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THE MAGAZINE

FOR THE CABINET, JOINERY, FURNITURE, TIMBER AND PANEL INDUSTRIES



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Published by the Australian
Woodworking Industry Suppliers
Association Limited
ABN 44 134 548 253

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other wood, timber, aluminium, plastic, stone
and panel processing industries. Members
include suppliers of machinery, materials,
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and advertising enquiries are welcome.

DEAR READER,

This issue features some of what's old and lots of what
is new. Our 19th century furniture making article gives
an insight into manufacturing methods through the
nineteenth century and how the introduction of steam
machinery was the great new technology of that time.
Then the article on the three chairs that have been used
by the speakers of the federal parliament since federation
talks about how the first and third chairs were made here.
But the second chair was conveyed as a flat pack from the
United Kingdom - who thought flat pack had been around
so long?

Our first article, about the art of the curve, covers both
the old and the new. The early methods of creating bends
and curves are discussed, in particular the contribution of
Thonet to the subject. We then move to today and talk
about Curvwood with its mechanised methods of creating
curves, and the bespoke methods of Manny Oppliger.

However, as always, this magazine presents the case for
new technology. How the right software can help make
businesses into the smart factories of tomorrow, and how
an ERP system is right for many businesses.

On the machinery side, AWISA members present new
high-speed machinery, automation and robotic systems,
energy saving vacuum systems, and new tooling systems.
All these are things that make life in the factory more
efficient. But let's not forget the things like measuring
systems that improve the efficiency and accuracy of site
measuring before jobs get to the factory, plus apps that
make the task of the installer a lot easier.

I hope you enjoy this issue, and don't forget we always like
hearing about businesses that are doing something a little
bit different from the norm. We welcome the opportunity
to write about such businesses.

Geoff Holland
General manager
Australian Woodworking Industry
Suppliers Association Limited

FRONT COVER: Sophisticated sliding door
systems are available from many hardware
and fittings companies.
Photo courtesy of Titus Tekform.

CONTENTS

-
- 6. CURVES:** The art of the curve.
-
- 12. COMMENT:** Transition to being smarter.
-
- 14. JOINERY:** An indigenous business.
-
- 16. FURNITURE:** 19th century furniture.
-
- 21. REPORT:** Sustainability – act today.
-
- 22. CHAIRS:** Seats of power.
-
- 26. SOFTWARE:** Hints and tips webinars.
-
- 28. PLYWOOD:** A learning curve.
-
- 30. MACHINERY:** A symphony of motion.
-
- 34. DOORS:** An essential catalogue.
-
- 36. TOOLING:** New shank cutters.
-
- 40. AWARDS:** Industry awards on again.
-
- 44. DESIGN:** In design we trust.
-
- 48. SERVICES:** For manufacturers.
-
- 51. HARDWARE:** Next generation drawers.
-
- 52. MACHINERY:** A new world.
-
- 57. MACHINERY:** Pack of all trades.
-
- 58. MACHINERY:** Integrated cell system.
-
- 61. STONE:** Quadrupling productivity.
-
- 62. MEASURING:** Proving itself.
-
- 67. DOORS:** Evolution of sliding.
-
- 68. VACUUM:** The right choice.
-
- 70. HARDWARE:** One stop shop.
-
- 74. SOFTWARE:** Needing an ERP.
-
- 78. AMBASSADOR:** New appointment.
-
- Plus other industry and product news.
-

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Woodworking and the art of the curve

CURVED wooden structures, it is reasonable to say, capture and exercise two features, functionality, and aesthetics: the way things work, and how they look. Nicholas Barratt who heads the Australian representation of Thonet, the makers of the iconic eponymous café chairs, reflects in a conversation with AWISA about the signature curves of the bent wood chairs. Although some people today may not like the curve because it feels too old-world, for many others it is part-and-parcel of the product, its defining feature, that makes it unique.

Truett and Eva Dellow, the owners and artisans at the innovative Curvwood firm, say in their conversation with AWISA, yes, there will always be a desire for clean straight lines but curves are just more inviting and appealing to the human eye.

Timeless

Bending wood for curved structures, big or small, is a timeless technique that people have used to make baskets, ships and boats, stairways, tools, farming equipment, wheels for coaches, and musical instruments. Techniques include steaming, microwaving, cold bending, or the use of chemicals to bend the wood. Then there is glulam, glued laminated timber, used to create bent wood structures. To use any of these techniques, the woodworker must know about the specific qualities of the species of wood, how different processes work and how grain and knots will affect the process, and understand the chemistry and physics of what happens to the lignin and cells inside the wood. Perhaps it is a science verging on art, or vice versa.

Bent wood was a hallmark feature, for instance, of how Viking shipwrights constructed their boats, renowned for their seaworthiness, and manoeuvrability in the rough northern seas. The shipwrights would axe-hew planks to the necessary measure from felled trees, then submerge the planks in water until they were sufficiently water-logged. Next, the builders strung the planks over a fire, flipping them over regularly while pouring boiling water over them. When the planks were suitably malleable, the builders clamped the planks onto the boat structure. The builders' skill in judging measurements, temperatures, let alone the tough physical labour, was awesome.

The Aleut people of what is now called Alaska made visors that covered the whole head out of bent wood. The study and making of these visors, chagudux, was the object of a workshop at the Anchorage Museum some years back. Patricia Lekanoff-Gregory, to whom Aleutian elders passed on the knowledge about making the chagudux, told the local press that they were not easy to make. Thin sections of driftwood were cut and then boiled in water for half an hour, then bent over forms for two days, to put the curves in the hat. They also used a hand drill that was fashioned from a wooden bow, and hunters would later spend days painting and decorating the visors. The visor worked as an amplifier and funnelled sound directly to the ears, helping the hunter hear the sounds of prey from a distance.

Below: Thinet
Classic Embossed:
Considered to be
the definitive Thonet
chair, this is one of
the most successful
chair designs ever
produced. With its
light sturdy frame and
versatile seat options,
this timeless classic
features the elegance
and functionality
that is quintessential
bentwood.



Images supplied by
Thonet Australia courtesy
Mr Nicholas Barratt.

This model was Michael Thonet's
first independent commission, in
1849, for the Cafe Daum in Vienna

This is the chair that launched
bentwood design onto the
world market.

Designed in the late 1890s, with
its distinctive and unobtrusive low
back featuring five vertical slats, this
versatile and sturdy chair became a
cafe favourite throughout Europe.

Designed in the latter half of the
20th century and drawing on the
tradition of classic bentwood this
chair offers a modern quirkiness.

More recently

In turning to more recent history, Thonet uses the traditional steaming methods in making its chairs, and Curwood uses the latest advances in technology to make large bespoke structures in laminated glued timber.

Over the years, Thonet proudly recounts in its website that it made furniture for work and leisure, for public and private use, with the volume, expertise and reach of the Thonet Company's manufacturing capabilities attracting many of the world's leading designers: Otto Wagner, Marcel Breuer, Le Corbusier, and Ludwig Mies van der Rohe. By 1912 the company was making 1.8 million furniture items per annum. Its trademark artefact was and continues to be the bentwood chairs that Michael Thonet developed in the mid-19th century in Vienna under the aegis of Prince Metternich. It is nigh impossible to conjure a picture of a Viennese, Parisian or indeed any European café without a chair that looks light, manoeuvrable, and made of wood that is bent. The Thonet chair was a defining feature of European café life until Europe self-destructed in the First World War. Thonet re-emerged and today remains popular as the number of copies of the style attests. One owner of genuine Thonet chairs told AWISA, "We bought some Thonet chairs over 25 years ago and they are still like new."

Truett describes Curwood's aim as collaborating directly with architects, artists, builders and designers to help them actualise their innovative, memorable, alluring and award-winning designs from paper to life. "Our advanced skills and knowledge of joinery and laminated timber fabrication, allows us to achieve creative results with unique and impressive curves and free shapes that go beyond the standard capability of timber. In one project, a play pod, consisted of over 88 pieces in total, and the main S shaped curved beams were six metres long with a cross sectional size of 150mm x 110mm. Some of the designs had double curves and there was quite a bit of back and forth refining and perfecting the design with the client, but we met the tight deadline and specs that were of the highest standard."

Processes

The process of glulam depends on the end result and it ultimately always involves gluing pieces of timber together, and there are multiple ways to do that, says Truett. "The way we create curves using a glulam process, is to cut the timber into thin slices, glue them together and clamp them into the desired



Curved wood Playpod at Easter Creek Quarter, NSW.
Photo: Steve Brown

► shape and size. The radius always dictates the thickness of the slices. There are global practices for glulam manufacturing and the safety, quality, and durability of our work is at the forefront of everything we manufacture. We are members of the Glue Laminated Timber Association of Australia (GLTAA) which sets industry standards, a code of practice, and policies.”

When Curwood manufactures bespoke items, the size of the members is usually governed by form and aesthetics. “The bulk of the work we do is for non-structural projects. For these the size of the members depends on the application and applied load on the members. When we are talking about structural beams, a structural engineer must specify the strength of the beams and then we manufacture to that specification.”

The firm’s latest acquisition, Truett continues, is a European built clamping system that will allow them to “create larger sectional sizes, and its stackable design means we can have multiple beams, in the same shape or being clamped simultaneously. This has aided our process in becoming more efficient and economical. We have tried and tested various glue brands for many reasons and have found one that ticks all the boxes for us. It’s one of the most environmentally friendly ones on the market, which was a huge factor in our decision-making process.”

Thonet describes the technique that its founder developed, “After placing the rods of Beech in a pressure vessel, steam was applied until the resin surrounding the timber fibres became pliable. In this changed state, the rod could be bent around a form. Once the rod had taken shape, it would be left to cure. The hardened resin would effectively hold the timber fibres firm in the new shape, which could then be used as a solid

component in the manufacture of bent wood furniture.” A further innovation was that the parts could be bundled together to be re-assembled elsewhere so that a number of chairs could be transported in the smallest space, a multiple flat pack, for global disassembled distribution. Thirty-six disassembled chairs could fit into a one cubic metre box. In 1941, says Thonet, the firm went to the US and in New York, “the factory was outfitted with state of the art radio frequency bending equipment to produce the highest quality plywood furniture parts available at that time.”

The wood

Although there is other timber readily available near the Thonet factory in Poland that supplies the Australian market, no timber is as good for making the chairs as European Beech, explains Barratt. It is the best because its structure makes it less likely to split than other local species, such as Oak or Birch. They do sometimes have to outsource but mainly they get local content from the local plantation forests, which is important for sustainability obviously, and managing costs.

Truett says Curwood’s favourite timber is Blackbutt for its blonde finish and interesting grains. But the easiest timber to work with is Accoya, a pine wood. It is an engineered pine product that has been injected with vinegar, which shuts down the timber cells, meaning it has a robust 50-year



Glulam battens.
Photo: Eva Dellow.



Truett Dellow holding curve.
Photo: Sophie Brown



Small clamping system at Curwood. Photo: Eva Dellow.



guarantee against rot, even in an outdoor application. It cuts like butter and because it is lightweight, it is easy to bend and shape. With its light colour it is easy to stain. "Whilst we are passionate about aesthetics, we also pride ourselves on providing sustainable wood in our manufacturing. For every project we work on, we always consider the best environmental and economical options to ensure a sustainable and practical solution without compromising on quality and finish. We use various local suppliers, and it depends on the species we require. Milling is a very important part of the glulam process and as such we have comprehensive machinery to ensure we are producing the highest quality glulam possible. The milling processes we generally carry out are sawing, docking, planing, drilling, moulding and dressing."

Equipment

A bandsaw, four-sided moulder, glue applicator, manual clamping system, thicknesser, spindle moulder, table saw, are the machines and tools that, Truett says, make up the equipment they use to create their structures.

Barratt explains that the Thonet factory in Poland, purchased in 1880 during the firm's early expansion, continues to use the same forms and some of the same machinery - it has not broken down. "They've been using all that, all that time, in the same factory, in the same town of Nowo-Radomsk."

Innovation

Michael Thonet revolutionised the manufacture of chairs by modernising an age-old application, mechanising it and turning

it into a mass production process. The artisan chair maker did not have a place in the new process. But it was a revolution in the business.

In a sense, Curvwood is doing the opposite because they are applying artisanal attitudes and methods to their innovative approach to making large glulam structures. Eva asserts that Curvwood is unique because the firm is eager to manufacture items which other companies find too challenging or fall outside their core business, which is usually straight section glulam. "We love timber in any shape or form and the beauty, warmth and natural feeling that it gives to any space. Curves really add a whole new dimension to the design and the feelings they inevitably evoke." It's an attitude that will resonate with all makers of bent wood over the ages.

Curved wood Playpod
at Easter Creek
Quarter, NSW.
Photo: Steve Brown



Curvwood's curved clamping system. Photo: Eva Dellow.



Interior view of the Playwood pod.

► Curvwood's speciality

Truett and Eva Dellow say that curved structures are more challenging to make and the end result definitely creates a powerful impact. Much more thought, consideration and man hours are needed to produce a curved design.

"In the past, architects and designers have had to look to have curved items manufactured outside Australia because of the lack of manufacturers within Australia. The cost also plays a part. If a straight glulam member takes so many hours to manufacture, a curved member of the same size might take ten times more to manufacture. In saying that, we believe architects want to include curves in their designs and we are already seeing that shift. We started Curvwood knowing that we were stepping into an area that requires education and advice on what's possible when it comes to curving wood," Truett explains.

Eva continues, "We receive hand drawn sketches from architects and get asked about feasibility. The architects and designers we have worked with are coming up with some brilliant concepts and we really enjoy being able to guide them to a more resolute design once all factors have been considered. It's been great to work closely with architects and designers on several concepts and see them now being more confident in specifying and using glulam in their creations, or other ways to curve or bend timber."



The Curvwood team: Ron Gattone, Eva Dellow, Truett Dellow, Lanie Mardini.
Photo: Sophie Brown.

Manny Oppliger – bespoke woodworker

Manny Oppliger, previously profiled in this magazine for his bespoke curved wood bathtubs, met the challenge of creating a made-to-measure curved wood staircase. He explains:

"The stair stringers are made up of laminated plywood. There are several different curves in the stringer because the stairs open up, widen, in the bottom section.

"It was all done by hand, and no CNC was involved. The majority of tools used to build the stairs were hand held power tools like a router, circular saw, and belt sander.

"The structure of the stairs is plywood laminated with a three millimetre Ironbark veneer I cut. I did that mainly to reduce the weight, and plywood is more stable then solid timber.

"I used SketchUp to draw the stairs, only top view. There is nothing straight on these stairs. Even the treads and risers are curved. Because the stairs open up at the bottom, the tread curve flattens out to keep the tread width in the walking path even. SketchUp showed me the different radiiuses that helped with making the templates." ■



by Leigh Swalling
Planit Cutting Edge Solutions

Consideration as we transition to Smarter Manufacturing

THE INVESTMENT in new technology by a business is often initiated by the need to address a problem or a perceived need to improve manufacturing flow. Sometimes there is more of a singular focus, with benefits only touching a specific area of the production line. But when you think about having a smart factory and Industry 4.0, what connects it all together? What data or information is provided to a business owner in order to monitor flow and results?

When investing in automation the outcome needs to demonstrate a return-on-investment that delivers a decrease in the time it takes to produce, as well as an increase in the quality of the product. Overall, it needs to be simple and easy to follow.

The investment outlay required can often be viewed as the major constraint. However, consideration needs to be on the "real time saving" that the overall system provides, regarding boosting productivity by way of increasing flow. Something that is predictable, automated and on demand. A system like this could highlight bottlenecks in the various stages as they are forming.

Many business owners have learnt this the hard way after many years of lost productivity. They understand they are running the gauntlet to find staff, especially those that have traditional tradesman skills. Demand continues to increase for both product and services, which means businesses are forced to look for technologies which allow them to remain competitive through being both time friendly and profitable.

If we improve digital communication and tighten up the various stages in production, with a view to save time, we become more efficient. We help employees avoid walking around searching for missing components and we make improvements through machining, edging, sorting and assembly, to maintain quality control and avoid dispatch errors. A system like this would help us enormously with training new staff, as it could include instructions that guide them through processes directly relative to each individual stage. Most importantly, we can detect production bottlenecks early.

Perhaps the secret is in the details around embracing systems. Systems that connect various stages, with on demand instructions, quality control at each individual stage, and maintaining a balanced overall production line with steady flow. Simple, task orientated and measurable systems, appear to be the key ingredient. Training new staff to perform a particular stage of the process, needs to be uncomplicated. Furthermore, maintaining the flow by focusing on nominal, set tasks, is crucial.

