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FORESTRY

Fire is inevitable and we must plan to manage the worst-case circumstances ......................................................................................................3

Focus on the sponsors A decade of developing novel mechanised silviculture equipment ......................................................................................6

Developing cutting-edge technologies is no walk in the park 7

The Terramech T-16 is a one-of-a-kind multipurpose beast ...... 8

#marchforscience – do your bit! ................................................................. 9

Forest management and water resources .............................................. 10

Husqvarna challenge results in school bags for kids in need ... 11

PEFC welcomes South Africa as its new national member ...... 11

The forestry industry is a best practice environmental leader in Southern Africa ....................................................................................................12

SAWMILLING

Ligna 2017 delivers the goods ................................................................. 13

Irish jigs lifted the spirits of the crowds at Ligna .................................. 17

Kalfass wet and dry mill systems in demand – orders signed at Ligna ................................................................. 19

Holtec at the forefront of innovation ...................................................... 20

WoodSA visits iconic Weinig Grecon showroom ................................ 23

Nukor Group visits international suppliers and sawmills .............. 25

Cooks celebrate their 20th convention in September ................... 31

Plans for the world’s first wooden football stadium revealed .... 32

Linck shows off superior quality .......................................................... 34

Vollmer at Ligna: sharpest tool in the shed ........................................ 35

Microtec unveils new technology at Ligna ........................................ 37

Fire regulations apply to timber roof trusses .................................... 38

WOODWORKING

Cover story: PG Bison’s new particleboard line increases capacity and enhances board quality ................................................................. 41

Interzum 2017 was a roaring – and crowded - success .............. 44

Is the zeitgeist of a changing world influencing interior design? ..................................................................................................................... 46

Proadec’s edging materials and designs a crowd pleaser ...... 47

Chiyoda chooses Woodfinish Management as its South Africa agent ................................................................. 50

Ligna 2017: Cefla embraces industry 4.0 ....................... 52

Austro introduces game changing edge banding technology ................................................................. 54

Record breaking sales at Ligna confirms Biesse’s leading status ................................................................. 56

Leitz redefines tooling solutions for composite boards and solid wood processing ................................................................. 58

Lamello launches new Cabineo cabinet connector system .... 61

Kastamonu invests in second hot coating line from Kleiberit .... 63

Kleiberit goes all out at Ligna 2017 ...................................................... 64

Latest Holz-Her smart machines demonstrated by Huster Machinetool Company ................................................................. 66

Homag networked automation is a market changer .... 70

Weinig Group cleans up at Ligna 2017 ...................................................... 74

Weinig releases the all-new Powermat 700 moulder and the Rondamat grinder ................................................................. 75

Mirka showcases dust-free sanding technology at Ligna ........ 78

SPECIAL SUPPLEMENT: ICFR: celebrates 70 years of excellence in research
Collaboration and coordination needed

The aftermath

Following a recent meeting with the forestry and sawmilling stakeholders in the fire-ravaged Southern and Eastern Cape areas, Forestry South Africa (FSA) and Sawmilling South Africa (SSA) have emphasised the need for intensive collaboration and careful coordination between government and industry during the recovery operations.

The two associations, government departments and the National Disaster Management Centre are assisting industry with plans to mitigate the impact of these losses, by salvaging commercially saleable product and re-establishing the affected areas.

At a regional industry level, there has been extensive damage to the timber plantations and one complete sawmill was razed to the ground. The scale of the disaster is the worst that the industry has experienced in the region for many years. At this time, it is not possible to put a monetary value to the damage caused by the fires, but preliminary estimates indicate losses running into hundreds of millions of rands.

From an employment perspective, there may be a short-term increase in jobs as the industry seeks to commence salvage, re-establishment, and reforestation operations, providing it can secure the finance necessary for these interventions. However, in the medium to longer term and until the plantations return to a more normalised rotation, stakeholders will need to explore other employment interventions, as the future sustainable supply of timber, will be adversely affected.

“These fires will not get us down”

It is difficult to express the shock, dismay, and horror of runaway fires. Lawrence Polkinghorne, MTO Group CEO was on the ground during the fires and during a brief call he drew my attention to the group’s Facebook page. I feel compelled to repeat some of his sentiments because they reflect those of everyone has been in a similar situation:

“As I write, hundreds of fire fighters battle the lines and face the wrath of flames. Hundreds of families are reeling from the shock and destruction of their homes; it has claimed lives, and threatens us. We share each other’s sadness and mourn together, but we stand strong together.

“Our community is incredible. Your help enables us to regroup and rebuild. Kindness and care goes a long way, it’s real and tangible and powerful. We stand firm for another day. We are strong because we have each other. We remain in awe of you for fighting, for never standing down, for saving thousands of lives. It is unthinkable to imagine what it would be without you out there.

“We are humbled by the strength of community and generosity of many, we join in prayer for those who have lost loved ones, we stand together with you all and commit to rebuilding and restoring our lives, it is truly devastating, but we will take this in our stride as a country and as a community, together we will emerge stronger. We take for granted the compassion and selflessness that people have in their DNA, it is now that we can be grateful to live amongst heroes.”
Fire is inevitable and we must plan to manage worst case circumstances

Ed’s Note: The news has just broken of the unbelievably devastating fires in the southern Cape that are taking the lives of people, wild and domestic livestock, and pets, and laying waste to homes, buildings, sawmills, agricultural land, indigenous and commercial forests and businesses. No matter the cause of fires it is imperative that an integrated approach to fire and fire risk management is implemented and that all role players – including social media and those who provide humanitarian aid – are included in this process.

Integrated fire risk management is the only solution
By Ben Potgieter of CMO: extracted from 2016 unpublished training notes

Although veld and forest fires are an essential and natural process, society’s influence has altered the historic fire cycles, resulting in dangerous and difficult build-up of vegetation in the veld and on the forest floor, and extreme fire behaviour. Integrated fire risk management (IFRM) involves identifying the level of risk posed by fire to life, assets, and the environment, and to develop strategies to protect them. Firefighting techniques and practices cannot prevent catastrophic fires, and a more scientific approach is needed. Historically, some of the shortcomings of fire management programmes are:

- Lack of coordination of stakeholders
- Insufficient awareness about fires and their impact
- Ineffective implementation of legislation
- Lack of penalties for non-compliance
- Inadequate recording, collation and analysis of pertinent information.

The objectives for efficient and effective fire risk management are to:
- Prevent the outbreak of fires and achieve fire safety awareness throughout the community
- Ensure the enforcement of codes on fire and life safety for the prevention and control of structure fires
- Investigate the cause, origin, and circumstances of fires in the response area
- Protect life and property against the dangers of fire and other emergencies that may occur in the response area
- Maintain a response capability that is safe and effective.

Risk can be described as exposure to a hazard, or to the chance of injury or loss and, in the case of veldfires, damage to or loss of assets. To understand the exposure, it must be known what the degree of probability will be for a loss.

Understanding the type of loss is also important. Managing loss is done through applying the following steps:

- Understanding the risks to the business
- Building vigilance into the organization in a systematic way through effective controls, operational measurement and strategic scanning
- Creating a culture that encourages effective risk identification, mitigation, and monitoring
- Orderly management of the process
- Linking risk management to rewards and resourcing
- Communicating to the organisation, its stakeholders and owners.

Remember:
- There is no risk if there is no consequence
- There is a very high risk if the consequence is very great
- There is low risk if the likelihood of the hazard happening is small; the event is very unlikely
- There is a high risk if the likelihood of the hazard occurring is big; the event is frequent.

Figure 1 shows the risk management process.
Without man-made interventions, the clinical work environment is hazard free, however with the introduction of people, machines and materials to the working environment, the exposure to hazards increases sequentially. This is depicted in Figure 2 below.

We can use the 4-T method to mitigate hazards, these are:

- Treat
- Terminate
- Tolerate
- Transfer

If we treat the hazard the RIP principle is applied, i.e. remove the hazard, isolate the hazard or protect it.

For IFRM we can apply eleven generic strategies to reduce the risk of veldfires, these are:

- Awareness communication in the community
- Early detection
- Fire break management
- Compliance management
- Fuel management
- Matching resources to the risk
- Response times.
- Response types.
- Static water resources.
- Radio network that covers the response area.
- Access and escape routes.

We need certain resources to successfully combat veld and forest fires, these are people, machines and materials. If we apply these to the SPEQS (safety, productivity, environment, quality and social) principles we get a successful outcome. See Figure 3.

The resource selection must match the fire behaviour as well as terrain conditions.

Veld and forest fires are a natural occurrence and cannot always be prevented, however if all sectors of society share responsibility within their spheres of influence, a community and environment that can respond to and recovering from veld fires can be achieved. This requires a seamless approach where all agencies work together, using resources effectively and efficiently in a coordinated manner. This is a brief look at complex management phenomena.

For more information or for a risk assessment please contact Ben Potgieter at ben@cmo.co.za or on 079 497 9681, alternately, Carl van Loggerenberg at carl@cmo.co.za or on 082 329 7115.
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A decade of developing novel mechanised silviculture equipment

Novelquip Forestry (NQF), a South African business dedicated to identifying silviculture problems and developing, testing and commercialising mechanised solutions, is celebrating its 10th anniversary.

During this period NQF produced its first commercial fully automatic planting machine, known as a silviculture carrier, and the Terramech T-16 multipurpose carrier. In addition, NQF has shipped its first pitting head to Brazil with a range of planting equipment to follow.

The business concept is the brainchild of company CEO, Dr Jaap Steenkamp, who has a BSc in Forestry and a doctorate in business administration. He is an academic, an inventor and a holder of intellectual property. Jaap was given an Award for Excellence by the Southern African Institute of Forestry (SAIF) for his contribution to the South African forestry industry, and serves on various forestry and related forums, and is involved in forestry contracting.

Helgaard Steenkamp is the design and operations engineer, and has an engineering qualification from NMMU in George. Helgaard rose through the ranks of NQF, gaining in-depth knowledge and experience of hydraulics, electronics, and mechanics. An experienced manufacturing team assists him.

Jaap says that the Steenkamp family identified silviculture as a window of opportunity for developing modern equipment to supplement labour shortages for certain activities. He explains that poor productivity, and the ergonomic, health and safety hazards that confront people doing silviculture procedures like land preparation, pitting, planting and applying herbicides and pesticides, have a direct impact on the costs associated with manual operations.

NQF entered the market in 2007 when it patented a planting head for forestry seedlings with assistance from the Department of Trade and Industry’s (dti) Support Programme for Industrial Innovation (SPII). This programme focuses on the development phase of new technologies, which begins after basic research and ends when a pre-production prototype is produced.

The relevance of NQF’s research and development for the forestry industry was recognised by the Industrial Development Corporation (IDC), which Jaap says provides support that helps to overcome challenges typical to technology development and commercialisation. The Technology Innovation Agency (TIA) is also contributing to the furthering of NQF’s product ranges.

“The NQF team is small, innovative and knowledgeable regarding forestry and engineering, including hydraulics and electronics,” Helgaard says. Jaap attributes their success to an understanding of the interface between their customers, the forests and the technologies.
Developing cutting-edge technologies is no walk in the park

The process of developing any modern technology is costly and time consuming, calls for extreme tenacity and innovative engineers. Novelquip Forestry (NQF) has weathered many a storm and, to quote one of its customers: “Often the cutting-edge is also the bleeding edge!”

CEO of NQF, Jaap Steenkamp, and the design and operations engineer Helgaard Steenkamp, describe how many concepts that work on the design table, do not always work in the forest compartments.

To kickstart the business in 2007 NQF focussed on a pitting head and their first multipit four-head pitting machine was produced on a John Deere tractor. It was fully automated and only steering was left to the operator.

“Grower companies were increasingly struggling with stumps left after harvesting that hampered inter-row pitting. They decided to implement inter-stump pitting, and that effectively put a stop to multi-head inter-row machines,” Jaap says. “To make matters worse, we had to put the multi-head John Deere based machine to bed after it was hijacked and written off.”

Not deterred, NQF developed and fitted two commercial pitting heads to compact excavators and put them to work doing inter-stump pitting at Mondi Iswepe from March 2013. The machines logged more than 12000 hours each, and are still in a good working condition. The average production achieved over the four year period was just shy of 2600 pits per shift per machine.

From 2013 to 2017 NQF sold 32 of these MPAT machines into the South African forestry market and a number into construction and the agriculture market.

In parallel with the pitting heads, the development of planting heads continued. Helgaard says that in 2015 a twin-head prototype planter was tested in Zululand. “Although the productivity results left room for improvement, we were satisfied that all the concepts we tested functioned well, and we are now in the process of commercialising the Novel ProPlant.

“NQF’s products are unique as they are designed to be electronically controlled for purposes of quality, precision and productivity. Electronics are stable and only high quality electronic components are used,” says Helgaard.

Jaap explains further: “Electronics accurately control the process of planting, thus eliminating human error and improving quality, precision and productivity. The single head planter, known as Proplant-1 ‘locks out’ the operator when plant positioning is selected and from that point the electronics will complete the planting as required by management and controlled by the electronic sequence.

“This avoids damage to the head and assures optimum productivity. The process includes preparing the planting pit (350mm across and 350mm deep), doing a pre-emergent spot spray, planting the seedling, adding water or gel at the desired volume, the addition of fertiliser at two spots at the desired quantity, and firming up the seedling, again to the desired level,” Jaap says.

“The process completely eliminates J-roots and air pockets, thus removing a major reason for seedling mortality. It is also possible to irrigate the seedling trays on the planting head to keep transplant shock to an absolute minimum.”

To celebrate their tenth anniversary, NQF is offering the first three Proplant-1 machines and the first two Terramech T-16 carriers at a special offer for their clients during 2017.
The NQF Terramech T-16 is the first South African conceptualised, designed and manufactured vehicle that can carry a range of silviculture and agricultural solutions, including up to six planting heads, a semi-mechanised planting system, a tank of up to 10 000 litres of water, a boom sprayer, repetitive irrigation systems for planted seedlings, and firefighting equipment.

During the development process, Novelquip Forestry (NQF) tested tractors, digger-loaders and “batching machines” as carriers for its planting and pitting heads. Jaap Steenkamp of NQF says they found that tractors and digger loaders have limited application in forestry. For example, the most serious constraint of a tractor is either excessive weight at the front or the back, and with a trailer, it becomes very clumsy.

