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Trim Saw

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Pinnacle Locally Manufactured by multisaw band sawmills
CONTENTS

Forestry
3 An unstoppable Asian invasion is killing our trees
5 Green shoots trending for forestry mechanisation
7 IPM is essential says TIPWG
8 New Hans Merensky EuCxylo Research Chair at Stellenbosch University

Transport
9 Shell invests in natural ecosystems
10 How we can break out of the productivity / technology trap
11 Bell wins Exporter of the Year awards

Sawmilling/Ligna Review
12 Wood-Mizer weaves its spell on the international stage
14 Berneck sawmill orders 32 kilns from Hildebrand-Brunner
16 Holtec presents an expanded range of products and services
18 LIGNA 2019 created a fertile climate for future investment
22 Bruks disc chipper passes the PG Bison test

26 New Mebor line cuts D-class logs at Bracken Timbers

Woodworking / LIGNA & Interzum Reviews

COVER STORY
30 Biesse celebrates the future of 50 years of history
31 Biesse is a “Best Managed Company”
32 Solutions in digital dimensions from Leitz
32 Jürgen Köppel, managing director of Leitz.
33 P&W common language standard coming in 2020
36 Striebig scores at Ligna with Vertical 4.0 Solutions
38 Evergreen and highly advanced technologies from Bacci
40 Holz-Her releases new CNC machines at Ligna 2019
44 Versatile sanding tools from Arminius
45 Visitors fascinated by SCM’s Smart&Human Factory
48 Rehau’s smart #futureapartment drew crowds at Interzum 2019
50 Be Inspired. Moving ideas from Blum at Interzum 2019
53 Biscuit joining for cabinet construction
54 Kinvaro T-Slim: A new dimension of invisibility
56 SABS to verify local content
56 Sonae agrees to pay over R46-million for cartel conduct
editorial comment

Of alphabet soup and revolutions...

Welcome to the latest issue of WSA&TT where we plunge into technologies and acronyms such as IoT, Industry 4.0, smart, VR, Integrated, AR, AI, networked, and the Cloud.

Readers, please bear with me, I feel a need to share a few thoughts on these topics with you. It began in April this year when I was forced to admit to myself – and now to you - that I am a Baby-boomer (naturally I am not going to give my real age away) because I was born between 1944 and 1964. Boomers received a reality slap at the Focus on Forestry conference in White River when a millennial speaker (1965 – 1994) at the event made light-hearted remarks about boomers and our so-called Luddite tendencies.

This got me thinking, googling and questioning! My first port of call was to find out what a Luddite is. During the Industrial Revolution early in the 19th-century machinery began to replace hand production, water and steam power began to improve, and the factory system became entrenched. Not everyone climbed on the modernisation train, including the Luddites. Luddites were textile workers in the UK. They feared that the time spent learning the skills of their craft would go to waste, as machines were beginning to replace their role in the industry.

They protested the introduction of machines that threatened to make their jobs and skills obsolete.

Today the term refers to someone who is reluctant to accept the fast pace of industrialisation, automation, computerisation, and the adoption of new technologies in general. The points I am making are that labels can be prejudicial and that while change may seem threatening in the short term, in the longer term it can be beneficial.

In this issue, we review some of the technologies exhibited at the tradeshows Ligna and Interzum in Germany in May this year. These two shows have a great deal of influence on Southern Africa’s sawmilling and woodworking industries. Focus on Forestry and these shows demonstrate the speed of technological change and the inevitability that humans must work with and alongside computer-controlled machines and robots.

This entails the interconnection of devices like virtual reality (VR) and augmented reality (AR) tools, cameras, and sensors within an existing internet infrastructure. The aim is to improve the environment for humans at work while achieving a variety of business goals like cost reduction, increased efficiency, product innovation, improved safety and meeting compliance requirements.

I believe that this increases the need for a true Skills Revolution. To some extent soft skills that support collaboration and communication have taken a back seat to specialised technical skills in South Africa. Digitalisation and automation requires employers planning to automate tasks and create new jobs, to develop skills that are core to the business and will develop organisational agility and workforce resilience for the future.

There should be a concerted effort to develop people who understand complex business challenges and decisions, can understand the engagement, interaction, and collaboration of humans and machines, have enduring and essential human skills such as empathy, creativity, and enthusiasm for learning, and who can embrace change and uncertainty.
An unstoppable Asian invasion is killing our trees

There is no way in which the aggressive Polyphagous Shot Hole Borer (PHSB) invasion in South Africa can be stopped, however, some treatments and management strategies can reduce its impact.

The Euwallacea whitfordiodendrus (PHSB) is a 2mm long ambrosia beetle that is native to Southeast Asia. The female beetle carries several fungal species, one of which is Fusarium euwallaceae, with it when it infests new trees. It bores through the bark into the sapwood and inoculates the fungus into the living wood. The fungus grows in the galleries of the beetle and serve as food for the beetle larvae. In susceptible trees the fungus can spread through the sapwood causing disease or even death of the tree.

The research team at the Forestry and Agricultural Biotechnology Institute (FABI) at Pretoria University is under the leadership of Prof Wilhelm de Beer. A research network including academics from seven other universities are collaborating on various aspects of the PSHB invasion in the different regions. The team is engaging with various government agencies, municipalities and industries to advise on policy and strategy, and to secure funding for research projects.

'Polyphagous' refers to the ability of the PSHB to infest many different tree species. An important distinction is made between reproductive host trees and non-reproduction host trees types of infestations.

The beetle infests reproductive host trees and successfully establishes a breeding gallery in which the fungus grows, eggs are laid, and larvae develop into mature adults, thus completing its life cycle. The majority of reproductive hosts die.

The beetle attacks non-reproductive host trees and penetrates and inoculates the fungus that then starts growing in the sapwood. The beetle either leaves or dies without reproducing in these trees, however the fungus can eventually kill or damage hosts.

High alert

The forestry and agricultural industries are on high alert. FABI has found avocado trees to be the most susceptible agricultural crop trees, and says no trees in commercial plantations, including pines, have been detected with PSHB in South Africa. “Of great concern is the recent discovery of PSHB on London plane and sweetgum trees in Somerset West. With the major...
impact of the disease on oak trees in especially the George and Knysna areas, it is inevitable that the famous oaks of Stellenbosch and the surrounding wine farms will be dramatically impacted,” says FABI. “Most unpredictable is the impact that the PSHB invasion will have on our native forests. It is now known that the beetle is spreading from the urban areas into native forests close to the towns of George, Knysna and Durban.”

What can be done?
This invasion cannot be stopped and at present no chemical product is legally registered for use on PSHB in South Africa. FABI recommends some treatments and management strategies that can reduce its impact.

Municipalities should:
- Train staff to recognise and cut down heavily infested reproductive host trees from streets and public areas.
- Cut infested branches if the main stem is not infested (unlikely, as PSHB usually infests the stem first).
- Designate dedicated dumping sites where infested wood can be dumped.
- Chip wood to pieces finer than 2cm at the dumping sites. Allow chips to compost by keeping it wet.
- Provide an on-line help desk where the public can report infested trees and get information.
- Alternatively burn the wood on-site but some beetles will fly away when the wood becomes hot or when smoke appears, so do not burn in un-infested areas.
- Alternatively place chopped wood under thoroughly solarised for at least one month in summer or several months during winter.

Current host trees confirmed with DNA sequences in South Africa

<table>
<thead>
<tr>
<th>EXOTIC SPECIES</th>
<th>NATIVE SA SPECIES</th>
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<tbody>
<tr>
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<tr>
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<td>Ricinus communis</td>
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Current non-reproductive host trees

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<th>NATIVE SA SPECIES</th>
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<tr>
<td>Bauhinia purpurea</td>
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<td>Taxodium distichum</td>
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<td>Viburnum x burkwoodii</td>
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</tr>
<tr>
<td>Vitex vinifera</td>
<td>Grapevine</td>
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“Most unpredictable is the impact that the PSHB invasion will have on our native forests” - FABI
Flora Mathelele, a young MSc student at Nelson Mandela University (NMU) conducted the latest survey in 2017 under the supervisory team of Dr Andrew McEwan, Prof Michal Brink and Muendanyi Ramantswana.

The first survey was conducted in 1987 and the second in 1998. Dirk Längin and Prof Pierre Ackerman conducted the third forest engineering survey in 2006/2007.

This latter survey included contracting and contractors, harvesting systems, equipment and methods, operational costs, human resources, and challenges facing the industry.

Längin and Ackerman ended the survey with a short statement on trends in mechanisation:

“Motor-manual operations (felling and processing with chainsaws, extraction with skidders, tractors and/or cable yarders) are the dominant harvesting systems accounting for about 65% of the total harvesting volume. Manual operations, which include manual extraction and extraction with animals, only accounts for 9.5% of the total volume.

“There is a slow trend towards full mechanisation with semi-mechanised systems, specifically mechanised debarking in eucalyptus operations, making up 19.5%, and fully
mechanised operations using harvester, forwarder combinations as well as feller-buncher, skidder, processor combinations, contributing just 6.4% of all systems.”

Matthelele’s research focused on harvesting and transport equipment and covered 88% of the total afforested area in Mpumalanga, KwaZulu-Natal, Western Cape, Limpopo and the Eastern Cape with an overall response rate to the survey of 79%.

The data was collected from grower companies, harvesting and transport contractors and small-scale timber growers.

Questionnaires were sent to potential respondents from the three target groups, and interviews were conducted with selected respondents. She presented her survey report at the Focus on Forestry conference held earlier this year, and in this issue of the magazine we are mainly covering her harvesting findings.

Although her presentation did not expand on it, she included interesting graphs that depict the dominance of clear felling over thinning harvesting processes.

When comparing the four technical surveys Matthelele says the full-tree method was barely applied in the first three technical surveys and was completely absent in the 2007 survey.

In her survey she found that while the full-tree method was used for felling 27% of the sampled volume of softwoods and 9% of hardwoods, the tree-length method was adopted for an average of 40% of the surveyed volume of softwoods and 15% of hardwoods.
There were more mechanised felling machines in the latest survey compared to the technical surveys conducted in the past.

Mathelele found that:

- The first technical survey had the highest number of chainsaws.
- Chainsaws are the preferred tools for softwood felling.
- Chainsaws decreased dramatically from 4000 in the second survey to 1048 in the 2017 survey.
- The favoured machines for felling hardwoods are harvesters.
- Harvesters and feller-bunchers increased from zero in the first technical survey to 94 and 13, respectively.
- Grapple skidders and forwarders have also become more popular.
- Three-wheel loaders have remained dominant in all the technical surveys.
- Excavator-based loading machines have increased from nine units in 2007 to 57 units in 2017.

Mathelele explains that the most important reasons for the increase in mechanisation of harvesting and extraction systems are:

- Safety and health of operators and their support teams.
- Ergonomics.
- Productivity.
- Labour issues.
- Operational costs.
- Terrain.
- Changing company policies.

The number of chainsaws decreased dramatically from 4000 in 1998 to 1048 in the 2017 survey.

She ended her presentation by reiterating the fact that her survey cannot be directly compared with the previous surveys as she did not cover the full range of variables.

Three-wheel loaders still dominate however excavator-based loaders have increased from 9 units in 2007 to 57 units in 2017.

There is no doubt however that medium to large forestry companies and contractors will continue to embrace mechanisation.

