



Through-Feed Drilling – BST 500

Not enough drilling capacity? Here is the perfect solution!

For more than 50 years we have provided the new BST 500 – manufactured by Weeke in Germany

The demands of your customers are increasing every day. The latest in through-feed technology lets you work smarter instead of harder to meet and exceed those demands.

The latest machining concepts allow high product flexibility between smaller job runs with a superior level of quality. The BST 500 puts these concepts to work in your production process.

Some of the advantages of the BST 500 are:

- Easy operator handling
- Impressive production flexibility
- Very high machine reliability
- Excellent work piece quality
- Lower cycle times, giving you up to 30 pieces a minute
- Modern ergonomic construction methods to reduce operator fatigue and assist the maintenance personnel in optimising the machine performance
- High level of safety

In short, the BST 500 allows you to achieve your manufacturing goals at a lower operating cost through increased productivity using a minimum of company resources.

So what are you waiting for? Ensure your advantage over your competition by investing today where they will start thinking tomorrow.



Version: Optimat BST 500

est technology.



Pictures can also show options

Version: **profi line** BST 500



Small batch sizes or large quantities: With the BST 500 you can handle every order

Cycle times of up to 30 pieces a minute are possible on parts which require construction drilling, shelf holes, hardware holes, and other drilling operations. This provides you with very impressive production capability.

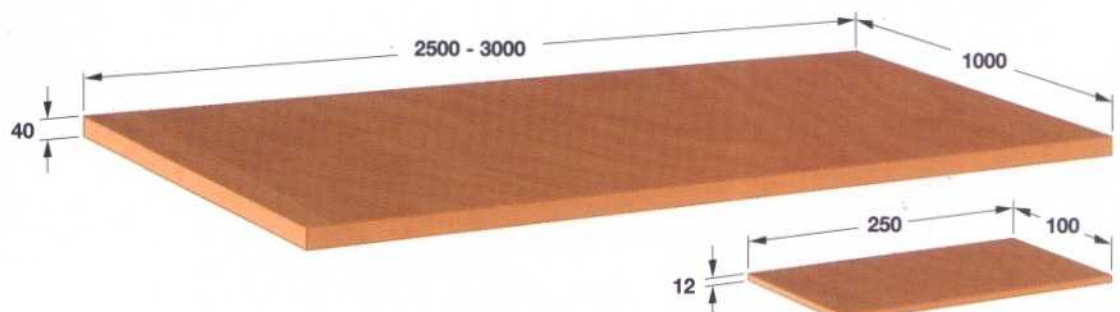
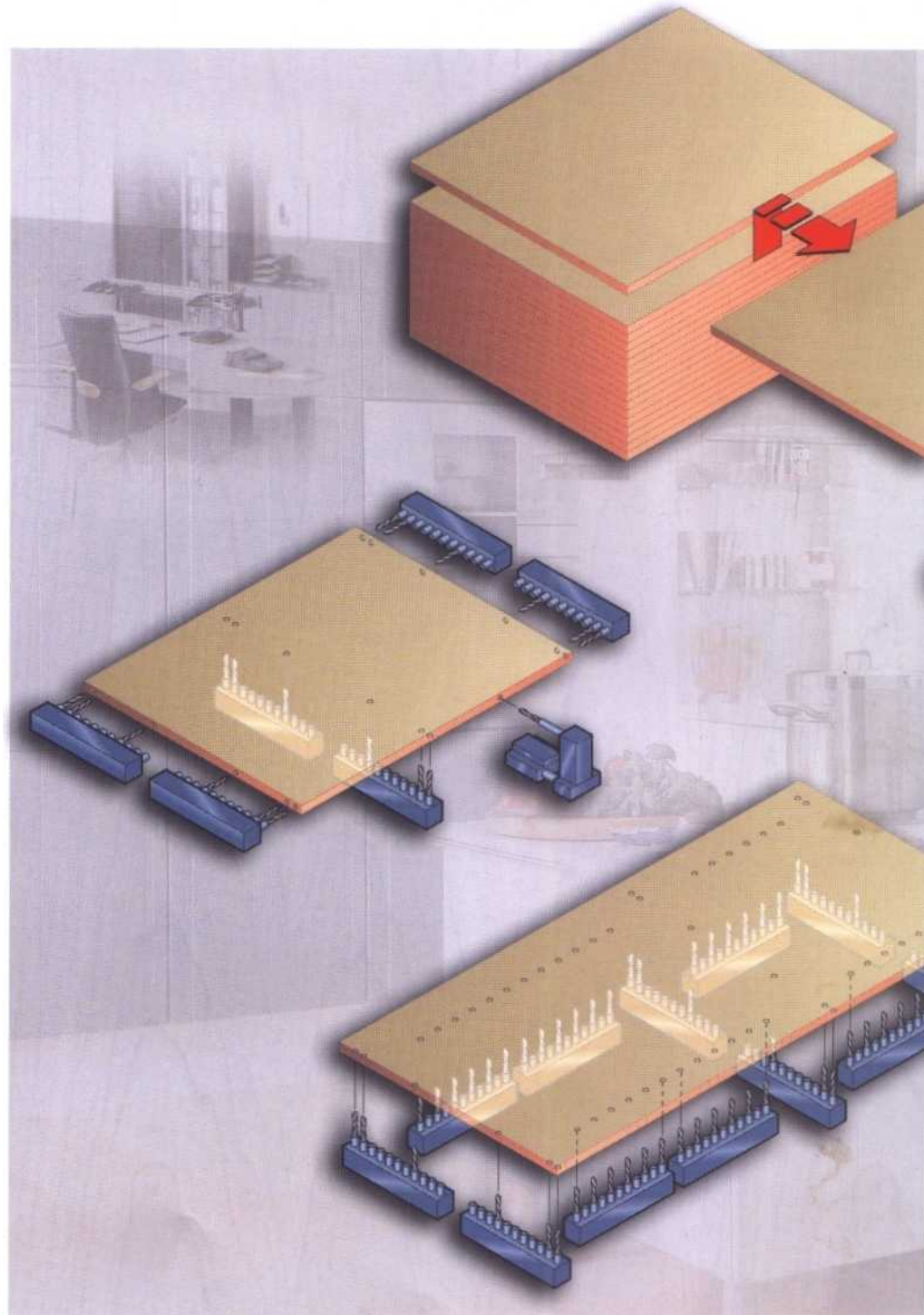
After infeeding, alignment and clamping of the work piece all necessary drilling operations are completed in a single step. Any gluing and dowel insertion can be accomplished in a secondary part of the system. The machine configuration can be customised to your specific needs.

These work flows can be set up from the minimum part size to the maximum part size. By using an optional work piece magazine you may run very narrow parts without any problems.

