



Machines, Plants, Systems  
for the Woodworking Industry.

# From the Router to the Processing Centre.

The Genius-20 Series.  
The First Modular System for CNC Stationary Processing.

A large industrial CNC machine (HOMATIC) in a factory setting. The machine is green and yellow. A control panel with a screen is visible in the foreground. The screen displays a CAD interface with a table of data and various control buttons.

Programm	Y-Baugruppe	D-70
Werkstoff	V-Roundrouter	70
Werkz.	Rundmesser	10
Licht-Str.D	Abstrahl	CB-300/250
Spd	Planer	130
Zeit	2-3-Strichung	10
Wk	2-5-Strichung	1

Best Engineering

Additional images include a close-up of a yellow component and a view of a wooden part being processed by the machine.

# Main spindle offering a universal interface for extension when and where it is needed.

With its range of CNC processing centres for the sizing, edge banding and complete processing of flat shaped components, Homag AG holds a leading position in the field of stationary processing. Due to its size, this universal machine model has previously been used almost exclusively by industrial furniture producers.

The completely new machine concept of the Genius-20 series is designed to appeal to users seeking a reasonably priced solution for the processing of shaped components which at the same time offers the capacity for future upgrading.

Any producer investing in a conventional router or point-to-point drilling machine nowadays will find himself unable to upgrade with different units, for example for edge banding, in the future. The reasons for this are primarily lack of know-how in the field of gluing technology, and also a generally order-related machine concept which is not designed to permit modular upgrading.

Both these aspects played a role in the redevelopment of the Genius-20 series, which as a result opens up a whole new dimension in stationary processing technology.

## Provision for future extension

The upgrading capacity offered by the modular interfaces, like the one at the main spindle, allows a router to be simply and cheaply turned into a processing centre including facility for edge banding. In this way, the machine can be adjusted to operating requirements at any time.

One of the most notable features of the machine range is its capability to grow hand in hand with the ongoing development of processing units. Customers can be provided with an update for their Genius-20 at any time – giving them what amounts to a new machine.

## Economical and efficient.

These are the qualities to emerge from a machine concept which in practice offers state-of-the-art structural elements, optimum traversing dynamics, precision and outstanding operating reliability.

The resulting minimal processing times are achieved through

- Maximum traversing speed of 80 m/min
- Maximum processing speed of up to 30 m/min
- Tool changeover time 2-3 secs.
- Changeover time for complete units 5-7 secs.

The outstanding economy and flexibility of the machine are further enhanced by direct glue application during the edge banding process at appr. 20 m/min. The result is elimination of the costs and trouble involved in using pre-coated edges.

Units like the pneumatically tracing flush trimmer additionally make use of the third-stage pneumatic interfaces.

The fourth interface is provided by the main spindle to cater to practically any future unit development. This permits units to be supplied both by the main spindle, pneumatic and electric/electronic (24 V/220 V) drive system for an additional separate unit drive.

Field bus system with fibre optic technology for trouble-free signal transmission between the control system and the switching element.

Water-cooled high-performance spindle with hybrid bearings (ceramic) for lower friction, greater rigidity and twice the service life.

Precise, wear-resistant adjustment of the compound slide (y/z axis) by means of a rack drive system.

Tool interface HSK-63 B for maximum static and dynamic rigidity, changeover and repeat accuracy, torque transmission. With high-speed capability.



Simple servicing through remote diagnoses of the drive systems.

Fixed, ultra-rigid vibration-absorbing y-axis extension arm for maximum space savings.

Short scanning time in conjunction with SERCOS interfaces, achieving pin-point precision and optimum traversing dynamics.

Simple servicing through remote diagnosis of the drive systems.