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**IPM is essential says TIPWG**

The Timber Industry Pesticide Working Group (TIPWG) promotes responsible and effective use of pesticides in South African commercial timber plantations.

One of TIPWG’s roles is to provide technical support and recommendations to Forestry South Africa (FSA), its Environmental Management Committee (EMC) and the forestry industry on:

- Adoption of new pesticides and removal of older, less effective formulations and active ingredients;
- Coordination of industry derogation applications, pesticide research and IPM practices;
- The endorsement of new pesticides for regulatory approval.

The group has announced on its website that the IPM approach has been firmly adopted to ensure chemical control methods really are a last resort. Roger Poole of TIPWG says IPM is becoming an increasing integral part of plantation management and agriculture in general.
New Hans Merensky EucXylo Research Chair at Stellenbosch University

Dr David Drew has been appointed lead researcher of the newly established Hans Merensky Research Chair in Advanced Modelling of Eucalyptus Wood Formation (EucXylo) that is based in the Department of Wood and Forestry Sciences at Stellenbosch University.

The contract formalising the ten year-initiative was signed in May by Dr Khotso Mokhele, president of the board of trustees of the Hans Merensky Foundation, and Prof Eugene Cloete, vice-rector: research, innovation, and postgraduate studies at Stellenbosch University.

Drew is a senior lecturer in the university’s Department of Forest and Wood Science (DFWS). He will collaborate closely with scientists in the faculties of Agrisciences and Science at SU, and with leading international researchers.

The initiative provides co-funding for new laboratory facilities and research equipment in the DFWS and allows for the appointment of a new technical staff member. The first group of postdoctoral students and postdoctoral fellows to be supported through the Chair will commence their work in 2020.

The objective of the Hans Merensky Foundation sponsored EucXylo research is to develop an evolving, interconnected set of models of how Eucalyptus wood forms. Studies into the factors that influence xylogenesis or wood formation will have a number of focus areas including research on how trees respond to periodic cycles of drought.

Drew says xylogenetic studies are a niche field of research pursued by a relatively small number of scientists internationally. Most of them work in the northern hemisphere on poplar, softwood species and small “model” plant species.

“In our program, however, we will focus on understanding and modelling the processes of wood formation of Eucalyptus in the context of the physiology of the whole plant,” he says.

“This will be done through a range of projects by postgraduate students, postdoctoral fellows and academics who will employ cutting edge, high precision measurement techniques combined with intensive sampling and laboratory analyses,” explains Drew.

These insights will be the basis by which researchers in the project continually build and improve predictive models at multiple scales. The models will be incorporated into a software-based simulation framework which is to become a platform for scientific collaboration and the generation of new hypotheses and ideas within South Africa and around the world.

The Hans Merensky Foundation was set up in 1949 by Dr Hans Merensky. The research Chair is inspired by the legacy of Dr Merensky as a geologist and agriculturalist.
Shell invests in natural ecosystems

Shell will invest $300-million in natural ecosystems over the next three years as part of its strategy to act on global climate change, including addressing carbon dioxide (CO2) emissions generated by customers when using its products.

This programme will contribute to Shell’s three-year target, beginning in 2019, to reduce its Net Carbon Footprint by 2% – 3%.

“There is no single solution to tackling climate change. A transformation of the global energy system is needed, from electricity generation to industry and transport,” explains Ben van Beurden, CEO of Royal Dutch Shell.

“Shell will play its part. Our focus on natural ecosystems is one step we are taking to support the transition towards a low-carbon future. This is in addition to our existing efforts, that include reducing the carbon intensity of oil and gas operations, and investments in renewable sources of energy.”

Mark Tercek, CEO of The Nature Conservancy, says: “Shell’s announcement signals that one of the world’s biggest energy companies is pursuing a decarbonisation strategy with a broad set of solutions, including by investing in nature. By doing so, it is helping to curb global deforestation, restore vital ecosystems, and help communities develop sustainably.

“Shell is the first in the industry to set near-term targets for the emissions of both its operations and its products. This is clear progress, but it also illustrates how much work remains to achieve Paris climate targets. We look forward to seeing further investment from Shell in these areas.”

On the road, Shell is making a wider range of transport solutions available to customers. The company is stepping up its investments in lower-carbon options, from battery electric vehicle charging to liquefied natural gas and hydrogen. For example, in Europe, customers can access 100,000 electric vehicle charge points through New Motion, a Shell company.

It is also investing in 200 new rapid electric vehicle chargepoints, powered by renewable energy, on its forecourts in the Netherlands, in addition to installing 500 ultra-fast chargers on Shell forecourts across Europe, in partnership with Ionity.

For customers who drive internal combustion engine vehicles, Shell is making it simpler for them to reduce their carbon footprint through low-carbon biofuels and carbon neutral driving.

From April, customers who fill up at a Shell service station in the Netherlands will be able to drive carbon neutral through the use of nature-based carbon credits. This will be done at no extra cost for customers who choose Shell V-Power petrol or diesel, while those who fill up with regular Shell petrol or diesel can participate for an additional one cent a litre.

Shell will roll out similar choices to customers in other countries, starting with the UK later this year.

CO2 emissions generated by participating motorists, and from the extraction, refining and distribution of the fuel, will be offset by carbon credits. As a major trader of carbon credits in the world, Shell buys the credits from a global portfolio of nature-based projects, including Cordillera Azul National Park Project in Peru, Katingan Peatland Restoration and Conservation Project in Indonesia and GreenTrees Reforestation Project in the USA.

Each carbon credit is subject to a third-party verification process and represents the avoidance or removal of one tonne of CO2.

Shell also plans to invest at scale in forests, wetlands and other natural ecosystems around the world, to reduce emissions and capture more CO2 while benefitting biodiversity and local communities.

A peer-reviewed paper co-authored by a number of universities and non-governmental organisations, including the Nature Conservancy and Wetlands International, estimates that even accounting for cost constraints, supporting such initiatives could reduce CO2 emissions by more than 11-billion tonnes per year by 2030. This is equivalent to the combined emissions of the USA and the European Union.

As a start, in the Netherlands, Shell and Staatsbosbeheer, the independent Dutch state forestry service, will plant more than five million trees over the next 12 years. “This collaboration enables Staatsbosbeheer to plant new trees in the forests following the death of ash trees affected by an aggressive fungal disease,” explains Sylvo Thijsen, CEO of Staatsbosbeheer.

Shell has also signed a deal with Land Life Company to create a 300-hectare reforestation project in Spain. Around 300,000 trees will be planted in the Castilla y Leon region by the end of this year. “We welcome Shell’s investment in high-quality nature-based solutions to address climate change and rebuild critical ecosystems,” says Jurriaan Ruys, CEO of Land Life Company.

“Combined with a technology-driven approach, reforestation can now be achieved and optimised at scale, maximising the impact of this investment.” The projects in the Netherlands and Spain are expected to generate carbon credits within five years.

In Queensland, Australia, Shell has established an 800-hectare endangered native forest regeneration project. In Malaysia, Shell and the Sarawak state government are jointly studying the potential for nature conservation, restoration, and enhancement venture for Sarawak’s natural landscape.
How we can break out of the productivity / technology trap

The tyre industry is a microcosm of the dilemma in which South African manufacturers find themselves, writes Jacques Rikhotso, manufacturing director at Bridgestone.

Many South African industries have been built on the back of abundant cheap labour. Mining is the obvious example, but the manufacturing sector has also been shaped by cheap labour. For many years, this was arguably a huge advantage, enabling us to become a world-leading mining country and also to create significant agricultural and manufacturing capabilities. But, in the end, it has had the unintended consequence of stifling investment in equipment and masking a skills deficit that will be very hard to overcome.

To understand the dynamics, we must remember that productivity is, at the crudest level, the relationship between output and input. Humans are still the most important input contributors, and so labour costs are a significant factor in the productivity equation.

In the developed world labour costs are high. South African manufacturers miners and farmers have used more people to produce the same number of units that a European or American manufacturer would do, while still managing to compete on price and often on quality. However, the much more expensive labour costs in the developed world, while causing short-term pain, have means that the business case for investing in the latest technology to make those expensive humans even more productive has always been strong.

By contrast, the business case for investing in up-to-date equipment has been weak in South Africa. If more output is required, more people are employed, usually a cheaper answer than better equipment. We have therefore remained a fairly labour-intensive market, which is good given our unemployment issues, but raises two daunting challenges.

Major investments are needed

We need to make major investments in equipment. In my industry, I would venture to say we are 15-20 years behind developed countries when it comes to the deployment of equipment. This was not too much of a problem for a long while because the old equipment was still cost-effective and could turn out the products needed at the right quality and price.

However, tyre technology has now moved on to such an extent that the old machines are not capable of producing the new generation of products.

Radialised agricultural and underground mining tyres and light weight tyres for electric cars, for example, represent significant advances in tyre design. Current machinery cannot be adapted to produce them; and a substantial investment in new equipment will be necessary.

Another factor is that industry dynamics have changed over the years. The arrival of cheap, mass-produced tyres from the Far East means that in many instances, fleet owners are no longer re-treading existing tyres but rather purchasing cheap new ones.

To compete, local tyre manufacturers need to move upwards on the cost curve by investing in technology that is less electricity-intensive, uses minimum labour and requires maintenance in order to compete with high-volume producers.

Because our investment in equipment has been so low for so long, we are not talking about incremental investment but something much more significant in many areas at once.

This massive new wave of investment will not be restricted to manufacturing equipment. High-tech data-driven modern equipment associated with the 4th Industrial Revolution will also require factory layouts to be revamped in order to accommodate new IT infrastructure and robotic capacity. This is essential to be able to compete in the longer term.

Skills development

We need to make major investments in skills, both at the corporate and national levels. New technology will create a need for a new generation of skilled operators.

These machines require totally different skills because dexterity with gears and levers is making way for skills on touchscreens, the ability to type and, crucially, to read and action screen-based instructions quickly. Sadly, many of the cadres of experienced operators will not be able to reskill and companies will need to give serious thought to their future. However, in Bridgestone’s experience, the younger generation of operators has the potential for reskilling on modern machines, and we are already busy with that process.

Being part of a global group is an advantage because our regions are all at different stages of industrial development, and some have undertaken a similar journey into the modern era. Our Japanese factories, in...
Bell wins Exporter of the Year awards

Bell Equipment won Exporter of the Year Award (Large category; turnover > R200-million) and was runner-up in the Exporter of the Year Africa Award (turnover > R100-million) at the inaugural Exporter of the Year Awards for capital equipment manufacturers held in Johannesburg at the end of May.

Bell Equipment achieved this by exporting its products to over 80 countries worldwide. “Exports account for about 40% of turnover and our exports increased year-on-year from 2017 to 2018 by 19%. We’re also proud that our exports have 70% local content and we are always looking at ways to increase this,” explains Stephen Jones, Bell Equipment director: global product portfolio and marketing.

“Manufacturing is one industry that has the single greatest potential to make a massive difference to our economy and level of unemployment,” says Jones. “We appreciate the attention that the Expo and the Exporter of the Year Awards have focused on the sector and are proud of the role we have played.”

A collaboration by the South African Capital Equipment Export Council (SACEEC) and Specialised Exhibitions Montgomery, the awards formed part of the Southern African Local Manufacturing Expo.

