

## Drives Give Improved Safety of Woodworking Machines



**Woodworking machines from Swiss company Krüsi GmbH meet the most stringent of safety requirements – and give improved precision cutting – thanks to a control system featuring drives from Control Techniques and designed and built by panel-builders Fichter and Zimmerli GmbH.**

The company manufactures machines used in the cutting of timber in the manufacture of log cabins. Last year, tighter requirements for the emergency stopping of the heavy, high-speed vertical milling heads when an access door is opened, meant that DC brakes were no longer up to the task. Krüsi turned to Fichter and Zimmerli for a solution.

They recommended Commander SK drives from Control Techniques because they offered the best combination of price and quality, dynamic performance – and the compact size of the drives meant that the overall panel size was smaller, saving panel-building costs.

Four or five Commander SK AC drives are fitted to each machine, providing control of the vertical movement and rotation of the drill and milling heads (7.5 kW drives) and, on some of the machines, the control of the cross cutting saw too (a 5.5 kW drive).

Across the complete Commander SK family, the footprint and volume of each drive is among the smallest on the market, offering excellent power to size ratio.

Equally, the drive has market-leading performance and features, from ease of fitting, set up and use, to dynamic response, connectivity to all major fieldbus networks as well as Ethernet, as well as energy-saving efficiency.

Installation is straightforward, with a choice of DIN-rail or simple panel mounting, with easy-access, clearly marked terminals keeping connection simple. All the 10 parameters most users need are accessible from the display keypad, which is included as standard, and start-up is a matter of a simple pushbutton.

“The milling heads are between 240 and 270-mm in diameter, rotating at up to 3,000 rpm,” says Herr Krüsi, the owner of Krüsi GmbH, “and they have a lot of inertia. However, with the new SK drives the stopping time is now just two seconds, which more than complies with safety requirements.”

The woodworking machines are manually fed with wood sections, a clamp is applied and the machine goes through a programmed sequence under PLC control, drilling and milling out interlock corner joints for the log cabins / block houses, the average time per cut being just 15 seconds.

Access doors are fitted with interlocks which return an ‘open’ signal to the PLC when opened, initiating an emergency shutdown during operation, stopping all rotating movements within the space of two seconds, even if the milling head is rotating at full speed.

“We are very pleased with the whole package provided by Fichter and Zimmerli,” adds Herr Krüsi. “The Commander SK drives have proved to be extremely accurate – and, of course, the better the accuracy of the joints, the better the thermal performance of the finished cabin.”

### KEY BENEFITS

- IMPROVED PRECISION CUTTING
- ACHIEVE THE MOST STRINGENT OF SAFETY REQUIREMENTS
- BEST COMBINATION OF PRICE & QUALITY
- DYNAMIC PERFORMANCE
- COMPACT SIZE



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