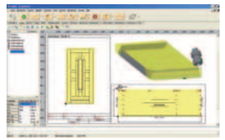
Control system

Control system with integrated safety concept
The VISION is equipped with the latest generation of control systems, the Sinumerik 840D solution line (sl) of Siemens make, whose openness and modular system architecture perfectly match the design concept of the VISION. The machine is operated and programmed in a time-saving and intuitive manner by means of a graphic user surface (NC-HOPS). Above all, the control system is able to handle the short reaction times resulting from the high processing speeds. This means that the ultimate machining precision is even guaranteed during high-speed milling. The high speeds also require a sophisticated safety concept. With its safety concept Safety Integrated the Sinumerik 840D sl offers the best conditions in this regard. As all the safety functions are directly integrated into 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 permits the visual development of dynamic parts within a very short time. Thanks to the machine-neutral component description, time-consuming movements, positioning processes and special functions do not need to be programmed at the machine.

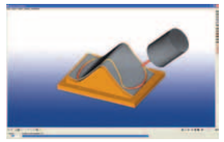
- quick learnability
- efficient working environment
- graphic identification (click to get)
- extensive processing functions
- reusable macros (libraries)
- side-neutral processing



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

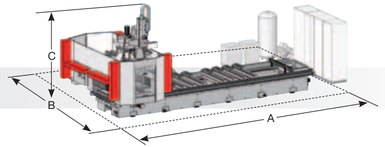
- tool-specific positioning of the working head
- support of the positioning aids for pods and components
- workshop-oriented system

Licom AlphaCAM
is a modular CAD/CAM system for wood and plastics processing. The emphasis lies on the programming on solid models, the graphic parametric, excellent nesting solutions and many other highlights, from the 2.5D up to 5-axes milling.



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

Dimensions for installation



	VISION I (T)	VISION II (T)
Measure A mm	7,940	10,300
Measure B mm	4,570 (5,170)	4,570 (5,170)
Measure C mm	3,170	3,170

→ *taking into consideration a safety distance of 800 mm*

vision

Technical Features

Working units	Cardanic 5-axes working head, exchangeable additional units for all common machining operations, various types of drilling units, sawing heads with different performances	
Cardanic working head	Performance 15.0 kW, maximum performance as of 11,300 rpm Number of revolutions programmable from 500 – 24,000 rpm (15.0 kW / 30,000 rpm or 24.0 kW / 24,000 rpm as an option) Tool fixtures with hollow cone shank HSK-F63 B-axis, swivelling range +/- 180° C-axis, swivelling range +/- 360°	
Tool changer	The automatic tool changing system is placed in the portal. A magazine plate with 24 places has been integrated (chain magazine with 40 to 80 places as an option). Tool diameter max 300 mm / pick up place with saw up to Ø 450 mm	
Machine table	**VISION I** HPL-table plate 3,800 mm x 1,500 mm Portal passage 400 mm	**VISION I-T** 3,800 mm x 2,100 mm Portal passage 400 mm
Axes movements	X-axis 3,740 mm - max. 60 m/min Y-axis 1,560 mm - max. 60 m/min Z-axis 480 mm - max. 20 m/min	X-axis 3,740 mm - max. 60 m/min Y-axis 2,160 mm - max. 60 m/min Z-axis 480 mm - max. 20 m/min
Machine weight	approx 7,000 kg	approx 9,000 kg
Machine table	**VISION II** HPL-table plate 6,200 mm x 1,500 mm Portal passage 400 mm	**VISION II-T** 6,200 mm x 2,100 mm Portal passage 400 mm
Axes movements	X-axis 6,140 mm - max. 60 m/min Y-axis 1,560 mm - max. 60 m/min Z-axis 480 mm - max. 20 m/min	X-axis 6,140 mm - max. 60 m/min Y-axis 2,160 mm - max. 60 m/min Z-axis 480 mm - max. 20 m/min
Machine weight	approx. 9,000 kg	approx. 11,000 kg
Types	Higher portal passage of 700 mm for machining high 5-axes parts (string wreaths, special furniture, etc.) Equipped with 3-axes or 4-axes working units, portal passage 320 mm	
Additional equipment	Machine table with beams (manual or automatic set-up table), vacuum system 250 m^3/h, chip removal belt, special clamping devices, tool identification system, laser projection system, modem for tele-diagnostic, barcode reader, user software for the graphically supported programme generation.	
Control system	Siemens Sinumerik 840D sl (Solution Line)	

VISION-L and -U
The unique flexibility of these machine series is based on a modular unit equipment, multiple additional equipment and different table types. Depending on the task, the machining centres can individually be equipped to the customers' requirements. Upon request, these will best be configured and offered after consultation.

