

# CNC-machining centres



## Product overview

<b>About us / Colour key</b>	<b>3</b>
Reichenbacher – Specialists with more than 60 years of tradition in mechanical engineering	
<b>PRIMUS</b>	<b>4 - 5</b>
Universal machine for a small budget	
<b>ARTIS</b>	<b>6 - 7</b>
Flexible CNC-technology for artisanry	
<b>VIRTUS</b>	<b>8 - 9</b>
Using the plate to the best effect	
<b>VISION</b>	<b>10 - 11</b>
The components show what the machine can do	
<b>VISION-U/L</b>	<b>12 - 13</b>
Success based on individuality	
<b>VISION-RC</b>	<b>14 - 15</b>
Well prepared for the future	
<b>ECO</b>	<b>16 - 17</b>
A synonym for flexibility	
<b>ECO-NT</b>	<b>18 - 19</b>
Extremely handy	
<b>ECO-LT</b>	<b>20 - 21</b>
Up-to-date value for your money	
<b>ECO-RS</b>	<b>22 - 23</b>
A completely new sensation	
<b>Customised solutions</b>	<b>24 - 25</b>
From a batch of 1 to series production	
<b>Software / application technology</b>	<b>26 - 27</b>
The perfect software for your applications	
<b>Service</b>	<b>28 - 29</b>
Qualified service for your CNC-systems	
<b>Contact</b>	<b>30 - 31</b>
Contact details and how to find us	



### About us:

Located in Germany, Reichenbacher Hamuel offers a wide range of universal CNC milling machines for wood, plastics, aluminium and composites processing. Based on a modular system, machines are built to suit small, medium and large companies. From a batch size of 1 to series production, CNC control systems in multi-channel technology, and even the loading of machines by robots, are nothing unusual for Reichenbacher Hamuel.

Reichenbacher Hamuel is:

- A specialist with 60 years of tradition in building CNC special purpose machinery for the processing of wood, plastics, aluminium and composites
- A system supplier for complete manufacturing solutions
- A company with more than 30 years of experience in 5-axes and multi-axes technology
- A high-level designer of individual CNC machining centres and integral solutions for customers from the automobile, aircraft, facade, furniture, door, window and staircase construction and from many other industries
- A guarantor of constantly high output and excellent availability of the machine under utmost mechanical load
- A member of the SCHERDEL group with 4,000 employees worldwide

### Colour key – application focus

The colour key will help you to choose the adequate machining centre for your needs. Pages are marked according to the application focus of each machine.

**W**  
Woodprocessing

**P**  
Plastics processing

**A**  
Aluminium processing



## Universal machine for a small budget – PRIMUS

In its basic design, the CNC-machining centre PRIMUS is a 3-axes wood machining centre with a 13-spindle drilling unit. Here, Reichenbacher Hamuel has succeeded in meeting also the requirements of smaller businesses by offering a serial machine at an economic price.

Most needs are covered by the two table designs, namely grooved table and beam table. This series will predominantly be used for interior fittings and the processing of corpus parts, furniture fronts, room doors or plastic parts. Moreover, pneumatically extendable supports and stops are available to facilitate the loading and alignment of semi-finished products on the table.

## Technical features

- Vertical 3- / 4-axes working head
- Performance: 10 kW, 1,000 – 24,000 rpm
- Multi-spindle drilling head with 13 drilling spindles and groove saw
- Plate magazine with 7 or 14 places (moving along)
- 2 pick-up places in the machine bed (as an option)
- Encased cantilever with safety bumper
- Machine table with HPL or aluminium plate (grooved or plain) or beam table (manual) with 4 – 6 beams
- Table partitioned into 2 vacuum sections (clamping stations)
- Working area (X, Y, Z): 2,800 x 1,100 x 150 mm
- Control Siemens Sinumerik 840D sl