“The lack of a commercially available carrier suitable for our silviculture applications led us to design and build a dedicated carrier for multiple planting heads and other loads or attachments. The six-tonne class excavators are retained as the carrier of preference for single head planters,” he says.

The NQF Terramech T-16 carrier took fresh thinking from the NQF team and they report that the results seem to be excellent, although it is early days.

Unique features

The centre of gravity is extremely low as the engine and pumps are nestled between the front and rear wheels, and the hydraulic tank and battery bay are located on the opposite side of the machine. The fuel tank is located at the front. The weight distribution is designed to overcome the imbalances of tractors and allows for up to 10 tonnes on the load body.

Various options are available including the fitting of a PTO or a three-point linkage, which makes it suitable for almost every silviculture or protection application. The ground clearance of 500mm, strong belly plates, the angles of approach and departure, coupled with four-wheel steer (and normal and crab modes) makes it extremely manoeuvrable in-field. Continuous traction with 45% limited slip differentials and tough 22-ply steel radial tyres make it surefooted in forestry conditions.

Steenkamp says safety and operator comfort were taken very seriously. A suspended seat with four-point harness and a very strong cab support operator comfort and safety. Safety features built into the operation of the Terramech T-16 includes the locking-out of four-wheel steer at speeds above 15km per hour, an auto braking system when in neutral or when the machine stalls, parking brake and “run-away” brake when the electronic system senses something is wrong.

To cater for extreme forestry conditions and to protect the hydraulic system, the machine has six additional electric cooling fans. NQF says they are completing the process of homologating the Terramech. Homologation is the complicated process of satisfying the requirements of the National Regulator for Compulsory Specifications for vehicles. It involves supplying a vehicle sample for evaluation, supported by a large body of documented evidence including inspection and test reports compiled by recognised laboratories or inspection authorities. The evidence must cover the characteristics of the complete vehicle, as well as all components referred to in the applicable standards and codes of practice.

The current customers of NQF include major growers and contractors in South Africa. Enquiries are also coming in from neighbouring countries, with sound interest from Australia and market pull from South America.
#marchforscience – do your bit!

Rob Thompson, writing in the May edition of the Southern African Institute for Forestry (SAIF) newsletter, urges forestry practitioners to “Share your analytical ability and observations by being an active citizen and contributing on appropriate platforms.”

Thompson explains that a non-partisan body of science advocates, identified under the epitaph #marchforscience, has taken it upon themselves to mobilise global awareness about the importance of science.

“An extract from their mission statement further encapsulates their objective thus: “We unite as a diverse, nonpartisan group to call for science that upholds the common good and for political leaders and policy makers to enact evidence based policies in the public interest.

The March for Science is a celebration of science. It’s not only about scientists and politicians; it is about the very real role that science plays in each of our lives and the need to respect and encourage research that gives us insight into the world”.

Thompson writes: “Forestry practitioners are amongst the privileged few with a science based background. Use it well. Celebrate it. Make known your concerns about poor practices that you come across. Substantiate reasons for your concerns and pass them on to the appropriate authorities.

Do what you can to encourage your own community to embrace science as a first choice. Give a talk at a school or support an SAIF outreach event. Write an article about something that you have observed and submit to a publication or website. This very newsletter (and magazine – Ed’s note) can use your inputs!

“I am not calling on you to become radical science activists! My simple plea would be that you respect what you have, the “authority” that this gives you and to encourage others to achieve similar or more. The more I think about this the more I feel that science advocacy is not only a necessity, but an obligation.”
Forest management and water resources

The United Nations Educational, Scientific and Cultural Organisation (Unesco) published a technical document with the title *Forest Management and the impact on water resources: a review of 13 countries*, earlier this year. The countries are Argentina, Australia, Brazil, Chile, China, Republic of Congo, India, Malaysia, Peru, Romania, South Africa, Spain, and United States, which makes this document a relevant contribution to the current state of water and forestry-related issues, management, and policies worldwide.

The editors are Pablo A Garcia-Chevesich, Daniel G Neary, David F Scott, Richard G Benyong and Teresa Reyna. The following excerpt is taken from pages 7 – 9 of the executive summary.

“As the demand for water grows and local precipitation patterns change due to global warming, plantation forestry has encountered an increasing number of water-related conflicts worldwide. Differences in historical forest management, climate, vegetation types and socioeconomic conditions driving the use and management of forests mean that forest hydrology research results vary from nation to nation. This makes it difficult to generalise and extrapolate between countries and regions.

What seems to be of greatest importance is the combination of watershed characteristics (size, slope and soils), current and prior land uses and local climates, especially the temporal distribution of annual precipitation and temperatures.

In certain climates, for example parts of Australia, Brazil, Chile, China, India, South Africa, Spain and the USA, where natural grassland, shrublands or land previously cleared for agriculture is replaced with fast growing plantations, streamflow and groundwater recharge are often substantially reduced, potentially creating local conflicts between plantations and other water users. In South Africa and Australia, this has led to introduction of legislation to limit plantation developments in some areas.

Conversely, reforestation of degraded agricultural land, especially where soils have been heavily compacted, can sometimes increase dry season stream flow by increasing infiltration rates and may also increase the soil’s water holding capacity as well as improving water quality. Consequently, flood mitigation is seen as an important role of forests in some countries.

Whereas once forests were thought to bring rain, it is now well documented that at local scales of tens to tens of thousands of ha, replacement of shallow-rooted vegetation with forest usually reduces streamflow but may improve water quality. Permanent clearing of forest will increase streamflow in some regions, albeit often accompanied by reduced water quality. In the few parts of the world where fog drip is an important hydrologic input, forest clearing reduces water yield. At much larger scales, for example in the Amazon Basin in Brazil and Peru, extensive forests can cycle moisture between the land and the atmosphere so that large-scale clearing of natural forest may have detrimental effects on regional and national water cycles.

In many countries, including Brazil, Chile, China, India, Malaysia, Peru, Romania, and Spain, deforestation and soil degradation have created water quality problems, which are now being addressed, or will need to be addressed through reforestation. In China, for example, extensive areas of highly erodible soils have been reforested. However, there may be a trade-off between improved water quality through soil restoration and reduced water yield, unless rainfall occurs only during winter months, as is the Chilean case.

Fire in forests can create concerns over water quality, and less commonly, water yield. In Australia, Spain and the USA, fire seasons are becoming longer and more extreme due in part to combinations of drier and warmer climate. Forest management to reduce fire risk and the associated detrimental effects of wildfire on water quality, is now an important consideration in these countries.

Based on the information provided, the countries with the closest links between forest hydrology research and policy-making are Australia, Brazil, China, South Africa, and United States. However, in most of the remaining eight countries, research and political initiatives are rapidly advancing. Importantly, most countries have invested resources and research into climate change adaptations, including its effects on forests and water interactions...

However, demands for forest-related products will also increase. Furthermore, the establishment, conservation, and management of forests are tasks that most countries should focus on, to ensure healthy watersheds. In this sense, activities such as reforestation, afforestation, and land restoration represent a key factor for the future, since worldwide millions of hectares are deforested every year, with many of them becoming deserts.”
Husqvarna challenge results in school bags for kids in need

Nearly 250 needy children from the Mid-Illlovo area in KwaZulu-Natal were delighted to receive unique schoolbags complete with built-in ponchos. The handover took place at Ondini Primary School, which, with almost 100 pupils, was one of the recipients. Others included Ondini High School and Arden Primary.

The welcome donations were a response to a challenge issued by the Husqvarna Classic Mid-Illlovo MTB Challenge & Trail Run for corporates and participants to pledge schoolbags to children in the region. Taking up organiser, Shanon MacKenzie’s challenge, 250 bags were pledged by corporate sponsors, who included Husqvarna, Safire Insurance, Illovo Sugar, PMB Petroleum, Coastal Farmers’ Co-operative, Gwahumbe Game Lodge & Spa, Mid-Illlovo Bottle Store and Uzwelo Bags (an Expand-a-Sign initiative).

One of Uzwelo’s products is the novel schoolbag that was donated to the children. It is made from Expand-a-Sign’s waste textile fabric that would otherwise be destined for landfill sites.

The bag has a built-in poncho above the zip, which pens out to cover the pupil’s head and the bag itself in wet weather.

Ondini Primary School principal, Siboniso Makwanya was thrilled with the donation, saying most of the children previously used plastic shopping bags for their books.

Jacqui Cochran, marketing manager of Husqvarna SA, says the company was delighted to be on board with the donation: “Giving back to the community is part and parcel of the annual race, and the team is building a great relationship with schools in the Mid-Illlovo area.” This included planting trees at Ondini Primary for International Forest Day.

Anton Rohrs, marketing manager for Safire Insurance, which sponsored the 40km leg of the Husqvarna Classic Mid-Illlovo Challenge, says the company appreciates the level of community involvement in this event. “Safire is glad to have been part of this project. Supporting children from disadvantaged backgrounds is a major part of our overall social responsibility programme.”

PEFC welcomes South Africa as its new national member

South Africa has been inaugurated as the fourth member of the Programme for the Endorsement of Forest Certification (PEFC) in Africa, alongside Cameroon, Gabon and Ghana.

“Becoming a PEFC national member is an important step towards the endorsement of our country’s national forest certification system,” said Craig Norris, forest technology manager at NCT Forestry. “We expect to finalise the system documentation by June and will submit the system to PEFC shortly after.”

There are approximately 1.2 million hectares of exotic tree plantations in South Africa. While much of this is already certified to alternative forest certification systems, most of this area is owned or managed by large organizations. This has led to a growing concern that small- and family forest owners are being left behind.

“As the demand for certified products increases, both abroad and locally, certification could become a trade barrier to smaller management units. In addition, South Africa’s land reform programme is likely to result in a greater proportion of the plantation estate being managed by smaller scale timber growers,” said Norris.

“The complexity and cost of the certification options that currently exist prevents many smaller operations from achieving certification. There is an urgent need to develop a standard that is more relevant to our plantation forestry, particularly for smaller scale operations. This is where PEFC comes in,” he said.

“The PEFC system enables stakeholders to develop their national standards independently, tailoring them to the political, economic, social, environmental and cultural realities of their own country,” said Ben Gunneberg, CEO of PEFC International. “While at the same time, our endorsement process ensures these national systems are compliant with internationally-accepted requirements and provides them with global recognition.”

The South African Forestry Assurance Scheme (Safas) is also joined by the Council for Sustainable Forest Management and Certification in Bulgaria and PAFC-Congo as the latest members of the PEFC alliance. This means there are now 49 PEFC national members around the world!
The forestry industry is a best-practice environmental leader in southern Africa

“Forestry is more than simply the science of planting, managing, and caring for timber plantations. It’s about the landscape that our timber plantations are a part of, the animal and plant species that call the forestry-owned land home and the people and communities that the industry touches.”

This is the introduction to Forestry Explained, the online beginner’s guide to the basics of forestry and forest products. It covers everything from water use to recreation, and pest control to ownership and end uses.

This one-stop shop for the fundamentals of forestry is sponsored by forest owners who are members of Forestry South Africa (FSA), and can be found on the FSA website. The organisation says the forest industry’s legacy is far reaching and: “We, as Forestry South Africa, are proud to be part of it. It’s about developing best practices that are efficient and effective with the lowest environmental and social impact possible, while producing an array of sustainable and versatile end-products.”

In addition, the FSA has released the third version of its popular Environmental Management Guidelines for Commercial Forestry Plantations in South Africa, which is also available on its website.

It provides updated guidelines on the management of plantation forestry to minimise the impacts of operations on the physical environment. Each chapter includes a general description of the subject matter to inform the reader of the most important issues. This is followed by a statement of intent describing what a forester should aim for, and highlights a number of measures that can be applied to achieve the desired outcome.

The guidelines are designed to reduce negative impacts through the application of the law and best management practices to:

- minimise impacts on stream flow through the removal of alien and invasive species from wetland buffer zones and adjoining rivers
- reduce impacts on biodiversity through the retention or establishment of natural vegetation corridors between timber compartments
- reduce impacts on soil from harvested compartments and roads.

It also deals with conservation measures in unplanted areas, the use of fire to maintain biodiversity and legal requirements for firebreaks. Other topics include integrated pest management, the best silvicultural and harvesting methods, road construction and management, non-timber products and the management of staff housing. The legal requirements for all activities are included, along with a brief discussion of forest and forest product certification.

Go to www.forestrysa.co.za to view or download the documents.
Ligna 2017 delivers the goods

The 2017 incarnation of Ligna, the top woodworking and forestry machinery trade fair in the world, held in Hannover, Germany, in May, drew to a close having delivered big in terms of innovations and global appeal.

Boasting significant increases in both the number of exhibitors and visitors from across the globe, and keeping in touch with worldwide market trends, the show focused greatly on digitalisation, integration and automation.

"LIGNA 2017 will go down as a milestone in the digitalisation of the wood industry," said Dr Andreas Gruchow, the Deutsche Messe managing board member in charge of Ligna, at the end-of-show press conference in Hannover.

"Industry 4.0 concepts for the wood industry were the dominant theme at this year’s Ligna, with major emphasis placed on digitalisation, integration and automation. The exhibitors covered everything from sophisticated approaches to plant integration right down to entry-level systems for the skilled trades, thus offering the right technology for any scale of operation."

Ligna 2017 featured a new site layout and an array of display categories chosen to reflect the increasing technology convergence between the skilled trades and industry.

"The new layout has proven to be a great success. Our customers have found it very easy to navigate," said Wolfgang Pöschl, chairman of the Woodworking Machinery division of Germany’s Mechanical Engineering Industry Association, VDMA, and chairman of the management board of Michael Weinig.

"Digitalisation and integrated production are the new keys to success for our customers. There is huge demand across the board, resulting in full order books. The challenge now is to shorten delivery lead times as much as possible."

More than 1,500 exhibitors, including 900 from outside Germany, were on hand to showcase innovative plant, machinery, tools and solutions on some 129 000 square meters of space. Most exhibitor stands were designed not only to showcase, but to emphasise the focus on

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digitalisation and integrated production, with fully integrated production lines and live demonstrations running throughout the duration of the show.

Ligna 2017 attracted a total of 93,000 visitors, including some 42,000 attendees from outside Germany who had descended on Hannover from more than 100 different countries.

‘These impressive figures confirm that international decision-makers have come to place their trust in Ligna as the only event that can give them a full grasp of the latest wood processing and woodworking trends and developments,’ said Dr Andreas Gruchow, the Deutsche Messe managing board member in charge of Ligna.

