

Arcus - The new middle class of edgebanders from Holz-Her

Holz-Her Reich Spezialmaschinen GmbH, a leading manufacturer of edgebanding machines, will present its new ARCUS range of edgebanders at the Holz-Her Days 2008.

The ARCUS series is distinguished by its high variability, higher performance and greater stability with reduced space requirement. The modern machine design sets accents with its large, space-saving guard hoods and minimalistic functionalism. The required attachments such as mounts for the cleaning bottles or chip catch boxes are integrated into the body of the machine leaving the operator room to concentrate on his actual work - edgebanding.

The newly developed ARCUS series is equipped with shaping units for machining the ends as well as machining post-forming profiles and is also available with an optional jointing cutter with two cutter motors.

Three different high performance packages make the ARCUS the ideal machine for tailor-made adaptation to the shop's processes. All three versions allow processing of workpieces with thicknesses up to 60 mm and gluing and post-processing of edging with thickness of 3 mm, 8mm and 15 mm depending on the equipment.

The feed rate is 10 m/min. on the simplest version and up to 10-18 m/min. on versions with infinitely adjustable drive. These speeds are achieved by a powerful drive motor with output of 2.2 kW.

In the run-in area the ARCUS models offer an optional possibility of attaching a jointing cutter with two motors in the forward and backward directions to

eliminate hairline fissures in the final layer of the panel material. Here chip-optimised and noise-reducing, diamond-coated cutting tools are used. With the ProLock quick-change unit these can be changed very quickly.

The edge guide, which can be adjusted without tools, provides precision guidance for coiled or cut-length edging, and cuts off the coiled edging from the coil with a powerful guillotine blade. For glue application HOLZ-HER offers its own patented nozzle application systems with cartridge or for processing glue in granule form. This ensures that PVA or PUR glues can be used without problems. The short heat-up time of 3.5 minutes ensures users that the machine is quickly ready for operation saving unnecessary waiting time.

The optional, pneumatically controlled pressure unit provides maximum edge pressure to glue the edges optimally so that the glued joint is hardly visible at all.

The post-processing units consist primarily of standard attachments with high rigidity. These are attached to a flat milled surface. The end trimming unit with its two motors ensures tear-free cutting results for high

processing rates. Surface hardened guides guarantee long-term cutting precision. The unit can also be pivoted up to 10° for chamfered cuts. Heavy duty cutters are used for flush cutting. These allow processing of edge thicknesses up to 15 mm. Depending on the equipment version the ARCUS series offers various shaping units for corner copying and postforming. PVC edges are trimmed with a scraper unit, available with optional motor-drive and pneumatic control.

Clean final processing is achieved with finishing units such as scrapers and buffing units. A heavy duty grooving unit is available for cutting longitudinal grooves in the surface or ends of the panel.

With their compact design and variable attachment capabilities the ARCUS models from HOLZ-HER have redefined the middle class range of edgebanders.



Altendorf WA 80x Limited Edition

Now available from Altendorf, the WA 80x Limited Edition comes with package deal offering an exclusive combination of high specification features. The rip fence is motorised and controlled with 1/10 mm accuracy from the eye-level control panel. The crosscut-mitre fence offers mitre cuts with integrated length compensation, so the stops work accurately at any angle. But the most extremely exciting feature is the price.

Options Pack

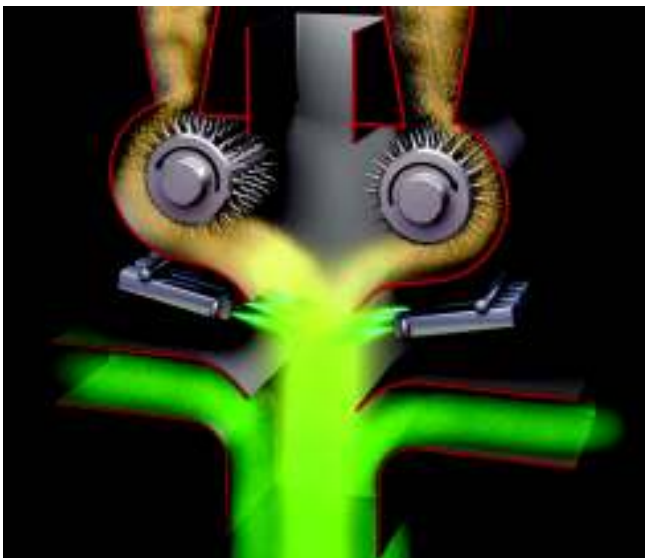
- Pivoting eye-level operating panel
- Rip fence with motorised adjustment, cutting width 1 000 mm (optional 1 300 mm, 800 mm)
- Crosscut-mitre fence, stops to 3 500 mm, manual adjustment, angles from 0 to 49° with length compensation