## Reasonable in price and upgradable.

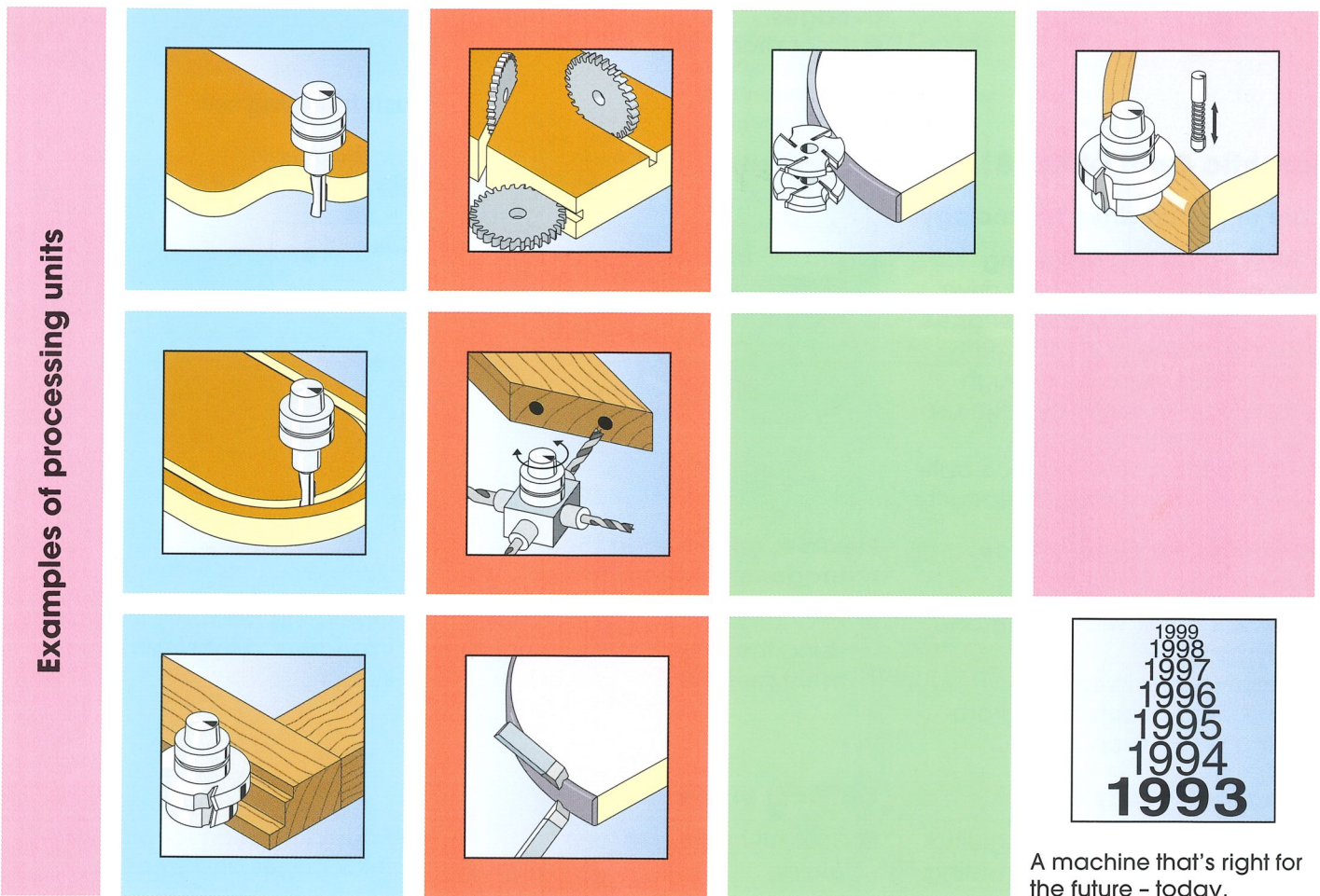
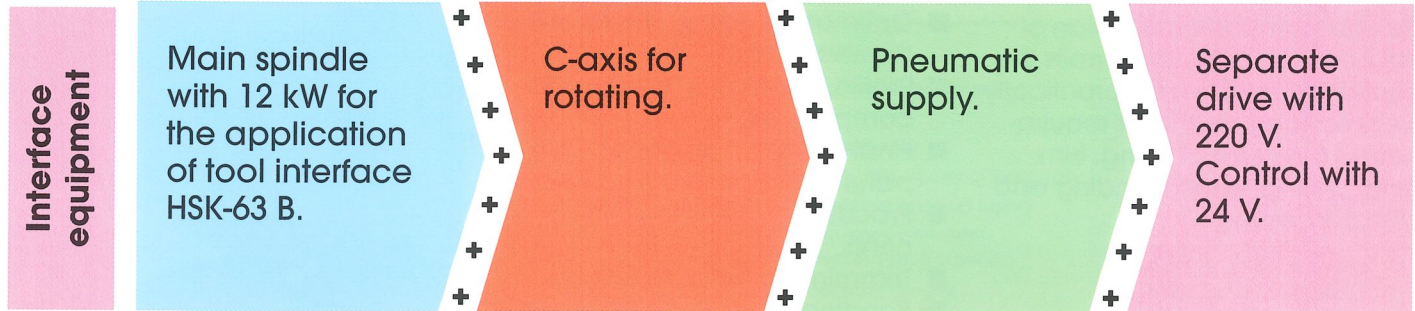
The Genius-20 series is designed to permit four different upgrading stages. Even the first, with a 20-slot tool changer working in combination with the 12 kW main spindle, turns the machine into a high-performance router.

