

# Smooth on the corners

**A superb finish to edges and corners, endless flexibility and fast changeovers are just three of the benefits of Biesse's new AR70 single-motor corner-rounding unit.**

When was the last time you took a close look at the edges of your finished panels – a really close look? Were the radii absolutely smooth and free from chatter marks? Did you notice any chipping? Did the corners pass the thumbnail test or did you notice a tiny raise in the edging material that snagged?

With the emphasis firmly on imperceptible glue lines, it makes little sense to ignore imperfections on the edging materials – and to combat such imperfections is one of the key reasons Biesse has introduced its AR70 single-motor corner-rounding unit as an option on its Stream A and Stream A Smart mid-range edgebanders.

The technology behind the AR70 isn't new; in fact, it's filtered down from Biesse's larger industrial models. But while the most obvious benefits when you run your fingers

over a panel edge are exemplary smoothness, no chatter marks and no snagging on the corners, what the AR70 brings to the party is much more: I'm talking about versatility; the kind of versatility that enables you to switch instantly and automatically between any of four different radii and a chamfer and even create your own unique edge profile while running at speeds of up to 25m/minute. Features like these in a mid-range edgebander are quite something.

"Machines equipped with an AR70 will appeal to customers who want total flexibility on the corner-rounding," Malcolm Storey, Biesse UK's Brand Sales Manager for Edgebanding explained. "The machines we've sold since the first one arrived in our showroom last autumn have gone into trade suppliers who never know what they are going to produce next and need the

versatility to switch in an instant. They could be edging a laminated post-formed panel one minute, a batch of panels edged in 1mm or 2mm the next. Every order could be different. With the AR70 you get the flexibility to cope with that and produce work of the highest quality. There's no longer a compromise."

So, what's an AR70?

The AR70 is a single-motor corner-rounding unit that gives you the advantage of being able to do top and bottom corner rounding with just the one unit. Historically, mid-range edgebander users have had to decide on the edge thickness and select a radius to apply to it – generally 2mm, 1.5mm, or 1mm, sometimes 3mm. With a two-motor corner-rounder there's invariably a compromise: "Typically, when you change from 2mm to 1.5mm you don't change the

