

CNC-Processing Center Optimat BHC 350

Optimat BHC 350 K-Table



With the Optimat range, WEEKE offer you an individual CNC solution which reflects all of the requirements you have in mind. These machines enable you to react quickly and with flexibility to your customer demands hereby convincing through highest quality and maximal security in production.

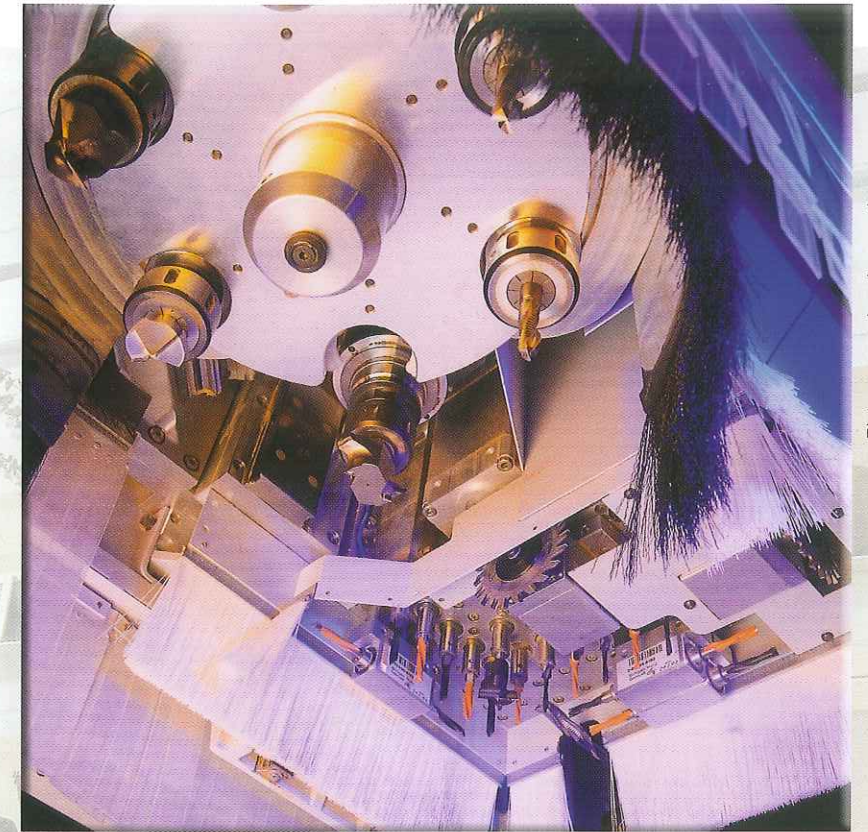
Here are only some of the highlights:

- Table versions:
K-Table / Basic-Table / Matrix-Table
- Solid base machine frame
- Travelling speed in X-direction of up to 100 m/min
- Rack and pinion drive in X-direction
- Special dust protected linear guiding system in X-, Y- and Z-direction
- Secure cable lead via sealed cable chains
- Customer specific configuration versions
- Router spindle up to 9 kW
- Laser- and LED-positioning systems
- Highest security provided through safety mats
- Up to 14 tool changing places
- Vacuum connection for gigs

K-Table Version

- Stepless in X-direction adjustable work piece supports 1220 mm (4") pneumatically clamped
- Tubeless vacuum clamping system
- Pneumatically retractable stop cylinders (rear and front stops)
- Side stops in Y-direction are adjustable
- Work piece feeding rails at the supports
- Various types of application proven vacuum cups and clamping elements
- Scales and indicators to position cups and work piece supports

WEEKE – Your partner for the future.
Member of the HOMAG-Group.
Certified by DIN EN ISO 9001.



Configuration Version

Pictures can also show options

Optimat BHC 350

Basic-Table

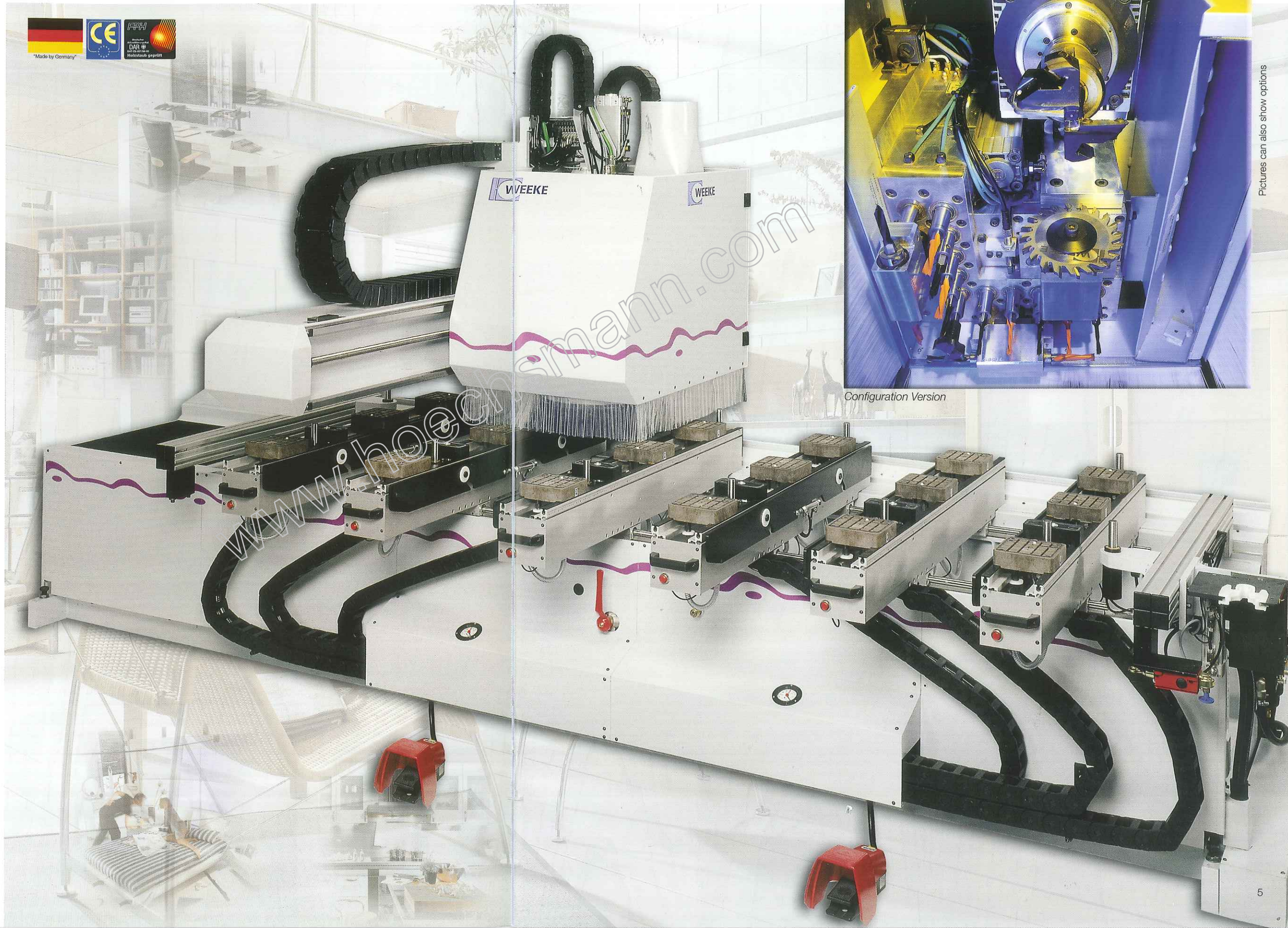
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Optimat BHC 350 Matrix-Table

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Matrix Table Version

The clamping table is integrated into the machine bed with rigid steel construction and grooved wooden fixture board to accept templates and workpieces. 2-circle-vacuum system in 2-field operation integrated in the table. Especially suited for nesting processes and complex applications.