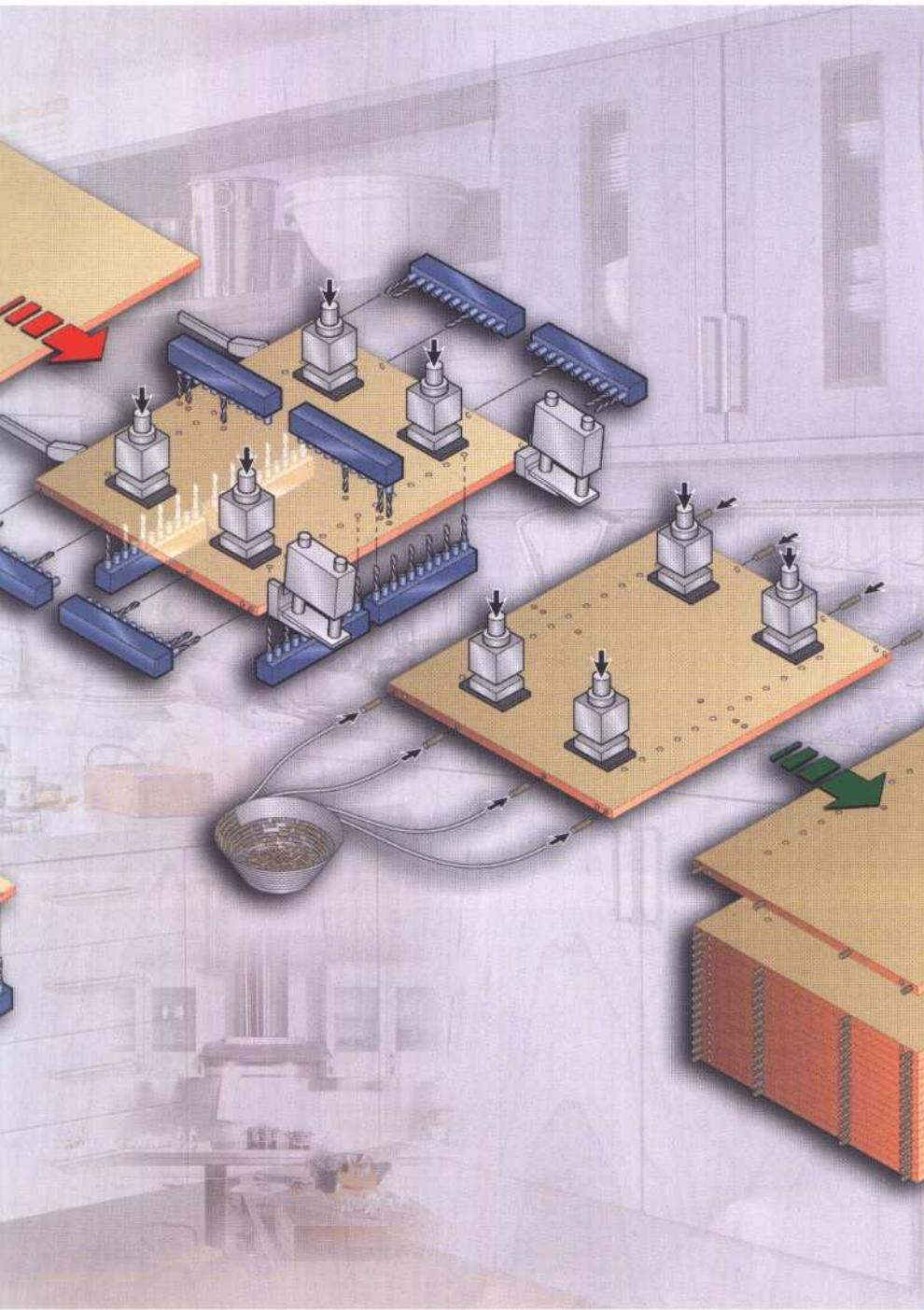
When designing these machines we focused on a wide variety of customer applications:

- Different surface materials
- Different shapes and materials of paneledges
- Work pieces which are popular in the market
- Pre-processed work pieces e.g. soft formed edges

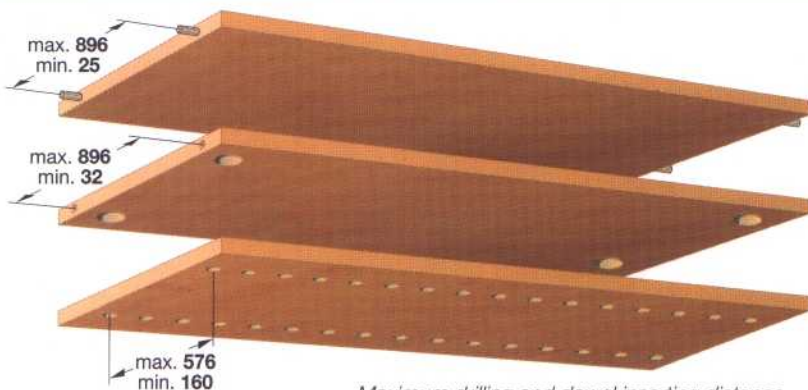
From this we have developed a machine that gives you all of the flexibility you need to be a leader in your competitive market.



Work piece dimensions



Pictures can also show options



Maximum drilling and dowel inserting distance



Precision through technical finesse

Conditions for accuracy and the highest quality product are a combination of the work piece transport, stopping and clamping' systems.

The frequency controlled transport system is responsible for gentle work piece movement and soft positioning in front of the stops. The work pieces are taken over from the first machine and are transported to the stops via the conveyor belt within the machine. Following this step, the transport belts are lowered and do not touch the parts during machining. At the same time, the stop switches activate the following operations:

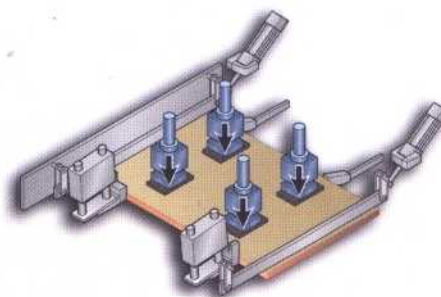
- The panel is aligned at an angle to the drilling row via an insertion cylinder, the panel area is then fixed via clamping cylinders and the edges via clamping strips. The actual drilling process now begins.
- After the clamps release the panel the stops and insertion cylinders return to their rest-position. The transport system is raised and the processed panel is transported out of the machine.

