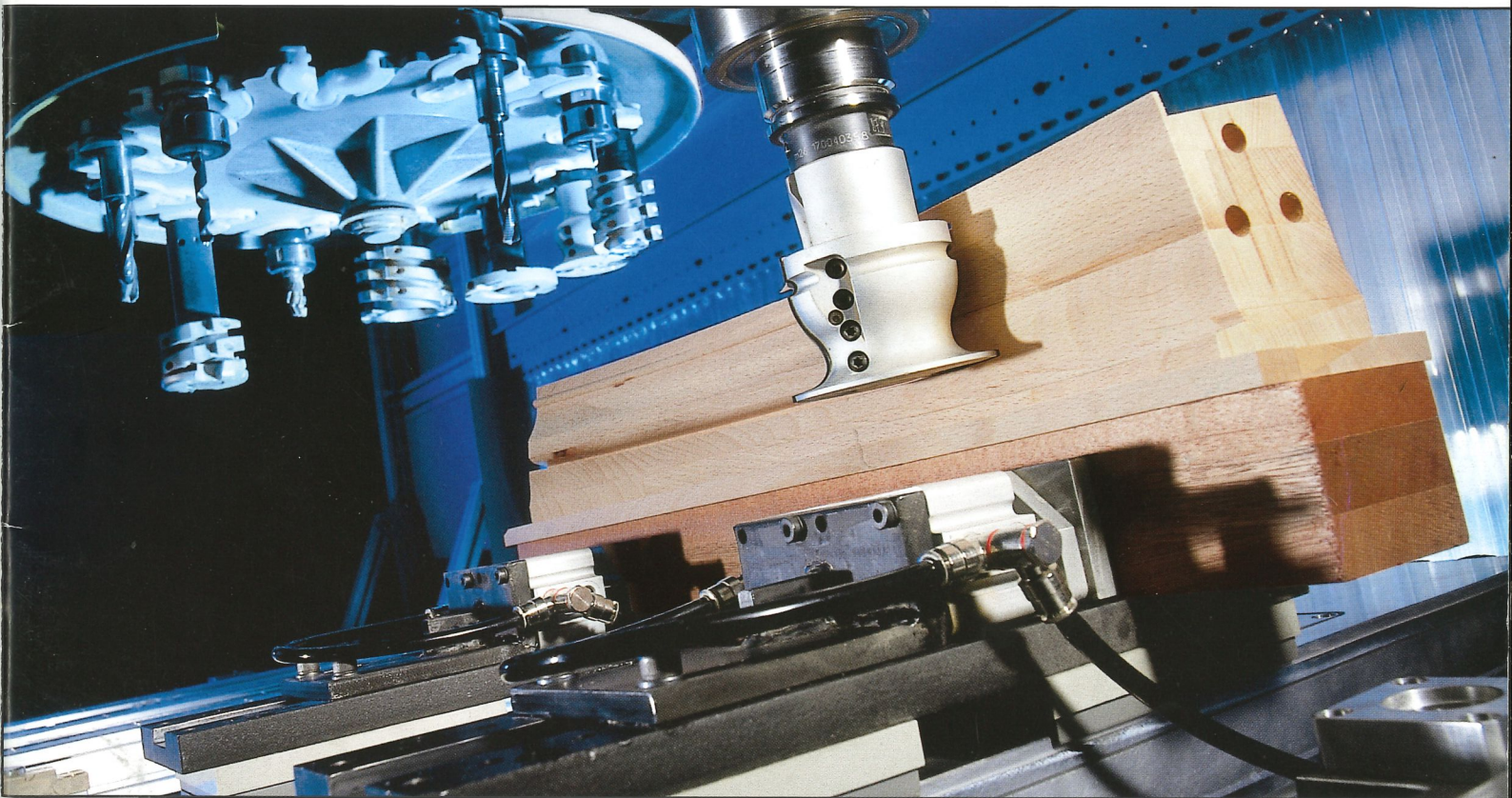


## Gantry series BOF 700



Optimat | profi line | power line



# A whole new standard in flexibility: Gantry series BOF 700

The growing complexity of customer requirements, new products and dwindling delivery periods call for a process engineering solution which is both flexible and efficient. The new BOF 700 gantry series addresses these demands with a whole new standard, combining high flexibility and high output for the first time in a gantry machine requiring a low financial investment. The unique flexibility achieved by the series is made possible by modular-based unit technology and the varied equipment possibilities offered by the gantry design. Coupled with the use of two independent processing tables and up to three processing units (**profi** line), the BOF 700 gantry series opens up exciting scope for above-average productivity, flexibility and quality.



Optimat BOF 711



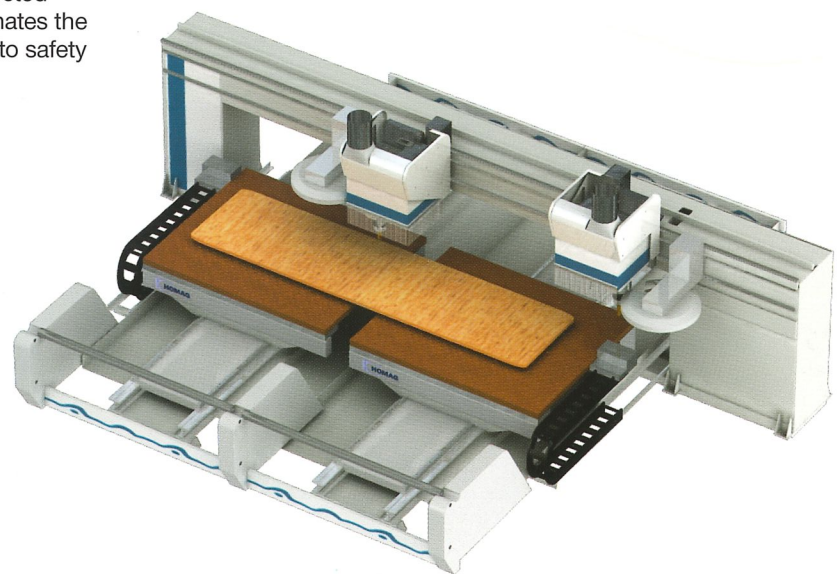
# BOF 700 – the direct route to greater productivity

## Save time with faster set-up periods

The special gantry design with its two independently operating processing tables and up to three independent processing units offers a number of decisive benefits: It is optionally possible to process two different workpieces simultaneously or to use the units in an alternating mode at the two tables without the need for a tool change. The benefit here lies in drastically reduced non-productive and processing times.

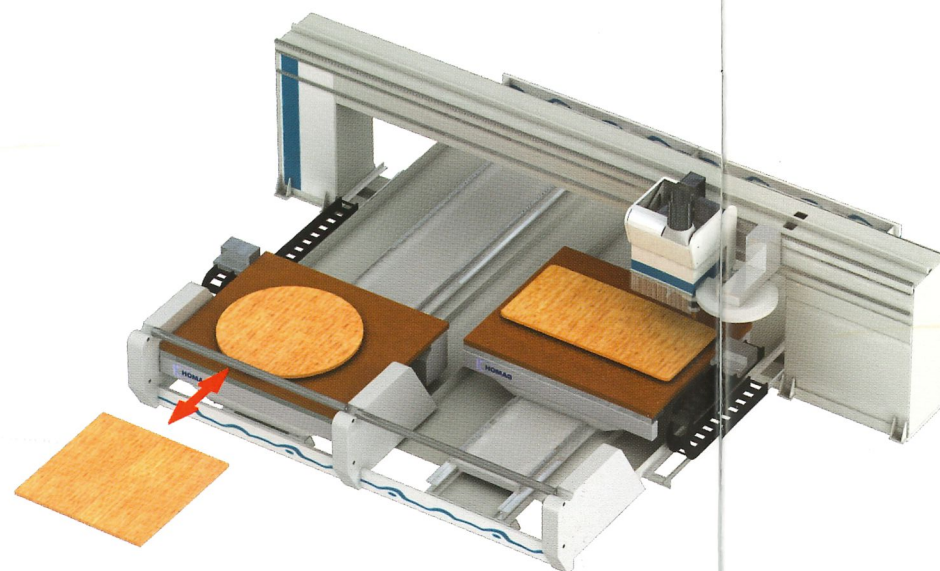
## Save space through a compact gantry design

Depending on your processing requirements, both tables can be used independently or in tandem mode: Either for alternating processing (while workpieces are positioned on one side, production is in full swing on the other), or for processing large-scale workpieces in a minimum of space. The gantry design cuts down on distances covered by the operator, as the work areas for the two tables are directly adjacent to each other. The patent-protected safety monitoring system eliminates the need for extra space allocated to safety devices or step mats.



