

Quality Inside – Made in Europe

Technologies for businesses both big and small

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This year's Ligna not only demonstrated efficient technologies for use in industrial furniture production, but also presented those independent joiners and carpenters visiting the trade fair with automation solutions that also cater to their needs – thus providing smaller businesses with their own opportunities for more cost-efficient manufacturing. What's more, the world's leading trade fair also put forward a comprehensive range of coatings, adhesives, inspection systems and measuring systems which can be used to avoid rejects and allow production to be set up in a more environmentally-friendly manner.

Taking place from 27th to 31st May 2019 and boasting approximately 1,500 exhibitors from 50 countries, the Ligna in Hanover (Germany) provided those from the furniture and wood products industries, as well as representatives from the skilled crafts and trades, with an update on everything new in the world of wood processing, also giving them a glimpse into the furniture production processes of the future. With more than 90,000 visitors from 100 countries, the technology exhibition was able to demonstrate that its reputation as the world's leading trade fair for wood processing machines remains very much intact. Leading manufacturers of wood processing machines from both Germany and Italy repeatedly jostled for space with their larger stands. However, the negative situation regarding orders in the first quarter of 2019 did put a damper on things – during this period, German trade association VDMA and Italian trade association Acimall reported a drop in orders for wood processing machines that amounted to 17 percent in Germany and 11 percent in Italy.

Anti-Fingerprint surfaces

The surface segment provided what could be considered the biggest technological innovations, further increasing the range of potential surface technologies. For example, many eyes were on excimer technology, which allows for the creation of deep matt surfaces with an anti-fingerprint effect. At the Ligna, this technology was used in combination with an exceptionally wide range of application procedures. Prior to the Ligna, excimer technology had only been able to be used on flat panel material. However, at the trade fair, Cefla (Italy) and Giardina (Italy) were able to present solutions for three-dimensional furniture parts, such as profiled kitchen fronts or other shaped parts, for the very first time. Digital printing also played a bigger role in the trade fair than it has done in previous years, with a large number of exhibitors competing to demonstrate newly-developed solutions aimed at a range of differently-sized companies. Some also offered the opportunity to create haptic pores on digitally-printed decorative products. When it came to more “analogue” coating technologies, the main focus was on improved control over processes through digital networking and providing direct user support through service apps, as well as on new “air circulation systems” and cleaning systems.

Networked systems and robots

Machine manufacturers are predicting that the future lies not in linked plants but rather in networked production cells. At the Ligna, providers thus demonstrated a range of different solutions, which should

enable furniture manufacturers to further increase their degree of automation, allowing them to carry out almost completely unmanned manufacturing. According to these manufacturing concepts, autonomous transport vehicles ensure the provision and further transport of furniture parts to the corresponding cells, where robots will also be primarily responsible for carrying out handling and processing tasks. At SCM (Italy), collaborative robots work together with the operator by applying glue, sanding or mounting fittings. By carrying out repetitive, less valuable tasks, the robots allow the operator to concentrate on more valuable tasks. Düspohl (Germany) has developed their own “RoboWrap” concept, whereby up to 47 articulated robots can be programmed to take on wrapping tasks. This is also something, which increases efficiency, as modifying the profiles only takes five minutes.

This year, when it came to classic wood processing machines, focus was placed less on output records and feed rates and more on simpler operation and how to integrate the machines into the digital world. In the future, the aim is to have a comprehensive range of services and apps on offer in order to make operating these machines easier for inexperienced or untrained employees, as well as to make the production process more transparent. When it came to production with a lot size of one, exhibitors demonstrated further developments and improvements which have been made in nesting technology; improvements which are increasing efficiency levels.

The future of furniture production

This year, the Homag Group’s (Germany) “InnovationCenter” acted as a medium through which the machine manufacturer was able to show visitors to the trade fair what additional digital solutions their developers were currently working on. For example, thanks to augmented reality glasses, machine operators at divider saws will be shown the correct work procedure, will be made aware of errors, and will even be shown the correct pile on which to put down the sawn product.

Some of these operational tools have already become a reality, and were able to be found on the machines exhibited at the Ligna. For example, solutions, which support users via LED bands or laser projection are already available. In the future, parts will be able to be sorted with the help of LED support and “hands-free” barcode scanning systems, enabling the quick recognition of parts, which are missing from the assembly.

Environmentally friendly adhesives

In addition to technology providers, all the leading adhesives manufacturers were also present at the world’s leading trade fair. This year, they had brought adhesives, which were so low in emissions that they are not even subject to the legal labelling requirements concerning poisonous substances. The providers of furniture varnishes who attended the fair also focused on environmentally friendly application solutions, many of which were based on naturally occurring resources.

The range of new products on offer was rounded off with a series of innovative measurement and inspection systems, which can be used by both the supplier and by the customer. These should contribute towards reducing complaint rates and, ultimately, towards reducing those costs, which occur when the customer does not accept faulty parts. *Richard Barth*

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