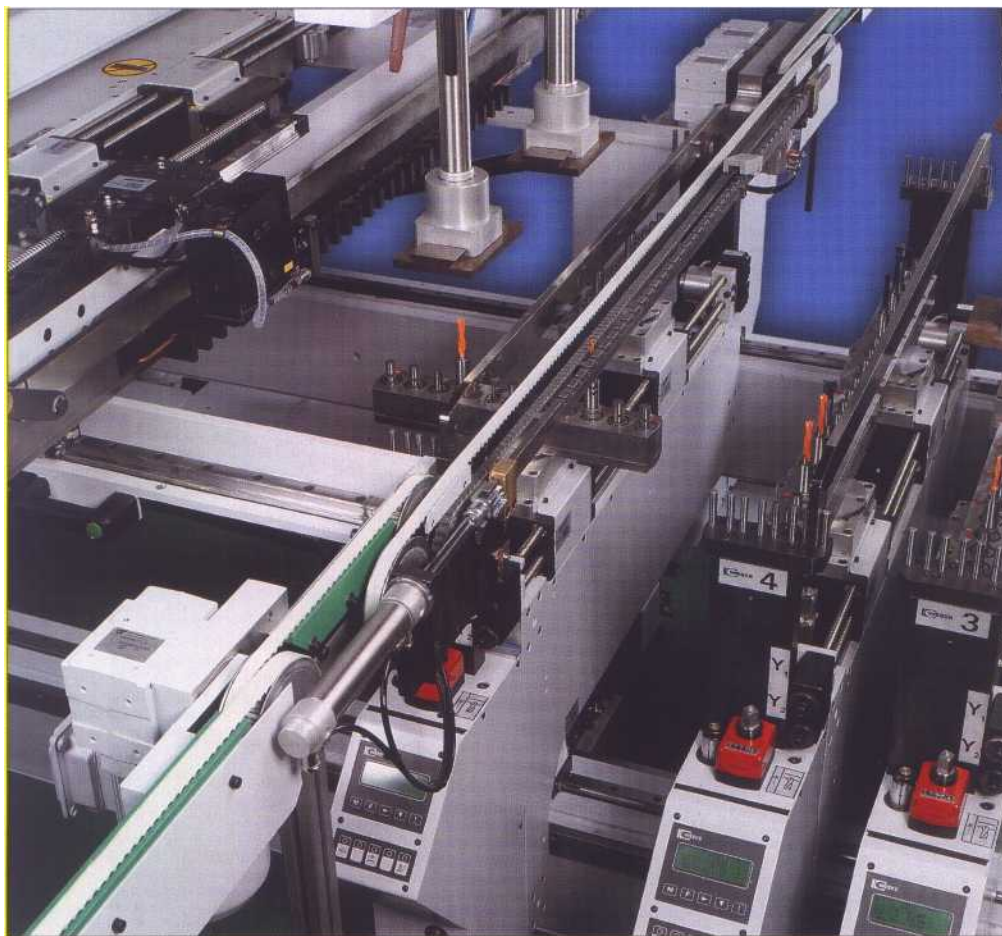


Swinging out clamping elements

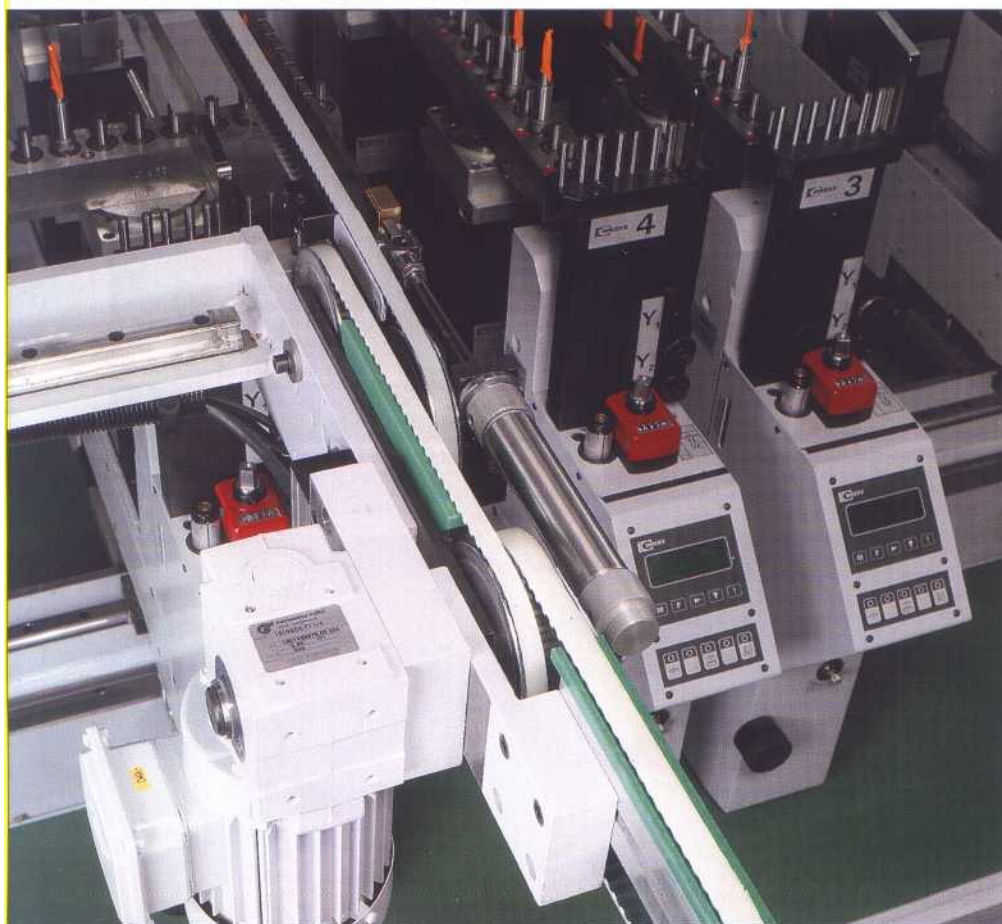


Clamping elements adjustable (in height)





The transport can also move over the equipped drilling blocks.

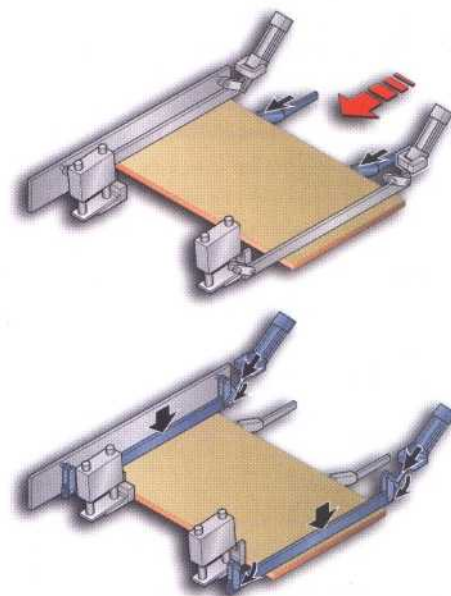


Due to this finely tuned process of operations the precise position of the holes, the exact drilling depth and the quality of the holes are guaranteed.

The mechanical structure of the BST 500 is designed to absorb the high dynamic stresses which are created by these fraction of a second operations.

In our standard machine many features are already included that allow for customised operation. For example non-standard drilling patterns (out of pitch) or holes for fittings, or drilling on the edge of the panel to create a half circle for hardware insertion, etc.

