

LIGNA: One investment, multiple benefits

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Hannover. LIGNA 2013 will showcase the next generation of highly flexible, multi-functional wood processing machines. Rising market demand for customized products is confronting wood processors and the skilled trades with unprecedented challenges. Today's processing solutions have to cope with all kinds of order scenarios, from mass production through to single-lot production. They also have to be able to cater for an increasingly diverse range of materials and products. At the same time, manufacturers have to find new ways of compensating for the productivity losses arising from increasingly customized production.

While the emphasis in large-scale serial production environments is on optimizing process flows, SMEs are more focused on flexible processing systems. These types of companies are looking for innovative solutions that offer a broad range of applications. For SMEs, the key to remaining competitive is the ability to keep up with and respond to ever-changing market trends. More and more manufacturers are also seeking out integrated solutions that can perform the work processes of multiple machines. For these reasons, LIGNA 2013 will be putting the spotlight on the latest generation of flexible, multi-function machines and aggregate technology solutions.

German machinery suppliers already have a solid reputation as providers of high-quality, state-of-the-art multi-functional processing systems. Machines that are capable of sizing, profiling and encasing raw panels in a single pass have been in use in the furniture industry for a number of years. LIGNA 2013 will be showcasing the next generation of these machines as well as integrated solid wood processing solutions that are designed to cater for the ever-increasing diversity of surface finishes demanded by the market. The latest multifunction machines are now capable of reproducing freely programmable three-dimensional structures without the need for expensive upgrade kits. Units like these allow SMEs both to deliver lucrative special orders and mass produce conventional products, quickly and efficiently. Today's state-of-the-art grinding machines offer all sanding processes in one workstation, from cross and longitudinal sanding through to high-gloss finishes. Ageing effects, which used to require multiple work-intensive processing steps, can now be achieved in a single, continuous operation, resulting in significant productivity gains and space savings over traditional angular systems.

Conventional timber sawing solutions can also expect to face some stiff competition from new technologies at LIGNA 2013. The latest systems combine panel, rip and docking saws in one multi-functional unit. For timber processors, this means major capital investment savings and efficiency gains. Combined sawing-

storage solutions are also gaining ground in the industry, not least because of their automatic panel storage and feed systems, which minimize machine idle time. They also minimize scrap and processing waste, reduce labor costs and are able to handle a diverse range of materials and dimensions.

Five-axis technology has significantly expanded the areas of application of CNC machining centers. LIGNA 2013 will feature a number of machining centers which represent the next evolutionary stage of this technology: six-axis systems. Here, too, the trend is towards greater flexibility and more compact machines. Adapter aggregates that can do the work of up to five conventional tool assemblies in stair, door and window manufacturing operations are likely to create a major splash at next year's show. Users of these systems benefit from significantly reduced retooling times and higher productivity. Modular systems offer an alternative approach to retooling. Timber processors are sure to find a solution for their specific needs and just about any application among the wide range of different upgrade kits on show at LIGNA 2013.

A number of new-generation horizontal panel saws on display at the fair will feature an additional pusher, enabling multiple simultaneous cutting cycles. Manufacturers of throughfeed drilling machines have also embraced the multi-tasking production principle. Selected throughfeed drilling machines now feature drilling heads that are fitted with both vertical and horizontal spindles. Multiple-spindle drilling heads significantly boost the productivity of timber window manufacturing operations since they can perform many of the various processing steps required for the application of window fittings, thereby replacing a whole raft of individual angle drilling heads. The idea of combining two processing steps in a single machine can also be found in the latest generation of vacuum presses. These enable the pre-heating and molding of thermoplastic materials in a single processing step. Even hand-held power tools are following the multi-tasking trend. For instance, LIGNA 2013 will feature multiplaners that can cut, mill and slot a wide range of different materials, including timber, gypsum, and aluminum.

For users, the trend towards multifunctional and multiproduct processing systems opens up new opportunities to leverage multiple benefits from a single machine investment. LIGNA 2013, which runs from 6 to 10 May in Hannover, Germany, is a must-see event for anyone wanting to get a comprehensive overview of all the latest market-ready wood processing innovations. The world's number one meeting place for the wood processing industries and skilled trades will feature exhibits from all the leading technology providers.

Source: Deutsche Messe AG, Hannover Fairs International GmbH.