

Custom Machine Manufacturer

Galil Controller and Drive Used For Cutting Vinyl Fences

There's no question about the appeal, practicality and legacy of wooden fences—including railing and decks. But with rising costs, less availability (due to environmental and logging concerns) and ongoing maintenance of wood becoming big issues, PVC or vinyl fencing has become a fast growing alternative due to several cost and performance advantages, as well as new technologies that speed production and create more attractive designs.

While conventional saws and routers can do wonders with wood, it takes specialized machines for fabricators to deal with vinyl. Leading the way is Custom Machine Manufacturer LLC (CMM) of South Bend, Indiana, with their line of CNC routing equipment, automated notching equipment and CNC cut-off saws.

Stephen Johnson, President at CMM, a division of JIT Distributing, says “Most commercial grade vinyl today includes UV inhibitors and impact modifiers that make it incredibly durable and weather resistant. It can have more tensile strength and flexibility than wood. It never needs painting or maintenance; it never peels, corrodes or rusts; and it always looks like new.”

To ensure fast, accurate cutting of vinyl extruded products, CMM incorporates a DMC-2123 two-axis controller integrated with an AMP-20520 brushless amplifier, both from Galil, into their router models, including the CMM-250, CMM-255, CMM-650, CMM-655 and CMM-1050.

This router has two material bays along with a fast activating, zero-load time, and a unique, electronic, self-centering clamping fixture to hold onto the material, determine the width of the part and send that input or data to the auxiliary encoder of the Galil controller. This enables operators to feed in various sizes of PVC, and let the controller adjust the CMM-1050 automatically. Also, while the Galil controller deftly provides precise XY coordinated motion, the router head comfortably runs at speeds of up to 50+ inches per second, which translates to 125 three-rail line posts per hour.

Johnson adds that the Galil solution eliminated the wiring between the controller and drives, and provided enough I/O and built-in performance to eliminate the need for an outside PC and all its requisite programming to handle the complex motion coordination tasks.

Another advantage of the CMM-1050 is its easy user



Galil controller enables CNC routing to provide precise cutting of vinyl fencing, rails and decks.

graphical interface that runs on CMM's proprietary MotionCAD™ software. With about 45 minutes of training, operators are able to input arc patterns, fence length, set the number of pickets and more through the interface. The Galil controller then receives the data so that it can ensure the cutting is done with absolute precision and repeatability.

John Luckett, Chief Software Engineer at CMM/JIT, said ease-of-use can be further attributed to the Teach Mode function inherent in the Galil controller. “Essentially, in this mode, the probe of the CMM-1050 takes in the parameters of the vinyl part, and the Galil controller memorizes the coordinates for subsequent routing, whether that is now or later. There are designers who have found this process so simple that they just cut the desired shape or prototype by hand and let the controller remember and store the shape for future reference and use. That means they can go back whenever they want to produce an exact duplicate.”

As the demand increases, count on machines like the CMM-1050 to help deliver vinyl fences—even arbors and gazebos—that have great aesthetic and environmental appeal. ■

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