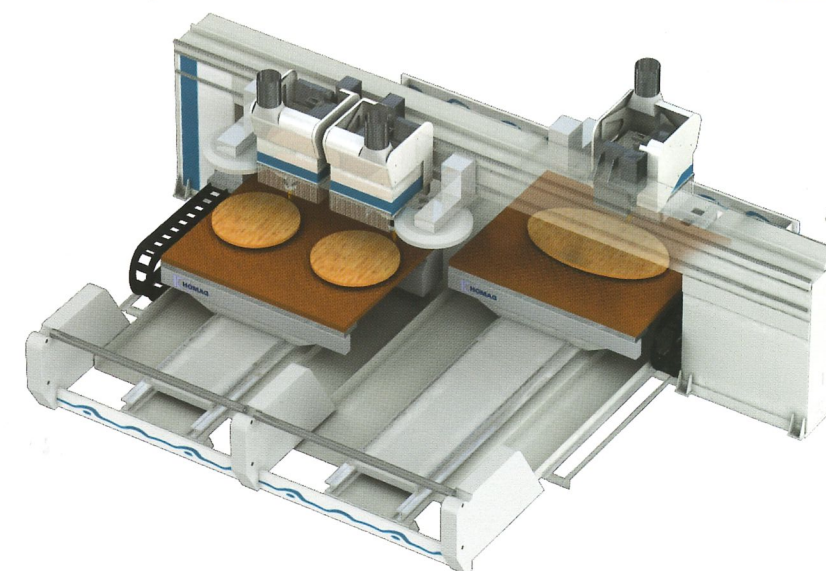
## Individual mode and fast tool change

The two spindles are deployed simultaneously to process a single workpiece. While one continues to work, the other spindle engages a new tool and moves into position, drastically reducing downtimes. For large workpieces, the two tables can be used together in tandem mode.



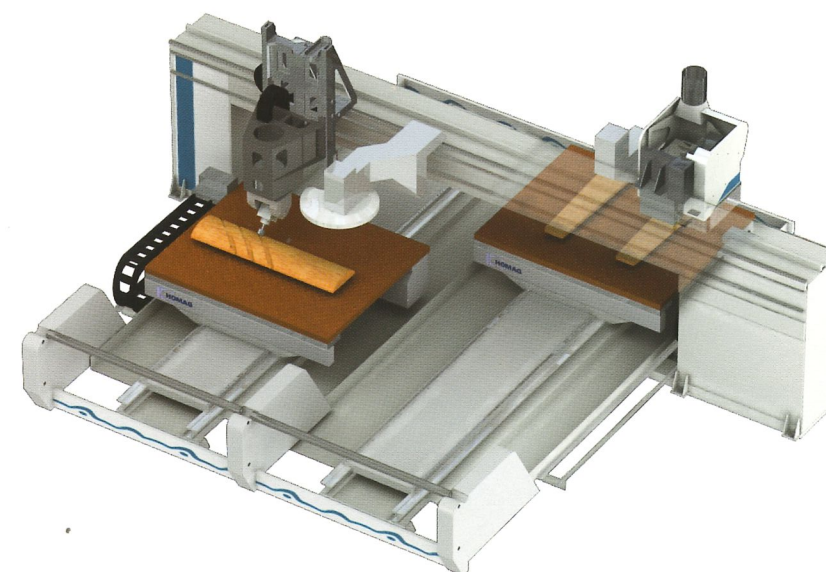
## Alternating mode to minimize set-up times

With simultaneous workpiece changeover on one table and workpiece processing on the other, set-up times for workpiece changeover are eliminated.



## Synchronous mode

Two spindles process two workpieces synchronously on one table – which means that the output is doubled.



## Independent mode

Two or more spindles process different workpieces independently of each other on the two tables. This is also possible in conjunction with a 5-axis spindle.

## Low-vibration design for optimum quality

The extremely rigid gantry design copes easily with highly dynamic acceleration. As a consequence, output is increased and vibrations are reduced to such a degree that optimum routed patterns / workpiece surfaces are achieved.

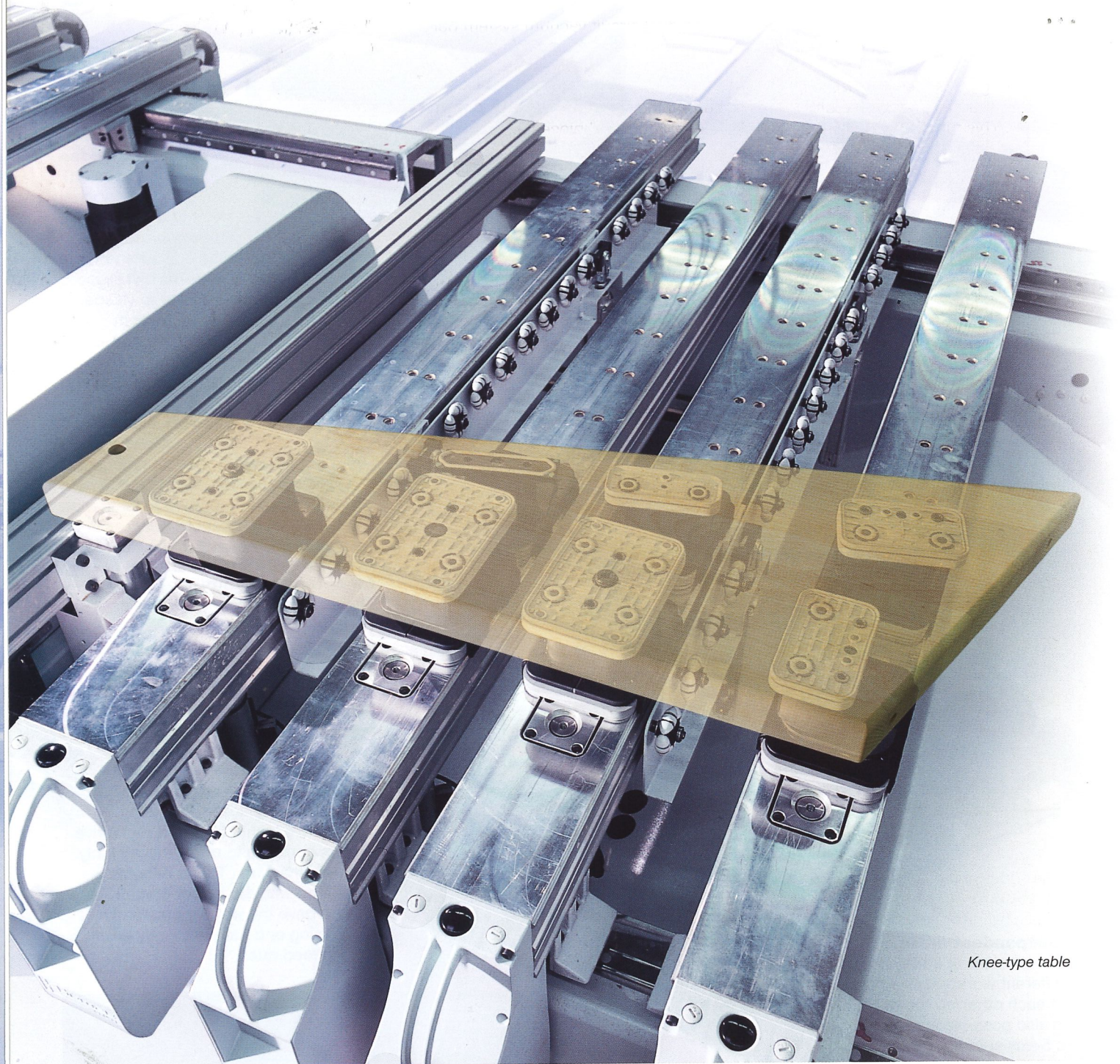
## Maximum precision even for complex routed geometries

Precise linear guidance systems, digital drive technology and rack drive system combine to make this a highly dynamic machine. These benefits combined with the power control system pave the way for outstanding positioning and path accuracy even at high feed rates.



Simultaneous processing of a stair step using a tracing unit, and a curved handrail element using a 5-axis spindle (background).

# Table options to address your needs



*Knee-type table*

The two independently operating tables can be configured just the way you need them from any of the four available options.

## **Clean and fast: The knee-type table**

This is the ideal answer for flexible manufacturing. Every knee can be simply adjusted by a quick manual operation. The benefits: Hoseless vacuum system for a variable number of suction cups. Precise fixturing of parts on the highly rigid knees permits

pin-point processing precision at any time. Both ends of the knees are fixed by guide carriages, permitting them to be moved without jamming. The conveyor belt for automatic waste piece disposal is an optional extra.

To cover wide-ranging requirements, a large selection of clamping elements is available. For details, please refer to our unit and clamping element catalog.