EVOjet™ - Perfect gluing and up to 50 per cent lower glue costs

The new EVOjet™ ensures perfect gluing by the combination of mechanical dispersal, more fiber surface area in the air flow and more effective glue distribution. This means a defect-free board surface can be achieved at the same time as reducing glue costs by up to 50 per cent.

The EVOjet™ is used by the Dieffenbacher subsidiary Sands MDF Technologies as an alternative to a conventional "blow line" in new machines and for modernization.





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Honeycomb board production

Honeycomb boards, higher quality of higher stability, with the use of IMA's "stabiliser edge" edgebanding technology.

More and more customers are investing into IMA's "stabiliser edge" edgebanding technology for the efficient production of frameless honeycomb furniture or to supply furniture manufacturers with individual honeycomb components. Both IMA and their customers have systematically developed processing techniques suited for small shops and the industry, explains Burkhard Sydow, managing director of IMA AG Asia Pacific.

Characteristic of this new material is top and bottom layers that are the only millimeters thin, glued onto the core. The board is typically made of paper honeycomb material with edges covered with decorative materials such as ABS, acrylic, PVC, veneer or solid wood edges. One of the challenges faced was thus the bonding of the honeycomb edge to the honeycomb board as only two layers could be used to hold the edges together. On very thick panels, the edge could also be deformed and thus veneer and solid wood edges could not be used.

Both problems were solved with the use of IMA's stabiliser edge which is applied onto the board before the application of decorative edges, thus providing the necessary strength and glue bond surface. Frameless honeycomb boards provide a better alternative than thick particleboards. With IMA's patented stabiliser edge process and an accompanying aggregate and machine technology, a highly productive machine concept for the efficient manufacturing of finished honeycomb boards has been developed.

Also resolved is the task of applying four stabiliser edges and four decorative edges to the board. Through the specially designed Combima – from IMA's double-edged range – we can feed different-sized honeycomb boards



Honeycomb sample



Honeycomb sample

into a single-sided machine, where after four passes, all four edges of the board are finished with stabiliser and decorative edges.

This single-sided execution machine is typically used by sub-suppliers of furniture components for small batch sizes. The machine is also equipped with an automatic vacuum in-feed and alignment system, thus ensuring right dimensions on the board and allowing boards to be fed automatically length and cross-wise.

After the third and fourth edges are fed into the machine, a double hogger seizes the panel. Servo-controlled milling cutters carve out grooves for the insertion of the stabiliser edge. For the gluing process of the stabiliser edge, glue nozzles are used to apply the hot-melt onto the rebates before inserting the stabiliser edge. Two controlled joint milling cutters flatten the top and bottom layer and the inserted edge.



