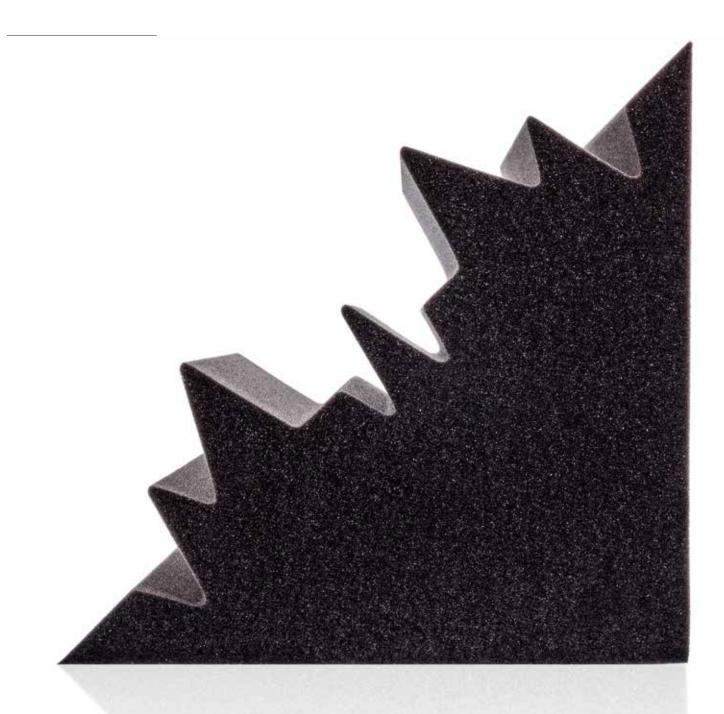
# BÄUMER 4.0



**BXUMER** 

### **NEW NETWORKING PLATFORM UPGRADES BÄUMER'S DIGITAL SERVICES**

### **BÄUMER 4.0 - FOR KPI-BASED AND EFFICIENT PRODUCTION MANAGEMENT**

We assure the future of our customers by deploying customized engineering and intelligent services, and amalgamating information systems with the production level.

We aim to incorporate all of the people, machines and processes involved in the value-added chain into one network through digitalization and automation.

The networking of machines is a basic condition for the development of digitalized, automated processes in modern production. Production plants become more intelligent and have smarter control functionalities

allowing more effective and more flexible reactions during the production process.

For many years, Bäumer has been developing and upgrading a variety of automation and control modules for use at various corporate levels of the foam production industry in the control and networking of many different processes.

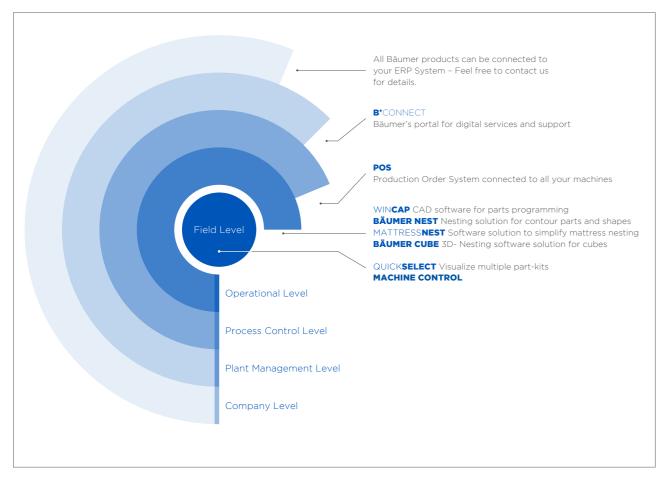
The automation circle - the so-called system highway shows how information is passed on. The digital Bäumer portfolio is represented at various levels.

When our customers network their machinery and operative functions with digital Bäumer products, they can reckon with higher value at all points along the value-added chain.