The top ten visitor nations after Germany were France, Austria, the United States, Sweden, Belgium, Spain, China, Poland, Italy and Russia. While not in the top 10, South Africa boasted a significant turnout at the event, with visitors ranging from all the top machine suppliers in the country, to prospective buyers, trolling the event and inspecting all the latest technologies and solutions on offer.

Industrie 4.0

Market leaders used the flagship fair to introduce new software for integrating the complete range of plant components. In line with the mega-theme of Industry 4.0, visitors were especially interested in the trend towards visualising process and work steps.

The wood industry’s capacity for innovation was showcased via solutions ranging from a service app for machine monitoring to a digital graphical operator saw guide, plus a bucket camera system for wheel loaders. Cloud-based digital twins of tools and machines were used to present effective processes for faster machine commissioning and life-cycle documentation.

A further key trend at Ligna consisted of ways of significantly boosting production efficiency with minimal demands on the operator. One exhibitor presented the first-ever ‘three-click’ process for producing a complete item of furniture. Meanwhile, in the area of machine components and automation, robots continued their forward march.

Skills training

In the pavilion next to Hall 11, the first Ligna training workshops for joiners, cabinetmakers, carpenters and...
mobile assemblers were held in partnership with the Sprint Academy (Cologne, Germany).

Festool, Jowat, Mafell and Dr Koch from the Thünen Institute were the training partners, delivering a programme of practical content. The speakers communicated their knowledge and expertise on technology applications in the skilled trades in nine training workshops.

This included explaining the distinctive features of new commercial timbers or how the latest adhesives work.

Participants were given the opportunity to put the manually-operated woodworking machines through their paces, under the watchful eye of expert technicians. Participants picked up many useful tips and tricks and praised the workshops as a valuable addition to the other Ligna offerings.

The Ligna program also featured a series of brief presentations on the processing of plastics and composites at the Robotation Academy. Industry experts were on hand to share information and ideas.
on current themes and trends. Many exhibitors featured displays showing that woodworking machines can work not only with wood, but also with plastics, composite panels, and insulation and building materials. These applications are ideal for caravan and boat construction and for the interiors of vehicles, ships and aircraft as well as for plastics production.

The new Ligna layout was well received by primary industry visitors, with the four thematic areas of Forestry Technology, Sawmill Technology, Wood-based Panel Production and Energy from Wood.

The focus was on the production of wood as a raw material for products or energy generation, through the planning, felling and retrieval stages. The current state of the art on the use in forestry of UAVs (unmanned aerial vehicles), or drones, proved a popular drawing card, along with the latest forest surveying processes.

Open-air demonstration area
An open-air demonstration area was set up at the foot of the Hermes tower, in partnership with the German Forestry Council (KWF). Several moderated technology presentations were staged each day on an area measuring approximately 1,500 square meters.

Every step in the process was covered: pruning, the extraction of standing timber with harvesters, removal to the forest roadside with forwarders and logging trailers, and transport to the sawmill.

Wood industry summit
Another standout attraction, particularly for the international primary industry audience, was the second Wood Industry Summit. Delegations from 13 nations (including Canada, Colombia, Chile, Bulgaria and Romania) addressed the audience.

Under the motto of “Access to Resources and Technology”, summit participants debated the latest trends and developments in the categories of “Forestry and Wood Industry 4.0”, “Resource Roads”, “Forest Fire Control” and “Fleet Management”.

The next Ligna will be held from 27 to 31 May 2019.
Irish jigs lifted the spirits of the crowds at Ligna

Comhilift’s dancing trucks, new lifting products and, naturally, pints of Guinness, once again welcomed visitors to the Irish company’s outdoor and indoor exhibits at Ligna.

Celebrating its 15th year in business, Comhilift demonstrated the versatility, efficiency, and space saving operations of their broad range of models. With over 18 000 units sold in more than 75 countries, Comhilift is now a world leader in the market for long load handling solutions.

The company’s machines are distributed through Shamrock Handling Concepts in South Africa, and managing director, Marius Schutte, confirms that over the years the C-series fork lift trucks, such as the multi-directional C5000XL and C4000 models, have become firm favourites in this market.

The original and core model of the Comhilift range, the C4000, was developed in 1998 and is still one of the...
most popular products manufactured by Combilift. It has undergone continual refinement and the latest generation of the C series features a new cabin which offers considerably more room for the operator.

Extra glazing in the new curved windscreen and the ergonomically redesigned dashboard offer better all-round vision and the load sensing steering and suspension seat provides improved driver comfort. It has a 4000kg capacity and can be powered by LP Gas or a Kubota diesel engine.

The C5000XL has a 5000kg capacity and is available in LP gas or diesel options. It can work indoors and outdoors and comes standard with multi-directional capabilities. It can lift heights up to six metres and there are a wide range of custom attachments available.

Schutte says the three-in-one functionality of the C-Series trucks are in demand because it can be used as a counterbalance fork lift, an aisle truck or a side loader.
Kallfass reports that during Europe’s largest trade fair for the latest products and solutions in wood processing, Ligna 2017, the Western Cape’s Swartland Boudienste placed its fourth order with the company.

The Kallfass exhibit was the starting point for many sawmilling visitors from South Africa. In recent years the equipment manufacturer has developed numerous special solutions for this market, took the opportunity to present some of these developments to the public at the trade fair.

The German engineering company’s stand was kept busy and many new contacts were made and projects discussed. Most importantly for the business, several orders were finalised including an order from Swartland Boudienste for an upgrade of its Boskor dry mill in the Eastern Cape.

The latest model of its multi-cut saw, as well as an exhibition model of a tong loader for the cutting of sawn timber, was demonstrated at Ligna. Kallfass multi-cut saws have been successfully commissioned at Northern Timber in Tzaneen, AC Whitcher in the Eastern Cape, and at MTO’s sawmill in George.

Over the past five years Kallfass has installed more than 12 automatic stackers in South Africa. These investments are contributing to improved productivity and health and safety at the respective wet and dry mills.

The company is looking forward to Ligna 2019 when it will celebrate its 70th anniversary in style.
Holtec at the forefront of innovation

Log handling solutions and package crosscut saw manufacturer, Holtec, represented locally by Newsaw, made quite an impact at Ligna 2017 with stands in two halls, covering the sawmilling side of affairs as well as their crosscut saw range. The second stand focused on the wood based panel processing industry.

In the sawmilling sector at Ligna, they showed off their log handling equipment and solutions with a strong focus on their impressive original innovations, including the Holtec Stair Feeder, which made its debut in 1998, Holtec V-Rollerway, introduced in 2000, the Holtec Eccentric Ejector from 2001, the Holtec Tandem Step Feeder from 2005, and the Holtec Rollerway for Alignment with Log Allocation Wheel, introduced in 2006.

The company further focused on their range of tailor-made plant solutions that cater for precisely selective investment, striking the perfect balance between optimum economy and the demands of the job.

According to Holtec international sales manager, Erwin Franzen, Holtec has been on the forefront of innovation in the industry for many years and continues to be a game changer in the industry with their innovative solutions for businesses ranging from small operators to large commercial sawmillers and logyards.

"Many of the popular products available in the industry today are based on products that were first introduced by Holtec," says Franzen. "Take for example the amount of stair feeders available on the market now. Holtec was the first to introduce stair feeders in 1998."

Holtec offers a range of three different options for the sawmilling industry that offer a solution to any business, big or small.

**Basic Line**

The first of these is the Basic Line, an economical solution for small and medium businesses with an approximate cutting capacity of 25 000 to 50 000 cubic metres.

The Basic Line range is all about affordable log yard technology for low to medium performance requirements, which caters to the specific needs of specialist and small-scale log yard businesses.

This type of operation places particular emphasis on assessing the quality of individual logs by using simple, durable, and easy-maintenance transport systems that avoid unnecessary over-engineering and high costs disproportionate with the requirements of this performance category.

**The range includes:**

- Transport plants for bars and logs
- Feeding and separating systems
- Crosscut lines and crosscut saws
- Sorting plants with sorting control systems
Your reliable and innovative partner for wood processing.

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- Multi-saw crosscut station for highest demands at Johannesburg Timber & Box

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Holtec has gained a solid reputation globally with its log manipulation systems developed over the past 35 years.

Holtec’s Solid Line solution for medium and large sized operations with a cutting capacity of between 50 000 to 300 000 cubic metres combines their 35 years of know-how and trusted technical achievement to deliver solid plant engineering, reliability, and outstanding performance. The company has proven its mettle with the successful installation of more than 250 plants around the world.

Whether short or long logs, small or large diameter lumber, the company prides itself on the versatility of its plant engineering capabilities, working with clients to develop the optimum layout for the application at hand. Their team of more than 20 engineers and technicians plan, install and commission the plant to the tiniest detail.

The range includes:
- Transport plants for bars and logs
- Feeding and separating systems
- Crosscut lines and crosscut saws
- Sorting plants with sorting control systems
- Waste evacuation systems
- Electrical control and switchgear with optimal visualisation
- Debarking machines and butt reducers
- Measurement electronics

Solid Plus
Solid Plus is Holtec’s high performance standard for industrial operations with a cutting capacity of between 300 000 and 1 million cubic metres, offering heavy duty, durable plant engineering of the finest standard.

High performance industrial scale production calls for sound plant engineering capable of addressing very specific criteria. Extreme loads in around the clock operation and high availability are essential to economic operation.

This solution offers longer system operating times, higher capacities, lower wear, and lower costs of operation.

The range includes:
- All kinds of heavy duty transport plants
- Sawmill feeding systems with turning devices for up to 40 bars per minute
- Feeding and separating systems for up to 50 bars per minute
- Sorting plants in different versions with sorting control systems operating at up to 200 metres per minute.
- Waste evacuation systems in all variants
- Electrical control and switchgear with optional visualisation
- Debarking machines and butt reducers
- Electronic scanning systems, 2D and 3D scanning operations, calibration and forestry authority approvals in Germany, Austria, Switzerland and France, with log photography and photo archive.

Holtec also showed off their range of package crosscut saws at Ligna, including the EasyCut range of portable saws with either electric or gasoline motors, and their highly successful Model ES 121, which has seen more than 1 500 machines delivered in 35 countries.

The star of the show though, was their versatile high performance range, the VarioCut, especially designed for companies cutting at high capacity.

The range is distinguished by a robust basic saw unit, a very sturdy vertical bar guidance, and the option of variable control of the guide bar during the crosscut.

The VarioCut series can be perfectly integrated into automated systems and is also available as multi-saw system with up to four saw units.
WoodSA visits iconic Weinig Grecon showroom

Weinig Grecon are well known for being at the forefront of innovation when it comes to their fingerjointing lines, and we had a chance to experience that first hand during Ligna 2017 when we received an invitation to Join the Nukor Group on a tour of the iconic Weinig Grecon showroom.

Situated in Alfeld, Germany at the world renowned Fagus building, a Unesco World Heritage site, Weinig Grecon shares the site with another company with which it has enjoyed close ties over the years.

Weinig has recently announced that it has acquired 100% shareholding in the company.

It was a bitter cold day in Germany with icy winds strong enough to make you think twice about venturing outside when we got off the train and took a brisk five minute walk to the factory.

Upon our arrival, we were treated to a short history of the iconic building, famous for being the first factory built in this particular style of architecture in 1911, before we were corralled into the showroom where a number of fingerjointing lines were set up and ready to go.

Weinig has been a market leader when it comes to fingerjointing since 1978 and stands at the forefront of technology and innovation, constantly coming up with ways to make the whole production process better, faster, more efficient and cost effective.

According to Weinig regional sales manager for jointing technology, Frank Medicus, Weinig finger jointing technology is focused on maximum precision, meaning minimal dimensional allowance, minimal wood losses and minimal operating costs. “All systems are extremely user-friendly, making residual wood processing and upgrading by finger jointing profitable and easy,” says Frank.
“The flexible modular design allows machines to be equipped according to your individual requirements, enabling high flexibility for standardised as well as customised solutions, regardless of whether the systems have raw wood entry lengths, smaller or larger than 1 000 mm.

**Turbo-S 3000**

This double shaper is constructed for a package width of up to 600 mm, a package height (lamella width) of up to 225 mm and a package length of 300 – 3 000 mm. The shaper combination produces on average 3,5 packages per minute, although it has been known to reach speeds of up to five packages per minute. Press systems can be combined as desired for all end lengths.

**HS 3000/HS 6000**

You can design your production very flexibly with the HS 3000. Infeed lengths of up to three meters can be processed, although the HS series can be extended to 6m infeed length. This means that the line reaches a shaping capacity of 60 - 80 parts per minute.

A special timber adjustment in the shapers minimizes any possible curvature of the panels in order to produce a straighter end product.

**Powerjoint 15**

The PowerJoint 15 compact finger jointing lines have a total output of 15 connections per minute; with an average infeed timber length of 2 500 mm. This type of line is used for laminated beam lamellas as well as CLT lamellas and gives a high flexibility. It is possible to produce batch size one and minimizes the dimension changing times to a minimum.

All the machines are controlled using production software. With this software, the order to be processed can be entered at any time and at any machine.
The Nukor Group was once again well represented at Ligna 2017, and after a very busy and productive show, they and some South African sawmillers stayed on in Germany to visit a few of their suppliers and see the latest that there is to offer in the sawmilling sector.

Nukor was represented by owner, Andreas Maier, Cobus Richter, Marcél Joubert and Peet van Staden and were accompanied by their guests and clients, Jannie van Staden, Graeme Fivaz and Nelisa Tshuku from PG Bison Thesen Sawmill, Johan Dekker and Yonela Mdudu from Cape Pine George Sawmill, and Stompie Groenewald from TWK Swaziland Sawmill.
Their week-long tour would take them to factories and sawmills in Germany, France and Austria, and would see them driving in excess of 2 500 km.

“It was very exciting,” says Richter of the tour. “The driving became gruelling at times, but we had a lot of fun and we learned a lot.”

The first stop on their tour was on Monday, 29 May, when they visited the largest European manufacturer of sawmill equipment, Linck, in the town of Oberkirch, Germany, to look at the latest in profiling technology available on the market today.

According to Richter, the whole group was astounded at how clean and modern the production facility is. “Linck is one of the top manufacturers of sawmill equipment in the world and anyone who owns a Linck line will attest to that fact. Their machines do what they promise and they exceed expectations every time.”