Eric Bruggeman CEO of the South African Capital Equipment Export Council (SACEEC), says the Expo is the perfect showcase for the vast array of products available from local manufacturers. “There is a wealth of talent in Southern African manufacturing and SACEEC is thrilled that the industry is being placed in the spotlight. The Awards allow us to recognise the supreme efforts invested by local manufacturers. There were a large number of entries, all of which are notable for their focused drive to provide products that are characterised by out-of-the-box thinking, with and careful and systematic attention to detail. Selecting the finalists, and later the winners, was an extremely hard task since all qualifying companies have excelled in their respective fields of expertise.”


From page 10
How we can ...
Wood-Mizer weaves its spell on the international stage

Wood-Mizer unpacked the largest range of products ever exhibited by the company at Ligna 2019, a move that underscores the company’s drive to provide a complete timber processing solution, from forest to final form.

The equipment on show included machines for micro, small and medium sawmillers and manufacturers through to industrial scale solutions. The company says its range is suited for primary and secondary wood processing purposes and improves efficiencies, opens niche markets, and extracts better value from timber while conserving energy.

Planers and moulders

Wood-Mizer introduced its new woodworking series of planers and moulders to the thousands of people who visited the show. These machines drew interest from furniture and solid wood products manufacturers and sawmillers looking to increase the value of their dried timber.

The woodworking machine range included the MP160 planer/thicknesser, MP200 planer/moulder that can plane and profile timber on two sides in a single pass, the versatile MP260 and the MP360 four-sided planer/moulder range, the MF130 universal spindle moulder with a 270° operating capacity and the MS300 rip saw.

Log and board saws

Affordability is important for business owners and Wood-Mizer’s LT70 and LT40 saw systems were joined by the new LX50 for sawmillers with a limited budget. The LT15Start that offers ultra-compact quality sawing capacity and the LT15Wide that can accommodate large diameter logs up to 900mm wide received a lot of attention from the crowds.

On the professional side, Wood-Mizer’s LT70Wide that can accommodate the maximum log diameter of 105cm, made a big impression. The standard LT70 can now be fitted with a Wide head that increases the maximum width of cut to 86cm for larger logs and produces wider boards and up to 78cm wide cants.

There was much interest in the new profiling and planing machines from Wood-Mizer.
Wood-Mizer Woodworking Machines
Unleash your Creativity!

**MP360**
Planer Moulder Range
Four-sided planing & moulding

**MP200**
Two-sided Planer Moulder
Two-sided planing & moulding

**MF130**
Universal Spindle Moulder
Vertical & Horizontal Spindle Moulder, Router, Mortise & Tenoner

**MP180**
Thickness Planer Range
Thicknessing & Planing

**MS300**
Table Saw
Made in Sweden

From the Leader in Thin Kerf
Narrow Bandsaw Sawmilling Technology
Innovating technology for forests to final form

Wood-Mizer Africa (Pty) Ltd
1 Leader Park, 20 Chariot Street, Sterenhill Ext. 6, Rodepoort, Johannesburg, South Africa
Tel: +27 (0) 11 473 1313  |  enquiries@woodmizerafrica.com
www.woodmizerafrica.com
The standard LT70 can be configured with the Wide non-belted blade wheels to run the Wide 50mm blades. These wheels and blades are available for the regular head width or the Wide head.

Several years ago, Wood-Mizer introduced the new Titan wideband sawmill range for high volume industrial sawmilling applications. Three units from the Wood-Mizer Titan stable represented the range at Ligna 2019. They were the:

- WB2000 wideband saw that features heavy-duty construction, low maintenance requirements, and efficient operation;
- EA3000 optimising board edger, whose sensors allow the edger to scan boards and make the most out of slabs of varying widths; high capacity EG800 multi-rip edger, a robust machine that edges material up to 100mm thick.

Blades and Knives

Ligna visitors also had the opportunity to view Wood-Mizer’s burgeoning range of blades and knives.

The range now includes:
- multi-rip, ripsaw, cross-cut and framesaw blades,
- planing and profiling knives
- narrowband and
- wide band saw blades.

With more than 2,000 available items in stock, the continuously expanding product range covers a wide selection of sawblade sizes and applications.

Wood-Mizer says the trade fair underscored the company’s worldwide reputation as a leading supplier of reliable and quality timber processing solutions for entry-level through to industrial sawmilling and manufacturing applications.

Wood-Mizer unpacked the largest range of products ever exhibited by the company at Ligna 2019.

Berneck sawmill orders 32 kilns from Hildebrand-Brunner

Berneck conducted careful research and a series of technical studies and trials before selecting Hildebrand-Brunner.

The order consisted of 32 kilns with a holding capacity of 200 cubic metres each for drying Pinus elliottii and Pinus taeda. Their features include the most advanced control systems and the Hildebrand weight precision technology (HWPT) that was officially launched at Ligna 2019.

Hildebrand-Brunner says this game-changing measurement system provides precision that was previously unknown. It combines the weight of all lumber stacks with conventional lumber moisture measuring methods. In addition to the high levels of accuracy this technology brings, it is easy and practical to implement, since the measurement is done by “electronic bolsters” and is completely wireless.

About Berneck

Berneck Sawmill is a Brazilian company with almost 70 years of history. It specialises in the production of Particleboard, MDF and HDF panels, and sawn Pine lumber. All of its industrial plants have high production capacities and are fitted with cutting-edge technology.

The raw materials come from plantations and are destined for markets that include the furniture, civil construction, automotive, electronics and packaging industries, among others, in Brazil and abroad.
Since its establishment in 1952, the Company has contributed to the social and economic development of its employees through the improvement of human capital and innovative and sustainable products.

About Hildebrand-Brunner

The kiln manufacturer went into business 70 years ago and has built an international reputation as one of the leading manufacturers of drying kilns in the world. The company says it has fundamentally re-shaped the timber drying industry with its ground breaking ideas and patents.

The product range includes conventional fresh air/exhaust air dryers, steamers and special kilns, the world's largest vacuum dryer HIGHVAC and the unique HCK-Alexander, the allrounder among continuous kilns.
Holtec presents an expanded range of products and services

Holtec, the developer and manufacturer of technologies for the wood-based panels and sawmill log yard, mill infeed, materials handling, value-adding and related industries, exhibited its services and products in two halls at Ligna 2019.

The company promoted its full range of products and services as well as its innovations for the Ligna theme of Industry 4.0. These included introducing its ability to provide remote service assistance to operators and maintenance engineers via data glasses, system simulation and electronically supported spare part catalogues.

Holtec was established 40 years ago and has designed and installed over 300 log yards, which makes it a world-leading supplier of sawmill log crosscut systems, sorting lines and mill in-feeds.

The product portfolio includes log handling for the production of veneers, plywood, wood pellets and biomass. Its electrical controls and switchgear systems let it provide solutions for integrating debarkers, butt-reducers, and scanning and optimisation systems.

10 years of Chain-less log handling

More than 10 years ago Holtec made waves in the industry when it introduced its Chain-less drive technology.

Not a lot has changed over the last decade as sawmills are still battling to reduce operating costs by managing their maintenance, repairs, and downtime.

The Chain-less system has no chains and hydraulics that need constant monitoring and maintenance. With its nearly wear-free step-feeder technology and crankshaft-driven electrical drives, the system reduces operating costs and increases throughput to up to 50 logs/min.

Cross-cutting timber packs

Since inception, Holtec has supplied over 8000 package cross-cutting saws that are designed to meet each customer’s
individual needs. Udo Hörnchen, technical director at Holtec, says cross-cutting offers reliable solutions for product finishing and value creation after sawing.

“The tough market conditions make it essential for sawmills and wood suppliers to be flexible with short reaction times to compete successfully. Storage is expensive and it is necessary to plan production to ensure quick turnaround times, short-term storage and just-in-time deliveries. Timber suppliers or bulk timber manufacturers need to add value by being able to offer non-standard lengths,” says Hörnchen.

New Multisaw cross-cutting system

Holtec covers the whole range with its package saw technology, from a mobile machine to its high-performance systems. Hörnchen says that when a machine with only one cutting unit has to cut more than 200 m³ of timber a day then it has effectively reached its limit.

“For this demand, the new Multisaw has been designed. The modular system can be equipped with up to six cutting units, which can be positioned individually. Up to five single packages with individual lengths can be produced at the same time”, explains Hörnchen. “So we are able to divide a complete timber pack into five short lengths within less than 3.5 minutes.”

Contact Nukor for more information on Holtec’s products and services.
LIGNA 2019 created a fertile climate for future investment

LIGNA 2019, the world’s leading trade fair for woodworking and wood processing plant, machinery and tools gave a considerable boost to the wood sector, paving the way for future investment

Smart, futureproof solutions were at the top of the agenda, and it was clear that technology users are now "getting smart" and embracing digitisation and automation.

A major emphasis was placed on integrated solutions that enable businesses of all sizes, from niche woodworking firms to large-scale manufacturers, to meet current market demands and prepare for future challenges.

"Ligna has underscored its reputation as the global woodworking and wood processing industry's definitive event, and the place of choice for unveiling the latest innovations," remarked Deutsche Messe managing board member Dr Andreas Gruchow.

"A total of 1500 exhibitors from 50 nations presented their impressive solutions for the future, making innovations tangible and easy to grasp for users from every industry of the sector, on a scale unrivalled throughout the world.

By focusing on digitisation, automation, robotics and revolutionary surface technology applications, Ligna’s exhibitors played a large role in driving technological advancement. Technologies considered to be visionary at the previous Ligna have now become reality," he said.

"Ligna 2019 demonstrated that we have taken a big leap forward in the direction of digital wood processing, and that interest in advanced technology is running high throughout the world," commented Pekka Paasivaara, president of the German Woodworking Machinery Manufacturers’ Association, CEO of Homag Group and member of the board of management of Dürr.

The numbers:
- 1 500 exhibitors from 50 countries
- 90 000+ visitors from 100+ countries
- 40 000+ trade visitors arrived from outside Europe
- 50% of visitors rated the importance of Industry 4.0 as being high to very high
- 40% of visitors were either upgrading their existing machinery or considering the purchase of new machines to reap the benefits of Industry 4.0 technology.

"It is amazing to meet up with so many customers from around the world interested in making capital investments. The new solutions on display are relevant to small firms and large industrial processors, alike. This gives us all good cause for optimism."
The innovations and trends

- Automation and integrated systems
- End-to-end digitisation, from idea, to design, to production and monitoring
- Robotics technology is becoming the norm in all forms of industrial manufacturing
- Surface finishing is integrated into the overall production system
- Automated guided vehicle systems are optimising materials flows

- Advanced central system control modules are intelligently gathering and managing the data quickly and efficiently
- Cloud-based data management is a reality
- Accessibility of production data is making preventive maintenance and production planning more efficient
- Standardised P&W (Plug & Work) communication protocols for most woodworking machines will be available next year
- Virtual and augmented reality, most notably the use of VR
headsets and tablets to control forestry machines, visualise work-steps and woodworking machine states are increasing

- High-performance sensor systems for material detection in primary processing
- A new generation of self-learning scanner technology that represents an exciting initial implementation of artificial intelligence (AI) in woodworking
- Software that can generate challenging decorative laminate layers, such as stone-look, in a single pass while maintaining a high level of quality
- World premiere of a six-axis aggregate that can process work-pieces on all sides without repositioning
- A membrane press that can handle curved and uneven surfaces
- Spotlight on climate change and the environment
- Forestry 4.0: digital machine integration, supply chain tracking, timber flow and logistics management, apps for various in-forest operations

The next LIGNA will run from 10 to 14 May 2021 in Hannover.
PG Bison commissioned a Bruks horizontal-feed disc chipper a few years ago when it began the next phase of major investments at its Boksburg plant in Gauteng, and the machine is proving to be one of the productive drivers of the success of the project.