Many businesses have invested in technology to aid in streamlining their manufacturing, but many have not made the transition to automation. Keep in mind that the aim of automation is to boost efficiency and most importantly, reliability.

The next level of automation for your business must be dedicated to reducing cycle times by linking all the critical areas of the manufacturing process. It must be digital, and intuitive, and provide the business owner a clear outlook for capacity planning. View this as the Smart Factory of tomorrow. ■



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by Rick Lee

Diverse range of products made by Indigenous community's joinery business

Image: Cherbourg
Council website -
Many tribes, one
community



TWO HUNDRED and fifty kilometres north-west of Brisbane, Queensland, lies the Aboriginal Shire Council of Cherbourg. This small Indigenous community sits within the tribal boundary of the Wakka Wakka people and borders on the Gubbi Gubbi territory to the east. Originally named Barambah, the settlement was gazetted under the Aboriginal Protection Act of 1897 and established as an Aboriginal reserve. The name changed to Cherbourg in 1932 to avoid confusion with a nearby property called "Barambah Station". During its time as a reserve, over two thousand Aboriginal people were forcibly removed from their families and relocated to Cherbourg. The traditional owners for the area were the Wakka Wakka people, but the population soon became a mix of many tribal groups after being relocated from across Australia and remains a diverse community to this day.

Despite the hardships of the past and its part in the stolen generations, the Cherbourg community has taken a firm control of its future. Since mid to late 1960s, Cherbourg has had an elected Aboriginal Council. A master plan for the shire, completed in 2019, gives an impressively optimistic vision of the future. The cornerstone of this vision is a balance of community services, housing choices and local employment opportunities, keys to achieving a vibrant community and a diverse local economy.

Located in the town's industrial precinct is the Cherbourg Joinery. Owned and operated by Cherbourg Aboriginal Shire Council, the joinery has been an operating workshop since the 1950s and was originally the Trade Training Workshop, part of the Shire's Rural School Centre. Even in its early days, the workshop took pride in the high quality of the workmanship and materials turned out. In 1951, the stated aim of the workshop was to 'train promising men and lads in joinery and modern

furniture manufacture while at the same time producing such items for Settlement and Departmental use'. While most of the items manufactured at the Trade Training Workshop could be found on today's job list, many of the items reflected Australia at that time. These included the manufacture of the "Thunderbox" or earth closet as it was known in more eloquent terms, food safes for those days without fridges, commodes, blackboards and coffins.

I spoke with Project Manager, Greg Tynan about the current day programme. Greg says that the joinery runs as a stand-alone business model and is not a subsidised business. "We have to stand alone as a going concern, and like most businesses, we've had our ups and downs, but we've been able to establish a good solid base." Greg went on to say that most of the work comes from the township and its surrounding neighbours, and local house construction plays an important role in the amount of available work. "There are currently six new houses under construction and we will be providing the joinery for those in the near future. Of course, there are limits to the number of builds in these smaller communities, but there are plans for further growth when new land will be released." Greg has been with the joinery for twenty-five years and has helped see a number of apprentices go through with the skills to find employment beyond the Shire. Creating opportunities for employment is a big part of the joinery remit, and with Aboriginal youth employment falling well below the national average, it's an important role for the Cherbourg Joinery to be playing.

Greg says that the joinery is geared up to take on a diverse range of projects, from kitchens and household joinery to office furniture and fitouts. Everything can be custom made to order. "We have been able to take our manufacturing to the next level when we purchased a CNC work-centre a few years ago.

This gave us the capacity to produce to tighter deadlines." The availability of CNC machining also increased the joinery's ability to produce complex projects that might have been too difficult before. Greg says that they encountered a big learning curve when the CNC was introduced. "We were able to master it after receiving the right training, fortunately one of our boys took to it naturally and other than a few glitches along the way, we've been able to make the most of the state-of-the-art technology. Unfortunately, we have to learn it all again as we need to upgrade our software soon as it's no longer supported." For Greg, this is all part of running the joinery business and taking control as part of the community.

Things might have changed since the days of the reserve, but there's still so much to be done for Aboriginal communities such as Cherbourg whose grief is still raw from their treatment under European settlement. Cherbourg's difficult past is evident

in the displays at the Ration Shed Museum, located in the town centre, where first hand stories are shared for those who would listen. There are many Australians who could learn from researching Cherbourg's history. Having said that, the Shire is not a community that's waiting around for Australia to catch up with the past. It's a community that is moving on and shaping its own destiny. Cherbourg Aboriginal Council has a well thought out master plan and a clear path forward. There's a sense of ownership of their past and their future and a determination to build a better life for young and old alike. Nothing exemplifies this more than the modern efficiency of Cherbourg Joinery under the guidance of Greg Tynan and his team, and those 'Lads' who have emerged through their doors to embark on careers in the wider industry. ■



Top: The reception desk at Cherbourg Radio Station.

Above: The-Trade-Training:
The Cherbourg Joinery in 1951.
Image courtesy Cherbourg Ration Shed Museum.



Kitchen, bathroom, bedroom and office furniture
made to order.

by Rob Ditessa

19th century furniture carpentry

A large cedar tree from Gresford (NSW) 1985, milled cabinet boards up to three feet wide.

PETER GIBBS has carried out the complex and arduous, though satisfying, restoration joinery woodwork on two historic properties that he and his wife, Jacqui Kirkby, restored. Both houses are listed on the state's heritage register. 'Varro Ville' in Varroville (Campbelltown, NSW), where they now live, dates back to 1810. Previously, in 1986, they purchased and restored 'Englefield' in East Maitland (Newcastle, NSW). It dates back to 1837. And in a successful business career, Peter has made bespoke cedar furniture in the style of the colonial era, generally defined as 1788 to 1850, using traditional methods and hand tools. He points out that his work is dated and stamped so that it cannot be passed off as reproduction or a fake, and that he uses only Australian cedar from private sources where he personally supervises the felling, milling and air-drying.

Drawing on the wealth of knowledge and practical experience that he has acquired, Peter generously shares his extensive experience with AWISA in a comprehensive conversation. He says that the biggest difference in woodworking and in making bespoke furniture between today and the 1800s, is in the preparation of material.

Few of us can even imagine the work necessary to size and dress timber entirely by hand. An enormous amount of work was involved in re-sawing flitches by hand and preparing dressed timber to standard sizes. Young apprentices probably did little else than supply their masters with dressed timber ready for use. While mechanisation made the work easier, in making furniture with curved forms, as opposed to case furniture, the use of some traditional hand tools is indispensable, Peter says.



The development of steam machinery in the middle of the century saw the introduction, amongst others, of the lathe, planers, and moulding machines. While this reduced the manual work, he says, makers became assemblers of material supplied by people who operated the machines. Business minded cabinet makers established factories where they employed specialised labour such as wood turners, and upholsterers, and used the new technology to escalate production to satisfy the increasing demands of a burgeoning population. "It also meant that designs became more standardised as templates were made to suit the machines. This was the beginning of the end for 'one-off' bespoke made pieces where consultation with the maker by the client was the main driver. The standard items were made in considerable numbers and sold from a shop front. The client now bought from a salesman and the work went on in the factory at the rear, which the customer never saw."

Cedar Bow fronted sideboard, c.1815. Maker, Peter Gibbs.

The sideboard was the most expensive piece of piece of furniture in the house and used for the display of crested or monogrammed family silver. Traditionally, it was a piece where the cabinet maker could 'pull out all the stops' to create the best he could do. It was placed in the dining room, often in an arched top niche, built into one of the walls, designed especially to showcase it. The parallelogram end drawers have sides at 100 degrees and 80 degrees to the curved faces and there are various inlays, ebonised knobs and carved decoration. The centre drawer has lift out trays which house the silver cutlery. Again, there is an architectural influence. The scrolls carved into the backboard are derived from the volutes of the Ionic order.



New skills went hand in hand with new systems, says Peter. For instance, the trade of pattern making and template making became a new separate skill. You had to stay on top of things. Those who showed original thinking in solving problems and streamlining manufacturing rose to the top. The guild system had always protected trade secrets because they gave a competitive advantage, and this did not change. Basic training continued to be gained through apprenticeships but now innovation, acumen, and a sheer flair for salesmanship brought success. The designs the local makers used were taken from British pattern books and treatises on furniture featuring Georgian, Regency and emerging Gothic Revival themes that were in vogue. These books, along with designs that the makers remembered, the arrival of experienced cabinet makers from England, and imported English furniture, formed the main influences for early Australian makers, says Peter. "The books published in the late 18th century by the great furniture design personalities such as Chippendale and Sheraton had long preambles on classical design, proportion, mathematics, geometry, and perspective. They were followed by a series of plates showing fashionable designs of the day which could be got up by makers. However, the actual mechanics of construction were absent from these publications as this was information intended to be passed through the apprenticeship system. For furniture makers, the publication of 'The Cabinet Maker's Assistant', in 1853, was a watershed moment. In this magisterial volume, for the first time, actual mechanical details of construction appeared alongside the theoretical principles and the plates. As well, the first serious treatise on cabinet



Left: Cedar sofa table c.1810. From a design by Sheraton. Maker, Peter Gibbs.

Peter Gibbs first saw the original of this piece in the collection at Old Government House, Parramatta, as a very young man. It has haunted him ever since.

These tables always have the grain of the top in the orientation shown. When constructed from 'ribbon grained' timber, the joins are imperceptible to the eye and look like a single piece of timber. The same material and principal is used in dining tables.

Sofa tables have two full width drawers resolved with false drawer faces on the other side. The rule jointed, drop leaves at either end, which when needed, are supported by fly brackets with ingenious wooden hinges. The table is profusely strung with ebony and is an example of sophisticated construction techniques, mixing curved and square case forms. Much of the ebony inlay was achieved with the scratch stocks and purfling tools.

Top detail. The hinged fly brackets which support the drop leaves.

Detail. Showing again, architectural influences, the interplay of arched forms is reminiscent of those in a Gothic cathedral.





Cedar Console c.1835.
Maker, Peter Gibbs.

An example of architectural furniture. These pieces, either singly or in pairs, were found in the vestibule (front hall) of Greek Revival major colonial houses. The Doric order columns will have been used outside on the colonnade or portico. When the visitor walks inside, the same architectural elements can be seen in the furniture, linking the two.

timbers of the world was included. Even Australian red cedar made it into this study."

According to the records, he continues, in mid-century the colonial elite in the cities imported large amounts of furniture from England to furnish their mansions, and used Australian made utilitarian pieces for service areas or lesser rooms, like bedrooms, rather than areas of great display. The houses were lavishly trimmed with Australian cedar. So, muses Peter, the joinery trade thrived. In country areas, wealthy landowners were more likely to seek out local, provincial cabinet makers. He says the cedar furniture at Camden Park, for example, is some of the finest ever crafted. In addition, it carries the distinction of being designed by the architect, John Verge. Because of the supply of highly figured wood, which is traditionally prized for cabinet making, Australian colonial furniture tends to present as simple forms with flamboyant wood. The decoration is in the wood itself.

Circumstances were markedly different in country areas where geographic isolation engendered the provincial system of cabinet making. One man did everything, a 'jack of all trades and master of all'. Of course, Peter explains, he could not be a master of all trades. For example, the difference in quality of carving between country and city is noticeable.

"However, in an attempt to overcome his shortcomings, the country maker often triumphed, and produced pieces of great execution and visual distinction. He may not have had the latest tools of his city counterparts, and certainly could not afford steam machinery. This meant that in country areas, true, entirely handmade furniture, was produced for a lot longer. It is my opinion that the finest examples of colonial cedar furniture are products of the provincial system. There is a quirkiness and lack of standardisation that makes this furniture innovative, original, exciting, and appealing."

The curved form

Peter says:

"For forty years, I have been fascinated by curved forms, particularly chairs. The multiplicity of designs for this most utilitarian of objects, which everyone uses every day, is simply staggering. Yet, the amount of work involved in designing, drawing, fabricating, polishing, and upholstering them is monumental compared to any other item. As soon as you introduce curved forms and any angle other than 90 degrees, the real work starts. Firstly, you cannot make a small drawing and simply increase the sizes as for case furniture. You must make full size drawings on which you can solve all the problems of angles, curves, proportion, comfort, and size relationships based on human proportions, and then cut the pieces out and glue them onto thin wood to make a set of templates. Workshops of old had templates hanging from every inch of available space. The mortises, tenons and all fabrication details are relayed onto the templates. The templates are then used to cut out all the pieces before the joinery work begins. There will be piles of pieces if you are making a set. Traditionally, this was done with a bowsaw. Today, a bandsaw is used to cut curved forms.

"As a safety catch, it is wise to make a rough prototype before you proceed to cut out all the pieces. This can be held together with clamps and sat on, to test for comfort. Any problems with the template sizes and angles can be rectified before an expensive waste of time and material is discovered. The prototype pieces can be stored in a box with the templates as a kit for that particular item.

"The fundamental heart of a chair is the seat, which is wider at the front than the rear. In old chairs the angle formed at the intersection of the front and side rail will vary from 82 to 87 degrees. After toing and froing for 40 years, I have come to the conclusion that in most cases, the sweet spot is 85 degrees.

"After any problems have been rectified, the pieces cut out, and the mortises and tenons fabricated, it is time for decoration, dressing, shaping and running mouldings on the raw pieces."

Cedar armchair c.1815. Before and after French polishing. From a set of four. Maker, Peter Gibbs.



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Hettich Sustainability Report 2020:

think about tomorrow, act today

As a family run company with more than 130 years of history, Hettich is proud of being able to sustain its position in a global market environment. The company's goal is to combine business success with ecological and social responsibility.

Hettich's products are long-lasting in the true sense of the word: They keep furniture comfortably movable for a long time and thus ensure a long furniture life. This alone sets a clear signal for sustainability.

But for Hettich, sustainability means much more: The company is committed to using natural resources as responsibly as possible to preserve the planet for all and for future generations. Of course, Hettich cannot master this great challenge alone.

Hettich's commitment to sustainability begins by encouraging colleagues to take on more personal responsibility. After all, sustainable behaviour begins with each individual. Only if individuals change themselves, their own attitude and behaviour can they expect the same from others. This is how sustainable thinking is established and acting step by step in all its activities, without losing sight of economic efficiency.

This Sustainability Report summarises Hettich's activities and provides information on its priorities, on goals that have already achieved, and on the challenges it will be facing in the future.

Certified according to the strict European environmental standard EMAS (incl. ISO 14001) at 6 European locations, total of 12 Hettich companies, annual inspection by state-approved environmental auditors, proof of improved environmental performance and complete legal conformity, annual publication of environmental statements.

Hettich takes responsibility for the world we live in.

- Sustainability principles implemented in the company since 1993.
- Responsibility for the conservation of energy and resources declared worldwide in the Hettich Code of Conduct.
- Reduction of specific CO₂-emissions by 55 % from 1996 to 2019 in the Hettich Group worldwide.
- Green electricity since 2017, 100% electricity from renewable energy at several locations.
- Solar energy: 666,031 kWh electricity from 2009 to 2019 from photovoltaic systems in Kirchleugern.
- Combined heat and power generation and waste heat utilisation: 3,480,000 kWh of electricity and 6,408,000 kWh of heat in 2019 by using combined heat and power plants and compressor waste heat in Kirchleugern.
- Sustainable mobility management: further expansion of e-mobility and electric vehicle charging stations, sustainable travel planning and financially supporting colleagues to use public transport and (e-) bicycles.
- Awards for sustainable buildings: Green Building Award, Best Practice Energy Efficiency, Wood Construction Award



NRW, Industrial Construction Award for Sustainable Building.

- Compliance officer for environmental issues in each company.
- Long product life due to high quality: quality management system certified according to ISO 9001.
- Sustainable packaging solutions: recyclable materials, avoidance of composite packaging materials, reduction of plastics, FSC-certified packages, reusable pallets.
- Dynamic set of rules for product ingredients: for more than 15 years, the identification, evaluation, and regulation of questionable or environmentally harmful product ingredients, far beyond legal requirements such as REACH or RoHS.
- Multimodal transport: reduction of emissions by using less CO₂ intensive means of transport such as rail or ship.

Hettich has already achieved a great deal and still has a lot to do to promote sustainable thinking and action in all its activities, it reaffirmed the responsibility of all its colleagues in a broad-based sustainability workshop in February 2020 and developed key areas for action.

Hettich wants to continuously reduce CO₂-emissions, conserve resources and increase energy efficiency, and further optimise the recyclability of products and promote biodiversity at its sites.