- Vacuum systems up to 500 m³/h
- Diverse work piece clamping systems
- Pneumatically retractable stop cylinders integrated in the table
- Sectionwise selection of individual vacuum fields



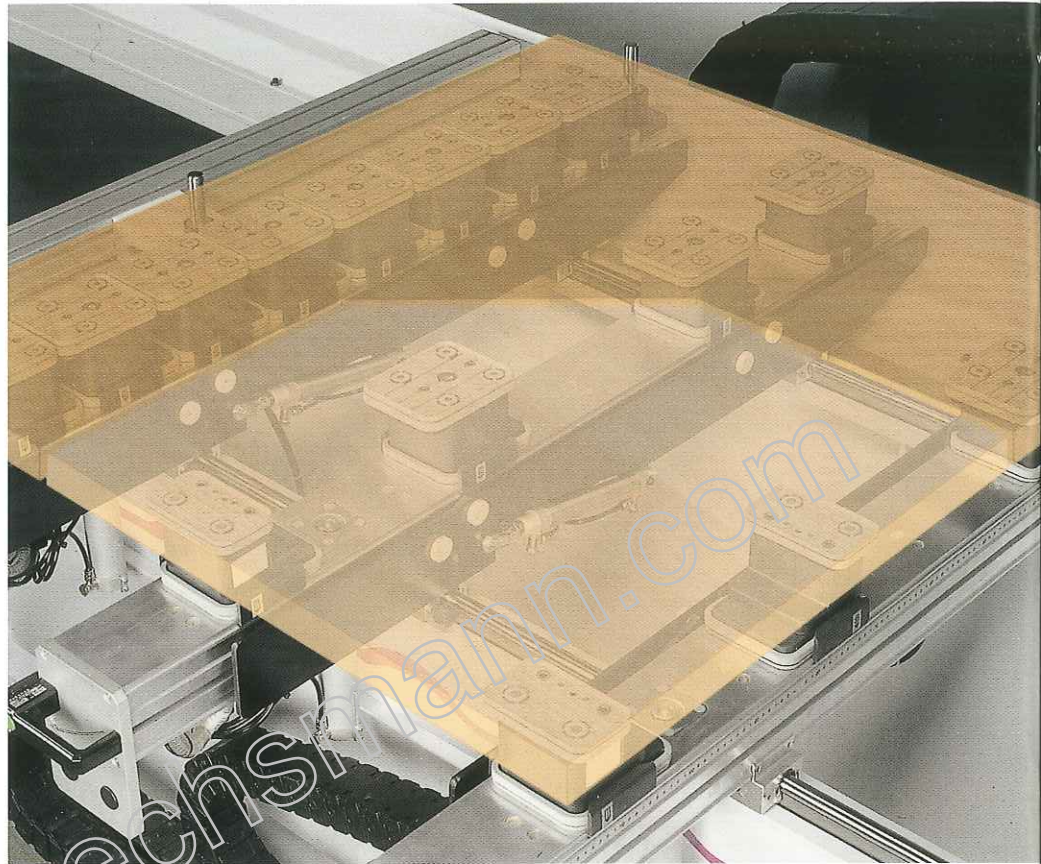
Innovation in Clamping Technology – the K-Table

The clamping procedure of workpieces is one of the most critical issues for the quality of CNC-manufacturing.

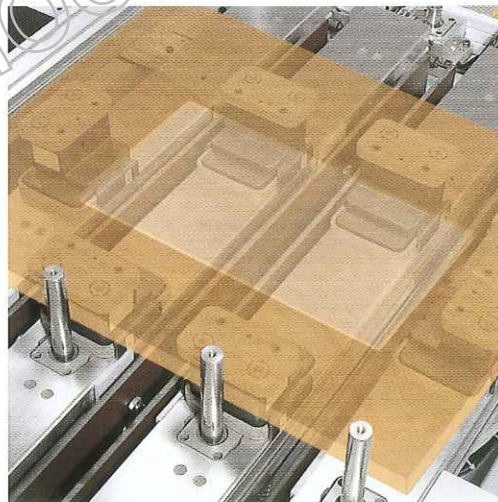
We have followed up this fact consistently and developed the practical solution of our console table **with free and easy positioning vacuum pods**. Our vacuum system offers you highest flexibility in order to clamp diverse geometric shapes.

We achieve this via following features:

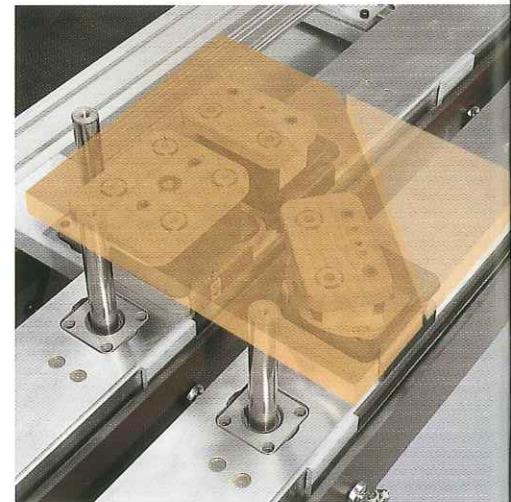
- **Side stops** are retractable
→ no limit in the work piece length.
- **Powerful vacuum pump**, including an electronic vacuum control, ensure secure clamping of the workpieces
→ manufacturing reliability even for porous materials and unusual shapes.
- **Laser and LED-positioning systems** as well as scales ease the location of vacuum cups and work piece supports
→ operating reliability and fast set-up.
- **Solid steel stops** guarantee accurate positioning – especially for heavy workpieces
→ manufacturing reliability.
- **Exchangeable gaskets** for the vacuum pods - fast and easy to replace
→ low wear and spare parts costs.
- **Up to 8 vacuum pods** can be positioned (length- and crosswise) on the work piece console
→ high flexibility.
- **Feeding rails** and the front stop row enable ergonomic positioning of the workpieces
→ user-friendly.
- **100 mm high vacuum cups** achieve large processing freedom below the workpieces
→ application of very long multi-functional tools.



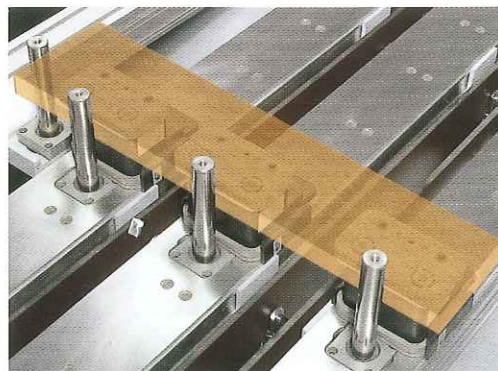
Up to 8 vacuum pods on one bench



Vacuum pods length and crosswise



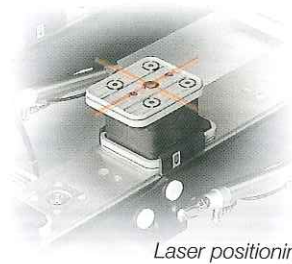
Swivelable narrow vacuum pods (0°-45° indexing)



Narrow vacuum pods



LED-Display



Laser positioning



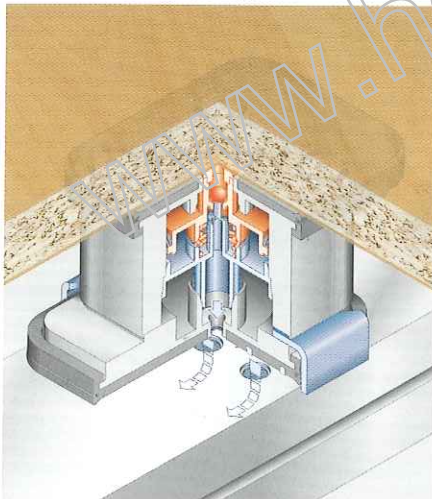
A variety of different pod types



Exchanging of a rubber gasket



Stops for veneer overhang (veneer, laminate...)