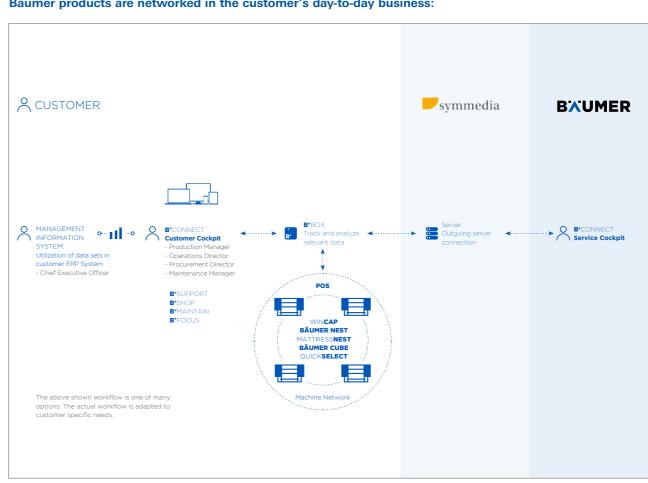
Foam producers and foam processors have been battling for many years with increased pressure on efficiency, higher throughput times and reduced costs. In order to reach the required rates and to maintain a leading position in the industry, a trouble-free production process is essential. Simplified and quick processes which control production are elementary.

BÄUMER 4.0

#### Expanding the portfolio with a new integration platform B+ Connect:



#### Bäumer products are networked in the customer's day-to-day business:



## FOUR MODULES TO SUPPORT CUSTOMER PROCESSES

### B+CONNECT

#### **B+ CONNECT: THE NEW NETWORKING PLATFORM FROM BÄUMER**

Bäumer is taking the next steps towards digitalization with the B+ Connect driver (Bäumer Plus Connect), which will result in a new platform for future product lines to bring digitally networked machinery and operative functions to a new level.

#### Four modules to support customer processes

With initially four modules Bäumer will be supporting its customers in their direct day-to-day business.

#### Modul 1: B+ Focus

Not only the production and maintenance staff but also the product manager and management must keep an eye on the machines, plants and production in real time. The preparation of key figures creates a rapid overview of daily business and facilitates control – wherever and whenever necessary, via smartphone, tablet or laptop.

The current condition of the machines can be optimally monitored and visualized. The capacity and efficiency of the machines are shown as well as the complete picture of all machines on an international level in all locations in Germany and abroad.

- √ Identification of OEE (overall equipment effectiveness)
- √ Display of dead times and causes
- √ Monitoring of technical assemblies
- √ Retrievable maintenance log for each machine
- √ Available information on the state of each machine

#### Modul 2: B+ Support

Customers with a problem can now be helped even more quickly now. The machine operator uses B+ Support to send a service message manually or, as an alternative in certain pre-defined cases, the machine triggers an alarm independently. Both reach the Bäumer Service immediately.

The specialists at Bäumer are connected directly with the customer, either to provide a service or to defuse a critical situation. For example, the settings in the machine control can be checked by means of remote maintenance and problems can be remedied online. Customers can also chat with the Bäumer specialists or hold a webcam conference. If the machine operator puts on his head-mounted display, the Bäumer

specialist is able to see exactly what the machine operator sees and can look "directly into the machine". This means that on-the-spot support rules out any misunderstanding when describing the defects orally, faults can be identified and qualified solutions quickly found.

- √ Fast reaction time
- $\sqrt{}$  Reduction in number of machine downtimes
- √ Time savings at machine start-up
- √ Reductions in process costs



#### Modul 3: B+ Maintain

Maintaining and servicing machinery is now even easier. All of the maintenance activities required are sent directly to the operator via a role concept (access control) or registered with the central maintenance department. The operator has a constant overview of which activities are due at a certain time or perhaps are already overdue. Each item of maintenance work is documented and can be tracked at all times.

Instructions are displayed for certain maintenance jobs so that the operator not only sees what he must do, but

also how he must do it – without having to leaf through any documentation.

- √ Condition-based, predictable maintenance
- √ Improved information on the requirements situation
- √ Plannable maintenance measures

#### Modul 4: B+ Shop

Relevant parts can be procured automatically at the touch of a button. The Customer Cockpit easily recognizes wearing parts and spare parts, which can then be ordered directly. The B+ Shop can be used via a role concept at different levels with various rights in the ordering system.

Orders can be placed directly at the machine or centrally in the Procurement department.

- √ Simplified identification of spare parts minimizes incorrect orders
- √ Automated ordering process
- $\checkmark$  Complete price transparency

### **OPTIMAL PROCESS CONTROL**



#### **POS - SUPERIOR PRODUCTION ORDER SYSTEM**

POS (Production Order System) is a software program for the organization and automation of processes in the foam processing sector in a modern line, from the long block to the finished product. In-line machines can thus be addressed from a higher level. POS makes it possible to link up several machines as well as intermediate systems (shuttles, conveyor belts etc.) on the basis of a central control system.

From the warehouse to the finished cuts, the raw block covers a long distance until it leaves the factory as a contour cut, a mattress or as sheets.