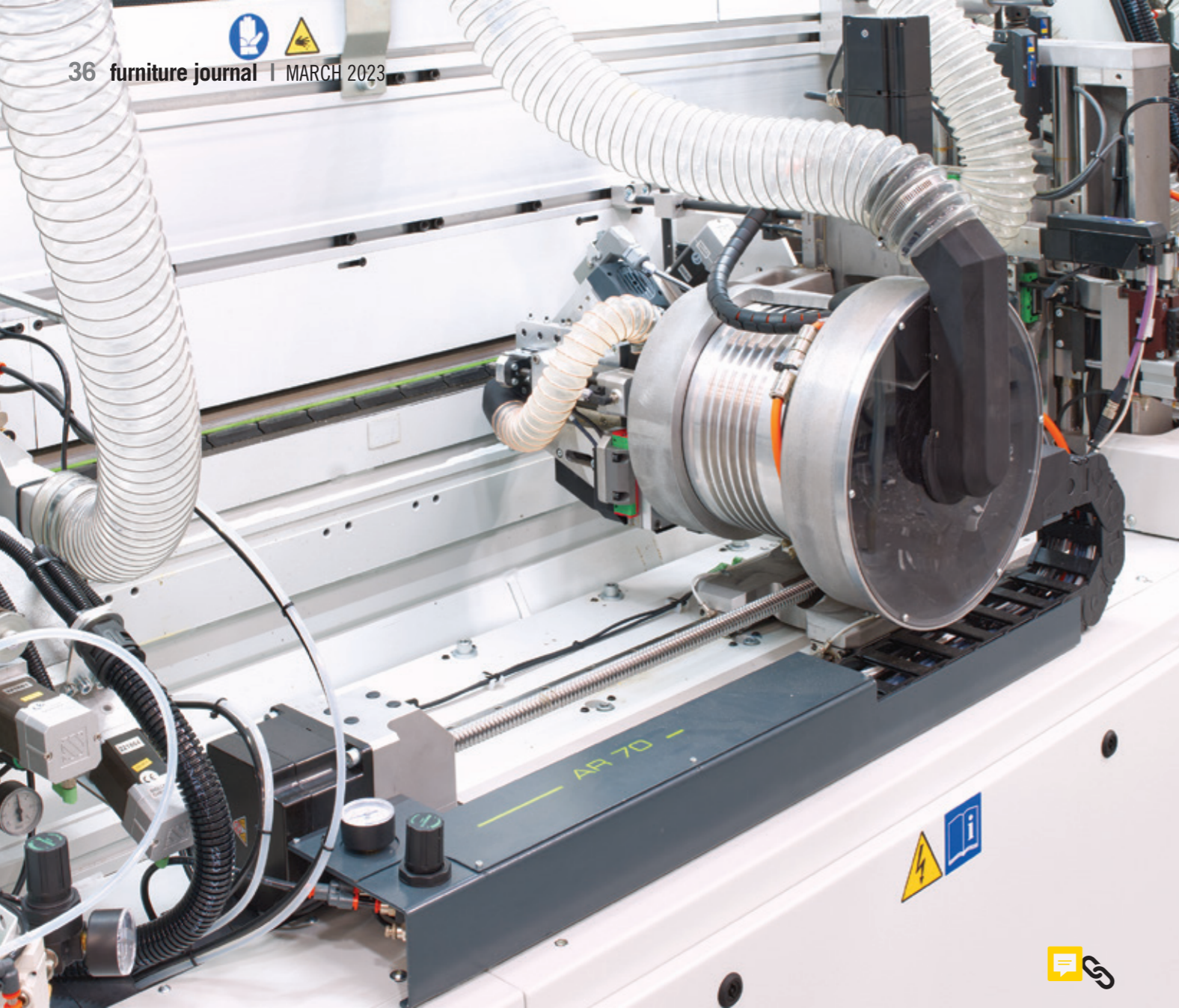
radius on the corner-rounder, you compromise on it so the result is a 2mm with a 1.5mm radius or a 1mm radius on the corners, or whatever setup you have on your corner-rounder.

"The beauty of the AR70 is it comes as standard with a multi-profile tool that includes four radii and one 25-degree chamfer, so you have five options that can be used to process the edge. You have standard 3mm, 2mm, 1.5mm, and 1mm all on one tool, which means you have enough radii to cater for a 1mm on slab effect panels for kitchens and switch instantly to larger radii for such as office and educational furniture, care homes or hospitals."

Most quality-conscious manufacturers want to improve the blend on the corner as well as the glue line and by combining servo-positioning with a multi-profile tool, Biesse's



Malcolm Storey



The AR70 is a single-motor corner-rounding unit that gives you the advantage of being able to do two-radius corner-rounding.