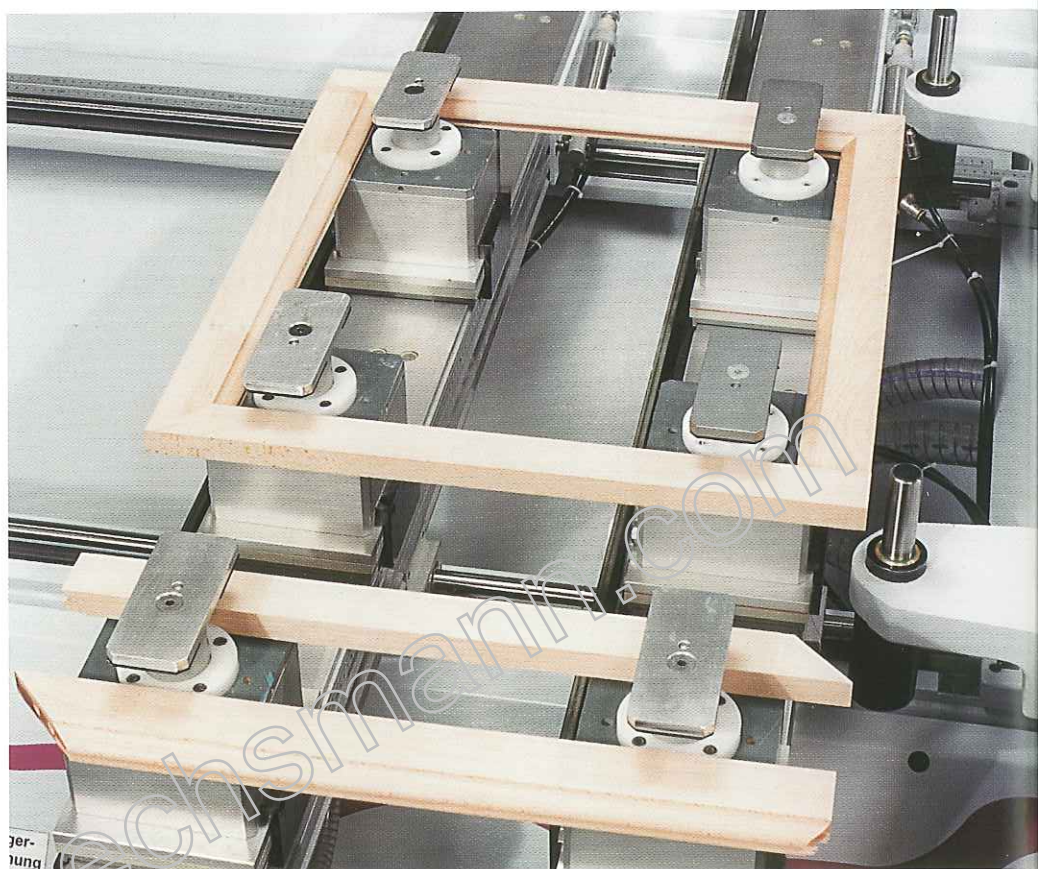
Principle function of the 2-circle vacuum system



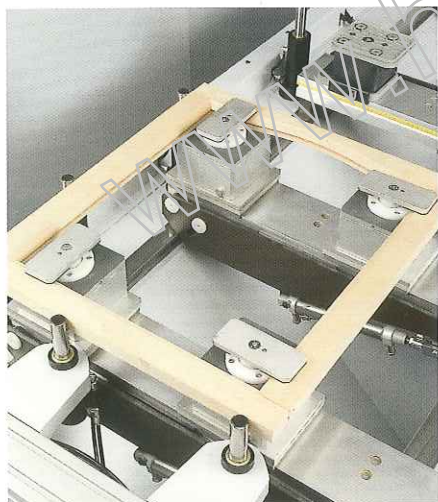
Integrated chip transport belt

The Console-Table – Multi Clamping System

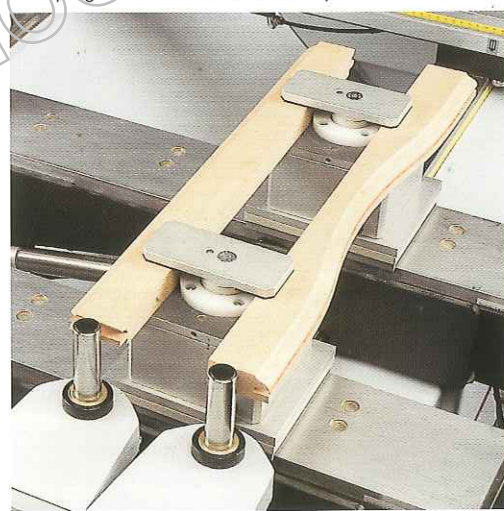
With the combination of the tubeless clamping system and tubeless vacuum cups only the clamping elements which are really required are positioned. The clamping elements can be placed aside and do not disturb the production flow.



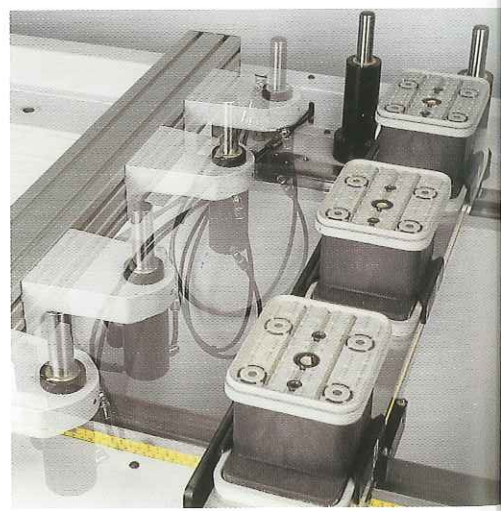
Clamping on both sides of narrow parts



Multi clamping system



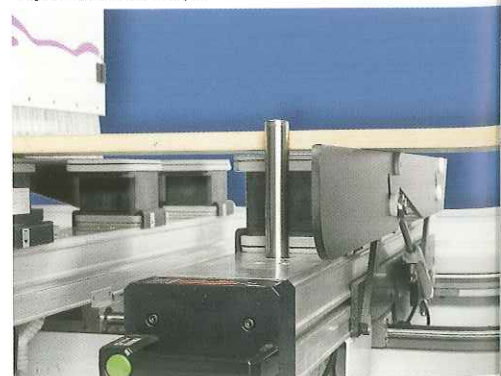
Clamping on both sides of narrow parts



Adjustable side stops

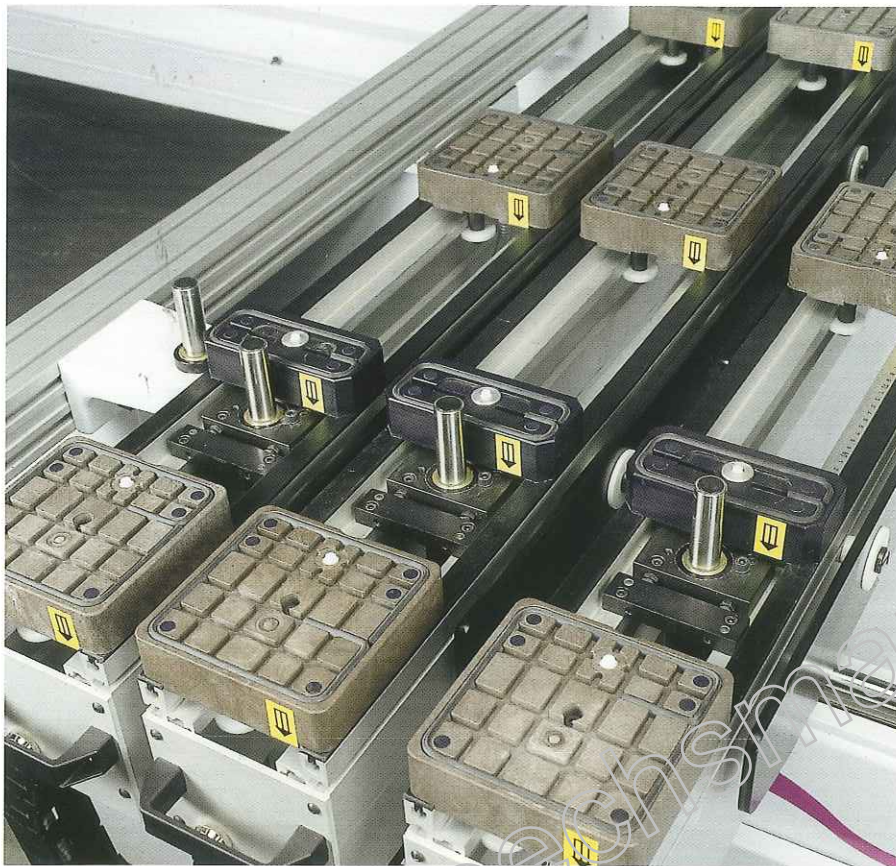


Work piece feeding rails



Active work piece feeding rails

The Basic-Table – classic clamping technology



Front stop row for narrow parts

- Ergonomic processing for narrow parts in the front area and for large surface workpieces in the rear area (2 stop rows)
- Easy handling of heavy workpieces via the panel feeding rails
- Large surface vacuum cups for secure clamping of the workpieces