In classical production, each operation must be planned individually in each machine and performed manually:

#### Work preparation:

- 1. Inventory check of the blocks from long and short block storage
- 2. Entry of customer orders for mattresses, sheets and contours
- 3. Preparation of the programs for customer orders: nesting of the contours into corresponding sheets, collection of the various sheets to form a short block
- 4. Transfer of the orders to the machine

#### Production:

- 1. Requesting the block from the block storage
- 2. Entering the block dimensions in the cut-off machine and cutting the blocks to size. Moving the blocks to the machine in question on the basis of the manual planning

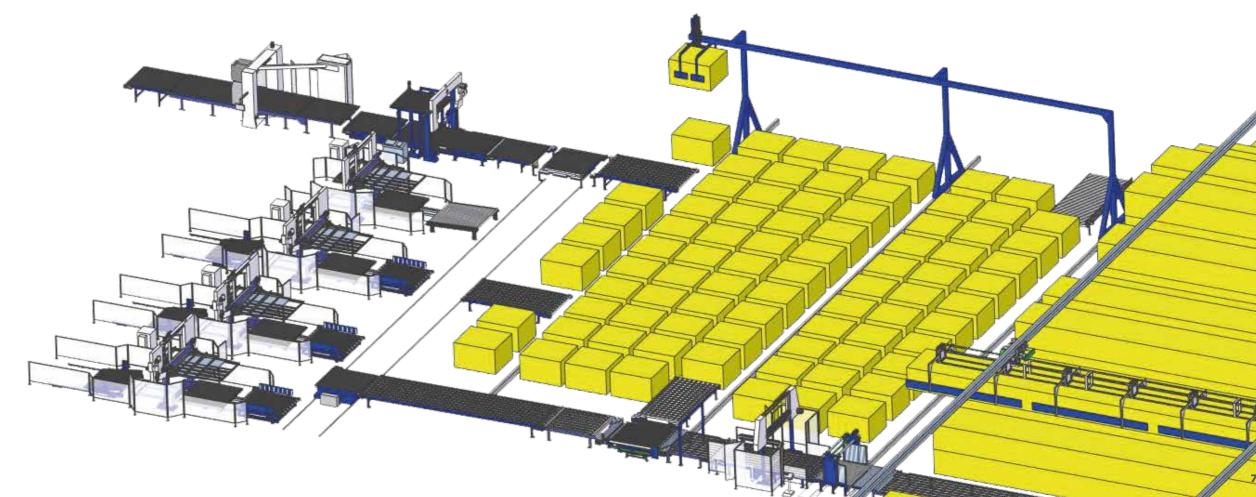
- 3. Loading the cutting program and checking the options, or entering the number and thickness of the sheets, as well as the block height. Only then the contour can be cut
- 4. Releasing the contour parts from the sheets or from the block
- 5. Checking the number, quality and tolerances of the cut contour parts
- 6. Warehousing the contour parts correctly
- 7. Marking the remaining blocks and warehousing them

8. Booking the cut parts manually into the ERP System

This means that an operator has to go through 12 operations.

#### Disadvantages of the traditional working process:

This working process is labor-intensive, error-prone and time-consuming. A full-time worker is required for each machine. If the process is not optimally planned, this leads to pauses. The management of the remaining blocks is confusing, and the operators must be asked what the production status is.





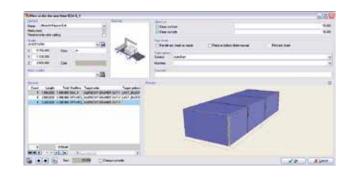
## OPTIMUM CONTROL AND AUTOMATION OF THE PRODUCTION PROCESS WITH POS

#### Work preparation:

 The block bin status reports are already integrated in POS. The planner only records the customer orders for mattresses, sheets and contours. POS creates the mattress, sheet and contour programs fully automatically and passes these on to the respective machines.

#### Production:

- Requesting the block from the block storage. The long block order is then loaded. POS now processes the long block fully automatically as far as the final completion of the mattress, the sheets or the contour parts. At the same time the mattress and contour data are transferred automatically to the ERP.
- Releasing the contour parts from the sheets or from the block. With the optional software Quickselect, the operator can immediately see which parts belong to one order and which to another. This is visually represented in Quickselect.
- 3. The cut contour parts only have to be examined for quality (foam defective).
- 4. Warehousing the contour parts correctly.
- 5. Residual blocks can be automatically identified and are transferred to the warehouse.



