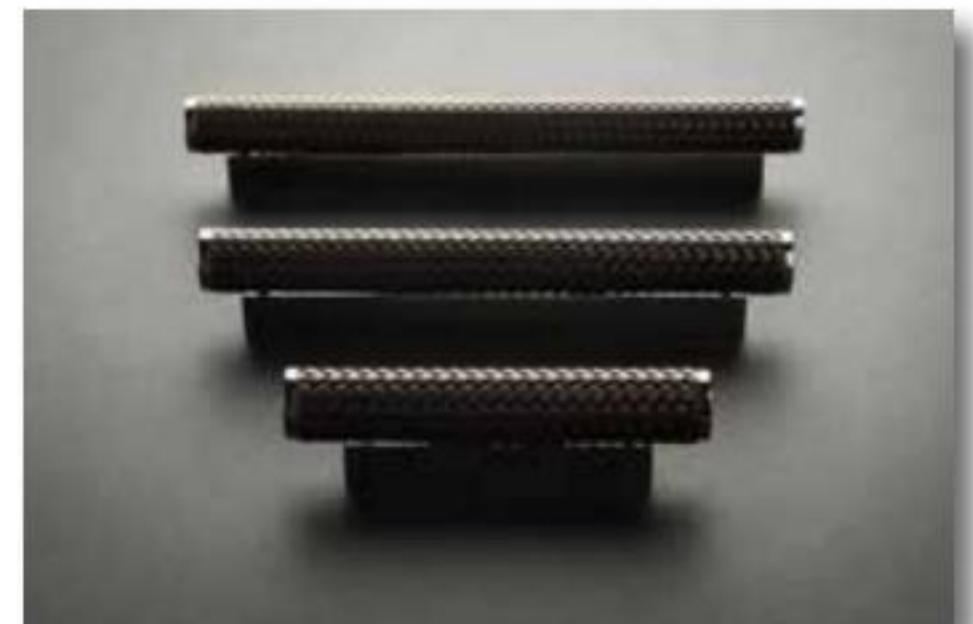
ground, the effect is achieved using modern décors and high quality fittings - but one aspect that many manufacturers often neglect is that crowning glory, that cherry on the cake, that pièce de résistance, the handle. And for a lot less than you might think, it's possible to have individually designed, custom made handles that will really set your furniture designs apart.

Turnstyle Designs is a specialist when it comes to making bespoke handles. The craftsmen and women at the Barnstaple-based factory have produced every kind imaginable for applications as diverse as kitchens, hotels and luxury yachts. 25 years in the business, and recently crowned winners





Hand-stitching leather to a solid brass handle.

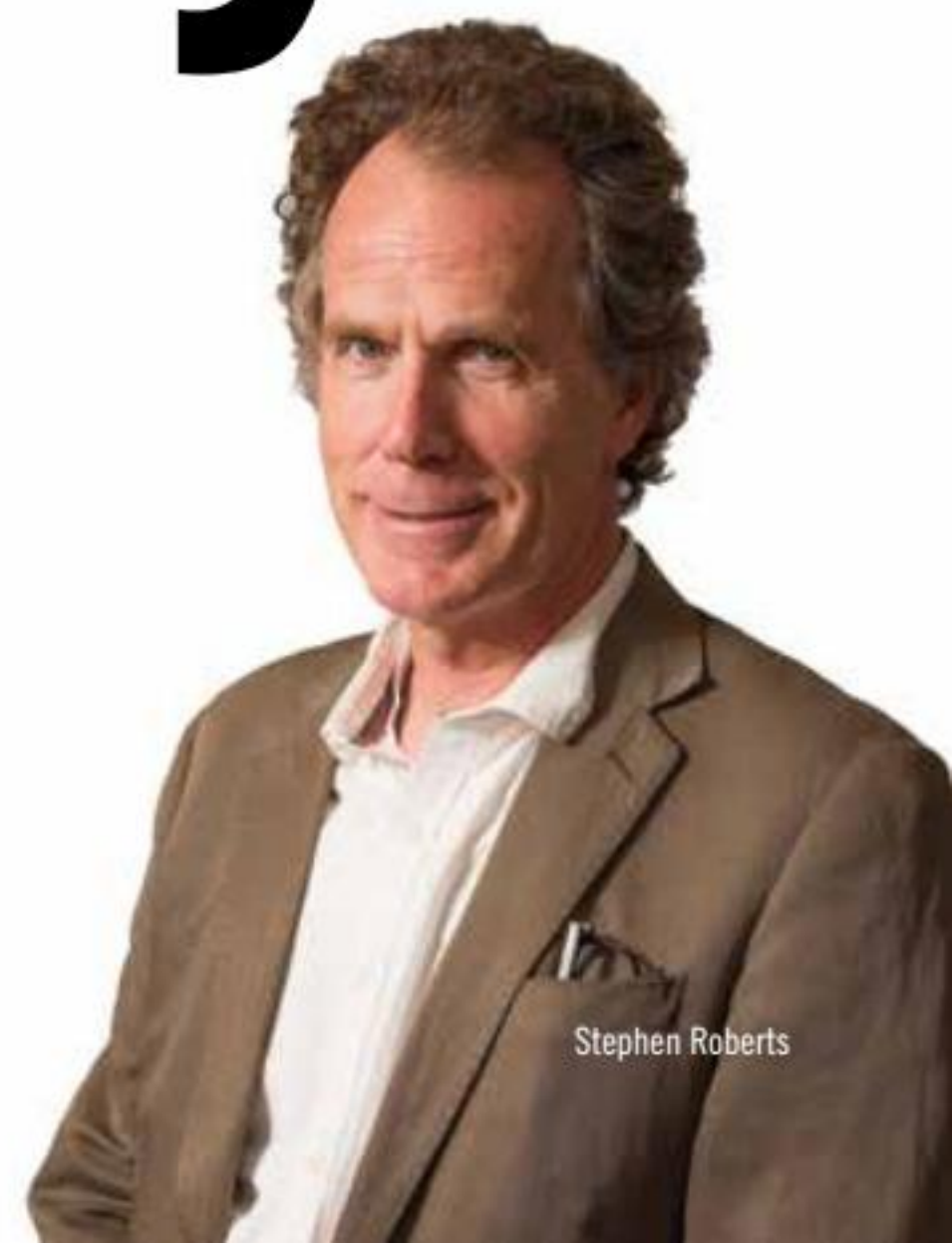


# on the Style

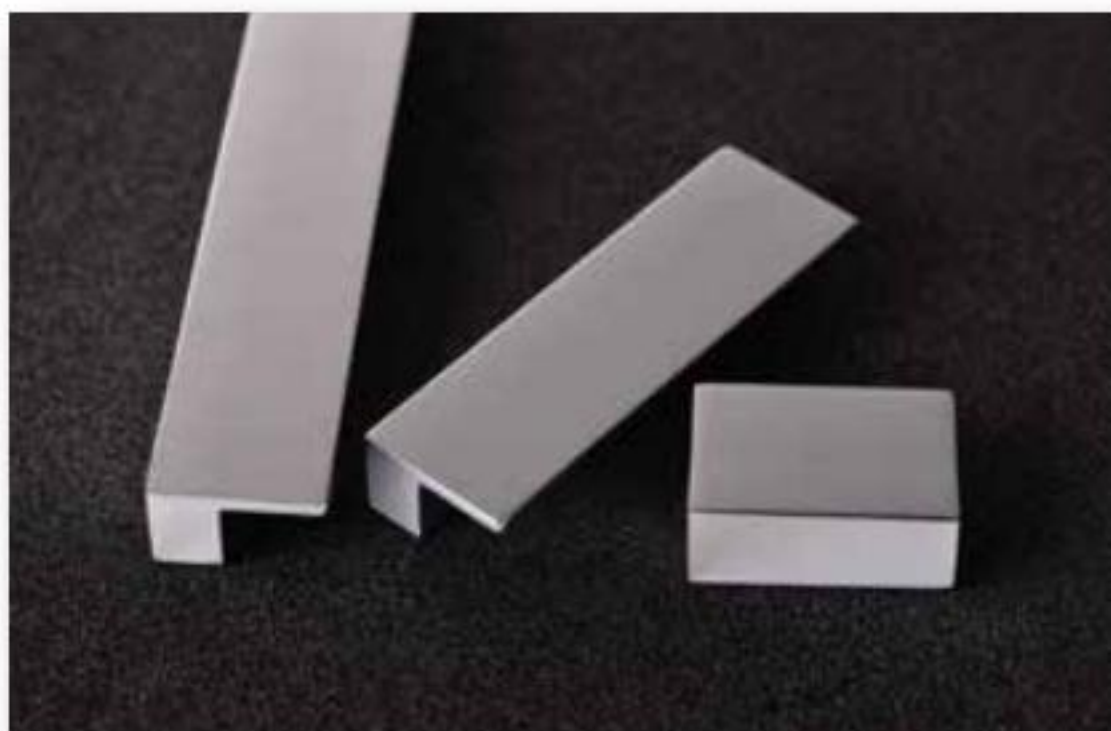
of the Overall Business 2017 and Made in North Devon awards, Turnstyle cut its teeth in the demanding marine industry by making complicated handles for multi-million pound yachts. "Working at the very top end of the industry teaches you to be very good at service and pushes the boundaries of design and manufacturing," says Turnstyle's Managing Director, Stephen Roberts. "It's much more complicated to make a contoured handle with a latch, a lift, or a push button for a yacht and design a mechanism that will keep it firm and rattle-free when it puts to sea than it is to make a furniture handle – and marine industry designers are clients that don't take no for an answer. If their engineer can't figure

out how to make what's needed, we generally can and that's what the industry has come to expect from us: solutions to design issues and top notch service."

Unlike many companies that are geared to volume production, Turnstyle Designs doesn't have a minimum order quantity. "If you need three bespoke handles, we can make three," says Stephen. "If you need all the handles for a hotel we can do that, too, or we can engineer a product to a price so it looks much more expensive than it is. We're not all about volumes and most of the time we're working with materials and finishes you can't get elsewhere, so when you order from us you get something unique that can't be mass produced."



Stephen Roberts



The patination process is achieved by hand-dipping.

"We can work in any of three ways," continues Stephen. "We have a standard catalogue and every handle in it is available in a choice of 48 material and grip options. These are made to order and usually shipped within ten days. Often, customers will use these existing designs as a base for their own ideas and ask us to customise examples they've seen in the catalogue, or on the website, maybe by changing the colour of the Amalfine grip, the metal finish, the length of the handle, or the stitching. Making customised versions of our designs accounts for about 35% of our business but we can also work from a client's own ideas and create an entirely new design from scratch. Normally, we'd engineer a mock-up, then manufacture and test it using a variety of materials from brass and leather to glass

and carbon fibre according to the look the client wants."

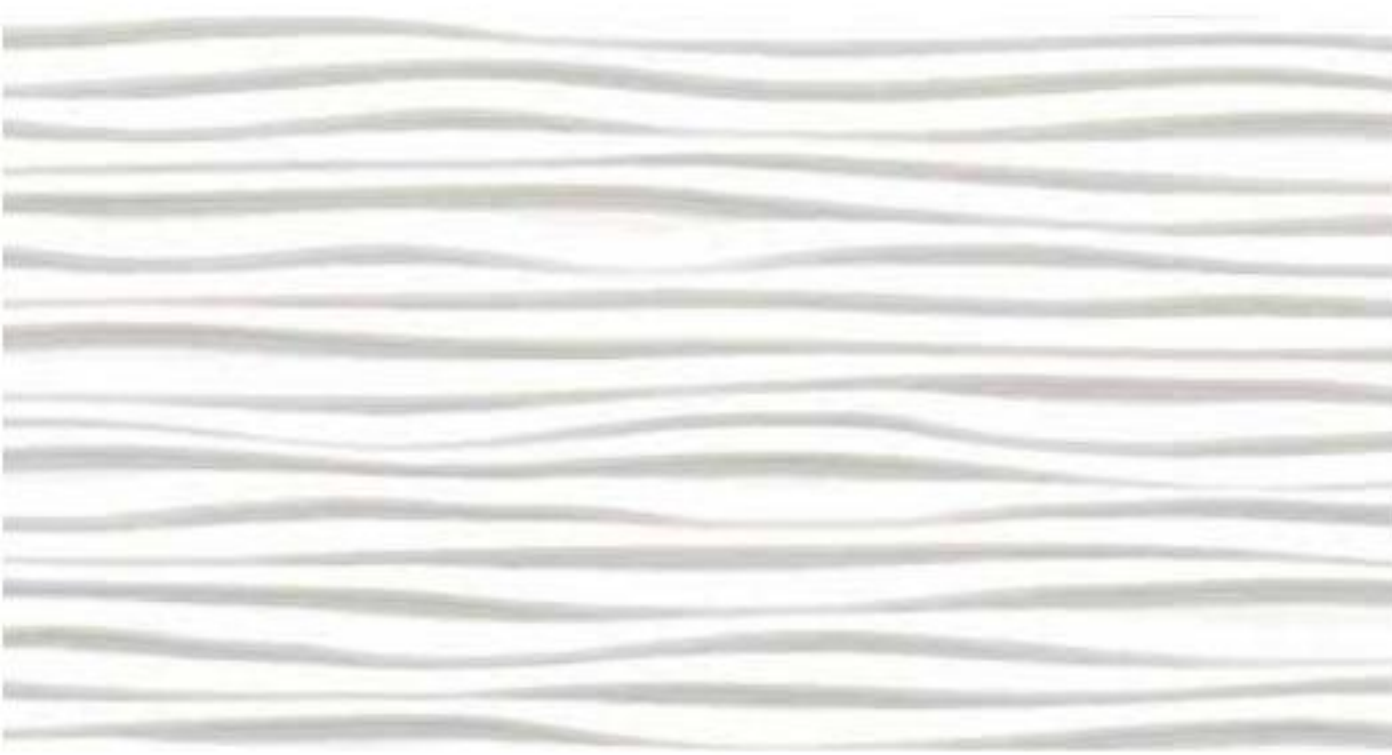
Take a tour of the factory and you may be surprised at the amount of handwork involved in Turnstyle's designs. All the handles are made from solid brass and it's a material they really know how to bring to life. Eight different finishes are available from polished to patinated and because the patination process is achieved by hand-dipping, you can specify the colour so it creates a match, a contrast, or blends with other materials you are using for your furniture design. Combine brass with a hand-stitched leather, or a shagreen in your choice of colour, or with an Amalfine finished with a pattern of your choice, and you make the handles in your furniture every bit as much a talking point as the tactile supermatt finish and the soft-close

drawers. If you want a slate-finished grip to match your slate-effect worksurface, a ceramic or a wood grip on a uniquely shaped handle that reflects the curves in your solid surfacing, or a simple turned knob that carries your brand signature, anything is possible at Turnstyle. Full interior projects involving window handles, lever handles for the doors and matching handles for furniture are par for the course. Just ask. You'll find everyone at Turnstyle Designs is as enthusiastic about bringing your ideas to life as you are.

To find out more, call Turnstyle Designs on 01271 325325, or visit the company's new website, [www.turnstyledesigns.com](http://www.turnstyledesigns.com), where you'll find 25,000 variations and be able to experiment, put your own stamp on a design, mix and match materials and get a good idea of what working with Turnstyle is all about.



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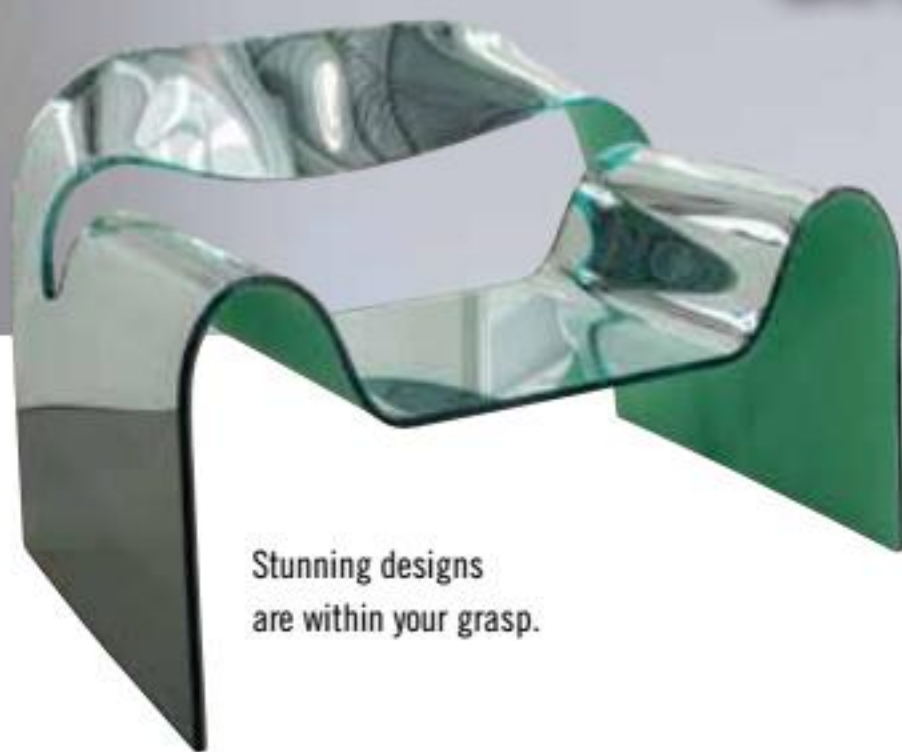
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# Where Possibilities are Endless



Stunning designs  
are within your grasp.