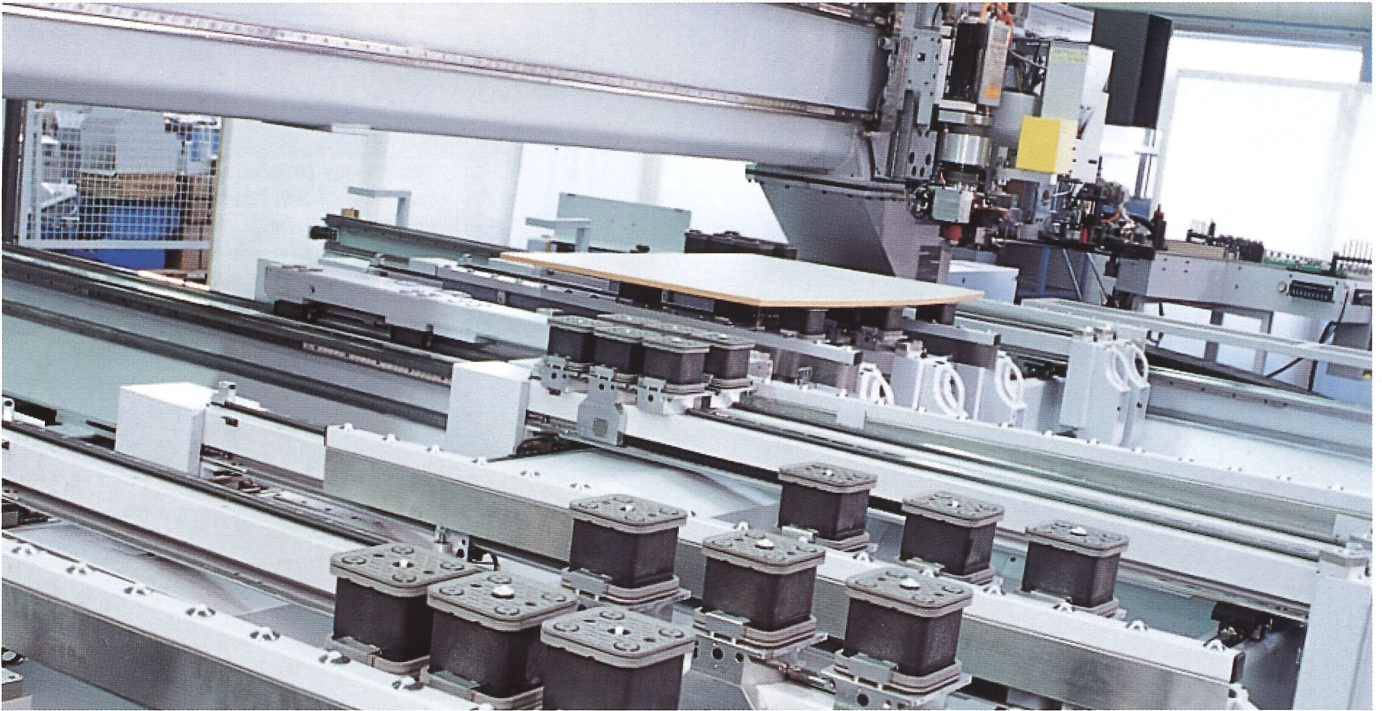
## **Workpiece positioning**

Stop pins are the precise standard solution for fast, simple workpiece positioning. To adjust the clamping fixture to each individual product, we offer a wide range of different clamping elements. These can be positioned using a LED display integrated in the knees, or using a ceiling laser. A ceiling laser for additional indication of the workpiece contours is optionally available.

**Increased input through flexible clamping systems**

The development of a new exclusive suction cup platform for use with the knee clamping system means it is now possible to move a hoseless suction cup along the knee without the need to worry about the integrated suction points. This functional feature is made

possible by a system of chambers which suppresses leaks between the suction point and suction cup. The dual-circuit vacuum system permits the suction cup to firstly be fixed, and then in a second stage the workpiece to be fixed. This does away with unwanted movement of the suction cups when workpieces are positioned.

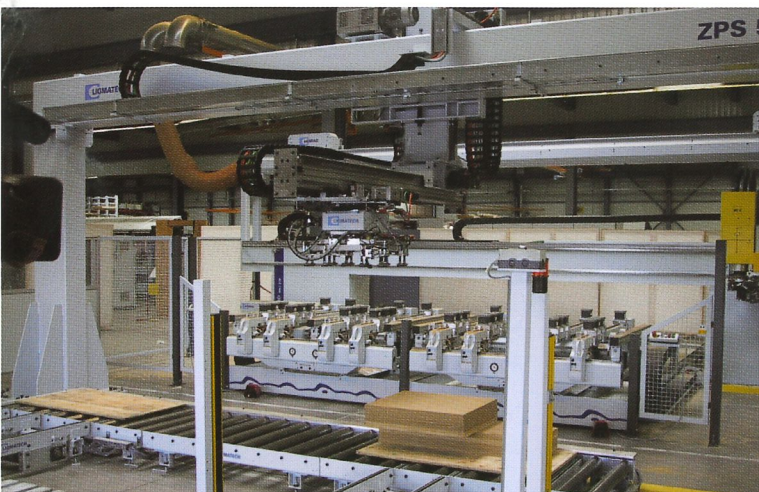


**Fully automatic: the patented AutoClamp knee table**

The newly developed AutoClamp knee-type table allows automatic table set-up including precisely positioned clamping elements.

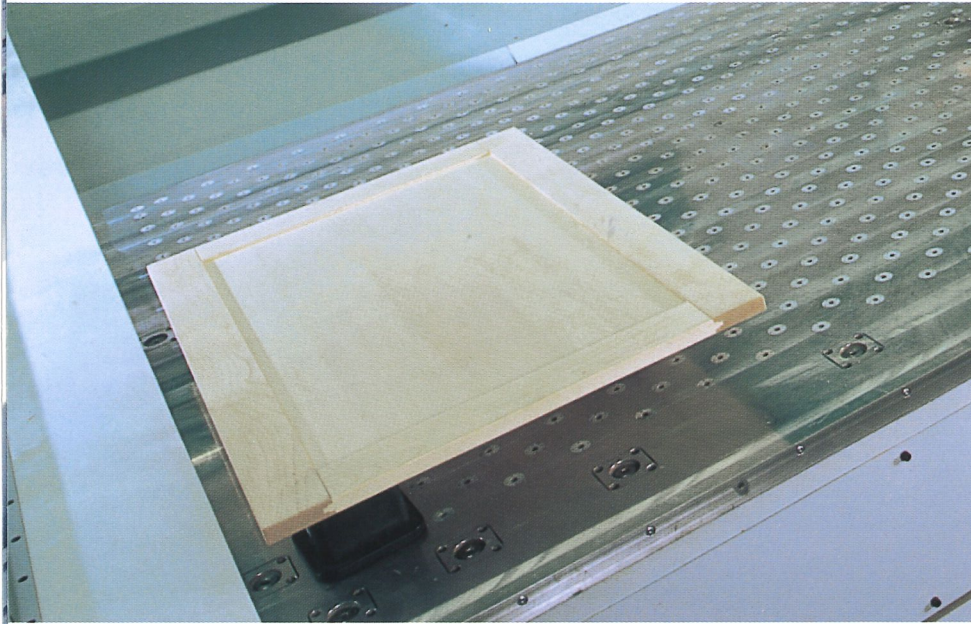
The benefits in practice: Resetting the work table during workpiece change-over reduces downtimes and ensures high output even for batch sizes as small as 1. It also permits upgrading to create a production cell.

Different suction cup shapes can be used to accommodate varying workpiece geometries.