## Flexible CNC-technology for artisanry – ARTIS

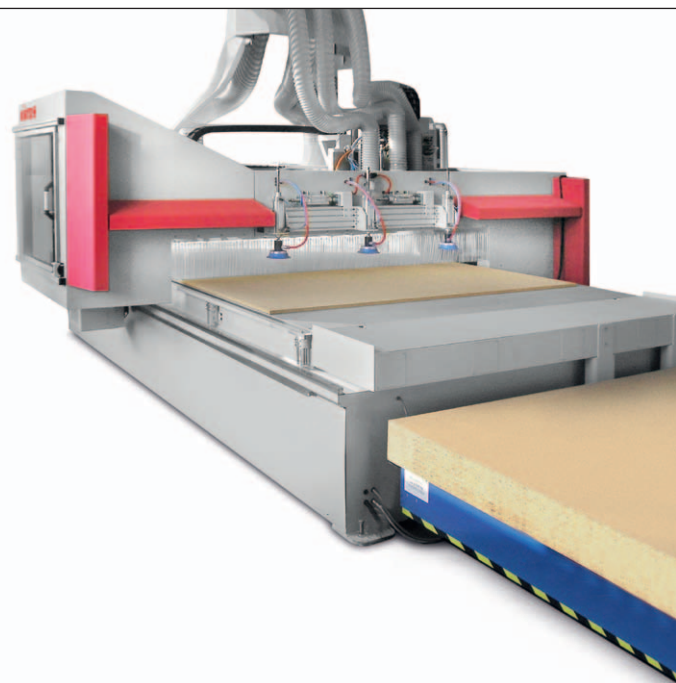
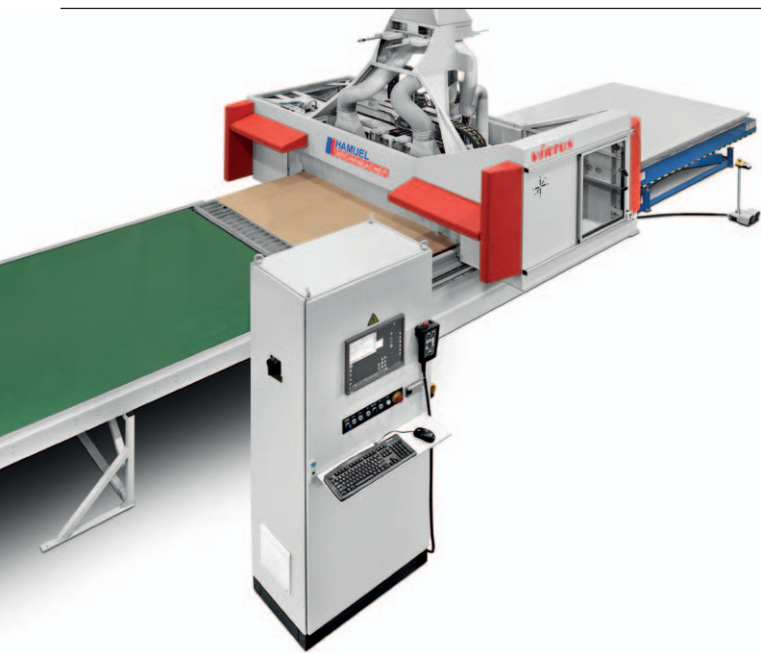
Typical orders received by small and medium-sized handicraft businesses are characterised by high quality demands made on repeat production parts, as well as by flexibility required when producing small quantities. Reichenbacher Hamuel has met these demands for efficient and flexible machines at a favourable price-/performance-ratio by its CNC machining centre ARTIS X Sprint.

Short set-up times, a variety of machining options and ease of operation are indispensable, when technical progress in handicraft businesses is to be concentrated on a few important investments in order to achieve the intended increase in efficiency.

## Technical features

- Cardanic 5-axes working head
- Performance: 14 kW, 1,000 – 24,000 rpm
- Multi-spindle drilling head with 15 or 25 drilling spindles
- Plate magazine with 22 or chain magazine with 36 places (moving along)
- 1 pick-up place for saw blades up to  $\varnothing = 350$  mm (moving along)
- Encased cantilever with safety bumper
- Machine table with HPL or aluminium plate (grooved or plain) or beam table (manual or automatic) with 6 – 8 beams
- Table partitioned into 1 – 4 vacuum sections (clamping stations)
- Working area ARTIS X4 (X, Y, Z): 4,000 x 1,400 x 400 mm
- Working area ARTIS X6 (X, Y, Z): 6,000 x 1,400 x 400 mm
- Control Siemens Sinumerik 840D sl with operator interface HMI Operate (Windows 7)