**A visit to Biesse's Technical Centre and bLab in Pesaro is a mind-opening experience that will take you to a future you may not even realise is at your fingertips.**

Over the last decade or so, the way many of us buy machines has changed markedly. Not so long ago, we'd settle on a machine because it performed a specific task, then trot around the market to see who was offering what we needed. And when we found it, the chances were that every supplier had something similar, making the whole business a tad confusing. It was easy to be swayed by price, or build quality, or because one model offered greater speed, a bigger bed, or something equally easy to grasp – and that's still the case to some extent at the smaller end of the market. However, over the years, such tangible issues have become less polarised, blurring the boundaries between the products

offered by different manufacturers, and the reasons for choosing one machine over another have shifted.

The flexibility to grasp a wide spectrum of opportunities in a rapidly changing market is something provided by software as much as hardware, so today's savvy manufacturer looks first at software and service in search of qualities that provide an adaptable, future-proof solution to a broad spectrum of manufacturing tasks. But software is a mind-boggling topic with endless possibilities that few of us ever use to full potential. If what you want to do is manufacture a particular product, but leave yourself with enough flexibility to make other products as the market demands,



A training session in the Biesse bLab.

there are few places better equipped to demonstrate both your present and future needs (and maybe show you how to do it faster, or better) than Biesse's Technical Centre.

"We no longer concentrate only on the performance of the machine," Raphaël Prati told Furniture Journal during a recent visit to the Technical Centre and bLab in Pesaro. "Brochures highlight the technical features of machines; the Technical Centre enhances their value. Our job is to help our customer to help his customer – whatever the end requirement – and to do that we encourage our clients to consider the whole picture.

"Our customers often find examples of work in our Technical Centre that seem

complex. Few realise how simple they are, or how quick they are to produce. It is our job to inspire our customers, show them what they can make in the future and how easy it is to produce radically different work, or increase the productivity of what they want to make now. What we offer here is a complete partnership: training, support and after sales service with people who are available to provide help quickly when you need assistance and you are back home in your own factory."

At the very heart of the Technical Centre, which houses fully functioning demonstration machines of just about every denomination in an area of more than 3,000 square metres, is the bLab. It's here that visitors will see



Raphaël Prati



Biesse's Tech Centre in Pesaro – every machine is there to be tested.



inspirational furniture, joinery and cabinet work and be able to discuss, learn and undertake specialist training. "The decision to buy a machine is often based on the ease of use of the software," continues Raphaël. "We demonstrate the full capability of our software here – even replicating tasks on customers' own machines – and we provide training on the latest updates. It's also a place where customers can experiment in a safe environment, reducing risk and bringing reality to a virtual world. When they see their creations made on the machines in the demonstration area, we often hear comments like 'Wow! We didn't know we could make that in 15 minutes'. It's a place that opens minds."

Raphaël refers to the Technical Centre as a campus and, in a sense, that's exactly what it is: a place of learning, where industry specialists from a number of disciplines gather and work together to provide customers just like you with complete solutions to production issues. You'll often find tooling, material and other specialists working alongside Biesse's 150-strong team of mathematicians and software developers, and it plays host to In-House events throughout the year. "It's a place where you can talk to specialists, talk to engineers, discuss optimisation of working practices, explore problems and come up with solutions," says Raphaël. "A lot of customers come here because they want to save time,

improve aspects of their production, make furniture quicker or better, or simply network with other clients from around the world. We encourage customers to use the Technical Centre and the bLab whenever they feel they need to improve something, or make something that takes them beyond their current level of expertise. It's not just for new customers who want to see what Biesse has to offer."

To find out more, or if you've got a particularly knotty production problem you'd like to solve, talk to Biesse UK and ask about arranging a visit to the Technical Centre. You will be surprised at the breadth of knowledge and services you can access there.

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# The Famous Five Create

Five new stories from five imaginative designers were introduced alongside Interprint's Six Pack at the Design Post in Köln.





Reef by  
Jochen Flacke.



Picea by  
Thorsten Keissner  
(Dolf Langemann Design).

Engage five famous designers and give them each a brief to apply their imaginations in whichever way they feel is appropriate in order to create a new furniture décor and what would you expect the results might look like? Certainly nothing Enid Blyton could ever have imagined in any of her Famous Five adventures, that's for sure. When the décor printer Interprint came up with the idea as part of its Co-Creation theme and commissioned Jochen Flacke, Thorsten Keissner and Peter Kern from Germany, as well as Attila Kuzu from Turkey and Luca Tormena from Italy, even members of Interprint's experienced design team were as surprised as they were delighted by the results. And they could not be more varied.

Jochen Flacke's Reef is an oak that embodies serene imperfection; a décor for

people who long for originality and the comfort in security. "How happy we are to live in old houses or fetch the old chairs down from the attic," he says of the inspiration behind Reef. "We love relaxing at home and thinking about how all this patina came about. We are looking for peace and quiet to counter the perfect, but hectic world."

Contrast this with Thorsten Keissner's Picea, a décor that takes its inspiration from the Alpine lifestyle: "For me," he says, "The new interior design trend décor is the sunburned spruce." Natural and weathered, the colour spectrum ranges from brown to silvery-grey, harmonising with the latest shades and styles."

"Especially in times of radical change, people are looking for trust and comfort to counterbalance smooth high-tech, working

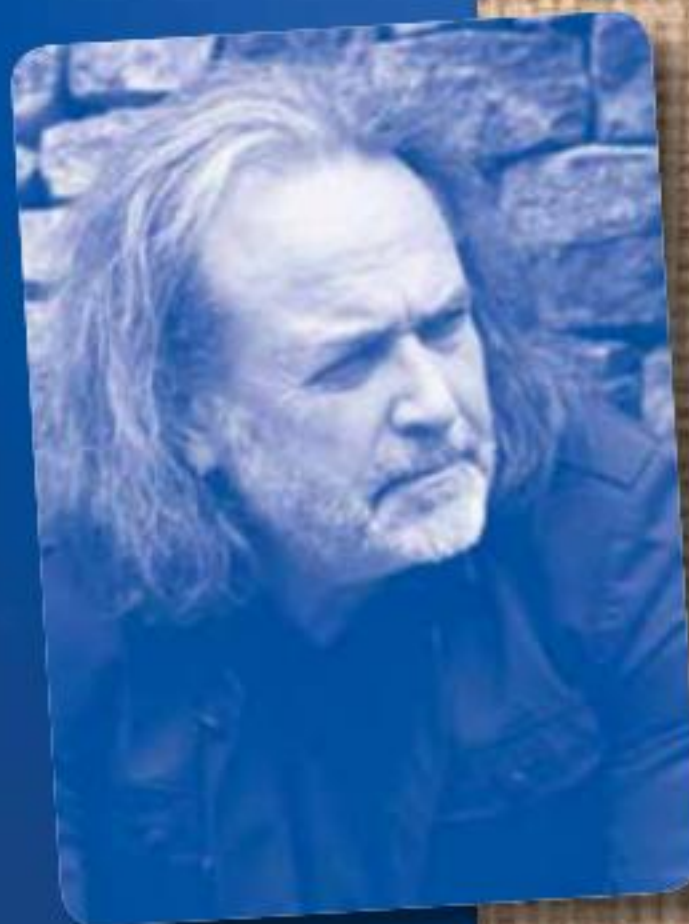
like a maniac and cyber stress," comments Peter Kern. His décor, Comfy, has a textile appearance and the design conveys warmth and naturalness. The materiality is convincing, especially in combination with different wood types, stones and metals.

Turkey's Attila Kuzu took his inspiration product for the décor Yonga from a reconstituted natural product - the compressed wood chips found in oriented strand board. It is highly original, experimental and trendsetting for a decorative product. "Sometimes, beautiful products from nature are given a new shape and form through industrial production processes, and yet they maintain a unique surface in unpredictable ways. We show people the beauty of the industrial transformation process, instead of concealing these traces."

With Harris & Crusoe by the Italian designer Luca Tormena, comes the combination of a walnut - the soul of Italian furniture design - and Crusoe, a slightly used textile with a chevron. Comments Luca, "The design of a décor is closely modelled on the conception of a house full of memories and pictures: the travel experiences gathered by the residents of the house. Observing the décor from the comfortable sofa, everyone can immerse him/herself in this multi-faceted experience of life."

On 17 May, under the motto "Transform – Interior Design in Changing Times", the five designers, compèred by Salvatore Figliuzzi and Maurizio Burrato from the Interprint Design Team, provided an invited audience with interpretations of how home design could look in the future – extending the pioneering approach to décor design enjoyed by many during the Furniture Days, hosted annually in Arnsberg at the Interprint Design Centre. With its co-creation strategy, Interprint's collaboration with renowned designers is a new departure, intended to provide mutual inspiration and new ideas in décor development. "This panel discussion allows us to give our visitors the unique opportunity of meeting design experts from the international furniture industry," commented Salvatore Figliuzzi, Director of Marketing and Design at Interprint. Selected décors designed for the company by Flacke, Keissner, Kern, Kuzu and Tormena were displayed as a separate part of Interprint's presentation at the Design Post and featured alongside Interprint's own Six Pack.

For more information contact Interprint on 0049 2932 9500 or visit [www.interprint.com](http://www.interprint.com)



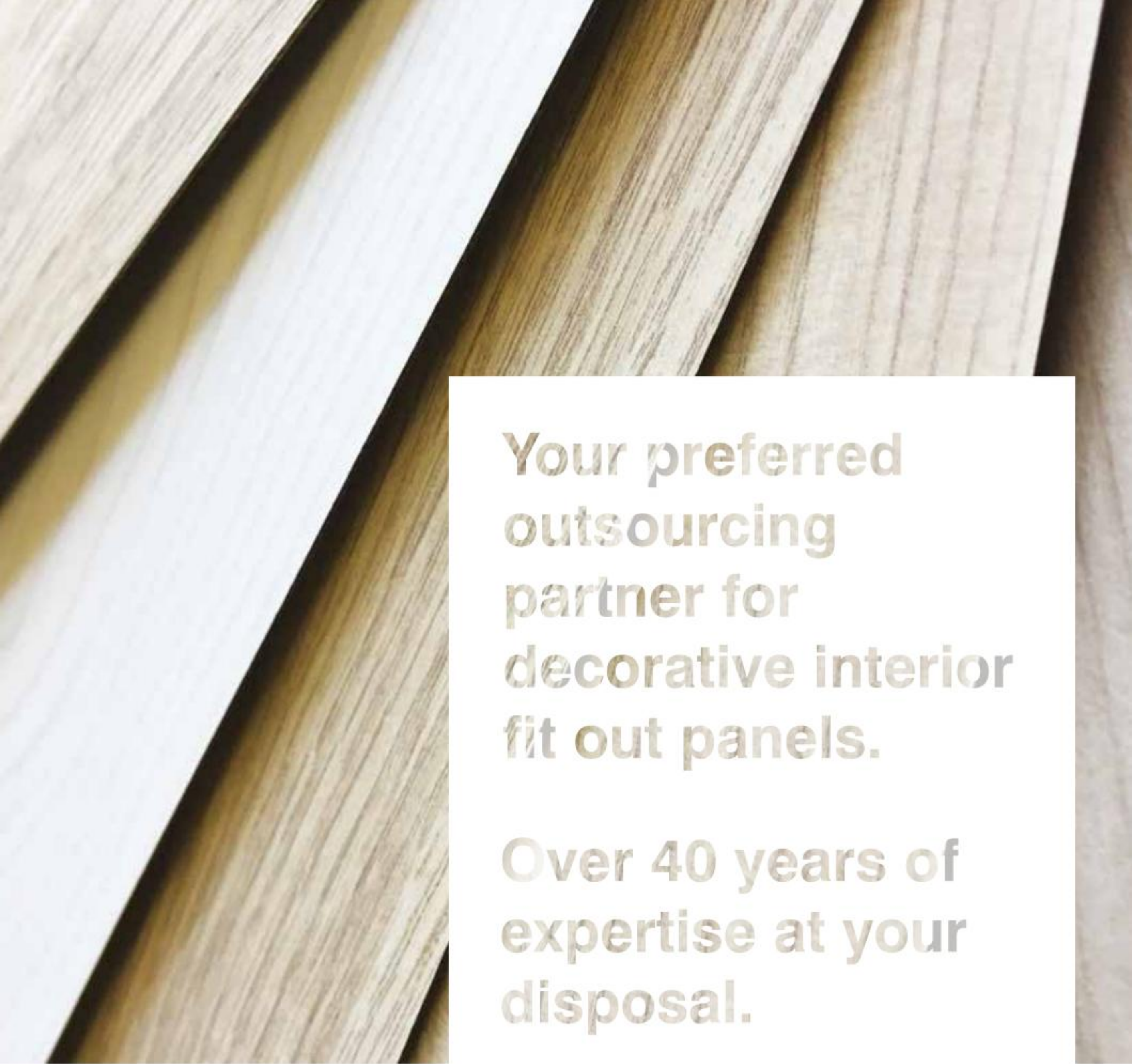
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interzum



# Interzum Review

**A bigger than ever Interzum shows high quality fittings and product differentiation are now paramount in 2017.**



Interzum 2017 closed its doors on 19th May - and what a show it was! The organisers reported an increase of 13% in exhibitor numbers and an increase of 15% in exhibition space. Visitor numbers were reported to be up by 19% with an increase of around a 3% in foreign visitors, including many more from the UK. It certainly felt like a busier show than 2015 and the exhibitors we talked to confirmed this. It was elbows out on the Renolit, Egger and Pfleiderer stands as crowds flocked to see the latest décors. The hardware halls were also extremely busy – just getting through the Grass stand was a task and a half. Only the Chinese stands seemed quieter and, if one was to read anything into that at all, it might suggest European furniture manufacturers could be swinging away from lower price point products from far off lands and going in search of products that enable them to provide product differentiation instead.

Differentiation was certainly the buzzword this year. Although there are discernible trends in the décors section with a plethora of greys and concretes dominating membrane pressing foils, we're seeing much more widespread availability of digital printing technology, both for flat laminated décor products and for edgebanding materials. There was a particularly impressive 2.25 x 5m example of digital printing shown at the very front of the Schattdecor stand, and with most of the big name décor printers now offering low run digital designs on demand, it's clear the printing industry as a whole is preparing for this sector of the market to grow.

In recent years, the growth in décors that offer perfectly synchronised grain and print has gathered pace but, at Interzum 2017, it seems to have reached a zenith and, to some extent, been overtaken by surfaces that emphasise tactile appeal. Providing increased



Schattdecor's giant digital print



product differentiation for their clients, some of the décor producers are beginning to supplement their offer with products that intentionally don't synchronise, yet still give interesting tactile effects. Saviola and Alvic both showed non-synchronising décors that set out to challenge the senses and make one think about the surface rather than accept it on face value. It adds another dimension – a talking point that can be used as a selling point – when touch doesn't confirm what you expect. Companies like Saviola have made it their trademark to offer clients enhanced product differentiation through the combination of unique designs and unusual tactile finishes – and they've made it a speciality to offer relatively short run products for those who want them.

The greys and blacks we've seen in décors have steadily but surely found their way into the hardware world. Salice, with its award-winning Air hinge, was one of the first to

introduce exciting dark finishes and together with the new Tiomos Hidden from Grass, I get the impression we're beginning to see the emergence of what could be a new generation of discreet functional hardware that allows the furniture design to take centre stage. It's now possible for consumers to personalise hardware such as drawers with products like the Vionaro ID from Grass – a very neat system of clip on sides that takes the décor to the drawer side.

The big trend in decorative hardware is metallics and there were many interesting shades of copper, brass and nickel to be seen. Brushed and more tactile effects were to be found alongside patinated finishes that work well in living rooms. That's definitely good news for those who want to flow their furniture seamlessly from the kitchen through to the living room, as kitchen door handles don't necessarily make great living room door handles.

The era of the Smart Home is upon us. We use Hive to control our heating, command Alexa to switch on the hi-fi or turn down the lights, and use charging units in worktops to charge Siri in our smartphones. One of the newest entrants to the market at Interzum was Häfele's Connect, a development of Häfele's Bluetooth-connected Loox LED lighting system that uses intelligent software via an app to change the atmosphere in the home. I think we'll see a lot more use of such technology in the furniture of the future – air chargers, electric sliding doors, drawers and flaps are already here and consumers love such cutting edge technology. As well as being practical, it's a great way of adding appeal and making furniture come alive. And yes, it adds product differentiation.

The next edition of Interzum will take place at the Kölnmesse from 21st-24th May 2019. More details can be found at [www.interzum.com](http://www.interzum.com)

Doppia in black-gold received a 'special mention' in February at the German Design Awards.

**interzum**  
  
**REVIEW**

# Authentic Egger

**Hard on the heels of the newly-launched Decorative Collection 2017-2019, several new décors made their debuts on the Egger stand at Interzum.**



Egger brought all of its recent product introductions together under one roof for its offering at Interzum 2017. Its stand at the Kölnmesse showed highlights from the newly-launched Egger Decorative Collection 2017-2019 as well as some recent innovations and inspiring applications. The company also picked up two awards from the show organisers for 'high product quality' and 'intelligent materials and designs' in a competition judged by a panel of international design specialists.

What Egger calls its 'matt concept' likewise created a lot of interest. Its premium PerfectSense gloss and matt lacquered boards, which both come with an Egger MDF core, are well-suited for applications in residential and commercial areas, and in upscale retail as well as for furniture design.

PerfectSense Matt has a warm velvety feel with anti-fingerprint characteristics that makes it ideal for elegant, modern fronts without handles. The super-smooth MDF boards used allow for a flawless surface and a unique UV lacquer makes them highly-durable. This surface is very well suited for use in furniture frontals or for sliding doors and wall cladding. Texture innovations give even more choice and more authenticity – and matt is finding favour for interiors, doors and open shelving.

Complementing its PerfectSense Matt board, and making its debut at Interzum, was the new PerfectSense Topmatt laminate. Seen for the first time, Topmatt has the same matt surface and anti-fingerprint features as PerfectSense Matt but was specially developed for use on high-stress surfaces such as



Accent edging or a perfect match?