In-feed section at the Combima edgeworking machine



CNC edgeworking unit for honeycomb boards

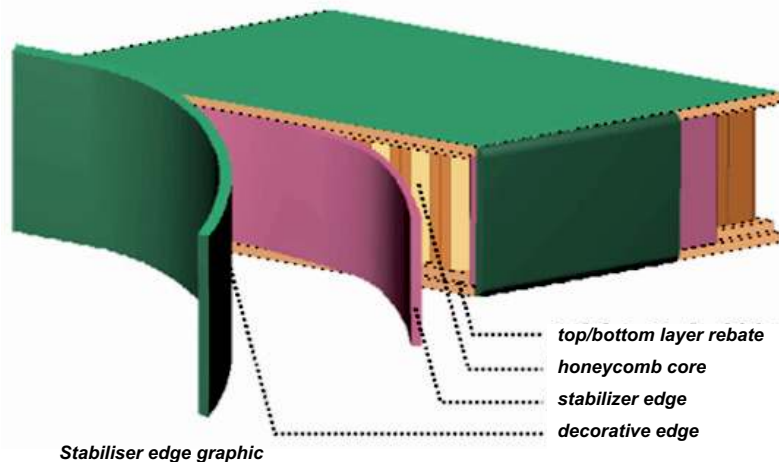
The gluing section is made for an edge of 100mm in height, followed by the end-trimming unit, the flush milling unit and the multi-milling unit MMU 08.353, and the profile scraping unit. A flat scraper and buffing units finalise the finish.

Honeycomb boards with thin top and bottom layers can obtain the necessary strength by applying a stabiliser edge. The compound stabiliser edge and decorative edge provide a solid edge bond for finished furniture. For processing common particleboards, IMA had faced a challenge with the aggregates in the honeycomb process, but resolved this in by working closely with suppliers – especially with tool manufacturers – and stabiliser edge and fitting manufacturers.

After the successful installation of a honeycomb edgeworking line at one of China's largest furniture manufacturers, demand for frameless honeycomb panels is now increasing all over the world. IMA recognises the enormous potential of this new material and is now able to deliver this to its customers.

The technology allows IMA to size large boards and directly send them for edgeworking onto the finished product.

The complete logistic chain begins with the disposing, storage and cutting



Stabiliser edge graphic

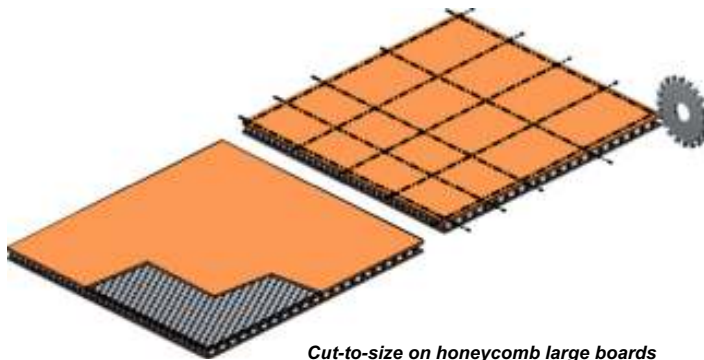
- top/bottom layer rebate*
- honeycomb core*
- stabilizer edge*
- decorative edge*



Combima for stabilizer edge and decorative edge in one pass



CNC edgeworking unit for honeycomb boards



Cut-to-size on honeycomb large boards

to size, and ends with the modified edgeworking. There are further advantages: one can still use the particleboard for single batch productions; there are no separate disposals required for the various sizes and special delivery times are typically like that for still manufactured frame boards.

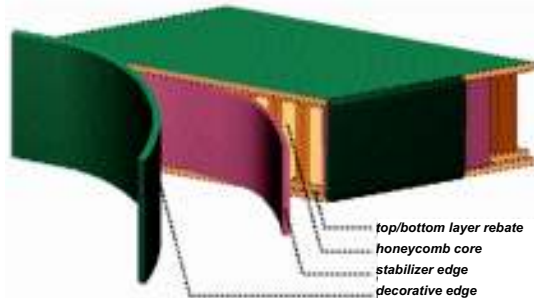
Also CNC-processing centers from IMA are available to process not only standard boards, but also honeycomb boards with different shapes and freely designed forms can be processed. Honeycomb boards for the manufacturing of tables, work tops and kitchen bench tops are a common product on IMA CNC-processing centers.

Furniture with a new voluminous optic has been well accepted by consumers but challenges the processing techniques of a manufacturer. However, with the newly installed machine, IMA has become the first supplier that delivers perfectly manufactured honeycomb furniture elements, whether in single batches or in high volume.

This article has been contributed by IMA AG Asia Pacific Pte Ltd.