Due to the main spindle's universal interface, a processing unit with an interface for a C-axis, for example for drilling or grooving, can be integrated in a second stage at any time.



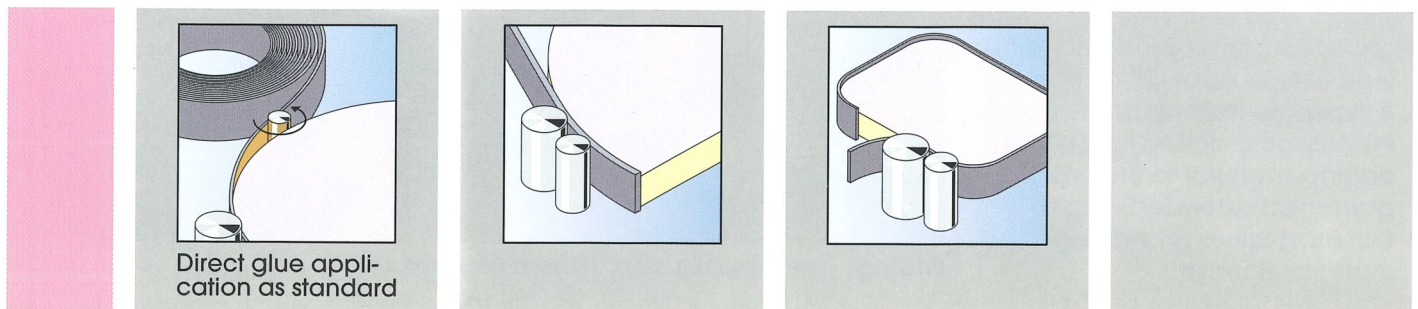
Main spindle with universal interface.

**Stage-by-stage upgrading using the modular interface.**



A machine that's right for the future - today.

**The gluing unit can be upgraded irrespective of the modular interface at the main spindle.**



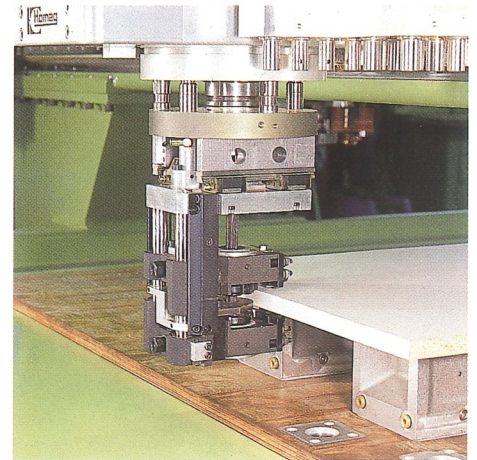
# Solutions for practical application with a wide choice of unit modules.

## Individual, universal.

The comprehensive selection of tool and unit modules permits the creation of solutions for practically every conceivable work requirement in the fields of sizing, trimming, drilling, edge banding and finish processing.

Examples:

- Optimum dividing of irregular panel shapes.
- Profile trimming of solid wood components.
- Finishing of unprocessed MDF panels.
- Processing of frame components.
- Trimming of door panels.
- Banding of veneer and plastic edges.
- Door processing etc.

