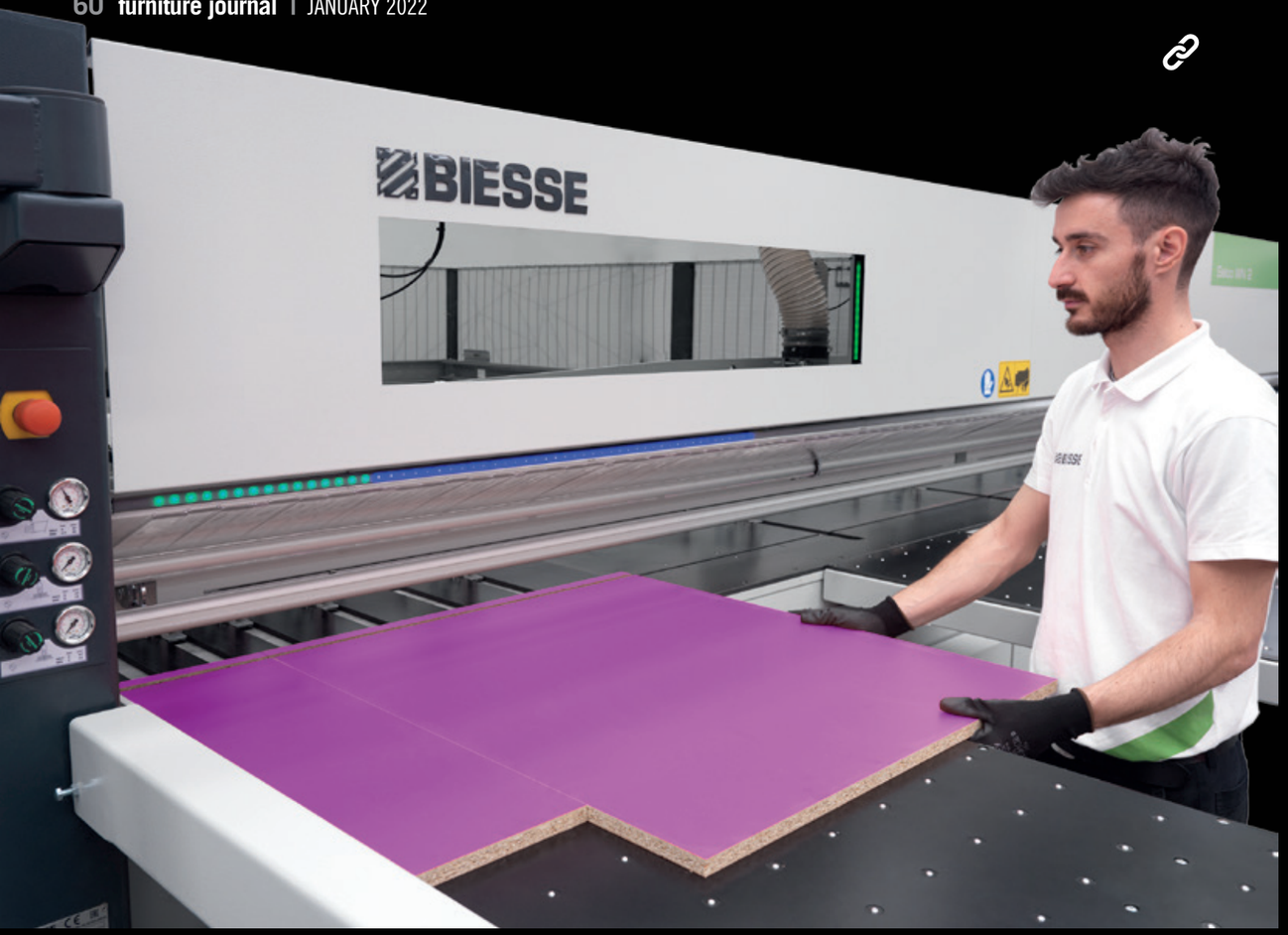
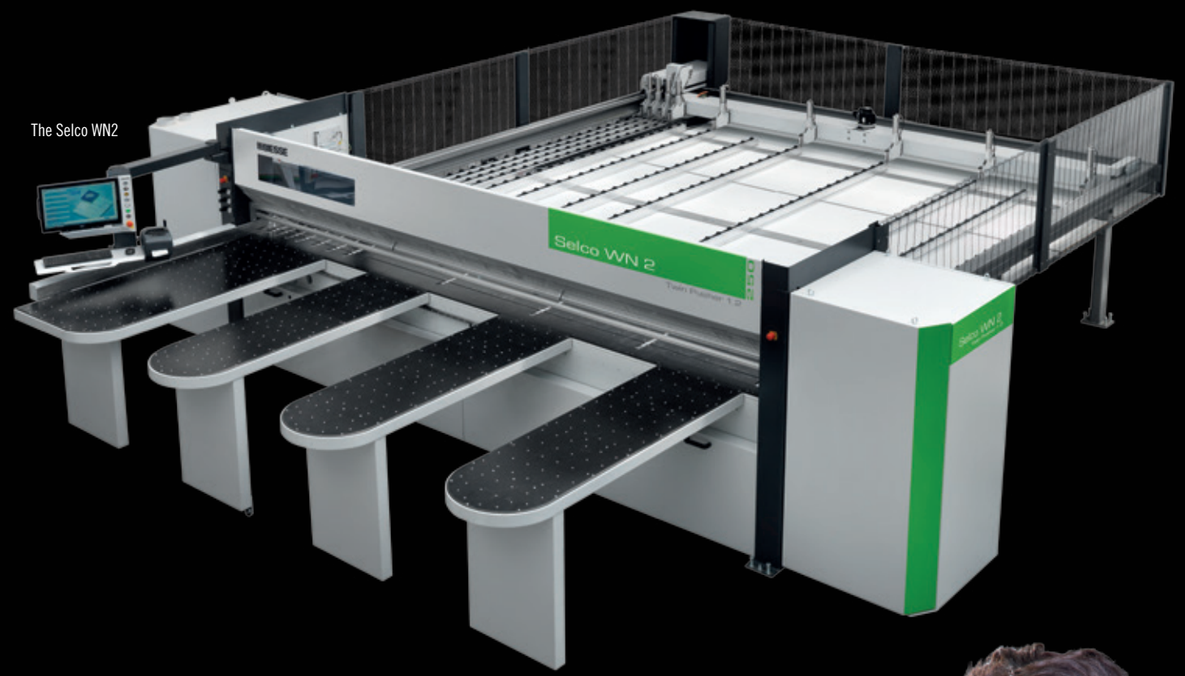