Pictures can also show options



Smooth panel transport via overlapping transport sections

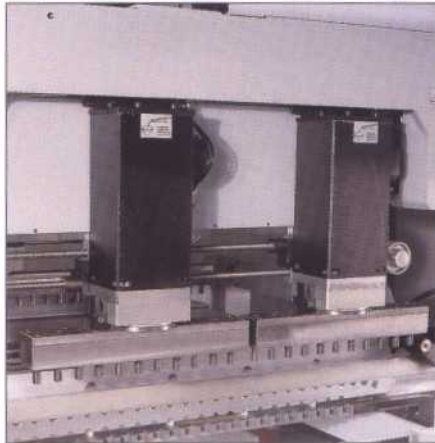
The Heart of the BST 500 – the drilling block supports

The BST 500 can be economically customised because of the wide array of options available, for example:

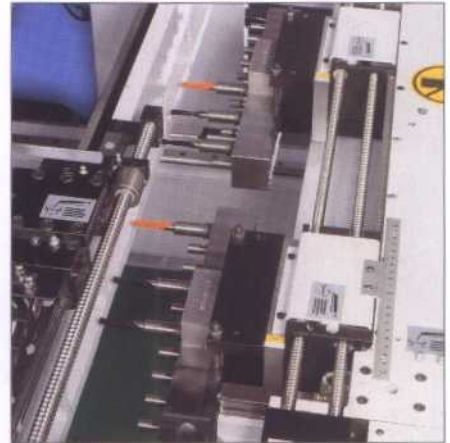
- Vertical drilling from the bottom; with a maximum of 7 drilling supports
- The same is available from the top with a maximum of 4 supports
- Drilling supports: 2 pcs. in standard.
- Motor: 1,5 kW
- Standard drilling block: 11 spindles with 32 mm pitch.

The construction of our machine frame is displayed by following features:

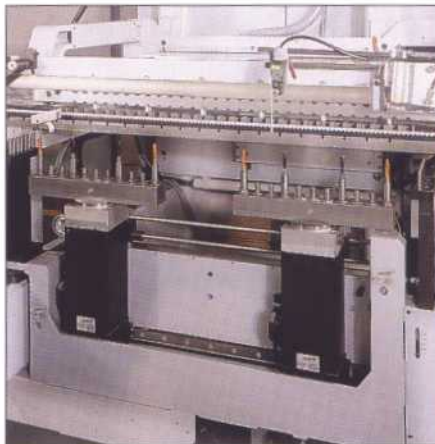
- The horizontal drilling support on the fixed side of the machine is integrated directly into the frame
- In the Optimat Range the horizontal drilling support on the moveable side moves on the same guide level as the vertical drilling supports
- Parking space for 7 vertical supports is available below both horizontal supports
- Parking space for 2 upper vertical drilling supports above both horizontal supports is available
- On the profi line BST 500 the horizontal drilling support is integrated into the upper machine frame. This support can move over the vertical supports without demounting the drilling blocks
- Drilling stroke via linear guide
- Adjustable tool length 57/70 mm
- Y-axis adjustment accomplished by ball screw spindle and guide rails.
- Pneumatically clamped drilling blocks
- Drilling blocks with quick change system
- Central clamping of the X and Y positioning via button
- 3-line LCD - display utilised for the X and Y-axis
- Chip extraction via a specially widened chip conveyor belt with 2 dust extraction ports (0160 mm)



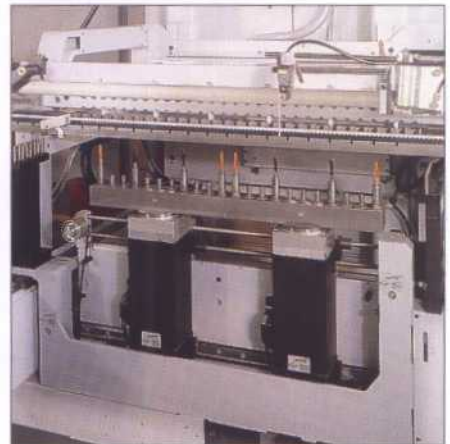
Vertical drilling from top



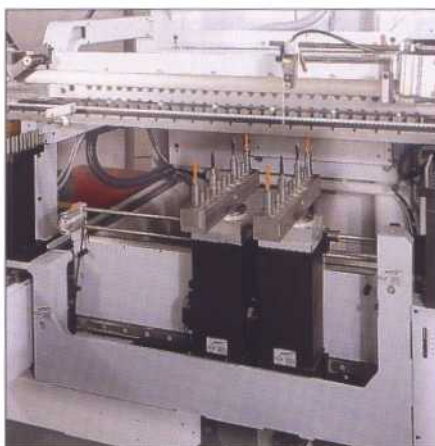
Horizontal drilling



Vertical drilling from below maximum distance



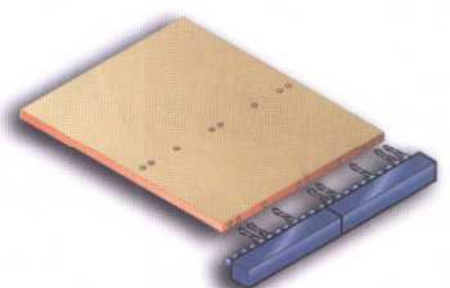
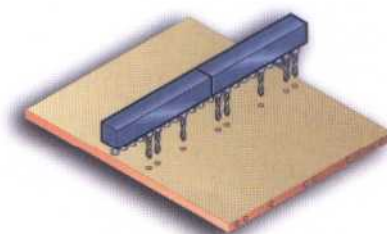
Vertical drilling from below minimum distance



Vertical drilling from below minimum distance

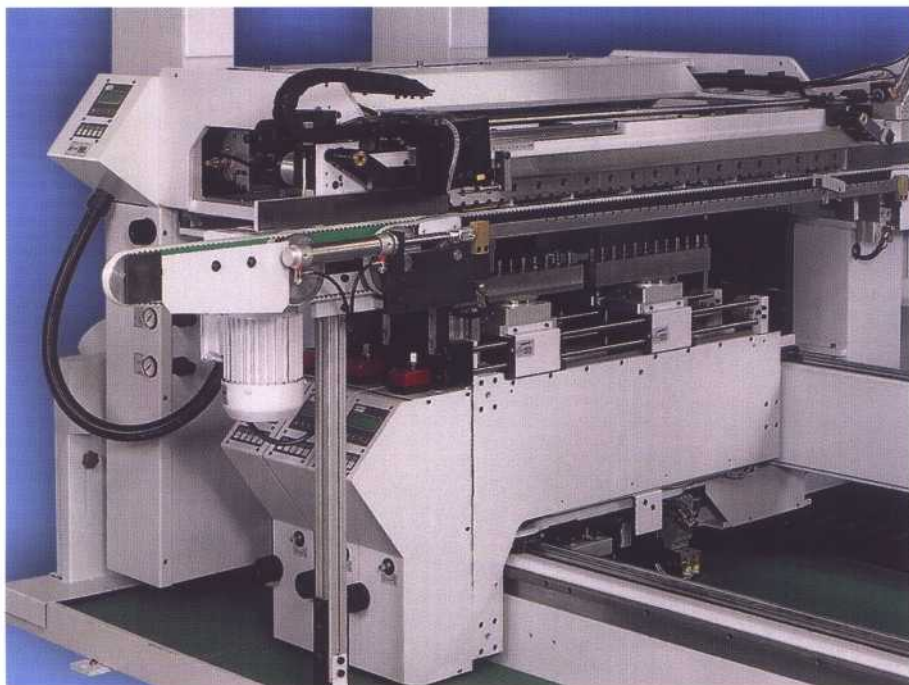


Vertical drilling from below maximum distance





Moveable side is guided on the upper machine frame. Possibility to cross above the vertical supports.