Andreas Maier of Nukor says the Linck brand is as near to perfection as one can get. “I was very impressed, not only with their facility, but with the whole attitude of perfection,” says Maier. “Not only from management, but from the staff as well. They are all totally focused on achieving perfection.”

Richter says 17 out of the top 20 biggest sawmills in Europe are Linck mills. The company finished a massive installation for SCA Timbers recently at the Tunadal Sawmill in Sweden, and based the on the massively increased capacity to in excess of 200 metres per minute and excellent precision achieved, they managed to sell another two lines.

From the Linck factory, the group made their way to France for their first sawmill visit of the trip, to see a Linck Merry-Go-Round profiling line in action...
at the Scierie Feidt sawmill based in Molsheim, France, just across the border from Germany, some 50 km away.

A well known feature of the Linck lines is that every line is different, configured specifically for the application at hand, and according to Richter, while the line at Scierie Feidt is a basic one, it still outdoes anything currently running in South Africa without breaking a sweat.

The French timber manufacturer for pallets and packaging works with two to five metre long logs and production is carried out in one shift with only six people. The 3D scanner information is fed into the log optimising program, which in turn generates the sawing patterns for the logs.

The line runs with a feed speed of between 30 and 100 metres per minute on unsorted logs, processing logs of between 12 and 60 centimetres in diameter, and producing approximately 80 000 to 120 000 cubes annually.

The group’s next stop was at another French sawmill, this time in Bertrambois at the Decker sawmill, which sports a Linck chipper cantor-circular saw line, as well as a Linck designed and built logyard.

According to Richter one of the things that impressed him at Decker, was that the sawmill owner himself operates the yard from the merchandising yard operator cabin. Another thing is the effectiveness achieved with the automation of the mill, which has a total staff of around
30 people. “In South Africa, your average mill this size and with this capacity would require a staff compliment of approximately 250 people,” says Richter.

Bright and early the next morning, the group headed out to Weinig Dimter in Illertissen, Germany, to see the world’s fastest crosscut optimising saw, the Dimter Opticut 450 in action.

“The company is in the final stages of planning a larger and more modern factory to keep up with demand as they have been running at 115% capacity for the last three year,” says Richter. “This is further proof that this is one of the best and most popular crosscut optimising saws on the market today.

“It is very impressive to see the speed at which it runs and the extraordinary precision it achieves.”

From Illertsen, the group embarked on the next step of their journey, driving approximately 40 minutes to Biberach, to visit sawblade sharpening machine manufacturer, Vollmer, where they were delighted to find a South African flag hoisted in their honour.

“Needless to say, we were very impressed,” says Richter, adding that the company is well over 100 years old and is a family business.

“There has been massive growth in the market for PCD sharpening rotary tools, to such an extent that the company is in the final stages of deciding on a new factory to keep up with the upward trend.”

On Wednesday morning the group headed for the town of Imst in Austria to visit glulam beam manufacturer Pfeiffer.

Richter says, it is very impressive to see the scale on which timber is used in Europe. “Here is a single factory producing more glulam beams annually than the whole of South Africa put together,” he says.
They do beams up to 24 metres in length, and they have a Weinig Grecon continuous press after the fingerjointer that runs at 160 metres per minute.

The company also impressed with its state of the art, world class training facility, where there are always five or six trainers available on the floor to provide training.

After a well deserved rest, the group headed out the next morning to a town called Altötting, to visit sawmill machine manufacturer, EWD, specialising in bandsaws, optimizing edgers and circular profiling lines, where Richter could scarcely believe his eyes when he noticed that the company still manufactures frame saws.

After a brief tour, the group headed off to their next appointment for the day, a sawmill tour at Vilshofen an der Donau near the Austrian border at the Holzwerke Weinzierl sawmill, which sports two merchandising logyards, one for short, and one for long logs.

The company also boasts with its own combined heat and power (CHP) plant, where all its biomass is used to generate power.

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Presented by the Nukor Group of companies
The company runs an EWD profiling line with one EWD optimizing edger and one Linck optimizing edger.

For their last appointment of the day, the group made their way to A. Bösendörfer Sägewerk und Palettenherstellung, a company that saws primarily for pallets, running a EWD profiling line with a Springer compact bin sorter and stacker and producing on average between 60 000 to 80 000 cubes per annum.

According to Richter he was once again surprised to see the mill owner driving the forklift, loading and unloading, while his wife conducted the factory tour.

Friday morning arrived and the group tackled their last day in Germany head-on, driving out to mechanical-engineering and equipment supply for the bulk materials handling industries manufacturer, Bruks.
“I was very impressed by the amount of chippers in production for biomass energy generation,” says Richter. “It shows that the energy generation market is one that is constantly being invested in and growing.”

The last visit of the trip proved to be an eye opener for the group from Nukor, when they discovered that they are running two (very) old Linck profiling lines.

“I found it very interesting how much optimisation capabilities these old lines have,” says Richter, adding that as he walked through the factory, he actually found a machine, still running smoothly, that was built in 1976.

“Now that’s a way to convince us of the quality of your product,” he jokes. The plant also runs a Bruks waste handling system.

The trip was a learning experience for the whole group. “We learned a lot. It was truly amazing to the scale, the speed, and the precision that these lines can achieve.”

Cooks celebrate their 20th convention in September

The South African Lumber Driers Educational Association (Saldea) is hosting its 20th conference on 14 and 15 September 2017, and have chosen the peaceful surrounds of Ingeli Forest Resort in Harding as the venue for the celebrations.

Saldea chairman, Maurits Perold, says registration is now open for the conference which will include a tour to Merensky’s modern Weza Sawmill. Perold invites all sawmillers with an interest in lumber drying, especially kiln operators (fondly known as the cooks), to attend.

The speaker line-up so far are:

Contact Amanda on 082-324-1363.

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SOUTH AFRICAN LUMBER DRIERS EDUCATIONAL ASSOCIATION

The Lumber Driers Convention will be taking place again in September 2017.

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Venue: Harding

Deadline for bookings: 7 August 2017

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Plans for the world’s first wooden football stadium revealed

To say that this $123-million project is amazing is an understatement.

Wood is used as a construction material mostly for residential houses, sometimes commercial buildings, but never a stadium. But lower league English club Forest Green Rovers is changing that by building the world’s first ever stadium made from wood.

Chairman and football club owner Dale Vince said in a statement, “The really standout thing about this stadium is that it’s going to be almost entirely made of wood – the first time that will have been done anywhere in the world.” To be constructed in a 100-acre Eco Park in western England, the stadium will provide facilities for the community and the football club, and will host events and conferences. There will be gyms, all-weather pitches, and sports science clinics to be offered.

In March of 2016, the Rovers announced a design competition for the wooden stadium, with over 50 entries from around the globe. Zaha Hadid Architects (ZHA) eventually emerged as the winner. “ZHA has built some fantastic sports stadia and facilities around the world, including one at the Olympic Park in London. They’ve designed one of the stadiums for the 2022 World Cup, and now they’ve designed one for Forest Green,” the millionaire said.

ZHA director Jim Heverin, said in a statement that the project will be the first all timber football stadium with almost every element made of sustainably sourced timber, including its structure, roof cantilevers and louvered cladding. Moreover, the wooden stadium was designed to accommodate 5,000 people but the designers allowed the possibility for a 10,000 seater in the future.

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Linck shows off superior quality

Ligna 2017 saw world leading sawmilling machinery manufacturer, Linck, out in full force, showing off some of the lines that have made them a leading brand in the industry.

Represented in South Africa by the Nukor Group, the company has an undeniable track record of excellence, with 16 of the top 20 softwood lumber producing sawmills in Europe being Linck customers.

According to Nukor’s Cobus Richter, Linck is one of the top machinery manufacturer’s in the world today. “They are definitely the market leaders in the sawmilling industry,” says Richter. “Any owner of a Linck sawmill will attest to the superior quality and precision of their lines.”

The company had a large showing at Ligna 2017, presenting many detailed solutions devised to increase the already impressive efficiency of Linck sawlines.

One of the combinations on show was a recut chipper canter with separate outfeed system VZO. The outfeed system was equipped with vertical and horizontal roller pairs for a reliable and continuous feeding of the cants. The precise, servo-hydraulic positioning of the roller pairs allows active curve sawing of the two-sided cants.

A Linck 6-curve scanner allows the accurate scanning of the cant curvature. An essential feature of this scanner is that movements of the cant during scanning do not have adverse effects on the scanning result.

Therefore scanning can also take place in case the cant is moved, for example, by centering rollers.

The result is a considerable reduction of the overall length of the saw line, which makes it possible to integrate this scanner in existing lines.

Energy recovery has become a major factor in the industry, and one not ignored by Linck, as they demonstrated the effect of energy recovery using a cant turner as example.

The high piece count and the high speed necessary for turning a two or four sided cant, initially requires high acceleration of the cant turner rotor. The energy released by the subsequently necessary strong braking of the rotor is not converted into heat, but into electrical energy, which is then fed back into the power network.

Linck also showed off a roller conveyor designed for up to 200 metres per minute line speed. Such high speeds would not easily be possible with conventional roller drives due to problems including high levels of noise and heavy wear.

Linck has managed to contain both these factors by replacing the chain with a belt, thereby minimising noise levels as well as excessive wear.

One of the combinations on show was a recut chipper canter with separate outfeed system.
Vollmer at Ligna: sharpest tool in the shed

Tool machining specialists, Vollmer, represented in South Africa by the Nukor Group, presented their range of complete and efficient solutions for machining both saws and tools for the woodworking industry at Ligna 2017.

These included the new CC 355 production system for manufacturers of carbide-tipped circular saws and the CP 650 sharpening machine for sharpening tooth faces and tooth tops on carbide-tipped circular saw blades.

The CC 355 enables large numbers of circular saw blades, including all tooth faces, tooth tops, and side angles, to be fully sharpened in a single working cycle. Four grip arms automatically carry the saw
blades, which can range from 150 to 355 millimetres in diameter, from the loading system to the three machining stations.

The CP 650 is suitable for sharpening tooth faces and tooth tops on carbide-tipped circular saw blades between 80 and 650 millimetres in diameter.

### Sharpening carbide-tipped tools

VGrind 360 is the new tool grinding machine from Vollmer, and is the successor to the VGrind 160 model. Vollmer has equipped this new generation with enhanced travel distances in order to machine carbide tools – depending on their geometry – up to a diameter of 200 millimetres.
Microtec unveils new technology at Ligna

Leading scanning and optimisation provider for the sawmilling industry, Microtec - represented in South Africa by the Nukor Group was out in full force at Ligna 2017, premiering two brand new products, the CT Log Scanner, and the Goldeneye 800 multi sensor quality scanner.

CT Log Scanner

The CT Log Scanner offers full digital log reconstruction and virtual grading for true value optimisation in the bucking and sawing processes. CT Log Computed Tomography scans and digitally reconstructs the internal features of the log, allowing the assessment of the optimum cutting solution in real time.

CT Log Computed Tomography allows continuous, qualitative and full 3D log reconstruction. For the first time, size and position of internal wood defects can be accurately described in all three dimensions.

Using the internal defects, CT Log evaluates appearance, quality and strength and assesses their impact on the final products before the physical breakdown of the log.

Sawing and bucking solutions are continuously optimised based on the highest quality and resale, allowing production to be managed according to real-time priorities.

Large Cone-Beam Computed Tomography is the most innovative technology for the log yard and saw infeed developed by the industry leading engineers at Microtec. This approach uses a large X-ray sensor rotating 360° around the log and an innovative mathematical inversion algorithm to perform high speed, high resolution X-ray CT-scanning.

Breakdown, bucking and sorting

CT Log Computed Tomography data is the basis for the powerful breakdown optimisation software, Maxicut, which determines the best cutting pattern with the highest outcome based on quality and resale value of the final products.

Interopt Bucking Optimization determines cross cutting based on the highest value cutting pattern solutions in various areas within the log. Winlog Sorting Optimization enables log sorting and control of the log and merchandising yard.

Goldeneye 800

The Goldeneye 800 Multi-Sensor Quality Scanner maximizes recovery for high-speed planer mills and manufacturers of construction lumber and high-speed applications.

Goldeneye 800 features:

- Multi-Sensor cameras and sensors
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Fire regulations apply to timber roof trusses

Timber is used extensively in every part of the world for structural purposes including roofing. For safety reasons, it is compulsory that timber roof trusses be manufactured and erected in line with the National Building Regulations and SANS 10400, which provide for fire safety.

Building regulations are set in place by bodies such as the South African Bureau of Standards (SABS) after extensive research and consultation with industry experts. It considers all aspects of the building material’s composition and properties to ensure that it meets the same safety and performance standard as any other building material in the same application.

Fire regulations relating to timber roof trusses stipulate:

Each independent dwelling unit situated on either side of a fire wall must have its own bracing system within its roof structure, regardless of the fire wall projecting above the roof covering or not.

The fire regulations do not state the size of a permissible gap between timber members bearing on either side of the fire wall. However, trusses passing through a fire wall must be split into separate trusses.

“No part of the roof assembly, made of wood or any other combustible material shall pass through the separating wall.”

No tile underlay or insulation may pass over the fire wall. The Department of Public Works’ revised Guide to Architects about fire security (1998; pp. 3), addresses the matter of fire walls in roof spaces:

“Fire walls, where required, shall be carried up tightly against the underside of the floor except that combustible minor structural members, such as battens, to which roofing material is directly fastened, may be permitted. Purlins must not penetrate a fire wall for a distance greater than 80 mm, but if they penetrate from both sides of the wall, at least 80mm of non-combustible material must separate them.”

While the Institute for Timber Construction South Africa (ITC-SA) does not make the regulations governing timber construction in South Africa, as part of its endeavours to promote and protect the industry, its players and the general public, it interprets and disseminates them. It is the responsibility of all players, from the manufacture to erection and inspection of timber roof trusses to reinforce the regulations; even engineers who sign off on a non-compliant roof structure could well be taken to task by the Engineering Council of South Africa (ECSA).
FIRE REGULATIONS

The ITC-SA does not make these rules, but rather interprets and disseminates them in order that we, as a responsible industry, act in accordance with the National Building Regulations and SANS 10400.