#### Advantages:

- √ Order lists can be imported into POS from the individual work preparation system.
- √ POS sorts the orders to be cut according to quality and dimensions. These are assigned to the existing blocks. POS proposes residual blocks for processing.
- √ POS fully automatically transfers the orders to the controllers of the in-line machines and the preliminary units
- √ Order data are assigned unequivocally to the block and are passed on from one machine to the next with the material to be cut.
- √ When the long block is loaded into the storage rack, all
  of the data belonging to the block such as quality, color,
  block dimensions and storage location are stored in POS
  by means of an ID. When orders are received, it is then
  possible to check whether the required foam is in stock or
  whether foaming has to be initiated.
- √ The entire block inventory in stock, including all decisive block data and updated storage locations, is stored in POS. When a production order is selected, POS determines the availability of the required block qualities and, depending on the order, picks these from the warehouse or, in the case of viscoelastic foam, directly from the curing rack.
- √ In addition, POS gives you an overview: the status of the machine can be checked at any time by means of traffic light signals.
  - Green: the order is completed and the machines are ready for the next order
  - Amber: the order is being processed, the loading conveyor in front of the machine is free
  - Red: the order is being processed, the loading conveyor in front of the machine is occupied

#### MORE EFFICIENT PROCESSES SAVE TIME AND MONEY

Through the use of POS you can save 50 % of the manual process steps, as these are fully automatic. You require less manpower and can thus reduce wage costs. Through automation, the waste rate improves. The throughput also increases within a shorter time. Machine investment thus pays off more quickly. No costly "just in time" storage, even for the smallest of order quantities. And that is not all ...

√ Optimum utilization of material in conjunction with residual block management

- √ Faster order intake and block selection
- √ Bundling, selection and coordination of orders
- √ Constant production status feedback
- √ Efficient production flow and material throughput
- √ Also control of third-party machines
- $\ensuremath{\sqrt{}}$  Possibility of system-specific software adaptation



System requirements: WinCAP, Optional: Mattress Nest, Bäumer Nest and Quickselect

## INTELLIGENT SOFTWARE FOR CREATING CUTTING PROGRAMS

## WINCAP - PROGRAMMING SOFTWARE FOR CUTTING PROGRAMS FOR CNC CONTOUR CUTTING MACHINES

With our WinCAP programming software, you can quickly and easily create cutting programs for Bäumer CNC contour cutters.

In order to optimize proven methods, to show new possibilities and to create intelligent solutions, we have made your questions ours! Together with the optional

nesting software, WinCAP provides the prerequisites to meet the latest requirements. The development and generation of the cutting programmes is automated to a large extent.

However, the user is given the possibility of including individual features at any time.



"I EASILY CREATE MY CNC CUTTING PROGRAMS,
I SAVE TIME WHICH I CAN USE FOR OTHER THINGS"



#### **FEATURES AND FUNCTIONS**

#### √ New multifunction toolbar

We designed our new menu bar to mirror the well-known Office menu structure to improve usability. Users can customize it by adding a personalized favorites toolbar which contains their most frequently used function icons.

### √ Preview window for cutting programs and contours

The currently selected cutting pattern can now be displayed in a well-designed preview panel.

#### √ Simplified function calls and hot keys

The number of clicks required to activate various program functions was reduced to support a faster work process. In addition, the specification of user-defined key combinations facilitates increased efficiency.

#### **√** Different user rights

In line with the improved usability, it is now possible to utilize specified user rights to hide certain functions that are irrelevant for standard users (Access authorization).

#### √ Improved drawing editor

Users can now create personal toolboxes and select individual colors in the drawing editor. The optimized drawing functions also ensure speedier work processes.

#### √ Improved import function

This new version supports CAD file imports in DXF, DWG and various other external file formats. The improved and optimized import function also offers added convenience. The following formats can be imported: DXF, SLD, S3d, FRM. Export function for

tables: XLS, XLM, HTML and Textfile. Program export as ZIP, G-Code and DXF possible.

#### √ Translation options for various languages

The following languages have been implemented: German, English, Spanish, Polish and Japanese. Other languages can also be implemented on request.

#### **√** User-friendliness

The extensively redesigned program interface and functions streamline the design and ensure that users can utilize the program quickly and easily.

#### √ Manual nesting

Depending on user requirements, we offer various levels of manual nesting. Comfort nesting goes beyond manual nesting. Here, the parts no longer overlap. We can also offer you an add-on as a fully automatic version (Bäumer Nest).