Moveable side positioned in lower machine frame. Parking space for vertical supports is available below the moveable side.

Program assisted machine set-up

The BST 500 utilises a measuring system in all adjustable axis (x-y1 -y2) for easier and reproducible adjustment of the machine. The control offers the possibility to store 400 processing programmes with assistance of the "Teach-in-mode". As well as reading the position of the X- and Y supports and stops, the transport speed and the processing options can also be read in. These programmes can be called upon at any time.

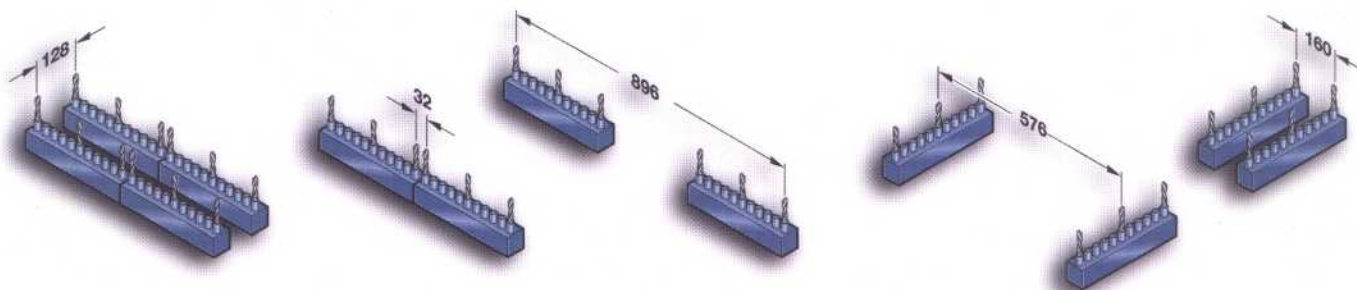
A count-down function in the displays makes the adjustment of the axis much easier. Axis which have reached their position are automatically clamped. Processing of the panels will only start when all necessary data has been finalised and inserted.

The position of all of the supports is monitored during processing. Should any differences occur the drilling process is automatically halted.

Pictures can also show options



Changeable support segments for drilling outside of the panel field

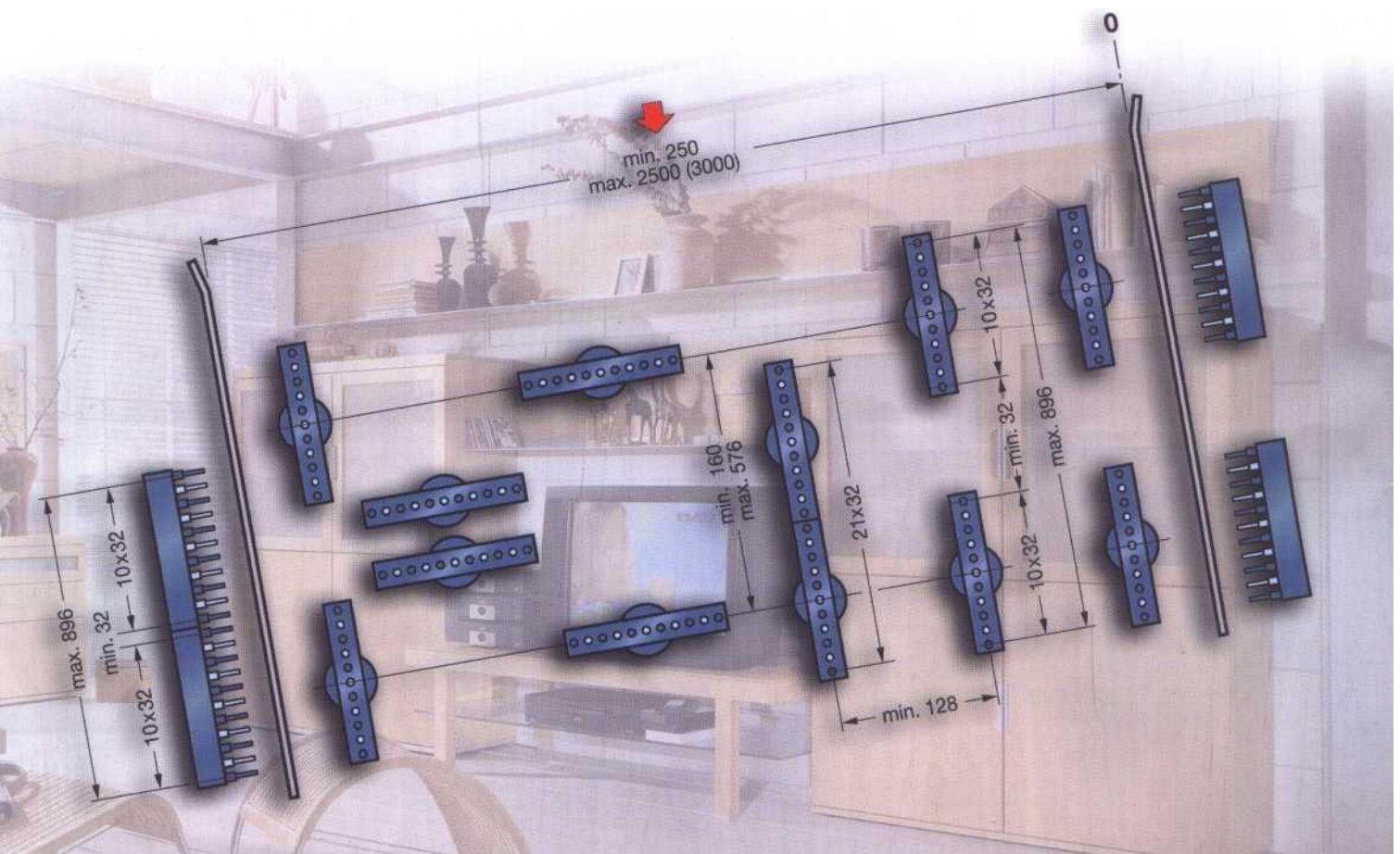


Flexibility in detail – drilling blocks for every use



The standard drilling block with 11 spindles for the BST 500 has been developed with 50 years of know-how by company Weeke.

