

CNC-machining centre

ARTIS-X

CNC-technology at its best



HAMUEL
REICHENBACHER
A member of the SCHERDEL group

ARTIS-X



Flexible CNC-technology for the woodworking industry

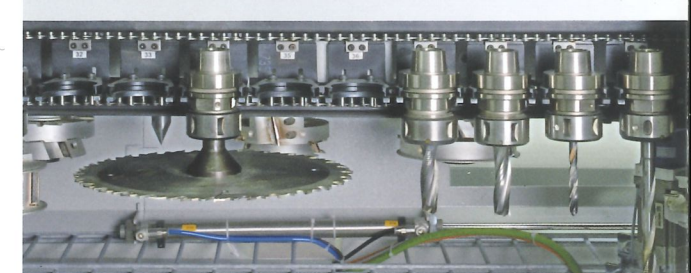
High quality, repeat production and flexibility for small quantities are the typical requirements of most small and medium-sized joinery shops. With the ARTIS-X, Reichenbacher Hamuel satisfies the demand for an efficient, flexible CNC-machining centre, which provides high performance at an affordable price. Short set-up times, a variety of machining options and ease of operation are essential requirements for increased production efficiency in businesses

where investment in technology is often limited to a few important purchases. Reichenbacher Hamuel machines are renowned for consistently high output, excellent availability and the highest mechanical reliability. The products are characterized by long operational life with low maintenance requirements.

Delivering first-class machining quality of workpieces is the number one priority for Reichenbacher Hamuel – as it has been for decades. All these qualities can be found in both standard versions of the modular 5-axis ARTIS-X machining centre.

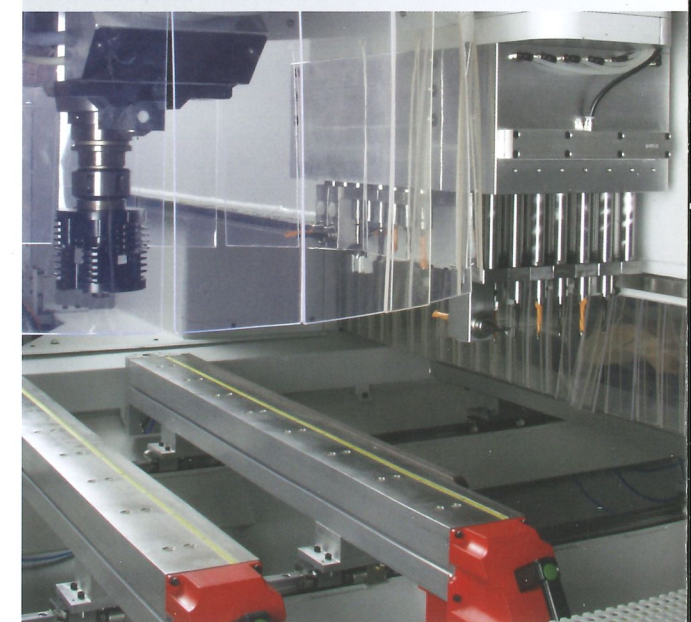


Machining units



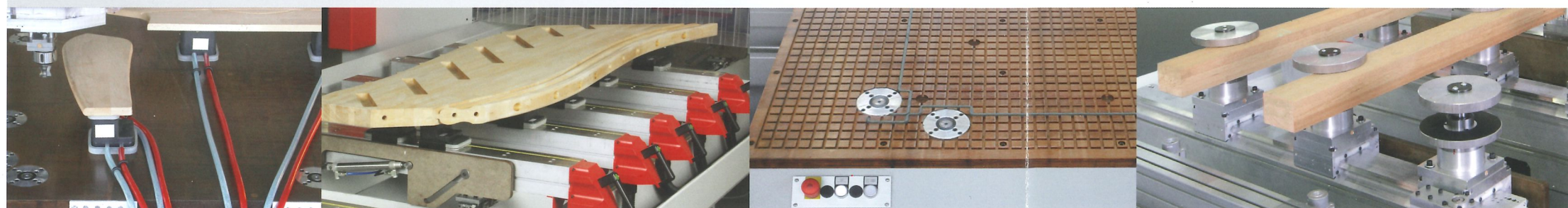
Possible machine configuration

- Charging by robot for unmanned operation
- Automatic beam table with supporting beams
- Reciprocal machining left and right side of table
- 5-axis working head
- Drilling unit with 25 spindles mounted in L-shape
- Chain magazine with 36 tools



Machining at its highest level

Table types



Protection of the entire working area with safety bumpers optimises reciprocal loading possibilities and dispenses with the need for pressure sensitive mats. The two basic types are available in two table lengths and are both equipped with