#### √ Favorites toolbar

Parts of the menu bar can be merged to form an individual favorites toolbar.

#### **√** Documentation

Changes are saved in a "History" and can thus be traced.

#### √ Photo scanning

A photo can be loaded as background of the graphical editor so that the contour can be drawn similar to digitizing.

#### √ Autosave

A new feature is the cache, through which previous steps can be restored.

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#### **GENERATE CONTOURS PARTS**

#### There are several methods of creating contour parts in the WinCAP parts menu:

- √ Import of DXF, SLD and FRM files
- √ Editing by entering coordinates
- √ Easy drawing by means of the integrated drawing programme
- √ Import from older CAP versions
- J By offering import and export functions, WinCAP is an open system with interfaces to other applications. For example: saving of all parts by name, foam quality, dimensions, pre-settings for automatic nesting (if add-on tool exists), the operator's name
- √ Creating templates: recurring settings can be saved in a template, and can be restored. This saves you the trouble of having to re-enter recurring input.

- $\sqrt{}$  Display to show whether a part is closed: this function checks to see whether the parts are completely closed. If not, the open spots are shown with a red
- √ Fast creation of the piece counter or block program: with the help of the right-hand mouse button, you can create these from the parts table with only 2 clicks

For a better overview, all contour parts are shown in a preview window.

The table entries inform about dimensions, quality and machine types and the customer's name at a glance. Details regarding production date, piece numbers and cutting parameters can be separately indicated.

### **NESTING OF CONTOUR CUTS**

The nesting can be done either manually or automatically by means of Bäumer Nest available as add-on tool.

#### Manual nesting

By manual nesting, all contour parts are manually positioned. There is also the option of "comfortable" nesting: in this case, the parts are no longer shown as overlapping, but the programmer can specify the required spacing between the parts. Now the parts can also be very easily rotated, mirrored and nested to form pairs.

#### Automatic nesting

Bäumer Nest is an additional tool for automatic nesting and block optimization and is the optimal supplement for automating the often complex nesting processes.

The parts are placed in an intelligent way with different piece numbers, priorities, distances, mirroring and turning options, respecting at the same time the nesting efficiency and the minimisation of cycle time (max. stack height) as well as the waste rate.

Together, WinCAP and Bäumer Nest are an advanced fully automated solution for the preparation of foam cuts.

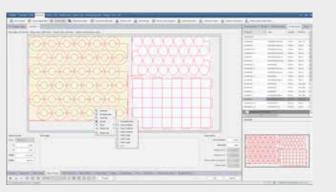
#### Advantages of Bäumer Nest:

- √ Minimisation of the cutting runs which therefore increases the cutting efficiency
- √ Economy of foam by an average of 5 to 10 %
- ✓ Increase of productivity by more than 10 % with vertical cutting machines

#### Additionally Bäumer Nest offers following functions:

- √ There are also 5 choices as to what the criteria for nesting can be, e.g. waste rate or throughput speed.
- √ Multi area nesting The multi area nesting function enables the foam block to be optimally utilized. When using small piece numbers, it is particularly advantageous to section the block into individual areas which can be filled with various existing or recalculated cutting programmes afterwards.
- √ Mattress Scanner Different mattresses (with different contours) can be comfortably nested in one block. To do this, existing programs are scanned by means of the barcodes.

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### SIMULATION OF THE KNIFE CUTTING LINE (ROUTING)

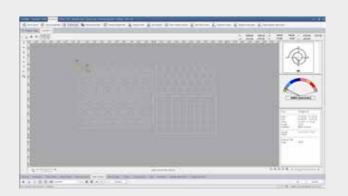
After the nesting process has been finished, the creation 

Programme administration of the cutting ways can be realised either manually or automatically. By using the simulator, the cutting way of the knife is traced on the screen. The cutting way is decisive for the cutting quality and the cutting time. Knife turning points, feed rate, breakpoints etc. are displayed on the screen in real-time. The operator can manually interfere at any time.

#### Backup

An integrated back-up and restore programme enables data to be easily backed-up and easily re-inserted afterwards, e.g. in case of updates.

The finished nesting results and cutting programmes are stored in the programme administration. Here, all programmes are saved with a picture and all information regarding block or sheet dimensions, foam quality and margin measurements.





