

IMA SCHELLING GROUP

INDIVIDUAL SYSTEMS FOR LOT-SIZE-1 PRODUCTION
PERFORMANCE CLASS 1



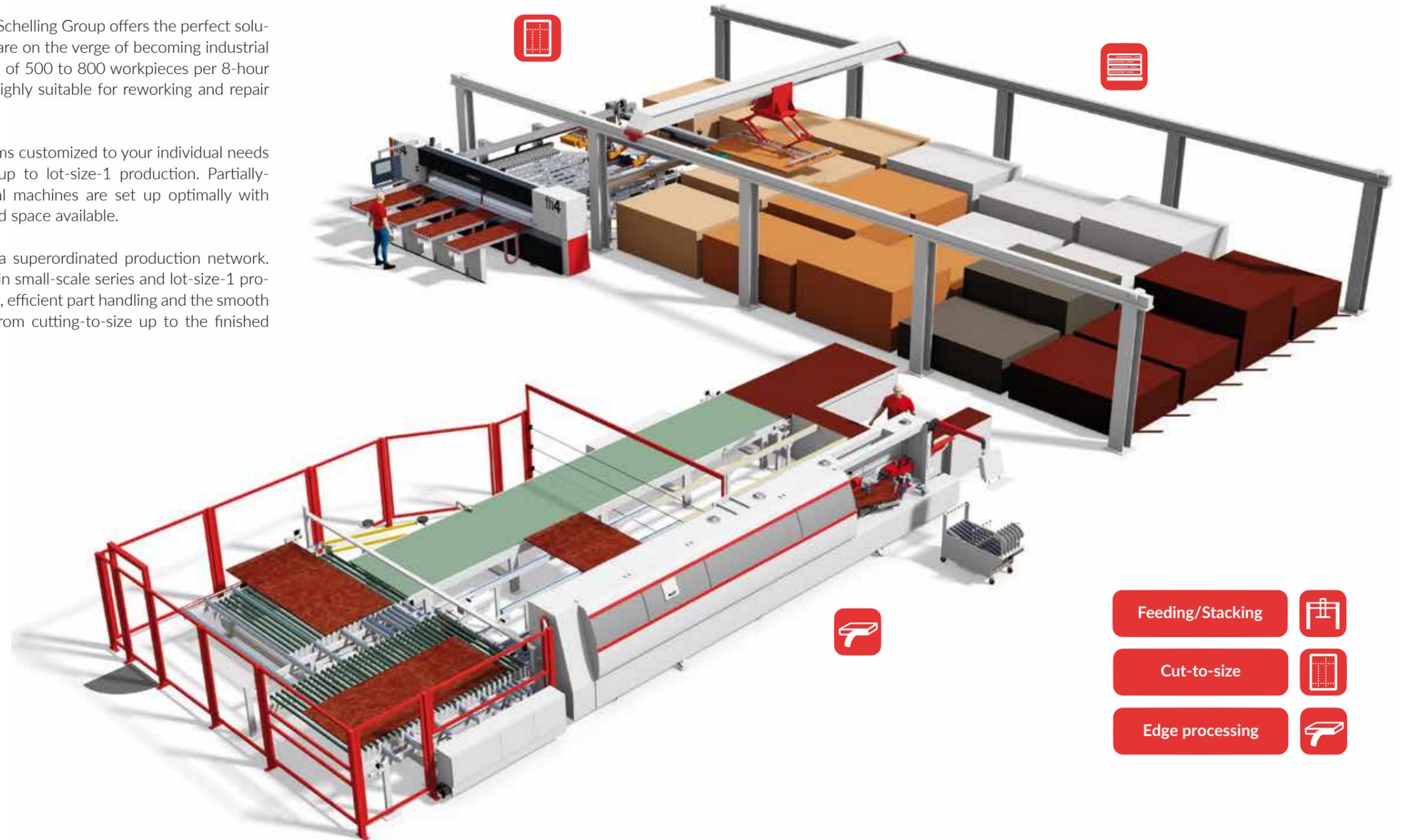
PERFORMANCE CLASS 1 AT A GLANCE

Modern production islands for advanced production operation

With Performance class 1 the IMA Schelling Group offers the perfect solution for small craft operations that are on the verge of becoming industrial operations. Designed for capacities of 500 to 800 workpieces per 8-hour shift, Performance class 1 is also highly suitable for reworking and repair work.

Performance class 1 covered systems customized to your individual needs for small-scale series production up to lot-size-1 production. Partially-automated solutions and individual machines are set up optimally with regard to your processing needs and space available.