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by Rob Ditessa

Seats of power

IN AUSTRALIA, there is a wooden chair - a seat of power - that the eminent furniture historian and international antiques dealer John Hawkins wants to see put on public display. "This historic chair in Australian Blackwood [Acacia Melanoxylon] has played an important part in the history of Federation. It belongs in the Museum of Australian Democracy in the old Parliament House in Canberra," Hawkins tells AWISA.

But the chair that Hawkins identifies as a symbol of Australian nationhood, and the most important item of Australian furniture not in a public collection, was put up for sale by the Leonard Joel auction house late last year.

The chair is the original Speaker's chair from the people's house of Parliament, the House of Representatives, and is symbolic of the important constitutional and political function of the Speaker. The role of the Speaker, with its origins in the 13th century UK Parliament, is to preside over the House, represent it in dealing with the Sovereign and others, although in the news clips, more often than not, the Speaker is only seen calling for order in the House as members become noisy and garrulous. The Speaker's chair is perhaps one of the most important and significant, if little recognised, seats of power in Australia.

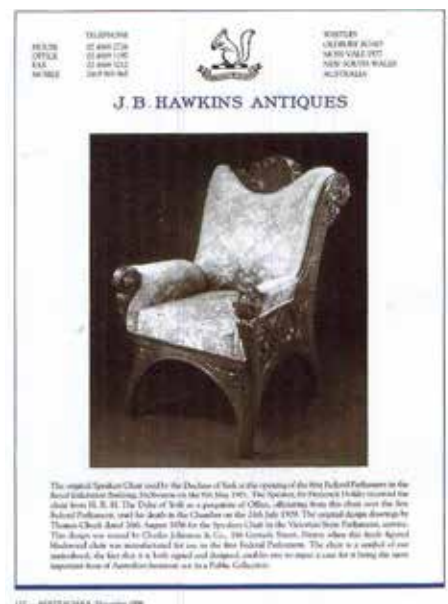
At the opening of the first Australian Federal Parliament on May 9th, 1901, by the Duke of York, the representative of the

British Sovereign, the Duchess of York used the Speaker's chair. Hawkins provides a detailed history of the chair in his article "The Australian Federal Parliament and the Speakers Chairs", published in Furniture History (vol. 37, 2001, pp. 121-134), the journal of the (British) Furniture History Society. This article can be found in Hawkins' website for his business, JB Hawkins Antiques.

<https://www.jbhawkinsantiques.com/articles/the-australian-federal-parliament-and-the-speakers-chairs/>

Leonard Joel's catalogue provides this description, "The Speaker's chair from the first Australian Federal Parliament after a design by Charles Pasley (1824-1890) The fiddleback blackwood frame richly carved to the centre of the top rail with a circular panel flanked by foliate scrolls above an upholstered back and seat, the scrolled and paneled sides with a central circular reserve flanked by relief carved scroll panels on arched legs, the armrests with richly scrolled terminals and front legs with relief carved spandrels, the back paneled and moulded. Maker's stamp of Charles Johnston & Co. Gertrude St, Fitzroy 'European Labour Only'. Circa 1900. Height 110cm; Width 80cm; Depth 80cm \$300,000-500,000."

Charles Pasley, as Commissioner of Public Works in Victoria, was involved in the design of that state's first Parliament



House, including seating. When seating was required for the new Federal Parliament, Charles Johnston drew on the original Pasley designs for the Speaker's chair, and other furnishings, that he made in his Fitzroy furniture manufacturing workshop.

"The new chairs may have been carved by Robert Prenzel, then working with Johann Treede as carvers, designers and out-workers to another leading Melbourne firm of cabinet-makers, Nunan Brothers, at 248 Swanston Street, Melbourne. It should be noted that Nunan Brothers issued an undated catalogue of c. 1900, presumably produced with the aim of gaining a contract for the chairs of state in the new Federal Parliament. It illustrates three President's chairs designed by Treede, with Royal motifs," writes Hawkins.

Unfortunately, there is a tragic tale to tell about the first occupant of the first Speaker's Chair.

In the early morning of 23 July 1909, after a fourteen-hour long debate that lasted late into the night, in the House of Representatives of the Federal Parliament meeting at the time in Melbourne, Sir Frederick Holder, keeled over, saying, 'Dreadful, dreadful'. Unconscious, he was carried into his room where doctors attended to him until he died at 4.20 pm. The newspaper from Holder's home state of South Australia, *The Advertiser*, on the next day reported Holder had suffered "a paralytic seizure", a cerebral haemorrhage. The newspaper also reported that Holder had been having a trying time as Speaker of the House for the whole of the session but had always maintained command and his dignity.

The Chair was taken by the family of Sir Frederick Holder as a perquisite of office on his death, as was the custom of the day, Hawkins tells AWISA.

The chair was eventually acquired by the Sydney firm of antiquarian booksellers Hordern House. Hawkins purchased the chair from Hordern House, and in due course advertised it for sale. An advertisement appears in *Australiana* magazine November 1988. Trevor Kennedy, who was media magnate Kerry Packer's CEO, and a collector of *Australiana*, acquired the chair, and replaced the original floral brocade upholstery with a green velour because it needed reupholstering.

Leonard Joel's catalogue notes the overall condition is good, consistent with age and use, and there is good patination and excellent depth of colour to the blackwood. "Three filled fixing holes to the roundel in the top rail of the seat back where



► something has been removed. Some wear on the roundel to the right-hand side below armrest. Seat rails and corner braces appear to be later replacements. The back panel is made from separate sections of wood and these are separating, also there is a small crack to the left-hand side of the centre panel. The side panels are also separating slightly. There is an old filled crack to the front apron just to the left of the centre join, and a crack to the right-hand spandrel." The chair did not sell at auction in late 2020 and when this magazine went to print there were no further developments regarding the sale.

Today, it is still possible to stand at 186 Gertrude Street, on the corner with George Street, in Fitzroy (Melbourne) where Charles Johnston had his workshop, to envisage the hustle and bustle of the workshop, and the neighbourhood, back then.



It is also possible to stand in the Old Parliament House in front of another significant Speaker's chair. This is probably the one that older Australians will recognise. It has stood in its place since its installation on 1 October 1926, as reported by The Canberra Times, for the 9 May 1927 opening of the Parliament House in Canberra. Until then from 1901, the Federal Parliament was allowed to sit in Melbourne, rather than Sydney.

This chair was a gift from the Parliamentary members of United Kingdom Branch of the Empire Parliamentary Association. The

Speaker at the time was Sir Littleton Groom, who was Speaker from 1926 to 1929.

Kate Armstrong, from MoAD (Australian Museum of Australian Democracy), writes that the gift was a richly symbolic and faithful replica of the Speaker's chair that sat in the House of Commons in London's Westminster. "The flat-packed chair had been carefully conveyed from the United Kingdom on the Australian Commonwealth Line steamer Hobson's Bay. Unpacked and assembled, the towering 3.8 metre chair, redolent with symbolic ties to the Parliament of the United Kingdom and its tradition of democracy, dominated the chamber."

It is handsomely carved, and even its timbers are richly symbolic, the Royal Arms which surmount the canopy being carved in old oak taken from the roof of Westminster Hall, which was erected in 1397. The Canberra Times reported on the day, "The foliated canopy, the intricate carvings and mouldings, and the graceful pinnacles and pendants, are fine examples of the carver's art. The back of the chair contains many delicately-worked linen-fold panels, each with the monogram 'V.R.' and the wreath and intertwined cord. ... On the folded ribbon, amidst the ornate carving on the right side of the chair, is inscribed, ... The new chair has been executed by Messrs. Harry Hems and Sons, of Exeter, under the direction of Sir Frank Baines [Baines], of H.M. Office of Works." MoAD's information reveals that the chair was made "using traditional medieval methods (no screws, nails, etc)."

Amongst the timbers used for the Chair was original wood from HMS Victory, the ship helmed by British naval officer John Jervis, after whom Jervis Bay is named, and by Nelson at the sea Battle of Trafalgar. As British naval ships were constructed with oak, it is reasonable to suggest that oak, associated with the gods and might and political power since earliest times, went into the making of this parliamentary chair.

Despite the quality workmanship and symbolism of the chair, the architect of the Parliament House, John Smith Murdoch (1862-1945), expressed concern that the chair based on a Gothic design by Augustus Pugin (1812-1852), was not in keeping with his design based on simple classical lines.

In 1988, there was much consternation in some quarters when the government decided not to move the 1927 Speaker's chair to the new Parliament building.



Ian Warden, in a column in The Canberra Times, called the 1927 chair "an ornate confection of lumber".

The new chair for the new building was made by craftsman David Upfill-Brown, who says working with timber is akin to sculpting. He told Susan Aitkin (Canberra Times, 5 November 1989), "It was a very difficult job logistically, which taught me a hell of a lot. We had to resolve a lot of problems. I worked from 5.00am to midnight for most of three months to get it done on time. There was no room for error. It was finally put together the day before the opening." Upfill-Brown made the new chair from solid and veneer Australian grey box (*Eucalyptus microcarpa*) with Tasmanian black-hearted sassafras and six types of Australian wattle.

The Parliamentary website says the chair also has marquetry elements designed by Tony Bishop of a wattle motif and made by Michael Retter, who also made the panels in the Marble foyer. It was for this and other work that contributed "to the art program in the Australian Parliament House" that Retter gained an OAM honour in 1989. The contours and textural qualities of the latest version of the Speaker's chair reflects the philosophy of the building's architect, Romaldo Giurgola, that the building be seen to extend an invitation to all citizens, and, let us add, to take a seat at the place of Australian democracy. ■

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CAD+T launches 'Hints & Tips' webinars

2020 has seen us change the way we live, work and run our businesses. For bespoke software developer, CAD+T, this has created new opportunities to guide, support and train their customers via tailored online training sessions and brand-new webinars set to launch this autumn.

"Last year put cloud-based software solutions on the map and has seen demand for our highly customisable CAD/CAM software increase by 50%," begins Martina Schwarz, International Sales & Marketing Manager at CAD+T. "This surge has seen demand for our online training services grow exponentially, as the industry adapts its processes and users look at new ways to enhance their skill-set and develop a greater understand of the software. This, plus the fantastic response we had from our free-to-join webinars streamed during the lockdown, has led us to expand our online offering and introduce new webinars into our regular maintenance programme."

The new webinar series, which will run alongside CAD+T's one-to-one and group training sessions, will cover a wide range of topics including planning and design, CAM-interface, ERP, CON and data-setup. "Whilst our existing online training sessions are very much designed to help our customers learn the functionalities of the software we create and are tailored to suit individual production processes and challenges they may face, our webinars are geared towards sharing clever hits and

tips, time-saving hacks and useful problem-solving techniques," says Martina. "Starting in January, each webinar, which can be purchased as part of a package, will offer solutions that will optimise the way CAD+T's software is used. It's a real value added service and one we're sure will gain a lot of interest in the coming months."

Martina adds, "Direct training will always have an important role to play in our industry but finding new ways to help our customers grow and develop their skills during this time is equally as important to us. By offering additional online training, we're committed to investing in our customers and giving them the tools they need to grow and strengthen their businesses. In times like these, this is what is important to us."

A full events timetable is available on CAD+T's website as well as a link to register interest. Sessions will also be available to watch online for seven days after their initial screening. For more information visit <https://www.cadt-solutions.com/en/events/>

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by Jim Bowden

Hoop pine ply a learning curve

for NSW state school building programme

THE DESIGN and construction of the \$55 million Jordan Springs primary school in suburban Sydney was completed in just over 12 months – a record for any state government schools infrastructure project. The project was a close collaboration between Melbourne-based modular homes manufacturer Modscape, Group GSA, a building design consultant, and Richard Crookes Constructions, both in Sydney.

A class of its own

Sydney's Jordan Springs primary school features hoop pine cladding made in Brisbane by Austral Plywoods.

Austral Plywoods supplied more than 2000 sqm of Ariaply panels that were adhesive-fixed to metal framing.

Jordan Springs is seen as the beginning of a new era for the Department of Education as it examines modern and innovative methods of construction. And Brisbane-based plywood and veneer manufacturer Austral Plywoods met the challenge, supplying its factory-finished architectural panels for internal and semi-exposed areas throughout the school's 4406 square metres of learning space.

Jordan Springs, north of Penrith, demonstrates how design for manufacture and assembly can be utilised for off-site works to create a seamless, high-quality and rapid project. While the

modules were being constructed within the Modscape factory, the school site was being prepared and Richard Crookes Constructions was able to undertake preliminary traditional construction works that would eventually marry the modules after installation.

More than 95% of the school was built off-site under a pilot of a new construction method that can deliver permanent buildings in shorter time-frames. It is part of the state government's \$6.7 billion commitment to accommodate surging populations in NSW schools. Jordan Springs is the first of five to be built using a 'design for manufacture and assembly construction' method, which involves architecturally designed buildings being constructed in factories for more sustainable and efficient project delivery.

Classroom components were built in factories in Victoria, then transported up the Hume Highway over four weeks by large trucks under police escort. While a typical school build takes one to two years, Jordan Springs was assembled within seven months, with an extra two months to finalise additional works such as landscaping.

Education Minister Sarah Mitchell said the new method had reduced on-site building time by up to 50%, without project delays due to bad weather or external factors.



While not all Sydney schools will be deemed suitable for the new construction method, the government has suggested it was a good option for fast-growing areas with high demand for enrolments. It will also look to move construction to NSW factories, instead of Victoria.

Premier Gladys Berejiklian said the coronavirus pandemic had enabled some infrastructure projects such as schools to move faster. "That's really been something we're proud of in NSW and we'll need it to continue," she said.

Comprising 46 modules, Jordan Springs includes 27 internal learning spaces, six covered outdoor learning spaces, a library, learning auditorium, administration spaces, a school hall and plenty of landscaped 'play' areas for 600 students with capacity to increase this to 1000 students.

Austral Plywoods' key role focused on supplying more than 2000 sq m of 2400 x 1200 x 9.5mm Ariaply panels that were adhesive-fixed to metal framing.

The ready-to-install panels have found applications for ceilings, soffits and internal walls, available in seven colours to suit any project – blackbutt the choice for the Jordan Springs school.

Made from high quality certified Queensland hoop pine (*Araucaria cunninghamii*), the exterior Ariaply was finished with a unique three-coat system that provided durability along with an attractive outward appearance for the school buildings. The same product has been supplied to the Galungara Primary School at Schofields in Sydney's north-west, a \$54 million project to be completed early this year.

A plywood manufacturer since 1925, Austral Plywoods draws on 100% plantation-grown hoop pine, sourced from HQPlantations in southeast Queensland and has Responsible Wood forest certification and chain-of-custody under the Australian standard AS 4707:2014, awarded through an independently-audited process by the Engineered Wood Products Association of Australasia. ■

(With information from the NSW Department of Education).

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Biesse High Dynamics - a symphony of motion



There is no better example of technology innovation than Formula One. F1 is the proving ground for leading automotive invention and the lessons learned eventually find their way into the cars we drive today. Biesse know that to continue as a world leader in performance woodworking machinery, they need to push the design envelope. Biesse Group's latest CNC nesting equipment can be compared to F1 where the design of the chassis; table; drive motors and safety equipment has been

optimised to provide the customer with a totally new and re-imagined processing solution. Welcome to the world of Biesse High Dynamics.

Nesting provides the greatest potential for High Dynamic processing because speed is one of the most important processing criteria. To achieve higher production speeds, other factors must be considered. Biesse Group has worked to deliver the benefits of higher speeds to its customers by re-thinking the nesting process from the ground up. Every aspect of the machine has been considered with the goal of increasing the actual processing speed while maintaining quality and safety. The result is a product Biesse Group claims is the fastest and most productive nesting machine available.

The new Rover B FT HD nesting machine is now available through the Biesse Group as a stand-alone machine that will significantly increase the number of

sheets processed per shift, but it's as a cell that the machine really shines. The cell's infeed; CNC machine; and outfeed, and every aspect of work has been optimised for continuous, high-speed processing. After the first sheet has been labelled, the rest of the day's production continues without a break, ensuring that equipment delivers the maximum return on investment.

In F1, performance is measured in milliseconds. To achieve faster acceleration and deceleration and high lineal and cornering speeds, the key factors include chassis (table) design, weight, and power. Biesse Group has re-imagined the entire process and achieved a cutting solution where every second

of movement has been considered to produce a CNC nesting result that saves an enormous amount of time. The highest linear cutting speeds of 50 metres a minute with a 12mm tool; high speed angular interpolation (corner) movement; and a positioning speed over 170 metres a minute are now possible with Biesse HD.