PG Bison manufactures and upgrades wood-based panel products and produces sawn timber and poles. It supplies the building and furniture industries across South Africa and sub-Saharan Africa.

The multi-million rands upgrade to the modern medium density fibreboard (MDF) press and hi-tech gloss UV-line at the Boksburg plant produces more volume, which in turn, consumes more raw material. This required an increase in throughput from the existing flow of wood chips from its log yard to keep the line continually fed.

After an intensive period of research, that included finalising a precise list of customised specifications based on the quality and infeed requirements of the new equipment, the company confirmed the order for the Bruks chipper with Nukor Sawmilling.

Raw materials

During a recent visit to the Boksburg mill’s log yard by WSA, Cobus Richter of Nukor described how PG Bison’s technical team worked closely with Nukor, the Bruks engineers in Germany and locally appointed civil, electrical and mechanical engineering contractors. “Highly accurate measurements and compliance with strict project management deadlines were of the essence,” says Richter.
“An important aspect of designing the machine was the need for unique mechanical elements to be added to the chipper. The reason for this is the incredibly variable mix in wood densities, moisture content, diameters, and straightness of the eucalyptus logs arriving at the mill,” explains Richter.

“PG Bison’s state of the art production process requires wood chips with uniform and precise geometries to ensure an efficient throughput of quality raw materials.”
For MDF, pulpwood generally needs to have a high density and the Boksburg facility prefers old growth rather than younger trees. Some logs are sourced from PG Bison’s own forests, but the majority are supplied by independent contractors from Mpumalanga. The logistics of monitoring and evaluating the quality of the trees, safe harvesting and infield practices, loading and road transport to deliver at the right time is managed by the mill.

While Bruks manufactured the chipper according to strict design specifications in Germany Nukor completed the civil works without impacting on the existing chip production process. When the machine arrived, Nukor was responsible for assembly and the installation took place in 2017. They had about four weeks to complete this process, two weeks to connect and fine-tune the electrical systems and another week to get it up and running at full capacity. This hard work and careful planning ensured that there was no chip production downtime in the switchover from the old system to the new.

“With projects of this nature, there are often hiccups along the way, however, the honest communication between the project team members meant that any issues could be sorted out immediately. The Bruks engineers visited several times to assist in the refinement stages. In fact, the machine was successfully switched on a day ahead of schedule,” comments Richter.

The Bruks disc chipper produces high-quality wood chips that meet the exact specifications stipulated by the client. “The Bruks product range includes small diameter discs and extends to high-capacity chippers with disc diameters of up to 3.0m and 2,500kW of installed power. Bruks horizontal-fed disc chippers can process up to 650m³ of chips per hour, with adjustable chip lengths from 20-50mm. Options are also available for different knife arrangements.”

**Maintenance**

All the larger disc chippers from Bruks have a knife holding system to make handling the knives as easy and safe as possible. The knives are fitted in two sections and mounted in cassettes so that light-weight knives can be used.

Rheimus Phefudu of PG Bison showed WSA how well designed this system is. When knives need to be changed, the chipper hood is raised hydraulically.

To maximise safety, Phefudu explained, it is locked while the chipper disc is rotating and cannot be opened until the disc has come to a dead stop. Additionally, the chipper cannot be restarted when the hood is open.

Once removed the knife length can be adjusted using screws prior to fitting, which ensures the correct knife length as well as fast and easy knife changes. Chip length can be altered by changing knife shims and moving the disc. Jimmy Sibanyoni is PG Bison’s highly experienced knife doctor and setter and WSA watched as he deftly demonstrated his skills.

The “knife” doctor, Jimmy Sibanyoni, makes easy work of precisely setting the knives.

Rheimus Phefudu of PG Bison demonstrates how to safely change the chipper’s knives.

The “knife” doctor, Jimmy Sibanyoni, makes easy work of precisely setting the knives.
“All wear parts on the chipper are generously dimensioned and easily exchangeable. Bolted wear plates in sections protect the chipper’s in-feed side of the disc and their fittings make them easy to exchange when needed. The same applies to the bolted wear plates on the base and side of the feed chute.”

**Modifications**

Richter says a few modifications were required to mitigate against downtime and increase output. “The chipper is fitted with twin drive motors and an integrated soft starter. This means the energy needed to stop and start the motors is less than that of a single larger motor, and in the worst-case scenario, the machine can run on one motor.”

Additional innovations include an inline metal detector and wash bay. The old growth timber has had many uses over the decades and WSA was appalled to see the nails, snares, barbed wire, fencing, and other objects embedded in the stems that could badly damage the cutter knives and disc.

The wash bay is a simple yet effective mechanism for removing abrasive soil, stones, loose bark, and residues from the logs before they enter the chipper.

By far the most unique adaptation, according to Richter, is the development of a hydraulic turning infeed device. Many of the logs are slightly bent, twisted, or tapered. Excessively twisted logs are rejected. Logs that meet specification are securely gripped by the infeed device and the logs are fed smoothly and efficiently into the chipper.

**Quality**

As the leading manufacturer and primary upgrader of wood-based products in its chosen markets, PG Bison implements strict procedures for all staff, contractors, and visitors. These policies and procedures support the company’s quality and environmental system principles of OHSAS 18001 and ISO 14001.

PG Bison’s main focus is the production of particle board and MDF. These are then upgraded and sold under the company’s well-known brands:

- BisonBord interior grade premium quality
- Particleboard
- SupaWood MDF
- MelaWood durable, scratch and moisture-resistant melamine faced board
- MelaWood SupaGloss
- MelaWood SupaTexture
- MelaWood SupaMatt
- Formica LifeSeal work tops
New Mebor line cuts D-class logs at Bracken Timbers

The business environment of a sawmill is tough; however, it is possible to counterbalance increasing production costs by manufacturing higher-priced value-added timber products, and this is exactly what Bracken Timbers set out to do.

Bracken Timbers is a 43 years old sawmill situated near Greytown in Kwa-Zulu Natal. George Johnson, the sawmill and charcoal director at Bracken comments that South African sawmillers are feeling the pinch: “The economy and the current state of the construction industry are major factors, and the minimum wage is also a concern for less mechanised mills such as ours.”

Johnson says, “Bracken Timbers has always felt that we can do more with the well-pruned trees that are in our 30-year rotation plantations and those of our suppliers’ forests, especially the D-class base logs.”

The search was on for a solution that could cut with the taper of the log to get the maximum recovery and produce quality boards. “We searched for a machine to cut 30m³ of logs per day and logs that are bigger than 600mm diameter when they are available in our plantations,” explains Johnson.

“We looked at a number of different options and spoke to various equipment suppliers. After he visited the Mebor factory in Slovenia Lawrence Hill convinced us that the capabilities and robust design of Mebor’s horizontal saws and multi-rip board edgers were the best options for us.”

Lawrence Hill is the owner of Hill Equipment that operates from Sevenoaks & Pietermaritzburg. He and his wife Paula have been in business since 1999 when Hill combined his forestry background with his interest in machinery to start manufacturing products for the forestry industry.

“We try to source products from family owned and run businesses,” says Hill. “We supply high quality, easy to use, simple to maintain equipment that is great value for money.” Today the company supplies winches, firewood making equipment, timber grabs, rotators, grapples, hydraulic cranes and now sawmilling equipment.

“Although a number of sawmills are no longer operating, the remaining sawmills are facing socio-economic business challenges and are competing to get maximum recovery and value from the reduced volume of log supplies,” explains Hill. “We have found that more than 80% of our customers are processors of timber and this is why we are moving in the direction of sourcing and supplying products that can fulfil their requirements.”

Hill says he agreed to supply and service the Mebor range of machines because he visited the family-owned factory in Slovenia. “In 1982 the company’s founder Boris Mesec designed and built the first Mebor band saw and put it to the test in the family’s sawmill. This means they understand the needs and problems of sawmills,” explains Hill.
George Johnson, Sawmill and Charcoal Director at Bracken Timbers.

“They were the first to make a fully automatic horizontal band saw and some of their innovations have had a direct influence on the industry. I was impressed with the quality of their products and their pricing. These machines are good value for money in Southern Africa.”

Bracken Timbers settled on purchasing the Mebor HTZ 1200 Plus band saw which cuts logs with a maximum diameter of 1250 mm and can process between 30 and 65 cubic metres of timber per eight-hour shift. It is paired with the Mebor VR 900 multi-rip board edger.

“Admittedly we took a bit of a risk, but we did our homework and all the critical spare parts are available in South Africa. The line was installed earlier this year and after two months of production we are impressed with both machines,” says Johnson.

The Mebor machines make up the third processing line at Bracken Timbers. The mill is still using its two Linck framesaws installed many years ago. The main line consists of a Linck, a board edger and cross-cut saw. In the second line logs pass through the frame saw and others are processed by the Hyper twin band saw followed by a Multisaw multi-rip and the Multisaw auto-edger.

The framesaw and twin band lines are designed for the structural lumber market with a small percentage of the clear or semi-clear products recovered in the dry mill. Johnson says the reason for the Mebor line is to try and extract maximum value from the pruned butt logs only.

“The recovery with the framesaws is still fairly good but it is difficult to compare recoveries because the log diameters are not the same on all the lines. Generally, we cut C and D-class logs on the main framesaw line, C and B-class logs on the second frame saw line and B and A-class logs on the twin band saw line. Only D class logs with a maximum length of 4.2m are cut on the Mebor line at the moment so it is impossible to make a fair comparison.”

The large logs come from Bracken’s own plantations and from private growers in the area who have thinned and pruned their trees correctly from an early age. “Almost all our harvesting is done by our own teams, using motor-manual methods as far as possible. Employment creation is critical to our district and our country,” Johnson says.

The P. patula and P. elliottii base logs are sorted apart from the other sawlogs in-field because of their size and transported separately to the mill. The logs
New Mebor line ...

Each board is optimised by the Mebor VR 900 multi-rip board edger to get maximum value recovery.

are not debarked and log measuring is done manually by a tally clerk. This is in contrast to the main mill, where all logs are debarked and scanned with Multisaw scanners.

A three-wheel loader loads the logs onto the log deck which feeds them into the wetmill infeed system. The reason for handling the large logs in this way is because the Mebor line is totally separate from the main mill and Bracken could not justify the expense of a log scanner and debarker for the volume of 30 cubic metres per shift.

There are 20 employees working on the new Mebor line, which is consistently producing 30 cubic metres per eight-hour shift. “The HTZ 1200 Plus horizontal wide-band saw can cut softwoods or hardwoods up to a maximum diameter of 1250mm but we haven’t had those kinds of logs to test yet,” remarks Johnson.

The planks are individually optimised by the VR 900 multi-rip board edger to get maximum board value recovery. They are then stacked and transported to the kilns for drying. Bracken has eight brick kilns and seven state-of-the-art TFD aluminium kilns, which are controlled by sophisticated computer programs and pneumatic systems.