They are simple to integrate into a superordinated production network. Performance class 1 thus provides in small-scale series and lot-size-1 production an optimal flow of materials, efficient part handling and the smooth handling of each production job from cutting-to-size up to the finished product.



STORAGE

Storage space is scarce and expensive and takes up large areas, especially in the case of panels. Our solution: perfect storage logistics and utilisation of space in panel storage areas with optimal access to each individual panel. The more quickly and space-saving the panel passes through storage, the more economic.



Precise positional control of cut-to-size panels

EXTREMELY PRECISE STORAGE

- storage of panel-type wooden materials of various types and sizes
- secure manipulation of the panels by automated transport
- rational and rapid taking into and removing from storage
- taking into and removing from storage possible from various storage areas
- optimal use of the space in the storage
- automatic feeding of panel parting saws and units
- utilisation of the area under the guide tracks up to the safety enclosure
- automatic handling of remnants



Flexible connection options to upstream and downstream process steps

CUT-TO-SIZE

The fh 4 is our versatile entry-level model. This parting saw for demanding craft operations and smaller industrial production companies combines precision and perfect cutting guidance with automated, optimised work flows to give higher productivity.

HIGH-PRECISION CUTTING-TO-SIZE

- powerful and efficient thanks to its 18 kW motor rating
- maximum productivity due to a variety of automation options
- handling advantages through movable air cushion tables
- lifting table with separate sweep-off carriage for rational feeding
- maximum angular precision due to double strip aligning device
- advanced ergonomics and safety
- sawing of very narrow strips down to 40 mm in width
- XBoB automatic remnants management
- turning unit before the saw
- fully automatic labelling before the saw
- DUPLUS2 infeed for the simultaneous parting of 2 different strips
- stacking concept with freely configurable stacking logic
- handling advantage: Clamp with outfeed function up to the end of the machine table
- cutting-to-size of individual panels and packages up to 90 mm thick and cutting-to-size of solid wood (depending on the material)
- post-cutting-to-size and soft forming
- grooving and recessing
- insertion grooves/insertion recesses/V-grooves
- cutting out windows
- cutting of laminates and veneer
- control system that is simple and intuitive to operate, including cutting plan generator with MCS control system (Windows platform)
- as standard with large 22" display
- HPO cutting plan optimisation for the optimal production of cutting plans



- high-precision steel machine table, consistent and lasting quality for its whole working life
- Evolution saw unit with fixed motor
- high-precision flat guides with central cleaning
- 3 different zero-tension cutting programs built in
- lifetime free hotline support

FORMATTING/EDGE PROCESSING

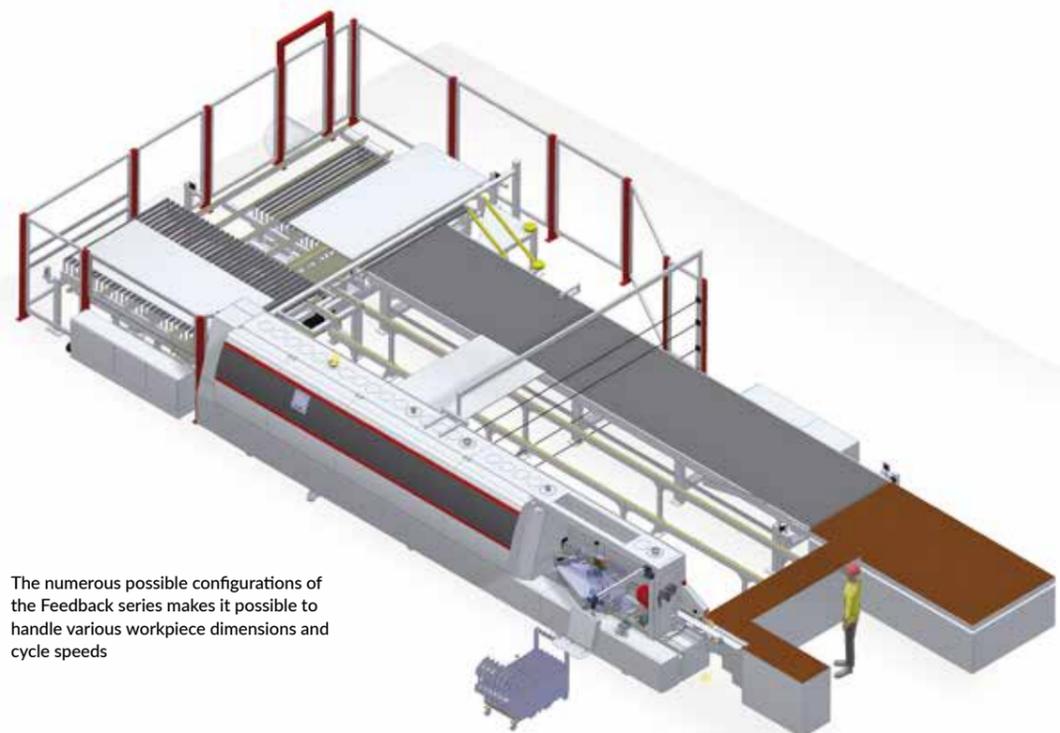
The combination of a return of the Feedback series and an edge banding machine of the Novimat series (Compact, Contour & Concept) produces highly flexible carousel production units that meet the high demands for genuine lot-size-1 production as well as for small-scale series production. Our solutions cover all the aspects of economic edge banding in the smallest possible area at a low price and with top quality.