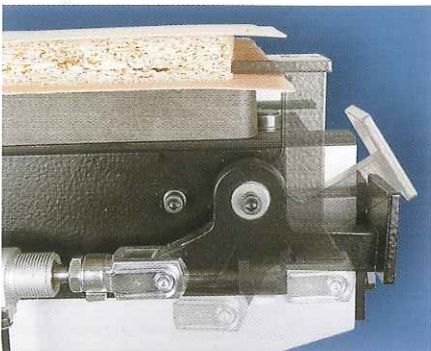
Pictures can also show options



Laser positioning

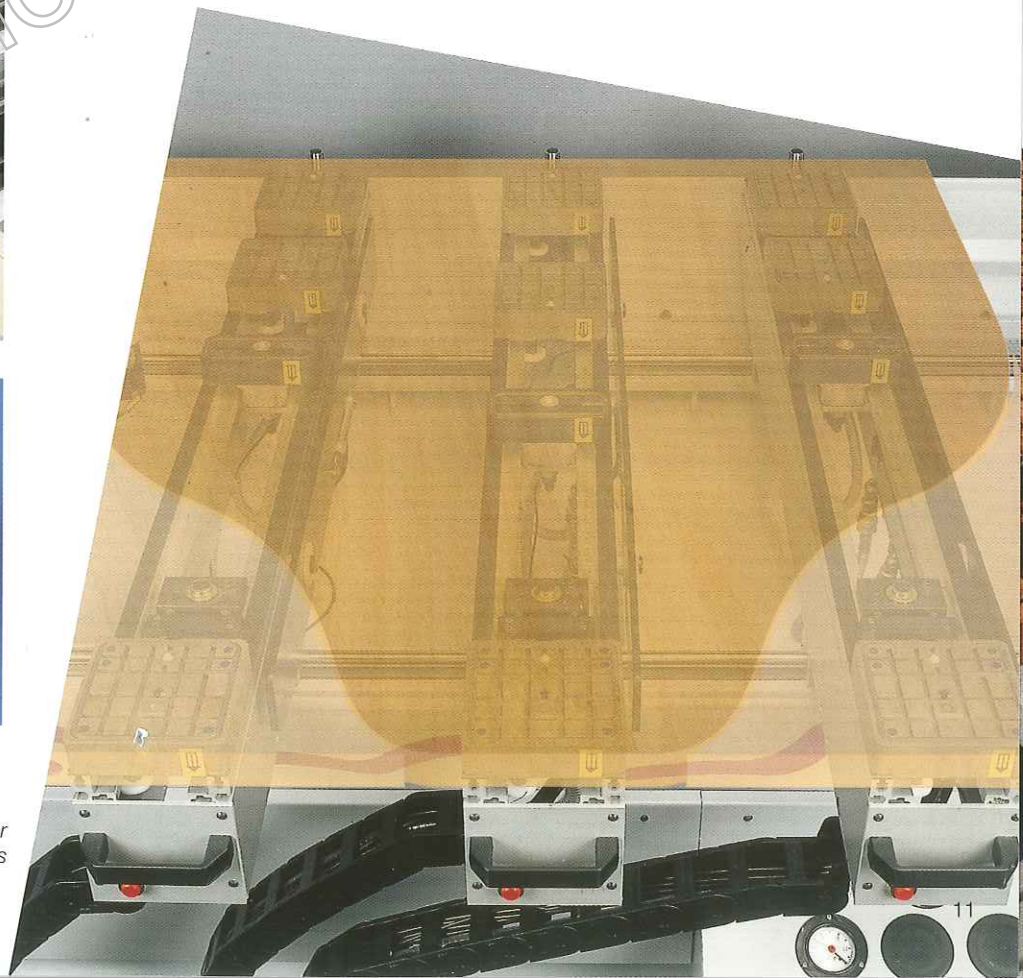


Plastic hold down for narrow parts



Stops for laminate and veneer overhang

Rear stop row for
positioning of large parts



The Matrix-Table

Shape variety in a single clamping step

NBM – Nested Based Manufacturing

What is NBM?

Processing of workpieces that are all contained within one sheet (e.g. ply wood, MDF, chip board) **on a processing center without pre-cutting.**

Who needs NBM?

- The cabinet and casegood, interior-, store and shop-fitter-, kitchen manufacturer
- Manufacturers of MDF doors
- Ply wood processor
- Manufacturer for components in the solid wood range

What does NBM offer?

- Commission-wise processing of front parts
- Economical manufacturing due to reduced working steps (machine)
- Reduced internal transport movement
- Reduced panel cut-back

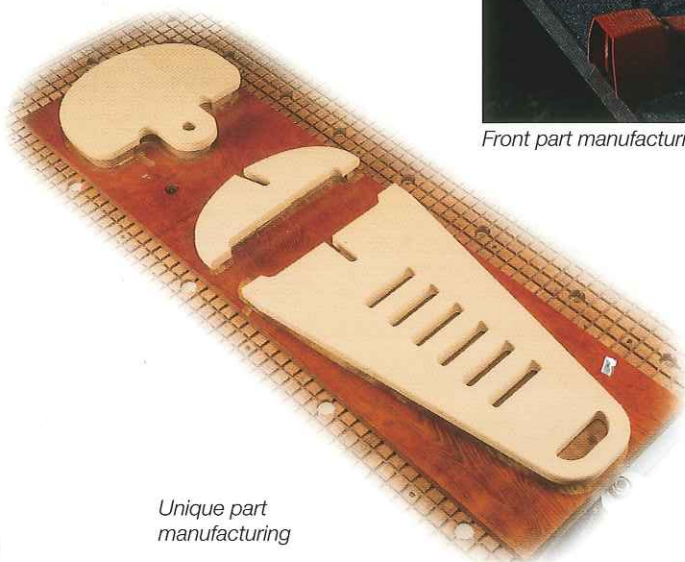
WEEKE Bohrsysteme offer you the complete NBM - package!



Part manufacturing with the NBM concept



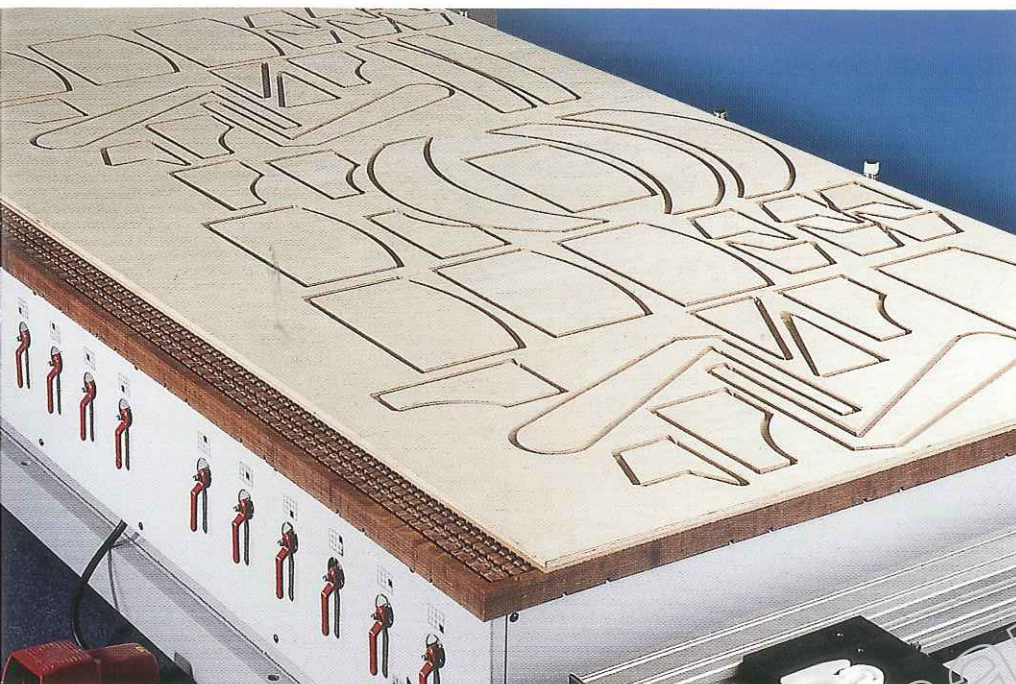
Front part manufacturing with the NBM concept