## Using the plate to the best effect – VIRTUS

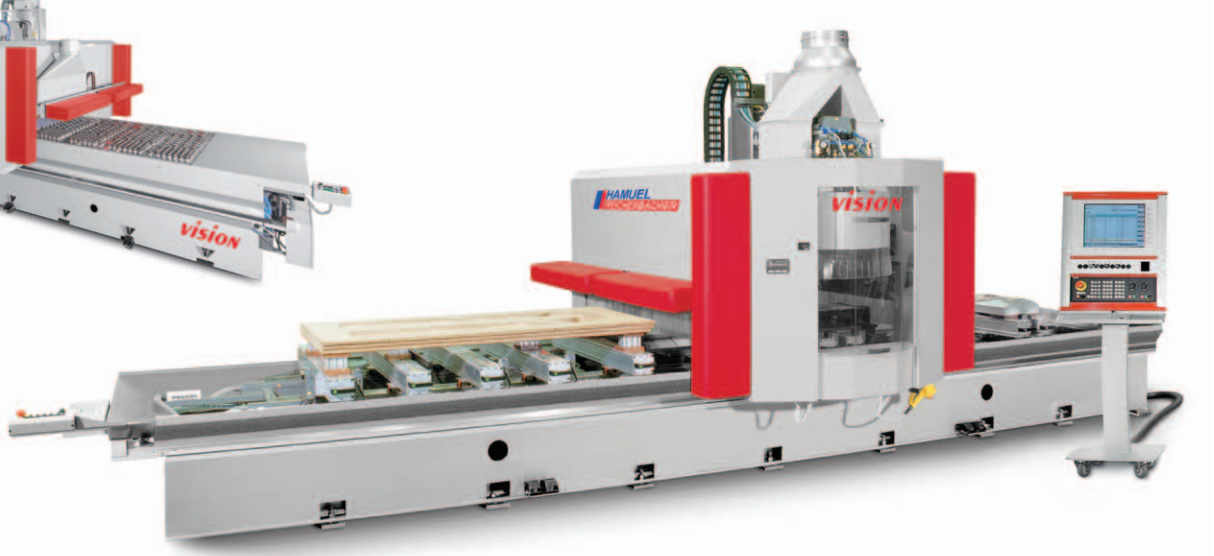
Above all, wood materials with special static properties and high-quality surfaces represent a cost factor one would like to keep as small as possible by their optimised utilisation. These requirements are met by nesting in an ideal way. In the case of the CNC-machining centre VIRTUS, the CAM-module NC-HOPS performs the administration of the plates available in accordance with their material, size, number and the side on which they are resting on the table.

On the loading side of the VIRTUS there is a lifting table that permits the stacking of the plates in dimensions 2,800 x 2,070 mm to a height of about 600 mm. The lifting table is automatically positioned at the entry level by means of an integrated sensor. The extendable extraction and push-out device removes the milled plate and at the same time cleans the machine table. The finished plate is pushed onto a conveyor belt situated at the exit side and transported out of the machine. Simultaneously, a new plate is positioned on the loading side of the machine table.

## Technical features

- Vertical 3- / 4-axes working head
- Performance: 4.6 – 12 kW, 1,000 – 24,000 rpm
- Multi-spindle drilling head with 13 drilling spindles and groove saw
- Sawing unit to be rotated by 0 – 90° (as an option)
- Plate magazine with 7 or 14 places (moving along)
- Encased machine portal with safety bumper
- Machine table with HPL or aluminium plate (grooved)
- Table partitioned into 2 vacuum sections (clamping stations)
- Working area VIRTUS H12 (X, Y, Z): 3,200 – 6,200 x 1,250 x 150 mm
- Working area VIRTUS H21 (X, Y, Z): 3,200 – 6,200 x 2,100 x 150 mm
- Control Siemens Sinumerik 840D sl





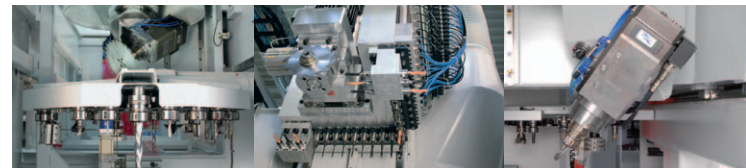
## The components show what the machine can do – VISION

The VISION type can be equipped with a cardanic working head to become the VISION Sprint to give small and medium-sized companies from artisanry and interior decoration a favourable access to 3D-machining and to provide them with the perspective of the unique design flexibility of a 5-axes machine.

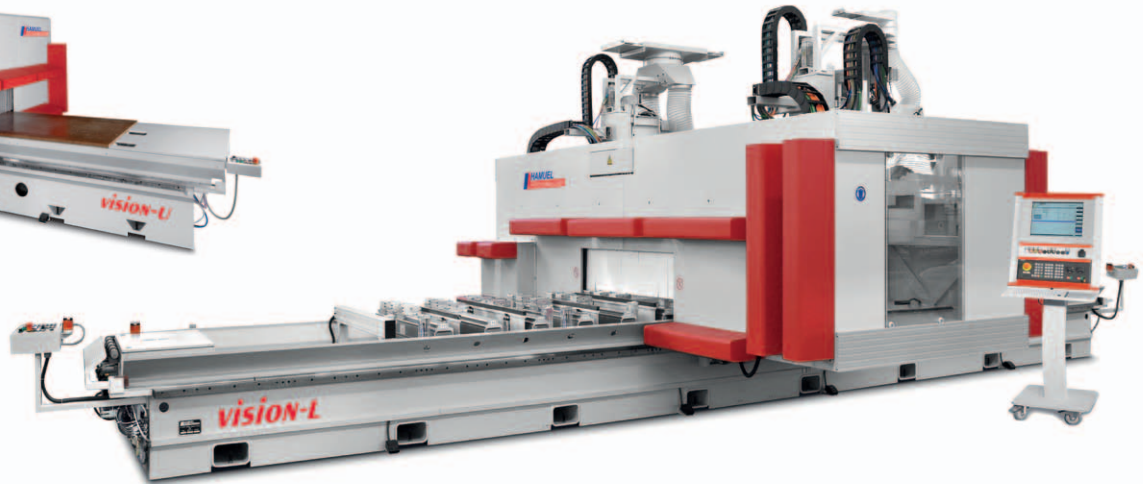
The VISION Sprint, with its excellent price-/performance-ratio, offers the opportunity to limit manufacturing costs of high-value components, i.e. to make quality affordable.

