STOP MANUAL PATCHING,

START UPGRADING VENEER QUALITY

Are you still patching veneer by hand? Everyone in the woodworking business knows that manually patching holes and knots in veneer can be a tedious and time-consuming job. Adjusting knives, positioning sheets manually and keeping the veneer quality consistent also takes a lot of manpower. That's why one of the biggest advantages in adapting to more efficient ways to patch is the savings on labor. With a good patching machine, the labor-saving ratio can be up to 1:10.

Patching with a machine is faster, more efficient and safer. However, when investing in patching machinery the pros and cons should be calculated precisely. Does it give more yield, does it lead to labor savings, how often does the machinery need to be maintained and does it really do a better job? The tradition of patching manually is deep-rooted, but there are better and more efficient ways to patch veneer.

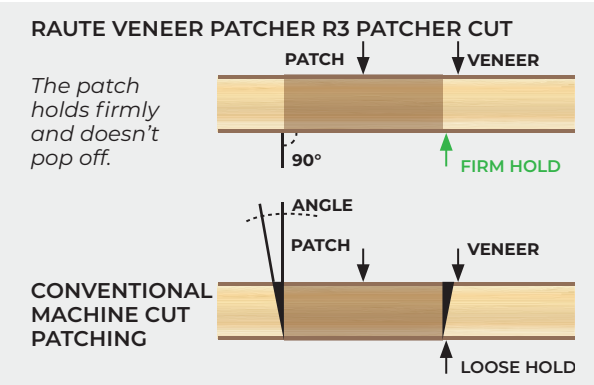
"The technology itself isn't new since patching machines have been on the market for a long time. However, the quality of the machines and especially the dies used in them have significantly improved in the last few years, and Raute R3 series technology has set a new benchmark" says **Shawn Cheo, Vice President of Raute Asia and Oceania, Singapore.**

With one-man operated patching machinery, the labor costs decrease significantly. This is simply due to the fact that the machine can patch a sheet full of defects even 10 times faster than when patched by hand. While wood is a delicate material and needs a lot of manual effort, patching might not be a task you want to do by hand.

"The patch needs to be the same quality as the rest of the sheet, but when done by hand, the hole and the patch are never the same shape or size," states **Jukka Siiriäinen, Raute Group Vice President, Grow**. "This leads to irregular quality. As we all know, a human can never be as precise as a machine. With a patching machine, the patch is perfectly fitted for each defect thus upgrading the veneer quality," he adds.

Keeping it together with butterfly patches

Because the quality of the end product is the main point of patching, the shape of the patch and how it is cut make a lot of difference. With manual patching, the shapes and sizes vary, and the quality is uneven. With a good machine, the patch fits the defects perfectly and there's no need for manual repair and gluing of the patch afterwards.



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>
> *Jukka Siiriäinen, Raute Group Vice President, Grow*

MANUAL PATCHING COMPARED TO RAUTE VENEER PATCHER R3

Capacity example	120 000 M³/ Year	
Repairing need	12 patches / veneer sheet	
	Manual	**Veneer Patcher R3**
Repairing Capacity Pcs/H	5	99
Workers Needed	190	10

SAVINGS IN OPERATORS - 180 WORKERS


Raute butterfly patches even suit joint patching


Hand patched

"With manual patching, there're always going to be defects on the edge of the patch, but with butterfly type patches, the patch is secure since the patch holds firmly and doesn't pop off later in the production process," Shawn Cheo states.

A butterfly type patch is the recommended veneer patch type. The butterfly type patches ensure a bigger contact area and better adhesion than oval shaped patches. With butterfly patches you can save up to 25% in patching material costs compared to the boat type patches. Due to their retention properties butterfly-type patches bear double the load compared to other patch types.


The R3 series die lifespan is around 50 million patches, and sharpening interval 2 million patches.


Themo-bond taping to repair veneer splits.

"But defects vary in shape and size. That's why we make several different patch types and sizes. We can also offer an integrated thermo-bond taping feature in our patching machines, depending on the customer needs," adds **Marko Perttilä, Portfolio Manager, Raute**.

Why would you invest?

"Usually mills see the biggest expense not as the machine itself, but the possible maintenance. But with a die that lasts for around 50 million patches, and a robust machine structure, you can use the same patching machine for 15-20 years and minimize maintenance costs," Jukka Siiriäinen, Raute notes.

All in all, manual patching will soon be history. Machines win in every aspect; quality, efficiency and safety. The quality of the veneer is upgraded, and the veneer recovery can be up to 30 times more than with composing. And of course, it's a cliché but true, safety is always key. Not a single hand will be harmed by a knife anymore. Last but not least, end product rejects due to veneer hand patching errors will be significantly reduced with high quality patches. P