*Production cell with linear feeder from Ligmatech*

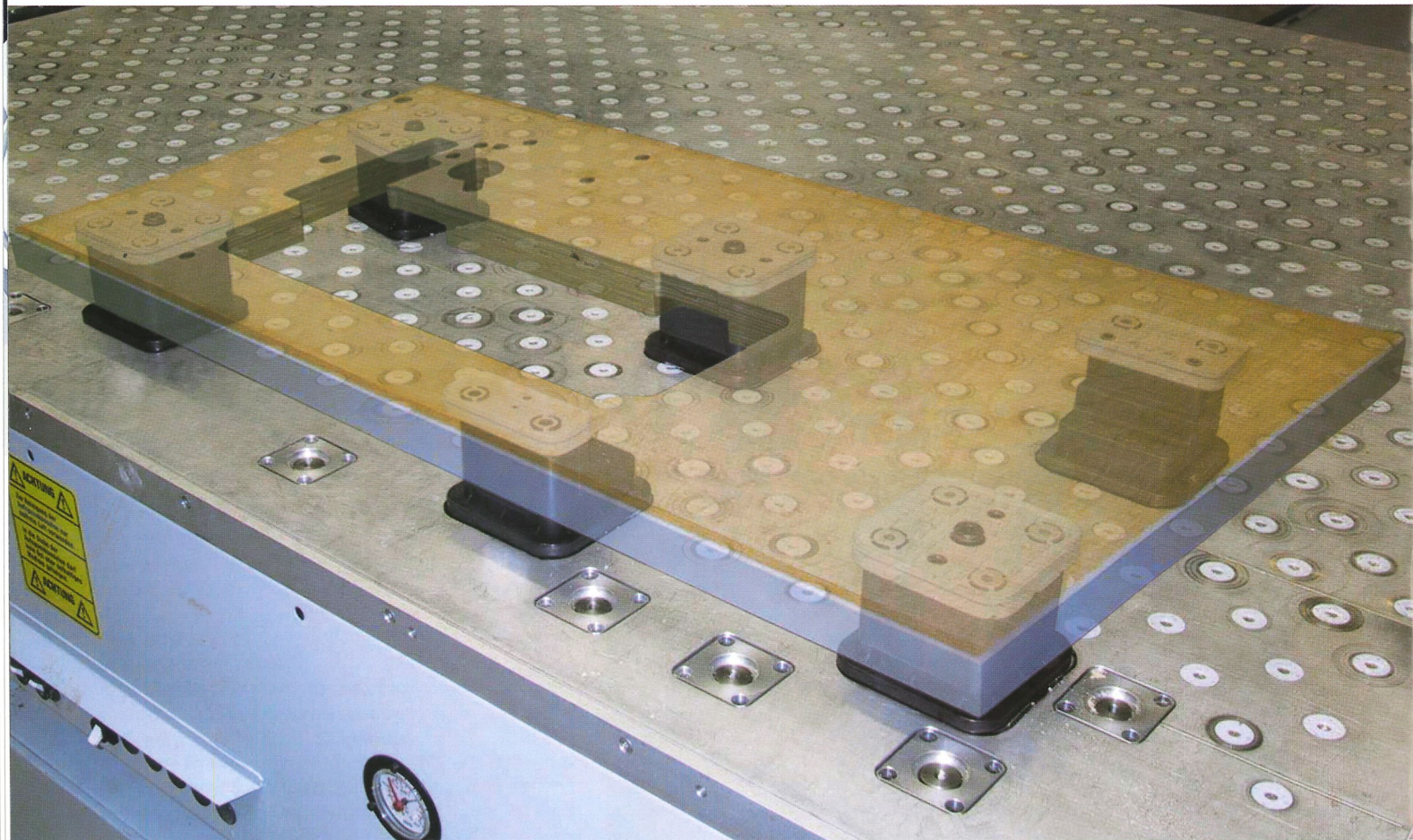
# Unfettered freedom – the GA table



GA table

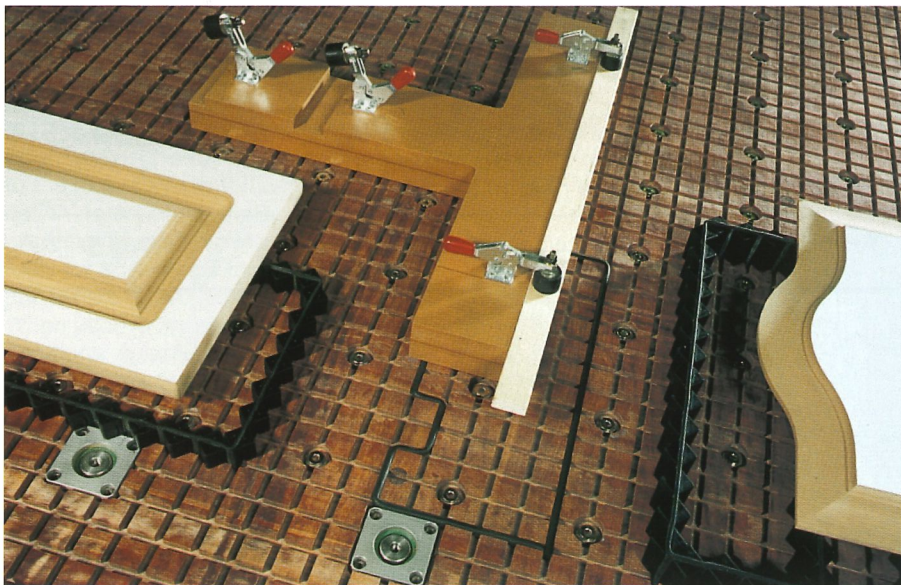
## Flexible solution: The GA table

The GA table features a hoseless vacuum system with solenoid valves. The vacuum is created by two low air pressure stages and is used to suction the vacuum clamps to the GA table and the workpiece to the suction cups. Each individual suction cup can be optionally positioned. The smooth surface of the table allows the easy removal of waste pieces. The extensive clamping element catalog opens up scope for a wide range of applications. GA – the innovative table version exclusively from Homag.



GA table with sewing machine workpiece made of 40 mm thick multiplex plywood

# Grid-type table – the universal standard solution



Grid-type table

## The grid-type table

This table version permits precise, flexible adjustment of the vacuum suction surface to the contours of the workpiece: With the sealing cord version, the entire workpiece surface makes flush contact with the table. In case of the optional plug-in module (pod), the workpieces are clamped 20 mm above the grid table to allow for processing the narrow edges. Stop pins or fences (optional) are available to support precise workpiece positioning on the work table.

## Nesting

The grid-type tables can also be combined with high-powered vacuum pumps as an ideal solution to the problem of workpiece clamping with dummy boards for nesting processes. For this application, we offer a specially developed optional software solution (WoodNest).

Grid-type table with fences  
for flexible workpiece positioning

Suction cups for the  
grid-type table



# Spindle control for perfect results

## Highlight on "spindle technology"

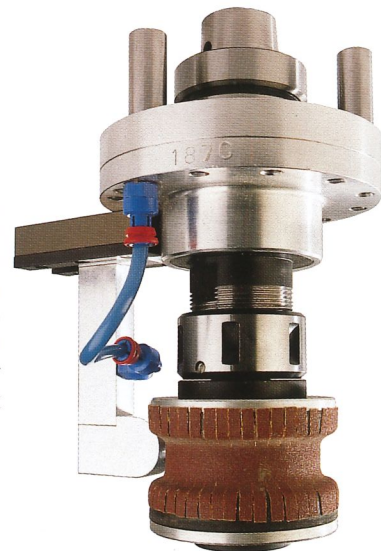
The use of a controlled spindle featuring electronic speed monitoring offers a whole range of benefits:

- Electronically monitored power input protects the spindle from damage due to non-homogeneous materials (such as knots in the wood)
- HSC technology for high feed rates and optimum surface quality due to speeds of up to 30,000 rpm
- No loss of speed under load, guaranteeing a consistent cutting rate and surface quality
- Full torque even at low speeds (e.g. when sanding)
- Fluid cooling in the spindle for low temperatures and a long service life
- Highly precise standardized locating interface HSK 63F
- Three-dimensional interface for
  - Power transmission
  - Optional C axis (the units inserted in durable ceramic spindle bearings can be rotated and swivelled at will to produce cuts and boreholes at any angle)
  - Pneumatic transmission (e.g. compressed air to blow away chips or to control tracing tools)

> <b>Main spindle</b>	External drive by controlled main spindle with 7.5, 14.5 or 21.0 kW
> <b>C axis</b>	C axis for rotation (optional)
> <b>Pneumatics</b>	Compressed air supply



Retainer for sanding discs, for example for sanding solid wood. The sanding disc segments are continuously cleaned by a pneumatically powered air jet



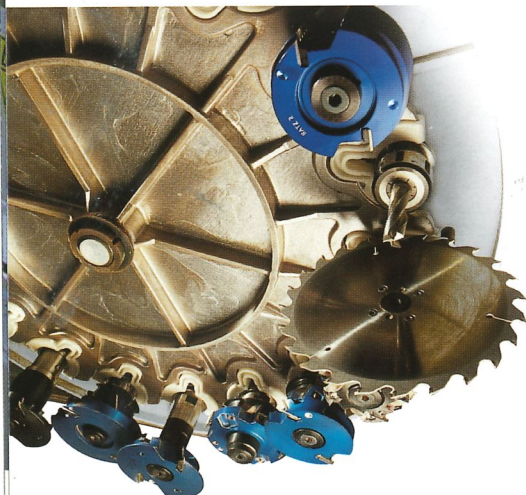
## Performance on demand: The tool changer

The 12-slot plate changer is a cost-effective solution for the provision of up to 12 tools and units (optional 18-slot version available).

The patented interface allows you to continually extend your processing repertoire. For details of the wide range of units available for use with the interface, please refer to our separate unit and clamping element catalog.

## The Homag added extra

The gantry BOF 700 is also available exclusively from Homag in a BAZ 700 version including edge banding and finish processing.





# 5-axis spindle

## 5-axis spindle (profi line)

for high-performance 3D processing operations afforded by direct access to the tool changer. Wide-ranging application possibilities, for example by exchanging saws for shift cuts, routing tools for engravings or for processing curved components.

When used in combination with an additional spindle (see page 5), output can be maximized by processing several workpieces simultaneously.