The Selco WN2

Simple sizing with Selco

With the latest additions to the Selco range, Biesse is bridging the skills gap and making life easy, even for unskilled operators.

Within Biesse's Selco beam saw range there are many options encompassing small workshop cutting requirements at one end of the scale and industrial production at the other – and in the last few months, Biesse's technical boffins have introduced a raft of new features, some of which will make life a lot easier, especially if your only option is unskilled operators.

The Selco range is divided into two sections: single cutting line beam saws and angle plant. At the entry level are the single cutting line models – the Selco WN2 series, the SK4 – then come the WN6 series, the WN7 series and the WN6 ROS, Robot Operated System. Angle plant machines are differentiated by the designation WNA and there are three: the WNA 6 series, WNA 7 series and WNA 8 series.

What are the deciding factors that would determine your choice?

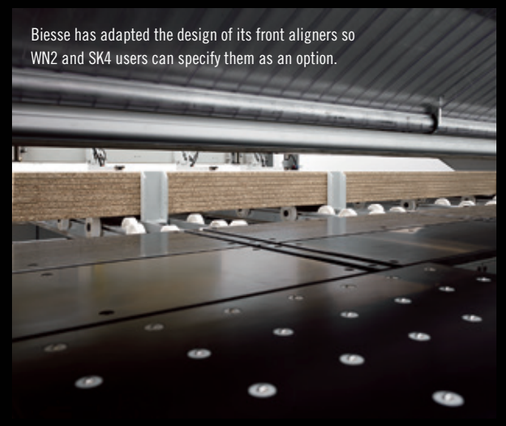
"It depends on the productivity required and the stack height the customer wants to cut," explains Biesse's Michele Luzio. "The WN2 series offers 60mm and 80mm saw blade projection, enabling you to cut 45mm – say, two panels at once – or three 18mm panels. With the SK470, we can go up to 90mm projection. The projection increases as we go up the range and there are more options available, for example for loading.

"If we look at the WN2 and the SK4, the standard machines come without a lift table so they are typically front-loaded. We can add a lift table to the two-series and the four-series but we are talking about a lift table that can't be customised. When we look at the loading configuration of a six-series or a seven-series with a lift table, it can be highly customised. We can add rear conveyors, side conveyors and there are more options to run the beam saw – things like the automatic scoring alignment by laser from the six-series on.

"Also, the main difference is the frame. As the range progresses, the frame becomes bigger, more robust, sturdier. As we increase the saw blade projection, the weight will increase on the frame so we need to increase the sturdiness of the structure to support the panels. These are the main points."