- 3000 rpm (option: increase of rpm)
- Helical ground gears and thorough lubrication secure quiet operation
- The drilling blocks utilise the proven Weeke designed quick disconnect spindle chuck which provides reduced set-up time
- Drill block adjustment 360°, fixes at 90°
- Pneumatic clamping
- The drill blocks are exchangeable without use of tools through release of the pneumatic clamping
- Precise central positioning
- Customised drilling blocks can be created to fit your specific manufacturing needs
- Drilling blocks are exchangeable on all supports



Highlights of the Software



WEEKE software development

The BST 500 can be equipped with an IPC (Industrial Personal Computer) interface. The user friendly software on this PC allows you the highest flexibility in creating, optimising and storing program patterns. The pattern storage capability is only limited by the size of the computer hard drive.

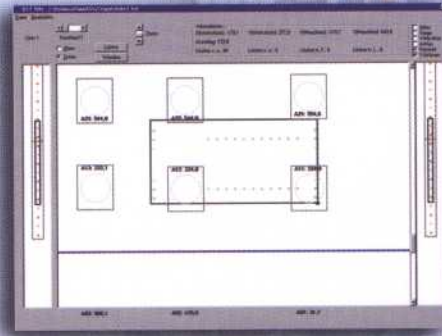
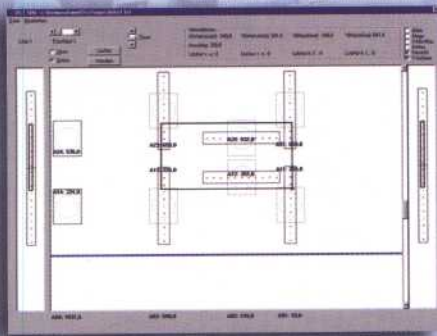
To create new programmes, we utilise a user friendly programming system called **BSTWOOD**. Graphic display of the pattern is shown as the program is created using ICON based choices for each kind of function; i.e. horizontal drilling, vertical drilling from the top or bottom. Optimised set-up of the drilling blocks and axis positions is calculated automatically for you by the program.

The program will analyse the optimal position and configuration of the drilling blocks, also the possibility of rotating drill blocks is taken into consideration. The solution is displayed graphically.

All calculated data can be sent directly to the machine control from the operator display. These patterns can also be printed out. All of this software can operate on any standard office PC.

Utilising the Homag group standard data format, CAD system integration can be achieved using the Weeke CAD/CAM system software. This allows integration to any standard DXF compatible CAD system.

Pictures can also show options



11:000		11:001		11:002		11:003	
POS	POS	POS	POS	POS	POS	POS	POS
11:000	11:000	11:001	11:001	11:002	11:002	11:003	11:003
11:000	11:000	11:001	11:001	11:002	11:002	11:003	11:003
11:000	11:000	11:001	11:001	11:002	11:002	11:003	11:003
11:000	11:000	11:001	11:001	11:002	11:002	11:003	11:003



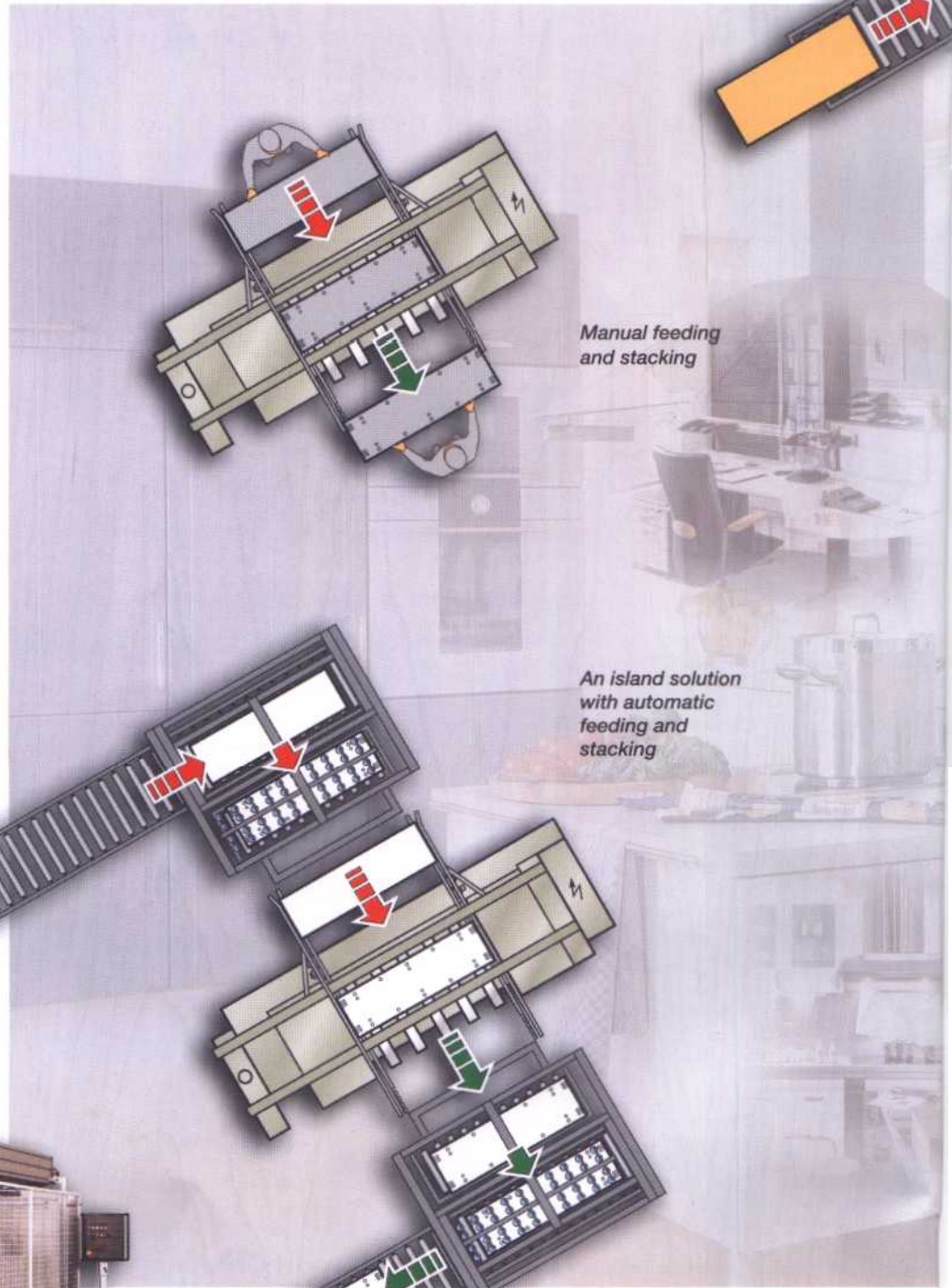
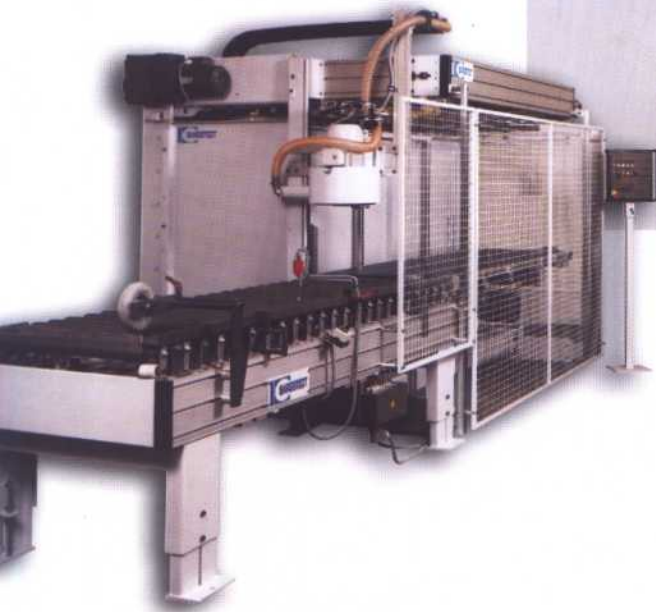
Manufacturing concepts for every level