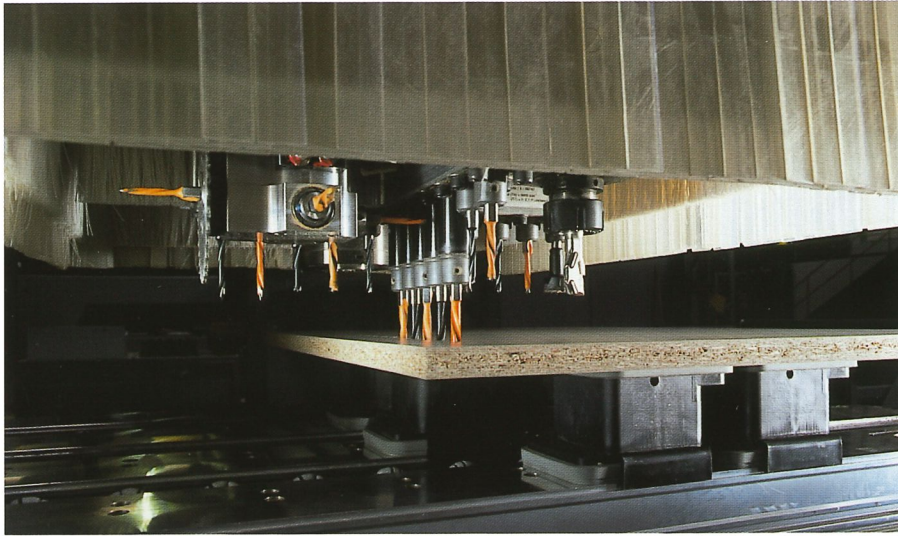
*Sizing cuts in curved inner facings*



*Precision routing of inner facings*

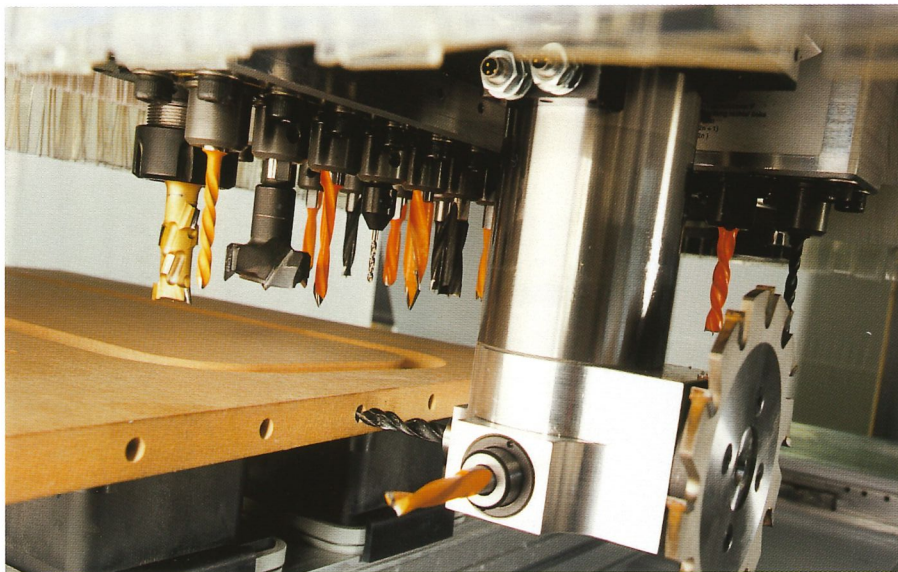


# A drilling head with an extra dimension



## Upgradeable drilling head

The modular structure of the drilling head optionally encompasses either 12 or 17 spindles. The double spindle bearings lend the drilling head greater resistance to stress. In addition, one or two adapter units can be mounted, allowing more tools to be used without any tool change, or it is possible to extend the number of vertical spindles up to 29.



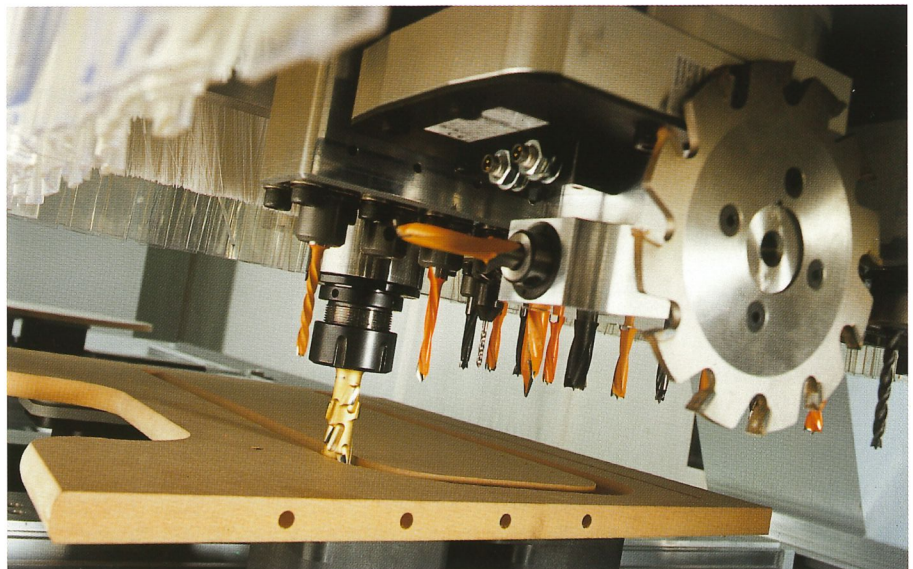
## Adapter 4-spindle drilling head + saw

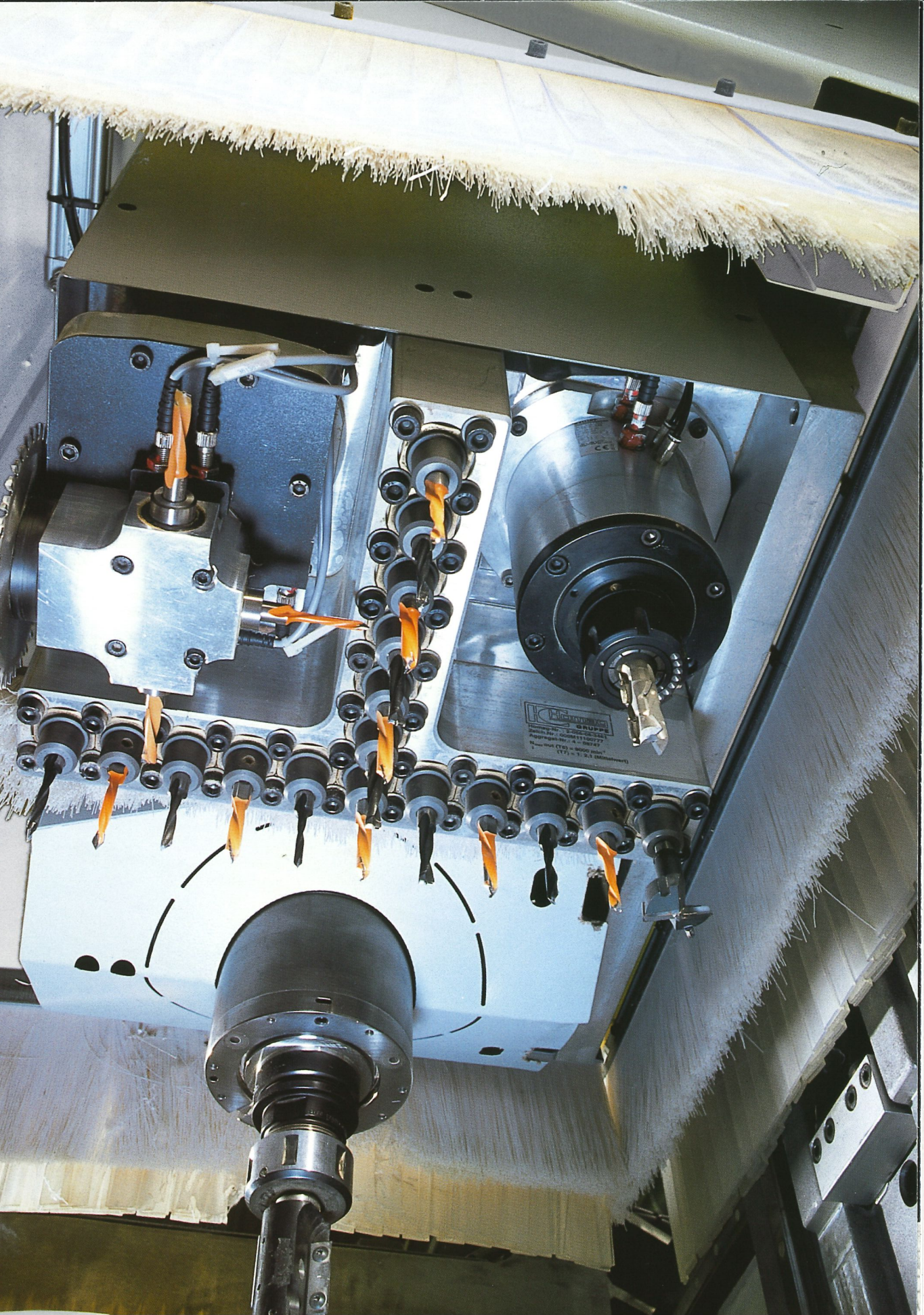
Three drills of different diameters for horizontal boreholes and a circular or grooving saw blade can be optionally deployed in the X and Y direction (0-90 degree swivel facility).

For details of other available adapter units, please refer to our unit and clamping element catalog.

## Adapter routing spindle

To reduce downtimes, an additional routing tool can be deployed directly without the need for tool changeover.





# Simple control – automatic optimization

The Homag **power** control system PC 85 is an open-ended and flexible control system for highly complex applications coupled with outstanding operating simplicity. The latest generation permits combination of all operating modes (alternating, synchronous and independent operation). Nesting of different program steps (variable table assignment of spindles and tool change optimization) is effected while processing takes place as a result of intelligent process optimization (**IPO**), meaning that efficient production is possible from as low as batch size 1.

To allow the programs to be accessed in accordance with the workpiece sequence, an integrated job list control system is provided.