Authenticity is at the centre of Egger's range



worktops and tables. ABS and PMMA edges with coordinated décors and textures matching the matt surfaces are available, and Egger anticipates that manufacturers will have specialist fabricators use it to create worktops with an upmarket understated look.

"Many of our customers have already seen some of what we were showing at Interzum," said Egger UK's Head of Décor Design Elliott Fairlie. "We have been organising our in-house Eggerzum exhibitions for clients in the furniture industry for more than 20 years but in the years in which Interzum takes place, we always try and have something new to reveal to a large international trade fair audience – and this year was no exception."

Authenticity remains the main focus for all Egger décors. In addition to appearance, the feel of the surfaces is also particularly

important. Textures are expressive and have character, depth and naturalness. Egger's objective is to come as close as possible to the original, and it consistently invests in new technologies in order to develop décors and surfaces that feel as real as they look. High-quality design accents such as the Doppia edge in PMMA are available in numerous eye-catching décor options, and the black-gold colour received a 'special mention' in February at the German Design Awards – with visual perfection achieved thanks to the narrow join. Doppia edging perfects the illusion of real glass on furniture and follows the design trend towards accents and contrasts. The bi-coloured appearance also creates a high quality colour transition to the surface décor.

"The launch of the 2017 collection gave our customers access to our biggest-ever

range of related decorative products, added Elliott. "The collection has been massively expanded but as our range increases, so does the need to make things easier for our customers – and technology is helping us to do that. We are already supporting furniture makers, architects, fabricators and retailers with comprehensive services such as the updated VDS Online with numerous new features, the Egger App, the new customer portal myEgger and the sampling service. And for worktop buyers, our recently-launched worktops visualiser – accessible with a tablet or smartphone – makes light work of selecting from the 6,500 possible combinations of worktops and décor panels."

For more information on all the latest products from Egger call 01434 602191 or visit [www.egger.com](http://www.egger.com)



# Surteco's Surprises



Aureatecs is a new PET that echoes the precious, metallic materials seen in Milan 2017. It has a super-matt surface with anti-fingerprint finish and is free of PVC.

**Highlights from Surteco Group were three new décor trend areas and a new digital offer for short run bespoke work.**

From a packed stand that emphasised growth, nature and unity across its entire product offer, Surteco Group launched its three main décor trend directions alongside a new digital printing system that will further enhance the Group's facility to offer customers everything from edgeband and foil to bespoke, short run décor products.

At the core of the latest trend statement are three trend characteristics which Surteco describes using the terms Smart, Balance and Liberté.

Smart is the trend that reflects our modern world. The "always-on" attitude to life creates the impression of being part of the future. A major role is played by technical innovations and connectivity. Sensory surfaces, intelligent textures and reflective effects can all be found in Smart. It is very simple yet full of inspiration. The décor Strabo is typical of Smart: it is based on a simple but elegant volcanic stone with sophisticated glitter effect.

Fine wood and natural materials set the tone in the world of Balance. Here the self is



Behind the main reception desk was an impressive edgebanding display from Group member Döllken.



Aquino Banana Grove, one of the Co-Equal Edition prints and a personal favourite of the Editor, won the Red Dot Award.



Tibidabo



Strabo



Sinope Marble

grounded by its longing for peace, flow and relaxation and for materials that pamper the senses. The feel good character is underlined by powdery shades and imaginative décors. The new décor Tibidabo picks up on the lifestyle of equilibrium: naturally balanced characteristics with a light white patina create both mellowness and freshness.

For the third and final trend, Liberté is described as the look of freedom, embodying pulsating street culture and tradition in which yesterday melts into today and luxury encounters street art. In this style world, filigree materials mix with exotic patterns and exciting colours; we see patchwork and layering. Typical

of the new décors in Liberté is Sinope Marble, a lively marble with depth effect.

All three trends are described and illustrated more fully in Surteco's trends book and accompanying video, Trends 2017/2018, One in Motion.

Alongside new décors, Surteco Group also used Interzum to announce its new digital printing offer. Using a process developed in-house that Surteco refers to as Haptronic, the Group is now able to offer new perspectives for digital décor printing. "At interzum, we were able to display the first product in the development stage," said Klaus Eggelbusch, Head of Product Management. "In the future,

we will be presenting a pyrotechnic extravaganza of innovations, customised, available in small lot sizes and in widths from 325 to 650mm." A diverse range of tactile and visual effects is possible, among them an anti-fingerprint finish, metallic effects, duo gloss with an impressive interplay of matt and gloss, super matt to high gloss lacquers and décor-synchronised surface effects. The effects can be applied to finish foils, plastic foils and melamine resin edgebands.

For further information on the range of products offered by Surteco Group, on the new décors and the digital print offer, call 01282 686850 or visit [www.surteco-decor.com](http://www.surteco-decor.com)

# Surfaces that Touch

**A new surface and several new décor designs made their debuts on the Hornschuch stand at Interzum.**

**W**ith a range of 2d and 3d films that's as broad as the skai® décor collection it's always interesting to see what new rabbits the Hornschuch team can pull out of a hat that already seems to be filled with an endless variety of classic and modern wood and stone looks. Under the motto "See – Touch – Think – Love", the rabbit dutifully arrived in time for Interzum with a new collection of Surfaces that Touch.

Angular, experimental, individual and full of idiosyncrasies, cracks, and washed-out areas, the stained bog oak, skai® Intra, contrasts light and dark wood areas in a décor that combines easily with other materials and colours. You'll also find exciting contrasts in skai® Kitami, another new wood-look décor that takes its character from stripy and flowery areas intermingled with slight discolourations and delicate fibre structures. It's a highly commercial design that should have widespread appeal across a number of sectors. Well worth a closer look.



The popularity of the oxidised metal look continued at Interzum and with skai® Oxid, Hornschuch has blended the character of stone, concrete and quartz with metal. It's almost an antidote to the intangibility of smart homes and the digital world we find ourselves in. The feel of the décor is particularly important. It blends easily with smooth unicolours and wood designs while adding an eye-catching feature to a room in the hands of an imaginative designer.

The way a surface feels has become every bit as important as how it looks. With its sophisticated and elegant coated surface, skai® Perfect Touch has become the gold standard in

the area of matt plains. It has a very pleasant feel: warm and without hint of dullness, it begs to be experienced with the senses and reinforces the visual impression of great value. It's also easy to form and easy to combine.

Brand new for Interzum 2017 was skai® PureLux 2D soft, a hardwearing coated laminate. It offers a high-quality look and feel for decorating furniture surfaces and elements and sets standards with regard to function and usability with its innovative surface finish. The current collection includes six trendy, fine matt, high-end, coordinated colours.

For more information call 01327 877646, or visit [www.hornschuch.de](http://www.hornschuch.de)





# Going Grey



Edward Quant reflects on the new blemish-free, 3D-formable Mirror décor.

**New greys, metallics and some stunning abstract décors made their debuts on the LG Hausys stand at Interzum 2017.**

It seems hardly a month goes by without LG Hausys adding more new colours to its immensely popular and very practical Hard Coat décor collection. Established trend colours like Cashmeres, Dakars and Mussels have been in stock at David Clouting Ltd for quite a while, both in high gloss and supermatt, but following Interzum 2017, some very interesting additions seem set to be joining them.

"The colour spectrum is broadening to include a wider range of greys," Edward Quant commented from LG Hausys's stand at the Kölnmesse. "Graphite and Dust greys are new

additions to our stock and they're available in supermatt 2D Hard Coat, with gloss already being stocked in 3D foil. The new range for Interzum encompasses dark greys, Tundragrau and Moss greys, Nightlife Grey, a new Dust grey – and there are some lovely blues, a Denim and a deep Indigo. The Indigo is almost a black-blue depending on the light and we're introducing Denim Blue as a tenth stock colour in the B9 painted wood collection. Many of the new releases are matched with Egger products."

New metallics were also much in evidence on the stand, especially those with



Two new finishes: Metallic Copper Hairline alongside Stainless Steel.



Oxidised Noble



Vintage Woven



Denim



Stormy



Glacier



Graphite

# Gracefully

pronounced sparkles, or brushed surface effects. Silver, in particular, seemed to be rising in importance at the show alongside new introductions like Topaz Cream, White Gold, Yellow Gold and Pale Gold that supplement Bronzes, Coppers and Inox. "In addition to the standard finishes, there's a new hairline finish and a new brushed finish," continued Edward. "These textures and metallic finishes are being made available across all colours in the Hard Coat range. There are also two new additions to the range: Stainless Steel and Mirror. The Mirror is exceptional; flawless - and it's both a 2D Hard Coat and a 3D pressing film."

No décor stand tour would be complete without mention of at least one concrete-inspired product and LG Hausys had several new variants on show. However, perhaps more striking was the woven fabric design, Vintage Woven, which seems to combine concrete with a weave to create an almost faded fabric look. I can see it being very popular as the trend towards non-conformism and the used look gather pace. It's available in cream, brown and a mossy grey and looks especially effective in high gloss.

If I was to pick just one star product from all the products on the LG Hausys stand, however, there's no doubt in my mind, it would

have to be Oxidised. Available as Classic (rich rusty brown), Bright (a lighter version of Classic), or Noble (dark grey to silver), this simple, effective, abstract metal-look décor embodies all the colours and the materials to make it a classic of the time and there are so many ways to use it. Noble holds particular appeal and seems well named. It embodies the whole idea of metal growing old gracefully: it's time-worn but there's still a sparkle. It's a product I can empathise with quite easily.

For more information on the latest introductions from the LG Hausys range, contact David Clouting Ltd on 01376 518037 or visit [www.davidclouting.co.uk](http://www.davidclouting.co.uk)

# Daring to be Different

**Novel new woodgrains made their debuts on the Renolit stand along with concrete décors, metallics and plenty of new colour ideas.**



**B**y mid morning on the first day of Interzum it was already getting difficult to see product for people on the Renolit stand. With so many new décor ideas and colours to see it was hardly surprising. Renolit's stock range of 2D films alone featured 22 new colours and designs, plus numerous metallic creations.

Further optimisation of patterns and textures in Renolit's woodgrain collections had been combined with the latest development, EIR (emboss in register), providing embossed pores with a structure that followed the printed image exactly. Three new oaks were shown: Grandson Oak, a notched and cracked example available in White Grey and Natural; the vintage-look Kronberg, with its sun-dried appearance; and the elegant Kendal Oak, also available as Oiled Kendal Oak.

If it's something quite different you're looking for that wasn't to be seen on any of the other stands at Interzum, take a look at



ENDgrain décors.

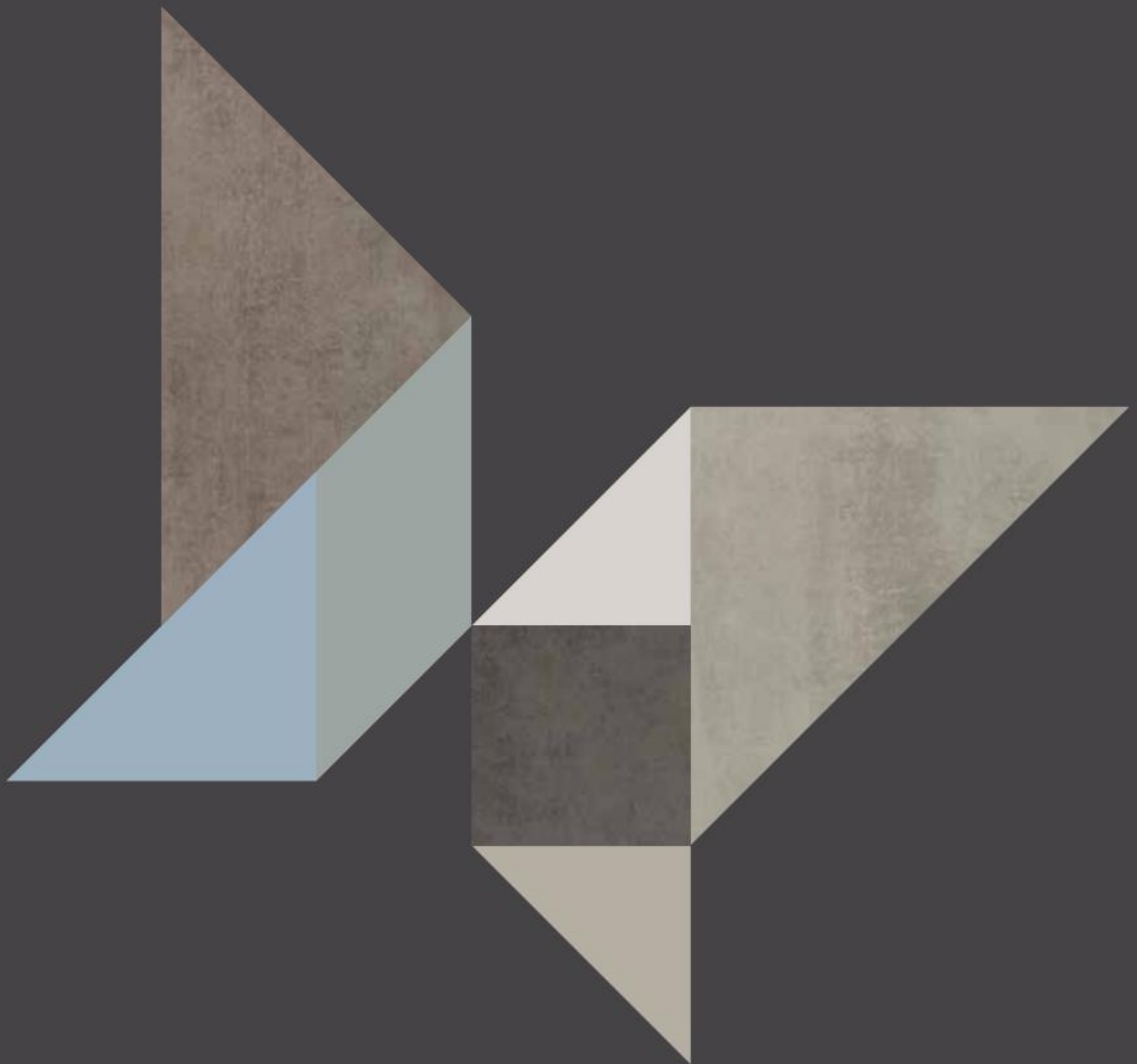


ENDgrain. Perhaps most striking of all the new launches on the Renolit stand were two ENDgrain oak décors that utilised the character of age rings and core splits in a décor that blended both end grain and long grain in one design. Full marks to Renolit's designers here for daring to be different!

Metallics are undoubtedly one of the rising stars in the décor world and with Rosé Gold and Bronze Metallic, Renolit has expanded its colour palette even further. Both décors make perfect accents for the dining room or the kitchen but will undoubtedly find applications in shopfitting as well.

At the opposite end of the spectrum, the décor Makalu embodied the authenticity of freshly cast concrete by using different shades of grey in combination with an embossing. There's also a trowelled version.

For more information on all the latest launches from Interzum call Renolit on 01670 718222 or visit [www.renolit.com/design](http://www.renolit.com/design)



# GOOD COMBINATION!

The whole is more than the sum of its parts: the new product **skai® OxiD** is a strong representative of tangible materiality with a stone-concrete-quartz look or with a metal look. It can be combined as desired, often and willingly used with plain colours or wood designs as a cosy counterpart.

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interzum

REVIEW

# Häfele Connected

With its new Häfele Connect app, Häfele has taken the Loox lighting system a stage further.

The Smart Home mega trend continues to shape technology, adding functionality to furniture and linking technology remotely, allowing furniture to adapt to living situations and daily routines. Häfele used Interzum to show its latest technological development, the brand new Häfele Connect, and it was clear from the number of visitors poring over technology in the darkened lighting presentation area that this is a subject many find fascinating.

We have all become familiar with technology that digitalises furniture in various parts of the room, such as charging units in worktops, visualisation tools and lights with USB ports. With the next generation, we are seeing the introduction of innovations that offer complete room management. Häfele's visualisation at Interzum included the remote operation of window blinds, air conditioning units, lighting and even electrically operated sliding doors.

The next evolution of the internationally successful Loox LED lighting system for light and sound in furniture, Häfele Connect, was premiered. The innovative system sees intelligent software open the way into furniture, effortlessly controlled by the Häfele Connect app, which connects itself to the Connect BLE boxes via Bluetooth, allowing for intelligent wireless light and sound control via smartphone or tablet.

The system offers complete versatility when it comes to controlling your environment and creating atmosphere to suit any occasion. Häfele Connect was demonstrated with live examples at Interzum, bringing the entire furniture technology experience to life. This new dimension of digitalisation within the home will eventually facilitate complete room management.

For more information call Häfele on 01788 542020.





