SOPHIE prepared

BÄUMERCUBE

# OPTIMUM WORKFLOW FOR VERTICAL CUTTING MACHINES

### 3D-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.

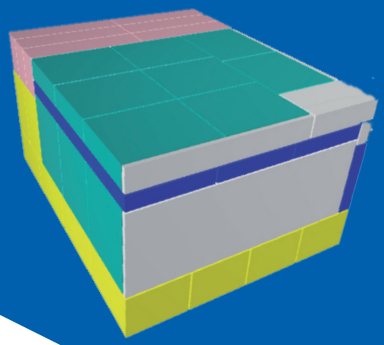
Complicated nesting from many different orders, as shown in the example here with Cube, can only be performed by an operator who has an excellent capacity for spatial thinking and can anticipate the next steps as in a chess game.

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.

### Features at a glance

- Optimum block utilization thanks to clever nesting algorithm
- Bäumer Cube is network-compatible – cutting jobs can be selected by the operator via a client PC at the machine on a large screen
- Clear instructions to machine operator thanks to clear visualization
- Marking and debiting of finished parts and finished messages
- Identification of identical finished parts within a block and request to remove entire layers
- Label printing for marking finished orders, residual, and temporary blocks
- Integrated residual block management



## The software guides the worker step by step

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

- 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.

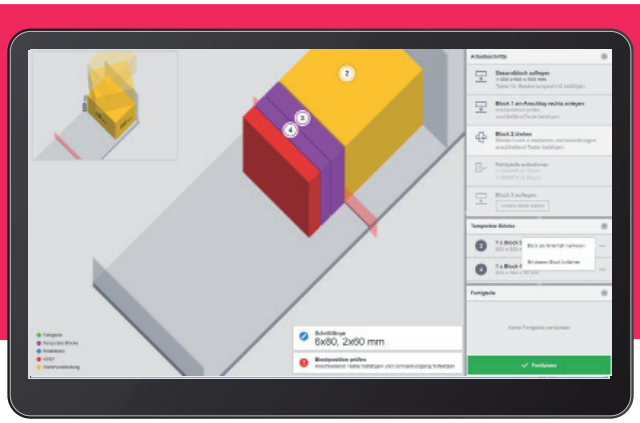
The purpose of Bäumer Cube visualization is to provide clear instructions to the operator.

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.

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

Basically, Cube can be provided for any vertical cutting machine. 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. 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.

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