The dried planks from lines one and two are unstacked into the dry mill where defects are removed using computerised optimising equipment. Cross-cut saws trim the planks to standard lengths and depending on requirements, they may be planed all round or moulded and then bundled in set quantities.

The Mebor line’s clear and semi-clear boards are bought by joinery, cabinet and furniture manufacturers for secondary processing. The core boards go to the structural and industrial markets.

Hill says he agrees with Johnson that two months is not long enough for a proper evaluation. “I am however impressed by the higher value recovery and increase in productivity achieved thus far.”
American hardwoods. Endless possibilities.

Architects and designers all over the world have embraced American hardwoods for the range of colours, grains and textures they offer, as well as for their consistency in grade, quality and supply and their sustainable credentials.

For more information visit www.americanhardwood.org
Biesse celebrates the future of 50 years of history

The Biesse Group turns 50 this year and is celebrating with a programme of events dedicated to its customers, with a single common denominator: the future

The international footprint provided by 13 Biesse Campuses and more than 30 showrooms reflects one of Biesse’s most important goals: ‘to be anywhere in the world, wherever the customer needs us.’

“Our 50th birthday is a starting point, and not an end point. Over the course of this year situations, results, vibes and decisions are coming together to give us the real balance of this anniversary. Rather than a rote celebration of the past, we want this to be a moment for looking ahead, a ‘declaration of intent’ regarding the many things we hope to do in the future as a company and as a multinational group’, explains Raphaël Prati, the corporate marketing communications director.

In South Africa Biesse is represented by Austro Engineering, and its CEO, Trevor Williams, commends the company on its achievements. “On behalf of the staff of Austro and our clients who have invested in the Biesse’s exceptional range of machines, I wish to congratulate Biesse on its achievements over the past half century and we look forward to the next 50 years of partnership in innovation and business growth,” says Williams.

New headquarters

The eagerly awaited inauguration of the Ulm Campus, the new headquarters of Biesse Deutschland, represents another of the ways in which Biesse is turning its attention to tomorrow and is the end result of one of the most strategic investments in the recent history of the company.

This new 6000 square metres facility has been christened as a campus due to the host of educational, training and exhibition activities it offers.

This includes 1600 square metres of floor space filled with new and innovative machines and systems, software and internet of things (IoT) solutions.

Sydney and Moscow

In February this year, the company opened the Biesse Group Sydney Campus, a showroom spanning 2000 square metres dedicated to the latest innovations in the processing of wood, advanced materials, stone and glass.

Following the grand opening of Biesse Deutschland in Ulm, Germany, which is set to take place from 24 to 26 October 2019, the Biesse Group Moscow Campus will also be inaugurated.

This facility occupies more than 2000 square metres and consists of a showroom of more than 1000 square metres where demonstrations of advanced Biesse technologies will be performed.

In addition to offices for staff, the space will offer areas for customers and partners to enjoy events, discussions and training.
Where it all began

The company was founded by Giancarlo Selci in 1969. Today his vision is carried forward by the present CEO of the group, Roberto Selci who has succeeded in strengthening the company by surrounding himself with people with strategic skills and expertise, thus increasing the knowledge and technology within the company. Biesse machines revolutionised the Italian furniture market with solutions that served to set new technological standards in the industry. In just a few years, the company became an integral component and driving force within the national furniture industry.

In 1989, the opening of the company's first foreign subsidiary marked the beginning of an intensive process of internationalisation.

Biesse says this process was a journey marked by ambitious decisions, partnerships and investments in research, which enabled the company to create cutting-edge machinery.

This was not limited to the wood sector, and extended to machines for processing glass, stone, technological materials and metal, along with high-tech products designed by the Group’s mechatronics division and machining tools.

International expansion

Today, Biesse is an international group of companies specialising in technologies for processing wood, glass, stone, plastic, and metal. This expansion is based on its philosophy that technology is innovation, and that in turn, innovation is only truly possible if a company has a future focus on what it can create based on what it can conceive and imagine.

It invests an average of €14 million per year in research and development, boasting over 200 registered patents. The company operates through soon to be 13 industrial sites, 39 branches, and 300 agents and selected dealers and exports 90% of its production.

“The future is a guide for innovation and brings it to life,” explains Frederico Broccoli, the wood division sales director who believes that every innovation developed by Biesse over the course of its history was inspired by the future.

“We are guided by what the market demands, and will continue to develop software, promote our international growth, and increase the flexibility of our machines and business units,” he comments.

The future

“None of this is possible without our employees who are an especially important part of our investment. For years, we have hired new employees and continue to invest in them and our service technicians to further develop their skills. We founded the Biesse Academy specifically for this purpose and to ensure that all installed machines and equipment worldwide function smoothly.”

Paolo Tarchioni, Biesse’s innovation director, is convinced that the IoT, robotics and artificial intelligence are and will be key players in a continuously evolving world.

When asked what role the new technologies play in designing business strategies, Tarchioni says the answer lies in harnessing them to develop new services and make decisions based on the results of algorithms that process millions of data in just a few seconds. “However, all of this can only create value if we maintain the central role of humans, who must play an increasingly decisive role in data interpretation.”

“We believe in the future and in the work of the people who, over these 50 years, provided crucial support for the international growth of Biesse. Which is why we wish to dedicate the 50 years of Biesse to the future and to those who have made Biesse the Group it is today,” says Prati.

“Our 50th birthday is a starting point and not an end point” – Raphael Prati

“The future is a guide for innovation and brings it to life” – Frederico Broccoli

Biesse is a “Best Managed Company”

For the second consecutive year, Deloitte recognised the Biesse Group to be among the Best Managed Companies (BMC) in Italy for having distinguished itself with its entrepreneurial passion, organisational ability, strategy, performance and sustainability.

The differentiating factors Deloitte uses to select the BMC companies reflect the assets on which the Biesse Group is strongly focused, namely product and service innovation, IoT, process automation, customer relationship management, and the investments made in recent years.
Solutions in digital dimensions from Leitz

Thousands of visitors took the opportunity to inform themselves about developments and innovations in the fields of tool technology, intelligent tool systems, digitisation and services at the Leitz booth at the Ligna trade fair in Germany in May

Ligna is the most important exhibition for the woodworking industry and the Leitz stand is always a must-see at the fair. The core of this year’s presentation was the LeitzXPert service concept. This is the company’s new online-support platform that uses a software app to deliver production-relevant data about the tools used directly to the user’s workstation.

At the click of a button personal contact can be made with a technical expert, service intervals can be checked, and stock availability of tools and spare parts can be viewed. These are significant features offered by the digital service package.

Jürgen Köppel, managing director of Leitz, explains: “For Leitz, as the world’s leading manufacturer of precision tools and tooling systems, Industry 4.0 is not only a trend but also a practical solution to support and relieve customers. With the development of LeitzXPert, our goal was to create an intelligent app that provides customers worldwide and around the clock with tool-specific Leitz know-how in real time to optimally support them in solving their manufacturing challenges.”

Leitz is constantly researching and developing new technologies and ways of improving its existing tooling ranges. Another key system highlighted at Ligna was the latest versions of the ProfilCut Q Plus and ProfilCut Q Premium Plus with re-sharpenable, diameter- and profile-constant cutting edges. These are made for the window construction industry however they are also perfect for companies that process solid wood, plastic or MDF panels.

The reason for these new developments is the manufacturing cost of disposable knives for profiling. The Leitz solution is the ProfilCut tools system that enhances high productivity.

Due to the high speeds, large quantities of material can be processed quickly and cleanly. A further advantage is the efficiency of the system, which significantly minimises setting and set-up times due to its diameter accuracy after sharpening.

“All of Leitz’s products, new developments and services are aimed at optimising the productivity, efficiency and flexibility of our customers. The great interest in our products and the positive feedback at the trade fair show us that our market agrees with us,” says Köppel.

“In the early 90s Leitz manufactured the first ‘smart’ tool with a chip inside. However, during recent years the awareness and joint approaches significantly increased the speed of development. Industry 4.0 is one of the main drivers in our industry following the megatrend of digitalisation and connectivity. Each country has developed its own model, but the basic concept is the connectivity of machinery, tools and other involved components, and this is and will be the competitive key for all manufacturers,” he says. “Small and medium enterprises are directly involved in this process, as Industry 4.0 makes no distinction in this respect. It should be adopted by all successful companies because those who fail to do so are running the risk of falling behind.”

The Leitz shareholders and management are pleased with the outcome of the show as they say it has once again confirmed and strengthened the company’s leading international market position. They expect further positive developments in the coming months, despite the economic challenges.
P&W common language standard coming in 2020

Eight European woodworking machinery manufacturing giants plan to enable machine communication between their brands in 2020.

The magic words used globally in boardrooms and at operational levels today are “efficiency”, “competitiveness”, “integration” and “flexibility”. Southern African manufacturers are finally beginning to realise that their sustainability is dependent on flexible and integrated processes throughout the business.

Production in the woodworking industry is demanding increasing digital manufacturing processes to gain efficiency and competitiveness through integrated data management and analysis. This means that woodworking machines need to be connected to each other and form a production network linked to some form of enterprise management system or cloud.

The magic words:
Efficiency; Competitiveness; Integration; Flexibility.

Without a standard communication protocol connecting machinery from different suppliers, software programming is always required, thus affecting efficiency and costs.

For this reason, eight leading European woodworking machinery manufacturers:

- Altendorf
- Biesse Group
- Bürkle
- Homag
- IMA Schelling
- SCM
- Weber
- Weinig

have formed a working group to define a common language that enables seamless communication between machines of different brands. The working group is driven by Eumabois and VDMA.

The framework for the new standard called Plug & Work (P&W) was launched during Ligna this year. This project is unique in the woodworking industry and is based on the Open Platform Communication Unified Architecture (OPC-UA) standard. The standardised semantic architecture is promoted by the OPC Foundation, an international non-profit organisation.

The P&W working group is also cooperating with machine tool manufacturers that are collaborating to develop a specific language named Universal Machine Tool Interface (Umati) that will be dedicated to machine tools.

The plan is to finalise this ambitious and challenging project in early 2020, and it is good news for manufacturers.

They will be able to customise their production processes by selecting the combination of machines they need from different suppliers rather than opting for a compromise line from a single supplier.
Kleiberit’s 510.3: Holding its own

The use of engineered wooden building materials in South Africa is becoming increasing popular, as sawmills and finger jointing specialists look for cost effective alternatives to using solid timber.

For polyurethane reactive (PUR) adhesive specialist, Kleiberit, this has led to the development of its new 510.3 PUR adhesive, designed specifically for load bearing wood construction.

Certified to meet the requirements of both the South Africa Bureau Standards (SABS) and the South African Technical Auditing Service (SATAS), the newly launched PUR adhesive is a tried and tested alternative to traditional melamine-based glues and boasts an impressive list of benefits designed to improve manufacturing efficiency.

Bradly Larkan, general manager for Kleiberit South Africa, explains, “Using conventional melamine-based products to join load bearing wooden building elements is an extremely slow process. This makes it a costly option when you consider the time and processing requirements needed. As well as being formidably challenging to handle, users need to allow for an extended curing time and in some cases, a specialist curing chamber to achieve the desired results.”

Kleiberit’s 510.3 single component PUR adhesive reduces production time considerably. It is easy and clean to handle and the resulting light-coloured glue joint reduces the downtime and labour costs associated with cleaning. It has a very high bond strength, which makes it suitable for a wide range of challenging applications in both small and high-speed production environments.