There are a number of features on Selco beam saws that are quite unique when compared with other makes. The shape of the base and the saw carriage, for example, are very different: "Most beam saws have a frame that supports the saw carriage on both sides. Our frame is designed in a unique way: the saw carriage runs on only one side of the frame. We patented the L-shape because this is the only way you can guarantee that over the lifetime

Michele Luzio



Biesse has adapted the design of its front aligners so WN2 and SK4 users can specify them as an option.

The Tracking Light is available as an option on selected models.

The increase in productivity from a twin pusher can be between 25% on a WN2 and 60% on a WN7.

of the machine, even if the frame moves slightly, the saw carriage will remain parallel to it. No one else in the market does this.

"The quick-change saw blade system is also patented. Typically, when you need to change a blade you need an Allen key or screw driver. This is a process that takes some time. If the operator isn't skilled and doesn't do things right, damage can result. The blade can be fitted incorrectly or if it's over-tightened, you could damage the motor. With our system, there are no tools. Just press a button and a pneumatic system releases the mechanical lock on the spindle. It's very quick, safe and easy. Customers really like this.

"The drive system on the saw carriage is also different: we use a helical rack and pinion system where most beam saw suppliers use a straight rack and pinion system. When the saw carriage moves, the contact between the pinion and the rack engages three teeth making the movement smoother and reducing vibration which increases accuracy and quality.

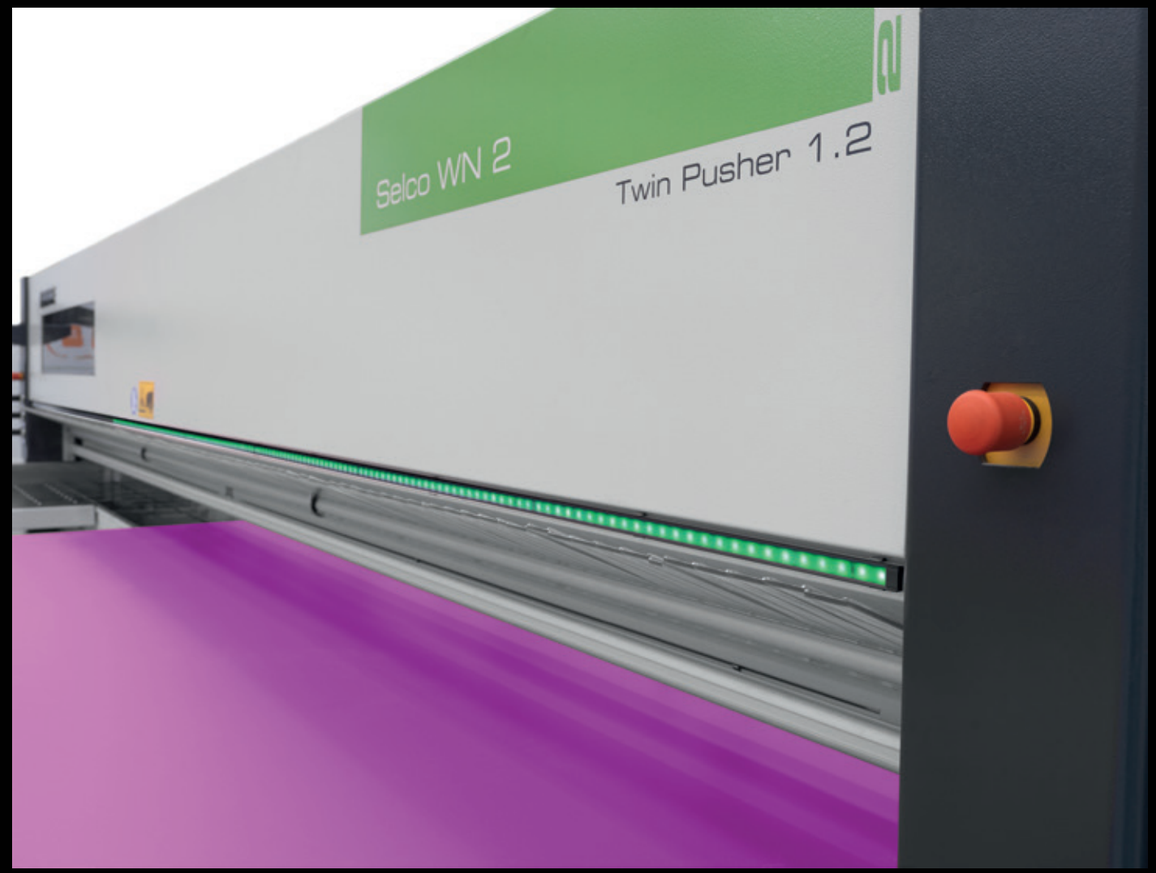
"When we have a lift table system on the WN6 or WN7 – with motorised rollers – we always reference the stack on one side of the machine not in the centre. As the stack is loaded into the machine and cut, all the strips after the rip cuts are left on the air tables on the right-hand side of the machine as you look at it from the front. When the operator needs to make the cross cuts, it gives him enough room in front of the cut line to rotate the strips without having to off-load them or push them to one side."