## Technical features

- Vertical 3- / 4-axes working head or cardanic 5-axes working head
- Performance: 15 – 55 kW, 1,000 – 16,000 or 24,000 rpm
- Various multi-spindle drilling heads with 5 to 21 drilling spindles
- Special units (e.g. label printer, metering of adhesives, etc.)
- Tool changer plate with 12 or 24 places  
or chain magazine with 40, 60 or 80 places
- 1 pick-up place for saw blades  $\varnothing = 400 - 800$  mm (moving along)
- Encased 4-column portal with safety bumper
- Machine table with HPL or aluminium plate (grooved or plain)  
or beam table (manual or automatic) or special table
- Table partitioned into various vacuum sections (clamping stations)
- Examples for the working areas of the different types of machinery:  
VISION I (X, Y, Z): 3,700 x 1,500 x 400 mm  
VISION II (X, Y, Z): 6,100 x 1,500 x 400 mm  
VISION II-H (X, Y, Z): 6,100 x 1,500 x 700 mm
- Control Siemens Sinumerik 840D sl  
with operator interface HMI Operate (Windows 7)



# VISION-U/L



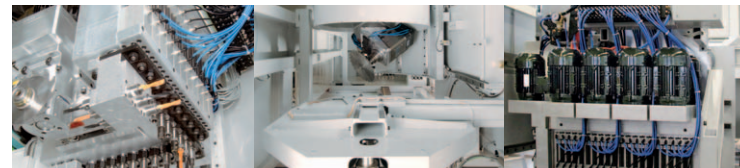
## Success based on individuality – VISION-U/L

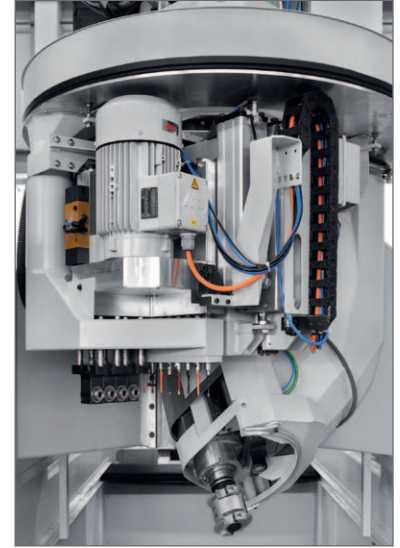
The VISION-U and L-types complete the existing VISION series. These machining centres are highly dynamic and thus ideally suited for reducing manufacturing costs while maintaining high productivity. A major feature of these machines is that they can be supplied with a choice of table dimensions and a wide variety of different heads. These units can be combined with up to two independent Y-slides for single and parallel machining.

Thanks to their extremely rigid machine construction, a diversity of machining units can be used side by side or one behind the other. Thus, for example, two big 5-axes heads with their comprehensive additional equipment can perform many diverse operations.

## Technical features

- A multitude of versions for parallel and individual machining based on a U-shaped portal equipped with several independent Y-slides
- Several vertical 3- / 4-axes working heads or 2 cardanic 5-axes working heads
- Performance: 15 kW or 24 kW, 1 – 24,000 rpm
- Various multi-spindle drilling heads or special units
- Special units (e.g. label printer, metering of adhesives, etc.)
- Tool changer plate with 12 or 24 places or chain magazine with 40, 60, 80 or 120 places
- 1 pick-up place for saw blades  $\varnothing = 400$  mm (moving along)
- Machine table with HPL or aluminium plate (grooved or plain) or beam table (manual or automatic) or special table
- Table partitioned into various vacuum sections (clamping stations)
- Working areas for various sizes of machinery: see VISION (page 11)
- Control Siemens Sinumerik 840D sl with operator interface HMI Operate (Windows 7)





## Well prepared for the future – VISION-RC

The ultramodern CNC-machining centre VISION-RC is equipped with a new kind of single-head system. The heart of this innovative system is a very stable and rigid working head. For wood machining in industrial and medium-sized companies in particular, the VISION-RC thus offers high-precision and fast component processing. Moreover, it is apt for machining aluminium, plastics and composites, and can – even after several years – be expanded and optimised to suit exactly the actual requirements and desired utilisation. This means that the machine virtually grows along with the company.