High cutting speeds place huge demands on every aspect of the machine so Biesse Group started with the chassis, or frame of the machine. To hold even the smallest parts on the edge of the sheet, three vacuum pumps move an increased amount of air from the vacuum table that has been completely re-designed. Larger air hoses, and air channels that are not only larger, but designed to guarantee a smooth, uninterrupted flow of air, exactly like a good dust extraction system. Tests indicate a 30% to 70% better holding of even the smallest parts.

Stability is another important factor that affects the possible cutting speed round the entire panel, as well as the quality of production. To guarantee the highest confidence, Biesse widened the stance of the gantry frame. The rack and pinion, still the best technology for dusty environments, is fitted with bigger and deeper teeth. And Biesse has located the linear guides closer to the rack for higher performance under load. As a one-operator cell the CNC machine can be enclosed in a cabinet and in this case the machine hood can be removed, reducing weight, saving wear and tear, and offering improved visibility and safety for the operator.

To power the High Dynamic cutting solution, Biesse increased the power in the axis drive motors by three times and added a more rigid reduction gearbox. A fast, 12-position tool-change travels with the processing head, further eliminating downtime. An optional 33-position tool change can be mounted at the rear of the machine. The automatically lubricated 42-bit vertical drilling head is now water-cooled, an additional low-cost advantage for continuous production. And finally, at the cutting station, the new design dust hood with shorter bristles and high-tech anti-ejection fabric, is now set to the millimetre for near-perfect dust removal on any thickness sheet.

The savings are everywhere with Biesse HD. First, the label printer moves with the pusher and after the first sheet, the cell production is continuous. The sheet is aligned with the machine table, saving fifteen seconds per sheet and adds up to twenty minutes a shift. When the sheet is moved onto the machine table it is dropped in its final position: more time saved not

having to push it into place. And as the finished parts are moved onto the outfeed, the next sheet is loaded at the same time. It's a symphony of motion that never stops.

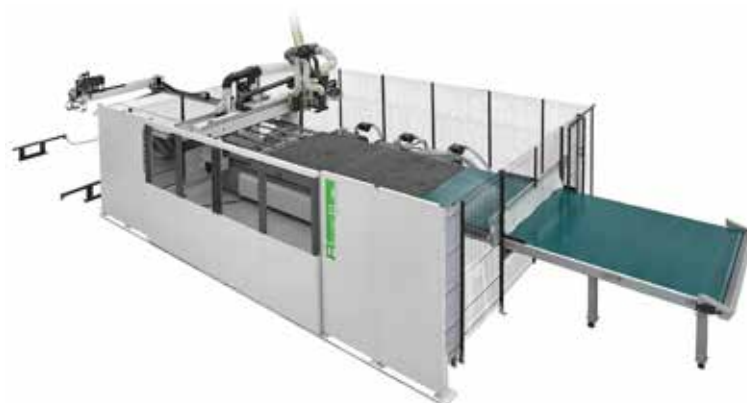
But it's the cutting where the most savings are made. Past machines have made claims of high speeds but rarely deliver because of the time the tool takes to reach the claimed feed speed. Biesse HD's improved rack and pinion and more powerful drive motors accelerate to reach the claimed top speed in around 100mm of travel and decelerate in the same distance. But lineal speed is not the only gain through Biesse High Dynamics. An F1 race car cannot compete without blistering cornering speeds and so, Biesse HD will produce sharp, square corners on nested panels four times faster than the standard Rover B.

On a typical 600mm by 600mm panel the tool achieves 50metres/minute for 70% of the time. In a test for an Australian kitchen manufacturer, cutting typical cabinet components from a 3.6 x 1.8m sheet took less than three minutes to process. An unseen benefit is the tool operating with its optimal chip load and lasting longer, especially with superior Australian manufactured board. Biesse HD offers the reality of using one machine instead of two or three, or the possibility of eliminating overtime or weekend work. It is a revelation like no other.

Biesse HD is not just a machine, it's a philosophy, a new way of thinking that directly benefits the customer. It's fast, dynamic, unique, unlike anything seen before. Equipped with the optional twin configuration of two routing spindles and two drilling units, even greater savings can be achieved. The cell can of course be linked to a storage solution with offloading and sorting of finished components by robot.

Frank Williams CBE, of Williams F1 motorsport fame asks of innovation, "Does it make the car go faster?" In the case of CNC nesting with Biesse High Dynamics, the answer is a resounding yes.

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New EWPAA CEO

Given the increased use of engineered wood product solutions in new buildings across Australia, and indeed the world, including mid-rise and commercial construction, manufacturing EWP's remains an exciting and innovative sector into 2021 and beyond, says the newly-appointed CEO of the Engineered Wood Products Association of Australasia.

Gavin Matthew, an experienced senior policy manager and a veteran staff member of the Australian Forest Products Association and manager of AFPA's softwood manufacturing chamber, leaves AFPA to take up his new position in mid-January.

"Gavin has been an invaluable part of AFPA for its whole 10 years, leading policy work in first the pulp and paper chamber and in the last several years in the softwood manufacturing chamber," CEO Ross Hampton said. "He also delivered important policy work in climate change, energy and trade, and under his leadership the softwood manufacturing chamber has moved progressively into extremely significant work which will help build the sector for years to come."



The range of innovative products manufactured and merchandised by EWPAA members includes interior, exterior and marine plywood products, as well as a wide range of modern engineered wood products. This encompasses structural plywoods used for formwork, residential and commercial flooring, wind and earthquake bracing, and feature cladding and includes LVL, particleboard, MDF, hardboard, CLT and I-beam products used in both commercial and residential structures.

EWPAA supports members throughout Australia and New Zealand and in Fiji and Papua New Guinea, from its Brisbane-based office and testing laboratory in the northern suburb of Virginia. Mr Matthew fills the position of Dave Gover who has taken on the role of business development manager with AKD, based in Queensland. ■

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As well as joinery applications Häfele also provides fittings for buildings including sliding doors for timber and framed/ frameless glass applications up to 19mm as well as folding walls for room division.

The all new sliding and folding essentials catalogue is the comprehensive guide from specification to construction. Scan the QR code for a digital copy or contact Häfele for a visit from a representative.

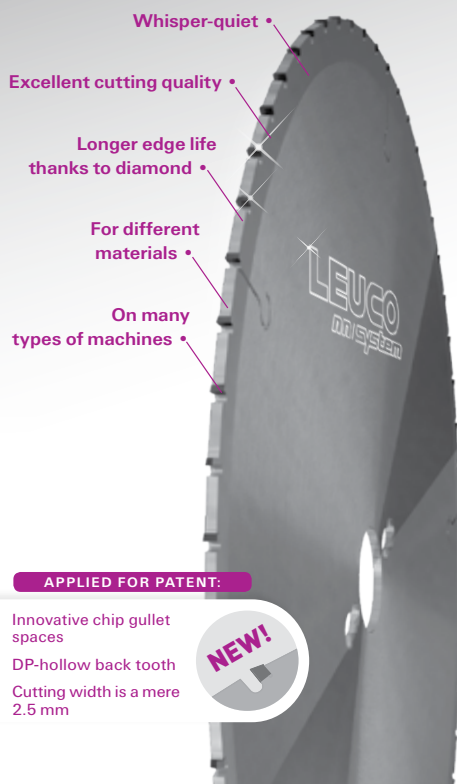
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How to choose the right bin

Everyone wants to play their part in increasing how much waste is recycled and in reducing the amount of waste going to landfills or the environment. The kitchen industry can have a huge influence on how much waste is sorted correctly in the home so that it is diverted away from landfills. Choosing the right bin system to make it easy and convenient for the homeowner to sort waste wherever it is generated in the home is critical. The choices designers and manufacturers make may affect waste behaviours in the home for the next 10 to 20 years.

Kitchen

With 60 to 70% of all household waste generated in the kitchen, this is the most obvious and critical bin system to get right. Choosing the right number and size of buckets depends on different factors such as the number of people in the home and what type of waste and recycling the local council collects. Placement of those buckets needs to be convenient and ergonomic. And of course, the homeowner wants something that is going to be durable and easy to clean.

Bathroom

Not only it is often underestimated how much waste is generated in the bathroom, but also how much recycling as well. With so much effort going into planning and creating beautiful bathrooms, it's important

to consider how to integrate a smart waste bin design into the cabinetry rather than let it be an afterthought.

Waste management guide

Hideaway Bins has developed a simple waste management guide which makes it easy to select the right bin system to match the current and future needs of each individual client. There is no such thing as a one size fits all approach, and it is important to make sure important considerations are not overlooked. Go to hideawaybins.com.au/info/waste-management-guide/ for more information.

Laundry

Not to be missed is laundry storage. Viewed as a must have item is an integrated hamper like the new Concelo 60L. These are not just limited to separating and storing dirty washing in the laundry but can be integrated into bathroom and wardrobe designs.

Hideaway Bins has a full range of New Zealand made waste and laundry solutions and are available nationwide, through Hideaway's distribution partners; Nover, Häfele and Galvin Hardware.

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Two Concelo CR215 bins stacked for 4 bucket waste and recycling.



Concelo laundry hamper in Cinder colour.

Diamaster EdgeExpert - the new diamond-tipped shank cutters from Leitz

No more tear-out edges and badly cut middle layers when CNC-sizing

The topic of finishes and decors is on the move as never before in the furniture industry, in shop fitting or in interior design. Digital and direct prints on ultra-thin decors, fine haptics, matt and high-gloss looks, nanotechnologies, anti-fingerprint materials or combinations of plastic and wood derived material dominate the material trends. However, as fine as the material finishes are, the true art of perfection can only be seen in the quality and appearance of the final edges. This presents many users with difficulties, especially when sizing and grooving on CNC machining centres. After all, the perfect edge has to be produced without bringing the cost-benefit ratio into an unbalanced position. The solution: diamond-tipped shank cutters from the Diamaster EdgeExpert series from Leitz.

Tear-outs on both sides of the edges, unclear cut finishes and lots of time-consuming reworking - this scenario alone makes many CNC users break out in a sweat. And when the tools start to fail excessively, good advice is often needed. This is not the case with the Diamaster EdgeExpert shank cutters from Leitz. Perfect edges, absolutely flawless middle layers and up to 30 percent longer tool life become reality. This is a fantastic savings potential compared to conventional solutions - with relatively low purchase costs and particularly low service costs.

Materials that are difficult to machine and delicate decors or finishes are the speciality of the Diamaster EdgeExpert shank cutters from Leitz.

Photo: Leitz



The main attraction here is the special, spiral-shaped arrangement of the cutting edges. With alternating cutting angles between 45 and 54 degrees, they always machine the material at the perfect working angle. Lower cutting angles used in conventional cutting tools allow cleanly cut middle layers, however, the edges break out much more frequently. The opposite is the case with cutting angles that are set too high. In this case, the edge quality increases, but the vibrations that occur on the workpiece prevent the perfect cut of the base material. Defective middle layers are the result.

The CNC shank cutters of the EdgeExpert series from Leitz are available from stock in three different performance categories. The Diamaster PRO EdgeExpert, for example, is available as a Z1+1 version in two working lengths, each with a diameter of 16 mm. As a starter model, it is perfectly suited for small and medium batch sizes and can be resharpened up to four times.

The Diamaster QUATTRO EdgeExpert is the all-rounder for medium to large batch sizes. The Z2+2 version with a diameter of 20 mm allows much higher feed rates and thus shorter machining times. It can be resharpened up to six times and thus provides a perfect cost-benefit ratio in its category.

For very large batch sizes and extremely high feed rates, the Diamaster PLUS3 EdgeExpert is the perfect choice. Available with a diameter of 25 mm, in various cutting lengths, it is the perfect solution when perfect cutting quality is required, such as on machining centres with zero-joint edging technology. This Z3+3 cutter makes this possible primarily due to the Real-Z3 technology developed by Leitz and can be resharpened up to eight times.

The diamond-tipped shank cutters of the EdgeExpert series are suitable for use in all types of chip and fibre materials. No matter if it is raw, plastic-coated or with sensitive decorative papers, foils or veneers. Even laminated woods such as plywood or multiplex with delicate finishes can be machined perfectly and highly economically with the EdgeExpert shank cutters. Another advantage is the optimal chip removal, which results in significantly less wear on the cutting edges. Even more advantages and time savings are achieved by users who order their Leitz tools as a complete system in combination with a high-performance shrink fit chuck. Perfectly assembled, balanced and including the supplied setting data, these tool

Photos: Leitz



Far left: The Diamaster PLUS3 EdgeExpert: Perfect edges and cutting areas, as well as extremely high feed rates - even in tricky materials. This diamond shank cutter can be resharpened up to eight times.

Left: The product range of Diamaster EdgeExpert shank cutters. They are available from stock, in three different performance categories.

systems are ready for use immediately after delivery - as a new tool ex works or also after sharpening in manufacturer quality, in one of the more than 120 Leitz sharpening services around the globe.

All in all, these solutions in new dimensions show why Leitz simply offers more. Knowledge and reliability for more quality, efficiency, productivity and flexibility and thus for more success of the users of Leitz products.

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Compressed air training and education still at the forefront



Kaeser Compressors Australia has launched a new webinar programme for 2021. This programme includes a remastered online version of its popular one-day compressed air seminar, as well as a series of compressed air focused webinars in partnership with Engineers Australia.

Kaeser Compressors is committed to supporting the compressed air industry with training and education. This became challenging last year with face-to-face events largely impossible. With COVID-19 restrictions likely to remain fluid throughout 2021, Kaeser has therefore taken the opportunity to move its seminars online.

Developed by Kaeser, the Compressed Air Webinar is a remastered online version of the company's popular one-day Compressed Air Seminar. It has been specifically developed to provide a solid compressed air knowledge base for all those involved in the planning, installation, operation and maintenance of compressed air supply systems.

Like water, gas and electricity - compressed air is an essential utility that many areas of industry rely upon every day. Providing compressed air reliably and efficiently in the required quality is a complex process and requires careful consideration of a compressed air supply system

as a whole. The widest possible knowledge base is therefore required in order to properly assess the various interactions within the system and its integration into the operational environment.

The complete Compressed Air Webinar is broken down into three 90-minute modules, that are held online and over three consecutive weeks. From the fundamental principles of compressed air to compressed air treatment, regulations and control systems - the Compressed Air Webinar from Kaeser, provides participants with the knowledge that can ultimately assist them in optimising the reliability and energy efficiency of a compressed air system. The Compressed Air Webinar is scheduled to run in May and October 2021. Visit au.kaeser.com for more details and registration options.

Kaeser is also excited to announce that it is partnering with Engineers Australia in 2021, to deliver a number of further webinars. These webinars will hone in on specific compressed air topics. More details on these events will be available very soon by visiting au.kaeser.com.

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ACFA's industry awards are on again

Annually the Australian Cabinet and Furniture Association hosts national industry awards culminating in a gala ceremony held in Sydney in September announcing the winners across more than 20 categories.

The annual national industry awards showcase and celebrate industry excellence and now is the time to start preparing entries.

How to enter

The entry process is simple. Review the entry categories detailed on the website - www.acfa.net.au. Choose projects suitable for submission. Projects must have been completed between 1 July 2019 and 30 June 2021. Once suitable projects have been selected, go to the website and register to enter.

As part of the requirements entrants will be required to provide a brief on the project, details of various aspects of the project meeting the category's criteria and submit photos and/or video showcasing the project. Members of ACFA receive a discount to enter the award, however entrants do not need to be a member of the association to enter - entry is open to the entire industry sector.

Award categories

Categories of entry include best Design and Cabinet Maker of the Year across a number of classes detailed on the website.

How judging works

The judging panel carefully considers each entry on its on merit, awarding points across three main criteria - design, functionality and innovation. Each entry is judged anonymously, meaning the judges are not aware of the entity and/or business name. This allows the judges to focus purely on the judging criterion.

The judging panel consists of industry representatives who have a strong knowledge of the industry, operations, manufacturing and trends.

Why enter

Benefits of entering the national industry awards include:

- The entrant will be recognised for outstanding achievement within the industry
- Raise the profile and reputation of a business
- Benchmark the business against national peers and competitors
- Increase awareness of the business and generate marketing opportunities
- The business will be detailed in media releases announcing finalists and winners
- Business and achievement included in awards feature in this magazine
- Business and achievement featured on the industry's website, in newsletters and on the social media channels

Previous award recipients

ACFA's website showcases previous awards winners, so entrants can check out the competition.

Gala dinner

10 September 2021 - Dockside Cockle Bay Sydney

Save the date to join the industry for the Gala Dinner and Awards Night. Enjoy a night of food, drink, fun, dancing and revelling at the industry's achievements.