## A SOFTWARE FOR OPTIMAL CONTOUR NESTING

# **BÄUMER NEST - FOR HIGHER THROUGHPUT AND LESS WASTE**

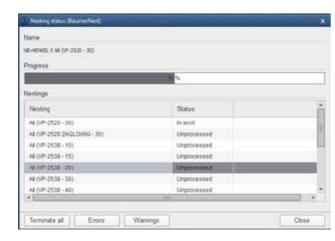
This software runs in the background of WinCAP 3.0. Together with WinCAP 3.0, text files with the order data can be imported. In the background, WinCAP sorts the order parts according to their depth and the type of foam.

If the data match, perfect contour nesting is then generated for a given block dimension on the basis of the order data, such as form and number.

The time-saving is significant, which increases the throughput volume. During nesting, this tool takes account of either stacking height or minimum waste.

If stacking height is taken into account during nesting, the production throughput time is improved enormously.

A mixture of the two options frequently leads to optimum results: up to an average of 10% compared to manual nesting.



### **YOUR ADVANTAGES**

- √ Runs under Windows 10
- √ No limitation on amount of pieces and no (unlimited) length for the nest area (fiber processing)
- √ Bäumer Nest uses 5 different nesting algorithms, which are selectable:
- 1. Advanced (Efficiency optimized)
- 2. Compromise
- 3. Optimized efficiency
- 4. Advanced (optimized to height)
- 5. Optimized to the heigh

- √ The nesting time is short. This is up the complexibility
  of the nest. More available time allows more
  calculation cycles which might optimize the nesting
  result
- √ Complete integration within WinCAP 3, which means no installation of an external software
- √ Adjustable multi processor support (multi core)
- √ Nesting jobs are nested in the order in which they are sent
- √ Only one contact partner, namely Bäumer

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# QUICKLY ASSIGN CONTOUR PARTS TO THE ORDER

### QUICKSELECT

## QUICK SELECT - USE QUICK SELECT FOR PERFECT ORDER PICKING AT HIGH SPEED

Up to now, order picking was time-consuming, paperintensive and laborious. The assignment of parts to the order-picking trolley was not always easy. Assignment was effected purely manually.

Now it can be done much more easily and quickly:





### Visualization of the cutting program

All parts of the cutting program are clearly shown. This means that the person doing the unpacking has a clear picture of where the contour parts are located in the block. This gives a perfect overview to the operator.



#### Identification of the parts

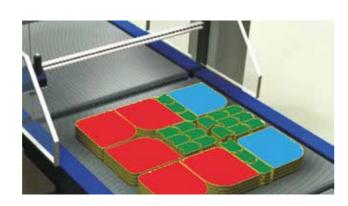
The parts are numbered or can be given a name. This makes it easier to find the parts.



As soon as the cut block is transported onto the unloading conveyor, Quick Select shows the cutting program on the screen. At the same time the labels, which can be marked as required, are printed out and can be stuck to the contour part.



Different orders have different colors. The parts are colored accordingly on the screen. This way, you know exactly which part belongs to which order and can be unpacked quickly.











## NEST A WHOLE DAY'S MATTRESS PRODUCTION FULLY-AUTOMATICALLY

## MATTRESS NEST - PROMPTLY PLANNED AND TRUE TO QUANTITY

Up until now, the daily production from importing to finishing had to be planned manually. Manual nesting, however, is not true to quantity because the machine operator nested only one type of mattress from the block until the complete block was full. This inevitably resulted in overproduction and warehousing.



Bäumer Mattress Nest makes it possible to carry out nesting true to quantity and fully automatically by planning the complete daily production in one go. Less manpower is required for planning and machine operation. Manual intervention in production is not necessary, but still possible. The complete production is quicker and more cost efficient.

### Automatic creation of cutting programs and cutting jobs

Bäumer Mattress Nest imports the order data into the system every day or for several days and first sorts all ordes automatically according to the required qualities. The programs for different mattresses which can be cut out of a short block or long block are optimally nested

automatically. The cutting programs created in this manner are executed in one continuous process on the BÄUMER horizontal contour cutting machines.

Because the cutting program executes the main program (e.g. the mattress contour) and the side programs (e.g. cutting the mattresses to length) in one continuous process, different mattress types (e.g. children's mattresses and overlengths) can be processed in one single short block.

In addition, the program automatically detects during nesting whether different mattresses have to be processed without any interval between cuts or whether an interval must be maintained. The remaining capacity of a residual block is also identified and factored into the calculations allowing for a freely selectable, tolerable waste quantity. In case of larger residual blocks, the order list can be filled with standard sheet dimensions or other orders.