It does not mean that because the local authority, the developer, the builder and or the erector do not enforce the regulations that anyone is entitled to try and gain a competitive edge by bending the rules. Engineers signing-off Roof Structures not complying with the Fire Regulations could be put to task with the Engineering Council of South Africa. Act responsibly at all times.

a. Each “independent” dwelling unit situated on either side of a fire wall must have its own bracing system within its roof structure, regardless of whether the fire wall projects above the roof covering or not.

b. The fire regulations do not state the size of a permissible gap between timber members bearing on either side of the fire wall; however trusses passing through a fire wall must be split into separate trusses.

c. The Regulation states… “No part of the roof assembly, made of wood or any other Combustible material shall pass through the separating wall.”

d. No tile underlay nor insulation may pass over the fire wall.

Typical Fire Break Between Two Flats or Town House Units
Professor Walter Burdzik of the Department of Civil Engineering at the University of Pretoria confirms, “Any failure of a truss plant or roof inspector to insist on the separation of roofs per fire regulations needs to be reported to the ITC-SA. The same principle applies to low-cost housing; just because a roof is over a low-cost house does not justify deviating from National Building Regulations.”

The Institute urges all responsible along the timber roof truss value chain to play their part and act in accordance with both the National Building Regulations SANS 10400 and Building Standards Act 103 of 1977.


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PG Bison’s new particleboard line increases capacity and enhances board quality

As economic conditions continue to put pressure on local businesses, PG Bison maintains its investment strategy and planning for the future.

The company’s continuing investments into its South African manufacturing operations reflects its optimistic view of the country and Africa’s future. This is made possible through the support of its shareholder, KAP Industrial Holdings, who has backed PG Bison’s decision to invest and grow.

In January 2017, we reported on the progress of the new Piet Retief BisonBord line and its target deadline of May 2017. Through the dedicated efforts and hard work of the project team, PG Bison successfully completed the commissioning of its brand new Siempelkamp Continuous Press, one day ahead of the project’s planned date.

The project team was headed up by PG Bison’s Francois Pienaar, and comprised local PG Bison employees working alongside European technicians from the supplying

A close up of boards existing the Controll Press

The Siempelkamp star board cooler at PG Bison’s Piet Retief plant
companies. The project is yet another example of how PG Bison is focusing on turning challenges into opportunity, while always improving its customer service offering.

One of the biggest benefits of constantly investing in new technology is the ability it gives PG Bison to provide its customers with globally competitive products.

The investment is complemented by the installation of PG Bison’s fifth short cycle press to produce melamine face board (MFB). This MFB press takes Piet Retief’s capacity from 10 000 square metres to 23 000 square metres per day and moves PG Bison’s capacity to 77 000 square metres per day as a whole.

Gerhard Victor, CEO of PG Bison, has previously mentioned to Wood SA that it is how companies approach economic downturns that will ensure whether they survive or not. And PG Bison is not stopping with this investment at Piet Retief. Phase Two of the upgrade is already in the works. This will see the fibre preparation area undergo a major revamp, taking the planned volume of particleboard production for the site from 680 cubic metres to 1000 cubic metres per day.

As markets become more sophisticated, ensuring consistency in the quality of products is a prerequisite for any meaningful service offering. For PG Bison, this requires ensuring the raw materials, plant and equipment and processes are all consistent. Replacing the old 1984 daylight press and forming line with the state-of-the-art Siempelkamp Continuous Press has helped make that a reality.

“PG Bison takes pride in the efforts it is sowing into this industry. The investments in the latest technology ensures quality on par with global manufacturers. Without committed people and the best equipment, successful project completion would not be within reach.

As a proudly South African company committed to our continent, this industry, as well as exceeding our customer expectations, remains at the centre of our business,” says Victor.

All PG Bison board plants - BisonBord (particle board), and SupaWood (MDF and HDF) - now use the latest international technology. PG Bison also recently invested in gloss board manufacturing capability and installed an additional MFB line. They plan to add additional capacity to their MDF/HDF line by December 2017.
YOU WOULDN’T EXPECT SOMETHING SO BEAUTIFUL TO BE SO TOUGH

MelaWood® SupaGloss™ is an amazing looking durable, UV hardened gloss surface that gives you the confidence of knowing you’ve made the right choice.

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Interzum 2017 was a roaring – and crowded - success

Approximately 69 000 visitors from 152 countries attended Interzum, the world’s largest trade fair for furniture production and interior construction that was held in Cologne in May.

They jumped at the chance to meet and mingle with the 1732 exhibitors from 60 countries who presented their new materials, technologies, and design approaches at the show. The products on display ranged from fittings, surfaces and decors to textiles, glass and lighting, timber, and veneers all the way through to innovative materials.

The wide-ranging special events at the trade fair examined global trends such as sustainability, digitalisation and mobility. The special Mobile Spaces event area explored how a new understanding of mobility will influence vehicle interiors. With events such as this, Interzum once again underscored its focus on groundbreaking ideas and highlighted the vital role that trade fairs play in enhancing the opportunities for expanding into new markets.

“It was the best Interzum ever yet,” said Katharina Hamma, CEO of the host venue, Koelnmesse. “With this year’s Interzum, we reached a new level with the growth in visitor figures, exhibitor numbers and an increase in floor space,” she said.

South African visitors say they found the show stimulating and a learning experience, however they all agreed that it was incredibly busy and the crowds made it difficult to do the business they would have liked to do.

The trade fair attracted more than 51,000 visitors from outside Germany and within Europe, increases in visitor figures were recorded in particular from the Netherlands (up 26%), Spain (up 25%), Italy (up 20%) and Eastern Europe (up 46%). Considerable increases were seen in...
visitors from Asia (up 53%), the Middle East (up 25%), Africa (up 17%), Australia/Oceania (up 31%), North America (up 26%) and India (up 41%).

This year Interzum addressed some very exciting themes and ideas for trade visitors. It demonstrated that outstanding innovations in furniture production and interior construction are constantly being developed.
Is the zeitgeist of a changing world influencing interior design?

How does the zeitgeist (the defining spirit or mood of a period of history as shown by the ideas and beliefs of the time) of a changing world influence interior design? What trends, decor, materials, and surfaces meet changing living and space requirements? Interprint presented answers to these questions at a four-day exhibition at Design Post Cologne in May.

Under the motto of “transform”, the company displayed exhibits of selected decor innovations and zeitgeist topics to a specialist international audience from Europe, North and South America, the Middle East, South Africa and Asia.

In South Africa, Interprint’s showroom in Pretoria is a magnet for interior designers, shop fitters and architects who make appointments to be inspired. An appointment is essential so that the company can ensure that each client experience is relevant and eye-opening. The new Design Lab will be ready soon and will be a “must visit” for everyone looking for inspiration for a new project.

Interior designers, shop fitters and architects are increasingly choosing individual surface designs for the design of their interiors. Interprint satisfies this demand with its decorative papers printed with industrial digital printing technology: The company’s state-of-the-art, single-pass inkjet system, is highly flexible no matter the size of the order. The system prints repeats of more than five metres with a maximum printing width of 1680mm for wood, stone, or creative décors.

Interprint takes a step further and puts its customers in touch with relevant partners from the timber and HPL/CPL industries to ensure a perfect further processing of the paper onto boards.

The relaxed exhibition atmosphere at the Design Post Cologne, held at the same time and adjacent to Interzum, contributed to the success of the event. The unique ambience of the location encouraged intensive discussions mutual inspiration and creative exchange.”

“Six Pack” with full service

Interprint introduced six decor statements that it believes defines the trends and packs the punch of this time of change, and calls it a “Six Pack”. These are Kronberg, Intra and Ladin which each interpret the focal topic “oak” in different ways: natural, experimental and rustic. Paldao is an elegant walnut, Nairo a chestnut and Lavant a diagonally laid marble.

“Un-furniture” – reduced furniture abstractions – demonstrated the effect of the Six Pack decors at Design Post Cologne. The decors were available in a range of application possibilities: as a full-service package with a melamine surface, Xelio finish foil, thermoplastic foil and edge banding. Among the other decor highlights the Sidewalk purist design with a metal look was very popular with the audience.

Co-creation collection

Interprint is stimulating modern decor design with its co-creation idea. This innovative process encourages the decor printer to cooperate with renowned designers in the international furniture world. This facilitates mutual inspiration in the development of decors. During the exhibition at the Design Post, Interprint presented decors developed specially for the company by design greats
Jochen Flacke, Thorsten Keissner (Dolf Langemann Design) and Peter Kern from Germany, as well as Atilla Kuzu from Turkey and Luca Tormena from Italy. The original materials and background stories exhibited allowed the visitors to take part in the creative process of decor development.

Co-Creation Talk
The highlight of the four-day Interprint event was, without doubt, the Co-Creation Talk that explored the topic: “Transform – Interior Design in Changing Times”. The five international design experts, Flacke, Keissner, Kern, Kuzu and Tormena, reflected together with Salvatore Figliuzzi and Maurizio Burrato of the Interprint Design Team on the influence of transformation on interior design. It was agreed that the application of technology and flood of information give design a new, central filtering and focusing role in the diversity of possibilities. Counter-trends of digitisation are the longing for naturalness, conscious imperfection, and the everything-is-possible mix of styles, colours and materials.

Experimenting in the lab
Visitors at the exhibition were encouraged to enter the special Interprint Lab to experiment and create individual collages with various decors, uni-colours and materials. These material collages reflected the role of the decors and uni-colours in the design of the room in an abstract way.

Leading the way
Launched in May 2015 as a pioneer with the world’s first industrial digital printing system, Interprint used Design Post to present an insight into the fascinating possibilities of this fast-developing technology.

Find out more at http://www.interprint.com
Proadec’s edging materials and designs a crowd pleaser

Visitors to Interzum found it impossible to pass the Proadec stand without pausing to look and feel the products on display and listen to the experts discussing the advantages of using Proadec edgings.

Austro’s representatives were at the stand and were pleased with the number of South African furniture manufacturers and shop fitters who dropped in to learn more. Edge bandings are an important component for the furniture industry, not only because it is a decorative finish but also for its technical features. It protects boards from impacts and humidity and quality edgings are today accepted as a high value-added component for diverse types of furniture and interior decoration.

Proadec offers polyvinylchloride (PVC), polypropylene (PP) and acrylonitrile butadiene styrene (ABS) edgings that are classified according to their materials and the functions for which they have been designed. The company’s product ranges have been developed to compliment the wide choice of boards available in the market. The printed edgings are produced using an environmentally-friendly, VOC free, UV paint technology with excellent scratch resistance. All are free of plasticisers and lead.

Proadec thermoplastic edge bands are available in a wide range of colours and textures and have superior resistance to UV light, abrasions, impacts, chemical agents, temperature extremes, and moisture. The life cycle of edge bands is much longer than melamine or wood veneer edging.

The company has its own research and development laboratories, and tries to ensure that it designs and manufactures edgings that are specifically relevant for each of its markets. These products can be colour and texture matched to ensure a technically perfect finish that meets its customers’ needs for superior design and decoration.

High gloss finishes
Proadec offers two versions of premium high-gloss edgings to meet different market needs:

ProHiGloss: high gloss edgings with ultra-smooth, clear reflection surface with elegant mirror effect. These edgings feature significant impact and scratch resistance and UV light protection. It is easy to apply and maintain, which makes it the most competitive option in its segment. It is available in PVC and ABS in thicknesses ranging between 0.8mm and 2mm in a range of colours and woodgrains.

ProHiGlossPLUS: special high gloss edgings carrying a thicker layer of lacquer that enhances gloss, volume, and depth, achieving a “piano black” high gloss finish with perfectly clear reflection. It is available only in ABS.

Matt finishes
Austro has found that although high gloss finishes are popular in South Africa, there are a select number of clients who are following the rising European trend of opting for a matt finish. This finish has scratch and stain proof surface characteristics that makes it robust, yet gives it a velvety soft surface that is satisfying to touch.

In Europe matt finish cabinets are more popular than glossy cabinets. They don’t reflect light and are the perfect choice for more traditional style or country style kitchen cabinets with routed fronts. However, a matt finish also looks just as good on contemporary style flat cabinet fronts. The main advantage of matt finish cabinets is the fact that
fingerprints, scratches, and other imperfections are far less noticeable than on gloss finish fronts.

It doesn’t mean there are no fingerprints or marks that show, it just means that you don’t see them as much because there is no reflection of light to make some areas of the cabinet fronts look brighter or darker than others.

Proadec’s ProMatt is a premium ultra matt range that offers an ultra-matt look. It has an ultra-smooth and velvety surface with zero reflection achieved through a high-grade lacquered finish with gloss below 4GU.

An added benefit is that unlike some matt options in the market it is highly resistant to fingerprints and dirt. Excellent processing and easy maintenance are notable features of this edging that is available in ABS in thicknesses ranging between 0.8mm and 1.3mm in plain colours and woodgrains.
Chiyoda chooses Woodfinish Management as its South African agent

Roy and Gareth Williams of Woodfinish Management have returned from a successful tour of Interzum and Ligna 2017 with innovative ideas, product ranges, technical information and equipment from their wide range of specialised suppliers.

At Interzum in Cologne, the father and son team met with Olaf Leonard, the creative director of their newest principal, Chiyoda Europe. This is a subsidiary of Chiyoda, the Japanese international industrial giant that was established in 1948 as a growing petrochemical company. Chiyoda Europe is based in Belgium and the company designs and manufactures:

- decorative papers
- synthetic films
- paper foils
- release films.

Gareth says Chiyoda is a company that does not believe in design limits, if a concept can be thought of, it can be designed and manufactured as a decorative surface. It has the capability to design originals, scan from designs, capture digital décor styling and translate it into amazing images and engravings for interiors.

The success of the company in Europe is based on its relationship with international trend agencies and ability to analyse life styles and social trends in terms of interior design, automobiles, art, architecture, and fashion.

At Interzum, Chiyoda stand attracted the interest of visitors who were drawn by its striking stand that exhibited examples of its decorative surfaces that are influenced by the four latest interior design trends dominating 2017-2018. Interior and furniture designs are influenced by:

Gareth explains that some of the products available for local shop fitters, interior designers, architects and furniture manufacturers include:

**Decorative papers**

C-DecoPaper CL: Rotogravure printing for classic melamine and acrylic coatings applications as furniture, laminate flooring, objects and interior decoration.

C-DecoPaper RE: Rotogravure printing for all register embossed designs for melamine and acrylic coatings as laminate flooring, furniture, shop fitting and interior decoration.

C-DecoPaper EXT: Rotogravure printing with special characteristics for outdoor applications as façades, carports, and boxes of all kinds.