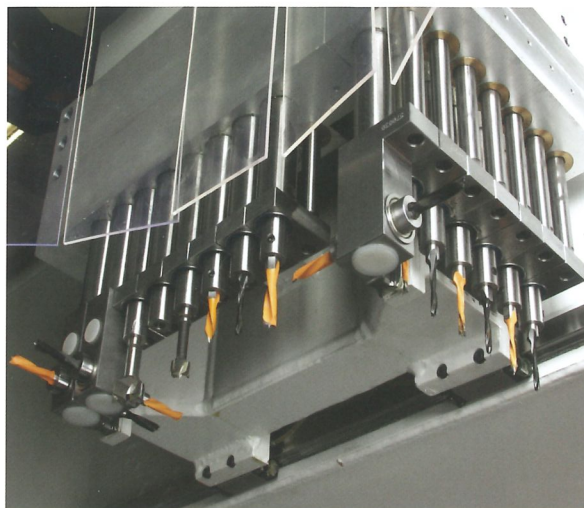
a full 5-axis cardanic working head as standard. The equipment versions cover the requirements of the craft up to those of the industrial production. The different table types – plane table, grooved table or beam table – cover every user's needs.

The machine bed is formed as a compact, solid weldment. Exact positioning of the aggregate cantilever in X-direction is done by ground precision guidings and rack drive powered by high-performance and maintenance-free servo drives.

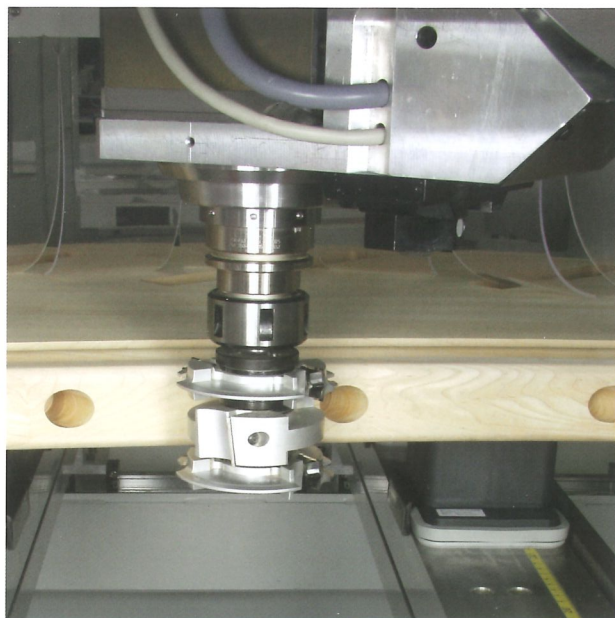
The clamping supports are bedded on linear guides and can be adjusted quickly and easily by the activation of a push button at the lever. This stable clamping is the basis for achieving high machining quality. Supply to the clamping supports is bundled in a flexible protective tube which is routed through the machine bed.

Universal application for the most different workpieces in the furniture and interior production – furniture parts today, tomorrow an interior part and the day after a solid wood part for stairs. For numerous machining tasks such as formatting, profiling, drilling, grooving and separating with material like MDF, chip or core boards, solid wood, plastics and many more.

The aggregates move within the enclosed gantry – the tools making all the movements. The moveable automatic tool changing systems with up to 36 places (chain magazine) and a maximum outer diameter of 300mm, enabling the use of larger tools and standard additional heads.



In addition to the basic equipment of one routing spindle, an optional tool interface HSK-F63 and a multi-spindle drilling box with 15 or 25 individually controllable spindles are available. The power consumption of a routing spindle with water-cooling is permanently controlled; this protects the spindle from damage.



The X-drive employs the proven and unique Reichenbacher Hamuel construction principle with pre-clamping mechanism. This guarantees high positioning accuracy and minimises wear of the toothed rack throughout the life of the machine.



The ARTIS-X is equipped with a full 5-axis control – the Siemens 840Di sl. Digitally driven axes with absolute measuring systems, together with process optimised control functionality, guarantees the best machining results.

Control system

Control system with integrated safety concept

The ARTIS-X is equipped with the latest generation of control systems, the Sinumerik 840Di solution line (sl) from Siemens whose openness and modular system architecture perfectly matches the design concept of the ARTIS-X. The machine is operated and programmed in a

time-saving and intuitive manner using a graphic user surface (NC-HOPS). Above all the control system is able to handle the short reaction times resulting from the high processing speed.

This means that the ultimate machining precision is also guaranteed during high speed routing. The high speeds also require a sophisticated

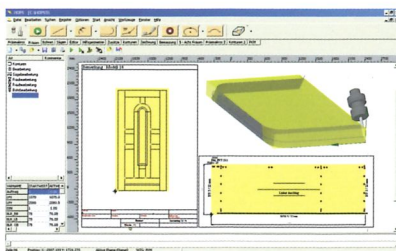
safety concept. The Sinumerik 840Di sl offers the best conditions in this regard with the safety concept Safety Integrated. As all the safety functions are directly integrated in the control and drive technology, this intelligent solution provides a high level of protection for man and machine whilst featuring convenient handling.