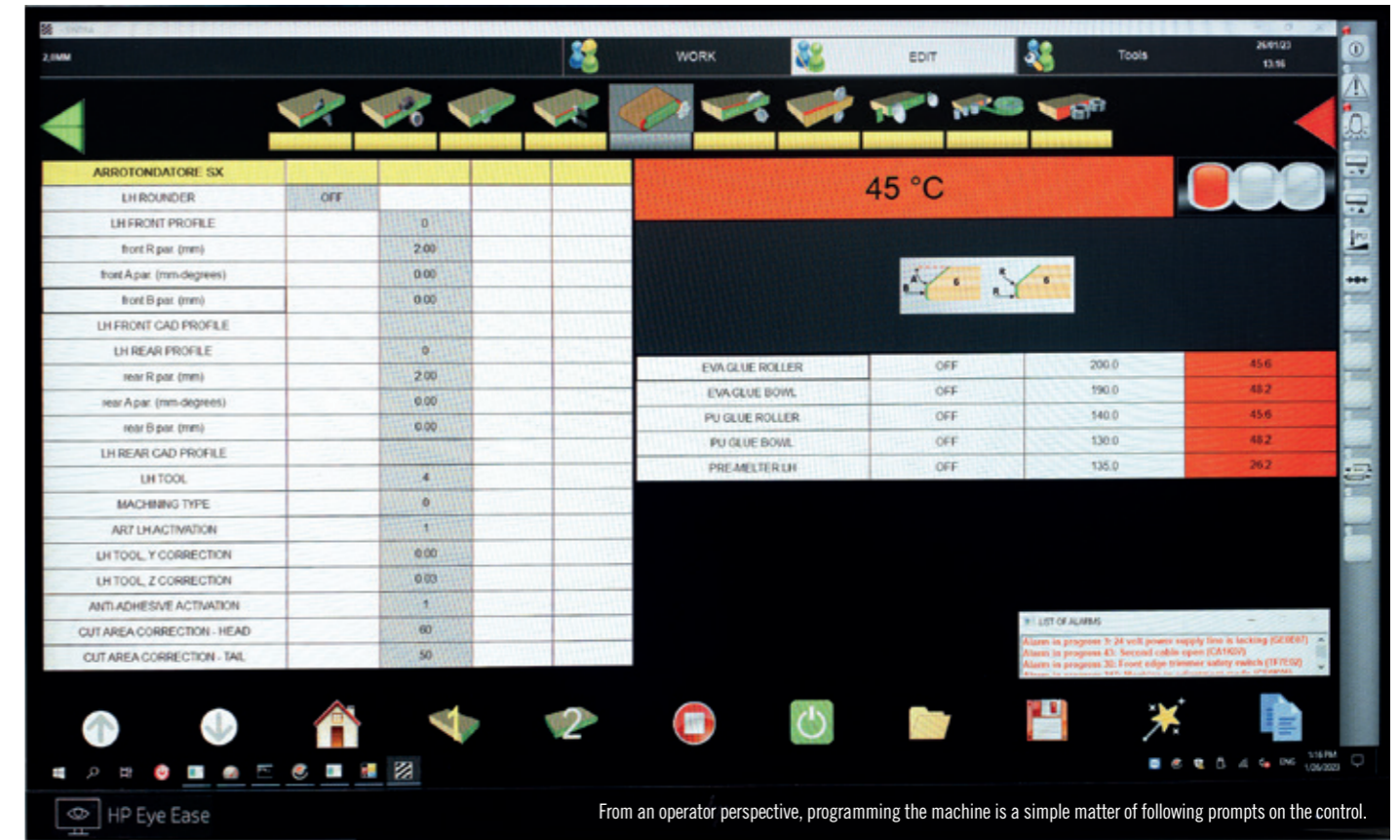
AR70 provides the best of both worlds. Add in a processing speed of up to 25m/min and non-mechanical software-driven adjustment to change the profile over on the Stream A and Stream A Smart and it's not difficult to see why these machines have already become quite a hit with small to medium-sized furniture manufacturers since the AR70 was launched.

"With the servo and the NC control, we can regulate the position where the corner-rounding unit engages the panel," explained Malcolm. "It's not so much on general profiling but when you are doing bull-nosed profiles, depending how the material is constructed, there can be a weaker area at the core of the panel and that can cause deflection. With the servo, we can put less pressure on and control that. Instead of being hard up against the board, the pressure is reduced – but that's not something the operator needs to think about. Everything is controlled automatically

