# Quality on the Corners


The Rover A Edge

**If you want matching quality on your curves and straight edges, that's what Biesse's Rover A Edge is designed to give you.**

Are you in the market for a machining centre that will perform all your routing, drilling, grooving, horizontal boring and edgebanding in one pass? Do you need a machine that will give you the same edge quality on curves that you're currently getting out of your straight-line edgebander? If the answer is yes to both questions, then you really need to take a closer look at the brand new Biesse Rover A Edge.

If you are making components that involve curves, or a combination of curves and straight edges – like contemporary office desks, for example – there's a pretty good chance you're running the straight edges on a straight-line edgebander and edging the curves by hand, or on a semi-automatic machine. Manually applying edges to curves generally means hand-finishing to get rid of chatter marks after the application and trimming of the edge and there's a lot of reliance on the skill of the operator to get a really good join on the corners where straight edges meet curved edges, or the two ends join on the circumference of a circular component. A highly skilled operator could take half an hour or more to make a curved component from start to finish and even with a semi-automatic machine, hand-finishing is required and there's no guarantee of consistency between batches.

That's where Biesse's Rover A Edge really scores.

The Rover A Edge performs all the processes in one pass, cutting the component out of a 3m panel, cleaning it and applying the tapes to both straight and curved edges, so the metre-diameter circular table top that might be taking you half an hour or more to produce can be fully finished in under five minutes. With no manual work involved, the finish will be as good at the end of an eight-hour shift as it was at the beginning – and the really clever bit is the Rover A Edge will apply edges using EVA, PUR, or even laser edgebands using Biesse's unique Rayforce infra-red system.

Once the machine rules have been set up, starting the machine is a simple matter of pointing at the edges you want to apply tape to on the screen image, making sure the machine knows which tape is loaded and pressing the start button. The Rover A Edge will cut the panel and an air jet will clean the panel, adding a pause so the operator can remove any offcuts, if required. Pushing start a second time moves the spindle out of the way so the gluing unit can engage and apply the edge. A sensor feels the overlap and it makes a cut to join the edge perfectly before the trimming aggregate on the head trims and edge scrapes for a perfect finish.

The Rover A Edge is equipped with a feed system that enables two coils of edging material to be kept on board with automatic switching between them. However, it can be equipped with four off-the-machine coils as well, which the Rover A Edge would find and load automatically after unloading the two main coils. In the same way the machine knows where the tools are it also knows where the tapes are. All you have to do is stand back in amazement.

As you might expect, there are some very clever features on the Rover A Edge that will save you time and help you maintain the same quality of edge consistently.

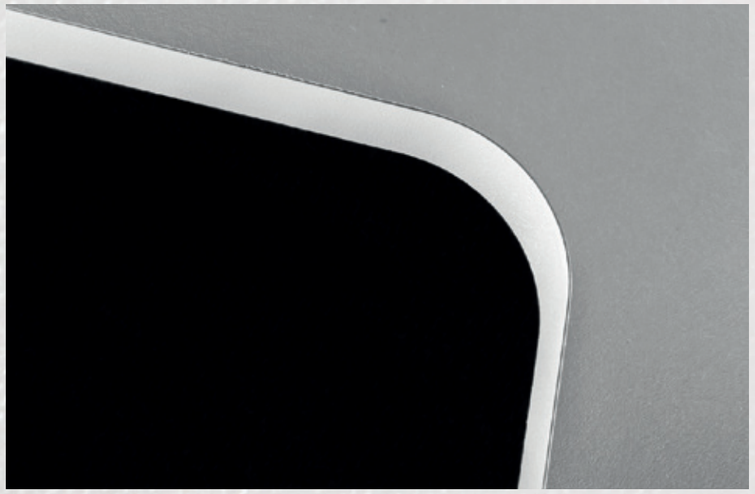
"We sell the machine on the quality of the panels it produces," says Paul Willsher, Biesse UK's CNC Brand Sales Manager. "There is no operator intervention for cleaning and trimming and what you get is A1 quality all day long with repeatability. Some machines require the edge to be applied then the operator trims, scrapes and cleans the panel once it's come off the machine. This one does everything – and regardless of whether you are applying with EVA or PUR, the Rover A Edge applies the glue to the board, the same as our straight-line edgebanders. That means no glue on the tape and that's why we can get to the quality without operator intervention."