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CNC-machining centre

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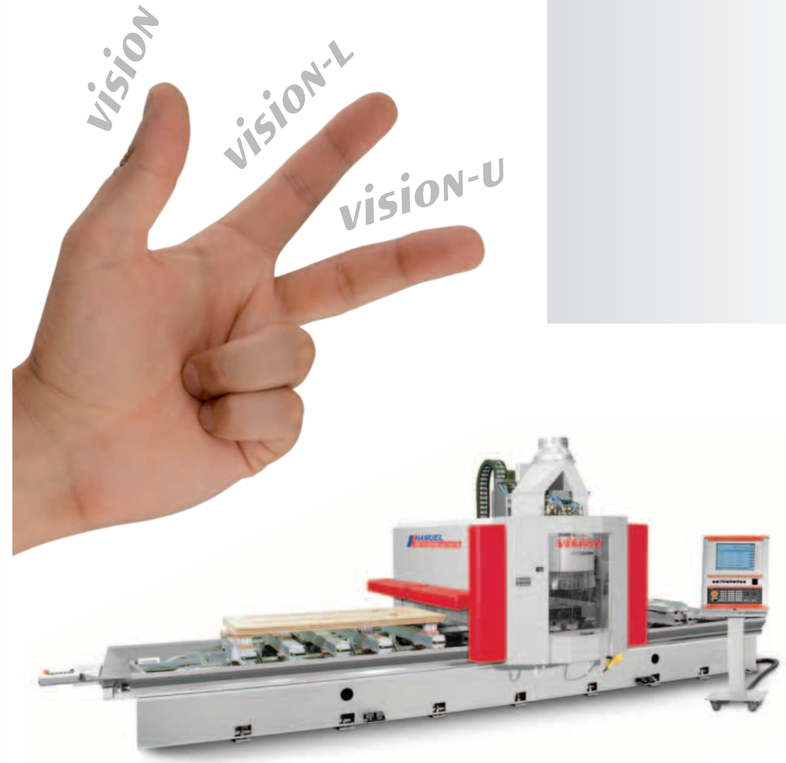
CNC-technology at its best



HAMUEL REICHENBACHER
A member of the SCHERDEL group

VISION

The components show what the machine can do

In many demanding applications, the basic version of the VISION series has already proven its capabilities at our customers. Its stability and precision correspond to the standards set by all Reichenbacher Hamuel machines. These machines excel by their good dynamics and are therefore predestined for a cost reduction in manufacturing while maintaining high productivity. This is why these machining centres are ideal for the order-related part manufacturing even of smallest batch sizes. Moreover, they ensure an outstanding cost-/performance ratio.

VISION-L

Success based on individuality

The VISION-L and-U types complete the reliable VISION series. These machines make a distinction by their variable dimensions in all axes and multitude of different machining units available. These units can be combined for single and parallel machining with up to four independent Y-slides. Thanks to their extremely rigid machine construction, a diversity of machining units can be used next to each other or one behind the other.

VISION-U

The VISION system:

- **After 15 years still market leader with our safety concept for moving portal machines**
- **Enclosed portal made of sheet steel with safety bumpers**
  → no pressure sensitive mats
  → no safety barriers
- **One-dimensional safety curtain**
  → maximum restraining effect by linear alignment
- **Safety view at the working process by generously dimensioned windows**

Universal application – for example for special profiles in the aeroplane, car or stair production, efficient allround machining of formed parts and plates, machining of combined hybrid parts made of plastics and metal, machining of aluminium and plastic parts.