OPTIMAL EDGES

All Feedback versions are perfectly matched to the machines of the Novimat series. Full integration into the machine control system means that the functions can be selected and operated directly at the machine PC. The various versions offer a possible solution for any requirement. The customer jobs can be dealt with quickly, economically and flexibly from the return of the workpieces in a way that is suitable for storage up to stacking after completion. The edge banding machines can also be set up for conventional gluing in addition to Laser Edging, or the production of connections with no joints or transitions by means of a diode laser.



The IMALUX Direct laser system is perfect for seamless edging



The numerous possible configurations of the Feedback series makes it possible to handle various workpiece dimensions and cycle speeds



Optimal cycle performance



Ergonomic handling

HIGHLIGHTS OF THE FEEDBACK NOVIMAT SERIES

- designed for industrial use when joining, gluing and post-working edging materials
- program-controlled feed speed
- multi-profile system with automatic profile changing possible
- versions: right-angle handovers, repositioning gantry, stacking area (optional)
- automatic and time-saving workpiece transport
- gentle treatment of delicate surfaces
- efficient structuring of processes
- operation by a single person
- software integrated into the machine control system
- can be used with teleservice

BUFFER/SORTING

The right handling and transport systems make excellent individual machines and island production units into an interlinked system that fits together like the gearwheels in a watch. Buffer and sorting units connect the machines with one another and form the interface of the unit with the customer.

EACH PART AT THE RIGHT PLACE

IMA networks all system parts to make adaptable production systems of a modular type. Appropriate handling and transport systems are available to handle all cases for optimal economic utilisation of the production units:

- panel and shelf storage systems
- feeding and stacking systems
- return systems for edge circuits
- material transport systems
- buffer systems
- sorting systems



Material transport

WHY BUFFER?

Buffering of the individual workpieces between the main process steps is required for efficient and continuous utilisation of the individual production stations and maximum productivity. It decouples and harmonises the flow of parts and prevents congestion or empty running or bridges problems at individual units. Buffering can be implemented as single panel storage or as package storage.



Venetian blind buffer

WHY SORT?

Sorting steps are provided at various points to make the best possible use of production cells. Increases in efficiency of the subsequent process steps can be achieved or specific sequences for the parts can be set up in the loading. Various versions are available for sorting, ranging from simple buffering and sorting boxes to individual buffering and sorting units with individual panel or package storage.



Sorting unit with robot

FREE-FORM MACHINING AND DRILLING

The IMA machining systems with integrated C-axis for high-quality and flexible machining for the individual small-scales series and individual production of furniture parts and interior fittings offers the option to edge, drill or groove free-form shapes in addition to rectangular workpieces.

HIGHLIGHTS

- 18- to 40-station tool changer
- 4- or 5-axis machining
- EVA, PUR and Laser Edging, also as a combined unit or AEK
- automatic feeding solutions
- IMAWOP control system