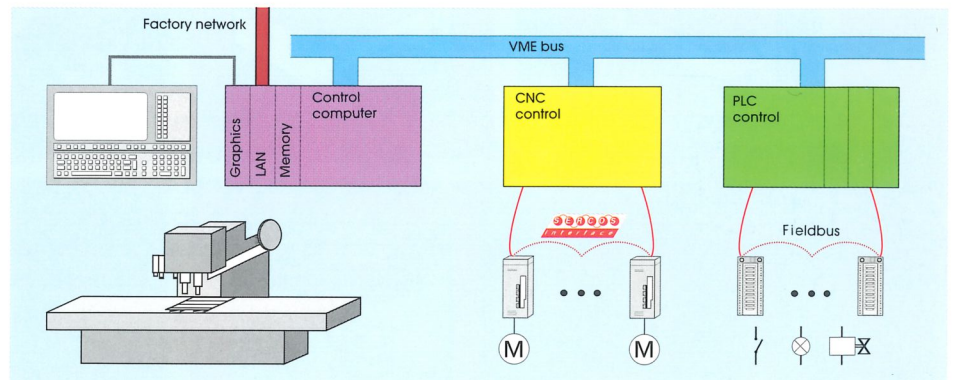


**Flush trimming unit.**

## Homatic Control NC 81.

**State of the art drive technology:**

- Highly dynamic traversing properties due to digital drive systems and SERCOS interfaces.
- Fast servicing and maximum operating reliability through reduction of wiring and the use of field bus technology.
- Fibre optic cables provide optimum data transmission security.



**Optimum user convenience:**

- Ergonomically designed control panel with membrane keypad.
- Graphic user interface.
- Workshop-oriented programming "Woodwop".

**Flexible, open-ended tool management system:**

- Reduction of changeover times using the chaotic tool management method.

- Operating reliability through interfaces to tool identification systems.

**Gluing technology:**

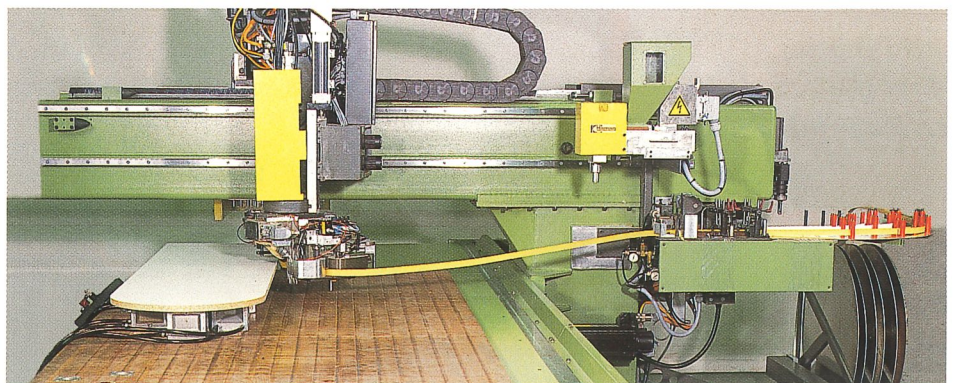
The central element of the gluing unit is the gluing head, consisting of

- Pressure and controlled post-pressure rollers with constant contact pressure at right angles to the contour.
- Direct hot-melt glue application on the fed edging material at a feed rate of appr. 20 m/min.
- A separate melting unit.
- Pre-snipping station for cutting edging material to the programmed extended length.
- Roll magazines for edging material storage.

**Optional extras:**

- 360° all-round butt joint gluing.

- Edge activation for processing thick edges and small radii.