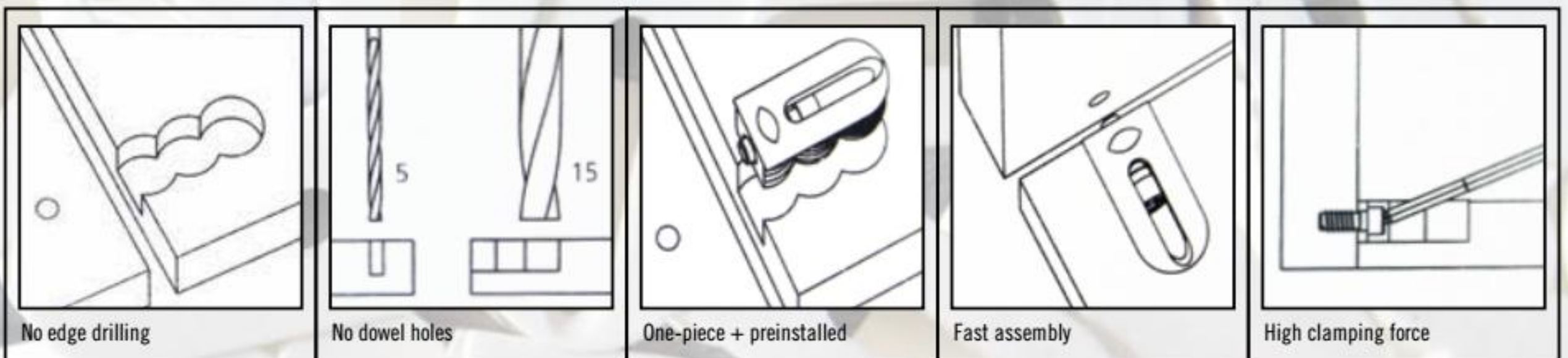
# Fabulous Fixing

**Having trouble with wobbly, fiddly or difficult-to-ship cabinet fixings? Take a look at the latest from Lamello.**

When it comes to choosing a method of fixing panels together, the options used to fall into one of three categories: good, bad and downright ugly. Nowadays, the choice has broadened, furniture manufacturers have become much more aware that quality matters in the eyes of the consumer and in terms of style, reliability and ease of fitting, cabinet fixings have shifted up a gear.

One of the newest entrants to break into the panel fixings market is Cabineo, a time-

saving furniture connector that comes from the renowned Swiss specialist, Lamello. Seen for the first time at Interzum, and presented again at Ligna, Cabineo is a one-piece cabinet fitting that is installed into a drilled or routed shape. No edge drilling is necessary - machining is required only on the surface of the panel, making Cabineo suitable for use with all kinds of CNC machines, including very simple three-axis and nesting machines. In comparison with the standard cam and dowel fitting, Cabineo offers more efficient production, faster installation and



# for Flat Pack

a higher clamping force. To top it off, there is no need for wooden dowels.

"Fitting Cabineo requires three top-drilled 15mm holes and a 5mm hole on the other side," Samuel Hänni told Furniture Journal on the Interzum stand. "It can be installed flat on the surface and it is a one piece fitting. There are no protruding parts. The benefit is the panel can be shipped in flatpack form with the fitting already installed. It's easier for the user to assemble and the furniture manufacturer doesn't need to supply bags of fittings. Once

the screw is tightened, the joint is very stable and, unlike many fittings for flat pack furniture, Cabineo can be dismantled and reassembled many times without any loss of stability."

When Cabineo was first conceived, the idea was to create a fitting that provided the maximum possible functionality but required minimal resources. The resulting design offers advantages during production, transport and installation and the absence of any protruding parts eliminates the possibility of damage to surfaces, even when panels are stacked for

packing. "All the end user has to do is screw the pre-installed screw inside the fitting into the 5mm drill hole in the corresponding workpiece using a ball-end Allen key attached to a cordless drill that joins the workpieces quickly and powerfully." Cover caps that can be clipped onto the Cabineo are available in various colours.

Cabineo is priced similarly to other solutions and, Samuel Hänni confirms, it works with most CAD programs.

For more information visit [www.cabineo.ch](http://www.cabineo.ch) or call Axminster Tool Centre on 0800 371822.



# More than a Match

**Ostermann showed matching edgebands for the very latest collections from mainstream décor producers as well as new profiles and concrete on a roll at Interzum 2017.**



**P**fleiderer, Egger and FunderMax all used Interzum to show their very latest décors – and the numbers of new launches ran into hundreds. Remarkably, the edgebanding specialist, Ostermann, has managed to keep pace and at Interzum 2017, launched an extended range of edgebandings that matches almost all of them.

The new trends are dominated by realistic looking material reproductions, such as textile surfaces, various stone finishes and rust and concrete looks. Grey, blue and green unicolours also feature strongly in this year's collections, with light or greyish oak as a popular woodgrain. You might think the task of finding a matching edge would be a difficult one but with the search tool on Ostermann's Online Shop, Ostermann is confident you'll find a match for most, if not all the very latest introductions seen this year in Köln.

Also brand new for Interzum was Ostermann's Rollbeton – a flexible and exceptionally realistic concrete décor that's available on a roll. A metre wide and three

metres long, Rollbeton comes in a thickness of 1-1.5mm and four different shades including a planked effect.

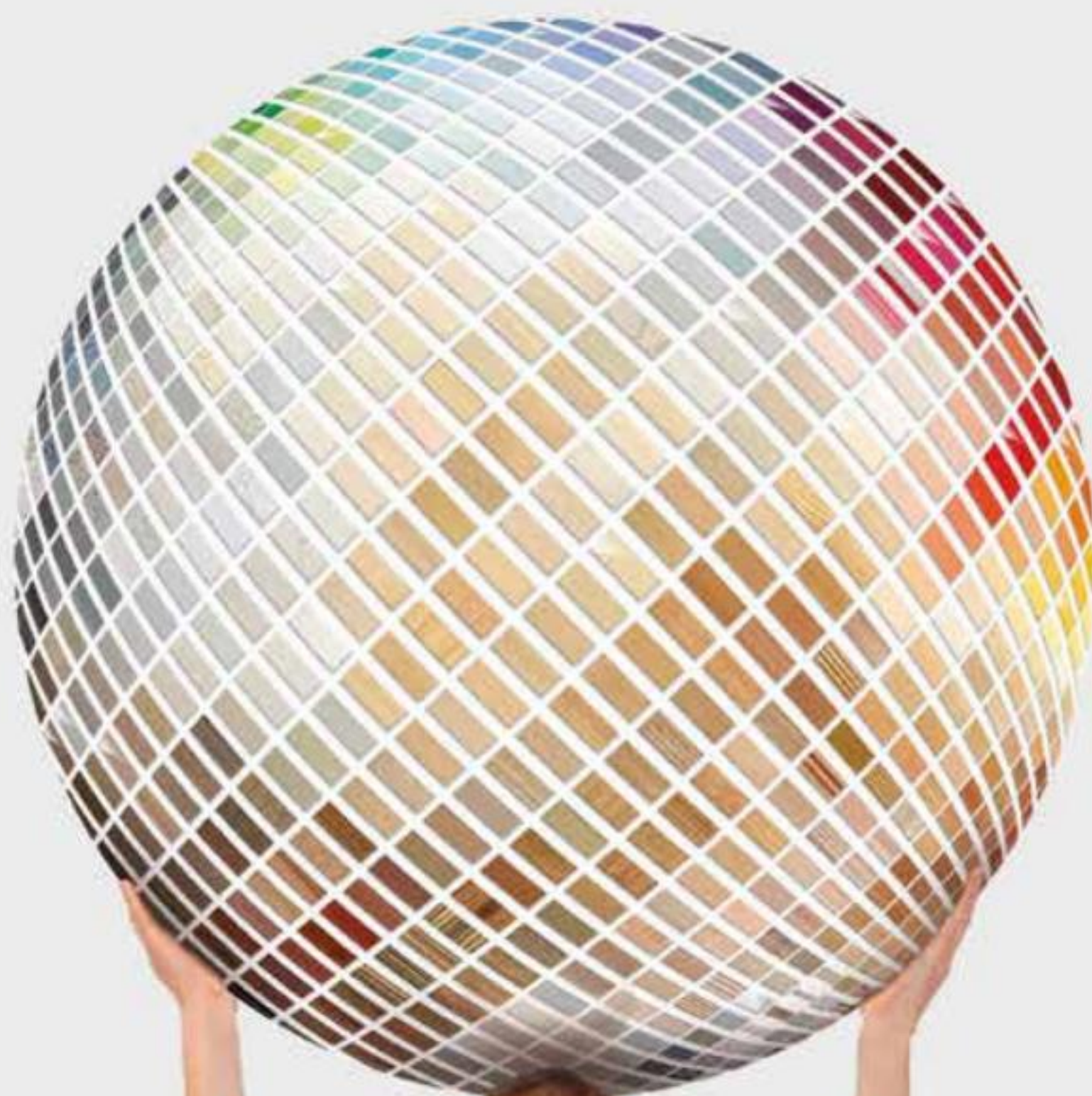
Supplementing the new décor ranges, Ostermann also showed new technical profiles for use with 18 mm-thick boards, including U-profile, H-profile as well as corner connectors. They are available in a matt silver-anodised and brushed anodised stainless steel finishes. There's also a new 'unprocessed' surface for those who want an extremely well priced and practical new surface version. It was specially included in the range for trade show stand construction, and is just as robust and functional as the surface-coated versions - but more cost-effective.

An overview of all available technical profiles can be found in the Ostermann Technical Profiles brochure. In addition, there is also an online catalogue at [www.ostermann.eu](http://www.ostermann.eu) available, which can be easily downloaded.

For more information call 01905 793550 or visit [www.ostermann.eu](http://www.ostermann.eu).

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The concealed Tiomos Hidden hinge is recessed in the cabinet and flush with the surfaces of the door and the inside wall. There's also a version for aluminium profile doors.



# Hidden Gems

**Personalising furniture is a way to add profit as well as style to your products and with the new ideas shown at Interzum by Grass you'll be able to do both.**

Putting the focus firmly back on the furniture, Grass used Interzum to launch the latest version of its Tiomos hinge, the Tiomos Hidden – a discreet, recessed hinge that provides all the benefits of soft closing and an opening angle of 105° without a weighty mechanism inside the door. Andreas Marosch, Head of Marketing at Grass, explains the thinking behind the new, discreet design:

“When we talk about minimalism, we assume that technology is becoming more and more intelligent and its functions more and more comfortable – but also less and less visible,” he says. “Customers want to express their personality with personalised furniture design. The technical components should be designed so that they take a back seat behind the furniture design, or provide a specific aesthetic aspect in addition to the pure function. The Tiomos series is a perfect example of this product philosophy: it really takes a back seat behind the furniture. Even better, it becomes one with the furniture and thus becomes almost invisible.”

The concealed Tiomos Hidden hinge is recessed in the cabinet and flush with the surfaces of the door and the inside wall. However, it's lost none of its functionality, is unusually strong and can be adjusted in three dimensions. It can be used on cabinets with a minimum door thickness of 18mm as well as aluminium profile doors and is available in a new Night surface finish as well as a nickel-plated version.

The familiar slim-sided drawer system, Vionaro, can now be given a bespoke makeover by using Vionaro iD, a modular system launched at Interzum that enables drawer sides to be personalised with a simple, clip-on sleeve system. The combination of the basic drawer side and a choice of personalised, combinable design sleeves has resulted in a flexible system that offers unlimited design options. Intelligent clip technology enables the elegant printed sleeves to be attached to the drawer sides without using tools or adhesive, enabling a black drawer side to be converted to red



**Right and Below Right:** Personalise your drawers with Vionaro iD, a modular system comprising simple, clip-on sleeves.

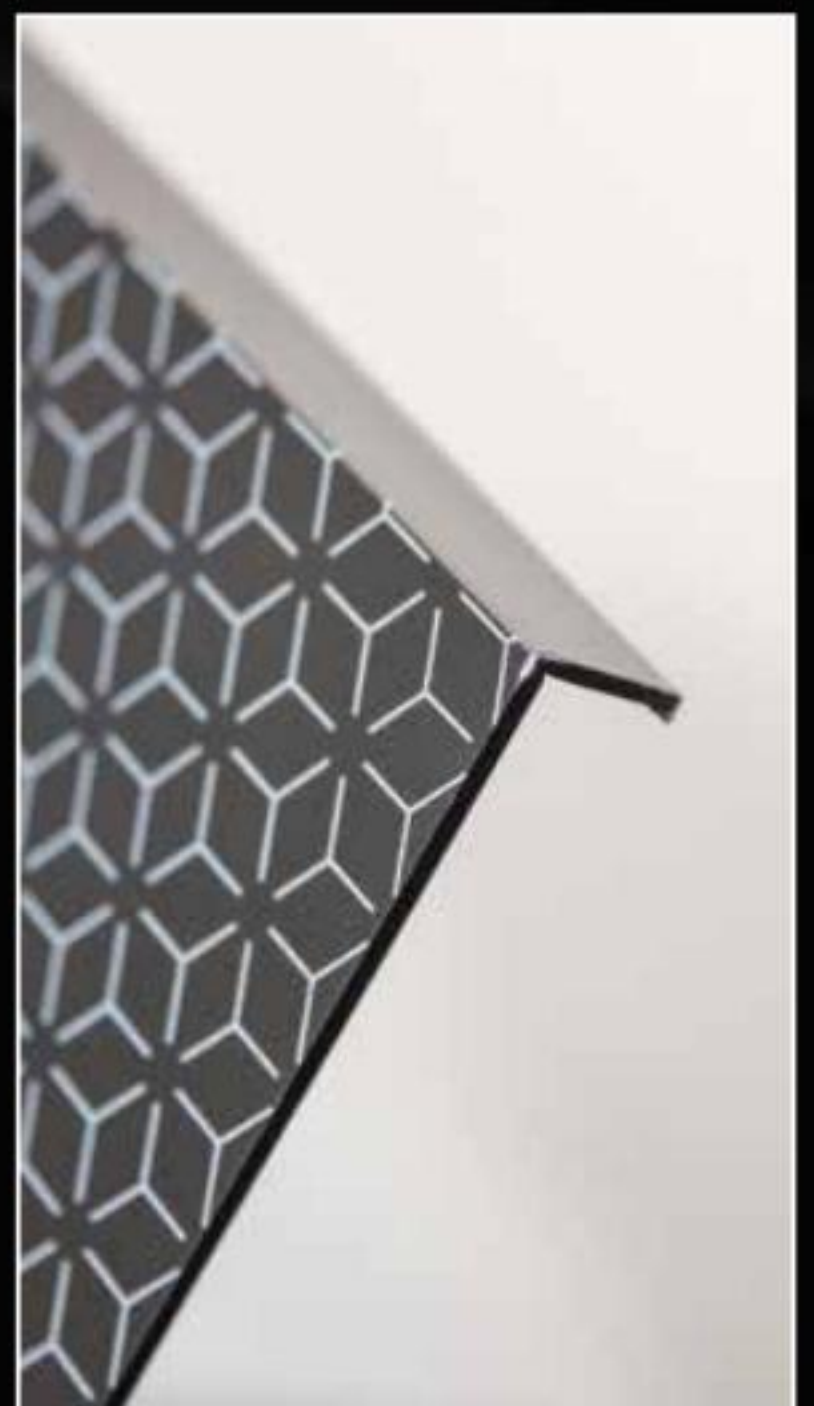
**Below:** Customising the interior of a drawer is as easy as customising the exterior with Tavinea Sorto.



one in seconds and changed easily for a completely new look. The narrow L-profiles, which currently provide around 368 combinations (as well as a completely individual design offer for those who want it) are made of aluminium and fit snugly to the Vionaro steel drawer sides. Once fitted, only the inside of the basic drawer side remains visible.

With the brand new Tavinea Sorto system for cutlery, customising the interior of a drawer is as easy as customising the exterior. Comprising three elements for easy sorting, Tavinea Sorto complements the silver and stone colours available in Novopro Scala and Vionaro and, in keeping with the slim-sided Vionaro, the separators are a stylish 8mm thick. Designed with bathroom storage in mind as well as kitchen storage, Tavinea Sorto is available in depths from 350mm to 650mm.

For more information on the new introductions from Grass call 0121 500 5824 or visit [www.grass.eu](http://www.grass.eu)



# Hardware Showcase



Titusoft SD100s is a new soft closing mechanism for bottom running sliding doors. It has a compact design that allows for mounting in the railing without taking extra cabinet space. The system is non-handed and uses a patented double stage spring that minimises the pull-out force and enables effortless door opening. Titusoft SD100s can be quickly and intuitively installed during furniture assembly or later, when the furniture is already in use. The Titus hydraulic damper, the core component of Titusoft SD100s, ensures a reliable and consistent soft closing action and a 'ConfidentClose' throughout the lifetime of the furniture. More information at [www.titusplus.eu](http://www.titusplus.eu)

The T-type, Titus' new generation hinge, enables time-savings at cabinet assembly with '3Way' 'snap-on' mounting and assures a life-long consistent performance on a wide range of kitchen, bedroom and other doors. Its rigid design ensures reliable operation over a wide range of tolerances, even in the case of accidental misalignment and inaccurate drillings. The '3Way' 'snap-on' mounting plate allows for an intuitive hinge-to-plate mounting in three directions, which enhances and simplifies mounting and enables easy door installation even in tall cabinets where 4-5 hinges per door are required. An easily accessible adjustment button provides intuitive adjustment of the damping action which gives an efficient soft closing performance on doors of different dimensions and weights. The T-type Glissando soft closing action enables a fast close; the deceleration action begins at a late point of door closing action and the closing is especially slow and soft in the last stage when the door leans against the cabinet side. More information at [www.titusplus.eu](http://www.titusplus.eu)



The thin-door version of Hettich's Sensys was a big draw at Interzum in Cologne. The ability to combine Sensys functionality with thinner profile doors is a very attractive proposition. It will be available in the UK within weeks. A black version of Sensys is another exciting development which Hettich UK will be able to supply later this year. For more information call 0161 872 9552.

There are plenty of lifting solutions for flap doors but for those who might want a really stylish hinge for fall flaps, Salice's latest, Pacta, has a lot to offer. Pacta is a compact hinge for fall flaps that operates without the need for additional stays or cables. It has a decelerated opening action and the fall of the door is gradual and controlled. In the fully-open position, the door and base panel are aligned, creating a uniform and flat surface. Unique in its particular application, Pacta delivers exceptional stability and resistance. It is also available with the Push self-opening system and comes in a variety of finishes. Its applications are numerous, especially in living room and kitchen cabinets, or to create desks in children's furniture or hotel furniture. For more information call Salice UK on 01480 413831.