Curing rates are also faster. Non load-bearing applications are ready in as little as three hours while load-bearing applications from 4.5 hours. The standard formula of Kleiberit 510.3 has a prolonged opening time of up to 60 minutes which, if needed, can be adjusted to suit individual requirements and special applications.

“This is a big selling point for the 510.3 PUR and one that is proving popular with those using engineered woods such as laminated construction timber and laminated beams,” explains Bradly.

“Adjusting the open time of the glue can be done while still maintaining the product’s certification. Instead of the formulation changing, it’s just the action speed that is altered, allowing us to adhere to the strict standards placed on products designed to bond load-bearing building components. This offers our customers complete flexibility and control over how they use their adhesive and the different applications it’s applied to.”

Suitable for surface bonding where the glue is applied one-sided with appropriate sealed application equipment, or application via a finger-jointing machine, Kleiberit’s 510.3 has a reduced coating weight of just 100 grams per metre compared with that of formaldehyde-based products weighing in at 350-400 gram per metre. The promise of using less than three-quarters of the amount of adhesive traditionally needed during the manufacturing process addresses the on-going issue of continuous volume and cost reduction in the industry.

Bradly adds, “Kleiberit has been driving innovation in the adhesive sector for 70 years and our experience allows us to offer much more than new products. We give our customers a comprehensive service designed to help them improve their manufacturing efficiencies.

“Our South African technical sales team have over 15 years of experience in the wood construction industry and we have built long-standing relationships with machinery manufacturers and the technical specialists behind the latest nozzle and pump application systems,” he explains.

“This means that when customers buy Kleiberit products from us or our South African distributor, Austro, they receive a complete package of technical experience, industry knowledge and adhesive know-how. This, along with our continued investment in product development, allows us to produce new and innovative ways to offer value-added products to the industry.”

To find more out about Kleiberit’s complete range of PUR products please visit www.kleiberit.com.
KLEIBERIT 510.3 – 1C PUR adhesive fibre free

Load Bearing Wood Construction

- finger joint bonding of load bearing wood components
- meets SANS 10183-2 service class S3 requirements
- stress group D4 according to DIN EN 204
- different open times to meet specific production conditions

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Striebig scores at Ligna with Vertical 4.0 Solutions

Striebig, the vertical panel saws specialist, demonstrated its latest digital automatic cut-to-size technology that it calls ‘Vertical 4.0 Solutions’ at Ligna.

Striebig specialises in designing and innovating vertical panel saws. It offers a comprehensive portfolio of services that result in optimised work processes, less waste, the best and most precise cutting quality and a consistent flow of data from preparation to sawing. There is also a retrofittable cutting optimisation software package that can be directly integrated into compatible machine models.

The OptiDivide cutting optimisation is independent of the machine control. OptiDivide imports parts list data from standard enterprise resource planning (ERP) software and CAD systems. It also works with MS Excel files in .csv-format.

The operator can see the workflow on an integrated 12” touchscreen computer with installed software, a WLAN network connection and a label printer.

The operator acknowledges the executed work steps on the touch screen and as soon as it is cut, the label printer prints the identification label for the cut element. OptiDivide combines hardware and software in a compact aluminium housing.
BaseCut CON and ExpertCut CON provide more options. Both solutions are tailored to the new Striebig Control saw. The Control is equipped with the EPS.x electronic positioning system and ASP automatic saw beam positioning as standard.

ExpertCut is the perfect system for Vertical 4.0. It imports parts lists from standard ERP or CAD systems, and CSV-format Excel files. The software is installed on the user’s production planning and scheduling workstation.

The user can edit and manage orders, materials and parts lists. The operator positions the saw unit and the length stop (EPS.x) with the Start key. The Control cuts the defined dimensions automatically and as soon as it is cut, the label printer prints the identification label for the cut element.

BaseCut CON is the light version for the Control. The operator or programmer creates simple parts lists and optimises the cutting automatically and easily with the 12” touch screen panel.

With the retrofittable OptiDivide system, and BaseCut and ExpertCut for the current Control model, Striebig covers all available models with a cutting optimisation solution, from the entry-level Compact model - retrofittable from the year of manufacture of 2004, to the 4D high-end saw.

The German manufacturer is represented locally by Austro Engineering that has its head office in Johannesburg and branches in Durban and Cape Town, which ensures that the company can support all its Striebig customers.

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A few wall saw facts

- Horizontal panel saws need about 50sqm of factory space
- Vertical panel saws with the same performance need about 27sqm.
- Horizontal machines require two operators when positioning large-sized boards.
- Vertical panel saws can be operated by one person with simple handling equipment.
Evergreen and highly advanced technologies from Bacci

For four generations the Bacci family has designed and manufactured traditional and specialised innovative woodworking machines and since 1996 they have sold more than 3000 CNC machining centres

The invitation to furniture, joinery and frame manufacturers attending Ligna this year was to visit Bacci’s stand to “experience the evolution of woodworking.”

To make this happen, Bacci rolled out a combination of traditional or “evergreen” machines like their trusty mortisers and tenoners, however, the stars of the show were their CNC machine centres and the new Pitagora machine management software.

The company says the Pitagora’s machine status prediction (MSP) function that generates numerically controlled (NC) programmes is unique. MSP is a complex system that ensures the close integration between the control software and the machining centre that eliminates stand-by time, deceleration and synchronisation.

Bacci says this is not just an ordinary cycle accelerator or an off-workpiece trajectory optimisation function, like those available with most generic programming systems. This unique function eliminates all possible kinds of stop-and-go conditions during machine movements, both off-workpiece and while machining, thereby significantly reducing the processing time. Pitagora can reduce production times by up to 50% compared to the programming performed with conventional CAD/CAM programming systems.”

“Comparative studies have shown that even a non-expert programmer can produce a parts programme by using Pitagora in less than 15 minutes. With other software, the programme generation process takes over 90 minutes without achieving the same level of optimisation that is automatically obtained with Pitagora.”

The 3D-simulation includes all the main machine elements: the machine, its clamping devices, and the reference models.

Correct programming is verified by means of a 3D-simulation of all machine movements and an effective display of all tool paths involved in the machining process. Bacci explains that these features ensure complete advance control of all collision risks.

Pitagora is equipped with its own complete series of CAD tools to programme four- and five-axis machines and can be interfaced with the most commonly used CAD/CAM systems. It directly imports machining programmes, 3D models of component parts, tools and clamps. In this way, legacy parts programmes can be reused and optimised, thus fulfilling the Pitagora advantage of reduced cycle times.

The CNC machining centres on show included the:

Master.Cut CNC bandsaw. It combines the advantages of a bandsaw with the flexibility of a CNC three-axes router. This machining centre may be equipped with multiple head boring units. It easily nests small parts and has a clamping system for stacked panels to multiply the output.
**Evo.Jamb** for door jambs in batch-one production. It has two operating heads that work simultaneously on the same piece.

The multiple spindles operating units with seven tools per head waste no time when changing tools. Its high-productivity is increased with it is coupled with a robot for automatic feeding and out feeding.

**Master.Flex** flexible clamping system that is a multi-spindle, five-axis heavy duty machine with a fixed gantry and twin moving tables. The carriages are multi-functional with quick connectors for vacuum cups and jig-less clamps. The 32 positions automatic tool changer is accessible from outside the safety enclosure.

**Artist.Single** most affordable high-Z single spindle five-axis machine with 16-positions automatic tool changer. It has a heavy-duty fixed gantry frame with a single moving head.

**Bacci Twin** six-axis NC machine. It is equipped with two independent tables and can perform, in a single set-up, various machining operations traditionally performed by several machines, including boring, boring on opposite faces, mortising, finger jointing, milling, profiling and carving functions. The rotating tables have an unlimited rotation for all possible manufacturing strategies.

**Evojet.Mitre** for batch-one production of all types of kitchen doors. It has double operating heads, multiple spindles for quick tool changes, heavy-duty clamps with independent servo-automatic positioning to manage different part lengths and widths in one batch.

**Double.Jet** with two heads designed to halve the cycle time with higher outputs compared to conventional single head machines. The jig-less clamps are adjustable in height and tiltable to hold straight and curved parts with ease. The clamps can be automatically positioned by the optional Pitagora system.
Holz-Her releases new CNC machines at Ligna 2019

Woodworking machinery manufacturer, Holz-Her introduced an array of new machines, hi-tech features for existing equipment and resource management hardware and software to the thousands of visitors at its stands at Europe’s largest trade fair for the wood processing sector, Ligna 2019.

Evolution 7405 gets Doors

The new, must-have feature for the Evolution 7405 4mat and Connect vertical CNC machines is the "Doors" package. It allows complete machining of door leaves with a maximum thickness of up to 70mm. This optional Doors package consists of a specially developed angle gear for lock boxes and a lock box cutter.

The hinge side and lock side are machined in two clamping operations. The 16mm diameter end mill cutter supplied with the machine drills depths of up to 115mm, allowing the installation of lock boxes with different backsets.

Handle and lock holes can also be drilled precisely using Hops macros. After turning and re-clamping the door leaf, it is possible to recess hinges for rabbeted doors and installs concealed hinges or fittings for object doors.

Evolution xcut package

Holz-Her introduced its xcut package as a new feature for the Evolution 7402 and 7405 Connect models. With this package, the vertical CNC machines automatically produce the required workpieces from panel strips previously cut in the longitudinal direction.

The operator simply activates the xcut mode with a single click and places the panel strips. The machine automatically positions the suction cups and activates the vacuum system when it starts up. During the machining process, the Evolution precisely cuts, machines and drills the parts while automatically measuring them and subjecting them to a plausibility check. The software for the xcut mode provides the operator with an overview of all jobs and the required strip material.

The Holz-Her range of edgebanders is an efficient match for the Evolution CNC machines and the Sector line of vertical panel saws.

Nesting with Nextec 4.0

The Nextec nesting machining centres from Holz-Her include three lines in various sizes and degrees of automation, that provide the right solution for every requirement and every size shop.

The new Nextec 4.0 offers a complete solution for control of production and material flow in the workshop.

Holz-Her says its CabinetSelect software is simple to use. It can generate CNC and cutting data for panel furniture and comes with over 400 furniture designs in its standard library on all Nextec machining centres.

Other professional CAD/CAM software systems can be used for added flexibility, and standardised interfaces are provided for transferring data to the Holz-Her Warehouse program.
TECTRA 6120 power – the variable all-round solution for your operations

- Double-finger workpiece clamps
- Angle pressing device (program-controlled)
- Solid air cushion table
- Trimming stops

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The Warehouse program uses the integrated Warehouse database. Among other features, this software allows the consolidation of multiple orders for production as one collective job. The integrated workpiece management list allows workpieces and their quantity to be entered and changed manually. The software includes a material database and data is reconciled automatically.

The job database on the machine computer monitors the orders pending for the machining centre and the degree to which they have been processed. This provides the operator with a clear overview of the nesting plans to be produced, the anticipated processing time, degree of processing and the production time achieved.

**Labelling systems**

Holz-Her offers four different manual and automated labelling systems for marking workpieces. These labels can be adapted to customer requirements using a label configurator.