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### MATTRESSNEST

## BÄUMER MATTRESS NEST AT A GLANCE:

#### Use

- $\sqrt{}$  For automatic mattress and sheet production
- √ Can be used for short blocks as well as for long blocks

#### **Customer benefits**

- √ Automated and efficient production planning
- √ Quick preparation of production with minimum manpower
- √ Automatic production process
- √ Less personnel for planning and plant operation
- √ No manual intervention in production required

#### Features

- √ Importing of mattress orders for daily or multi-day production
- √ Planning of all required mattresses and sheets with various qualities and measurements without overproduction and without warehousing
- √ Filling of blocks with other orders or filling sheets
- √ Program gives warning of excessive cuttings with inefficiently filled blocks. In this case, these parts can be shifted to the next nesting.
- √ 3-dimensional preview of block utilization
- √ Special nest algorithm guarantees optimum material utilization
- √ Quick and prompt planning is possible
- √ Short blocks are optimally planned in the long blocks, so that cuttings are reduced
- √ Long block scraps can be filled with standard short blocks

#### Feedback to the ERP system

- √ Importing of bin status reports (rack system, long block storage, short block storage)
- √ On-the-fly data feedback of planned and cut production
- √ Complete production feedback. Damaged blocks and parts, for example due to incorrect foaming, are shown separately.

Software requirements: WinCAP 3.0 and POS 2.2.

## OPTIMUM WORKFLOW FOR VERTICAL CUTTING MACHINES

### **BÄUMER CUBE - 3-D NESTING SOFTWARE FOR CUBOIDS**

Although a vertical cutting machine may seem to be a straightforward device, it is quite a complicated tool to operate. The machine operator is confronted with the task of optimally nesting various sizes of rectangular blocks from many different orders in diverse blocks while producing as little waste as possible.

Then these cuboids have to be cut from the block in a time-saving sequence.

The job also includes sorting the orders according to different material qualities, colors, etc. as well as marking any residual blocks that are produced.

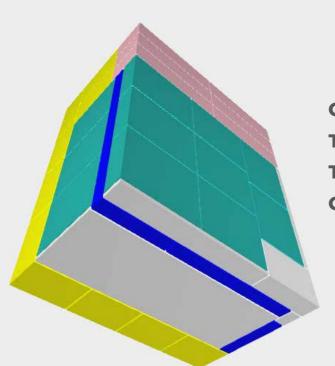
Complicated nesting from many different orders, as shown in the example here with Cube, can only be performed by an operator who has an excellent capacity for spatial thinking and can anticipate the next steps as in a chess game.

Therefore not only good planning but also an outstanding capacity for spatial thinking and logics is required for processing a daily production on the

vertical cutting machine. The efficiency and quality of the process depend heavily on the operator.

The solution for fast, forward-looking planning, constant quality and minimum expenditure of time is Bäumer Cube software, which nests the orders three-dimensionally with a special nesting algorithm and ensures optimum block utilization. Usually this step is performed by work preparation staff.

The special challenge our software programmers had to meet with Cube is the combination of automatic and manual processes. Compared to a CNC machine where cutting programs are sent to the machine and are processed fully automatically, only sub-processes can be automated with PLC control on a vertical cutting machine. For example, partial blocks have to be manually removed from the machine now and then or rotated around an axis before the workflow is continued or, in other words, the next step is done.



ORDERS ARE NESTED
THREE-DIMENSIONALLY.
THUS, THE BLOCK IS
OPTIMALLY UTILIZED.

### B'A'UMER**CUBE**

#### THE SOFTWARE GUIDES THE WORKER STEP BY STEP:



First Bäumer Cube specifies which block to use and how to position it on the machine. Then the block is cut. Initially, all the cuts which are possible according to the current orientation of the block are carried out.

Afterward, Bäumer Cube indicates whether the created partial blocks are finished parts, residual blocks, waste, or temporary blocks for further processing.

- √ Finished parts are assigned by Cube to orders or commissions so that the operator can remove, label, and store them.
- √ Residual blocks are provided with a clear identifier and back posted to the stock.
- √ Temporary blocks are still required in the further course of the cutting program. They are also provided by Cube with a clear identifier, stored temporarily, and repositioned for the next steps according to the specification from Bäumer Cube.

Every instruction from Bäumer Cube must be confirmed by the operator by pressing the button on the touch screen before the next step is specified.

The purpose of Bäumer Cube visualization is to provide clear instructions to the operator.

In a simplified model of the machine, the position of the knife and the stop as well as the positioning of the block are shown in relation to the machine. In addition, the edges of the block are measured and it is clearly indicated whether the edges need to be trimmed.