Wind is the new lift system from Salice. Characterised by compactness and elegant design, it offers smooth and perfectly controlled movement. Wind takes up a minimum of storage space inside the cabinet and is therefore ideal for both small and large cabinets. Extremely versatile, it is suitable for a vast range of furniture applications from office furniture, kitchens, bathrooms and living room furniture to bedroom furniture. The system can incorporate either a soft close mechanism for decelerated closing, or the Push self-opening system for handle-less doors. Various finishes are available. For more information call Salice UK on 01480 413831.

Blum's Blumotion S runner, the only runner now available in Blum's more manageable, slimmed down offer – was shown for the first time at Interzum. Three different motion technologies are available: Blumotion, Servo-Drive and Tip-On Blumotion. The runner provides the full range of functions and is compatible with two different product categories: a single runner for the Legrabox box system and a single runner for the Movento runner system. No matter whether you opt for the electric or mechanical opening support system, Blum's various motion technologies offer high quality engineering for every living area and every convenience level and they can be easily combined as required. Blumotion ensures that pull-outs, wall cabinets and doors close softly and effortlessly, while furniture equipped with the Servo-Drive electric motion support system glides open at a single touch – as if by itself (which is particularly handy for waste pull-outs). Tip-On Blumotion gives you mechanical one-touch opening and soft and effortless closing. Doors of tall cabinets equipped with Tip-On will open with ease at a single touch. For information call 01908 285700 or visit [www.blum.com](http://www.blum.com)





A real crowd magnet at Interzum was Vauth-Sagel's new corner unit solution Cornerstone Maxx. Incredibly easy to fit and space-saving, Cornerstone Maxx brings real functionality to awkward corner cupboards, providing access to surrounding cupboards without obstruction. How? Very cleverly, Cornerstone Maxx swings in front of its own unit. Thanks to lifting mechanism and soft push and pull action, opening and closing is almost automatic and soundless even with a load of up to 25 kilograms per shelf. The fastening system is nearly invisible, consists of only three pieces and has only one mounting point – a single stanchion provides maximum stability and makes it easy to adjust the height even when it's already been built in. And Vauth-Sagel manages all of this with fewer screws and fewer drill holes, saving time and valuable storage space. Cornerstone Maxx can be fitted for left or right-handed opening at the click of a tab. Available through Häfele: 01788 542020



# Hardware Showcase

A very clever idea, perfect for the home office or workspace, is Vauth-Sagel's Planero. The new storage programme is innovative, functional and can be used in fitted furniture or, interestingly, fitted into a portable cabinet unit on wheels. Available through Häfele: 01788 542020





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LIGNA

# Ligna Review



The digital revolution is gathering pace and Ligna 2017 provided the stage for machinery manufacturers at the forefront of it.

In a move that reflects an industry that's undergone much development and change since Ligna 2015, Ligna 2017 had been given a new layout that emphasised the synergies between surface technology and wood-based panel production, solid woodworking and sawmill technologies, and automation and machine components. A total of 93,099 visitors came from around the world to see technology presented by 1,552 exhibitors - but where once upon a time they might have come to see individual machines, compare specifications and check out the latest features, they were now coming to see intelligent and integrated manufacturing systems accompanied by innovative concepts, value-adding networks and solutions to market demand for ever-more customised production.

There were new and highly innovative individual machines – plenty of them – and some remarkable advances to be seen, but the focus was very much on the future and the digital revolution that is unfolding before us. Industry 4.0, not so long ago just a talking point, is already here and many machinery

manufacturers had hung “Industry 4.0 ready” labels on their latest introductions to indicate they were at the forefront of it. Industry 4.0 is already underway and steaming ahead in the USA with sophisticated online ordering systems that farm out consumer-specified orders for customised furniture to Industry 4.0-equipped manufacturers according to their availability for next day collection. Several of the big name machinery manufacturers showed robot-fed Batch Size One solutions that can be manned using a minimal number of unskilled workers to operate and look after a suite of relatively basic machines that, in the grand scheme of things, represents a fairly modest investment. The demonstration on the SCM stand intentionally set out to illustrate just such a system using only basic machines from the SCM range, showing Industry 4.0 really is within reach of the smaller manufacturer. There were also solutions for the one-man cabinet-making workshop – notably the Holz-Her solution - that, again, through clever software enable individual products to be either designed from scratch





**Left:** Robots are central to Industry 4.0 but their use is even more widespread.

**Below:** Biesse's IoT solution notifies engineers in Italy of potential problems so preventative maintenance can be carried out by local engineers.

**Bottom:** Homag Group premiered the cloud-based digital IoT platform Tapio at Ligna 2017.



and made within minutes, or called up from a library, customised and sent to a machine for instant production.

While machines are being built to ever-higher standards and reliability among the best has never been better, every machine at some point needs maintenance beyond routine day-to-day servicing requirements. And when it does, that's the real test of its manufacturer. All too frequently one hears tales of poor attention to aftersales service, or shortage of engineers letting down otherwise very good machines and users being left stranded with interrupted production. Machinery manufacturers at the forefront of the digital revolution (and, indeed, tooling manufacturers) are already addressing this with tools and machines that are embedded with sensors and communicate directly with remotely located maintenance specialists, notifying engineers of potential problems, advising of wear, measuring performance in relation to workload and categorising impending issues according to urgency so preventative maintenance can be carried out by local engineers on the ground. Biesse demonstrated

its own very efficient IoT-based system for the first time at Ligna 2017 and Homag premiered an all-encompassing cloud-based platform from Munich-based Tapio GmbH.

IoT, the Internet of Things, and its impact on the furniture manufacturing sector, is a topic several machinery specialists demonstrated to huge crowds at Ligna 2017. With cloud-based digital platforms like Tapio, premiered by the Homag Group in Hall 14, production machines (including both Cloud-ready and older machines), tools and materials from the whole of the wood industry are covered by an extended range of processes that make individual business processes more efficient, faster and more reliable. Tapio combines mechanical engineering know-how, service, software and consulting for companies of all sizes (and from around the globe) in order to simplify work and increase productivity and quality, and it co-ordinates the entire process from production, to process, to data flow. Visitors to Ligna 2017 were able to experience Tapio products live via a free app at the fair, and it's quite clear some were fascinated by

the facility to spy on the status of an entire plant from their phones and receive notifications and alerts from machines.

Another app that deserves mention, though perhaps not quite so all-encompassing as Tapio, was the very efficient Ligna app – and it's a feature other exhibition organisers might want to consider developing as an aid for visitors. This terrific little tool, which really has set the gold standard, enabled users to pre-plan their entire visit ahead of the doors opening, decide which stands they wanted to see, plan a route and find each stand individually using GPS-style navigation. For old badgers like me, who struggle to see micro-sized fonts on diminutive exhibition plans that seem to defy logic, an app that finds stands from exhibitors' names, shows you the way and then zooms in when you've arrived is a Godsend. I take my hat off to the developers and look forward to using it to find my way around the next edition of Ligna in a couple of years.

Ligna 2019 will take place from 27th-31st May. For more information visit [www.ligna.de/home](http://www.ligna.de/home)

# LIGNA REVIEW

- 1: The Flexstore EL picks boards and feeds remainders where production allows.
- 2: Sizing on a Gabbiani P, when larger runs are required.
- 3 & 4: Barcode label application before nesting.
- 5: The three-axis Morbidelli N100.
- 6: Intensive panel cleaning post nesting.
- 7: Under the translucent belt, cameras identify the centre of each panel to ensure precise positioning when the robot collects them.
- 8: The robot stands between the translucent belt (left in the picture) and the edgebander, with the drill right of the camera position.



# Tomorrow's World



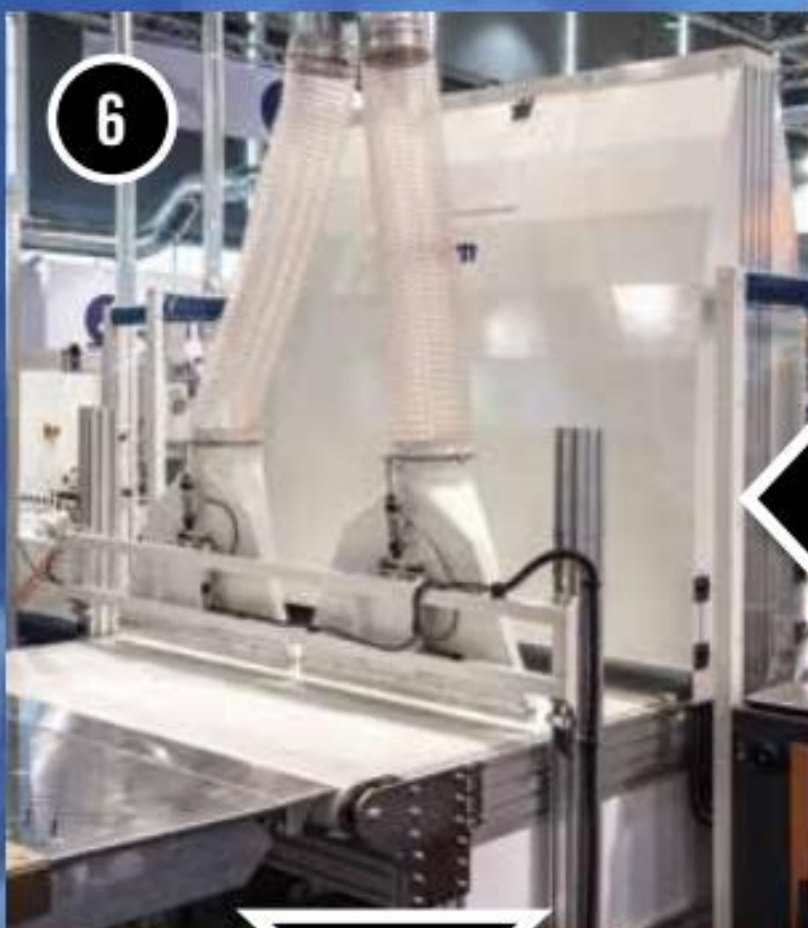
Andrea Zavatta

**The day is fast approaching when the consumer will choose the size, colour and finish of his furniture and, at the click of a mouse, send the order through a website that will farm it out for manufacturing and collection next day.**

Innovation comes in waves. When the steam age arrived, it caused a major upheaval in society and the way we worked. When electricity arrived, another revolution took place. And now we have the computer and the internet. It's hard to imagine life without the internet. With each day that passes, its functionality becomes wider, stronger and more all-encompassing, and with each leap in technology its grip on our lives becomes tighter and more compelling. Many industries take full advantage of the facility it presents to empower consumers to order

goods online, our own included. But it's not just off-the-shelf finished furniture we can buy across the internet. We can already design and customise the furniture we want, place orders over the internet and collect in hours.

Industry 4.0 manufacturing is gathering pace. A network of independent digital furniture manufacturing workshops in the USA has already latched onto the idea that being at the receiving end of orders for just-in-time custom-built furniture can be a very simple and profitable way to run a small manufacturing outfit – and an Industry 4.0



setup means software handles everything that demands skill. Across the internet, the consumer specifies the furniture he wants, the size, the materials and the finish, pays online and umbrella organisations like AtFAB.co (already rumoured to be one of the largest consumer production networks in the USA) send the order through to a workshop in the network that has capacity for on-demand manufacturing and next day collection – pretty much like Amazon sources goods and has them delivered direct from the supplier.



9: The Stefani XD edgebander (left and below), chosen for its multi-tape feeder. The edgebanded panel is returned to the robot (below left).

10: The robot with the vertical Morbidelli CX200 left in the picture.

11: Assembly and wrapping.



We may not yet have the umbrella organisation in the UK to handle the order process but it's only just around the corner. And the more Industry 4.0 equipped workshops there are available to work with, the more rapidly the success will come when the one entrepreneur it needs pioneers the first network hub. For those who might think becoming one of the pioneers of Industry 4.0 is complex, costly, and far too futuristic to be viable, SCM demonstrated a complete setup at Ligna using relatively basic machines – but extremely advanced software.

"We are putting more and more resources into the LeanCell 4.0 development we showed last year at IWF," SCM's Engineering Director of sales, Andrea Zavatta, reported from a busy Ligna stand. "All it requires is an integrated cell and a supervisor who understands where the parts are. The whole cell can be monitored by a central server. One operator runs all the machines.

"The idea is to manufacture parts from the board store according to incoming orders. The parts are barcoded ahead of being nested and the barcode is read ahead of being nested on a nesting machine. The nested parts pass over a translucent feed mat that enables a camera to

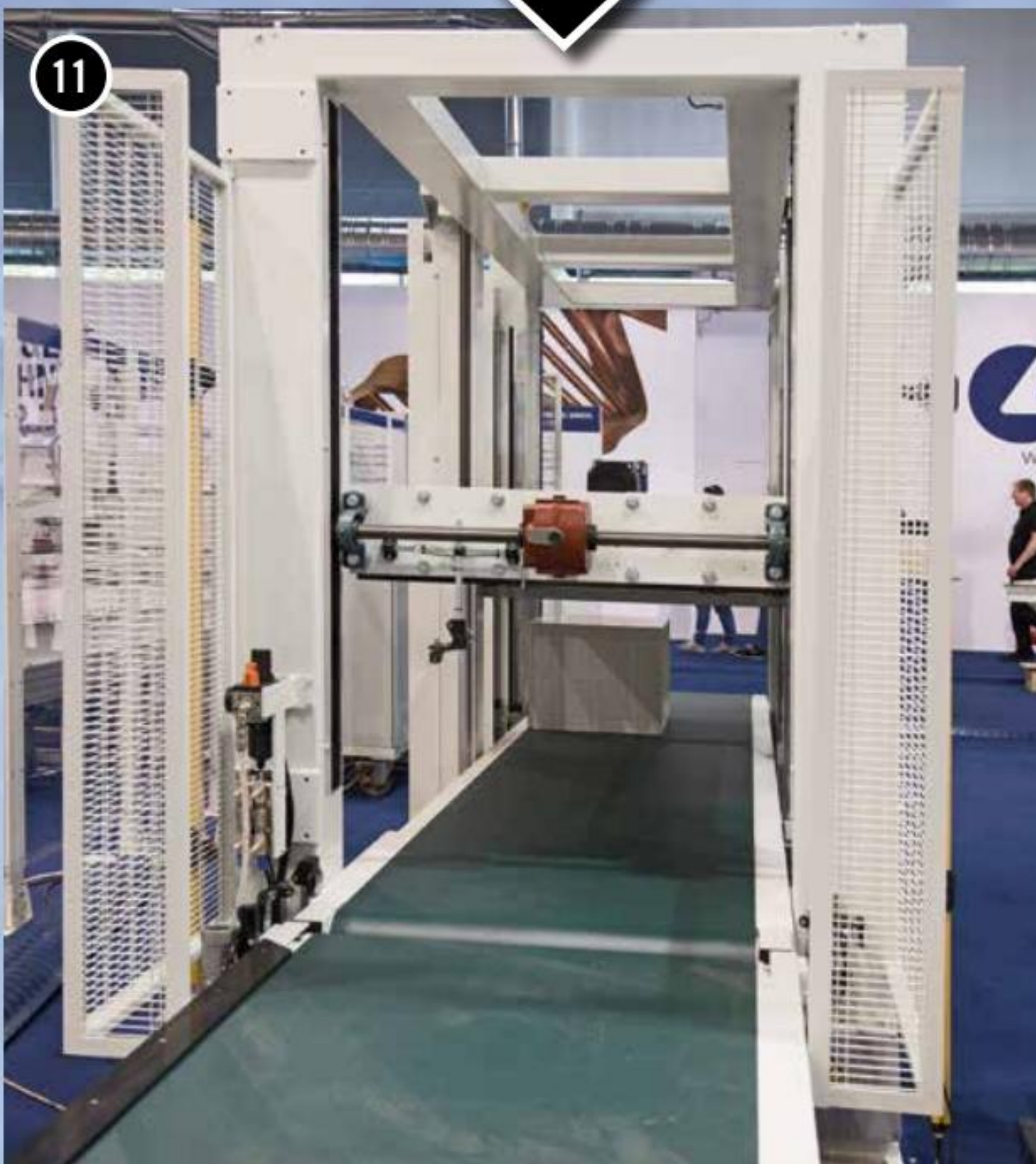
locate the centre of the component for the robot, so it knows exactly how to pick the panel up and which edge, edge colour and drilling pattern to choose. The robot starts with edgebanding, then moves to drilling. It can deliver a mini stack for a complete cabinet, or a simple panel. Every part can be different but the operator will find all the parts that make up a cabinet at the end. The cabinet can even be assembled and packed. This is mass customisation. A cell like this will produce 5-600 cabinet components per shift and every one can be different. It's very flexible and requires only one operator to refill the board storage – probably at night – and watch the edgebander to make sure the reels don't run out, the glue pot and release liquids are full and the tools don't need replacement."

At the beginning of the cell SCM Flexstore EL was managing external storage of materials, picking boards and colours and feeding remainders where production allowed. The rotating arm is fitted with suction cups that cope with thin boards as well as MFC and MDF and a device for the frontal release of the panel. It adapts automatically to different lengths and widths, and was transferring panels to a Gabbiani P

beam saw for sizing, or to a conveyor that moved it to a three-axis Morbidelli NI100 for nesting operations. At the back end of the Morbidelli NI100 was a special cleaning unit that removed dust in preparation for transfer to edgebanding via a translucent, camera-equipped feed mat that ensured accurate positioning on collection by the robot.

SCM had chosen to use its Stefani XD edgebanding machine as part of the cell in order to demonstrate the use of several different tapes. The Stefani XD is equipped with SCM's new top-of-the-range intensive use operating units, flexible glue changing and provides production of up to 25m/min, though Andrea Zavatta was adamant a lower specification machine would serve just as well in a production cell.