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Nover introduces Cosmos and Lunar to the Evostone range

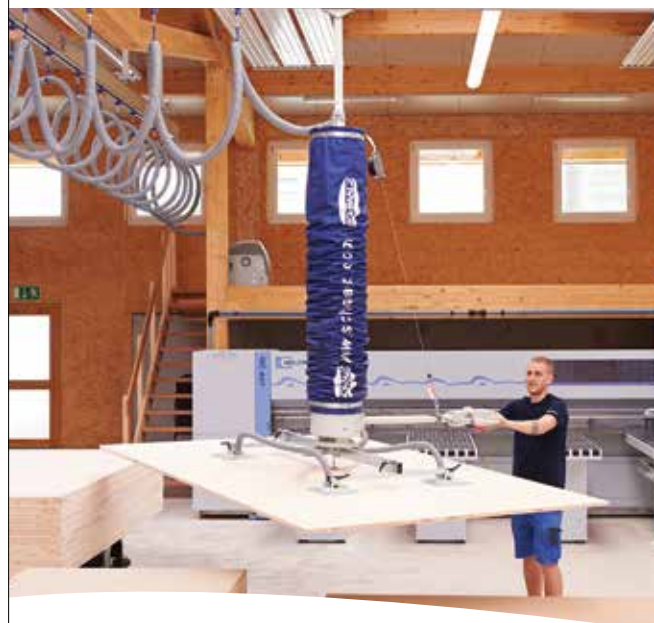
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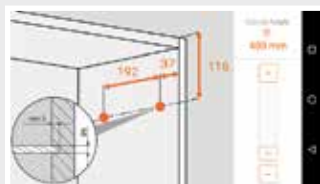


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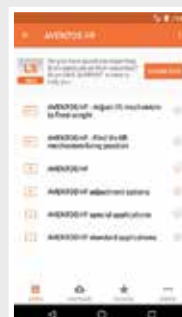
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A helpful tool for the assembly and adjustment of Blum fittings, ensuring you have all the latest relevant assembly information at your fingertips whenever you need it.



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Handy assembly videos demonstrate each individual work step and clearly show the adjustment options in detail.



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In design we trust

THE LAST TWELVE MONTHS have delivered so much change, it's hard to know where to begin – or where to go. One thing is certain is that connection, insight and purpose have been central to the design industry. The camaraderie within this industry has been exceptional, the welfare of all has been paramount, manufacturers helping each other out where possible and designers maintaining friendships across closed borders.

What hasn't changed has been our love of design and everything it delivers. We all try to leave something better than we found it, and as Joe Sparano said "good design is obvious, great design is transparent". I have been fortunate to see some amazing examples of individuals and organisations who have pushed the limits of design – and delivered. These are just a few from 2020, a year we will never forget.

Alessandro Mendini was a key figure in the history of Bisazza, one of Italy's iconic tile manufacturers. As an ambassador, an instigator, and the firm's artistic director from 1995 to 1999, his avowed aim was to bring a new perspective to mosaics as can be seen at the Bisazza Foundation. At the time, he claimed their use had been "relegated to mosques or the swimming pools of Miami." He not only employed them in his own projects, whether it be the Paradise Tower in Hiroshima or the Groninger Museum in the Netherlands, but also initiated collaborations with other designers and artists.

Back to the Foundation. If Lewis Carroll's quintessential Victorian heroine Alice came to life, pressed fast forward and found herself slipping down a twenty-first-century rabbit hole, she'd no doubt feel quite at home if it culminated at the Bisazza Foundation on the outskirts of Vicenza, Italy. There may be no Queen of Hearts or Mad Hatter there. Instead, she'd find a monumental multicoloured chair that stands 3.2 metres high, a shimmering silver chandelier covered in 153,000 tesserae tiles weighing some 850 kilos, and a wonderfully wacky mosaic-clad Mini that can actually be driven. At the end of her nap, she'd no doubt lie down for a nap in Arik Levy's site-specific installation, RockChamber, whose shiny angular black forms, give it more than a passing resemblance to a highly polished meteorite.

According to the Foundation's vice-president Rossella Bisazza, "Its fascination is due to the fact of being in an environment that is almost outside reality." For real-life visitors, the surreal nature of the experience is certainly enhanced by the Foundation's location. It is situated at the heart of what could charitably

be described as an unprepossessing industrial estate. Not exactly the kind of place where you'd expect to find creations by leading architects and designers, such as John Pawson, Richard Meier, Ettore Sottsass, Marcel Wanders, and Jaime Hayon! To add to its mystique, the building is hidden behind a tall bamboo hedge and only comes into view once you swing into its front courtyard, bordered by pristinely preened topiary. "We deliberately wanted people to turn the corner and enter a different, more beautiful world," notes the Foundation's president, Piero Bisazza. And believe me when I say, that drive in really has the "Wow" factor!

For more than 60 years, it has very much been the world of the Bisazza family. It was there in 1956 that Piero and Rossella's father Renato founded a mosaic manufacturing company, whose products were initially destined as cladding for the exterior of buildings. Things have since changed significantly and the former factory today houses the Foundation. The building's transformation was orchestrated by the architect Carlo Dal Bianco, whose brief was to create clean orderly spaces, while retaining traces of the building's industrial past. In response, he maintained the exposed concrete floors, kept in place marks left by the old furnaces and installed floor-to-ceiling windows that flood the vertiginously lofty interiors with natural light. For, what the Foundation may lack in terms of a glamorous location, it certainly makes up for in space. Its eleven rooms currently stretch over some 6,000 square metres, with an extra 1,500 square metres devoted to temporary exhibitions.

A purely private non-profit initiative, the Foundation is more than anything an expression of the Bisazza family's artistic passions. The genesis of the Foundation can also be traced back to the appointment of Alessandro Mendini as the firm's first creative director in 1995. During his four-year tenure, he revolutionised both the company and the way its mosaic tiles were used. "With a 2 x 2 cm square," he once said, "you can cover the entire surface of the world." "Collaborating with contemporary designers and architects is integral to our company," insists Piero. "It's a way of making our product relevant for today." His most famous piece, The Proust Armchair is one of the most famous attractions at the Foundation.

Many of the works displayed in the Foundation were initially produced for other purposes. Fabio Novembre's immense looping Love Over All was imagined for the Salon du Meuble in Paris in 2003; Marcel Wanders' Ante-Lope car was unveiled at

London's 100% Design Fair in 2004; and Mendini's Monumental Proust Armchair was conceived for an Italian design exhibition in Athens the following year. Other pieces, like Sandro Chia's Intelligent Bathers and Novembre's Godot, were produced for the decoration of Bisazza showrooms, in Milan and Berlin, respectively.

One of the joys of the Foundation is the sheer diversity of works on display. They come in 2- and 3-D, differ in scale and size, and range stylistically from Pawson and Meier's minimalistic approach to more expressive creations, such as Jaime Hayon's Jet Set airplane and Studio Job's oversized Silverware. Additions and changes to the Foundation have already been made – a 24-metre-long frieze bearing an iconic print from the archives of the legendary Florentine fashion house, Emilio Pucci, was introduced in 2016. "We're at the beginning of a journey," insists Piero. "The Foundation has given our job a new perspective. It will be the contribution of the second generation of the family." "It nurtures our daily work," concurs Rossella, "lifts our spirits and makes us dream." For me this is without doubt the showroom that exhibits its hosts product, perfectly.

The second product is all about wood. L'Ottocento continues to celebrate wood as an ethical and beautiful choice for kitchens and interiors that provides a beautiful design versatility. New solutions for the kitchen and living areas by L'Ottocento celebrate wood as a natural and resilient raw material which has been a leading material preferred by the company's artisan productions. Wood is rediscovered as an element capable of enhancing the sophisticated partnership between classic and contemporary styles, highlighting both style and technology.



The Proust armchair
by Bisazza.

Highlighting its timeless appeal, wood as a creative concept can be adapted to all areas of the home utilising strong forms and original pairings. Wood as a recurring theme within the home creates a warm and welcoming feel. The new range of furniture from L'Ottocento in collaboration with "makethatstudio" include the elegant Atlante panelling system in Piantagione walnut and featuring pocket and pull-out doors. It is a fully-equipped storage system at full height and offers a pleasing aesthetic not only to the kitchen but also if used in the living area.

To create a cohesive design flow, the panelling system extends into the living area including doors, and closed and open compartments depending on the needs of the occupant. It is a custom design that can continue through to other areas ►



The Mini reimaged by
Bisazza.



Above from left:
Bisazza - the Long
Room.
L'Ottocento lounge in
Plantagione walnut.

of the home where there needs to be a continuation of style and textural elements. The striking Architepo island, with its quintessential forms and cylindrical base units, has been finished with an original wooden pattern designed by Ettore Sottsass for Alpi and is completed by a revolutionary top in Lapitec. The island extends to become a snack bench, paired with matching Architepo stools upholstered in Rubelli fabric. And whilst timber doesn't have the same market penetration in Australia, I dare to ask if someone out there could match this mastery in both design and manufacture.

I know that containers (or lack thereof) have been discussed widely of recent times but Royal Wolf, Australia's largest supplier of shipping containers has 'reinvented' the shipping container to create a business success. Showing that even the most rigid of products, such as 20 and 40 foot containers that prefer a muddy-red colour, can be re-imagined when a company needs to adapt to the market and when a society comes calling for solutions. Royal Wolf's containers have been deployed for use as university student accommodation, a food market village and most recently, as crisis accommodation for the homeless in Tasmania.



Taking a hit when the mining bubble burst, Royal Wolf had to rethink their business. To diversify, they turned down the dial on camp accommodation and increased it on worker accommodation at civil construction sites, building a niche. CEO Neil Littlewood says "As a company it helped us learn about ourselves and what we could do. Most people have this view that it is just this steel container, but what you can do inside that is quite interesting. People all over the globe have come up with some sensational solutions."

During the COVID-19 pandemic, Royal Wolf was instrumental in providing emergency response testing stations, and, in Geelong, the modification of a container into a visitors' pod at an aged care facility. The design team have about 15 different configurations for pandemic response buildings. The company's largest long-term solution project has been the 85-container build in 2019 for 180 live-in students at the University of Tasmania's Sandy Bay campus. As a result of that project, the State Government commissioned Royal Wolf to supply 18 single-person pods for Hobart's Bethlehem House, a homeless accommodation service for men, and ten larger shelters for the Hobart Women's Shelter. Mr Littlewood says the local team in Hobart found a sense of pride in being able to be part of the solution!

Three different pieces relating to design I know, however just remember what Tim Brown, the British Industrial Designer said, "Above all, think of life as a prototype. We can conduct experiments, make discoveries, and change our perspectives. We can look for opportunities to turn processes into projects that have tangible outcomes. We can learn how to take joy in the things we create whether they take the form of a fleeting experience or an heirloom that will last for generations. We can learn that reward comes in creation and re-creation, not just in the consumption of the world around us. Active participation in the process of creation is our right and our privilege. We can learn to measure the success of our ideas not by our bank accounts but by their impact on the world". ■



Royal Wolf's Bethlehem House pods for homeless men.



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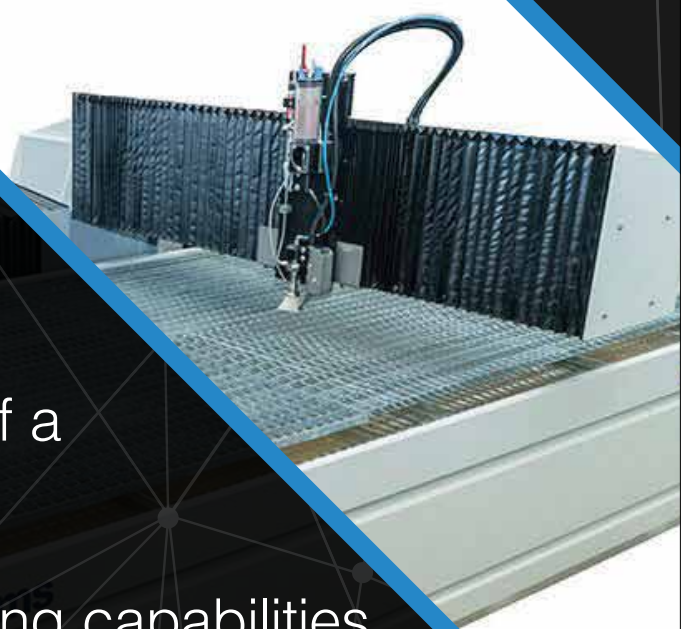
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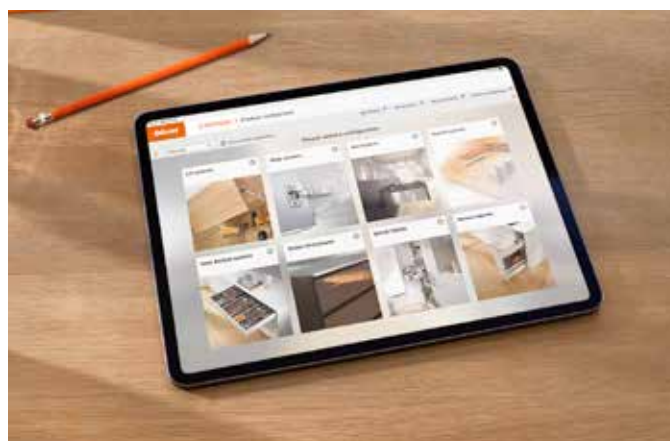
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The EASY ASSEMBLY app ensures users to have all the latest assembly information at their fingertips. Interactive applications use virtual images to help users accurately position Blum fittings and carry out precise adjustments. Useful assembly videos demonstrate individual work steps. The assembly app also includes an overview of all installation instructions, organised according to product group. Installers and cabinet makers can compile and manage all app content to meet their personal needs. The information that cabinet makers and installers need for installation on site can be downloaded to the corresponding device. The EASY ASSEMBLY app is available to download for free from your app store.

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*Compared to Genesis EVO 2019 model



Magic Pro's next generation drawer system

sold out before it hit our shores

Magic-Pro disrupts the slimline drawer market with its quality design and reduced installation time. Now there is an exciting extension to the range hitting the local market.

Introduced to the Australian market in 2019, the drawer has found its place in the mid to high end market. "Its success has more than exceeded our expectations" said Ms Tina Dao, General Manager Procurement at Lek. "We introduced Magic Pro to the Australian market due to exceptional quality and competitive price point. The uptake by many high-end projects user backs the quality".

Customers demand high quality and cost-effective alternative for wider drawer market. Magic Pro's highly stable construction ensured stable and smooth motion with soft closing feature for both wide and high drawer sides. For strength and durability this system comes in both 40kg and 60kg load capacity.

Remarkably versatile, the straight sided drawer system features a slim and elegant side design. Its simple design application makes it a good option for complete fit-out of kitchens, bathrooms, laundries and bedroom interiors.

On the back of its success, Lek has expanded the range to include glass sides and fronts, white and black options, push to open and soft close. "The overwhelming requests for glass

sides was so strong, we decided to introduce the complete range. Stock is running out fast, 80% of the shipment sold before the container hit our shores." said Ms Tina Dao.

With a choice of colours, glass sides, push to open and five different drawer heights: 62mm, 88mm, 126mm, 172mm, 238mm, endless design options can be produced.

Magic-Pro's slim sides design provides much more storage space and the design is very sturdy. Other benefits for cabinet makers have been the reduced installation time. With three dimensional adjustments left and right, up and down and tilt adjustment, it allows for tool free assembly and removal of drawer front.

Drawer installation is simple said Ms Dao: "The integral locking devices automatically engage by depressing the release levers, and the drawer is easily removed. Height, side and tilt adjustments are neatly concealed in the drawer sides behind cover caps."

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A new world

The world we live in is constantly moving forward and with that comes change. This is no more so than in the world of manufacturing and processing wood and panel based product and componentry, where to thrive, speed and accuracy is dovetailed with the need to meet the highest standard of quality possible and to be competitive, in the most economic and efficient way. In the last decade we have seen great strides made in the development and implementation of robotic technology in the factory environment that allows for the cutting, labelling, moving and storage of panel componentry pending eventual assembly into finished product such as kitchen cabinetry, shopfittings and furniture amongst other things. More and more so it is being seen as apparent that robotism in the factory process should not be viewed as stand-alone but rather as a fully integrated part of the business.