Several manufacturing methods are available depending on your production needs. Whether it's furniture, kitchen, bath or closet manufacturing, the BST 500 can accommodate every need.

From running one piece with manual feeding and off-stacking, an island solution with automatic feeding and off-stacking or as complex as a single part in a larger manufacturing line, the BST 500 is the automated drilling solution

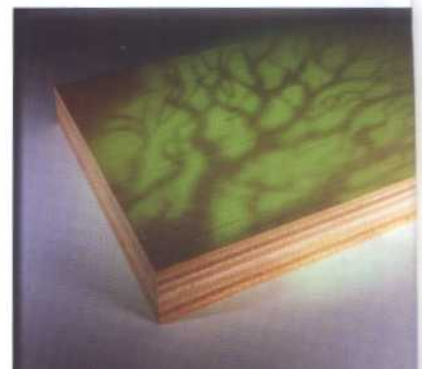


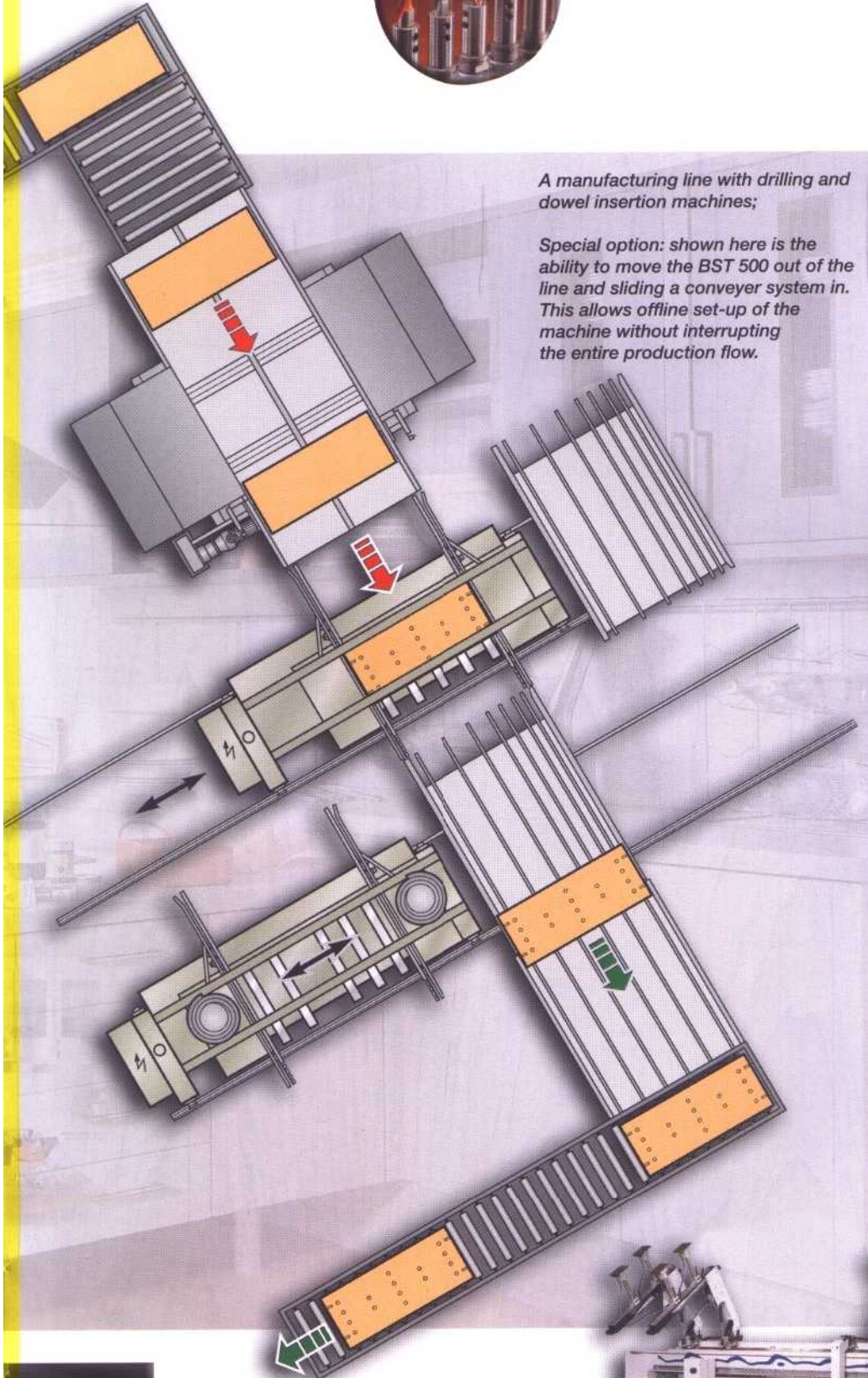
that pulls it all together.