- **Easy Label** for pressure beam saws. The matching label is printed for each completed workpiece containing edging information and the barcode for CNC machining.
- **Touch Label System** for nesting. The operator sees all the workpieces in a nesting plan on the monitor and can simply tap the desired component on the touch screen to print out the label.
- **Direct Label System**. This fully automated system attaches the labels on the panels before nesting machining.
- **New Power Label System**. It is particularly suitable for integration into the Store Master automatic pallet handling system for installation above the elevating table on automated nesting systems.

**Automation PRO master control system**

Automation PRO is the master system for control of the flow of production and material management. It is based on a master computer with pre-installed software and a database for product control on various Holz-Her machines and the Store Master panel storage system.

Only a few clicks are required to transfer the data from the production drawing produced with the aid of CAD/CAM systems to the production department.

Automation PRO provides real-time communication between the panel storage system and the database. It takes the work in progress as well as reserved panel material into consideration. A preview of the job database allows an overview of activated orders and machining details before
they are released for production. When the master computer releases the order, the optimised cutting plans are automatically sent to the Holz-Her pressure beam saw and the required panels are requested from the storage system.

The workpieces can be labelled manually or automatically for part recognition. Jobs approved for nesting operations are displayed to the machine operator in a job list and the material is automatically requested from the Store Master system.

The new Power Label System is recommended when processing large quantities of panels in minimum time. The workpiece labels can contain information on the edging either in clear text or barcode.

The edgebander scans the individual QR code and switches over to the required processing mode automatically.

To complete the Automation PRO system, the "Weinig Machine Monitoring" app offers the possibility of checking the machine status online, calling up machine efficiency evaluations and reviewing the degree of processing for pending or completed orders.

Contact Hüster Machinetool Company to find out how Holz-Her’s machines and new technologies can benefit your company.
Arminius Tooling was established in Germany over 50 years ago and manufactures a versatile range of general and specialised sanding tools. Volker Teske is the local agent for Arminius and Ingo explains that the choice of tools depends on each factory’s requirements and is particularly suited for sanding profiles such as raised panel doors, rebate profiles and moulding strips.

Ingo is the second generation in the Teske clan that has entered the family business. He travelled to Germany in May to catch up with the chief executive officer of Arminius Tooling, Heiko Lange, and to visit the trade fair, Ligna. Lange says Ligna is always busy and this year was no exception. “There was a lot of interest in our ranges at the show and the stand allowed users to interact with the tools,” says Lange.

“We have our own production plant in Germany,” he explains. “We have taken tradition and passion and used them to develop intelligent product solutions, which go beyond the norm.”

According to Lange CNC technology and the need for quick tool changes have had a significant impact on the world of furniture manufacturing. “Accompanied by continuous improvement of the level of training of system operators, the hour of plug-and-play has arrived in the field of tools.”

Ingo explains that the tools are precisely engineered and can be used right away with minimal if any adjustments. “We work closely with Arminius to assist our clients to match the equipment with their production processes and requirements. We are always ready to advise and support our clients with their equipment, provide back-up and consumables and to answer questions.”

The comprehensive range of sanding tools from Arminius Tooling includes:

- Sanding tools for through-feed machines, CNC machining centres and table-top machines
- High volume, high speed profile sanding systems that attain a surface finish at 12-14mpm. With multiple graduated abrasive grain sizes, a grain-neutral sanding pattern is achieved in both the longitudinal and end grain
- Brush systems where the user can fit one tool with various combinations of brushes
- Standard and helix shaped sanding tools for decorative grooves, raised panel doors, surfaces and edges and rebate sanding with a radius of 0.0mm
- Pad systems for coated surface
- Consumables

With our sanding tools, our customers are able to achieve incomparable surface quality on natural wood, chipboard and MDF boards as well as hardboards and many more materials,” comments Lange.
Visitors fascinated by SCM’s Smart&Human Factory

“It’s exactly 60 years since we first exhibited at LIGNA, and this year’s show has been the most successful yet,” says Luigi de Vito, division director of SCM, commenting at the end of the tradeshow in Germany that brought people from more than 100 countries to the SCM stand.

Visitors showed immense interest in our Smart&Human Factory and the innovative and exciting SCM technology solutions on display at our 4000 square metres of exhibition space. For us, Ligna has opened up some major opportunities in new and existing markets," he declared.

The Smart&Human Factory demonstrated how flexible and modular automated manufacturing cells integrated with industrial and collaborative robots, unmanned shuttles, and state of the art internet of things (IoT) digital services and software can also be user-friendly. An advanced system of video cameras installed directly in the SCM machinery processing and demonstration areas projected everything onto a gigantic LED wall in the SCM Arena.

Cornelis Rostoll, CEO of Geerlings, the company that has represented SCM in Southern Africa for more than 20 years, says clients from Africa were fascinated by these live demonstrations that allowed them to experience SCM’s “You will never work alone” concept of the company as a partner that is ready to support its clients with the most advanced technologies.

“The digital factory showed how human work can be integrated with that of industrial, collaborative robots in open and safe cells that can relieve operators of low-value jobs and allow them to focus on supervising the production process,” explains Rostoll.

Panel processing

In the Smart&Human factory, the manufacturing process starts in the breakdown area where the raw material, stored in the Flexstore HP high-performance automatic warehouse for shaped panels, is loaded into the sizing machines. The first type of cut is made by a Gabbiani S beam saw fitted with a saw-set device that ensures rapid tool setting.

The panels are transported to the Morbidelli X400 five-axes CNC nesting centre for processing and thereafter an anthropomorphic autonomous mobile robot (AMR) takes the panels to the edgebanding area. Here, the work is done by a Stefani Cell H edgebanding cell. This is the new high-tech and affordable generation of edgebanders for “batch-1” that is ideal for smaller woodworking companies.

After edgebanding, the shuttle transfers the panels to the drilling and insertion area. The panels are machined by the new Morbidelli UX200D CNC machining centre and then processed by the new SCM boring and dowel insertion system. It has a double dwelling unit and variable axis that can be adjusted based on the required distance between the holes.

When the machining process is completed, a roller conveyor takes the panels to an articulated robot for assembly into the required products. The robot receives instructions from the Maestro Active Watch supervision, control and data acquisition software.

Another AMR then transfers the components to the assembly area where three collaborative robots (co-bots) assist the human operators to assemble the bases and apply glue to the panels. The process ends with the transporting of the pre-assembled cabinets to the Action E clamp for accurate furniture assembly. Thereafter the finished product is shuttled into storage.

“At the entire process, from design to finished product is programmed to optimise panel cutting, edge banding and drilling operations to reduce waste, rejects and retooling during product changeovers. The system minimises repetitive human tasks by using Kuka industrial anthropomorphic robots, assisted by collaborative universal robots in the
Jacques Geerlings, Arnold’s son enjoyed his first Ligna show. He and Cornelis Rostoll marvelled at the architectural use of wood in Germany.

Digital systems

Digital factories are driven by digital software systems and the Maestro Digital Systems software and services took centre stage at Ligna. SCM introduced two types of software:

- The Maestro Office suite that encompasses various software for programming, management and data optimisation,
- The award-winning Maestro Active programme that is SCM’s answer to the human-machine interface (HMI) that it says makes the “You will never work alone” concept real. It offers a single integrated graphic platform that makes the operator’s work easier and reduces the risk of mistakes and increases productivity.

The IoT Maestro Connect platform constantly analyses the data produced by the machines and grants the users instant access to a wide range of services.

These include remote technical support with augmented reality glasses, the ability to purchase spare parts online, predictive maintenance and numerous other services to considerably increase the effectiveness and efficiency of production.

Rostoll explains that SCM is extending the Maestro Connect IoT platform to its cutting, edge-banding, drilling and routing, nesting and edging machines for panels and solid wood. The data is gathered by sensor kits that detect the changes in vital machine components, spotting any critical conditions of use or those that are not ideal.

New machines for small businesses

There is an increasing demand for flexible systems that can produce single or small batches of products. CNC machines like the Morbidelli CX220 and UX200D and the new nesting range of Morbidelli X200/40 combine high speed and maximum flexibility for smaller woodworking companies. The Stefani Cell edge bander with the new Pickback bridge system that automatically returns edged panels to the machine for further edging is an added ergonomic time saver.

Solid wood processing

SCM’s new Celaschi P40 profiling and squaring machine and the CNC Hypsos and Balestrini Power machining centres for solid wood technologies also received a lot of attention at the show.

Carpenters and joiners, in particular, were fascinated by machines like the new Class PX 350i mobile carriage circular saw and the six-axes Oikos X CNC machining centre.

Affordable competitiveness

“SCM is offering some amazingly flexible technologies for small and medium-sized companies,” comments Arnold Geerlings. “The amazing storage system and the simple and affordable beam saw, CNC machines and entry-level edge banders with corner rounding are ideal for our clients who have small or batch production runs.

These machines can level the playing fields in a highly competitive market,” says Geerlings.

“Geerlings Woodworking Machinery is proud to have been SCM’s sole agent in Southern Africa for more than 20 years now and congratulate them on their 15% growth during the past financial year. We look forward to many more years as SCM’s partner in Africa,” he declares.
SCM Minimax presented their new class px350 panel saw with a mobile carriage and tiltable blade up to 46° to operate in safety, with working space reduced up to 50% compared to a traditional panel saw @ Ligna 2019.

SCM Minimax presented their most compact & versatile me40t edgebander, which includes corner rounding & pre-milling, along with standard me40 features such as edge scraping, which runs at 9 m/min for increased productivity.
Rehau’s smart #futureapartment drew crowds at Interzum 2019

Rehau celebrated its 60th year of exhibiting at Interzum in Germany this year, and is looking back at a week of interesting, exciting, and motivating discussions with furniture manufacturers, interior designers, architects, specifiers, and shop fitting experts from all over the world.

A record-breaking 74000 visitors travelled to Cologne to attend the 60th presentation of Interzum, the world’s leading trade fair for furniture production and interiors suppliers.

“Our #futureapartment concept and new products from our edge-band, surface and tambour door system ranges, inspired our audience and won them over with solutions that are ready for use,” explains Jochen Luft, the sales manager from Rehau.

The event began on a high note when Matthias Pollman, head of Koelnmesse’s trade fair management division, presented Rehau with a certificate of recognition for the company’s loyalty. Rehau has participated in every Interzum since it was first held in 1959.

Taking centre stage was the ‘future apartment’, a special exhibit which allowed Rehau to showcase the very latest surface technologies that add intelligent and emotive value.

Design trends: Individual, Intelligent, Interactive, Innovative, Emotive

#Futureapartment: Within the hideaway, a pulsing contour of light sewn along the seams of the cushions generates a halo effect. The shelves on the side incorporate the Raukantex lite lights that can be programmed individually and controlled by invisible switches embedded in the surface.
The interactive design of this futuristic exhibit thrilled the international audience who could interact and experience the latest products.

These included new colour concepts for surfaces, new patterns, the versatile Rauvisio surface range and the Rauvolet tambour door collection that makes “smart” room layouts possible.

Through these numerous innovations, Rehau clearly showed that the future of furniture design lies in creating individual living concepts with products that have many variations.

**Smart furniture**

“Interzum 2019 was a resounding success for us,” says Thomas Ponater, Rehau sales manager of the furniture solutions division. “With this year’s highlights from our surface, edge band and tambour door system ranges, we were able to present a wide selection of new, innovative products and enhanced services.

We showed the direction Rehau intends to take in the future: towards smart furniture solutions that combine design and functionality in equal measure.”