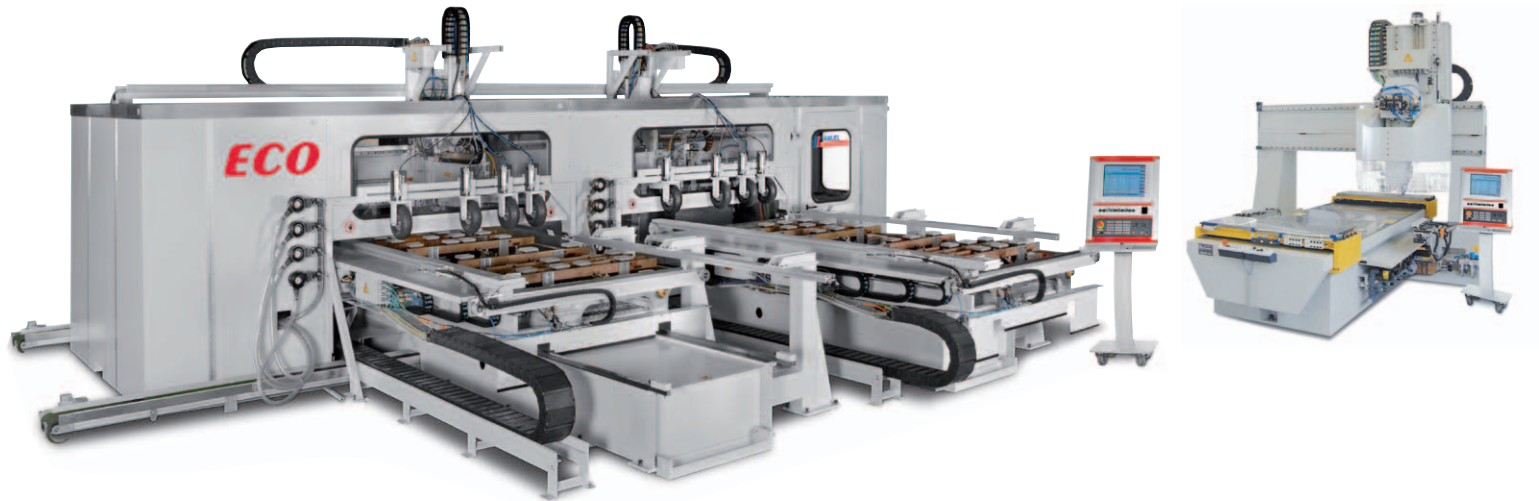
High-quality components warrant for the machine's longevity, e.g. exclusively user-friendly control systems of Siemens make are installed. A separate service module with graphical user interfaces permits a simple fault diagnosis. The manifold possibilities of combining the individual assembly groups guarantee that the respective customer requirements are met in an optimum way.

## Technical features

- Cardanic 5-axes working head
- Performance: 15 kW or 24 kW, 0 to 24,000 rpm
- Multi-spindle drilling head with 19 drilling spindles rotating around the C-axis
- Tool changer plate with 20 or 24 places or plate tower magazines with 96 places and tool shuttle for a quick change (as an option)
- Efficient extraction hood that swivels relative to the spindle
- Encased 4-column portal with safety bumper
- Machine table with HPL or aluminium plate (grooved or plain) or beam table (manual or automatic) or special table
- Table partitioned into various vacuum sections (clamping stations)
- Working areas of the different machine sizes: see VISION (page 11)
- Control Siemens Sinumerik 840D sl with operator interface HMI Operate (Windows 7)







## A synonym for flexibility – ECO

With the ECO machining centre, Reichenbacher Hamuel has employed all its experience in the field of special-purpose machinery to develop a series that offers the highest levels of flexibility and productivity. The vibration-free portal, which rests on two or three columns depending on the size of the machine and the type of machine table, supports one or several aggregate slides that perform the transverse and vertical movements of the working heads.

Based on production demands, the ECO can be equipped with one or two machining units controllable via separate NC-channels. The basic machine can be supplied with one or two movable machining tables. Moreover, there is the option of installing additional machine tables to enable set-up work to be carried out whilst the machine continues production.

## Technical features

- One or several vertical 3- / 4-axes working heads or cardanic or fork-shaped 5-axes working heads
- Performance: 15 – 55 kW, 1 – 16,000 or 24,000 rpm
- Various multi-spindle drilling heads
- Special units (e.g. label printer, metering of adhesives, etc.)
- Tool changer plate with 12 or 24 places (moving along or stationary)
- Machine table with HPL or aluminium plate (grooved or plain) or beam table (manual or automatic) or special table
- Table partitioned into various vacuum sections (clamping stations)
- Alternate machining on two independent tables, which can also be coupled to work synchronously
- Working areas as per customer requirements
- Multi-channel technology
- Control Siemens Sinumerik 840D sl with operator interface HMI Operate (Windows 7)





## Extremely handy – ECO-NT

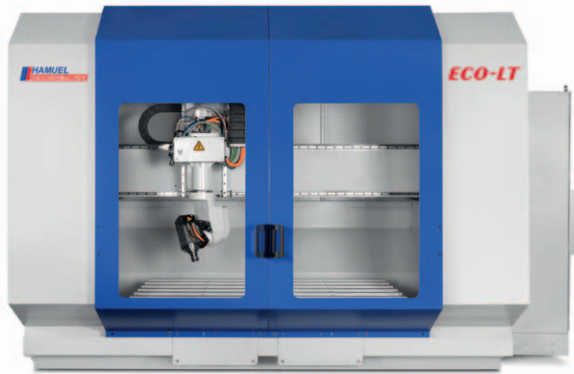
The ECO-NT series of Reichenbacher Hamuel sets new standards in the machining of plastics, aluminium and composites: perfect 5-axes machining and universal applicability are combined with maximum operator convenience and very compact design.