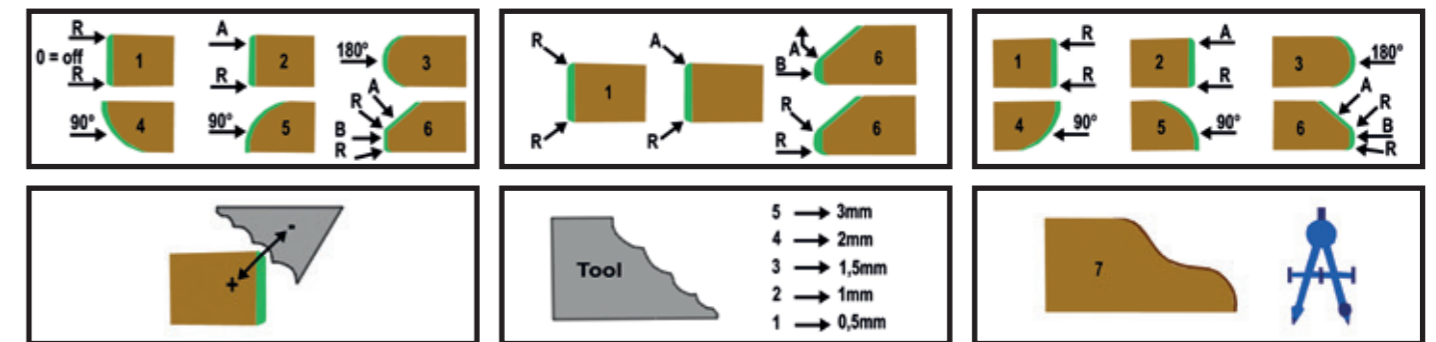
from the front end of the machine. Select the program and the machine does everything for you.

"With an AR70 you can process with four standard radii and a chamfer but you can also accommodate all postforming applications and create your own complex profiles simply and easily from the menu. There is even a feature where you can import your own CAD profile into the machine software and select that at the touch of a button."

The exceptional smoothness of finish along the panel edge and around the corner is the result of a combination of factors: "The fact we are engaging the panel with the correct forces and we're copying the panel exactly are key. The copying shoe engages with the panel and because the profile cutting block is independent of that, it provides greater control to give a higher quality finish. That's the beauty of the NC control. It's fully NC, not part mechanical. That really adds to the quality.



From an operator perspective, programming the machine is a simple matter of following prompts on the control.



"In addition, we're using an electrospindle with the cutting block. It has really tight bearing and run-out tolerances that come from Biesse's HSD router spindle technology and that allows it to run at a higher rotational speed, reducing vibrations that might ordinarily cause chatter marks. Most machines with a conventional motor run at 12,000rpm. HSD technology allows us to use a rotation speed of 18,000rpm. Combine that with the four-wing cutter block and cutter marks are vastly reduced.

Because machines equipped with an AR70 unit can run at 25m/min, Biesse has enhanced the end trim saw unit with the addition of a servo to cope with the higher track speeds. A hybrid glue head that allows faster switching between adhesive types/colours has also been added in combination with an NC glue gate that automatically regulates coat weight on the roller relative to the core material. When processing MDF the coat weight is reduced; conversely, more adhesive

is applied when processing MFC – and through NC control, the result is a higher quality glue line. "We get no contamination of units further down the machine, which means the finishing sections don't have to work as hard," Malcolm explained.

From an operator perspective, programming the machine is a simple matter of following prompts on the control. The program asks where you want to apply the radius – top or bottom – whether it will be postformed, what angle you want and what radius you prefer. If you want a 90 degree on the bottom, or a full bull-nose, you input four pieces of data. There is no mechanical setup. If the radius has been imported as a CAD profile, everything is displayed on the control screen ready for one-touch selection.

"You can do solid corner lippings or any kind of edgbanding. Whatever you use, you simply create the program so the operator can pull it up. The machine does everything

else, positioning units and giving you exactly the finishing you want.

"Compared with a conventional corner-rounding unit, the AR70 is an eye-opener. The finished panel feels so much better, so much smoother. The standard has always been to have a bottom corner that's difficult to set and maintain. That's been eliminated with the AR70 because we are working off the centre of the cutter and the centre of the motor. Traditionally, we've always had a mechanical copier which floats when it positions. That's gone too, replaced with a servo-driven system. Everything is software driven and if you want the absolute best quality you can get, this machine will deliver it."

For a demonstration at Biesse's Tech centre, call 01327 300366 or for more information visit [www.biesse.com/uk](http://www.biesse.com/uk). Readers with the free Furniture Journal app can watch a video of the AR70 in action by touching the image marked with a link sign.