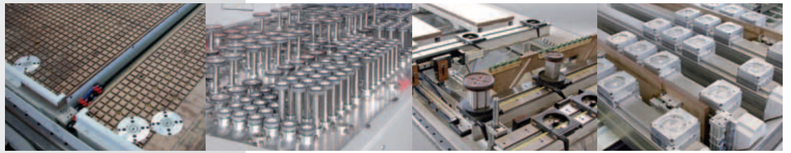
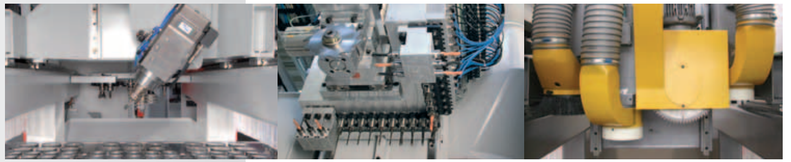


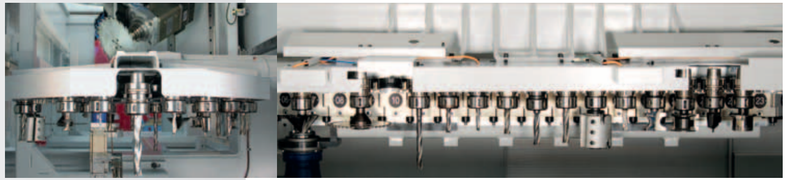
Table types

Furniture, interiors, stairs, doors, round-headed windows, worktops or frames – the range of applications is almost unlimited. There are different table lengths and table systems to cover all of them. The grooved plate table - also available with different clamping areas - is the proven universal version most commonly used. With the PIN-table, a unique table and clamping system, new levels of versatility in single-unit production can be achieved. The automatic beam table is a highlight. Thanks to this new design, the table can be adjusted for the new component within a few seconds.



Unit versions

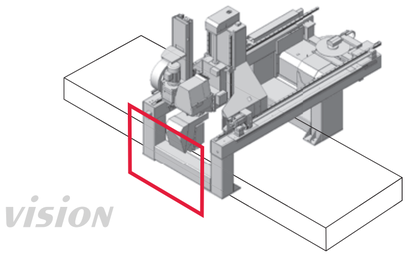
The VISION Sprint is equipped with a cardanic working head for the 3-dimensional machining of free-form surfaces and contours. Thanks to this multi-sided machining in freely definable planes, flexibility has almost no limits. The multi-spindle drilling unit features 30 individually controllable spindles mounted in L-shape. Equipped with an independent positioning unit, it is situated in front of the vertical unit in Z-direction and can move around the entire working table. Three separate milling units and one sawing head, together with special stair clamping devices and PIN table base plates, permit the entire stair machining process to be carried out in one clamping operation.



Tool changer

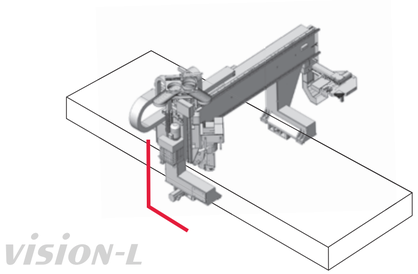
The high-performance units in the portal are supplied by a plate magazine with 12 or 24 tools or a common chain magazine with up to 120 tools. In this case maximum time savings are possible by parallel tool change. The hollow cone shanks used are particularly suitable for high-speed machining due to their high transmissible torque. To perfect flexibility, a multi-spindle drilling unit with individually controllable spindles can be added.

Machine configuration



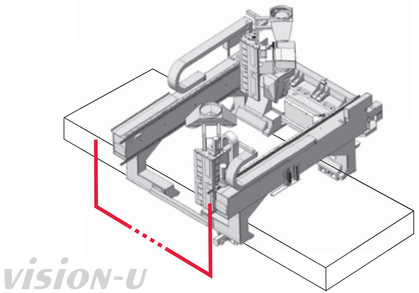
VISION

Machines of the VISION series have a machine substructure with a fixed table. The portal is mounted on the machine table and carries out the longitudinal movement (X-movement). All unit movements are performed within the enclosed portal equipped with safety bumpers. The main machine components are in ripped welded design to allow for an optimum rigidity or weight ratio, respectively. Thus, very good acceleration values can be obtained.



VISION-L

With the VISION-L up to two independent Y-slides for the units can be mounted one behind the other. This permits the tool change from two tool magazines, while machining takes places in parallel, as well as the synchronous machining of two components one behind the other – for example when 5-axes fork heads are used. The independent units are mounted on an L-support in Y-direction and guarantee high up-time.



VISION-U

Thanks to its U-shaped portal the VISION-U offers a lot of varieties for parallel and single machining. Thus, given two units, parallel to machining a tool change, e.g. from a chain magazine, will be possible – double tools can be omitted. The use of up to two big cardanic 5-axes heads and of other comprehensive equipment guarantees maximum flexibility, such as the synchronous machining of two components clamped one next to the other and/or one behind the other.