**Decorative foils**

C-DecoFoil CL: The classic finish foil based on a pre-impregnated paper for application in the furniture industry, profile wrapping, wall and ceiling panels, and surfaces with or without 3D-touch-experience such as solid wood character and optical pores.

C-DecoFoil HD: The high-quality refined finish foil with a print resolution in high-definition (HD) quality and extremely high resistance to chemical and mechanical...
use. It has excellent cleaning properties for caravans and motorhomes, furniture, doors, and surfaces with or without 3D-touch-experience.

C-DecoFoil IOS: The special finish foil for IKEA-type requirements based on a pre-impregnated paper for application in the furniture industry, profile wrapping, and surfaces with or without 3D-touch-experience.

C-DecoFoil ECO: The economical finish foil based on thin base paper (not impregnated) with limited chemical and mechanical characteristics for application in the panelling industry and furniture.

**Decorative synthetic films**

C-DecoFilm VIN: Rotogravure printing on transparent and coloured polyvinylchloride (PVC) films for applications as LVT-flooring, flexible wall, ceiling and floor coverings.

C-DecoFilm PP: Rotogravure printing on transparent and coloured polypropylene (polyprop) films for applications as flexible wall, ceiling and floor coverings, and furniture.

C-DecoFilm PE: Rotogravure printing on transparent and coloured polyethylene films for applications such as flexible wall, ceiling and floor coverings, and furniture.
Ligna 2017: Cefla embraces industry 4.0

Ligna 2017 proved to be a huge success for Geerlings, the South African sole agents of Italian wood, glass, metal and automotive finishing systems manufacturer Cefla, as the company’s continued pursuit of automation and digitisation solutions for the wood finishing industry attracted huge numbers of potential customers and interested parties over the five days of the show, to their impressive stalls.

The company displayed and demonstrated a number of machines at Ligna including the hugely popular iGiottoApp X2, a six-axis robotic sprayer for panels and 3D objects that combines cutting-edge coating technology with an easily programmable, high-performance application system for parts and components.

Exceptional precision means low coatings use and high productivity. iGiottoApp X2 utilizes state-of-the-art 3D laser scanning technology to assure application speed, accuracy and consistency. Automatic nozzle-cleaning reduces scheduled maintenance and the machine can also be networked for remote diagnostics assistance if needed.

iGiotto App X2’s pair of anthropomorphic robots are automatically driven by a system that classifies and recognizes the pieces inputted in the production process, allowing the user maximum flexibility.

The robots can operate in an autonomous manner, following optimised trajectories and without hindering the movement of one another. They can even be configured to increase productivity by working in a synchronous fashion.

Fully geared for the fourth industrial revolution, or Industry 4.0 as it is popularly known, with solutions that will enable their customers to turn their factories into ‘smart factories’, making the most of diagnostics, preventative maintenance and the resource optimisation that come with implementing modern automation and digitisation solutions, the company garnered a great deal of attention at Ligna 2017.

C-Cloner

Cefla’s C-Cloner application is, in essence, a simulator that allows for a realistic, 3D overview of the process before starting a production line. It allows the operator to check line logistics, assess loading and unloading stations, analyze the production flow and decide how to handle servicing operations.

It also has a revolutionary live-interface-goggles with technical support from Cefla direct, so that clients can get real time solutions to real challenges.

c-Cloner is quick and realistic. It can simulate a sequence of work days and thanks to its library of 100 machines, recreated down to the smallest detail by applying mechatronics.

Cyber-physical systems

Ligna 2017 saw Cefla present their range of Cyber-physical systems (CPS). These are applications tightly integrated with IT systems and capable of mutual exchanges and interaction at every step of the production process, enabling companies to make use of a number of features to optimise their production processes.
LET GEERLINGS HELP YOU MAKE A NEW CEFLA START TO YOUR 4.0 FINISHING

The time has come to rethink the rules of Finishing. Pioneering innovative ways to extend your equipment lifecycle, enhance your efficiency, boost your productivity and optimize your energy consumption, Cefla Finishing is driving the new revolution. Some are calling it Industry 4.0.

We call it the smartest way to secure your role in tomorrow’s industrial world. From the new IOT live service goggles, to robotic spraying machines, the future has arrived.

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Austro introduces
game changing
edge banding
technology

In response to the increasing quest for productivity and quality by South African board components and products manufacturers, Austro is introducing the Mobilatect system from Bio-chem Cleantec.

The Mobilatect system applies a solvent-free material that prevents escaping adhesive residues from adhering to the board edges during the edge banding process. This liquid cools the edge banded glue joint, reduces static acts as a cleaning agent by removing adhesive residues. This enables the edge bander’s scaping units to work more accurately with less prone wear and tear.

The system is integrated in the edge banding machine. Fine atomizer nozzles apply the liquid precisely on the upper and lower edges of the chipboard and MDF panels.

c-Tracker
This application evaluates the effectiveness of the line in real time by collecting and analysing data related to productivity, and communicating the necessary steps to increase productivity. It instantly provides the operator with a host of opportunities, minimising down times and constantly boosting overall production efficiency.

c-Link
This application is set to take the market by storm as it allows users to integrate data into their enterprise resource planning (ERP) systems, ensuring that data retains its value over time to optimise future workflows.

Through collection, storage and analysis, data becomes a vital asset and its integration and sharing facilitates progressive efficiency improvement of all the connected systems.
It is used as a separating agent prior to gluing, as a coolant during gluing, and as a cleaner after gluing the edges together.

The clean edge system operates at 0.5 bar and, thanks to the integrated pressure tank, there is no need to top up the cartridges. Trevor Williams, CFO of Austro, says it is a game changer in the edge banding industry. “When clients convert their edge banding processes to use the MobilTect clean edge system, it will culminate in up to 70% less consumption.

The liquid is solvent free, non-flammable and VOC free, and comes in at a much lower cost than traditional products.”
Record breaking sales at Ligna confirms Biesse’s leading status

For Italian woodworking technologies producer, Biesse, the numbers say it all: more than 4500 visitors from across the globe, 5000 square metres of exhibition space and the highest sales figures it has generated at a trade show, 45-million euros, makes Ligna 2017 an amazing event.

The company presented an extensive range of machines and technologies at Ligna and the fact that more than 35% of the sales were Industry 4.0 lines is confirmation that the internet of things (IoT) is shaping the present and future of manufacturing.

Trevor Williams, chief financial officer of Austro, which represents Biesse in South Africa, says South African manufacturers are no longer late adopters of technology. “Our clients, from the smallest to the largest, want Smart Factories. We enjoyed the opportunity to introduce our existing and potential customers to the people from Biesse, and to take them through the vast stand and discuss ways in which we can help them improve their productivity, quality and competitiveness,” says Williams.

During a press conference at Ligna, Biesse’s branch and division director for wood and sales, Federico Broccolli, said: “The layout of our stand was entirely based on the 4.0 concept, with interconnected technologies that offer customers the significant benefit of reducing production times and creating efficiency. We like to refer to these solutions as the Internet of Biesse.”
The Rover Gold is a compact machining centre designed for high performances capable of meeting various levels of production requirements.

It's the ideal machine for those who require a flexible and reliable solution.

- A single processing centre for all types of machining operations
- Quality finishing
- Reduced set-up time
- Intuitive technology
- Customisation of machine for different production requirements
bSuite software systems

Williams and his team of experts explain that South Africa’s visitors to the stand were particularly impressed by Biesse’s bSuite of software-driven production management systems. The bSuite software comprises an array of advanced software tools with several plugins that enables users to design, plan, and monitor their entire production process.

• **bSolid** is a 3D computer aided design and manufacturing (CAD-CAM) software programme that lets users import or draw any type of two- and three-dimensional project, from the easiest to the most complex, by using the intuitive and unique design system. The software supports the performance of a range of machining operations.

• The user enters the project dimensions and the software interprets the information so that the product is displayed on the monitor, together with all the operations needed to manufacture it. The programme verifies the accuracy of tool pathways, pre-empts programming errors, modifies and checks the project before machining. It gives the user full control by showing the machine in virtual reality, complete with its components, axis kinematics, magazine management and numeric controls. Changes to the machining processes can be made at any time.

• **bEdge** reduces design time as edge banding planning can be achieved in just a few simple steps. It sequentially orders pre-edge banding, edge banding and post-edge banding to maximise efficiency and prevent any programming errors. The software contains a huge amount of information from Biesse’s long-standing experience in edge banding operations. This is combined with the user’s expertise to deliver high productivity and quality. bEdge automatically processes all the information to generate the final programme required to manufacture the component.

• **bWindows** is a seamlessly integrated plugin for manufacturing windows and door frames. It can manage complex products in terms of number and types of components. All that is required is for user to specify which tools are available, and which bWindows processes are needed to execute the project.

• bWindows can verify the specifications of the product to be manufactured. All dimensions of the components, joints, and finishes can be checked and simulated before production begins. bWindows enables the precise calculation of door and window processing times and is integrated with bSuite and its job list management system.

• **bNest** is the bSuite plugin specifically for nesting operations. It allows the user to organise nesting projects.
Leitz redefines tooling solutions for composite boards and solid wood processing

The leading German tooling solutions manufacturer, Leitz, once again raised the bar when it presented its fundamentally revised, and in certain cases, newly designed, saw blade solutions at Ligna in May 2017.

With a lexicon of more than 8000 items as well as thousands of uniquely designed and fabricated customized tooling, the stand was an inspiration for the Ligna visitors. Represented in South Africa by its national woodworking equipment supply partner, Austro, Leitz exhibited its latest technologies for solid wood, composite boards and, for the shop fitting and allied industries, its diamond tipped tooling innovations.

A few of the products that interested South African visitors were the RazorCut saw blades, DT Plus hogging blades, the EdgeExpert router cutters and a comprehensive range of mitre saws and scrapers.

RazorCut blades

Saving one process step when cutting single boards and stacks of boards can significantly increase the profitability. The combination of vibration-damping laser ornaments, asymmetrical tooth pitches and high quality ultra-fine-grain cutting material, ensures that the Leitz RazorCut sawblades cut solid wood and composite boards perfectly with only one cut. Melamine boards, for example, are ready for edge banding, which eliminates additional time wasting processes.

in a simple way, reducing the material waste and machining times. bNest calculates the most efficient tool pathways for the nesting of board components. This optimises production times and minimises waste. bNest can be integrated with the most common CAD-CAM and cabinet software, and is fully integrated with bSuite via bCabinet and bSolid.

- bCabinet is the plugin for furniture design. It allows users to develop designs for a given space, and to quickly identify the individual elements that make it up. bCabinet provides a design environment based on parametric elements which allow maximum design flexibility. Users can move from design to production in a simple and direct manner, making the most of the full range of functions and benefits of the suite:
DT Plus hoggers

The Compact DT PLUS hogger units are redesigned and guarantee excellent cut results for all materials and surfaces, from chipboard to honeycomb, from veneers to plain, textured or matt melamine finishes. The hogging unit delivers cut-across roughing and smooth edges because of its constant cutting width and increased sharpening area, which makes it efficient and affordable. It can be resharpened up to 12 times during its lifecycle. The irregular pitch of the gullet area reduces vibration and the noise levels by up to 3dB(A). Chip clearance is trouble free.

Katana blades

The Leitz Katana blade is an all-rounder for processing different materials such as plywood, solid wood, honeycomb panels, coated woodworking material profiles, solid wood profiles and thin-walled plastic profiles. The specific tooth geometry and its innovative tooth combination ensure tear-free edges.

Jointing cutters

New board materials and machining centres require new solutions to keep up with their development and Leitz has a reputation for delivering every time. The Diamaster EdgeExpert router tools have increased shear angles to produce tear-free edges and smooth medium layers when cutting extremely thin paper decors, veneers or foil- and high-gloss coated boards on continuous machines and CNC machining centres. These routers last about 15 times longer than conventional routers.

All woodworkers are invited to contact their nearest Austro centre to view and discuss the Leitz range of tools.
Lamello launches new Cabineo cabinet connector system

Lamello’s biscuit jointing systems are well known in South Africa and their latest product, the Cabineo, was launched at Ligna and is now available from their local supplier, Austro.

Cabineo is a one-piece connector to join cabinet components. It is ideal for “flat-pack” ready to assemble furniture. A typical manufacturing process would be to cut the boards on the panel saw and to further process them on a CNC machine or a nesting system.

The 5mm holes for the Cabineo screws can be drilled with standard CNC tooling and therefore a tool change is not required. Time can be saved by letting the operator insert...
the Cabineo connectors into the already processed workpiece while another workpiece is being machined.

Cabineo 12 is used for corner connections and Cabineo 8 for middle partitions. Once the connectors are inserted, the workpieces can be edge banded. The edged components with the pre-installed Cabineo fittings are easily stacked for transport.

Once on-site, the fitter can easily assemble the furniture using a cordless screwdriver. Cover caps are placed on the Cabineo in a matter of seconds.

The beauty of the system is that the setup time is massively reduced, and the pre-mounted connectors mean that there can be no mistakes due to loss of hardware or wobbling products during assembly.
Kastamonu Entegre purchased their first HotCoating line from Kleiberit approximately four years ago and the new deal will see them doubling their production capacity.

The line was produced by Spanish machine manufacturer Barberan and, in addition to the wildly popular high gloss finish, will add some new finishing options to Kastamonu’s production capabilities, including a super matte finish with a fingerprint resistant soft touch effect.

The new line is 2.4 metres wide, 135 metres long and will be able to run at a speed of 15 metres per minute. It will be installed at the Kastamodu facility in Turkey.

The line can apply clear or pigmented products that are extraordinarily durable, abrasion and scratch resistant, and are highly resistant to discolouration from either chemicals or sunlight.

Kastamonu Entegre produces raw and melamine coated particle boards, glossy panels, MDF, laminate flooring, tops, door panels and value added products for the furniture, decoration and construction sectors, and is a global power in the industry. It is the largest in its sector in its native Turkey, the fourth largest in Europe, and the seventh largest in the world, with production at 13 factories at 10 locations in five countries.

According to Kleiberit CEO Dr Achim Huebener, the fact that Kastamonu has opted to invest in another line, effectively doubling their capacity is a great confirmation for Kleiberit that this is now the leading technology in the world for converting melamine boards into high gloss boards.

“Four years ago, when Kastamonu invested in their first HotCoating line, this was an innovative new technology. It was a great step for Kastamonu, moving from a board producer to a downstream converter, providing high gloss boards to the market.