The fixed machining table on a solid substructure and the very high Z-axis permit every machining task to be realized with absolute contour accuracy, highest surface quality and precision. The component can completely be machined from all sides and thus be processed in an optimum way in one single operation. In shuttle operation, each side can be loaded independently for alternate machining. If a larger working area is required, e.g. for the machining of longer components, the centre partition can simply be removed to double the working area.

## Technical features

- One or two fork-shaped or cardanic 5-axes working heads for the efficient 6-side complete machining of form parts and profiles
- High-frequency spindle with 4.6 kW, 3,200 – 60,000 rpm or spindle with 15 kW, 0 – 24,000 rpm
- Tool changer plate with 8, 12 or 24 places (moving along)
- Machine table with steel bars (threaded and fit bushings) on tubular frame construction
- Examples of various working zones:  
ECO-NT 1K (X, Y, Z): 3,600 x 1,000 x 700 mm  
Alternate operation (X, Y, Z): 2x 1,500 x 1,000 x 700 mm  
ECO-NT 2K (X, Y, Z): 4,800 x 1,000 x 700 mm  
Alternate operation (X, Y, Z): 2x 2,000 x 1,000 x 700 mm
- Control Siemens Sinumerik 840D sl with operator interface HMI Operate (Windows 7)





## Up-to-date value for your money – ECO-LT

The machining centre ECO-LT is to expand the proven ECO-NT series of Reichenbacher Hamuel by a version available at a favourable price. It has specifically been developed for the machining of plastics, aluminium and composites (CFRP, GRP) and permits the fully automated milling of cut-outs, circumferences and profiles.

The low-vibration portal frame with its fixed machining table on a stable base convinces by utmost machining quality at maximum feed rates. The machine is completely encased in a protective cabin including ceiling element, while allowing also for an optimum chip removal. The two versions available meet most different customer requirements.

The ECO-LT features durable mechanical and electronic components. The technical optimisation of its assemblies warrants for process reliability and operating efficiency.

## Technical features

- One cardanic 5-axes working unit that can be tilted by up to 46° and equipped with various head versions (star-shaped head with 3 milling spindles of 3.5 kW or 6.4 kW, each, or spindle for tool change with 14 kW, HSK-F63)
- Pick-up tool changer magazine with 7 places
- Fully encased milling machine
- Fixed machining table (steel bars, grooved table HPL or aluminium)
- Working area (X, Y, Z): 2,185 x 1,145 x 630 mm
- Space requirements (X, Y, Z): 4,900 x 2,650 x 2,950 mm
- Control Siemens Sinumerik 840D sl with operator surface HMI Operate (Windows 7)





## A completely new sensation – ECO-RS 1/2

The ECO-RS is one of the most recent machines developed at Reichenbacher Hamuel and available in two different sizes. Installation and start-up of the machining centre are as simple as never before, as almost all parts have been fixed to the machine and need not be removed for transportation or relocation.

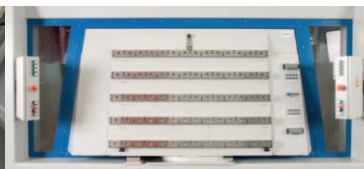
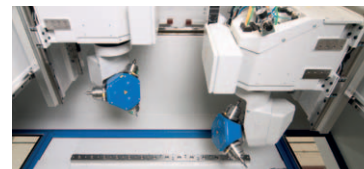
The special feature of the new series is the way how the components are fed into the machine. The ECO-RS is of the inclined-bed type, meaning that the table is fixed to the machine in an almost vertical position and can be rotated. The components are fed into the machine from the front, while machining takes place in the machine's interior.

As the table is inclined by 12°, the components are no longer placed and clamped horizontally, but almost vertically. Once the components are in place, the table will be rotated by 180°. Here, safety is ensured by a scanner that covers the entire area. Thus, the operator will no longer have to wait for doors to open or similar things.