Rehau has a range of technical solutions, such as lighting and temperature controls integrated into surfaces.

All images supplied by REHAU.
Be Inspired. Moving ideas from Blum at Interzum 2019

Blum, the Austrian manufacturer of fittings presented new products and inspirations for its customers at the Interzum trade fair and also participated in Interzum’s special exhibition “Tiny Spaces - Living in Compact Homes”.

Blum observes global trends, conducts its own research, and passes on inspiration, ideas and new insights to furniture makers. Blum made the most of Interzum in Cologne in May and presented unique products which underpin its new brand promise of “moving ideas”.

As a partner of the furniture industry, Blum displayed its latest solutions in the fields of lift, hinge and pull-out systems and presented innovative assembly devices and services. Visitors to the Blum stand had the opportunity to learn more about making optimal use of small and large living areas and creating bespoke furniture with inspiring solutions.

AVENTOS HK top

Aventos HK top is the latest addition to the Aventos range. The new fitting is small in size and yet comes with innovative features that make installation and start-up easy. It is available in South Africa with soft-close Blumotion or Tip-On mechanical opening for handle-less fronts. The Aventos HK top with servo-drive electrical motion system will arrive end 2020.

LEGRABOX

Legrabox drawer systems were on display exhibiting new unique drawer side designs with printing, embossing and special surface finishes. Designs ranged from classic elegance to trendy extravagance and from modern minimalism to a cool, “used look” demonstrating the flexibility of Legrabox. It will be available in South Africa on special request only.

BLUMOTION S for LEGRABOX

Blum also presented Blumotion S for Legrabox, which is available locally this year. It allows the implementation of three motion technologies with a single runner system:

Mechanical soft-close Blumotion
- Servo-Drive electrical opening support system
- Tip-On Blumotion, which is a combination of mechanical one-touch opening and soft and effortless closing.

MINIPRESS top and EASYSTICK

Minipress top is the latest generation drilling and insertion...
NEW PRODUCT

**eclipse**
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**EASY ACCESS**

New sleek **AVENTOS HK** top stay-lift fits neatly into cabinet interiors. Wall cabinet fronts lift up and out of the way. Specify 'Original Blum Quality'. Guaranteed for the lifetime of your furniture.

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Interzum Review

from page 50

Be inspired. Moving ... machine introduced by Blum. The assembly device speeds up the complete assembly of cabinets and makes it easy to do central line and horizontal drilling.

Combined with Easystick, Blum’s computer-aided automatic stop system, cabinet makers and manufacturers can produce precise and finely-crafted pieces of furniture in no time. It will be in South Africa in 2020.

**Blum Inspires on-line**

Blum launched a new online platform called Blum Inspirations. The objective is to show its customers how creative new furniture designs can be implemented with high-quality fittings, not only in kitchens but also in living areas, big and small. Videos, photos and reports demonstrate the use of Blum’s fittings systems in everyday applications.

The focus is on storage space solutions for kitchen and other living areas.

The Blum range is distributed by Eclipse branches in Durban, Port Elizabeth, Johannesburg and Cape Town. Eclipse invites you to visit Blum’s new online platform at www.blum-inspirations.com to “Be Inspired”. The site will be kept up to date with information and products that will provide inspiration to cabinet makers, furniture manufacturers and end users.
Biscuit joining for cabinet construction

Biscuits and biscuit joiners have been around for a long time and can be used for any application where edge to edge alignment is important such as during cabinet construction.

It is important to keep in mind that a biscuit joint is technically not a joint and therefore does not add strength to the construction. It is not advisable to use them where there is a lot of stress on the joint, such as in a chair leg-to-rail joint, or in a large table where the rails are joined to the leg. There the more traditional mortise and tenon will provide greater durability.

This month Vermont Tools, the supplier of Tork Craft products, is highlighting the Tork Craft biscuit joiner. With a high rotation speed of 11000 rpm, this 900W biscuit joiner has proven to be a popular choice and one on the most powerful and affordable power tools in its market segment.

The machine’s small circular saw blade is used to cut a crescent-shaped hole in the opposite edges of two pieces of wood composite panels to snugly accommodate the biscuit. Vermont Tools also supplies these oval-shaped discs made of dried and compressed beech wood to Tork Craft retailers.

After the slots are cut in each panel edge, sufficient glue is applied in the slot and the biscuit is immediately placed in the slot, and the two boards are clamped together. The moisture in the glue expands the biscuit and provides a quick way to align the boards.

Vermont Tools says the Tork Craft biscuit joiner is easy to maintain and if repairs are required spare parts are available locally.

Safety first

The biscuit joiner is a relatively easy to use power tool and is therefore dangerous if you do not use it correctly. Careless handling of the tool has caused many injuries.

Clamp your work piece firmly so that you can hold the biscuit joiner with both hands. First of all, check the cutter head guard and be careful because the cutter blade is very sharp.

Then, adjust the fence. Remember that you must do all adjustments before turning the machine on. The fence must be locked in place. Also, it is a good idea to inspect the adjustments and the fence for damage before each use. Check the cut depth as well.

Finally, check the machine cords before starting the biscuit joiner. If you notice any damage, don’t turn the machine on! When you switch on the machine let it get to full speed while you ensure that you have full control of it.

Remember, never stand behind the stock because you may get injured due to the kickback. Even though these cases are rare, you really want to be on the safe side. Mastering your body positioning technique is important when you use a biscuit joiner. Holding the tool with both hands prevents accidents. Never force the tool and release the switch immediately if the blade binds or the machine stalls.
Kinvaro T-Slim: A new dimension of invisibility

The motto is Super. Slim. T-Slim. Kinvaro T-Slim is the thinnest, most efficient fitting ever developed by GRASS. It combines purist looks with outstanding durability and the art of perfect movement in a unique way.

If less is more, then maybe nothing is everything.” This quote by pioneering architect Rem Koolhaas inspired the development of Kinvaro T-Slim. The new flap lift mechanism makes the dream of invisible fittings come true and will, therefore, provide furniture designers all over the world with inspiration.

“We have been a furniture industry pioneer for over 70 years,” says GRASS flap lift mechanism product manager Harald Küper. “With Kinvaro T-Slim we are adding a new chapter to our innovation history. After the first-ever concealed hinge or the invention of the double wall drawer, we have now developed a new dimension of invisibility with Kinvaro T-Slim.”

Kinvaro T-Slim blends into the furniture almost invisibly, thereby unlocking completely new possibilities for overhead wall cabinets. Particularly wide, rather than tall, storage solutions with lift-up flaps are currently undergoing a renaissance. Whether fitted at eye level directly above the kitchen worktop, sink or cooker, or above a desk or the television in the living room, or next to the mirror in the bathroom, overhead wall cabinets with flaps are an essential design feature in modern interiors.

The GRASS engineers have reduced the complex mechanism of a lift-up fitting down to an overall size of 12mm. This minimal size provides furniture designers with maximum flexibility. Anything is possible from a minimum sidewall thickness of 16mm upwards.

In material terms, there are hardly any limitations: wood can just as easily be used as MDF, and Kinvaro T-Slim’s effect on the furniture’s aesthetics really comes into its own on glass front flaps with aluminium frames. The fitting becomes one with the furniture.

“The best movement mechanisms distinguish themselves by the fact that they give precedence to the design of the furniture they have been fitted to,” says brand manager Harald Kühn. “Kinvaro T-Slim perfectly exemplifies this philosophy.” Besides the obvious aesthetic bonus, this reduction in size offers another advantage: the flap lift-up mechanism takes up truly little room so the available storage space can be used to its full potential.”
The Kinvaro T-Slim flap lift-up five-part jointed hinge arms mechanism are made of nickel-plated steel. The soft close technology, already proven millions of times over, ensures an elegant, gently dampened closing movement, a comfort feature that is particularly important on overhead wall cabinets.

With an opening angle of 107 degrees, the flap opens well beyond the user's area of movement and can, therefore, stay open without getting in the way.

It comes with an integrated opening angle limiting stay that prevents the front from being lifted up too high on overhead wall cabinets that are mounted directly below the ceiling. It can also be equipped with the GRASS Tipmatic for handleless cabinet versions.

When it comes to the fitting options, Kinvaro T-Slim can either be inset or overlaid and screwed on, the most commonly used alternative in the industry.

No tools are needed to fit and remove the two-part covering pelmet. The flap lift system can be adjusted after it has been fitted, if necessary. It is attached to the front with a clip and the fully-adjustable spring tension can also be adjusted from the front to ensure that the fronts move easily and elegantly.

Kinvaro T-Slim is available in Grass’ standard colours of ice, stone and silver and a paintable covering pelmet is available that can simply be painted to match the body finish.

“With Kinvaro T-Slim we are adding a new chapter to our innovation history.”
- Harald Küper of Grass.
Sonae agrees to pay over R46-million for cartel conduct

Sonae Arauco (Pty) Ltd (Sonae) “has admitted to price fixing and collusive conduct in the wood-based commodity industry in contravention of the Competition Act.”

This is according to a media release issued on 3 June 2019 by the Competition Commission of South Africa. It states that it “has referred to the Competition Tribunal for confirmation as an order a consent settlement agreement it has reached with wood-based panel company Sonae.”

The statement says that “in terms of the agreement Sonae has undertaken to pay an administrative penalty of R46944495.” It briefly explains that “Sonae and PG Bison (Pty) Ltd entered into an agreement in terms of which they agreed on the prices they would charge customers for wood-based panel products. From 2012 to 2016, these companies would frequently meet in order to fix selling prices and increases. “PG Bison has since changed its name to KAP Diversified Industrial (Pty) Ltd.

Sonae and PG Bison are competitors in the manufacturing of wood-based panel products, that includes Medium-density fibreboard (MDF) and particleboard.”

Urgent mandate

However, the challenge remains the verification of the real achieved value. The South African Bureau of Standards (SABS) has been given an urgent mandate to step up its efforts to conduct accurate and trustworthy local content verifications.

SANS 1286:2017 defines local content as “that portion of the tender price that is not included in the imported content, provided that local manufacturing takes place and is calculated in accordance with the local content formula”. Local content can only be realised on products manufactured within South Africa.

The local Content Verification process consists of the following step:

1. Supporting economic growth and job creation
2. Attracting new investments, foreign direct investments in particular
3. Leveraging public expenditure

Sonae agrees to pay over R46-million for cartel conduct

Local production and content are an Industrial Policy and Action Plan (IPAP) initiative aimed at increasing the economy’s ability to produce more and more complex and high value-added products with greater efficiency

This means manufacturers need to produce more value using fewer resources. From its first iteration, IPAP has identified public procurement as a key lever for industrialisation and re-industrialisation. It wants to raise domestic demand through the promotion of local production and an increase in the productive sectors’ share of production and employment.

SANS 1286:2017

The specification governing the products and sectors designated for local production is governed by the technical specification SANS 1286:2017. It provides the standard definition of local content that is expressed as a percentage of the tender price and primarily based on local manufacturing. Bidders are therefore compelled to use the standard formula in calculating their local content.

To date, a total of 23 sectors/products have been designated for local production, with varying minimum local content thresholds. Between 2015 and July 2017, almost R59.95-billion was reported to the Department of Trade and Industry (the dti) as value for local content in public procurement. The major transaction was on the rail rolling stock fleet procurement, amounting to about R49.5-billion.

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