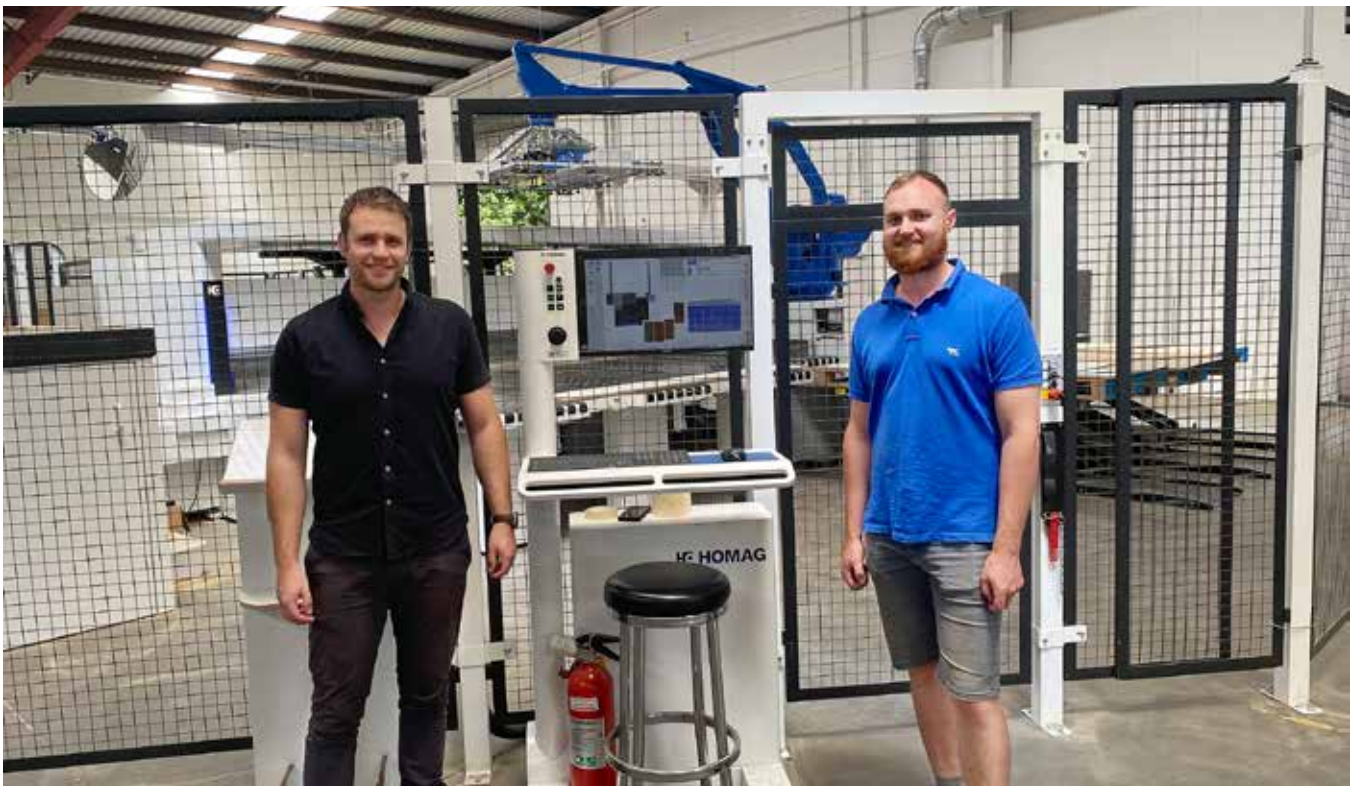
Liam and Braden
Russell of Greenmount
Espies

Bob Nordgren from Joiners Magazine NZ recently had the opportunity to discuss these very issues with Graham Russell, Managing Director of Greenmount Espies, one of the largest

contract panel and wood manufacturers in New Zealand, based in Auckland's East Tamaki along with his two sons Braden and Liam who also work for the company. Graham has been looking at various forms of factory automation and robotics as part of an ongoing project with German machinery manufacturers HOMAG AG who are world leaders in robotic factory systems, to purchase (during Lockdown Level 4 last year in New Zealand) a robotic saw (SAWTEQ B-300) and automated warehouse storage system (STORETEQ S-200) which arrived in June 2020 but because of COVID-19 was not installed and commissioned until November 2020.

The interesting question was why buy such a system?

"Perhaps at the centre of all this is consistency of performance," Graham comments "Reducing mistakes perhaps even poor decisions in some cases. You can achieve better control of the workflow along with panel management. Along with the normal software upgrades and other management improvements it will



also leave a clear path open to investment in future planned operations of the business as well. This leads to efficiencies and improved profitability."

The system installed can be operated in a fully automated, semi automated or indeed manual mode which makes for a responsive, reactive and flexible factory operation. It leads to full space utilisation for both the cutting and storage of panel product. It is ideal for Batch 1 production where through a process of aligning, clamping and redirecting combined with auto labelling of component parts this seemingly 'chaotic' production can cut and compile literally hundreds of components ready for further processing in an organised way. It suits nested manufacturing be it big or not so big. In robot mode it leads to low unit costs per part, a partially unmanned operation and very low error rates while in an operator mode it offers real freedom in the cutting process and far greater flexibility without the need for special robotics or programming knowledge.

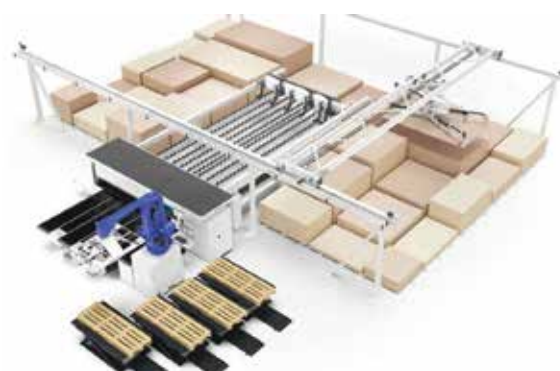
So since it was commissioned back in November 2020 how has it been working?

"We are still in stage 1 really," offers Liam "We can see it leading to better organisation and better production over the next twelve months." Braden adds " The install went really

well. It was a real challenge what with COVID-19 in getting the Aussie based technicians here but it all worked seamlessly. We also have our own in house engineers who can deal with most day to day issues . HOMAG set up the software and provide the diagnostics we need for any enquiry. The package of saw and de-stacker offers a lot of options so there is a lot to think about in how you want your system set up. The beamsaw in the system is fully robotic and is working well with the de-stacking system. We have a way to go in fully integrating the new system but it has progressed well. Integration means the business as a whole will gain in a variety of ways, not just efficiency and profitability. The key benefit of the de-stacking system for example, has been control of stock, where it is and where it goes be it panel or waste. As to training in the system's use, it has been straight forward with HOMAG supplying all we needed to get up and running."

With all these efficiencies what has having this system meant for the human element?

Graham points out "You still need smart people to run this sort of system. It has been really useful in fact in taking away the handling stress of moving heavy board around for those staff involved who in turn can be better employed in other areas of the total operation. This new cutting and handling ►





► system offers new efficiencies, and hence better profitability. Most importantly though, it will enable us to continue to meet customer's expectations to provide a quality product for a good price. So far HOMAG have delivered what we expected."

Greenmount Espies have been around for some time now. "We have been planning to build a new factory but this COVID-19 has delayed things somewhat," Graham comments. A real positive has been the family feel to the business with Graham's sons Braden and now Liam being involved in the business. Graham, who has always had an eye for new ways to do things sees a bright future ahead. "Taking on new technologies and being forward thinking dare I say, has been something we Kiwis

do a lot – and do it well. We plan to move forward into what many are now seeing as a new world." And we plan to have more on this in a future issue as this narrative unfolds.

AWISA thanks Joiners magazine NZ for contributing this article.

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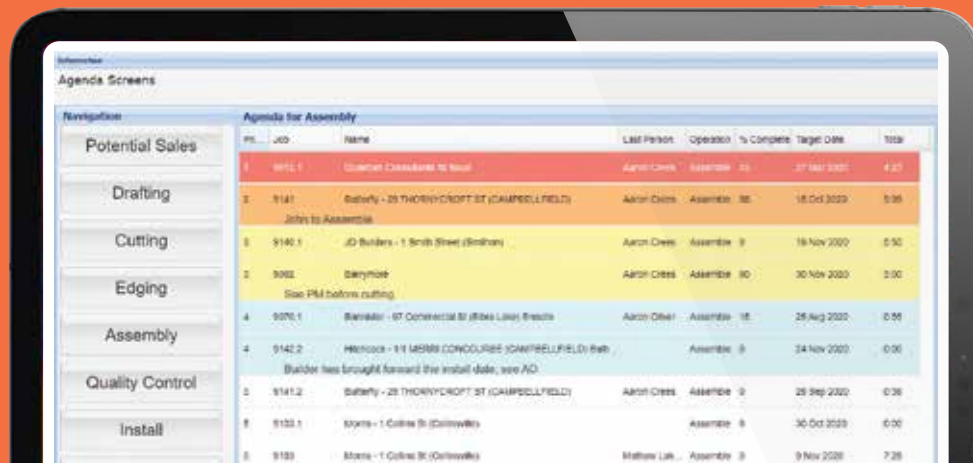
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plinth feet of corner base units.

Pack of all trades

When Brendan Menner moved from Melbourne to Perth in 2005, he wasn't just chasing warmer weather and being closer to the beach. He had a vision to set up a one-stop destination tradies can call home (rather than having their own factory and overheads).

Brendan officially founded Flat Packs WA in Bibra Lake in 2015, although its beginnings were well underway before then. Now with 20 years' experience and an ever-expanding team of 18, Flat Packs WA operate a trade-only factory for residential, commercial, shopfitting, boat moulds, fine timber masterpieces, even children's furniture. If you can dream it or draw it, there's a high chance Flat Packs can do it. From large mining and university projects, to everyday tradies, Flat Packs WA's in-house resources include a large spray shop for polishing, plus hardware, appliances, benchtops and more.

Although not the first trade-only cabinet maker, Brendan believes his real point of difference is the widespread capability of the team from machining to software; there's a large variety of different backgrounds to challenge the norm and achieve greatness. "Helping smaller cabbies be competitive is important, as we can pass on our volume pricing discounts,

offer assembly in our factory or even overtake workflow to help achieve tight deadlines," Brendan explains.

Already a Wood Tech customer, Brendan was looking for an additional CNC machine to sit alongside his existing 5-year-old Anderson. The brief was for a high-tech machine, with a larger sheet size capacity and the speed to suit large volumes. The solution was the all-new Anderson Genesis Plus 612 nesting cell with automatic loading and labelling.

Machinery innovation and capabilities aside, the real value that got Menner over the line was the technical support Wood Tech has offered him over the past 5 years, with local technicians based all over the country, including 4 in WA.

It may seem like Brendan Menner has his hands in a bit of everything, so what's next? "Well, I've always had an interest in helicopters..."

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Integrated cell system for the production of customised furnishings



Automatisation of processes, production flexibility, machining quality and reduced delivery times to keep up with increasingly faster, on-line purchasing methods.

These are the priorities for businesses involved in customised furniture designing covering the entire production process from the project to delivery. But how can all these needs be reconciled?

SCM offers integrated systems of flexible "batch 1" cells capable of meeting market trends with two results: optimisation of processes and a significant reduction in costs and energy consumption. This is the case of the solution outlined here, with a production capacity of 1500 pieces per shift, designed by the engineering team for a leading Spanish company in the furniture and design industry.

Sizing cell

The cell consists of two automatic three-axis Flexstore el storages, integrated with two Gabbiani g 3 and Gabbiani gt 3 sizing machines that both perform well in terms of speed and machining quality. There is also a machine for cutting the

smallest off cuts and finest material: the Class si 400 sliding carriage sizing machine.

Not only does the system have a separate magazine for managing the rejects that are automatically re-introduced but it is also highly versatile and capable of adapting to production needs. While the three sizing machines are equipped with specific functions, they can be interchanged depending on the amount of material being machined and the kind of re-usable off cuts. Integration with the Maestro active watch cell supervisor software and the Maestro store magazine is also key as they allow storages to be managed outside of the cell, used to store materials in other areas of the factory or the smaller or fine panels.

Square-edging

Flexibility is the keyword even for the square-edgebanding cell consisting of two Stefani sb one unilateral edgebanders with automatic feed system for perfect panel sizing and squaring. The strength of these solutions designed for big industry lies with their ability to work panels in sequence and just-in-time with different sizes, applied edge and machining, with small or pure "batch 1" batches. These machines are fully electronic and can achieve three radii automatically thanks to the Multiedge system. They have 24 roll edge magazines, ensure a rapid and automatic change of glue colour and perform routing inside and outside the feed tracks.



The Maestro active watch supervision software is also key: thanks to the bar code on each panel, the software can match the right machining program and trace and control all the process stages to each piece, as well as further control functions and production reporting. The edgebanding of special and prototype pieces is done in another cell, consisting of an Olimpic k 800 unilateral edgebander with Touch 7 control interface and panel return.

Stand-alone solutions to complement the process

SCM proposes two state-of-the-art technological solutions:

The Morbidelli p800 drilling, routing and edge treatment machining centre, ideal for machining and achieving "just-in-time" panels ready for assembly. It is highly versatile and can be used in two ways: to apply the shaped edging to panels already squared or to drill, route and edge the unfinished panel. If the pieces being machined are mainly curved, the machining centre allows users to skip the passage in the squaring edgebanding

cell proving itself to be a real "wild card" in any factory. Some of its key advantages include its extremely fast set-up times thanks to the Matic automatic table with suction cups and bars that move automatically and simultaneously with anti-collision check.

The compact CN Morbidelli cx220 drilling centres for machining special and prototype panels. Its worktable allows users to drill even delicate surfaces with excellent finishing results. The new, shaped hold-down grippers mean that panels can be machined even in positions inside the grippers, greatly reducing cycle times and optimising workpiece clamping.

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Innovative repair business

A few months before Greg Webster and his son James visited Germany, they damaged a tiled floor when a snooker ball came off the table. The only advice they received was to replace the tile if they had a spare. They discovered that there were no repair products to solve this problem type of problem in Australia.

In Germany they found Heinrich König & Co. who supply repair kits and items to the furniture, parquet and laminate manufacturers as well as the door and window industry, the furniture trade, carpenters, restorers, stone masons, hotels and gastronomy, facility management, boat and yacht building industry and the private consumer.

After meeting with Heinrich König & Co's Managing Director and his production team they were inspired by the technology and the German engineering within the products and repair kits to start König Australia.

König Australia is a company that creates innovative and effective repair products for all damages and defects for surfaces made from wood, plastic, stone, tiles and metal. The product range comprises diverse fillers, touch-up materials like pens, pigments and dyes up to spray lacquers as well as maintenance and cleaning products.

König Surface Repairs (KSR) provides trained repair technicians for all repairs onsite in the home, commercial and residential buildings. KSR services areas in NSW, Victoria, Queensland, WA, NT, ACT and SA. They also cover areas within New Zealand.

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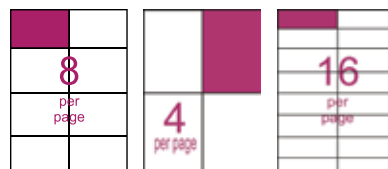


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Quadrupling productivity:

Northcoast Stone went on a machinery journey

In 2006, Jay McMillan and his business partner began a stone benchtop company that relied exclusively on traditional hand-based masonry. As the years went on, Northcoast Stone steadily grew into a reputable Queensland firm, evolving beyond the borders of benchtops and into new territory. Today, they're Australia's sole supplier of engineered stone from the Czech Republic's Technistone and have a whole suite of advanced tools to work it, and other materials, to make high-quality products for interior and exterior use.

"We started as just myself and my business partner, cutting everything by hand with a Makita wet saw. Then we ended up importing a Chinese saw, along with an Australian model. After that, we met Pierre and his partner and bought our first CMS machine," reminisces Jay. It was at Verona's Marmomacc that the firm's co-founders first became acquainted with CMS. Invited to the industry-leading event, various equipment was on show, but only one stood out to the duo. "I've had that many people see me about machinery, and I decided to go with CMS - because of the build quality, and the bright blue colour, which I liked", he recalls.

The decision to go with one of Innovync's best known suppliers had a lot to do with the impressive technology on offer, and the service extended by the Australian distributor's Managing Director, Pierre Sullivan. While in Europe, Innovync's founder took his guests to CMS' Northern Italy factory, where the Queenslanders viewed the innovative machinery first-hand. A trip to San Pellegrino followed, and the duo were sold on acquiring a complete collection of products from the European brand. "A bit of wine and dining in Italy always helps. The customer service is very good," says Jay.

Starting off with an Impact bridge saw, Northcoast's decision-makers added to their initial acquisitions. It wasn't long before those initial investments were replaced by newer technology from the same blue brand that caught Jay's eye in Verona.