Unique part manufacturing



Single piece acrylic processing



NBM processing, e.g. upholstering- and furniture manufacturing



Vacuum plug-in module

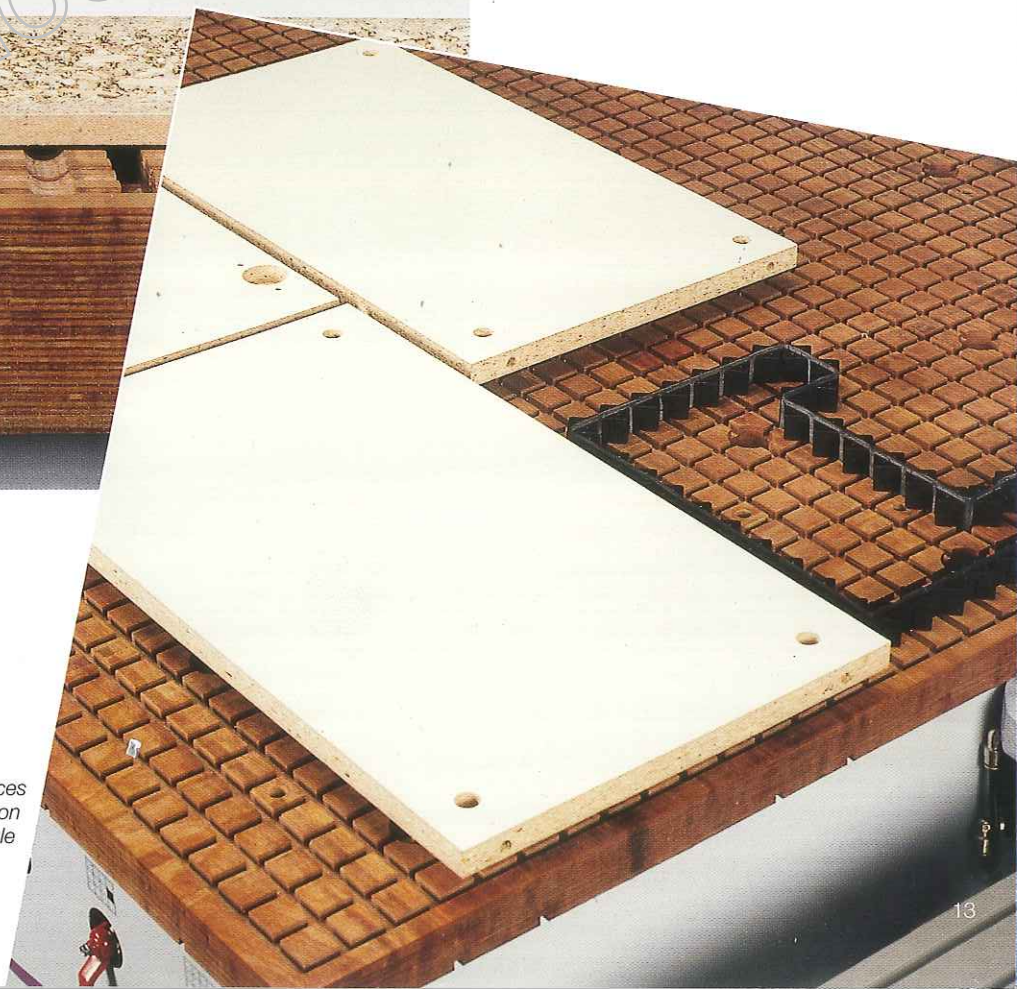
Pictures can also show options



Matrix-Table / MDF / Workpiece

Efficient vacuum pumps
guarantee secure clamping
of workpieces on the MDF-board
(suction through).

Workpieces
raised on
vacuum module



Efficient Technology – HSK63 router spindle

Our quality continuous both at the router spindle and the tool holder. The configuration versions with the **liquid cooled HSK63 router spindle**, tool changer and up to 9 kW (12 HP) efficiency guarantee you the best possible cutting quality. Even materials such as MDF, Corean, Multiplex, Plexiglas are not a problem.

Ambitious technology for even more ambitious tasks.

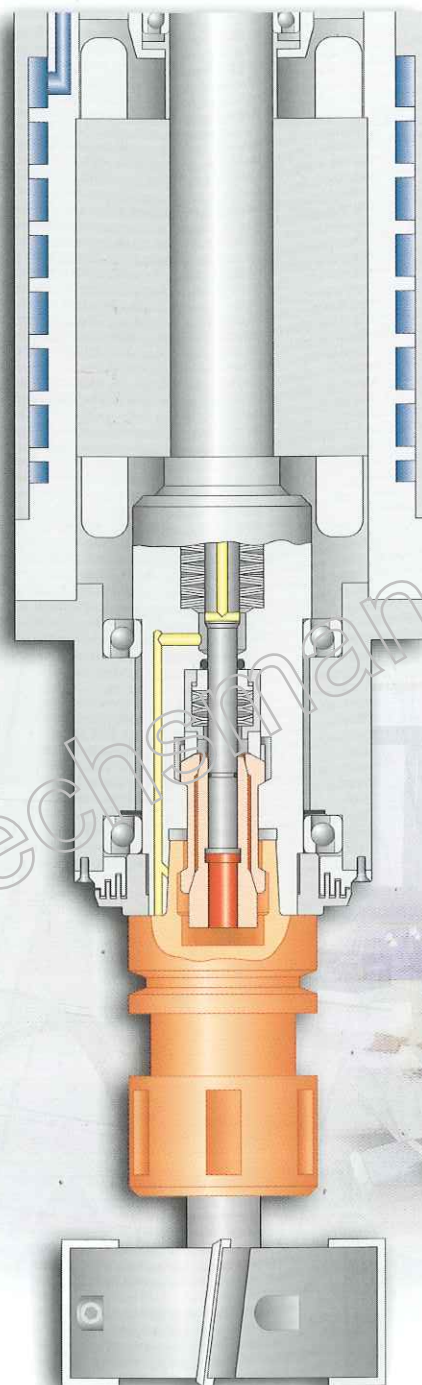
The HSK Tool Interface (hollow shaft cone)

The advantages of the HSK tooling interface are obvious though. Via the ever growing cutting speeds of router tools the centrifugal forces which occur are also growing. The **HSK-system** clamps from the **inside to the outside** hereby increasing the centrifugal force and achieving more clamping strength. The large surface between router spindle and HSK tool holder and the extremely high draw-in strengths create a unique system.

Additional advantages

Liquid cooling

- Constant temperature even at high RPM and heavy routing, thus no heating at bearings of the router spindle
 - operating reliability
- Electronic sensors
 - long life



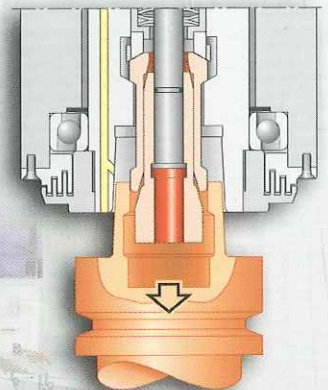
Liquid cooling system

Drive shaft

Cone blow-off air

Disc spring package

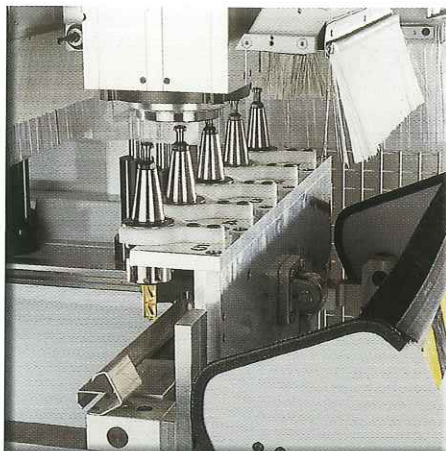
HSK – clamping system



The Tool Changing Systems



5-fold pick-up in process



5-fold pick-up tool changer



6-fold tool changer

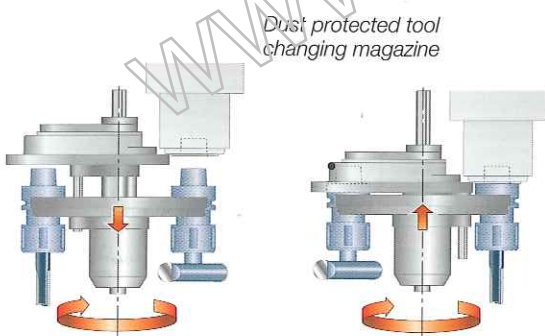


8-fold tool changer

We offer 3 tool changing systems which are available to you and can be utilised on your machine.