Applying the glue to the board makes a lot of sense if you think about it: with a machine that applies glue to a tape that's wider than the thickness of the board, trimmings can easily stick to the exposed part of the tape during the finishing process, potentially spoiling the result. Also, if there's a misfeed, the edge will remain within the gluing unit and the glue roller will continue turning, spilling out glue that could melt the edging. That's a messy situation nobody wants. On the Rover A Edge, however, the glue roller is ahead of the glue because it's gluing the board, ergo there is no contamination. Even if you have to pull the tape back through the gluing unit there's no cleaning of the machine or the tools afterwards because there's no glue on it.


The RC60B aggregate

The Feedback Positioning System is phenomenal

Spot the difference: one panel is edged with EVA, the other with Rayforce.



Internal and external radii edged with EVA.

Paul Willsher

Biesse has equipped the Rover A Edge with an on-board spraying station that sprays anti-adhesive over the trimming tools. It can be turned on and off. "When the machine puts the router down, it picks the trimming tool up and takes it to the cleaning station so you can machine longer distances without having to stop and clean the unit," says Paul. "It's an easy way of keeping the tools clean that doesn't involve taking them off the machine and it's a significant aid to keeping the quality at its best."

For the ultimate zero-glueline finish using laser edgebanding tapes, Biesse offers the Rover A Edge with its infra-red system, Rayforce. With Rayforce, there is no glue to apply and no possibility of contamination. "Having Rayforce on a Rover A Edge means you can complement the Airforce system on a straight-line edgebander with a system that will produce identical quality on curved components," says Paul. "If you are doing straight edges on three edges of a panel using your straight-line edgebander but you need a curved fourth edge, you might get three nice edges but without using the same process you'd see a difference in the glueline on the curved section. We wanted a process that enabled the curved edges to look just as good as the straight edges and this system complements straight-line edgebanders very well."

Placing the panel in exactly the right position on the bed and ensuring it is perfectly dimensioned to within a fraction of a millimetre is a tall ask of any operator – frankly, it's almost impossible – so how does the Rover A Edge guarantee a perfect match between edges that have been applied using a straight-line edgebander and those it applies to the curved section? The answer is to be found in a clever little aggregate called the RC60B. If the panel was even as little as 0.1mm over length, a conventional system would dig into the side of the panel. The RC60B copies the edge that's already been applied, then it works downwards to provide the corner rounding effect so every corner has a perfect edge. "It's the ideal solution if you are edging the straight edges on a straight-line edgebander for speed, then adding the curve on a Rover Edge," says Paul.

Edging at up to 15m/min, the Rover A Edge will apply practically any edgebanding on the market, even veneer edgings. The thickness of the edging material is the limiting factor when edgebanding curved components but with a 0.4mm veneer it can edge an internal radius of just 18mm and on less challenging external curves, 2mm thick edging material can be applied.

On the latest model of the Rover A Edge, the gluing side of the machine is on the same side as the electro-spindle, resulting in a narrower head and making it possible to machine and edgeband a full three-metre panel. There have also been some significant developments in the bed systems that are now available: "We have four levels of table setup system," says Paul, "Manual; Setup Assist (where the red and green lights tell you where to put the pods); EPS (where you press the button and the pods move automatically into position but any manual movement after they've been set requires the bed to be re-homed); and the very latest FPS 'Feedback Positioning System'. FPS homes the pods to start with and regardless of whether they are moved manually afterwards, the feedback system knows where they are and moves them into the correct position for the job it's about to perform.

"With FPS, you could set the bed up manually – for example, if you wanted to set up a jig system – and because the machine knows where the pods are you can save that back to a program so the next time you want to use it, the pods can be positioned automatically. FPS is very flexible. It just makes life really easy, especially if there are lots of different set-ups during production."

Of course, if you need even more productivity, Biesse offers a Rover B Edge. With this machine, two panels can be cut at the same time, productivity increases, the tool-changers are larger and the z-height is greater. There's even a Rover C Edge.

For more information on the Rover A Edge, or its bigger brothers, call Biesse UK on 01327 300366, or, if you are reading this article via the online App edition of Furniture Journal, tap **here** to be linked to Biesse UK's website. You'll find a very informative YouTube presentation by touching the machine image.