"We got the first machine from CMS three years ago - the Impact bridge saw. Then we got an Easyline, Speed 24, and now the Formax. We also have a high-pressure water filtration system from Innovync's range of accessories."

Having had the Formax installed just before Christmas last year, the stone manufacturer is now equipped with a flexible array of automated tools that allow for versatile production. Other than stone benchtops, wall cladding and architectural facades are easily created on the machinery, allowing for a streamlined workflow that goes directly from computer to machine, reducing the need for close quarters hand work. Thanks to the upgrade, the company's founders and employees enjoy cleaner air in the workspace, plus more time to focus on orders.

"CMS machinery is definitely on another level. I reckon just having the waterjet and CNC machine cuts down the percentage of hand finishing by 95%, which also helps prevent silicosis because the machines are doing everything," says Jay.

As a result, the greater productivity potential has given the firm a major advantage in capacity to produce. Excellent quality and timely output have reached the awareness of contractors, and Northcoast has enjoyed exponential growth in return - more than with any other machinery they've used.

"The increase in productivity with CMS machines compared to other machines is really good. The programming and software and the way that

the machines cut and do their thing is pretty advanced in the stone world, we've probably tripled or quadrupled in size over the past three years, going from 3 or 4 jobs a day to about 12 jobs a day."

Using DDX's Easystone software, a program distributed by Innovync across Australia and New Zealand, operators can easily design, develop, and digitally send to the factory floor for seamless manufacturing. Accuracy is excellent with the digital tool allowing precise data from measuring devices to be imported directly into Easystone's settings. From there, the CNC, bridge saw, and waterjet interpret the information, and execute the task exactly.

The real challenge for many local firms is sourcing premium service from a European supplier. With fast delivery on spare parts and the distributor's head technician, Marco, only a call away, the company has all the care and attention it needs in order to thrive.

"Any time there have been issues, Innovync's sorted it out very quickly. Even some of the Italian firms have found it hard to get guys to service machines."

The combination of premium technology, specialised software, and superb service has put Northcoast in a prime position within the stone industry. Landing jobs with the likes of Hutchinson Builders, and other big names, Jay and his partner look back on their humble beginnings and find a great deal of appreciation for where they stand today.

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Far left: Northcoast Stone's Queensland factory is fitted out with CMS machinery, supplied by Innovync.

Left: The newly installed Brembana Formax is Northcoast's latest bridge saw addition, joining the Impact, Speed 24, and Easyline.

Flexijet 3D continues to prove itself

The Flexijet 3D laser measuring system continues to demonstrate how this innovative German technology can markedly improve the efficiency and accuracy of any site measuring task. It not only handles simple tasks like measuring walls, pipe penetrations, bulkheads, windows and many other elements with ease, but will handle the most demanding measuring assignments not previously thought possible.

Flexijet 3D measures and instantly creates 3D (or 2D) CAD drawings on site in real time. The drawings created are compatible with most CAD software used in the joinery industry such as PYTHA®, Microvellum®, AutoCAD®, SketchUp® (to name a few) thus providing a seamless workflow from site to office.

Aspen Commercial Interiors from Arndell Park NSW successfully introduced Flexijet 3D into its workflow in 2018. It has since undertaken many hundreds of site measurements noting the speed, precision and quality of measurement data which has had an enormous positive impact on their site measurements compared to manual methods used in the past. In a recent project in the Melbourne suburb of Cremorne, Flexijet 3D once again proved its value and return on investment when the team at Aspen undertook part of the joinery fitout for MYOB headquarters. The scope included full height lockers over 4 levels, entry wall panelling and stair void wall panelling.

An especially problematic task was measuring the stair void penetration spanning over 4 levels. With Flexijet 3D, the stair void was measured with ease and all from the lower level. A seemingly complex measurement was completed in less than half a day with the 3D CAD model ready to be imported into their CAD software back at the office. The remaining joinery items were less complex but were equally completed with speed and an accuracy of 0.9mm.

In summary, Flexijet 3D is a measuring system that will revolutionise site measuring. The ability to not only measure, but to instantly create a CAD drawing on site is a huge leap from the days of deciphering handwritten measurements on a note pad. With a visual model to refer to while the measurements are being performed gives instant feedback and reduces the likelihood of missed measurements. How many times has someone had to travel back to site to get that missed measurement? The increase in efficiency and accuracy of Flexijet 3D will provide a return on investment in a very short time.

Contact Flexijet Australia to arrange a demonstration and discuss how this technology can improve site measuring.

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The Flexijet 3D laser measuring system.

The stair void measured from ground level with Flexijet 3D.

The successfully completed stair void.

Additional joinery completed in the scope of works and measured with Flexijet 3D.





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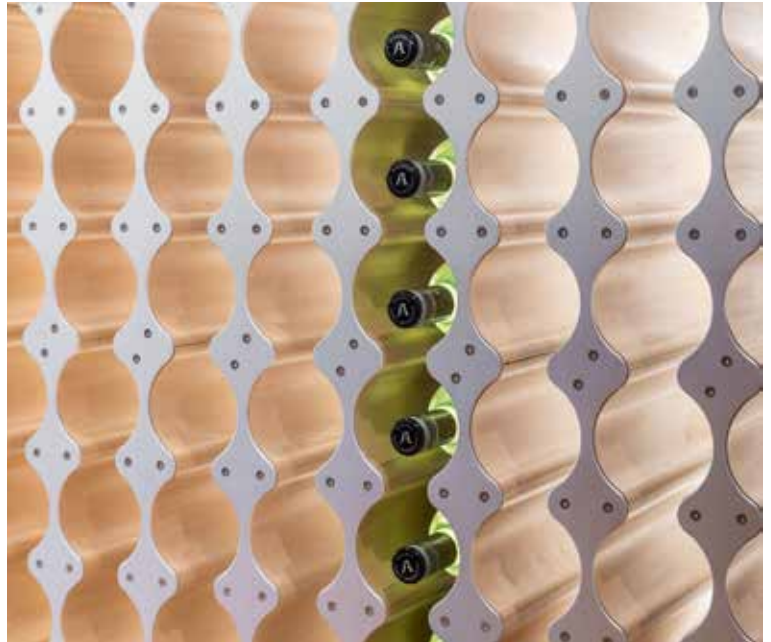
Lincoln Sentry moves to the Rhythm

With the cooler weather just around the corner, now's the time to have wintry reds on full display and easy to access with this mesmerising wine rack from Echelon.

Echelon's Rhythm wine rack cabinet inserts are a simple way to create a striking feature for bottle storage. These inserts are designed to slide into built-in joinery and are ideal for custom kitchens and bespoke cabinetry, cellars and wall units.

The bottle cavities are formed from wood composite profiles – creating elegant and rhythmic contours. The wood-grain and metal fascia combine to create an intriguing combination of materials – a blend of sculptured and engineered components.

Available in four different unit widths and two different depths, the Rhythm system allows the wine rack to be customised, choosing from walnut or beech racks and black or allow front panels.



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Surteco Australia's new Managing Director Aldo Borazio, joined the company in February 2019. With over 20 years' experience managing global and local brands producing product in Australia, he brings with him an understanding of the critical aspects required to support the local customer.

"Manufacturing in Australia comes with many challenges, however flexibility, consistent quality and investment in the local market allows for a global company to meet the local needs." Aldo said.

Surteco Australia's vision is to continue to invest in new products and processes to maximise suitability to the market and to its customers. In order to have a great manufacturing base, development of skilled employees within the industry is crucial. Surteco Australia has many long-term staff members who have seen the company grow and Surteco looks forward to continuing this investment to support its customers and clients for the future.



Aldo Borazio, Managing Director, Surteco Australia.



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2019 Design of the Year



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KEY DATES & INFORMATION

EARLY BIRD ENTRIES CLOSE: 31 MAY 2021
ENTRIES CLOSE: 31 JULY 2021
FINALISTS ANNOUNCED: AUGUST 2021
AWARDS NIGHT: 10 SEPTEMBER 2021
AWARDS VENUE: DOCKSIDE COCKLE BAY
2 WHEAT ROAD, SYDNEY
QUALIFICATION PERIOD: 1 JULY 2019 - 30 JUNE 2021

THE CATEGORIES

MAJOR AWARDS

Cabinet Maker of the Year
Design of the Year
Outstanding Achievement of the Year

DESIGN

Best Kitchen
Best Bathroom
Best Free-Standing Furniture
Best In-built Furniture
Best Soft Furnishings/
Interior Design

OUTSTANDING ACHIEVEMENTS

Workplace Champion
Apprentice of the Year

CABINET MAKER OF THE YEAR

Best Kitchen Project-New Build
Best Kitchen Project-Renovation
Best Bathroom Project-New Build
Best Bathroom Project-Renovation
Best Commercial Project
Best Alfresco Project
Best Laundry Project

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PROTECT

PROMOTE

PROVIDE

Cinetto Systems - the evolution of sliding

Wilson & Bradley is founded on the principles of quality design, providing customers with a diverse, premium selection of kitchen and cabinetry hardware, backed with the best customer service. These principles continue with the launch of Wilson & Bradley's latest Italian product range of Cinetto sliding systems, including the industry leading B-moved technology.

This Italian company was founded by Roberto Cinetto in 1948. What began as a small hardware shop, soon became the go-to place for local carpentry supplies. The company has grown vastly since then, with its warehouse now covering an area of 17,000 square metres. Cinetto now use the most advanced production techniques for the creation of its own unique systems. Cinetto is now recognised as one of the world's leaders in the production of sliding systems and designer aluminium profiles. Its history and experience of manufacturing quality products allows it to develop products that not only look great, but also function effortlessly.

Smart technology

Introducing B-moved, the market leading technology that transforms the way that spaces are experienced. Exclusive to Wilson & Bradley, B-moved is industry leading technology that allows for the electronic opening and closing of doors on many different sliding systems.

B-moved ensures silent and safe movement of doors and is equipped with wave sensor and remote-control capabilities. It is also smart-home compatible, allowing doors to be controlled at the click of a button. It brings forth a new experience of sliding and adds a creative edge to new projects or renovations.

The following Cinetto sliding solutions are available at Wilson & Bradley.

- LIBRO MAXI (PS11) - sliding bi-fold system
- IDEA (PS22) - one way sliding system
- LIBRO (PS23) - bi-fold door systems
- PIANO (PS40) - coplanar system
- VOLO (PS48) - sliding system for overlapping doors
- AGILE (PS60) - floor sliding for single side doors
- ASCEND (PS70) - vertical sliding system for concealed doors

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Energy savings thanks to the right choice of vacuum supply

To produce components for caravans and motor homes, as well as facility furnishings, the woodworking company Holzbearbeitung Kraus GmbH uses a total of 14 different CNC routers. Each of the routers was equipped with two rotary vane vacuum pumps which, all together, generated annual energy consumption of over 300,000 kilowatt hours. CEO Karl Fritz Kraus found this to be an unnecessary waste of energy. So he sought alternative vacuum generation for clamping. He found it in a central vacuum supply from Busch Vacuum Solutions.

With its 120 employees, Holzbearbeitung Kraus produces components for many caravan and motor home manufacturers, as well as countertops for kitchen units, washbasin covers, tabletops and much more. The company also focuses on facility furnishings, for which it manufactures complete systems for retirement homes, doctors' offices, office buildings, banks, and kindergartens. Kraus offers services from interior design and planning to construction, manufacturing, and installation – all from a single source.

At the plant in Zusammzell near Augsburg, Germany, 14 different CNC routers are busy with production. All of the machines work with consoles and vacuum blocks for clamping. CEO Karl Fritz Kraus thought it was horrible to see all these machines equipped with two dry-running rotary vane vacuum pumps, each running practically constantly during operation, even when

nothing was being clamped. With two vacuum pumps per CNC router and average power consumption of 3 kilowatts during two-shift operation, the resulting energy requirement was over 300,000 kilowatt hours per year. Furthermore, the rotary vane vacuum pumps required quite extensive maintenance. For example, the graphite lamellae needed to be exchanged in one of the vacuum pumps every two weeks, on average. This led to downtime and generated high costs.

For this reason, Karl Fritz Kraus began searching for a more energy-efficient solution to generate vacuum for clamping, which led him to contact Busch Vacuum Solutions in 2018. The company offered him a demand-driven central vacuum supply consisting of several MINK claw vacuum pumps. Thanks to cascade control, only the vacuum pumps needed to maintain vacuum for clamping at all CNC routers are in operation. In the beginning, Kraus was skeptical as to whether this could work. The team feared that all 14 routers would be affected if the central vacuum system failed. So they chose a vacuum supply with three MINK claw vacuum pumps to supply five routers with vacuum. These three claw vacuum pumps replaced a total of ten of the previously used rotary vane vacuum pumps. The three MINK vacuum pumps were each equipped with 5.5 kW motors. They therefore require 16.5 kW at full output. Compared with the previously used ten rotary vane vacuum pumps with 3 kW each or a total of 30 kilowatts, this provided energy savings of 45 percent in purely mathematical terms.

Thanks to the demand-driven control system, all three vacuum pumps were rarely in operation, which also led to significant energy savings. The initial skepticism regarding the operational reliability quickly dissipated. If one vacuum pump had failed due to a malfunction, both of the remaining pumps would have been able to supply sufficient output to maintain the vacuum level at each CNC machine. They were so convinced that they expanded the central vacuum supply, in two subsequent stages, to connect all 14 CNC routers. Now a total of eight MINK claw vacuum pumps are installed in the plant. Four to six of them are running during normal operation. This means there is enough

One of 14
CNC routers at
Holzbearbeitung
Kraus.

Photo:
Holzbearbeitung Kraus
GmbH



Comparison of energy consumption before and after switching to a central vacuum supply

Energy consumption comparison		
	Decentralized vacuum supply	Centralized vacuum supply
CNC routers	14 units	14 units
Vacuum pumps	28 units	8 units
Rated current / Vacuum pump	3 kW	5.5 kW
Total rated current	84 kW	44 kW
Actual energy consumption	84 kW	33 kW
Energy consumption per year	302,400 kWh	118,800 kWh
Energy savings	183,600 kWh = 60.7%	

redundancy and even reserves to connect an additional CNC router. If we assume that six MINK claw vacuum pumps operate constantly, the energy savings would be equivalent to over 60 percent.

The central vacuum supply consists of racks, each with three or two MINK claw vacuum pumps. It is installed in the production facility and completely enclosed. This eliminated both heat and noise emissions to the greatest extent possible. The staff found the noise level of the previously used rotary vane vacuum pumps particularly strenuous. CEO Karl Fritz Kraus is convinced that he found the ideal solution for his operations through centralisation of vacuum supply and using MINK claw vacuum technology. Because in addition to the huge energy savings, the maintenance costs have also been reduced. Maintaining the new vacuum system is limited to an annual inspection and an oil change performed by a Busch service technician. This maintenance work can be performed during operation. Because MINK claw vacuum pumps use IE3 energy-saving motors, the company was also able to receive financial support from the German Federal Office of Economics and Export Control (BAFA).

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Rack with three MINK claw vacuum pumps.

Completely enclosed central vacuum supply at Holzbearbeitung Kraus.

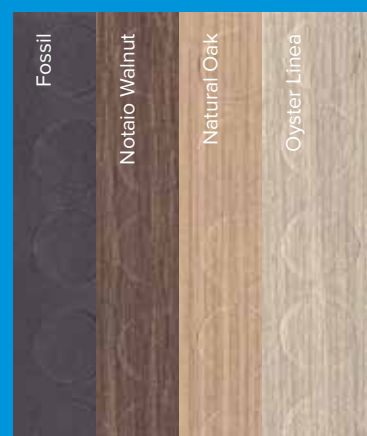
Photos: Busch Vacuum Solutions



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One stop shop Eurofit now stocks Hettich

Eurofit takes pride in providing great service and back up to its customers and is a "one stop shop" for cabinet makers' hardware requirements. The company has maintained a healthy stock level despite the COVID-19 situation and has also grown its product range over the last twelve months.

The company strives to carry a good selection of products with a diverse range of hardware from practical storage solutions to the latest fashion and trend in handles and general hardware. Stylish and functional gear to suit a range of budgets.

Eurofit is proud to be a Hettich Dealer, partners for intelligent solutions. In addition to the great range available in stock, Eurofit is able to order any product required from Hettich's complete, extensive German-made product range. With this Eurofit has embraced opportunities to evolve and offer exceptional customer service without compromise.

Eurofit takes satisfaction in helping furnishing, joinery, cabinetmaking, and kitchen and bathroom businesses alike to succeed.