Manual feeding and stacking

An island solution with automatic feeding and stacking





A manufacturing line with drilling and dowel insertion machines;

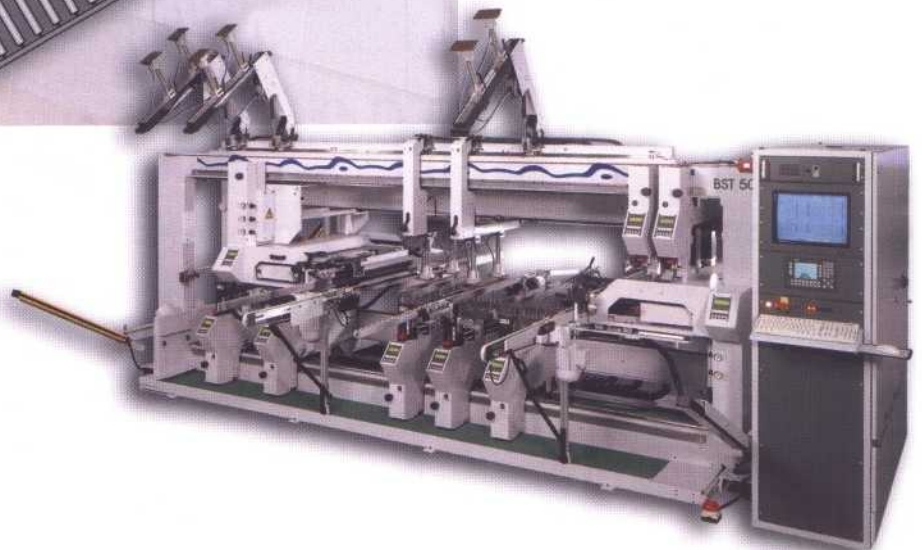
Special option: shown here is the ability to move the BST 500 out of the line and sliding a conveyor system in. This allows offline set-up of the machine without interrupting the entire production flow.



Pictures can also show options



The mechanical and electrical interfaces to the machines before and after the BST 500 are never a problem due to the vast array of partners in the Homag family of machinery. Interfacing with other machines in the Homag group has been proven in manufacturing projects all over the world.

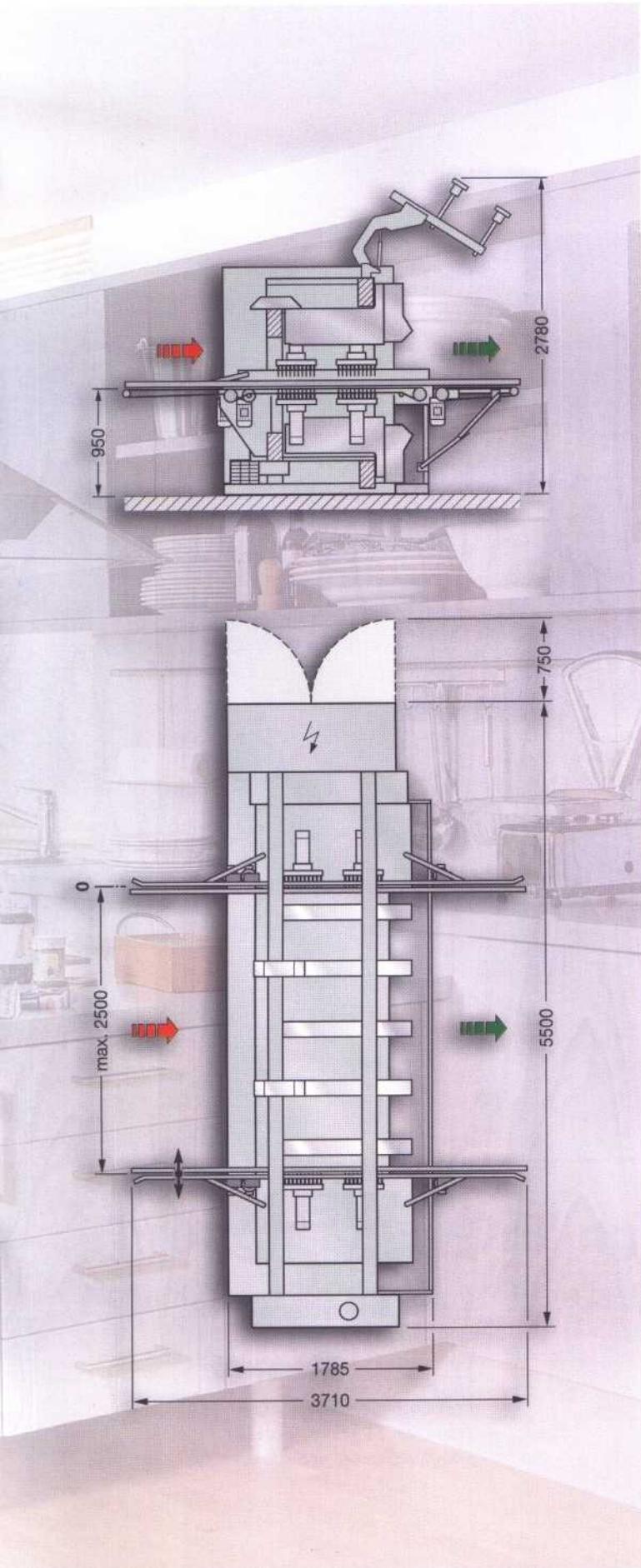


The Challenge – activity on all continents



The Challenge

World-wide manufacturing companies must prepare for tougher competition. This applies for us as well as for yourself. Those companies who restructure the 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.

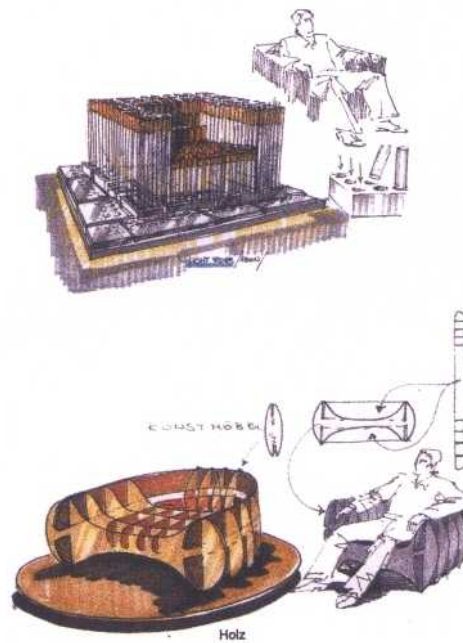


TECHNICAL DATA

BST 500

Machine			
	Length	mm	5300 (5800)
	Width	mm	1680 (3190)
	Height	mm	2100
Working			
	Length	mm	min. 250 max. 2500 (3000)
	Width	mm	min. 100 max. 1000
	Height	mm	950
Y1 center-of-motor to Y2 center-of-motor distance	mm		min. 160 max. 576
X-axis-center-of-support- to center-of-support	mm		min. 128
Weight	kg		6500
Power requirement (each drilling support)	kW		3,0
Power requirement (transport and chip conveyor)	kW		2,3
Pressurised air supply	bar		6
Air consumption per work piece	NL		90
Dust extraction port diameter	mm		2 x Ø 160
	m/s		30
Dust extraction requirements	m ³ /h		4350

Pictures can also show options



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 Bohrsysteme GmbH
Benzstraße 10-16
33442 HERZEBROCK-Clarholz
GERMANY
Fon +49-52 45-4 45-0
Fax +49-52 45-4 45-139
info@weeke.de www.weeke.de