## Technical features:

- One or two 5-axes working units that can be tilted by up to 46° and equipped with various head versions (star-shaped head with 3 milling spindles of 3.5 kW or 6.4 kW, each, or spindle for tool change with 12 kW, HSK-F40)
- Tool changer plate with 12 places moving along the X, Y and Z axes
- Integrated chip conception with chip removal belt and ascending conveyor
- Fully encased milling machine with rotary table and inclined machine bed (thus maximum working area at minimum base area)
- Working area ECO-RS 1 (X, Y, Z): 1,750 x 1,000 x 400 (550) mm
- Working area ECO-RS 2 (X, Y, Z): 2,150 x 1,500 x 600 (750) mm
- Space requirements ECO-RS 1 (X, Y, Z): 5,700 x 2,300 x 2,700 mm
- Space requirements ECO-RS 2 (X, Y, Z): 6,700 x 3,000 x 3,600 mm
- Control Siemens Sinumerik 840D sl with operator interface HMI Operate (Windows 7)



## Customised solutions



### High-tech machining centre for the efficient production of doors from a batch of 1 to series production

The heart of the production cell is a VISION II U T-Sprint with two 5-axes machining heads, a 60 place chain tool magazine and two automatic portal loaders. The components are loaded by one portal, machined on the table and then removed by the other portal.

Machining is controlled by a two-channel system, meaning that working unit 1 machines the component while working unit 2 performs a tool change simultaneously, and vice versa.



### Four machines in one – no downtime for the automotive industry

The ECO 2830 C is a three-column portal machine on a stable substructure equipped with two machining tables, which can be moved independently. The multi-channel technology used permits the different machining groups to be combined in an individual way.

At the front side of the portal there are four 14 kW milling spindles with a 12 place tool magazine, each. At the rear the group of units consists of two 14 kW 5-axes working units and a lateral multi-spindle unit with 25 drilling spindles.



### Machining centre with linear drive for highest precision and dynamics when processing composites

The convincing feature of the ECO 3117 A is the sturdy design of its elements. For vibration damping, its bridge portal and machine bed are filled with special concrete.

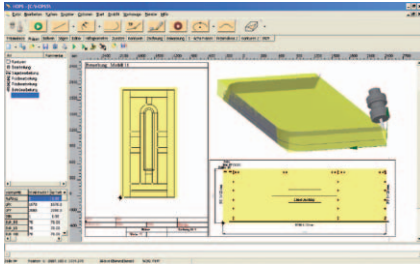
Thanks to its linear drive, the X-axis reaches a travel speed of 120 m/min – a revolution in dynamics and precision. A Renishaw probe with infrared transmission ensures the position of the milling spindle, the calibration of the clamping device position and the measuring of the components and of their position on the machine.



## 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.

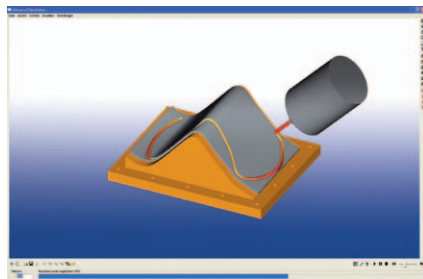
A high degree of safety is ensured by safety distances, approach distances and feed rates specific to the tool. The integrated 3D view shows displacements and the tool position, and presents a clear view of the entire component. Based on its flexible software design, NC-HOPS provides for optimum solutions for artisanry and industry.



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

## 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



## Our application technology – your management consultant

The market is our customer. Customer service is crucial to our success. Only customer contact provides feedback on the appreciation for our products. This is an extremely important incentive for our development and production team. Our application engineers are the interface between software and machine.

- Which unit matches your needs precisely?
- Which tools are suitable?
- How can you increase quality and speed up your processes?
- Which system will provide the best result?

We will be pleased to advise you on the appropriate, efficient and safe utilisation of our CNC-machining centres.

## The customer is our centre point



# Service



## Professional CNC service

Our machining centres are known for their high capacity and availability, very long life and outstanding ease of operation, installation and service. Our service centre, which is in charge of the after sales service for Reichenbacher Hamuel machines worldwide, is at your disposal to help you make optimum use of all these benefits.

## After sales service:

You can contact our after sales service from

**7:00 am to 5:00 pm**

**Customer hotline +49 (0)9561-599-300**

**Spare parts service +49 (0)9561-599-400**



## Premium Service:

Hotline available:

**Monday – Friday from 5:30 pm to 10:00 pm and**

**Saturday / Sunday / Holidays from 8:00 am to 4:00 pm**

- Guaranteed response within 24 hours
- Free-of-charge teleservice via modem
- Technicians also available on weekends
- Spare parts and their immediate dispatch guaranteed

You will receive an authorization number for the Premium Service together with your service contract.

## Preventive maintenance

There is nothing worse than a machine breakdown, as it always happens when everything is urgent!

In order to prevent this, we offer our customers fixed-price maintenance at specified intervals. These intervals can be agreed individually depending on machine utilization. Based on a checklist, an expert will verify and assess the machine and document the results. Thus, the current state of wear can be determined and a breakdown can be avoided by taking specific measures.