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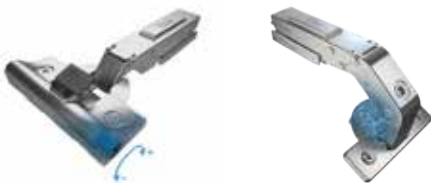
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New customer and logistics centre for Grass at Hohenems

Hohenems is already the third site in Vorarlberg and at 70 million euros not only the biggest investment in Grass company history but also the biggest logistics construction project ever completed in Vorarlberg. The figures relating to the new logistics hub speak for themselves. The eleven-aisle high-rise warehouse is 22 levels tall, with over 600 racking uprights to accommodate almost 38,000 pallet spaces. 5,000 tonnes of steel were used in the construction and the longest façade measures over 180 metres. The building covers an area of 11,150m² and rests on 1,500 piles that reach 30 metres deep. In addition, the central location of the 50,000m² plot has excellent transport links with access to the A14 motorway on its doorstep.

"Optimising the order fulfilment process is one of the key challenges to achieving long-term success and impressing customers," says Albert Trebo, CEO of the Grass Group, commenting on the motivation for the high investments. "The demand for Grass products remains strong. However, delivery bottlenecks over the past few years meant we were unable to

leverage opportunities. With the central warehouse, we are resolving a significant bottleneck and creating the conditions for profitable and sustainable development."

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Photos: Jens Ellensohn Fotografie

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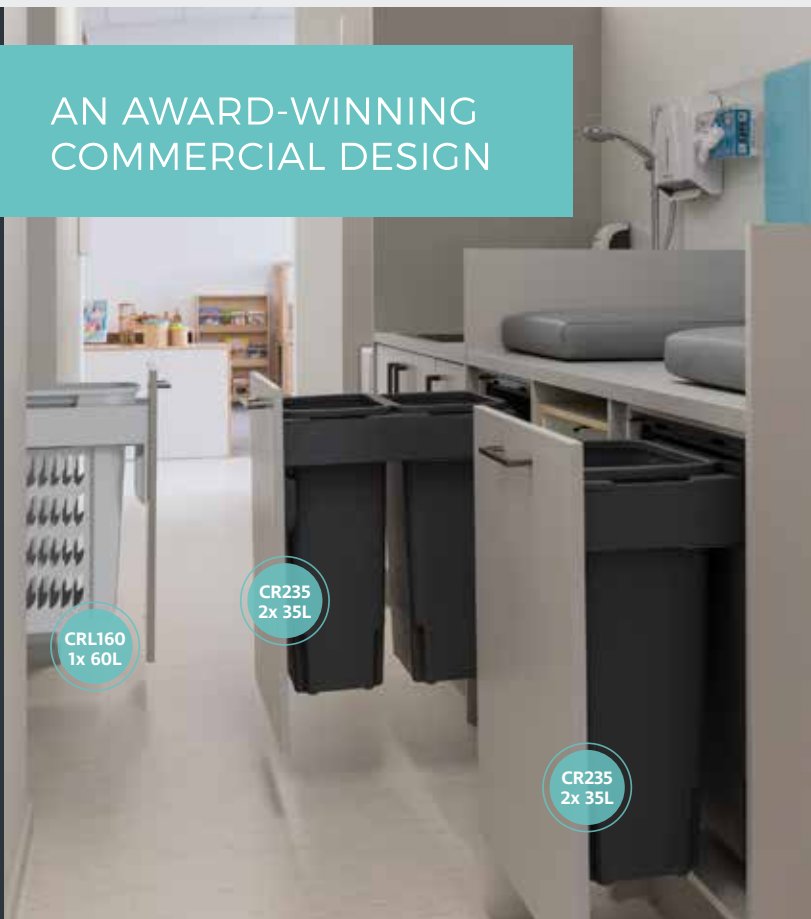
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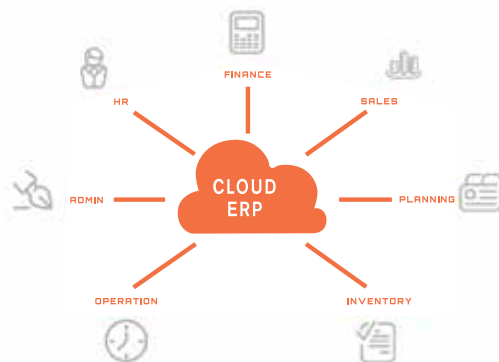

HIDEAWAY®



5 signs that your manufacturing business needs an ERP

So, you've read the signs and come to realise that an ERP system might be right for your business. But it's a hefty investment. Do you need one? There are many reasons a business would opt to purchase an ERP system. Some of the first warning signs may be:

- Profit margins dwindle away due to errors
- Many software's managing different processes
- Lack of easy access to necessary data across teams
- Difficulty with accounting processes
- Inability to provide excellent customer support
- Lack of sales
- IT complexity and confusion
- Manual paper systems that keep failing



This article will take a deeper dive into how an ERP system can help your manufacturing business in both the short and long-term. You may need an ERP system if your business:

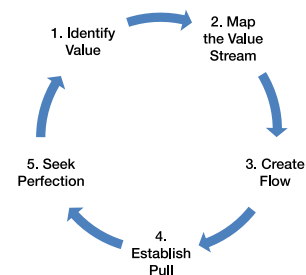
Can't access data quickly or easily

Immediate access to everyday data points is crucial to running a well-oiled and profitable manufacturing business. Do you know exactly how much inventory you have? What open orders do you have on hand at this very moment? What is your year-to-date gross margin?

If it takes you a while to come up with these numbers and have to make multiple calls to different departments to find out, it might be time for your business to invest in an ERP system. Visibility over every aspect of your business in real-time is essential. Ditch the manual reports and get an ERP system.

Lack of integration between departments

Siloes are part of manufacturing businesses. Each department focuses on and communicates within its own bubble, or silo, without the influence or oversight of other departments. This allows individual departments to create and manage their own systems and processes.



This makes for efficient departmental processes in the short term but could cripple company-wide communication, processes, and data gathering in the long term. Multiple systems working on multiple databases is setting your business up for disaster. The potential for error shoots through the roof and staff time is wasted on double data entry and reporting when businesses employ multiple databases.

Inventory counts are never accurate

Orders keep being made for items that are in stock and stock items fail to be replenished are typical issues for most manufacturing companies. Inaccurate inventory can adversely impact every part of your business, from working capital to customer deliveries.

All these problems disappear with an ERP system. Knowing what was allowed for in the quote to what is on hand to what was ordered and when it was ordered and by whom is only a click away with ERP. Your manufacturing business can effectively track inventory throughout the purchase journey from supplier to customer.

This tracking system provides enhanced accuracy and visibility. Errors and delays can be found and rectified much quicker. Accuracy is virtually guaranteed. Imagine how happy your customers will be.

Constant production scheduling problems

Your business needs to make products and deliver them on time while keeping the bottom line attractive to upper

management. If you don't know what machines are available, what raw materials you have on hand, or if you have enough workforce to satisfy current demand, what are you doing?

Some ERP systems come with Master Production Scheduling (MPS) modules. These modules optimise the process of having the right materials in the right place at the right time to please customers. And it's all automated. This provides a critical planning function that deciphers supply and demand data and upcoming forecasts to deliver action-inducing production plans.

Unable to work remotely and gain access to needed data

Now, more than ever, your business needs to be flexible in remote work arrangements. Due to the COVID-19 pandemic and the ever-increasing speed of business, your sales teams need to feel as productive, informed, and confident at home as they do in the office.

A cloud-based ERP with a strong quoting system gives sales representatives remote access to quote history, all current and

post communication, current pricing information in real-time with the ability to requote in seconds. Instant access gives you a leg up over the competition and can increase your close rate.

What's to lose? Imagine what your business could accomplish with:

- Increased agility and flexibility
- An easier path to scale
- Enhanced efficiency and productivity
- Readily-available and accurate information.
- A centralised hub of data to limit confusion and wasted time

It all adds up to a significant return on investment. It's time to consider an ERP system for your manufacturing business.

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Solu's new L-shape Shadowline profile

In line with European trends, and in response to requests by designers, Solu presents a leaner version of its signature Shadowline profile. Still available in both 42 and 52mm, with a patented clip system and matching end caps, the L-profile has a definitive square internal corner. The Shadowline L also suits a vertical application for tall cabinet doors.

When a contrasting texture or accent to the front finish is preferred, the Shadowline L range can also offer six finishes: clear anodised, silver brushed, nickel brushed, white powdercoat, black powdercoat and black brushed - providing the same level of quality that Shadowline has always delivered. Developed by Solu as a handle-free solution with a dual purpose, the design intention of the original profile was to also create a support rail for cabinets and benchtops.

The patented Shadowline profile and clips are designed by Australian cabinetmakers, for the local market. The sophistication and popularity of square edge melamine finishes makes Shadowline a practical solution for handle-free cabinetry, fitted in the factory or on site, without the need to bevel door and drawer edges.

All Shadowline profiles are supplied in an economical 3600mm length and cut to size by the cabinetmaker to attach to the front of the cabinet carcass with the clips as required. The 42mm profile can be fitted under the benchtop and will easily fit in the space above a freestanding dishwasher with little (or no adjustment) to cabinets, and depending on model used, will work with an integrated dishwasher. It is also compact enough to maximise storage space in the cabinet and drawers.



The 52mm profile can be installed between drawers and is designed to enable adequate space for a comfortable finger grip behind the drawer front. Shadowline can also be used for internal and external corner applications with Solu's purpose-designed clips. The new Shadowline L profile is in stock now.

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Titus Tekform's bins and doors

New Kosara soft close waste bin

Get more from the space with the new Kosara soft close waste bins for 450mm cabinets. The large capacity twin bins are available in 66 litre and 74 litre configurations. The modern anthracite finish will complement all kitchen styles and the fitted metal lid features a non-slip mat cover to double as storage shelving. The Kosara bin is door mounted with a 45kg undermount runner system and 6-way adjustment.

Order made to measure cabinet doors online

The Stefano Orlati made to measure door program from Titus Tekform delivers prefabricated doors cut-to-size with perfectly matched edgebanding, and is now available to order online in a quick and simple app. Made to measure doors are available with both OptiMatt, OptiGlaz and the new OptiGrain board. Order made to measure cabinet doors online for a quality high gloss, matt or woodgrain finish to any kitchen or room design.



Fabricated in-house at the Titus Tekform Sydney factory, the OptiGlaz, OptiMatt and OptiGrain doors are cut and edged to suit requirements, including hinge drilling. For an efficient and cost-effective solution, use our easy web app to make your selections and place your online door order.

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Hettich announces brand ambassador

Zephyr + Stone, Ania Forster and Kasia Clarke

One of the leading producers of cabinet hardware and fittings brand Hettich Australia, is proud to announce Ania Forster and Kasia Clarke from Zephyr + Stone as its 2021 brand ambassador.

Zephyr + Stone is an interior design studio run by the sister duo. The sisters are best known for their design and styling tips, with thousands of followers tuning in across the platforms of Instagram, Pinterest, Facebook and their online blog.

Ania and Kasia are respected as experts in great design - to get their tick, a design must be both functional and aesthetically beautiful. They specialise in kitchen, bathroom and laundry design, and are regularly featured in the media giving their tips in these areas.

Zephyr + Stone has been working with Hettich quality German manufactured products within their luxury projects for well over a decade. With their expertise and detailed understanding of the Hettich product range, the alignment for both companies was a match.

There will be some exciting new projects, especially around the integration of the new game changing premium AvanTech YOU drawer system that is making bespoke cabinetry more attainable than ever. Designed to impress with a sleek linear design, slender drawer side profile at an impressive 13 mm thickness, the style is uncompromisingly sleek. The purist design keeps all working components hidden into the slender drawer side. There are no cover caps or holes to spoil the look of flawless beauty.



Hettich is a family-owned German company with a heritage spanning over 133 years with a strong commitment to intelligent design and quality manufacturing.

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Kaeser breaks ground on new state-of-the-art facility

Kaeser Compressors Australia recently celebrated breaking ground on the construction of its new state-of-the-art head office facility in Melbourne. The transformation is well underway and expected to be completed by early 2022.

Peter Eckberg, Managing Director of Kaeser Compressors Australia said: "Construction of our new head office facility should have commenced in 2020. Unfortunately, COVID-19 had other plans. While the pandemic may have slowed down proceedings it has not stopped the company's reinvestment plans. Kaeser Compressors has always reinvested heavily into the business and the current pandemic has not halted those efforts. We're pleased to say that despite on-going COVID-19 disruptions, we finally broke ground in January."

The Australian head office has been situated in Dandenong, Victoria since Kaeser Compressors opened its doors in 1990. Thirty years later it was clear that the company was outgrowing the existing facility, and required additional office space, a larger warehouse and a bigger in-house workshop.

A complete transformation of the current facility is now underway which will both modernise and extend it to twice its current size.

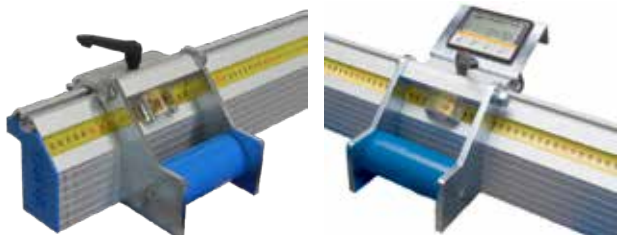
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Wood Tech launches PPE Tech

Established in response to Australia's reliance on imported personal protective equipment, PPE Tech offers Aussie-made P2 respirators to protect against everyday dust and particles in the workplace.

Made in Sydney and Brisbane, all masks are TGA-registered and certified P2 in accordance with Australian standard AS 1716:2012. Get free delivery for orders over \$99+, plus an exclusive offer for AWISA readers to get \$10 off their first box using code AWISA at checkout.

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AWISA The Association



AWISA was formed in 1986 by the principal suppliers to the Australian woodworking industry. The main aims of the association are to present industry exhibitions, publish industry magazines, co-operate with other organisations, and to uphold the highest ethical standards and encourage members to do the same.

Membership applications are welcome from Australian based companies, and from overseas companies with Australian agents or distributors that are also members of AWISA. Membership of AWISA includes suppliers of woodworking machinery, cabinet and furniture hardware, panel products and surface materials, portable tools, computer software, materials handling equipment, dust extraction equipment, components, and general plant and safety equipment.

AWISA The Exhibition



The exhibition has been held regularly since 1988, and attracts furniture manufacturers, cabinet makers, kitchen manufacturers, joiners, shop and office fitters, and other wood, timber and panel processing industries. Architects and interior designers also attend.

The next AWISA exhibition will take place in Sydney from 6-9 July 2022 at ICC Sydney, Darling Harbour. For more information visit www.awisa.com/exhibition or phone Geoff Holland on 0412 361 580.

AWISA The Magazine



AWISA's magazine is published quarterly and is distributed free to a database of over 13,000 end users in the industry. AWISA's editorial policy is to produce quality editorial about business and technical issues that affect the woodworking industry, and to provide members with a means of disseminating information about their products. The association welcomes input from both members and end users about subjects that should be written about in the magazine.

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ADVERTISERS INDEX

PAGE

ALL ABOUT LABELS	60
ALLEGRA HARDWARE	69
ACFA	66
BIESSE GROUP AUSTRALIA	20
BLUM AUSTRALIA PTY LTD	42, 43
BUSCH AUSTRALIA PTY LTD	59
CAD+T AUSTRALASIA PTY LTD	39
CDK STONE	32
CMT ORANGE TOOLS	64
CNCROUTERBITS	64
EUROFIT	84
FELDER	77
FLEXIJET AUSTRALIA	29
GRASS AUSTRALIA	63
HAFELE AUSTRALIA	13, 56
HETTICH AUSTRALIA	4
HIDEAWAY BINS	73
HOMAG	27, 38, 81
INNOVINC	48
JOBMAN PTY LTD	55
KAESER COMPRESSORS	54
KONIG SURFACE REPAIRS	76
LEITZ TOOLING SYSTEMS	65
LEUCO AUSTRALIA	35
LEK SUPPLY PTY LTD	83
LINCOLN SENTRY	19
LUNA MACHINERY	79
MULTICAM	2, 3
NOVER	41
PLANIT	75
SCHMALZ	41
SCM GROUP AUSTRALIA	71
SOLU	25
SURTECO AUSTRALIA	37
THE WOOD TECH GROUP	50
TITUS TEKFORM	72
WILSON & BRADLEY PTY LTD	33
WOODTRON PTY LTD	47

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