- 5-fold pick-up tool changing system
- 8-fold ride along tool changer in X-direction
- 6-fold ride along tool changer in X- and Y-direction
- Program controlled equipping of the magazine

Pictures can also show options

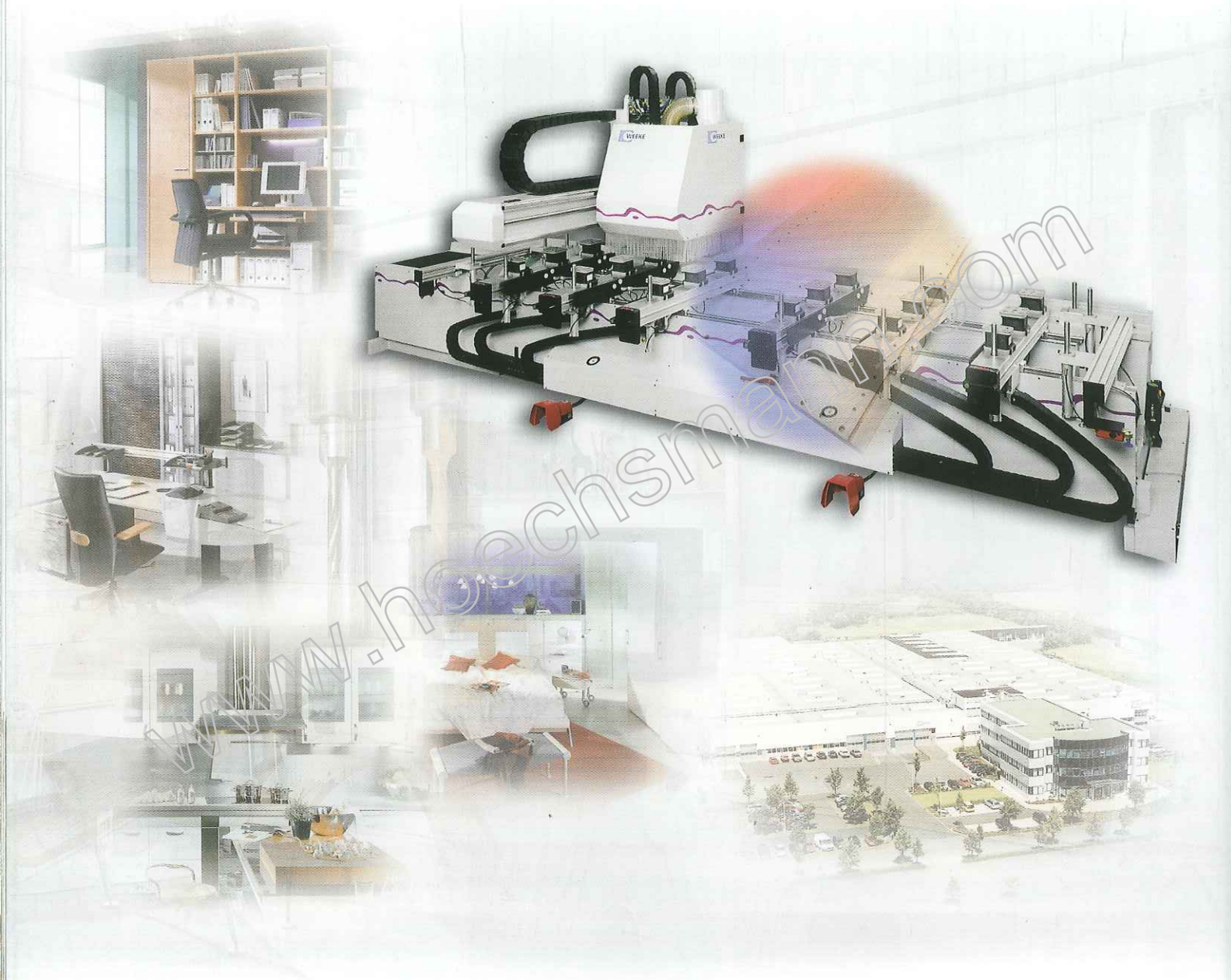


Dust protected tool changing magazine

Tool holding place to equip the tool changing system



The Challenge – activity on all continents



World-wide manufacturing companies must prepare for tougher competition. This applies for us as well as for yourself. Those companies who restructure their processes which are becoming more and more complex by the day and handle these issues in a competent manner, will stay competitive and will hereby stay ahead of their competitors.

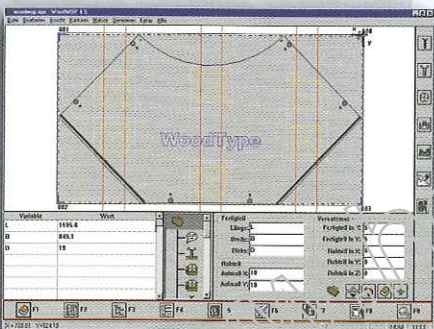
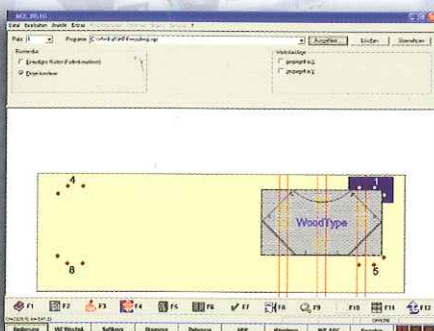
Highlights der Hard- und Software



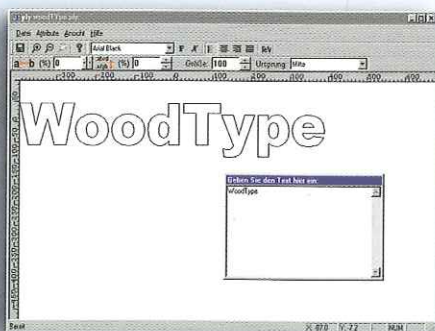
WoodWOP and Power Control System were developed together with you and our specialists.

→ Quick, easy and flexible programming

Short processing times are natural today – your success lies in fast and safe programming.

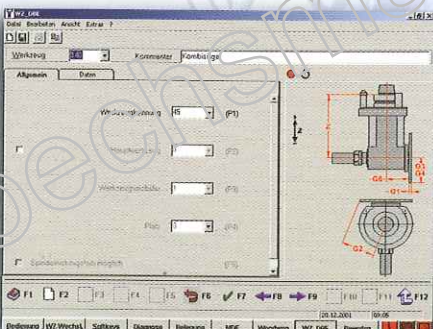
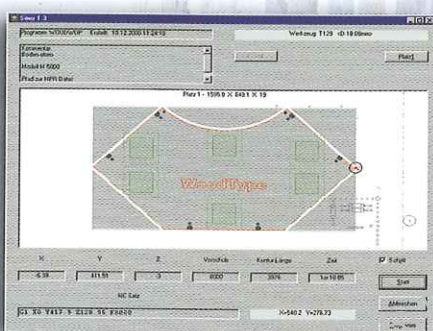


In our days, short cycle times are a must! Profits are realised by fast and safe programming. Well known to you from your standard machine, easy handling and high reliability are realised via the WoodWOP surface.



Parametric programming and the possibility of component technique combined with your personal know-how will lead to a maximum of productivity.

The interface between man and machine was realised by WEEKE with a PC-System and the Microsoft Windows® world many years ago. Easy handling



of the machine in your daily business is the result of this solution - you move in a confident world. You already know this world which provides safety and confidence from your own home.

Program your success in WoodWOP.

WOP = Workshop-Orientated - Programming

In WoodWOP you do not program the machine and its movements but the panel and its processes.

The integration of the Optimat BHC 350 machining center into your existing computer network and your barcode system are only few of many options. The control is already prepared for internet.