For drilling, SCM showed its Morbidelli CX200, a compact CNC drilling machine with a footprint of less than 10 square metres. A vertical drilling machine, it requires no vacuum and comes equipped with a double clamping device. "This is a very fast machine with a double drilling head," commented Andrea. "It can give a production increase of about 60%." The stand model was fitted with SCM RO.AX rotaxial spindle technology.



Sitting squarely in the middle, the SCM robot was taking nested panels and feeding them to the edgebander, then the drill before stacking them neatly in readiness for carcass assembly and wrapping – but at the heart of the entire operation was SCM Supervisor software. “Each machine has its own software,” explained Andrea, “But the controlling software talks to each of the machines to control the edgebanding and nesting. Supervisor is SCM’s own software but it is very open to third party software with access codes for those who want to use it.”

To watch the entire cell in operation producing bookcases for an earthquake-stricken school in central Italy was fascinating but in truth, this operation only hints at the capability Leancell 4.0 could demonstrate if connected to a website generating orders for custom-built cabinetry. With an investment of around a million GBP and no need for highly skilled operators, you’d have a factory that could work 24/7 and give you the better margins associated with bespoke products. And you’d have a factory that was ready for tomorrow’s world today.

To find out more about Leancell 4.0 and all the other technology SCM showed at Ligna 2017, call SCM (UK) on 0115 977 0044 or visit [www.scmwood.com](http://www.scmwood.com)

**LIGNA**  
**REVIEW**



**Below:** Inside the Creator 950.  
**Bottom:** A mobile dowel station turns the Creator 950 into a CNC drilling and inserting machine.



# Innovation

New additions to the Format 4 range made their debuts at Ligna 2017 alongside the innovative Creator 950.

It's so small you could almost pack it away in the corner of your workshop and not notice it – but wow, does Felder's Creator 950 pack a punch when it comes to machining long or awkward-to-handle components!

One of several machines to make their debuts on the Felder stand at Ligna 2017, the Creator 950 is a compact throughfeed CNC processing centre that enables panels to be loaded from the front and machined on all four sides. Available in four equipment levels – classic, advanced, premium and d-complete – all with a footprint under five square metres, the Creator 950 is ideal as a

first step into CNC processing, or as a supplementary machine for producing all the little jobs (or the particularly long jobs) you don't want to stop production for in a networked workshop.

With the Creator 950 you can forget vacuum pods and positioning. Workpieces are placed on the air table for easy transport, so even heavy or long workpieces can be processed by a single operator – and with longer workpieces in mind, Felder has thoughtfully incorporated a second row of stops for simple handling as well as a vertical pressure roller system for enhanced guidance.



# from Felder

The dual grip system running along the x-axis includes individually driven and guided grips that are cambered via a toothed rack for stability and, as an option, Felder is offering a 1400mm extension table with a choice of air cushion or roller table. For increased productivity, there's even an automatic length measurement system that measures the workpiece across three axes.

The main 12kW DH17 drilling head and spindle, fitted as standard, are continuously adjustable but options include a variety of aggregates as well as the larger DH25 head and the Creator 950 comes with a four-

position toolchanger as standard. For those who need it, there's even a mobile dowel station that turns the Creator 950 into a CNC drilling and inserting machine.

The graphics on this machine, like all the new generation Felder machines, are superb and backed by fast and intuitive Woodflash control for programming that calculates everything right down to cost for those who work with batch size one.

Combining speed, productivity and flexibility, the latest models in the Tempora edgebander range were given a spotlight at Ligna – and all now come with Felder's

Smarttouch control and crystal clear graphics. For small machines, the Tempora 60.06 and 60.06L have raised the bar, bringing big production machine features to compact units. Boasting a time of just eight minutes to heat the glue to operating temperature, and with infra-red heating upstream of the glue unit to give better adhesion in cold conditions, both machines will process 0.4-6mm thick edgings of up to 60mm height from coil or strip materials. Key features include a corner-rounding unit that eliminates post-processing, pre-milling and, for the first time in a Felder machine, a tool-free fast change EVA to PUR



**Facing Page:** Felder claims a space saving of up to 5.3 square metres for its Safe Space cabin.



The suffix "MT" at the end of its name denotes the new version of the Profit 4 H500 had been equipped with a matrix table.

gluepot, as well as low consumption spraying for PUR separation, antistatic or cleaning. The addition of a nesting package for processing workpieces with hinge borings and acute angles is not something you'd generally expect to find on a compact machine either. Most impressive, however, was Zero-Line, Felder's new zero glue joint aggregate for processing co-extruded, or laser edgebandings. The aggregate can be activated or deactivated directly from the control panel. Very neat.

The now familiar five-axis Profit H500 CNC machining centre was shown for the

first time in a new variant: the suffix "MT" at the end of its name denotes this model had been equipped for nesting and was equipped with a phenolic resin matrix table rather than the standard aluminium clamping table. It will be a welcome addition to the top end of Felder's range.

Right next door to the Profit H500 MT, and designed with the smaller Profit H350, H300 and H200 in mind, was Felder's Safe Space, a very clever alternative to the walled city we more commonly have to erect around machines to guard against accidents.

It's an idea I think we'll see more of in the future as the idea of putting a machine in a cabin not only decreases the space requirement, it reduces dust and noise while giving better access to aggregates that would otherwise have to be inside a hood. Felder claims a space saving of up to 5.3 square metres – and that can make all the difference. The 3.3m doors slide back to facilitate easy loading and all machine controls remain outside the cabin. The various processing steps are viewed on a large monitor in complete safety.



Two further newbies also deserve mention: the Kappa V60 and the Format 4 Finish 1350. Felder's new space-saving Kappa V60 Classic vertical panel saw is a high performance machine with an entry level price. Available in three versions, it features a moveable back wall for horizontal cuts as well as a new scoring unit that's ideal for work with coated panels. Accuracy is said to be within 0.1mm.

The new two or three belt Format 4 Finish 1352 and 1353 modular wide belt sanders allow you to choose the configuration you need – and for the first time at Ligna, Felder showed one with the optional cutterblock planer head. Positioned on the infeed side, the cutterblock module is just one unit from an options list that includes brushing equipment, combination sanding and more. The cutterblock, which uses Felder's patented quiet running system, is activated and deactivated from a central control panel that's available as a touch screen, if required. As with all the new Felders, the graphics are excellent.

For more information on the full range of Felder machines, including the new launches showcased at Ligna, call 01908 635000 or visit [www.ukfelder.co.uk](http://www.ukfelder.co.uk)



The new Kappa V60.



The new two or three belt Format 4 Finish 1352 and 1353 modular wide belt sanders allow you to choose the configuration you need.

# Accommodating Change

**Coping with the latest developments in décors and panels is a lot easier with Biesse's new technologies.**

**A**s décor producers introduce ever more realistic, more deeply embossed surface structures, high gloss surfaces with finishes that are virtually indistinguishable from glass, and tactile supermatts that pleasure the senses, the challenge for machinery manufacturers is how to handle and process such a variety of different finishes. How do you produce an impeccable glue line on the edge of a long panel when using a deeply embossed surface and a matching edgeband? Is it possible to ensure zero damage to high gloss or supermatt surfaces during handling and transfer from one machine to another? The answers to many such questions were to be

found in developments to the latest generation of machines on the Biesse stand at Ligna.

"The market has been heading towards deeper structured finishes for a while now," Biesse's Robbie O'Neill commented from a packed stand in Hannover. "These are not easy to work on an edgebander because they highlight any variations in the board thickness. On most edgebanders, the fine trimming, profile scraping, glue scraping and other units are normally mounted on the base of the machine and on the top pressure beam so they adjust to the thickness of the material. Most copiers work to tolerances of plus or minus 0.3 to 0.7mm but the new textured surfaces we're seeing more and more of have



The new quick changeover system uses adhesive in cartridge form and can accommodate 0.25kg or 2kg slugs.



much bigger tolerances and they can give problems. There's a randomness about the materials that makes repetition of quality impossible and the finished results are often unacceptable. With the latest generation of edgebanders – machines like the Stream – we've taken standard units and disconnected them from the top pressure beam, and then we've applied a servo-driven system that adjusts the unit automatically. Downstream of the edgebander is a sensor that detects the thickness of the material. It enables the scraper and fine trimmer to be adjusted relative to the panel thickness, on the fly. The units adapt automatically. For something like an Egger Structure 28 or 29, the fine trim unit and

profile scraper would be used in a normal way but the glue scraper would be more tightly controlled so it doesn't scrape through the colour. Some boards have even heavier structures, so the machine adapts, copying up and down by 1mm or more."

Prototypes were being demonstrated at Ligna but it's understood the new units, which were distinguishable by a green line and model number, will become available on machines ordered for production by the end of the year.

Alongside new processing units for edgebanders, Biesse also used Ligna to launch its new quick changeover gluepot system. During bespoke production work, it's not uncommon for manufacturers to use just one

type of glue when in some circumstances it might be more appropriate to switch from, say, EVA to PUR. The problem is PUR doesn't keep well unless you are able to keep it away from moisture. If you've already invested in a liquid nitrogen storage system, or you're one of the more inventive manufacturers who keeps his glue pot on breeze blocks in the bottom of an old freezer, all well and good – but for those who want a more professional solution, Biesse showed an alternative at Ligna that could be of interest to you. The new quick changeover system, which is designed to work with the Akron and Stream B and C edgebander ranges, uses adhesive in cartridge form and can accommodate 0.25kg or 2kg slugs. It keeps the



The X-Feeder L first labels the panels, then transfers them to a stack from where they are lifted by vacuum onto the back of the beam saw.

**Below:** Vacuum lifters arrive to collect a panel after labelling.



glue in operating condition and clips easily onto a separate unit that can be kept adjacent to the edgebander for easy access. Each unit will take several quick changeover units. There was also a brand new gluepot cleaning machine on show to make light work of an operation few people enjoy.

Dealing with the problems of witness marks left when high gloss, or supermatt boards are pushed over each other during feeding from a pack is another area Biesse has been working on. The Biesse X-Feeder, first seen at Xylexpo as an add-on for a Selco beam saw, has already made an impression – no pun intended – for its

delicate handling of easily-marked materials. “Panels are fine when they are being guided along the rollers,” says Robbie. “The problem comes when you slide one panel over another. With the X-Feeder, we avoid pushing material over material. The X-Feeder picks individual sheets up and places them on the machine. Cutting and stacking take place simultaneously.

“The X-Feeder is the first big revolution since the thinboard pusher. Everyone tried to find a reason why it wouldn’t work but it actually increases productivity by as much as 40%. It’s ideal for boards that have delicate surfaces because each board is pre-labelled in masked time – which simultaneously solves the problem of identification when cutting and stacking – before being lifted individually from the stack and placed on the machine. It copes easily with small batches, multiple sizes and rainbow stacks. It’s also a great help in low batch processing.”

Of course, once the components come off the machine, there’s another opportunity for damage as the operator manually slides them and arranges them in stacks. Biesse’s Winner W4 offloading system was shown assisting the operator at Ligna. “It’s just as

likely to find witness marking when the cut panels are given to the operator,” says Robbie. “The W4 picks and places the cut panels using vacuum. Not only does the W4 avoid damage, it can also increase productivity. We can apply the same W4 system to edgebanders and drilling machines and the W4 will either work as an assistant to the operator or entirely automatically.”

Biesse also showed its Rover B machining centre, a machine that both shapes and edges, in combination with its Synchro, a handling device with four controlled axes, actioned by the Rover machining centre. It collects the panels to be machined from one of two stacks, positions them in reference to a point of origin provided by the machining centre and, once the machining operation is complete, deposits them in an area designed to accommodate the finished stack. The working cycle is executed in automatic mode until the entire batch has been completed – and just like the X-Feeder and the W4, its vacuum systems are designed for work with delicate surfaces.

To find out more about Biesse’s solutions for handling and processing the latest generation of materials call 01327 300366 or visit [www.biesse.com](http://www.biesse.com)



The Winner W4, in the distance, can supplement manual offloading, or it can replace it.



Here and above: The Winner W4 copes easily with mixed stacking.

LIGNA

REVIEW

# Revolution in Wrapping

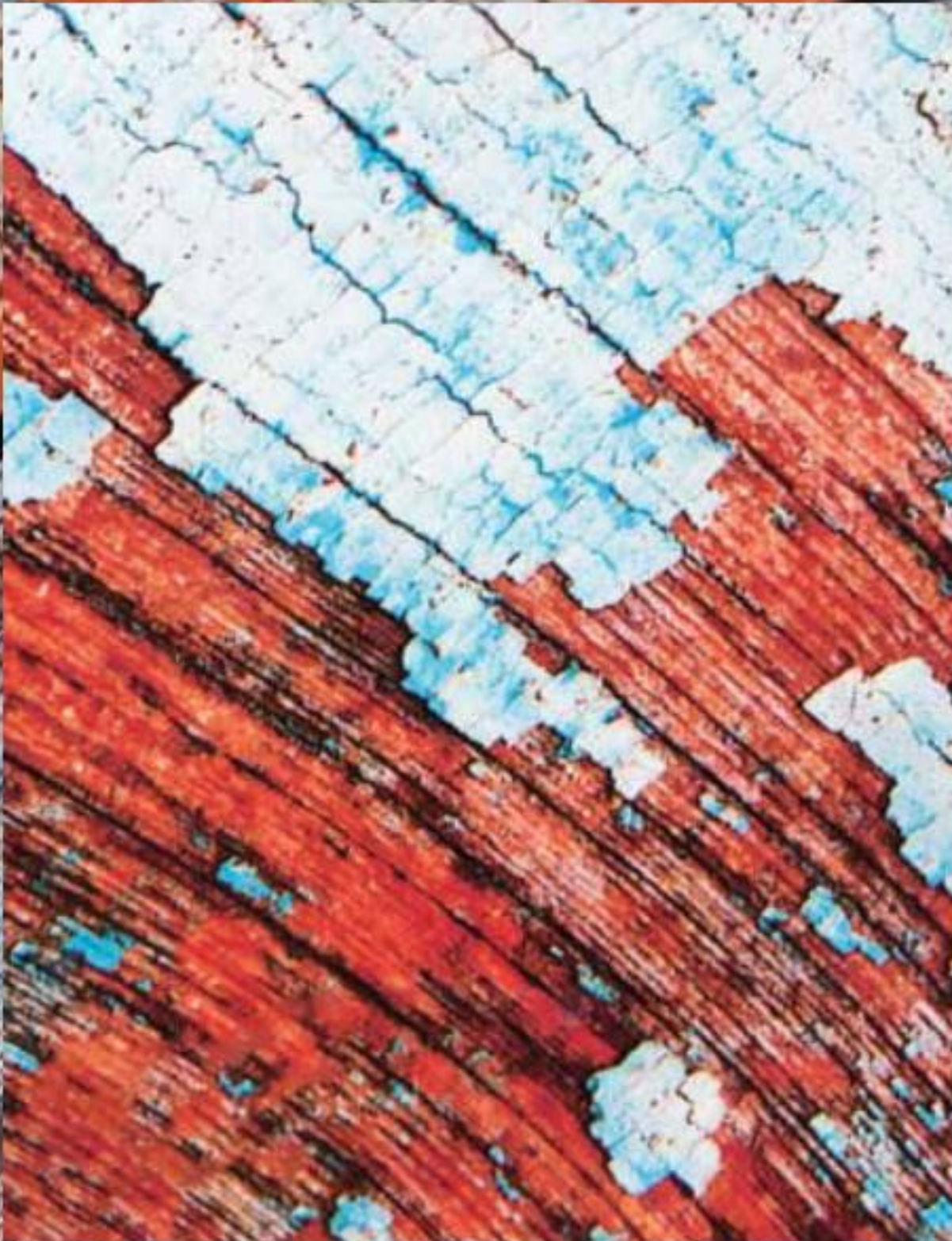
Digital printing combined with HotCoating® technology on the Kleiberit stand pointed the way to the short runs and bespoke products many profile wrappers now need to satisfy customer demands.

Kleiberit chose Ligna 2017 to showcase technology that could revolutionise the wrapping industry in the same way as it's breathed new life into the panel sector. Regardless of whether it's profiles you make, flooring, skirting, furniture or other interior profiles, using Kleiberit's roll-to-roll digital in-line HotCoating® process you'll now be able to offer your customers any design – with or without lettering - and run it in short batches.

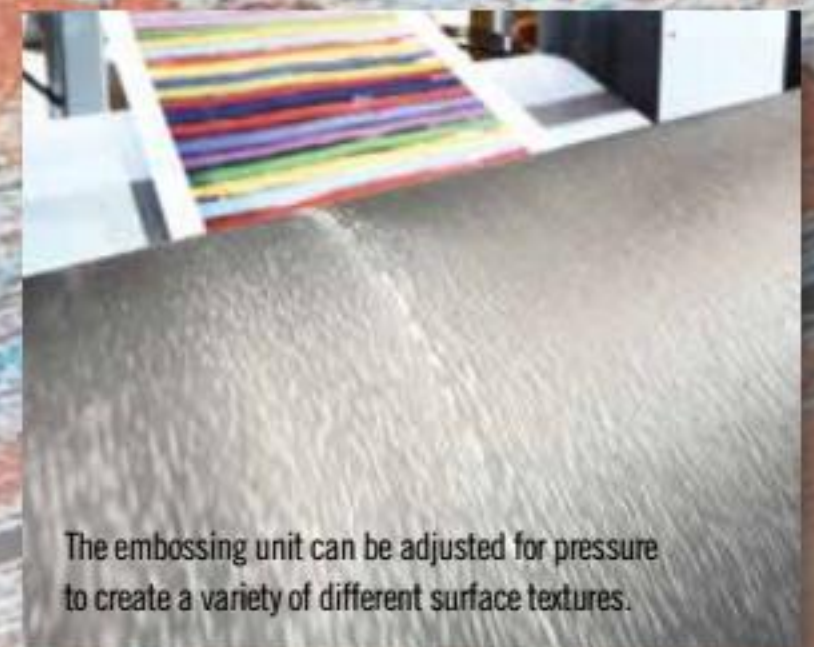
"Up until now, the choice for profile wrappers was to buy paper or PVC from a swatch and that invariably meant minimum order quantities applied," Kleiberit's Bradly Larkan told Furniture Journal from a packed Ligna stand. "By printing digitally, you can produce one metre, ten metres, or 100 metres as you need. It's possible to do a

small run without waste using the roll-to-roll digital in-line HotCoating® process and, at the same time, create a stock item. Another big advantage of the digital process is that it limits stock holding to a small number of unprinted foil rolls that are needed for printing base materials. The technology is already proven and any company that has a wrapping machine will benefit."