Over the past four years, we have worked closely with Kastamonu to ensure the success of the line. The fact that they ordered another line is a great success for us.”

HotCoating technology has been all the rage in South Africa as well since last year, when local board producer, PG Bison, invested R60 million in a six-foot-wide HotCoating production line, one of only five such lines in the world at the time.

Local board manufacturer PG Bison invested in a HotCoating line from Kleiberit in 2016.
Kleiberit goes all out at Ligna 2017

German adhesives manufacturer Kleiberit went all out at Ligna 2017, held in Hannover, Germany from 22 to 26 May, presenting the latest in interesting developments and solutions in the fields of surface finishing, surface lamination, edge banding, profile wrapping and LVT flooring adhesives at the company’s 540 m² stand.

The stand featured production lines running live demonstrations showing the advantages and uses of the company’s HotCoating technology, including high-gloss and super matt finishing for wood-based boards, and their roll-to-roll coating method.

Also on was an inline digital printing line that can print inline and subsequently ‘hot coat’ in a single pass – a method that Kleiberit recently enhanced in cooperation with machine manufacturer Huser.

The system’s compact integrated digital printer is worth a special mention. Embossed structures are also possible, thus opening up completely new opportunities for paper manufacturers, relating to profile wrapping and surface lamination. The system is capable of paper laminations up to a width of 1.6m.

Wide printed and coated papers hold substantial potential for the furniture industry – manufacturers can laminate large surfaces and coat edges in one go with Kleiberit’s technology.

This technology is also likely to make a huge impact on the flooring industry, with the high demand for luxury vinyl tiles (LVT) and flooring manufacturers looking for materials that are printable up to a width of 2.1 metres and treated with a highly abrasion resistant coating.

A super matt finish and can be reactivated in a short-cycle press, providing a ‘soft touch’ finish that also has excellent acoustic properties and can even be embossed with deep structures.

A major advantage of the HotCoatin technology is that the extremely low glossiness of the super matt surfaces are achieved by physical means – which offer numerous other benefits alongside preventing glossing – rather than with chemical matting agents.

Kleiberit’s adhesives unit was also present, showing applications and solutions in the fields of flat lamination, edgebanding, profile wrapping, and adhesive solutions for flooring.

The future of flat lamination

Kleiberit PUR hotmelt adhesives create new possibilities for manufacturers of innovative components for the wood, furniture and construction industries. Particularly noteworthy is the unmatched resistance against heat, cold, and water influences, as well as the tremendous bond strength.

Especially in the production of furniture components with thin foils, top surfaces are achieved under the best processing properties.

Premium quality in edgebanding

Whether in stainless steel, aluminum, chrome, or for the edging of for instance, polymer or glass components with a seamless edge –Kleiberit PUR hotmelt adhesives,
The PUR Specialists

KLEIBERIT manufactures high quality adhesive products for the Wood Industry with following applications:

**Flat Lamination**
- Designed products for slot and roller applicators
- High temperature and water resistance
- Excellent high gloss and matt surfaces with thin foils
- No formaldehyde
- ME-products available

**Edge Banding**
- Invisible glue line
- Superior water resistance
- Very high temperature resistance
- Excellent processing
- Wide product range; transparent and ME products available

**Profile Wrapping**
- Superior water resistance
- Very high temperature resistance
- Excellent processing
- Wide product range for almost all core materials and substrates available

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**Thanks for visiting us on LIGNA 2017. We are looking forward to continue our innovative partnership.**

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Latest Holz-Her smart machines demonstrated by Hüster Machinetool Company

History was made at Ligna 2017 when Holz-Her and the Weinig Group shared the stage for the first time to present a comprehensive range of machines and equipment for both, solid wood and board-based products. Holz-Her is the specialist German manufacturer of machines to cut, edge, and machine boards and turn them into top quality furniture, shop fitting and home décor products. It launched a range of new models at Ligna 2017, and representatives of its principal supplier, Hüster Machinetool Co, were on hand to demonstrate and explain the products to southern African visitors.

Hüster Machinetool Co has over 40 years of experience and a network of six branches to provide high-quality machinery to all sectors of the manufacturing industry in South Africa, Namibia, Botswana, Zimbabwe, Lesotho, Malawi, Angola, Zambia and Mozambique.

A wide range of heavy-duty industrial machinery, accessories and consumables is ex stock available through every branch. The company has frequent running containers and airfreight consignments from Europe and other countries to South Africa that allows it to supply non-stock items in a relatively short time, depending on manufacturing- and transport-times from suppliers.

Hüster Machinetool’s suppliers include well-known brands like AKE, Holz-Her, Martin, Griggio, and Kleiberit.

Glu-Jet stations

The Accura industry version is fully automatic and the Glu-Jet PUR 2K glue station is a standard feature. The glueing station can accommodate large 2kg glue sticks that are available commercially from all leading glue manufacturers.

The new gluing station is designed as a change-over station with technology from the Lumina series with HSK adapters. This allows the station to be removed easily using a change-over carriage, making it even easier to clean the glue application nozzle. An added feature is that other Glu-Jet...
stations can be changed over on the same machine or even combined with LTronic on the Lumina Industry version for activation of laser edging.

The features of the Glu-Jet station include:

• Integrated, fully-automatic purging routine
• Motor-driven nozzle height adjustment
• Residual glue monitoring indicator on the control unit that allows the operator to see how many meters of edges can still be processed with the current filling
• The station can be precisely cleaned at the touch of a button with the right purging volume as well as correct temperature and purging timing.

The advantages of the Glu-Jet system include:

• Invisible joint look using new thin film technology
• Low maintenance requirements and energy efficiency reduce costs
• The sealed system prevents unpleasant odours due to escaping glue fumes.

The 2kg PUR glue cartridges are significantly more economical than conventional PUR granules and the investment is worthwhile for furniture manufacturers who exclusively process PUR glues.

Holz-Her takes nesting technology to new dimensions

Solid machine construction and the latest technology ensures high production capacity and precisely produced workpieces. The “classic” level Dynestic 7532 machine can be easily adapted to fit in various automated environments. The “push” version pushes the finished nest onto the conveyor belt and cleans the machine table for the next machining process.

The “automatic” version is ideal for high performance and batch size-one production in combination with the automatic Holz-Her Store-Master 5110 panel handling system and the Dynestic 7532 lift and standard elevating table, which enables highly efficient machining of complete stacks of panels.

The Holz-Her Dynestic 7535 has a five-axis milling spindle and, with its 2200mm deep grid table, is the flag ship in the new series of nesting machines. It is equipped with the completely newly developed Campus software package version 7. The high-flow nesting table ensures optimum vacuum flow and can also be supplied with an intelligent 16-field grid table and software-controlled vacuum control. Double-acting suction pads enable the clamping of doors, staircase components, etc., making this five-axis CNC machine a real all-rounder with virtually unlimited machining capabilities, especially when the features and nesting results from the optional BetterNest software are used.

All Holz-Her five-axis machining centres are supplied with a liquid-cooled five-axis precision milling spindle with output of 10kW and speed range of 1000 - 24000rpm as a standard feature. The high-performance 12kW cutting spindle or the 17kW Pro-Torque spindle with controlled axis locking is available as an option.

Hüster Machinetool Co says the generous machining dimensions and comprehensive range of special suction cups make these machining centres perfect for configuration of a wide variety of applications in furniture and model construction. Whatever version is chosen, the Dynestic 7535 classic, push, automatic or lift five-axis CNC machine is at the top of its class.

Holz-Her, the international woodworking machine manufacturer, says the future has arrived with its Nextec complete CNC solution for producing furniture without programming.

The heart of the Nextec CNC is its CabinetSelect programme. Just a click of the mouse is all that is required to select the desired piece of furniture from the extensive CabinetSelect database and drop it into your cart. Simply amend the dimensions and quantities and the Nextec writes the required nesting programmes in the background for formatting, drilling, and grooving - all you have to do is position the panel and press the “Start” button. The work pieces can then be edged and the furniture assembled using the required connection techniques.

The Nextec makes furniture production more efficient and simpler. The machining centres have an extremely

All it takes is the click of a mouse button and Nextec will do the rest
All it takes is the click of a mouse button and Nextec will do the rest

stable, gantry-type design with precision drive and control technologies. The Nextec is also available with automation components for higher production performance.

The features of the Nextec CNC machine include:
• Free selection of connection technology
• Over 300 carcass furniture models ready for production in the 3D CabinetControl database that is fully customisable
• The unique Nextec-Clamex package for P-system pockets on the surface and on the edge
• DirectCut for laser-supported, high speed cutting that turns off-cuts into valuable furniture components
• You can produce a complete cabinet in less than 30 minutes.
• Different alternatives for CAD processing. In addition to the starter version, CabinetSelect, a professional version, CabinetControl Pro, is also available.

The advantages of CabinetSelect are:
• Large selection of pre-designed cabinets
• Variations in dimensions, quantities, materials and fittings
• Compatibility with CabinetControl Pro

The advantages of CabinetControl Pro are:
• Free configuration of cabinets
• Carcass design
• Free definition of materials and fittings

When Holz-Her’s Warehouse programme is combined with the Nextec it is possible to actively control the entire parts inventory to be transferred to the machine. This allows you, for example, to use predefined interfaces, such as CabinetSelect or CabinetControl, to import and then manage parts.

The next automatic part generation step provides the pre-requisites for production. CNC programmes are automatically created in the background, integrated into the parts list and nested by BetterNest in optimised cutting plans. With Direct-Cut as part of the Nextec system it is also possible to operate the Nextec 7505/07 as well as a formatting saw.

Holz-Her says the intelligent workshop has arrived. It gives all furniture makers maximum flexibility to manage all job sizes, changing trends and new types of materials. Economic success is dependent on effective communication and flow of information between humans, humans and machines, machines and humans, and between machines, that is facilitated by intuitive software and easily identifiable icons and support.

Maximum cutting precision in minimum space

The new range of vertical panel saws from Holz-Her’s Sector series combine over 50 years of experience with a basic, solid design that offers an excellent price-performance ratio.

The Sector 1255 and 1260 machines are ergonomically designed and their rigid completely welded frame provides precise cutting quality with edges that are edge-bander ready. Hüster Machinetool Company, the local agent for Holz-Her products, says the machines need only five square metres of floor space, compared with sliding-table panel saws that need a free area of 35m² to cut a full format panel.

The Sector 1255 is only available as a manual machine and has a cutting depth of 60mm and lengths of 3300mm, 4300mm, 5300mm and 6300mm. In all other aspects, it matches the Sector 1260, except that it can also accommodate an optional composite material cutting package.

The Sector 1260 gives the operator the choice of manual or automatic operation. The automatic mode allows automatic plunge cutting, through cutting and
ALL OUR EDGEBANDERS CAN PROCESS PUR.
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GLUE APPLICATION SYSTEM

Hybrid technology – two perfectly combined systems

The edgebander is decisive for furniture with a high quality appearance. You can also profit from 45 years of HOLZ-HER technological leadership in edgebanding.

- Change over from colored to neutral glue at the flick of the wrist.
- Cartridge or granular form (Figs. 1 and 2) – the glue can be changed over in minutes.
- Changeover from EVA to PUR glue is also possible within the shortest time.
- And the entire system can also be completely cleaned in just a few minutes.

HÜSTER MACHINETOOL COMPANY
Your partner in Southern Africa

For further information please contact:
Homag networked automation is a market changer

Productivity, competitiveness, and precision manufactured products are the objective of every woodworking business, and the Homag Group has demonstrated that companies that invest in automation of either the entire production process or key parts of it, are achieving these goals.

Ian Fuchs of Donald Fuchs Woodworking, the agent for the Homag range of machines and manufacturing solutions, says the opportunity to embrace automation, which is part of Industry 4.0, impacts profoundly on present and future markets. "It opens new opportunities for businesses that want to expand into different markets, particularly those competing in export and import arenas," he says.

Visitors to the vast Homag exhibit at Ligna 2017 could be forgiven for thinking they had entered a bustling city instead of a woodworking machinery supplier’s pavilion.

Ian Fuchs says Homag has such an extensive range of technologies available, that this month he is highlighting just a few of the automation solutions he believes southern African manufacturers could consider.

The brains of the system

Homag introduced the latest version of the brains of its networked storage system, woodStore-7 at Ligna. This is the seventh iteration of the programme and substantial new additions have been made in the fields of operator convenience and safety, and in process optimisation. The new tools link the raw materials purchasing and order processing systems. It manages offcuts, analyses, controls, and optimises all material movements, even if panels are stored elsewhere.

The newly delivered materials are loaded onto woodstore-7, which tracks its storing position, number of boards, dimensions, and other required data. In this way, search and handling times are significantly reduced.

The VKS cardboard box cutting machine

retraction, along with return to the starting point, making it significantly easier to cut panels and ensuring higher cutting power. It has a cutting depth of 60mm and lengths of 4300mm, 5300mm and 6300mm.

The professional OptiBase V-Cut cutting optimisation system is available for all Sector models. The user interface is simple and the 10” touch screen provides quick operation and management of orders, material and parts lists. The label printer for Holz-Her machines included in the package ensures clear identification of all parts. You can choose to carry out the optimisation on the machine or in the office with a network connection.
even for offcuts. When an order is logged, the software prioritises and recommends the available materials. The current offcut stock is displayed on each terminal connected to the horizontal storage system and can easily be incorporated into production.

WoodStore-7 can produce reports based on the user’s specific production conditions. This system generates different strategies for materials storage and accessibility, and gives tips on how to increase the efficiency of the materials stores.

Storage and materials handling
The Homag TLF-211 and TLF-411 storage systems solve logistical requirements at the beginning of the process chain. Boards are stored in and removed from the horizontal storage system, collated, or transferred to the networked operating machine quickly, automatically, and precisely.

The TLF-211 and TLF-411 coordinate the process so that operating machines like panel saws and CNC machines can run optimally. Idle times are avoided due to a continuous flow of raw materials, including off-cuts where needed, into the production chain. It maximises the output of the linked operating machines.

Automated seamless edge banding
Homag Automation demonstrated how to automate the manufacture of board products by using a combination of the Ambition-1650 airTec edgebander and the Boomerang TFU-140 materials handling system.