## WoodWOP – rationalization through fast programming

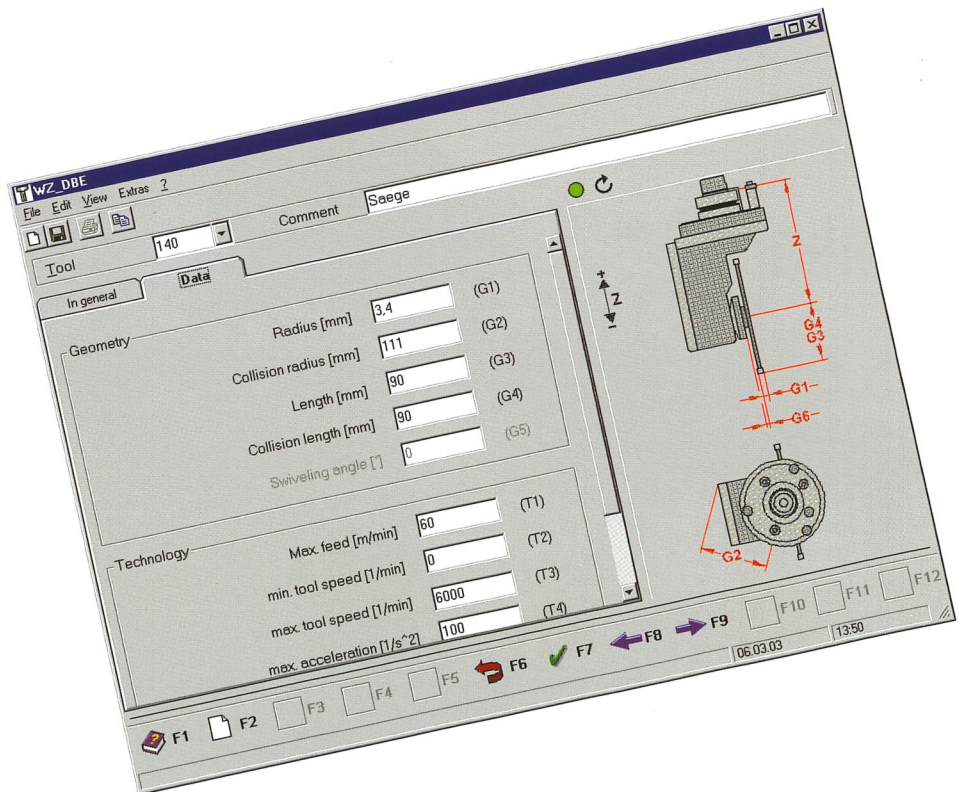
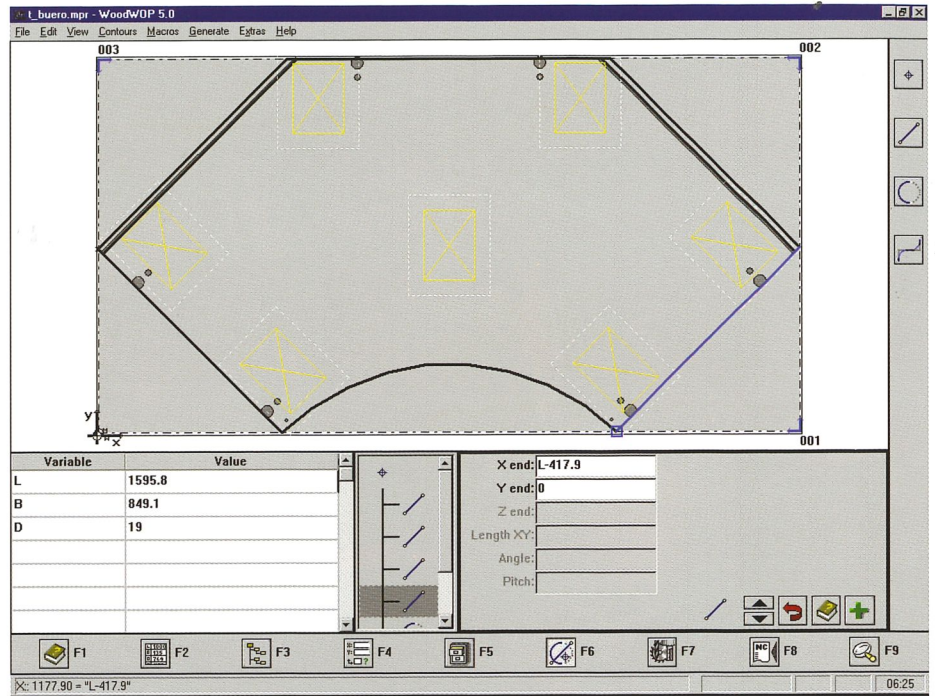
The world's most popularly used programming system in the woodworking industry offers outstanding support for optimum machine deployment. Starting from the graphic tool database as an overview for existing tools through to the adoption of CAD drawings and data from trade-specific software packages (optional).

## Machine data acquisition

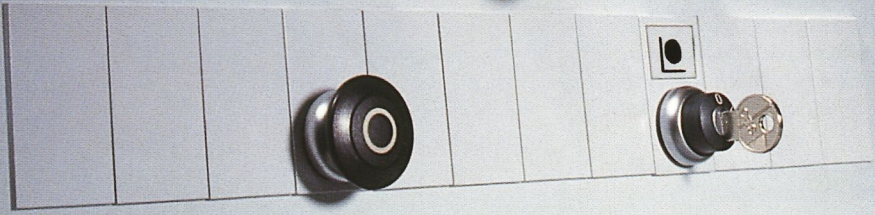
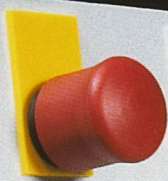
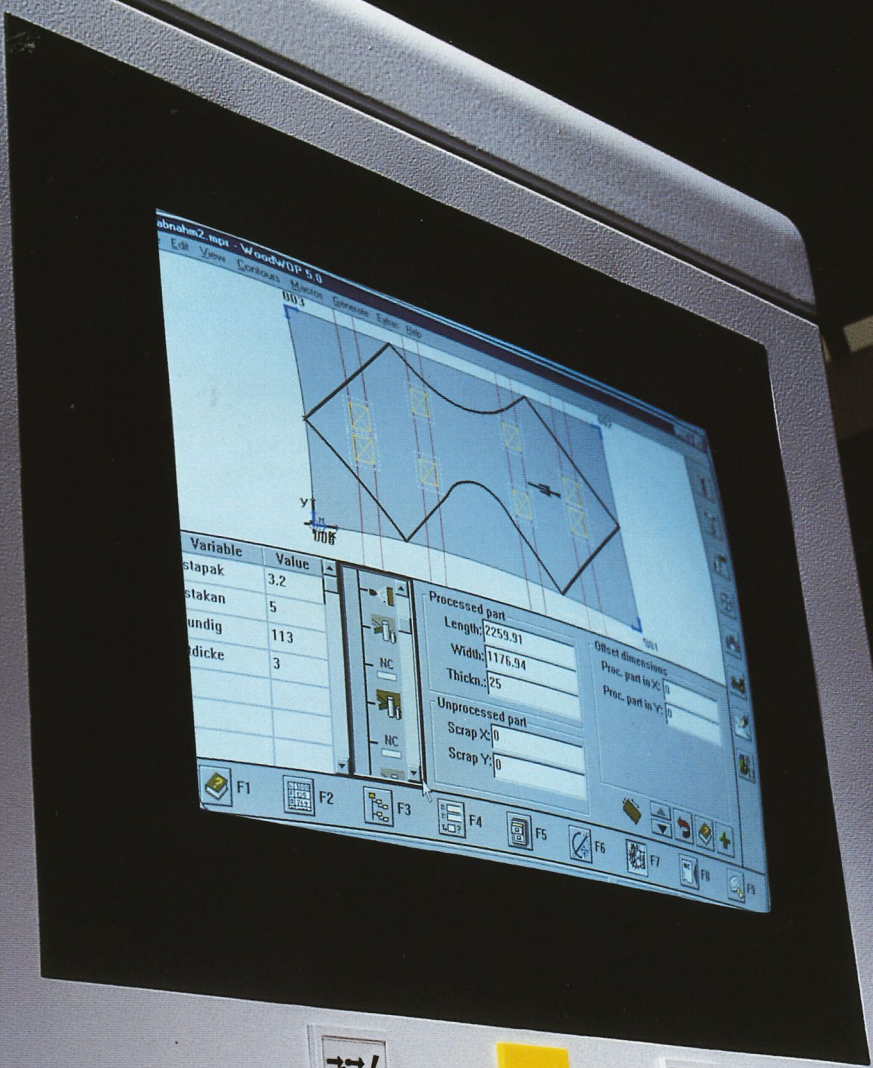
Alongside a reliable machine, high performance is dependent upon environmental factors. To analyze and optimize organizational integration and material flow, the PC 85 control system comes equipped with a basic machine data acquisition version as a standard feature. A professional version is optionally available which opens up the scope for detailed evaluation and feedback to higher-level management systems.

## Tool service life determination

In order to cut ancillary costs, a tool service life determination is optionally available. This allows you to optimize your tool inventory and the associated upkeep costs.



HOMAG



# Software solutions from Homag

## Integration made possible

Interfaces are optionally available which permit the integration or link-up of trade-specific software packages. This allows utilization of existing data from the production engineering department.