The process starts with the creation of a .jpg or similar image file. Software puts the design into repeat automatically and the machine will print at up to 60 metres per minute from large or small base rolls. After the inks have been applied by the printing head, a layer of PU HotCoating® is applied for protection. The top lacquer can be a high gloss or a supermatt, as required, and after in-line UV curing, the printed material, which can be



UV-curing of the top lacquer, which can be a high gloss or a supermatt.



The embossing unit can be adjusted for pressure to create a variety of different surface textures.

anything from 600mm to around 1500mm wide, is ready for wrapping. If a texture is required, for example to create a grain effect on a wood-look print, there's an embossing unit that can be adjusted for pressure to create a variety of different effects. The gravure roller can be swapped over relatively quickly.

"The technology is the same as our proven HotCoating® process. It's fast, it makes short bespoke products possible and we believe it could revolutionise the wrapping industry in the UK. It's ideal for companies that wrap profiles, such as kitchen and flooring companies, or for those who run moulders and want to get into wrapping their own products for customers who want bespoke, or short runs."

To find out more contact Kleiberit UK on 01530 836699.



Roll-to-roll digital in-line HotCoating® was showcased at Ligna by Kleiberit.

LIGNA  
REVIEW



# Realising Science

**Select, Adapt and Produce:**  
from idea to cabinet in three  
simple stages with Holz-Her's  
Nextec and CabinetSelect.

What's the difference between cabinet-making and science fiction? Science fiction dares to imagine and allows the impossible to become possible. Cabinet-making is much more down to Earth. But add a little science fiction to the world of cabinet-making and it would not be difficult to imagine the cabinet-maker of the future dreaming up a piece of furniture and transmitting his idea by telepathy to a waiting machine that obediently creates it. We're not quite at the stage of telepathic transmission yet – that's a little too far-fetched for Ligna 2017 – but as Holz-Her demonstrated, we are moving a lot closer to 'dream it up and make it' than you might imagine.

By using the new Holz-Her Nextec CNC machining centre in conjunction with Weinig

Group's CabinetSelect software, Holz-Her representatives mesmerised onlookers with demonstrations of just how easy it was to select a basic model from a database, adapt the dimensions, choose the materials, the hardware and the fittings and send the instructions to the waiting Nextec. The Nextec wrote the nesting program for formatting, drilling and grooving in the background while the operator was placing a panel using the laser guidance system.

The CabinetControl database contains over 300 carcass models that can be called up in 3d and adapted. Change the width, height, or depth to suit the space available; add shelves; select the colour and finish from faced panels held in your warehouse – even remnants can be utilised by using Holz-Her's laser-supported DirectCut. Then choose the

Nextec machining centres have an extremely stable, gantry-type design. The Nextec is also available with options to increase the level of automation still further.



1. Select a basic model from a library of more than 300 carcass designs
2. Choose your material
3. Choose your fittings
4. The Nextec-Clamex package creates P-System pockets on the surface and the edge automatically
5. Click the "Produce" button
6. Three simple steps. The Nextec writes the nesting program for formatting, drilling and grooving in the background while you position the panel.

# Fiction

fixing method for the cabinet. The unique Nextec-Clamex package for P-System pockets on the surface and the edge will ensure everything can be connected using just one fixing system and the software sorts out the machining automatically without any operator input.

"There's no need to work with design programs, exporting and optimising," commented Weinig UK's MD, Malcolm Cuthbertson. "Everything is done for you. The system has been designed with the smaller craftsman in mind and it's ideal for those who have customers who walk in from the street with an idea of what they want and an expectation it will be made in hours. There's no need for a computer in the office, the operator defines the product from the machine, presses the start button and makes it.

"Most nesting CNC machines work on full sheets," continued Malcolm. "Using offcuts can be difficult but the Nestec has a laser referencing corner that projects a right-angled laser light onto a zoned vacuum table that makes it easy to see whether a piece is big enough and where it should be positioned. It will even work with irregularly shaped pieces." Combine the Nextec with Holz-Her's Warehouse module and it becomes possible to control the entire parts inventory, enabling the Nextec to import and manage every available piece from full boards to offcuts.

Click and choose, no programming, no calculating, use all your offcuts and satisfy your bespoke customers with a cabinet in under 30 minutes – and amazingly it's not science fiction. Just call Weinig Group UK on 01235 557600 and they'll prove it! [www.weinig.com](http://www.weinig.com)



LIGNA  
REVIEW



# All in the Head

Galaxie drive image ©Wittenstein SE

**Blistering positioning speeds and braking in split seconds from Maka's new Galaxie drive.**



Iain Young

**W**hen you see visitors stopping and peering into a cabinet on the corner of an exhibition stand, then turning to colleagues with a look of amazement and disbelief written all over their faces, you know something pretty unusual has caught their attention. Faced with a 70kg, 26kW five-axis spindle positioning at more than four times the speed of the fastest head on the market at 9 o'clock in the morning, most people would probably assume it was the effect of the night before. Not so this time. Inside the glass cabinet on the corner of Maka's Ligna stand was the lightning fast Galaxie drive – the very latest in a new generation of superfast heads that knocked the socks off pretty much every comparable unit at Ligna 2017.

"The A and C axes are always the weak link in a five-axis machine," commented an enthusiastic Iain Young from the Maka stand. "Improve that and you improve cutting quality, depth and speed. The higher acceleration reduces cycle times. The Galaxie drive is several times faster than any other five-axis head, but with a head of this speed braking force becomes incredibly important. With the Galaxie, we stop the spindle with micron precision and zero backlash. It will stop instantly if you hit the emergency stop, significantly reducing the risk of collision. Compare that with any other 5-axis head, which may continue travelling for 20-30mm before stopping and you'll see how advanced the Galaxie is. The spindle is held in position



The new Maka PE90 at Ligna 2017.

with massive brake support, 500% greater torsional rigidity than before, but there are no belts or physical clamps and a minimal number of moving parts, making this a very low maintenance unit.

"Not only can you work faster, more precisely and with less vibration," continued Iain, "You can also use bigger moulding tools, saw blades and stepped tooling blocks on the Galaxie with much greater safety, freedom and flexibility in manufacturing. By reducing vibration you improve your tool life and you're able to use higher speeds."

The key to the speed is at least in part down to a hollow shaft drive that provides around 70% more diameter for cables and air to pass through and that's enabled Maka to offer a very compact unit. The engineers have been able to fit the drive motor and the encoder directly on the rotary axes so reading and high speed

feedback work in real time exactly where movement is taking place. It's a development of what Maka's been doing for many years, so there's nothing new for the user to understand, but it is so blisteringly fast that it takes your breath away to see it in action. Although around four times the speed of a conventional head, the Galaxie on show at Ligna had been speed limited to better illustrate it really was possible for the machine setter to keep up with it.

The Galaxie drive can be fitted to a standard Maka PE90, like the one shown on the Ligna stand, upgrading performance significantly. But the really remarkable thing is the higher cost can be recovered in no time – and the savings go on when the increased speed of production and longer tool life are taken into account.

For more information contact Iain at Maka UK on 01952 607700 or visit [www.maka.com](http://www.maka.com)



Maka's standard five axis head on a PE90.

# Boxing Clever

**The Vector 120 took five weeks to get to Ligna – and it arrived inside its own stand!**



If there was a Ligna prize for the most unusual stand it would surely have been awarded to New Zealand-based Vector. MD, Duncan Such, showed the fully automatic contour edgebander, the Revolution 120, in the shipping container it made the sea voyage in – and then simply shoved everything back in the container when the show was over! It's hard to knock the logic when you think about it. After all, it's the same "this is what it needs to do so why don't we just make it do it" logic that's applied to the design of the machine.

A dedicated contour edgebander, the Vector 120 is a machine that intentionally separates the edgebanding and routing processes. Equipped with a new two-pressure roller system that enables pressure reduction on thinner, more sensitive materials to reduce telegraphing, as well as a SuperFly end trim unit that eliminates heat stretch during the end trim operation, the Vector is very simple to operate. "We set an

X,Y and C position and the machine follows the contour," explained Duncan Such. "At the final corner, the arm picks up the bottom of the tape and a linear encoder determines how long to cut it to make a nice butt joint." Clever suspension of the SideWinder trimming unit enables it to follow complex shapes, trimming in the same pass as the edge application pass and dramatically reducing cycle times. The glue nozzle has a dosing bar that caters for tape widths of up to 40mm.

The Vector 120 on show at Ligna was equipped with an overhead projection unit that indicated the exact position of the vacuum pods on the bed making the positioning of workpieces easy for then operator. Working dimensions of the machine on show were 2400mm x 1200mm, though a 3500mm x 1800mm version is available that enables pendulum operation.

For more details contact RW Machines on 01869 244943 or visit [www.rw-machines.co.uk](http://www.rw-machines.co.uk)



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# Efficiency in Disguise



Scrutinising the changes.

Time is money, which is why Weinig has gone flat out to ensure its new Powermat 2400 moulder can be adjusted while it's still running.

From time to time, you've probably seen strangely liveried pre-launch models of prestige cars flying past, disguised with decals in tiger stripes, dots and squiggles. They're meant to be camouflage that hides subtle design changes; an interesting way of signalling to potential buyers that something different is happening without entirely giving the game away. Weinig went one step further at Ligna, launching its new version of the

Powermat 2400 with an all-over paint scheme that drew curiosity from crowds of admirers who peered under its open hood and scrutinised every detail of its uprated specification.

The changes are subtle and focussed on speed of adjustment, safety, and reduced need to open the hood, or even switch the machine off, in order to make adjustments. Strikingly obvious were the CNC controlled



elements – an essential part of Weinig's fast, tool-free Comfort Set system. Less apparent was the new Hydro outboard bearing technology that makes the set-up process simpler. Equipped with an automatic clamp, it means radial adjustment of the spindle can now be carried out with the hood closed.

With the new Powermat 2400, there is no longer any differentiation between the straight jointer for PowerLock tools and that for Hydro tools. The straight jointer can now be used with both up to a tool diameter of 180mm and profile jointers are now automatically clamped and operated from the front of the machine.

Several features have been incorporated into the new Powermat 2400 that allow dimension adjustments while the machine is running: the lateral pressure rollers of the four-roller infeed are CNC controlled and can be automatically positioned at the appropriate wood width; the lateral guide fences behind the left spindle are solid – a feature that helps the new Powermat 2400 reach processing speeds of 100m/min – and they are equipped with CNC axes for automatic positioning at the appropriate width; the jointers run along with all the spindles and, in the case of radial adjustment, they follow the spindle; and the automatic

clamp on the Hydro outboard bearing facilitates repositioning after several jointing procedures while the machine is still running.

Like the new mid-range BMW that probably shot past you in early February with its latest Hoffmeister kink duly camouflaged, the camouflaged Powermat 2400 isn't quite ready to make its debut in the UK yet. The first models are expected to be available towards the end of the year. Judging from the interest it received at Ligna (I had to do a lot of crowd clearing to bring you this picture), it might be prudent to get your order in sharpish. To contact Weinig UK call 01235 557600.



# Automation at IMA Schelling Group



Here and above:  
LS 1: designed and  
built with batch size  
one production in mind.

Batch size one and increased productivity were the main themes on a busy IMA Schelling Group stand at Ligna.

Pride of place on the newly liveried IMA Schelling Group stand at Ligna was given to the presentation of the fully automatic cut-to-size plant LS 1. Designed and built with batch size one production in mind, and in particular the production of small parts down to 70 x 200mm that need to exit in the correct orientation, the line began with a Schelling storage area equipped with a VS 12. The servo-driven VS 12, which is ideal for a storage area of 4-12m with a maximum carriage beam length of 100m,

enabled automatic recirculation of remainders as well as semi-automatic infeed and outfeed of manual remainders. The plant, which included DuPlus2 for shortening the strip changing time, enabled parts to be separated, labelled and cleaned. At its heart, the Evolution saw carriage provided a cutting length of 3.3m and a maximum board thickness of 60mm – more than sufficient for the single sheets the VS 12 was feeding in.

At the end of the LS 1 line, IMA Schelling Group showed a robot sorting and stacking



# IMA SCHELLING GROUP



solution with a vacuum pick up device that had surface grippers adjustable to each panel. Linked to the production supervisory team with complete stock management and visualisation, the system employs variable storey spacing that adapts to the batch volumes being processed – up to 1,000 parts, 80 storage locations with two shelves and 16 levels. The six-axis ABB robot at the heart of the system provided 4.5 cycles every minute, equating to about 1,000 storage and retrieval operations per shift.

Also on show at Ligna were two recently introduced saws, the FH4 and the S45. The FH4 already boasts the highest possible automation in its class with a host of automatic settings and automatically monitored functions to optimise sequences. But at Ligna, IMA Schelling Group was presenting the idea that, allied to a VS12 and equipped with a DuPlus2 feeder carriage,



even smaller workshops could benefit from the increased productivity automatic feeding provides. When the saw is often the bottleneck in production, it's certainly food for thought to look at a system that picks on demand and automatically recirculates offcuts.

For mitre cuts there's little to rival the Schelling S45's capacity for simultaneously cutting boards to size with edges cut at up to 46°. If it's grooves you are after, the optional groove device makes it easy to cut mitre grooves, and compound mitre cuts are possible thanks to the combined angular cutting device and the mitre saw. The MCS Evolution controller makes the S45 a very efficient unit and facilitates a high degree of automation, even when executing tricky jobs.

For more information on IMA Schelling Group's complete offer call Schelling UK on 01937 586340 or visit [www.schelling.co.uk](http://www.schelling.co.uk)

Christian Maag shows one of the jobs made simple by the S45.



LIGNA

REVIEW





The Standard S is equipped with a digital measuring unit.



# TM's Trio

A new vertical panel saw made its debut on the Striebig stand, while TM Machinery's other main principal, AL-KO, showed two new products.

TM Machinery's distribution partners were out in force at this year's Ligna exhibition in Hannover, with new product launches from German dust extraction specialists, AL-KO and Swiss vertical panel saw manufacturer, Striebig, taking centre stage.

Available exclusively in the UK from woodworking machinery supplier, TM Machinery, Striebig, well known for its class-leading vertical panel saws, has launched a brand new saw, the Standard S. Based on the original Standard model, which has been a best seller in the UK for over a decade, the Standard STRK1 and TRK2 Comfort, together with the Standard STRK1 and TRK2, feature new, integrated features to assist the user even further. Differentiated by either an aluminium

or wooden support, the Comfort model features a digital measuring system with motorised Y-axis as standard. The new digital display also features simple to operate positioning buttons that allow the user to adjust a panel's location at the touch of a button. A new VSA scoring saw unit – which is fully adjustable – has also been added to the line-up, allowing the saw to work coated panel materials with ease. It's also equipped with 17 rollers and either pedal or pneumatic brakes, as well as a TRK dust extraction system.

Key accessories also include reversible carbide tips for effective grooving and routing work from 8-15mm and a WSG angle cutting unit for precision mitre cuts on wood and composite materials. An X-axis measuring system can also be added during the build.



Also showing at Ligna, AL-KO revealed two new products that are only available in the UK from TM Machinery. Making its debut at Ligna, AL-KO's new, entry-level sanding table, the AST 1.0 Basic, has been introduced to offer a price-sensitive solution for manufacturers who use hand tools. Working alongside a dust removal and filter system, the unit is made from galvanised sheet steel and equipped with a manual, tool-free height adjustment mechanism and handy scale for ease of use. It also benefits from a offset longitudinal sides for edge sanding, a Beechwood rack to prevent damage to the work piece and a funnel-shaped air guide for the extraction nozzle. The AST 1.5 Basic sanding table joins the AST 1.0 – 3.0 Premium model as the company continues to expand its portfolio.

Ligna 2017 was also the first time AL-KO had demonstrated its 350+ extraction unit at a major show. Featuring new, patent pending technology and a unique design, and benefiting from the company's Made In Germany ethos,

the innovative 350+ boasts a powerful but economical 15kW IE3 motor that offers 10,000 m<sup>3</sup>/h - AL-KO's biggest flow rate to date. It also offers a filter surface of 73 m<sup>2</sup>, which is enough to lower the residual dust content of the recycled air to 0.1 mg/m<sup>3</sup> (H3).

Featuring AL-KO Opti Jet® technology and an integrated pre-separator as standard, the compact design measures 3,077 x 1,058 x 2,351 mm, making it ideal for smaller workshops or situations where local extraction might be needed. Sound absorbing panels make the unit extraordinarily quiet: just 72 dB during operation. Additional accessories also include a briquette press or rotary lock valve, which can be added to the unit for a tailor-made solution.