BIMA Cx40 5-axis machining




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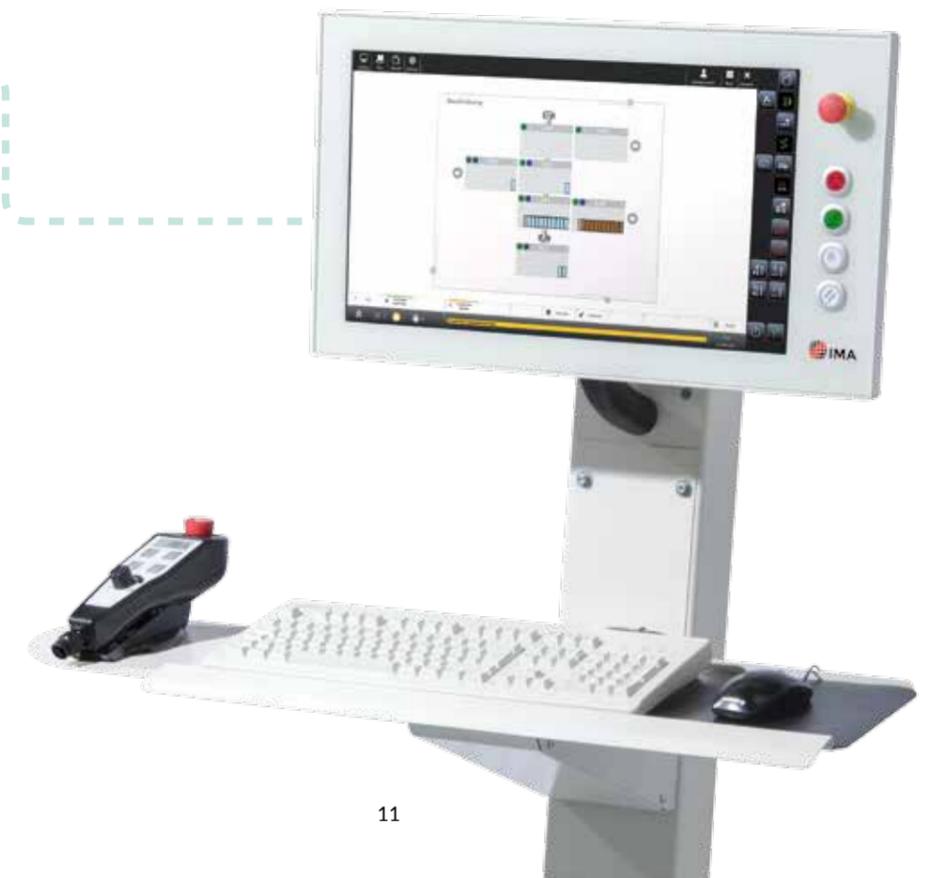
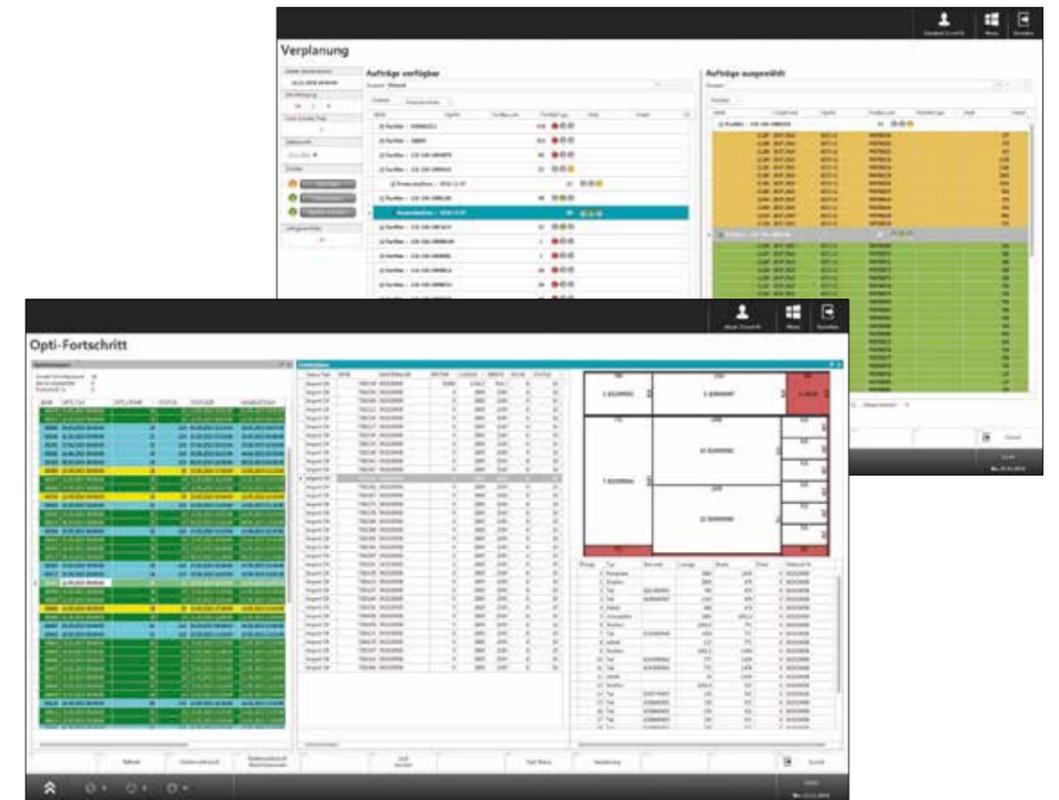
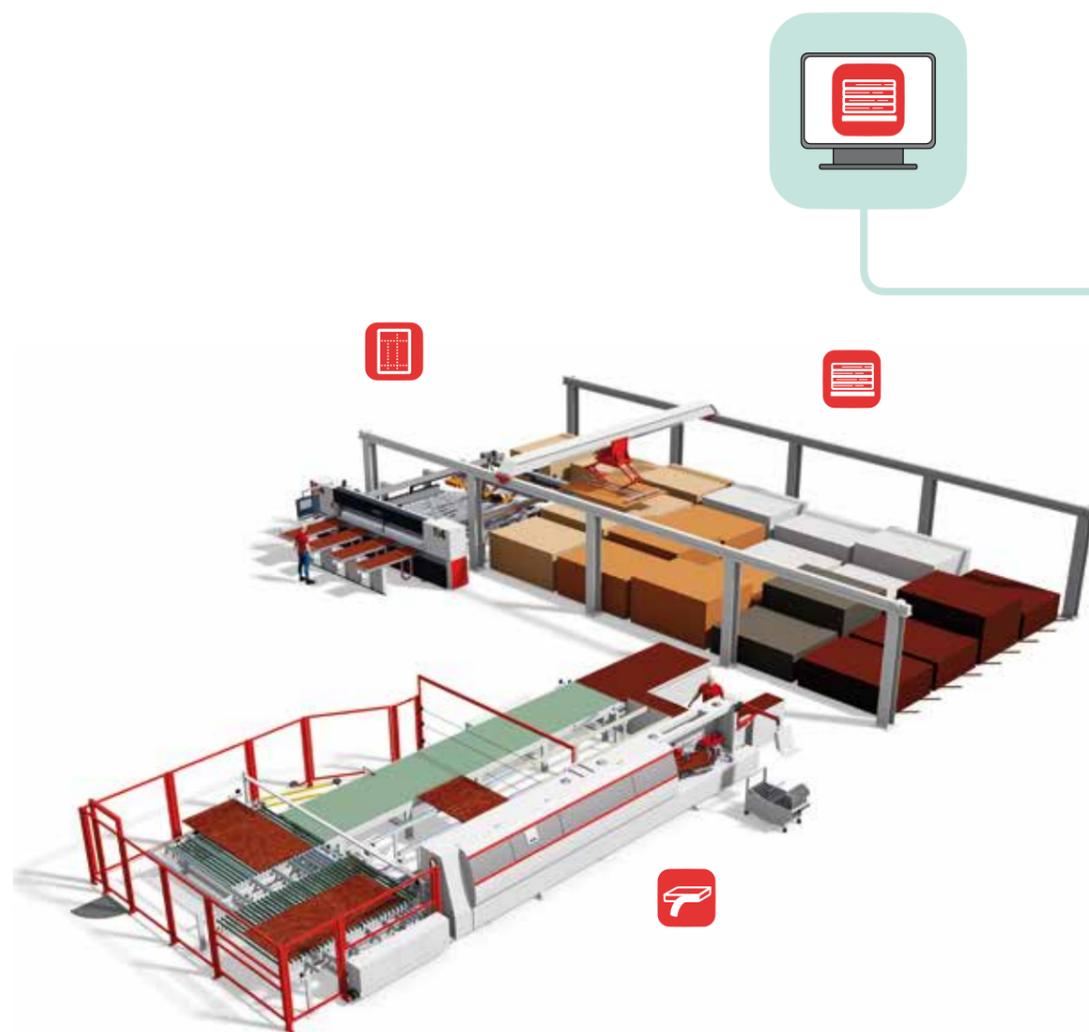
In order to be able to offer complete production systems from one source, the network has been working intensively for many years now with experienced and competent partners for drilling up to final assembly. Custom solutions for front, side and base machining and for main body assembly round out the entire system with high quality and efficiency.

CONTROL SYSTEM

Complex units require complex control systems with simple and intuitive operation. IMA Schelling Group systems for lot-size-1 production handle this task with bravura. The touch display not only gives the operator an excellent and transparent process overview at all times of all component movements and machine states, it also provides all the options for manipulation up to the direct manipulation of individual components by drag and drop. The software architecture makes it possible in future to expand various modules and allows the simple integration of additional production cells and units.

INTEGRATION THROUGHOUT

- the paramount aim is a high level of user-friendliness – this is provided by transparent overviews of the entire system
- various views for different application cases for faster troubleshooting
- comprehensive professional messaging and information system
- modern software architecture in the machine and unit control systems
- modular software platform offers full flexibility for the future since the software modules can be upgraded, replaced or modified with no problems





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