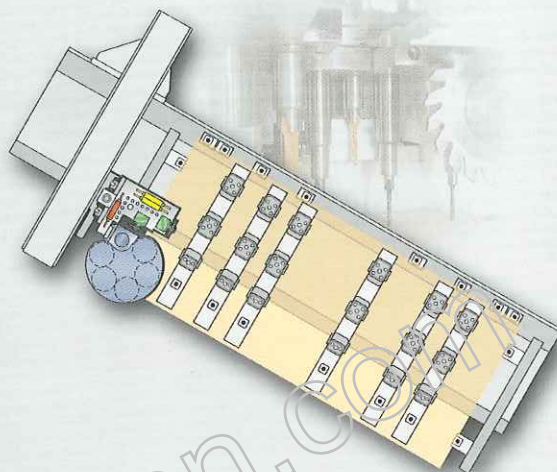
Pictures can also show options



Optimat BHC 350 – An overall view of the technology

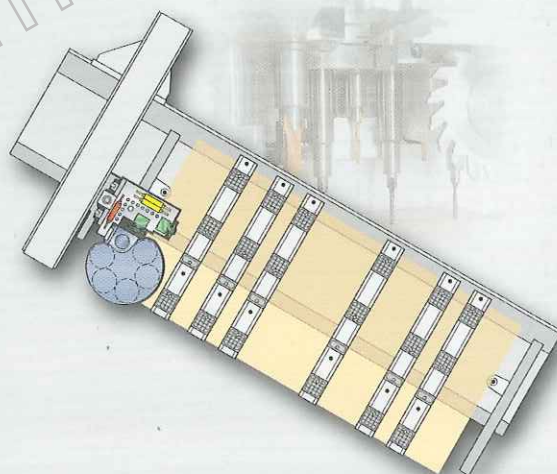
Optimat BHC 350

K-Table



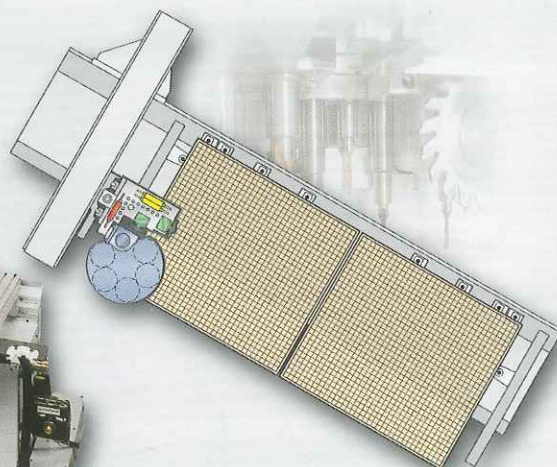
Optimat BHC 350

Basis-Table



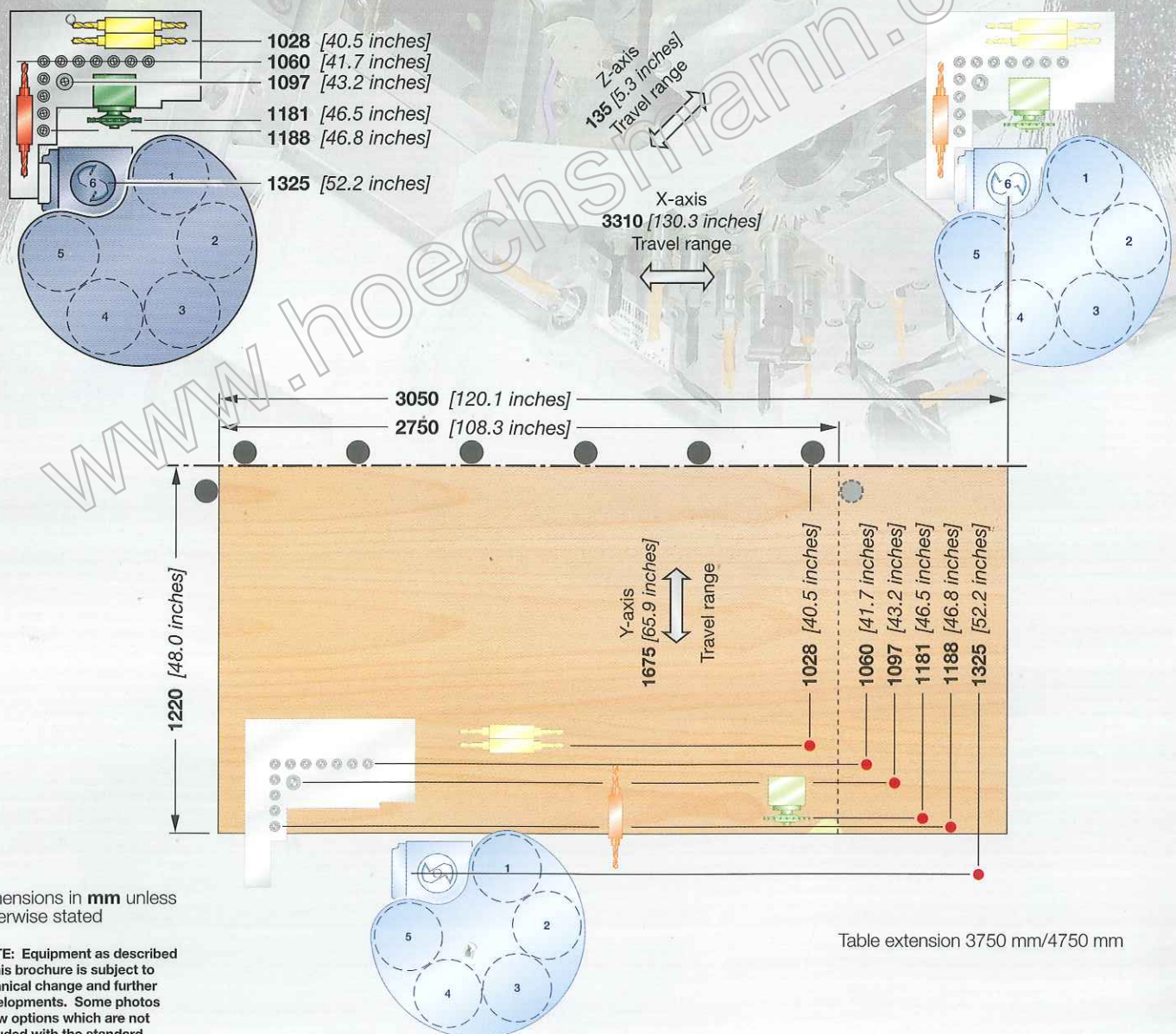
Optimat BHC 350

Matrix-Table



Pictures can also show options

Example: Movement range of the configuration version 0078



Dimensions in **mm** unless otherwise stated

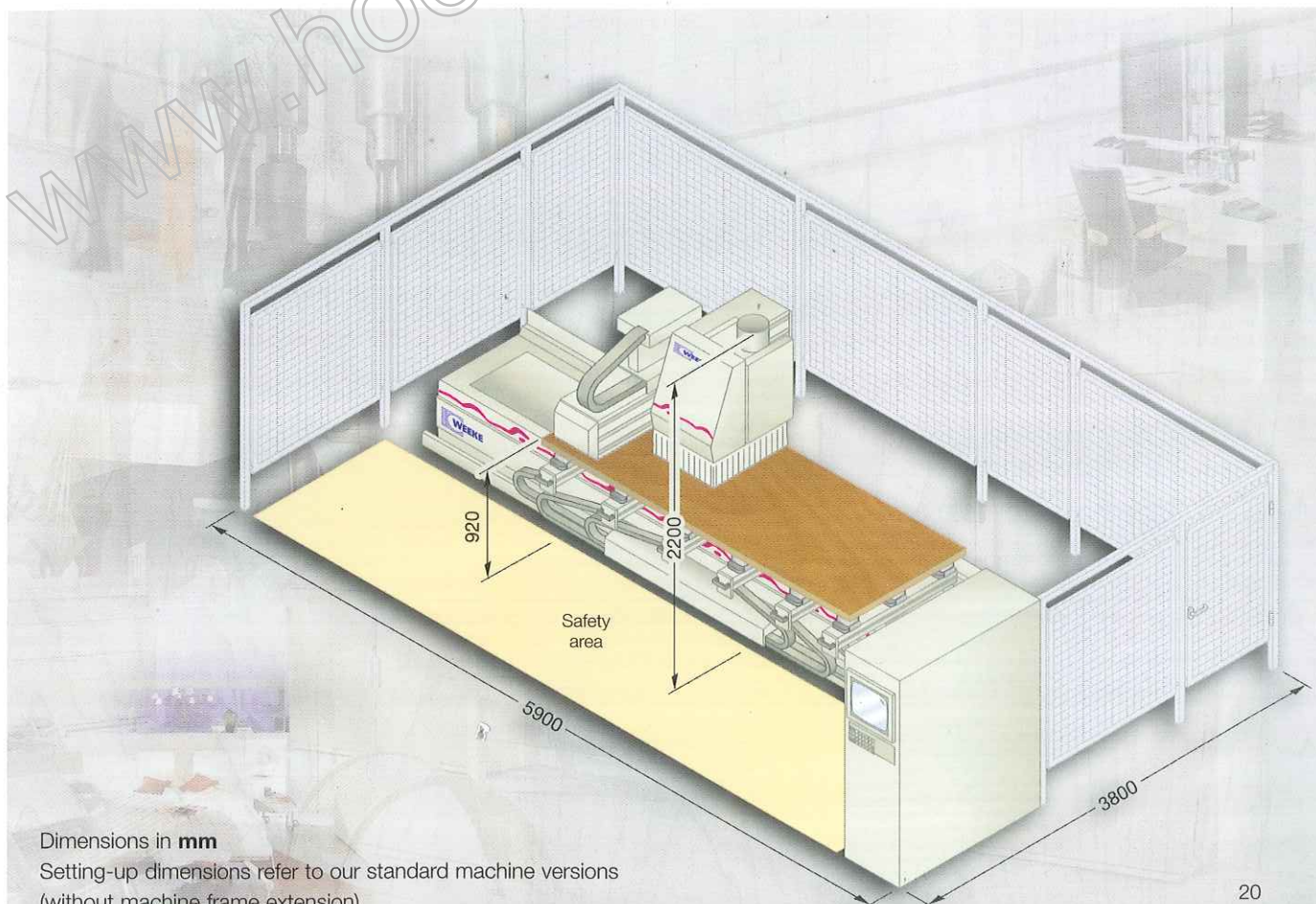
NOTE: Equipment as described in this brochure is subject to technical change and further developments. Some photos show options which are not included with the standard machine configuration. Technical data refer to standard equipment and are not binding for the order.