## Wood Design Package

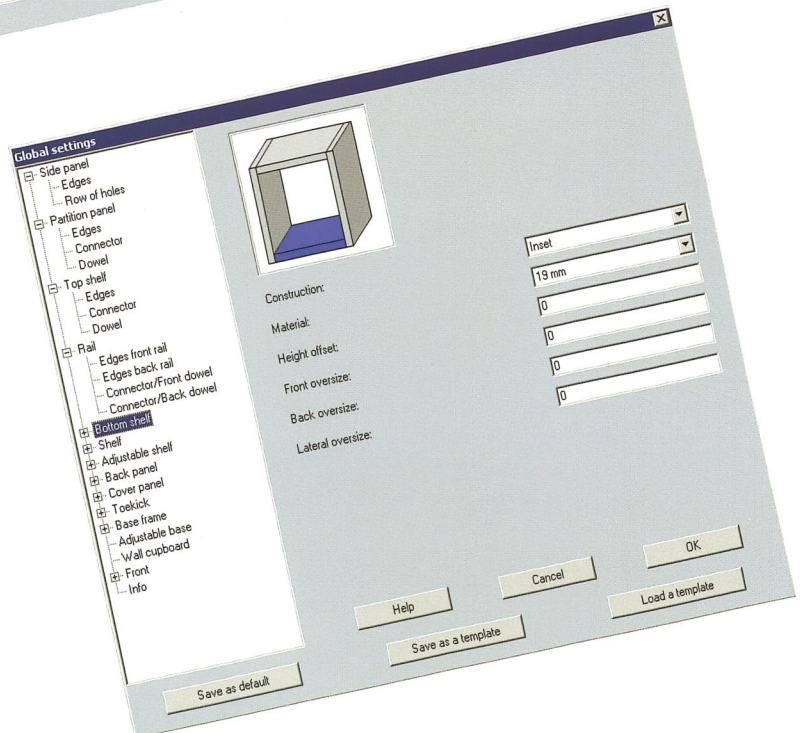
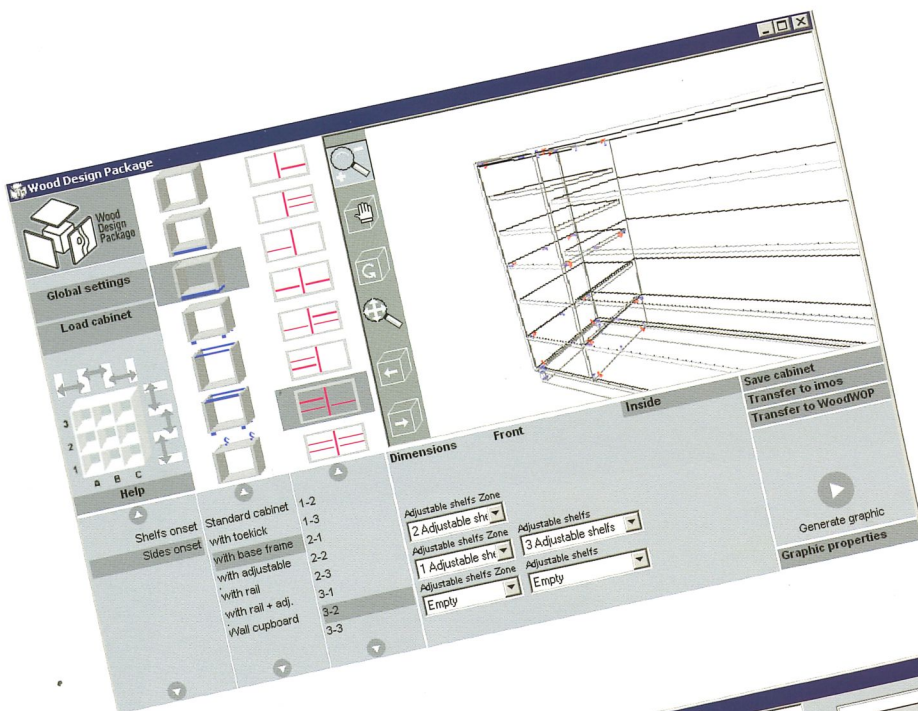
The Wood Design Package allows the fast graphic entry of case furniture designs into the system.

## WoodScout – Help in a language you understand

In case of faults, the unique diagnostic system (optional extra) provides an invaluable aid, graphically displaying the location of the fault at the machine and releasing an error message in comprehensible text.

## All from a single source

The broad performance spectrum of WoodWOP is supplemented by a range of additional software products. For example the special WoodNest software for nesting parts in order to optimize abatement. Use of the same operating principle and service from a single, reliable source guarantee optimized completion. Please apply for more detailed information.



# It pays to be a Homag customer



## **Homag is everywhere**

A well-developed servicing, sales and dealer network means even greater proximity, rapid response and improved customer support - all over the world.

## **Practically-oriented training**

Although Homag products are designed for outstanding operating simplicity, thorough training does help cut down on commissioning times, reduces scrap from trial and error, helps develop the skills of the operator and generally improves efficiency. With this aim in mind, customer training courses are held in a number of languages in our own training center.

## **Careful maintenance**

Scheduled, correctly performed maintenance helps reduce costs and increases the productivity and service life of plant and machinery.

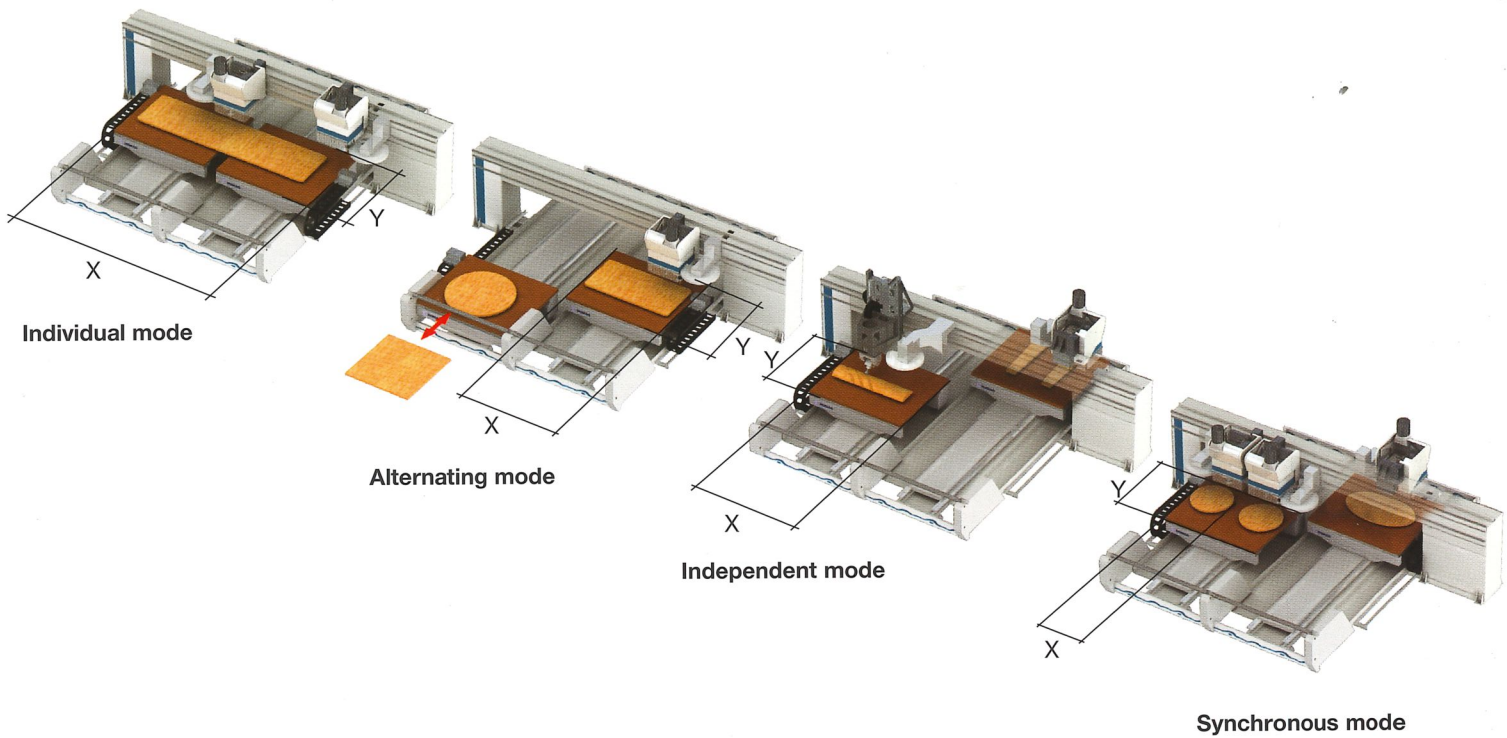
## **Identical parts, simple handling**

A large number of the parts, control elements and assemblies, used in Homag Group plants and machines, are identical. The wide-ranging benefits of this policy include simplified operation, lower costs, streamlining of spare parts management and also faster maintenance and servicing - to name only a few.

## **Remote diagnosis worldwide**

All NC machines are fitted in the factory with a modem to allow remote diagnosis anywhere around the globe. A search for possible faults is performed from the Homag Service Center, once localized, they are narrowed and often already solved over the phone.