Software

NC-HOPS

Using NC-HOPS as a CAD/CAM solution allows fast visual development of dynamic parts. Thanks to the machine neutral workpiece description, time-consuming movements, positioning processes and special functions do not need to be programmed at the machine.

- quick learnability
- efficient working environment
- graphic identification (click to get)
- extensive processing functions
- reusable macros (libraries)
- side-neutral processing

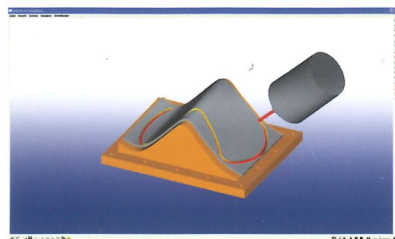


Door frame elements with 5-axis machining and layout, programmed in NC-HOPS

- tool-specific positioning of the working head
- support of the positioning aids for pods and workpieces
- workshop-oriented system

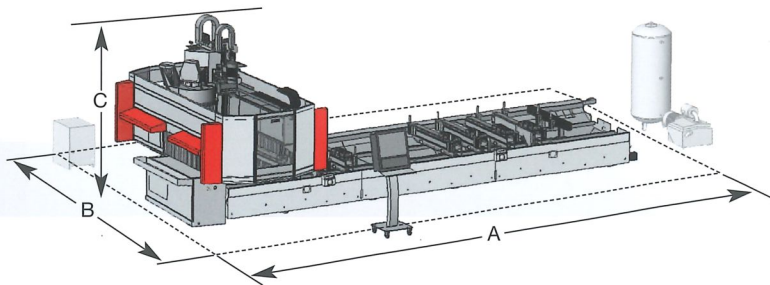
Licom AlphaCAM

is a modular CAD/CAM system for timber and plastics processing. The emphasis lies on programming on solid models, graphic parametric, excellent nesting solutions and much more, from the 2.5D up to 5-axis routing.



5-axis trimming with the tool edge, programmed in AlphaCAM

Dimensions for installation



	ARTIS X4	ARTIS X6
Measure A mm	8,520	10,500
Measure B mm	5,300	5,300
Measure C mm	3,000	3,000

→ in consideration of 800mm safety distance

ARTIS-X

Technical Features

Working head	Performance 14.0/16.8kW, maximum performance from 18,000rpm Number of revolutions programmable from 500 – 24,000rpm (continuously adjustable) Tool fixtures with hollow cone shank HSK-F63
Cardanic working head	B-axis, swivelling range +/- 180°, C-axis, swivelling range +/- 360°
Drilling unit	Multi-spindle drilling unit in L-shape with 12 vertical and 3 horizontal drilling spindles NEW: Multi-spindle drilling unit in L-shape with 25 vertical and horizontal drilling spindles (maximum 7 pieces)
Tool changer	The automatic tool changer system is inside the gantry. A magazine plate with 22 tool places is integrated, maximum tool diameter 300mm, maximum tool length 240mm, chain magazine with 36 places, maximum tool diameter 300mm.
ARTIS X4	
Machine table	Plate table 4,270 mm x 1,400mm Gantry passage 390mm
Axis motions	X-axis 4,685mm - maximum 70m/min Y-axis 1,550mm - maximum 70m/min Z-axis 530mm - maximum 20m/min
Working area 3-axis operation Condition:	Tool diameter 16mm Total tool length 120mm (additional pick-up place optional) X = 4,014mm, Y = 1,390mm, Z = 390mm
Working area 5-axis operation Condition:	Tool diameter 16mm Total tool length 120mm (additional pick-up place optional) X = 4,014mm, Y = 1,390mm, Z = 390mm
ARTIS X6	
Machine table	Plate table 6,310mm x 1,400mm Gantry passage 390mm
Axis motions	X-axis 6,665mm - maximum 70m/min Y-axis 1,550mm - maximum 70m/min Z-axis 530mm - maximum 20m/min
Working area 3-5-axis operation Condition:	Tool diameter 16mm Total tool length 120mm (additional pick-up place optional) like ARTIS X4, but X-axis = 6,024mm
Additional equipment	Machine table with beams, vacuum system up to 250m ³ , chip removal belt, special clamping devices, laser projection system, modem for tele-diagnostic, barcode scanner, software for the graphically supported program generation in the stair and furniture production. Automatic table as an option.
Control	Siemens Sinumerik 840Di / 840Di sl (Solution Line)

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