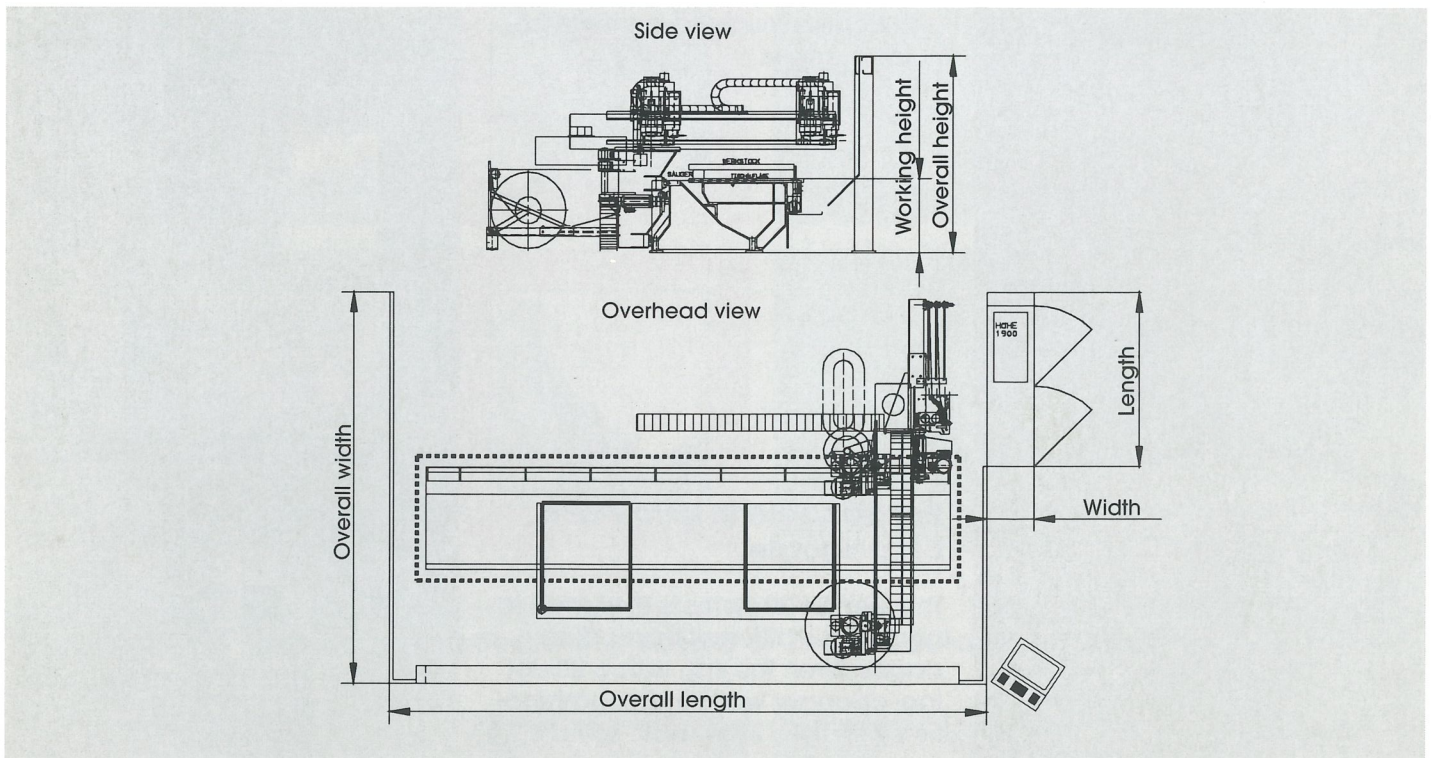


**Gluing, presnipping station and magazine.**

# Specifications.



Specifications	Homag machine type BAZ 20/../. ..		Specifications	Homag machine type BAZ 20/../. ..		
<b>Machine dimensions</b>			<b>Connected loads</b>			
Overall length with safety barrier	mm	../30/.. 7220	../50/.. 9220	Operating/control voltage	V	380/220
Overall width with safety barrier	mm	../12 4600	../14 4800	Frequency	Hz	50
Overall height (height of the extraction port)	mm	2150		Rated current appr.	A	76
Working height (table height)	mm	820		Total connected electrical load appr.	kW	43
<b>Weight</b>			20/30/..		20/50/...	
Overall weight gross appr.	kg	9000	10000	Recommended back-up fusing	A	100
<b>Working dimensions</b>			<b>Miscellaneous</b>			
Workpiece length				Switch cabinet: Length	mm	2000
■ BAZ 20/30/..	mm	appr. 3300		Width	mm	500
■ BAZ 20/50/..	mm	appr. 5300		Height	mm	1900
Workpiece width				Extraction output units at 35 m/sec.	m <sup>3</sup> /h	5000
■ BAZ 20/.. /12	mm	appr. 1200		Extraction port	mm	224
■ BAZ 20/.. /14	mm	appr. 1400		Machine extraction resistance appr.	mm WG	150
Workpiece length with alternating feed				Compressed air connection	bar	6
■ BAZ 20/30/..	mm	appr. 1000		<b>Note:</b> Not all details of our specifications and photos are binding. We reserve the right to make changes in the interests of technical progress.		
■ BAZ 20/50/..	mm	appr. 2000				
Workpiece thickness	mm	appr. 50				
			Traversing speed			
			x/y-direction		m/min.	max. 80
			z-direction		m/min.	max. 40



## Homag Maschinenbau AG

72296 Schopfloch  
 Tel. (0 74 43) 13-0  
 Fax (0 74 43) 1 33 00  
 Tx . 7 64 205 homa d