# Multidimensional flexibility



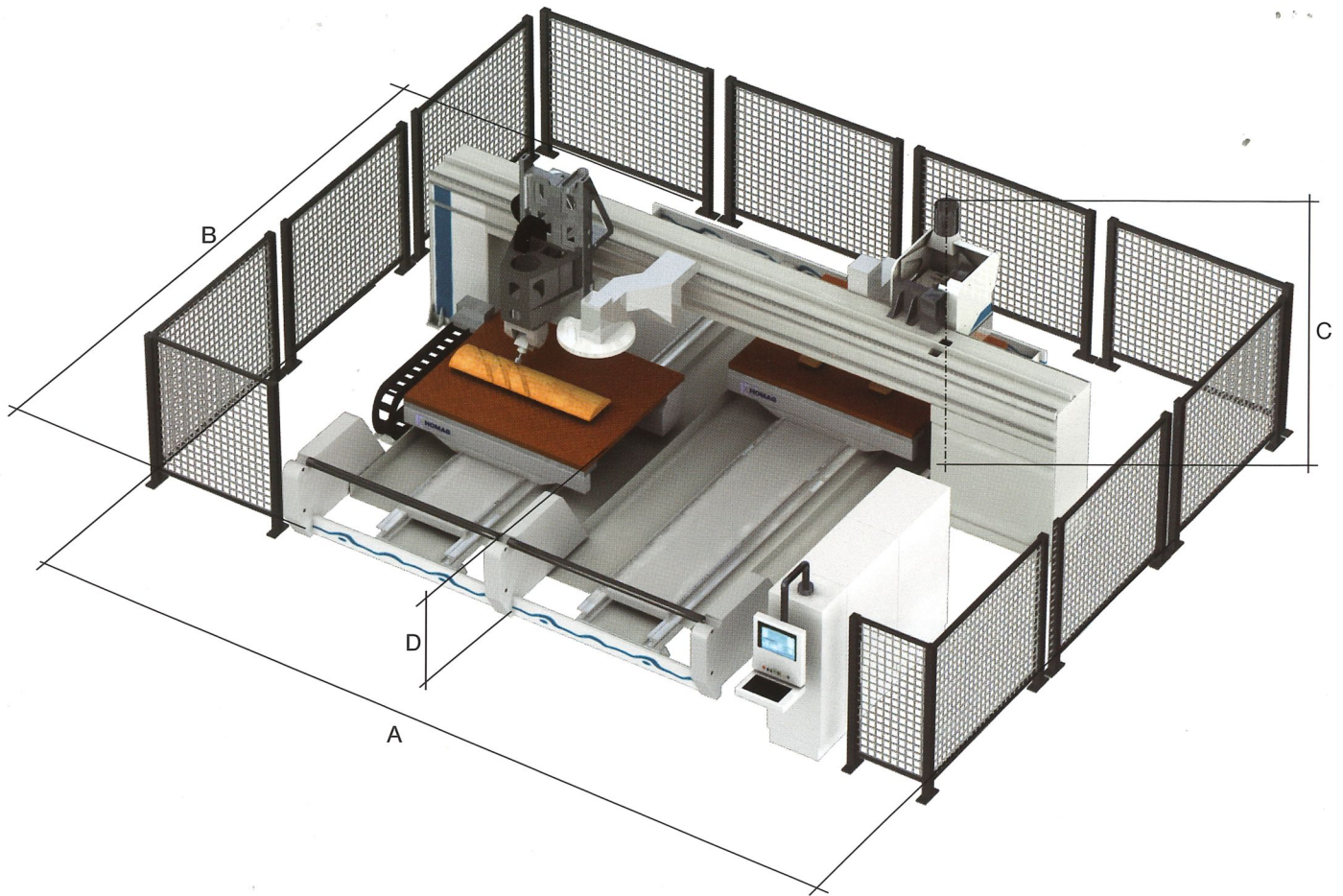
Two gantry lengths, three table depths and two processing heights mean you can select the optimum combination for your workpiece dimensions.

Processing dimensions (example: grid table)	Optimat		profi line			
	BOF 711	BOF 712	BOF 711	BOF 712	BOF 722	BOF 723
<b>X = Max. processing widths with 25 mm [1"] tool diameter</b>						
Individual mode type 42 [mm]	4570 (180")	3675 (144")	4570 (180")	4570 (180")	4570 (180")	4570 (180")
Individual mode type 58 [mm]	6230 (245")	5500 (216")	6230 (245")	6230 (245")	6230 (245")	6230 (245")
Alternating mode type 42 [mm]	2220 (87")	2220 (87")	2220 (87")	2220 (87")	2220 (87")	2220 (87")
Alternating mode type 58 [mm]	3050 (120")	3050 (120")	3050 (120")	3050 (120")	3050 (120")	3050 (120")
Independent mode type 42 [mm]	-	1635 (64")	-	1635 (64")	2220 (87")	1635 (64")
Independent mode type 58 [mm]	-	2465 (97")	-	2465 (97")	3050 (120")	2465 (97")
Synchronous mode for 4-workpiece processing type 42 [mm]	-	950 (37")	-	950 (37")	-	950 (37")
Synchronous mode for 4-workpiece processing type 58 [mm]	-	1375 (54")	-	1375 (54")	-	1375 (54")
<b>Y = Max. processing depths with 25 mm [1"] tool diameter</b>						
Standard [mm]	1580 (62")	1580 (62")	1580 (62")	1580 (62")	1580 (62")	1580 (62")
Optional [mm]	1880 (74")	1880 (74")	1880 (74")	1880 (74")	1880 (74")	1880 (74")
Optional [mm]	-	-	2130 (83")	2130 (83")	2130 (83")	2130 (83")
<b>Max. working heights including clamps</b>						
Standard [mm] with max. tool length of 230 mm [9"]	300 (11,8")	300 (11,8")	300 (11,8")	300 (11,8")	300 (11,8")	300 (11,8")
Optional [mm] with max. tool length of 230 mm [9"]	-	-	500 (19,6")	-	500 (19,6")	500 (19,6")

Specification and photo details without commitment. We reserve the express right to make changes in the interests of progress.



# Performance in a minimum of space



The use of a patented safety engineering concept eliminating the use of safety tread mats means a considerable reduction in the set-up space required for the machine. As EMERGENCY STOP situations can no longer occur, production disruptions as a result of unauthorized entry are a thing of the past.

The new safety concept also cuts out the risk of tread mat damage caused by fork lifts or workpiece pallets, allowing workpiece pallets to now be positioned in the immediate vicinity of the machine. Loading rollers have been integrated to aid the positioning of even large-format workpieces.

Set-up dimensions and connected loads	Optimat		profi line			
	BOF 711	BOF 712	BOF 711	BOF 712	BOF 722	BOF 723
<b>A = Length with Type 42 [mm]</b>	8750 (345")	9500 (375")	8750 (345")	10500 (415")	8750 (345")	10500 (415")
<b>A = Length with Type 58 [mm]</b>	11500 (455")	11500 (455")	11500 (455")	13000 (515")	11500 (455")	13000 (515")
<b>B = Width with processing depth 1580 mm [mm]</b>	5250 (207")	5250 (207")	5250 (207")	5250 (207")	6750 (266")	6750 (266")
<b>B = Width with processing depth 1880 mm [mm]</b>	5500 (217")	5500 (217")	5500 (217")	5500 (217")	7000 (276")	7000 (276")
<b>B = Width with processing depth 2130 mm [mm]</b>	-	-	5750 (227")	5750 (227")	7250 (286")	7250 (286")
<b>(B = +750 mm in machines with 5-axis trimming spindle)</b>						
<b>C = Height to upper edge of extraction nozzles [mm]</b>	3000 (119")	3000 (319")	3000 (319")	3000 (319")	3000 (319")	3000 (319")
<b>(C = +200-400 mm [8"-16"] in machines with 5-axis trimming spindle)</b>						
<b>D = Working height of grid table [mm]</b>	850(33,46")	850 (33,46")	850 (33,46")	850(33,46")	850 (33,46")	850 (33,46")
<b>Extraction output [m3/h] (Note: +5,000 m3/h in machines with 5-axis trimming spindle)</b>	5000 (2950 C.F.M.)	5.000/10.000 (2950/5900 C.F.M.)	5.000 (2950 C.F.M.)	5.000/10.000 (2950/5900 C.F.M.)	5.000/10.000 (2950/5900 C.F.M.)	5.000/15.000 (2950/8850 C.F.M.)
<b>Extraction port diameter [mm]</b>	250 (9,84")	2 x 250 (2 x 9,84")	250 (9,84")	2 x 250 (2 x 9,84")	2 x 250 (2 x 9,84")	3 x 250 (3 x 9,84")
<b>Compressed air consumption [NL/min]</b>	600 (22 C.F.M.)	1200 (44 C.F.M.)	600 (22 C.F.M.)	1200 (44 C.F.M.)	1200 (44 C.F.M.)	1400 (516 C.F.M.)
<b>Electrical connected load [kW]</b>	from 28 (38 HP)	from 42 (57 HP)	from 28 (38 HP)	from 42 (57 HP)	from 42 (57 HP)	from 60 (80 HP)



A member of the Homag Group



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