## OPTIMUM WORKFLOW FOR VERTICAL CUTTING MACHINES

### B'A'UMER**CUBE**

## HIGHEST POSSIBLE EFFICIENCY INCREASE THANKS TO INTEGRATION OF CUBE INTO THE CONTROL

#### Features at a glance:

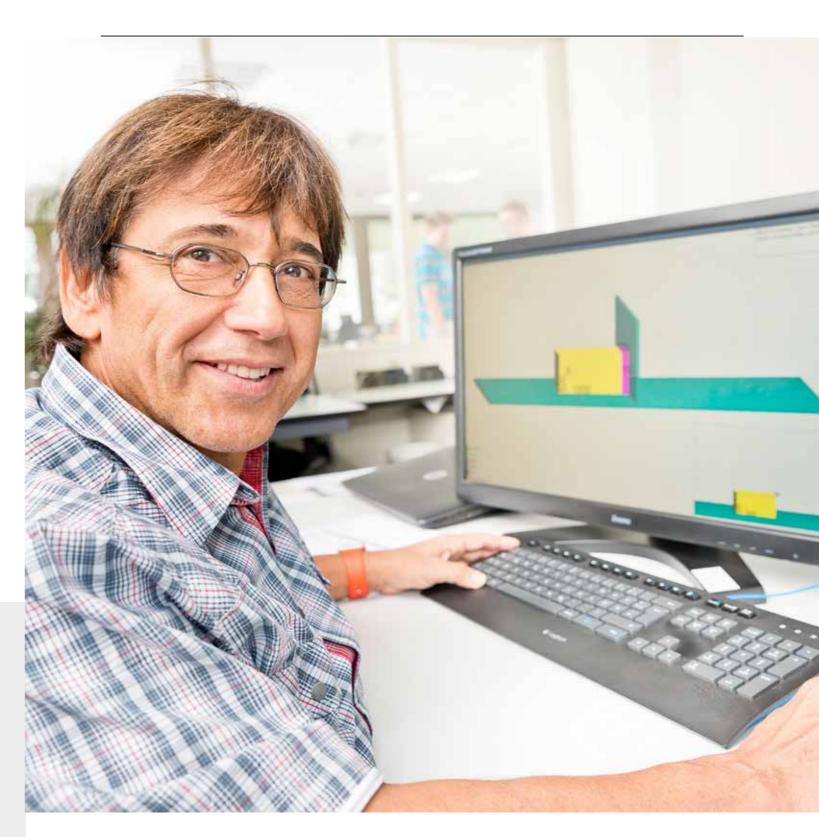
- $\checkmark$  Preparation of cutting jobs in the work preparation department
- √ Optimum block utilization thanks to clever nesting algorithm
- √ Operator-specific parameters can be stored
- $\ensuremath{\sqrt{}}$  Feature for estimating the cost of the individual cut part
- √ Bäumer Cube is network-compatible cutting jobs can be selected by the operator via a client PC at the machine on a large screen
- √ Specification of optimum workflows
- √ Clear instructions to machine operator thanks to clear visualization
- √ Marking and debiting of finished parts and finished messages

- √ Integration into the control of vertical cutting machine
  IS-M for automatic processing of instructions from
  Cube, such as stop positioning, setting quantity and
  cutting thicknesses, or performing the cutting job
- √ Cutting errors can be communicated to the system, and parts planned from the (partial) block are automatically sent back to the order pool
- √ Identification of identical finished parts within a block and request to remove entire layers
- √ Consideration of block edges (side, upper and lower skin or untrimmed edges)
- √ Label printing for marking finished orders, residual, and temporary blocks
- √ Integrated residual block management
- √ Log data as MDE data (BDE)

### Highest possible efficiency increase thanks to integration of Cube into the control

Basically, Cube can be provided for any vertical cutting machine. The operator enters the dimensions specified by the software manually and individually in the control, adjusts the stops, etc.

It is, however, a quantum leap in efficiency enhancement when the work steps specified by Cube are automatically performed by the machine. This total integration of Cube is now available in the new generation of vertical cutting machines IS-M, on sale starting in May 2017. The cutting process takes place automatically, allowing for material-dependent cutting parameters such as cutting speed. Cutting progress and, finally, cutting end are displayed on the IS-M. Finished parts are visualized and labels can be printed.



"WITH BÄUMER CUBE A COMPLICATED NESTING OF VARIOUS ORDERS BECOMES A BREEZE"

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