Only one person is needed to operate the zero-joint Ambition-1650 airTec machine and the Boomerang TFU-140 materials return system. In the airTec process, the edge band and board are bonded using an innovative rotary air heater system that provides an efficient and economical energy source. It heats the air and simultaneously serves as heat storage that can be used to reheat the air. When the boards have passed through the edge bander the TFU-140’s air cushion table gracefully handles the workpieces and returns them to the beginning for further processing.
The MPH carcass press makes it easy to assemble furniture carcasses. Reliable flow of materials
Sorting in batch size-1 is made possible with the order picking TLB-321 centre. This is an extremely versatile storage and materials handling device that buffers, sorts, selects and positions the boards across the entire process chain. The correct boards are placed in position for the next production process precisely when and where they are required.

The transport carriage design allows it to simultaneously transport and place the workpieces onto the carriage and enables better use of factory space.

The system is easy to maintain because the switch cabinet is a fixed component of the carriage frame and in the event of maintenance can be driven in an ideal position for the user. Several quick-change modules have also been integrated into the TLB to maintain various components without significant loss of time.

Carcass press
The Homag MPH is the perfect non-pneumatic aide for assembling carcass furniture. The press is easy to operate: simply assemble the carcass, place it in the press and push the start button. The results are perfectly square carcasses due to an automatic tolerance compensation.

Cardboard box cutting machine
Packaging is part of the business’ brand. It is important because goods must be delivered to the customer intact. It must also be packaged in a visually stimulating way and, as far as possible, in an environmentally friendly way. With the cardboard box cutting machine VKS-250, Homag offers packaging solutions that are effective and efficient in terms of time and costs.

The VKS-250 automatically transforms endless sheets of cardboard of varied widths and paper quality into accurately cut boxes or cartons. It does not have to be reset when different packaging materials are needed, which means the packaging cycle is non-stop and can be available just-in-time for each completed product.
Robotic packing station
Ligna saw Homag demonstrate the VRE-200 fully automatic system that places finished components into the correct boxes for shipping. Known as the VRE-200 robot insert station, it adapts to the speed at which the cardboard boxes pass the insert area of the robot.

A feeding system moves the stacks of materials to the robot station where they move onto a lifting platform that is perfectly positioned for the robot. The robot’s suction mechanism picks up the top workpiece and places it into its cardboard container that is traveling past the insert station on a conveyor belt.

With a maximum capacity of 10 cycles per minute, the robot’s sensor ensures that it never makes a mistake. The sensor tells the robot exactly where the container is on the transport belt and it adjusts if needed.

Homag’s VRE is perfectly positioned between the cardboard folding machine and the carton closing machine. The system is ideal for mass producers of knock-down (KD), ready-to-assemble furniture. It is accurate, reliably works at a continuous speed and, unlike humans, repetitive movements do not affect its health.

Automatic box closing
When the open packed boxes arrive at the VKV-710 cardboard box closing machine, it automatically closes the packages. This is done by means of a hot-melt system and robust pressing plates that close the packages in two steps. The result is a cleanly closed cardboard box, which optimally protects products during transport.

The closing mechanisms senses the dimensions of each box as it approaches the station and automatically adjusts to the box sizes. It is not necessary to sort the boxes beforehand or to enter data such as the package dimensions. In continuous production, the VKV-710 reaches a capacity of up to 10 packages per minute with first-class packing quality. The VKV-710 can be individually and flexibly equipped with driven packing belts, packing places, cardboard cutting machines, folding machines or robot stacking to eventually form a complete packing line.

Ian Fuchs urges furniture manufacturers to carefully assess their present and potential markets and production processes. “Homag offers smart solutions for manufacturers that want to reach wider markets by improving productivity, sustaining consistently high levels of quality and increases competitiveness and sustainability.”
Weinig Group cleans up at LIGNA 2017

The world’s leading trade fair for the wood sector, Ligna, held in Hanover, Germany from 22 to 26 May, saw the Weinig Group achieving an order inflow of 47 million euros.

Under the motto “Think Weinig”, the market leader in machines and systems for solid wood and panel processing presented a new trade fair concept, sharing a 4 000 m² stand with group company and panel specialists Holz-Her for the first time.

The company presented an impressive range of machines and solutions, packed with innovations, premieres and a comprehensive offering for all performance classes and sizes of operation. The combines stand drew hordes of customers and interested parties from 90 countries during the course of the show, making the Weinig Group and Holz-Her stand one of the busiest at this year’s event.

According to the company, new customers accounted for 8% of visitors, which is an extraordinarily high level.

The new W4.0 digital standard, via which the Weinig Group provides forward-looking responses to the challenges of networked production, met with particular demand from the international audience.

Weinig used linked production lines to demonstrate solutions for the entire value chain. Customer benefits and practicality were at the heart of the hugely popular live demonstrations.
Weinig releases the all-new Powermat 700 moulder and the Rondamat grinder

With an impressive range of machines and solutions on display, and non-stop demonstrations, the Weinig Group dominated solid wood processing and attracted the interest of the South Africans attending the largest trade show in Europe, Ligna 2017.

One of the biggest attractions on the Weinig stand was the unveiling of the newest version of the Powermat high-performance moulder. “The Powermat 700 will be the ideal moulder for South African manufacturers,” says Trevor Williams, chief financial officer of Weinig’s local partner, Austro. “It will be available from the end of the year and really does launch a new era for four-sided planing and profiling.”

Powermat 700

Traditionally, moulders require concentration and time to set correctly and safely. This can cause delays in production when component dimension changes are needed. Williams comments that in today’s Smart Factories where all machines and processes are interconnected and the saying that time equals money is most important. The ability to make time-saving adjustments by, for example, adjusting the moulder with the hood closed and the machine running, saves time and makes operating the machine safer for the user.

The new Powermat standard and optional features include:
- The lateral pressure rollers of the four-roller infeed are CNC-controlled and can automatically accommodate the wood width
- The lateral guide fences behind the left spindle are solid (for 100m/min) and are also equipped with CNC axes for automatic positioning at the appropriate width
- The jointers run with all the spindles and follow the spindle in the case of radial adjustment

In addition to the very busy 40 exhibits, another Weinig trade fair highlight drew the attention of professional visitors: the prize draw for the Cube Plus four-sider. The spectacular competition was a thank you from Weinig to its customers for their loyalty over the last year. More than 2 500 prize draw cards were completed. And the winner has since been announced as Tomaseth Treppenbau from Kastelruth in Italy.

During the customary Weinig Group press conference, the company’s supervisory board announced extremely positive growth of the Weinig Group at the end of the 2016 financial year, with orders rising by 16% compared with the previous year and the growth trend continuing into 2017. Orders to the end of April showed 17% growth while revenues rose by as much as 21%.

With the excellent Ligna sales of 47 million euros behind us, the Weinig Group is very confident of achieving the order inflow total of 471 million euros targeted for 2017. The board announced that in view of the fantastic achieved and projected growth, a number of forward looking measures as well as an investment budget of more than 30 million euros have been passed. Plans include a new administrative building and showroom at the Holz-Her site in Nürtingen at a cost of 10 million euros.

There was also a focus on growing the group’s personnel, with plans to increase the number of employees to 2 100. The personnel at Tauberbischofsheim alone is expected to grow by 6% to a total of 900 employees.

Following the press conference, chairman of the supervisory board, Thomas Bach, visited the Weinig Group stand in Hall 27. “After the excellent results in 2016 and the extremely successful start to the 2017 financial year, the supervisory board has made investment decisions that lay the foundations to further strengthen the Weinig Group’s leading position,” said Bach. “Bolstered by our success at Ligna and our innovations in the area of ‘Industry 4.0’, we expect further dynamic growth.”

At 4 000 m², the Weinig Group stand was not only one of the biggest at Ligna 2017, but also one of the busiest.
The latest a high-performance moulder from Weinig was launched at Ligna 2017

Weinig unveils new Powermat at ligna

- The hydro-outboard bearing is equipped with an automatic clamp so that radial positioning of the spindle, such as repositioning after several jointing procedures, is possible while the machine is running.
- The Comfort Set process allows toolless manual adjustments.

Thanks to these new design features, which were demonstrated at Ligna, the Powermat creates enormous added value in terms of ease of operation, operator safety, set-up time reduction and, ultimately, the quality of the final product. The new Powermat will be available on the market at the end of the year.

Rondamat grinding systems

Another range of Weinig machines that are increasingly becoming indispensable are the Rondamat tool grinding machines. These can be simple basic machines to the larger CNC tool grinding systems. Williams says the common feature of all models is the exceptional precision and they are all built according to the same high quality standards as the Weinig moulders.

The appropriate grinding wheel can produce and sharpen high speed steel (HSS) as well as stellite or carbide knives. A comprehensive range of options also allows it to profile and grind tools for special productions, such as shaft tools.

The new Moulder Master software package was on show at Ligna. In conjunction with the new Rondamat 1000 CNC tool grinding machine, OptiControl Digital tool measuring stand and PowerCom Plus controls, Moulder Master offers a system that enables process stages to be linked from the idea to the finished profile and allows the next tools and profiles to be prepared in parallel with the production in progress.

Austro’s branches in Johannesburg, Cape Town, Durban, East London and Nelspruit can be contacted to find out more about the Weinig range of equipment.
The Powermat 700 is designed with a revolutionary new operating concept which no other moulder can offer. The result: improved ease of operation and very short setup times offer the highest degree of flexibility. With these outstanding qualities the new Powermat is the perfect response to the market demands of today and sets a new standard for four sided processing.
Mirka showcases dust-free sanding technology at Ligna

Finnish sanding and polishing solutions provider, Mirka, represented in South Africa by Bulldog Abrasives, showed off some of their latest technologies combining net abrasives with a wide range of electric and pneumatic sanders at Ligna 2017.

Mirka’s range provides customers with a unique dust-free sanding experience for various surfaces, which showgoers could see first-hand during the company’s multiple daily demonstrations at their stand at Ligna.

Mirka DEOS
The company showed off the newest member in the power tools family - the Mirka DEOS electric sander. With its low profile and light weight, Mirka DEOS gets you closer to the surface and brings your dust-free sanding experience to a completely new level.

At only 10 cm high, the tool’s compact and very low profile gives a high maneuverability and helps deliver a precise and efficient sanding performance.

This small and light sander is naturally equipped with a brushless motor. The optimised ergonomics enable a comfortable grip and the machine has an easy to operate lever to control motor speed.

Mirka DEOS features an integrated vibration sensor and Bluetooth low energy technology. The vibration sensor makes it possible to view the current vibration level through the myMirka app. An in-app purchase allows the follow-up of the daily vibration exposure.

The low profile and small size makes Mirka DEOS 353CV ideal for sanding of profiles and hard-to-reach areas, and the Mirka DEOS 383CV ideal for ‘box style’ furniture enabling the operator to reach into corners, unlike conventional orbital sanders.

In combination with Mirka’s net abrasives, the tools offer fast, efficient and dust-free sanding performance.

Abranet Max
Abranet Max is a universal net abrasive suited for a broad variety of sanding applications and is especially developed for the wood industry. Due to the net structure it resists clogging on resinous wood types or soft materials and the sanded surface stays cooler and avoids burning. The tough
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Everything you thought you knew about sanders just became history.

**Imagine the perfect surface.** Thanks to the new Mirka® DEOS electric sander, you can obtain that flawless end-result easier and quicker than ever before. By getting you closer to the surface, we bring your sanding experience to a completely new level — you will never go back to hand sanding again.

Mirka® DEOS is the result of combining our experience with listening to the woodworking community. We have taken your needs and requirements one step further — beyond your expectations. The very low profile design makes the sander easy to maneuver and sanding is precise and efficient. A built in electronic motor brake and a smooth, easy to operate lever for controlling the motor speed means you can tackle any sanding job. All the while having a very comfortable grip thanks to optimised ergonomics.

The small and light Mirka® DEOS is naturally equipped with a brushless motor. It has a separate on/off switch for easy and safe handling. Use Mirka® DEOS together with Mirka’s net abrasives for fast, efficient and dust-free sanding.

<table>
<thead>
<tr>
<th>Technical specifications</th>
<th>Mirka® DEOS 353CV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>81 x 133 mm (3 x 5&quot;)</td>
</tr>
<tr>
<td><strong>Mains frequency</strong></td>
<td>50/60 Hz</td>
</tr>
<tr>
<td><strong>Power input</strong></td>
<td>250 W</td>
</tr>
<tr>
<td><strong>Voltage mains supply</strong></td>
<td>220 – 240 V ~</td>
</tr>
<tr>
<td><strong>Speed</strong></td>
<td>5,000 – 10,000 rpm</td>
</tr>
<tr>
<td><strong>Orbit</strong></td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>0.97 kg</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td>101 mm</td>
</tr>
<tr>
<td><strong>Noise level LpA</strong></td>
<td>69 db(A)</td>
</tr>
<tr>
<td><strong>Vibration level</strong></td>
<td>2.6 m/s²</td>
</tr>
<tr>
<td><strong>Dust system</strong></td>
<td>Central vacuum ready</td>
</tr>
</tbody>
</table>
aluminium oxide grain gives a high cut rate on harder wood types and materials.

The symmetric net structure enables an efficient cut and stock removal. Lower pressure is needed and a more consistent surface finish means minimal quality variations in the process when sanding with Abranet Max.

The product offers an extremely long lifetime compared to conventional abrasive belts, which results in fewer belts being needed to complete the job and also cost savings and time efficiency because of less downtime in production due to changing of belts.

The product is also well suited for applications where water is used as cooling agent.

Ultimax
Manufactured using a unique production process called ‘Selective Coating Technology’, Ultimax features a series of tiny cavities designed into the abrasive material which work to efficiently prevent clogging. This innovative technology, along with special abrasive grains, produces aggressive performance and excellent edge wear resistance while keeping the sanding surface cool. Together, these features ensure a longer lifespan and reduced material usage per job.

Abranet Ace HD
Mirka also launched Abranet Ace HD – the latest addition to the Abranet product family, at Ligna 2017.

Abranet Ace HD is a complete dust-free solution for coarse sanding applications. Its unique symmetrical diamond net pattern has excellent edge wear resistance, which increases the lifetime of the abrasive. The sharp ceramic grains provide a superior stock removal and an exceptional fast cutting performance.

According to Bulldog Abrasives sales director, Jason Baynes, Bulldog Abrasives already carry a full range of the Mirka products for the Southern African market, and eagerly awaits the launch of the DEOS sander in September 2017.

from page 78
Mirka showcases dust-free sanding technology at Ligna
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