The lift table on a Selco beam saw isn't a scissor lift, or a hydraulic system. Instead, Selco's design utilises four screws, one on each corner of the table. "When the lift table goes up and down and the loading is referenced to one side, a scissor lift will not ensure the table remains parallel during movement.

"Using a screw system makes the cycle faster, especially when processing a stack on a six or seven series. These machines have raisable grippers and as a result, when we are processing a stack and there is a pile on the lift table, the lift table will be positioned ready for the next stack, while the machine is cutting. Once the cutting cycle is complete, the pusher retracts behind the lift table and because the grippers are raisable, they do not interfere with the stack that's waiting to be loaded, therefore it increases the cutting cycle speed."

Where a WN6 and WN7 is not front-loaded, either a lift table is required on the back of the beam saw, or the saw must be fed via an automatic storage system. When the boards come from the back of the machine, the WN6 and WN7 are provided with front aligners that pop up from the bottom of the machine bed as the boards get close to the cut line. The pusher presses the stack against the front aligners before retracting – an important process that ensures correct alignment of the boards against the grippers.

Until only a couple of months ago, front aligners were not available on the WN2 and SK4 machines. The operator had to align the boards manually against the grippers and restart the cutting cycle. Biesse has now adapted the design to suit the limited space available on the smaller machines and is now offering the WN2 and SK4 with an optional front aligner system for automatic alignment of boards.



A key advantage of the Selco design is a device patented some 20 years ago: the twin pusher system. Having an auxiliary pusher that works simultaneously with the main pusher facilitates greater productivity and flexibility. "Depending on the model of the beam saw, we offer three different types," Michele explained. "The performance increases as we move towards the WN6 and WN7 range but the increase in productivity from a twin pusher on a WN2 and SK4 saw can be up to 25%. On a WN6 it can be 40% and as much as 60% on a WN7. This is achieved because it can rip and cross cut at the same time and also perform staggered cross cuts if the cutting pattern allows."

To get the most out of a twin pusher machine you really need someone in the office making cutting patterns to speed the workflow at the saw. "Using a beam saw is not just about the operator," says Michele, "It's everything that comes before – optimising, material, offloading. With someone doing optimising remotely, the beam saw work becomes faster. The operator does not have to create the cutting patterns himself, so the machine can be more productive."

Ideally, you need cutting patterns that have been adapted to suit twin pusher machines. Selco has always had its own Optiplanning software for optimising and this will do it for you. However, it's worth mentioning that in the last few months, Biesse has renamed its beam saw optimising software. It's now known as b_Opti in line with other Biesse products. The algorithms, features and the modules that can be added haven't changed, only the interface but it's been redesigned to incorporate the same black background as b_Solid, b_Cabinet and Biesse's other packages.

The lack of skilled labour in the market has led Biesse to develop several new ideas to help operators that have never used a beam saw before. Smart Stacking, for example, is a piece of software that can be integrated into the beam saw's onboard software to provide a visual guide that tells the operator where to stack each cut piece as it comes off the machine. It relies on a simple colour system to identify the correct pallet so components are always placed where required for the next step in the process.

A further recent introduction, again with unskilled operators in mind, is the Tracking Light system. The Smart Stacking solution has the facility to run an LED Tracking Light system on the saw that guides the operator through the loading, handling and offloading processes using different colours to indicate loading, trim cutting, strip rotation, off loading and strip positioning. The tracking light is available on selected models across the Selco range.

Another useful addition is the operator light, a simple white light that enhances the cut line and illuminates the saw blade area. The option makes it easier to see trim cuts that have dropped in the cut line and identify if anything needs attention in the saw blade area when the factory lighting isn't so good.

For more information on the Selco range of beam saws and to discuss which machine is best for your application, call Biesse UK on 01327 300366 or visit **www.biesse.com/uk/wood/** For readers with the free Furniture Journal app, touching images marked with a link sign will get you to a video demonstrating some of the latest introductions.