TECHNICAL DATA

OPTIMAT BHC 350

Travel range of the Z-axis	mm	135
Maximum workpiece thickness	mm	50
	mm	50 - 70 *
Driving system of the axis		digital
Positioning accuracy of the axis	mm	0.03
Rapid traverse rate X - Y - Z axis	m/min	60 (100) /50/20
Compressed air connection	Zoll	R 1/2
Compressed air required	bar	7
Compressed air consumption	l/min	100-200
Vacuum pump capacity	m³/h	from 100
Dust extraction port diameter	mm	Ø 160
- with tool changer	mm	Ø 200
Dust extraction air speed required	m/min	min. 28
Dust extraction pressure drop	PA	min. 2000
Dust extraction volume required	m³/h	min. 2027
- with tool changer	m³/h	min. 3170
Electrical power – total connected load	kW	10 - 14,5
Total machine weight	kg	appr. 3150

* in combination with appropriate tooling length or special clamping devices.

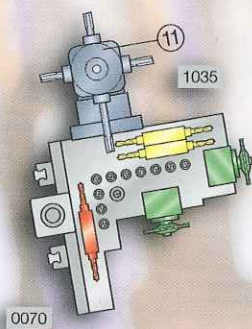
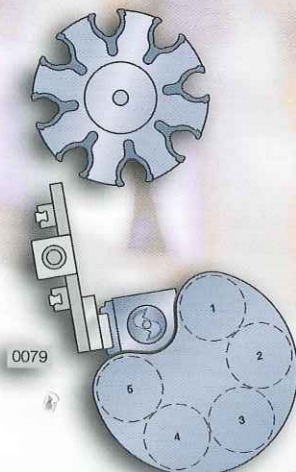
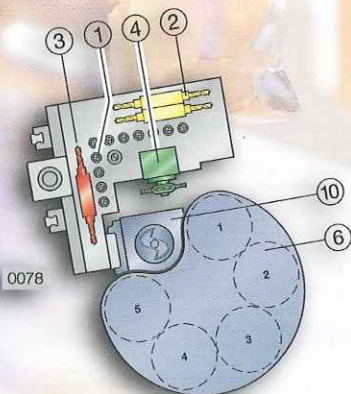
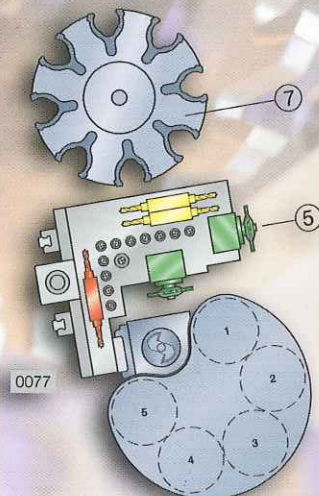
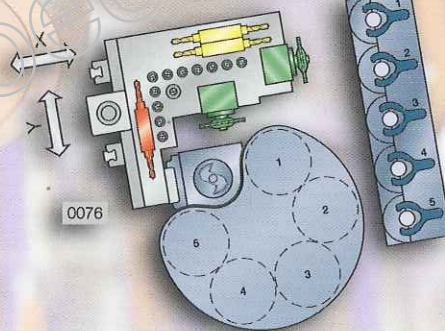
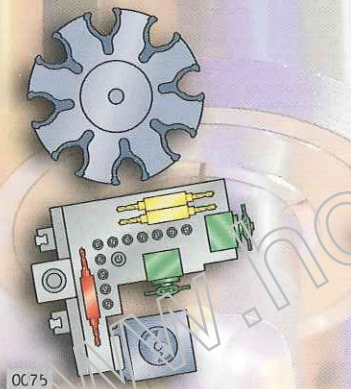
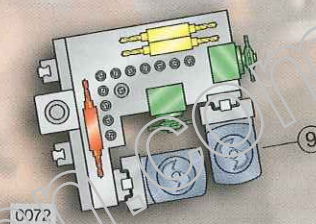
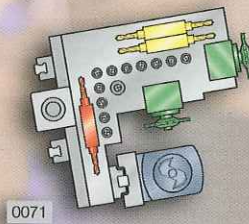
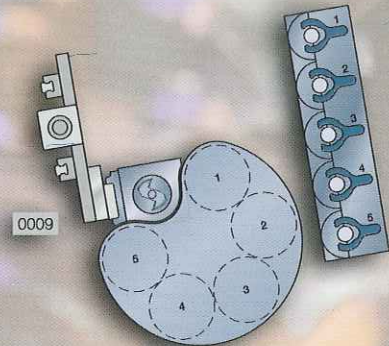
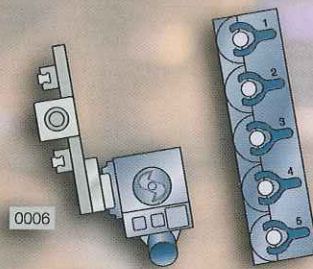


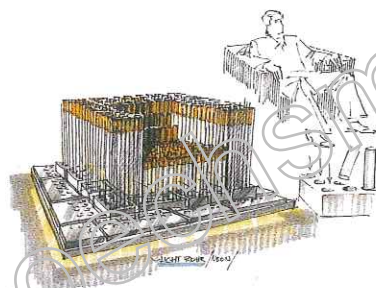
Dimensions in **mm**

Setting-up dimensions refer to our standard machine versions
(without machine frame extension)

Configuration versions

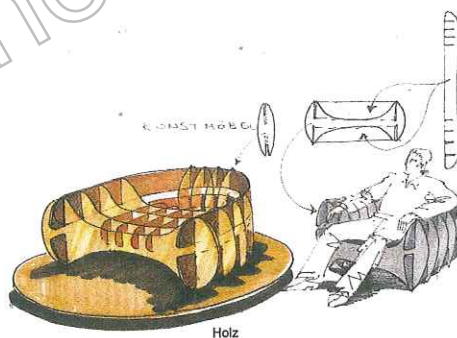
- ① Vertical boring spindles (individually selectable)
- ② Horizontal boring spindles (individually selectable) in X-axis
- ③ Horizontal boring spindles (individually selectable) in Y-axis
- ④ Grooving saw aggregate in X-axis
- ⑤ Grooving saw aggregate in Y-axis (optional)
- ⑥ 6-position tool changer up to 135 mm tool diameter
- ⑦ 8-position tool changer up to 160 mm tool diameter
- ⑧ 5-position tool changer (Pick-up)
- ⑨ 6 kW (8,16 HP) router spindle with hydro clamping system
- ⑩ 6 – 9 kW (8,16 – 12,24 HP) tool changing router spindle
- ⑪ Horizontal routing motor with 4-sided spindle outlet e.g. cam box processing





Dialogue

A chair made of wood – a chair made of aluminum. Two different materials but with so many similarities. You will find these objects in our foyer, hopefully to encourage you to talk with us.



Relationships based on a partnership mean we have the same aims and the same starting point resulting in mutual satisfaction – WIN WIN.

A member of the international HOMAG-Group

WEEKE

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