## Teleservice

The service centre and the machine or production control computer are connected via modem.

- Faults can be found quickly and unnecessary service operations avoided
- Programming or operating faults can immediately be eliminated
- Specific spare parts can be ordered
- If an intervention in the mechanic or electric / electronic system is required, specific action for error correction can be started

## Customer training

It is in your own interest to have qualified operators for your high-tech machines. Thorough training helps to motivate your staff and provides for a number of other advantages:

- Better skills for the operator personnel
- A shorter commissioning time for the machine
- No downtime due to improper operation
- Full production output already at an early stage
- No unnecessary tests with expensive material

## Retrofit

Modernisation, or retrofit, of machines is the answer for many users to give their machine a “second life”. In order to find a cost-effective solution for our customers, we have investigated the possibilities of replacing the old control system either separately or together with the drive system. In close cooperation with Siemens AG, our service and development department has found several cost-saving and practical solutions.

A modernisation of the machine brings significant advantages:

- Increased availability and productivity
- Easier operation and programming
- Faster machining cycles for intricate parts
- Higher accuracy and memory capacity
- Reduced downtime
- Guaranteed long-term availability of spare parts

# Contact

## Hamuel Reichenbacher group

Reichenbacher Hamuel GmbH is part of the business association Hamuel Reichenbacher. Further members are the HAMUEL Maschinenbau GmbH & Co. KG and the HAMÜL Maschinenbau Plauen GmbH & Co. KG. These three companies act as Hamuel Reichenbacher. As a customer, you benefit from the synergy effects of this partnership.

### WOOD, PLASTICS AND ALUMINIUM PROCESSING

#### Reichenbacher Hamuel GmbH

Rosenauer Straße 32 Phone: +49 (0)9561-599-0 info@reichenbacher.de  
96487 Dörfles-Esbach Fax: +49 (0)9561-599-199 www.reichenbacher.de

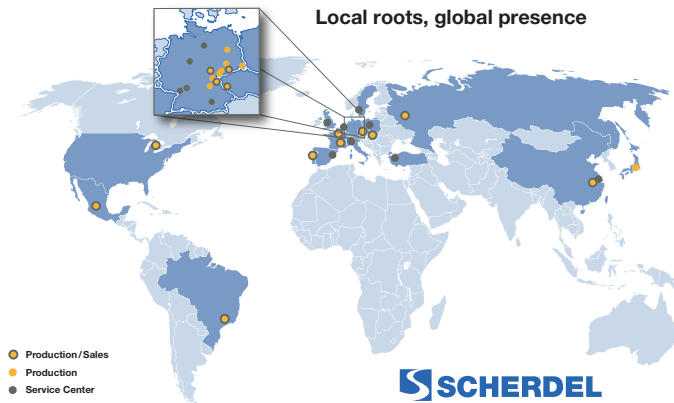
### METAL PROCESSING

#### HAMUEL Maschinenbau GmbH & Co. KG

Industriestraße 6 Phone: +49 (0)9566-9224-0 info@hamuel.de  
96484 Meeder Fax: +49 (0)9566-9224-80 www.hamuel.de

## SCHERDEL group of companies

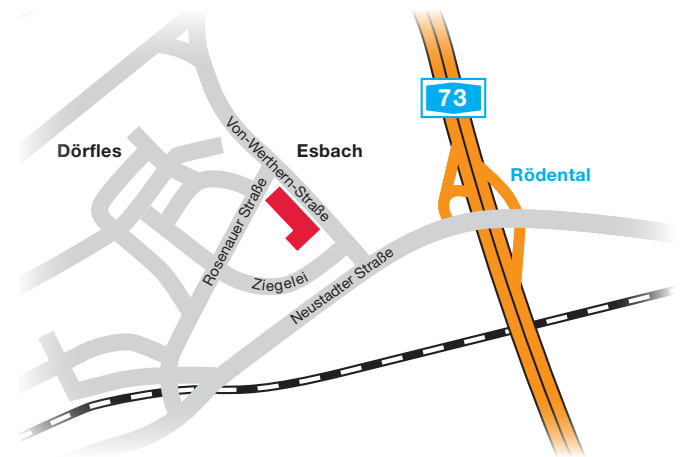
The SCHERDEL group of companies with its headquarters at Marktredwitz in the north-east of Bavaria has gone global featuring 29 locations with 37 production sites and more than 4,000 employees. The members of the SCHERDEL group offer to the market a wide range of products and services.



## How to find us



The Reichenbacher Hamuel GmbH factory is to be found at Dörfles-Esbach, at the north-eastern edge of Coburg.





CNC-technology at its best



*A member of the SCHERDELgroup*

**Reichenbacher Hamuel GmbH**

Rosenauer Straße 32 · D-96487 Dörfles-Esbach

Phone: +49 (0)9561-599-0 · Fax: +49 (0)9561-599-199

info@reichenbacher.de · www.reichenbacher.com