TM Machinery is the exclusive UK distributor of Striebig vertical panel saws and AL-KO dust extractors. For more information visit [www.tmmachinery.co.uk](http://www.tmmachinery.co.uk) or call 0116 271 7155. For the latest news, follow TM Machinery on Twitter: @TM\_Machinery



AL-KO's Power Unit 350+ was exhibited at Ligna



AL-KO's new AST 1.0 Basic sanding table

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LIGNA

REVIEW



# CAD+T goes VR

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Furniture design has come a long way since the days when consumers had to look at a 2-dimensional plan and visualise the finished room from a drawing and a few samples. With CAD+T's latest software – a complete solution for bespoke furniture – you can present your client with a pair of virtual reality goggles and sit back as he or she wanders through a newly designed virtual reality room, exploring the finish, the fittings, the positions of cabinets and imagining the functionality in having this drawer here or that cupboard there. “It really feels like you are right there in your own room,” said Martina Schwarz, CAD+T's MD. “The front end generates 3d objects that are visualised through virtual reality. The third level is virtual reality goggles.”

The CAD+T software begins with planning using a planing module. You can use free shapes or configure items from a library

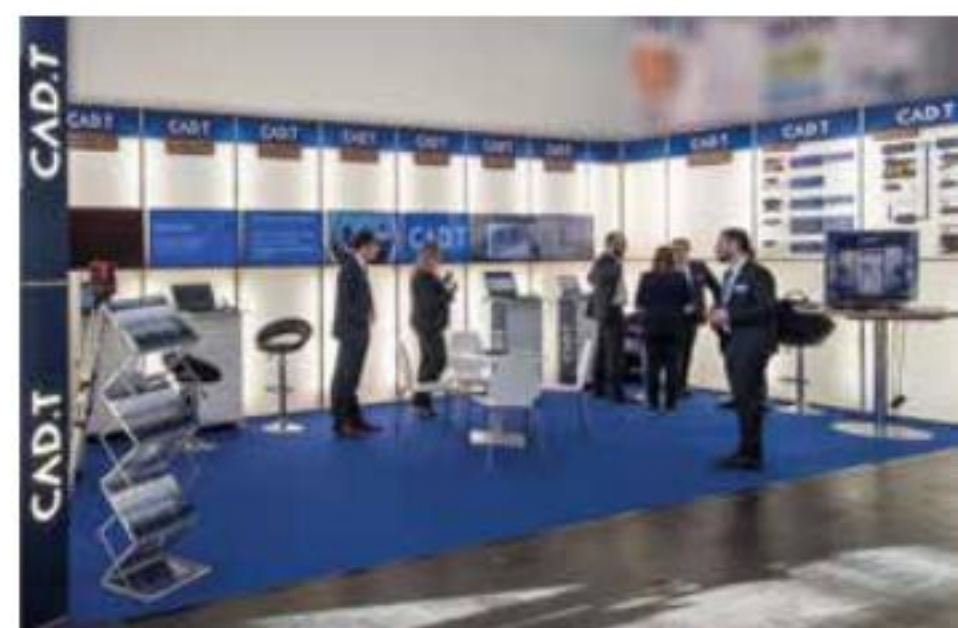
according to the piece you are creating. Next comes rendering. Frameworks are generated with light, materials, shadows and so forth and these are exported to pictures. The virtual reality is embedded in a .exe file that can be opened by the customer.

“All hardware, drilling, cutting and machining are added automatically so when the customer says yes to the final design, the machine codes are already in place for the furniture to be made,” added Martina. “Our real strength is with bespoke high end manufacturers who need the flexibility to design and modify, present to the client and modify without having to think about the details involved in manufacturing. It's very intuitive, easy to use and gives great flexibility to designers.”

For more information call CAD+T on 0043 7229 83 100 104 or visit [www.cadt-solutions.com](http://www.cadt-solutions.com)



Martina Schwarz




 LIGNA  
REVIEW

# Finishing at Ligna

Three finishing experts showed new machines for spraying and tactile digital printing at Ligna 2017.

**Above:** Makor's Evolution T robot spraying machine and control screen (inset).

**Below:** The quick disconnecting head of the Makor Evolution T can be equipped with three or five guns.



Among the many finishing solutions at Ligna 2017, three new systems stand out as deserving of a special mention: Makor's new five-axis Evolution T robot spraying machine; the Robus Eco and its bigger brother, the Robus Pro, from Bürkle; and J-Print, a completely different digital system that produces tactile surfaces at what's claimed to be a breakthrough price from Cefla.

Makor's Evolution T robotic spraying machine is a Cartesian coating robot with five axes that comes with the option of an economical paper transport system or a self-cleaning belt. Designed for use with paint or glue, and working at up to 3m/min, the Evolution T coats edges using a robotic arm and coats flat surfaces with an oscillating arm. It is mainly designed for medium to large size manufacturers who produce both high volume runs and just-in-time work. The quick disconnecting head is equipped with three guns, two for the flat surface and one for the edge, but Makor also offers a five-gun option that increases the number of guns operating on the flat surface to four. There's also a fast automatic colour change system that's ideal

for just-in-time work. Gun cleaning is carried out using an automatic brush system.

The booth of the Evolution T remains hermetically sealed during the spraying operation and the filter unit, a dry system with a generous filter surface area, has been cleverly designed so it can be removed easily – it's actually on a trolley with wheels. Makor says the capacity of the paper rolls is sufficient for the transport system to run at least three shifts, and the paper rolls are also on wheeled trolleys equipped with rails for easy replacement.

Over on the Bürkle stand, two new automatic spray coating machines made their debuts: the entry level Robus Eco robot spray machine and its industrial big brother, the Robus Pro. Both can be used with UV base coats and top coats, water-based finishing systems, solvent or water-based stains, oils or waxes. The development of the Robus sees Bürkle focusing on modular platforms that have been designed to offer improved overspray through air treatments and humidification technology.

The Bürkle Robus Eco is equipped with two moveable arms holding up to 4+4 guns.



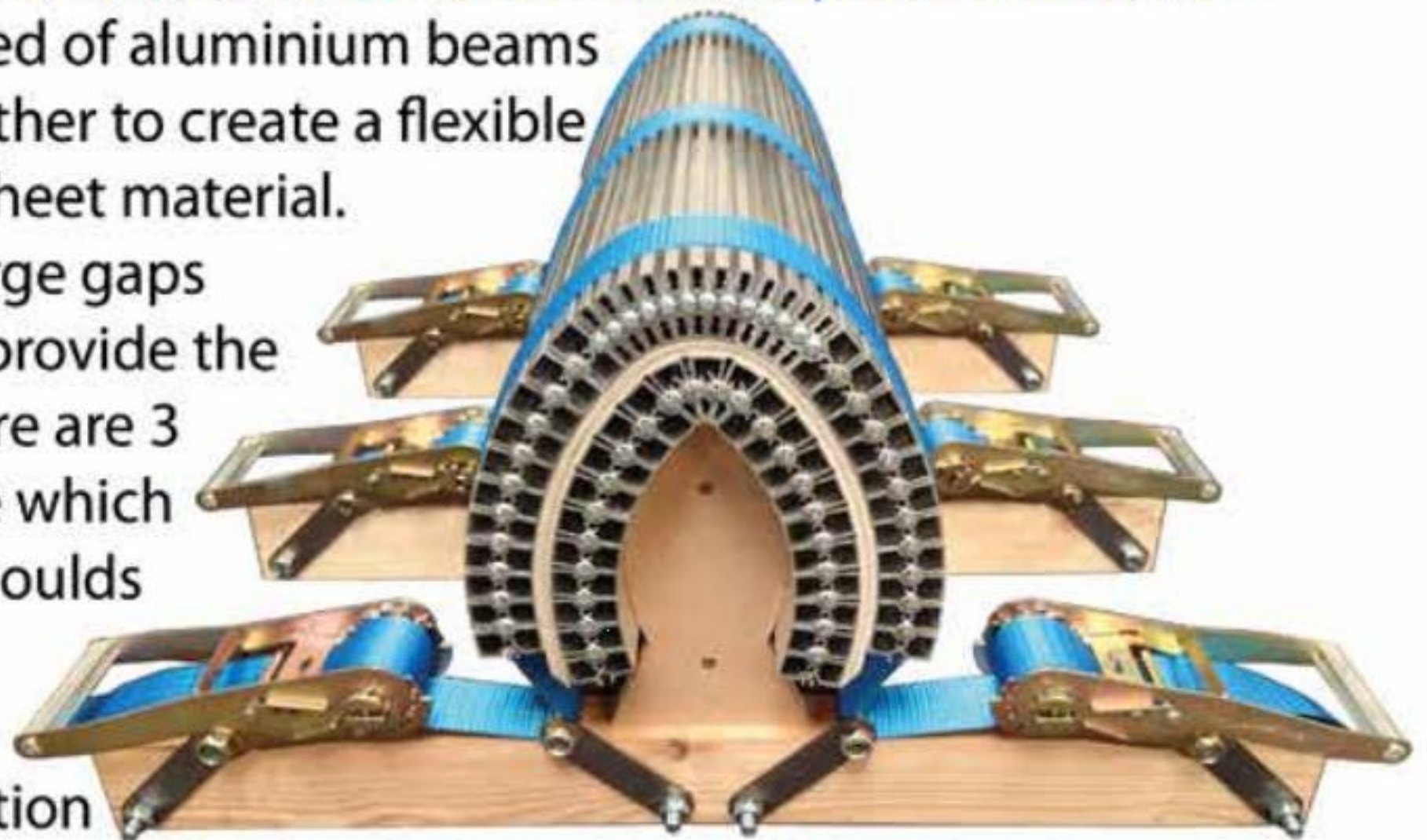
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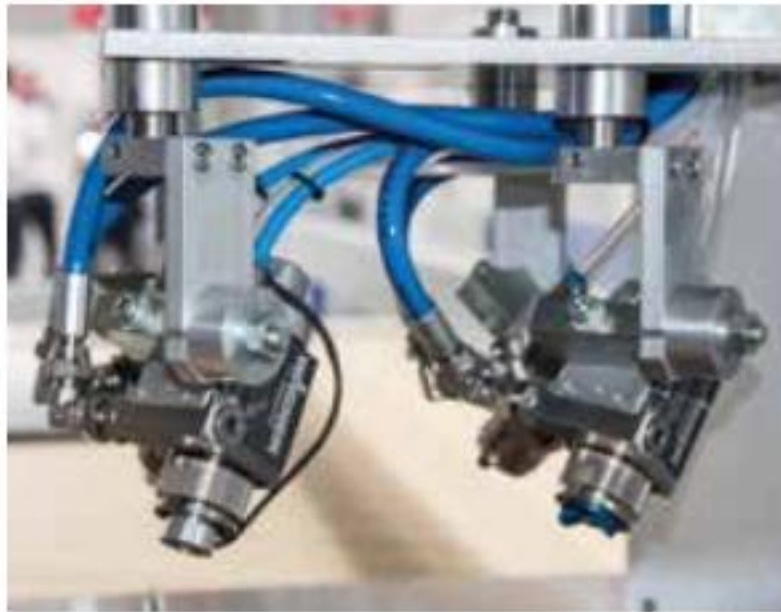
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**Right:** The Bürkle Robus Eco.

**Below:** The guns from the Bürkle Robus Eco.

**Bottom:** The Bürkle Robus Pro.

**Bottom right:** The Cefla J-Print SP1300-TD printer: catering for the growing market demand in unique, digitally printed designs with tactile surfaces.



Although quite a sophisticated machine, the Robus Eco has been designed for simple setup and easy maintenance and features a single direction conveyor belt with vacuum table or PVC conveyor belt with a coating recovery system and automatic cleaning. The control cabinet is integrated into the machine, giving the Eco a small footprint.

Move up to the Bürkle Robus Pro and you'll get a choice of two spray booth sizes to cope with different coating speeds. Bürkle has optimised the air flow within the spray booth and equipped the Robus Pro with generously sized, easy-to-replace filters in its five-stage filter system. There are different equipment packages available according to your preferred application method, including a rotation system and a carriage system – and the option of either an oil filtering system or a dry filter. An extra wide conveyor belt prevents the back of the belt becoming soiled. Both the Robus Eco and the Robus Pro can be enhanced with drying tunnels, UV units and fully automatic loading and unloading systems, if required.

Moving to Cefla, although the company was clearly focused on solutions for Industry 4.0, on the stand was the cutting edge iGiotto App X2 from Cefla's robotic team. The iGiotto App X2 first came to notice when it won the award for innovation at Xylexpo last year. Comprising a pair of anthropomorphic robots that are automatically driven by a system that classifies and recognises the pieces inputted in the production process, the iGiotto App X2 is designed to provide the user with maximum flexibility. The robots can operate in an autonomous manner, following optimised trajectories and without hindering the movement of one another, or they can increase productivity by working in a synchronous fashion. In Hannover, Cefla added further to this with solutions for the control and configuration of painting procedures and lines.

Brand new on the Cefla Finishing stand, and perhaps even more forward looking, was the new J-Print SPI300-TD, a single pass digital printer that Cefla claims offers lower price and increased simplicity of operation on a level that has never before been achieved.

The J-Print SPI300-TD is designed to cater for the growing market demand in unique, digitally printed designs with tactile surfaces – and it's capable of delivering surface quality that's normally only the preserve of systems based on mechanical pressure. Promising high productivity, exceptional resolution and versatility, it has many uses from furniture and edgbanding to flooring, skirting and other profiles. A single-pass printer, the J-Print SPI300-TD has been born from a combination of different technologies resulting from the synergy between Cefla's know-how and JetSet. Cefla showed a 4 UV colour single-pass J-Print SP520 for printing decorations on various types of substrates and a synchronised print with tactile finish was demonstrated afterwards on the J-Print SPI300-TD printer.

For information on Makor contact Schubert Technical Services on 01226 360900. For details of the new Bürkle robot spraying machines visit [www.buerkle-gmbh.de](http://www.buerkle-gmbh.de) and for more information on Cefla's finishing solutions visit [www.cefla.com](http://www.cefla.com)

Joystick control and an informative display make the ergonomically designed cockpit intuitive and the Combi-MR easy to operate.

LIGNA

REVIEW

# The Combi-MR debuts in Europe



Sean McMeel

Combilift's new-to-Europe Combi-MR was originally designed for the US market but after Ligna it looks set to be a hit over here.

It's hard to escape Sean McMeel's enthusiasm for Combilift's new Combi-MR multidirectional reach truck. Sean, who now works for Combilift in the USA, had much to do with the original idea for a forklift that combined the best features of a reach truck with the versatility of multidirectional travel for operation in tight spaces.

"Unusual for a Combilift, the Combi-MR has four wheels instead of three," says Sean. "The drive wheel is positioned in the back right corner so the driver can stand rather than sit, which makes this truck ideal for order picking operations where the driver is constantly in and out of the cab. There is a single step with a low entrance. Access is very easy and that makes it a lot less tiring when you don't have to get up and down

from a seat. It also makes the cab more spacious. It's a new concept for Combilift." The single drive wheel is fitted with a large 400mm rubber tyre for traction and comfort and features 360° steering rotation. For those who would prefer it, a sit-down version of the Combi-MR is available.

Sean describes the Combi-MR as "a joy to drive". "Steering, mode changing and directional change can be done without stopping," he says. "The braking wheel at the front left stops to assist the driving wheel with turns, so the truck turns in its own length, and the large diameter dolly wheels on the other two corners deal easily with rough ground. It's also got good ground clearance so it can be used outside." The joystick – to the right of a cockpit that includes an informative



digital display that tells the driver everything he needs to know about battery charge levels and direction of travel - enables seamless switching of the direction of travel and allows the operator to perform compact turns. AC technology in the drive and steering ensure optimum performance.

Another important feature of the Combi-MR is safety. "The driver is fully protected by an overhead guard when entering from the side," Sean says. "There's full protection at the back and when you enter or exit the cab, you do so into the open aisle and not into the racking. The view from the cab is also really excellent. You get a full 360° view because the cabin is positioned to the side, so you don't have to look around the mast."

With the ability to handle both palletised and longer loads and lift up to 2,500kg, the Combi-MR – a truck that had already found many friends in the USA before it made its European debut at Ligna – is ideal for operations across the timber sector where safety, speed and efficiency are of paramount importance. To find out more contact Combilift on 00353 478 0500 or visit [www.combilift.com](http://www.combilift.com)

The single drive wheel is fitted with a large 400mm rubber tyre and features 360° steering rotation.



LIGNA

REVIEW

# Döllken goes Magnetronic

The latest in a growing range of Fusion-Edge products sees Döllken at the cutting edge of new technology.



Jens Meyer zu Drewer



70 years ago, an American gentleman called Percy Spencer discovered that the waves produced by a magnetron could be used to heat food. Today, fifty years after its commercial launch, the microwave – an appliance now found in virtually every modern kitchen – is finding new applications in zero joint edgebanding technology. Working in close partnership with Homag, Döllken has developed a new breed of edgeband called Fusion-Edge Microwave that promises the quality of a laser edge from simpler and less costly microwave technology.

“Microwave sits between hot and laser,” commented Jens Meyer zu Drewer from Döllken’s Ligna stand opposite Homag City. “Plastic absorbs microwaves, so we have increased and developed the performance of Fusion-Edge by adding and changing the formulation of the co-extruded functional layer so the microwaves penetrate through the edgeband and heat the functional layer of

the edge. The layer is heated to 200°C and the bonding is then applied to the chipboard.”

Döllken says adhesion values, appearance and joint tightness are comparable to those achieved using the laser process and the premium coating of Fusion-Edge is exceptionally well suited for the Wavetec process.

Döllken’s development engineers came up with a formulation for the functional coating which is significantly easier to process and was made marketable in an extensive series of tests. This means a comparable quality to laser using the microwave process has been achieved with regard to mechanical reworking, UV resistance, dirt repellence, etc. Döllken is now rolling out the improved formulation across all Döllken Fusion-Edge products so even if you are using other application technology you’ll see the benefits.

For more details call 0049 2043 9790 or visit [www.fusion-edge.com](http://www.fusion-edge.com)

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