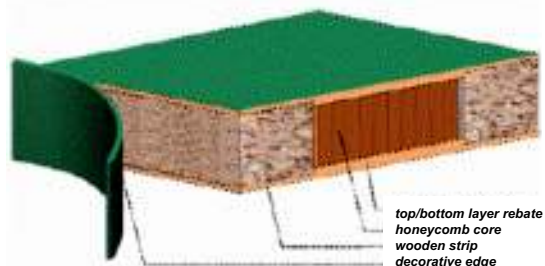
Stabiliser edge and decorative edge in one through-feed

The stabiliser edge and decorative edge are applied in one through-feed for cost efficiency and an economical production.



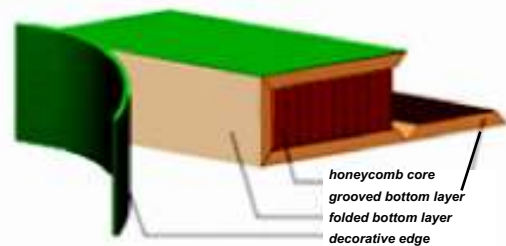
IMA's surface folding process

The vertical edge is produced from the bottom board layer. The top layer is processed with a V-groove where glue is applied, and after which the edge is folded upright and closed. Advantages: Both layers and the vertical edge are made of one material, ideal for foil or paper wrapping.



IMA's post-frame process

This is used to ensure higher stability in a honeycomb board, and for common hinges and fitting. IMA offers the solid strip insertion in a continuous through-feed process in combination with edgeworking.



American Basswood

Tilia americana

NORTH AMERICA

Suitability: Carving, turning, furniture, pattern making, mouldings, interior joinery and musical instruments. An important specialist use is Venetian blinds

www.ahc-seasia.org

Basswood or Lime?



American basswood *Tilia americana* and European Lime *Tilia vulgaris* are closely related. In fact in the UK basswood is often referred to as American lime. *Tilia* was also a highly symbolic and hallowed tree to the Germanic peoples in their native pre-Christian Germanic mythology as it was believed that the tree would help unearth the truth. Thus it became associated with jurisprudence even after Christianization, such as in the case of the *Gerichtslinde*, and verdicts in rural Germany were frequently returned *sub tilia* "under the lime-tree" until the Age of Enlightenment. Such authoritative botanical works as Lincoln's "World Woods" makes reference to the American linden.

However there are some key commercially significant differences between the wood of the basswood and the lime. As a prime species for carving in furniture and joinery both are hardwoods but the American basswood is softer allowing for easier crafting. The texture of basswood is also less woolly and much easier to machine to a fine surface. Both American basswood and European lime are widely distributed in their respective continents and each has a range of specialist uses. However the production of basswood lumber in the USA, especially around the Great Lakes States, is much greater than in Europe making for better availability in all grades. The trees are fast-growing and large, from 70ft feet (20M) to 130ft (40M) thus capable of producing long, wide and thick boards. Because of the vast amount of nectar produced the tree is known as the bee-tree in many regions.

CHARACTERISTICS

Basswood has low density, is light but also has low strength and the colour may vary slightly depending on growing region. The sapwood is normally a quite large percentage of the wood and is creamy white in colour, whereas the heartwood may be pale to reddish brown, sometimes with dark streaks. The wood has a fine uniform texture

and often indistinguishable grain. Under NHLA grading rules sapwood is not a defect and for most buyers is preferred. The wood is relatively straight grained with a fine texture.

TECHNICAL AND WORKING PROPERTIES

Basswood machines very well and is easy to work with hand tools making it a premier carving species. It nails, screws and glues fairly well and can be sanded stained and polished to a good smooth finish. The wood dries rapidly, with minimal distortion or degrades. The wood has substantial shrinkage but good dimensional stability.

American basswood is used in very specialist parts of musical instruments such as piano keys and Venetian blinds where consistency of material is of paramount importance. It is also highly appreciated by carvers because it does not draw or bias the knife away from the direction required and strongly resists splitting. The wood does not blunt tools and is therefore preferred for use by hand tools as well as mass production.

